



Getting Started

The Basics of Customer and Market Research

TOOLBOX

- Nuts & Bolts: A Definition of Market and Customer Research
- The Wheels, The Rim, The Hub, & The Spokes: The Nature of Market and Customer Research for Decision-Making
- Direction Signals: The Research Process
- The Wheels on the Bus Go Round & Round: All Aboard for Successful Planning
- Farebox: Cost, Value, and Resources
- Your Road Crew: Selecting the Consultant Team
- Full Speed Ahead: From Planning to Project Initiation

Market and Customer Research Defined

Many people have a mistaken perception about market and customer research. They believe it is simply asking customers what they think or feel about some product, ad, or issue. While market and customer research does make use of consumer surveys, it involves much more. On the other hand, they see it as marketing research – a subset of market research.

Market research is the process of listening to the voice of the market and conveying information about it to appropriate management. Consider the following definition:

Market and customer research is the function that links the consumer, customer, public, and stakeholders to the decision-maker through information – information used to identify and define opportunities and problems, generate, refine, and evaluate alternatives; monitor performance; and improve understanding of the competitive environment in which a business operates.

Market and customer research specifies the information required to address these issues; designs the method for collecting information; manages and implements the data collection process; analyzes the results; and communicates the findings and their implications.

Source: Adapted from definition prepared by the American Marketing Association (1988)

While possibly overlong, this definition has several noteworthy highlights.

First, it presents an expanded view of the research function, causing organizations to take an outward focus. It links the organization not only with its existing customers – in the case of public transportation this would be an agency's current riders – but also with potential customers – for public transportation anyone that travels locally. Moreover, it acknowledges other segments that are particularly important for public transportation. Market and customer research can also serve as a better link to the public – for example voters – and stakeholders – for example, local businesses, employers, government officials – who provide support for public transportation services.

Second, the definition is broad. Market and customer research deals with all phases of planning, developing, and marketing either goods or services. It involves the application of research techniques to the solution of business problems of any sort – planning, problem solving, or control issues. The fundamental requirement is that a decision is being made and there are questions surrounding that decision.

Third, the definition indicates that market and customer research is not simply collecting data specified by someone else. Rather, in addition to its role in the actual collection and analysis of data, market and customer research plays an important role in determining the information that is needed to address specific issues as well as the implications of what the collected information suggests. Hence, market and customer research is defined as an information input to decisions, not simply the evaluation of decisions that have been made. What is not clearly stated in definition is that market and customer research alone does not guarantee success. The intelligent use of market and customer research is the key to business achievement. A competitive edge is more the result of how information is used than of who does or does not have the information.

Finally, the definition specifies that market and customer research involves a process. Market research is the process of collecting accurate, timely, and relevant information. It is also the process by which managers and researchers interact in making good decisions. Each phase of the process is important. The process is in place to assist management in decision-making and is not a means or end in itself.

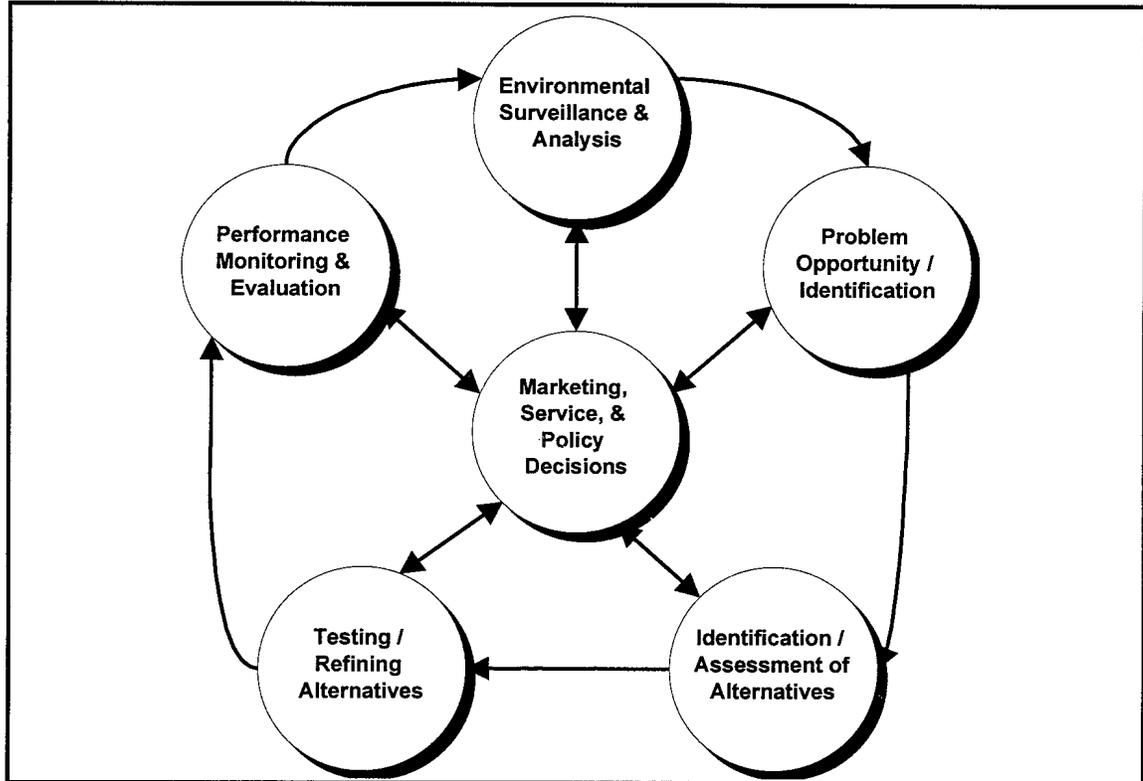
The Nature of Market and Customer Research for Decision-Making

As noted in the definition, market and customer research is the link – information – between the agency decision-makers – planners, marketers, general management, and the board – and the agency's customers, consumers, public, and stakeholders. Moreover, decisions are not limited to marketing decisions. Rather, market and customer research provides information for all types of decisions agencies make – marketing, service, and policy.

There are many different types of research that agencies can conduct, depending on the nature of the decision. These are illustrated in the following figure. It is drawn as a *wheel* where the different types of research are the *rim* of the wheel. The *hub* of the wheel is the decisions that are being made. The *spokes* of the wheel indicate the flow of the information between the researcher and the decision-maker.



FIGURE 10
MARKET AND CUSTOMER RESEARCH FOR DECISION-MAKING



The wheel analogy serves several functions.

- First, it helps categorize decisions and the corresponding market and customer research activities.
- Second, it illustrates the central position of the decision-maker.
- Third, because of its circular design, the wheel illustrates the continuous and interrelated nature of the different phases of program development. Since the process of change is continuous, decisions and the related information needs recur, albeit with varying frequency, urgency, and predictability. To take the analogy one step further, there is also the suggestion that, as a wheel progresses so does data and information cumulate from one type of research to the next.

The main elements of our wheel are elaborated below.

Environmental Surveillance

- What are the characteristics of our market?
- What major trends influence these characteristics?
- How is our agency performing?

The decision process starts with environmental surveillance. This surveillance process includes: the *detection* of impending or emerging change, the *recognition* of its implications, *forecasting* the direction and timing of development, and *tracking* the continuous progress.^{xxxii}

All agencies need a current and thorough understanding of their environment. This understanding should be based on all aspects of the environment – economic, technological, social, political, and cultural – that will influence marketing, service, and policy decisions. There are, however, certain basic types of information relating to consumer behavior and market characteristics that are especially useful in signaling changes in the market and helping management respond to these changes.

The data collected for surveillance purposes can differ as to the level of detail they provide. Much of the data is secondary in nature – for example, census data – or is collected from other sources – for example, state DOTs or local MPOs. Internal data – for example, ridership figures – also are part of environmental surveillance. This data is both provocative and frustrating for the level of aggregation often obscures the true picture. To counter this problem, agencies may elect to gather primary data. Here, survey research is often used. In some cases, this is longitudinal in nature. Sample sizes often are large enough to provide reliable analysis among many key subgroups – for example, riders and nonriders or different areas of the region. Interviews are often conducted by telephone or in person and are structured in nature. Consider the following example:

For over fifteen years, Seattle Metro has conducted an annual telephone survey of riders and nonriders in the King County area. Over the years, the study has taken a variety of forms but serves the basic purpose of measuring riders' and nonriders' awareness of and attitudes toward Metro and its services. Further, Metro uses the study as a forum for probing public sentiment about highly critical issues such as personal safety and security. The annual survey provides an important source of data over time and is used to gauge ridership – reflecting the incidence of riders in the population as opposed to boardings. It also measures satisfaction with transit-related services among Metro transit users.

Problem and Opportunity Definition

- What is the nature of the problems or opportunities the agency is facing?
- How serious is the problem? How great the opportunity?
- What are the consequences of the problem or opportunity for our market position or ridership growth?

This type of research focuses directly on the problems and opportunities identified as agencies better know and understand the environment in which they are operating the characteristics of their market. For problems, the task is to understand their causes and to predict their consequences. For opportunities, there is a need to further explore their size and nature. Moreover, this type of research is useful to help management to be more responsive to public wishes and complaints.

For example,

BART conducted such a study and found that operations were considered unreliable. The agency changed its emphasis in operations from expanding service to improving existing service.

Denver RTD found a large majority of those living within three blocks of a transit line felt they could not use it. To further explore the problem, a follow-up study was conducted that showed that they did not know how to catch or ride a bus.

Like environmental surveillance, agencies can use secondary data, but often, as in the RTD example, a special project will be required. Much of the research conducted at this stage is exploratory in nature. Focus groups and/or in-depth personal interviews often are used. Interviews are unstructured with the goal to capture unseen or unknown ideas as well as to identify potential alternatives.

A problem that has become an increasing focus for many transit agencies is ridership retention. Houston METRO and WMATA have used focus groups and surveys to better understand why riders stop using public transportation. The research showed the extent of the problem – in the case of Houston METRO nearly one out of four riders had abandoned the system. Moreover, it clearly showed the reasons for the problem as well as some possible strategies to overcome these barriers.

Conversely, an opportunity that more transit agencies are addressing is ridership acquisition. Here, the objective is on identifying potential rider segments.

Tri-Met (Portland, Oregon) completed a market segmentation study in 1993 that sought to classify people based on their attitudes toward transportation, their travel motivations, and the benefits they expect from their travel modes. This research has been used to develop marketing programs to target both existing and potential riders.

MCTO (Minneapolis, MN) has conducted two studies with nonriders in an effort to better understand the size and characteristics of the potential rider market and how to better reach this market with services and marketing programs.

Identification and Assessment of Alternatives

- How should we respond to the problem?
- What is the range of alternative solutions?
- What opportunities exist for new services or products?
- Which opportunities should be pursued?

Here the emphasis changes from what is, to what can be done. Within this general class of research there are several different types, some focused on broadening the range of alternatives – alternative generation – others on narrowing the set of alternatives to a manageable number – alternative screening.

Research conducted in the earlier phases may be useful in answering these questions. Moreover, a variety of techniques is generally used to generate and/or screen alternatives. For example,

The Central Ohio Transit Authority (Columbus, OH) conducted focus groups to assess community members' attitudes toward aspects of COTA's long range plan with specific focus on attitudes toward a proposed light rail system. Subjects responded to a series of questions on the proposed plan and possible themes for selling the plan to the public using the Perception Analyzer system, a hand-held device with which participants individually respond to questions and/or the presentation. Written exercises and a guided discussion provided further insight into the different alternatives being considered.

Testing and Refining

- Which alternative strategies, products, or services should we introduce?
- Should any changes be made?
- What is the best marketing mix to employ?

At this phase, the alternative strategies, policies, products or services are few in number and may be operational. The research task is to test the alternatives in the most realistic possible fashion. For communications programs, there are a variety of pretesting methods that ask whether the advertising message, brochure copy, and so on can be understood, believed, and will positively influence attitudes.

The marketing department for the Los Angeles County, Metropolitan Transit Authority conducted three focus groups to provide insights regarding nineteen pictograms: specifically in terms of how well each one communicates its intended message. For each pictogram, participants answered four questions: (1) What does this pictogram mean? (2) How sure are you that this is what it means? (3) Is there anything else it could mean? and (4) Where would you expect to see this pictogram?.

Alternative pricing strategies or service packages can be treated as concepts to which potential riders respond with expressions of interest. Under some circumstances the price and service levels can actually be manipulated in the context of a quasi-experimental design or through some form of modeling.

For example,

Houston METRO conducted a survey among Texas Medical Center employees to test different product / service offerings. Conjoint analysis was used to identify those attributes of service that were most important and the levels of those attributes which created the greatest product utility. Attributes tested included: fare, trip time, frequency, and span of service. Product and service modifications were made based on this research that resulted in significant increases in ridership on this route. Customer satisfaction also is higher on this route – 73 percent completely satisfied – compared with other comparable routes – 27 percent completely satisfied.

Performance Monitoring and Evaluation

- Should the new program, strategy, product, policy, etc. be continued, discontinued, revised, or expanded?
- Did the new program, strategy, plan, policy, etc. achieve its objectives? If not, why not?
- What are the cumulative effects of the new program, strategy, plan, policy, etc. in terms of increased ridership, better customer relations, increased awareness, improved performance, etc.?

The evaluation phase ends the research cycle, and begins it anew. It is not sufficient at this phase to evaluate the effectiveness of a new program, strategy, product, or policy solely in terms of boardings, trip counts, farebox revenues, and so forth. While this information is important for assessing cost effectiveness of the program, it is not adequate for determining what modifications are needed. Nor, does it provide feedback that allows the agency to learn from the experience. To achieve these latter goals, it is necessary to know the effects from the customer's point of view. The results of evaluation research make important contributions to the environmental surveillance phase. Indeed, one of the major intelligence questions with a strong evaluative flavor is: "How is our organization performing?" Hence, the research "steering wheel" forms a closed circle.

At this stage, research is generally quantitative in nature. In some instances, it is ongoing – conducted monthly, quarterly, or annually. Sample sizes are large enough to provide reliable estimates of change. Analysis may include the development of indices or other standard performance measures. For example,

B.C. Transit conducts research quarterly to determine satisfaction with the level of service delivered by conducting an ongoing monitoring study amongst transit riders and to monitor rider response to B.C. Transit advertising and information programs.

Many agencies conduct customer satisfaction research. If done rigorously and using tested customer satisfaction measurement methodologies, this research serves as performance monitoring and evaluation research. For example,

Milwaukee County Transit System has undertaken an ambitious customer satisfaction research program consisting of telephone interviews conducted quarterly with a random sample of 200 riders.

Houston METRO uses a self-administered and telephone administered survey to measure customer satisfaction.

The Research Process

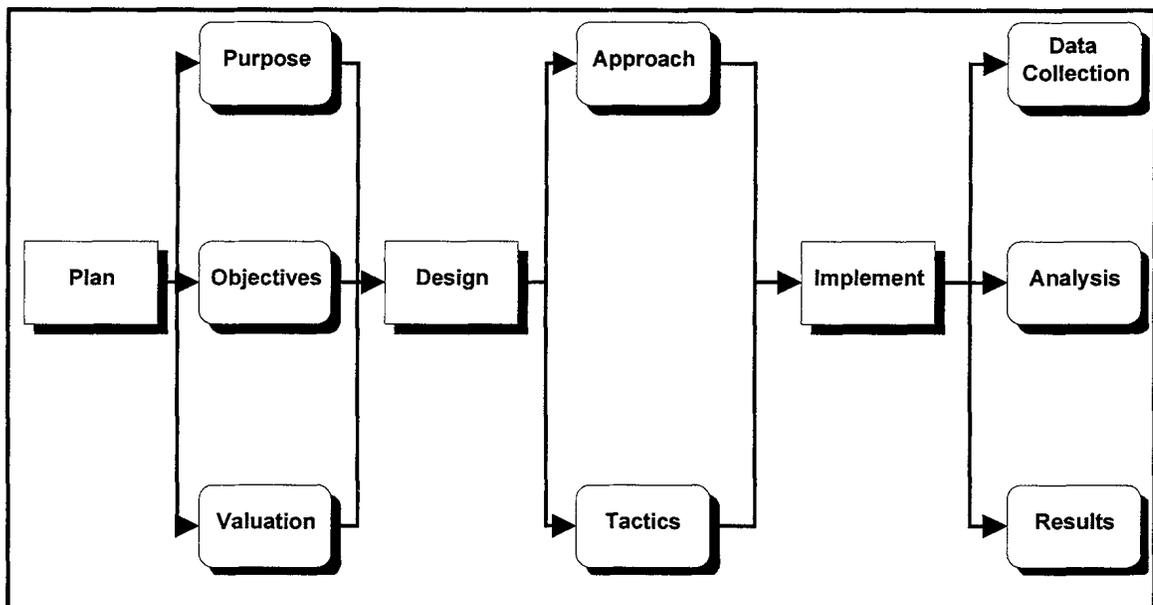
The market research function supports the agency's decision process by:

- Uncovering the need for evidence about the right problem,
- Collecting and evaluating the evidence,
- Presenting the evidence to the right people in the correct form and at the right time, and
- Providing additional support to the manager who must make effective decisions.

The many and varied steps of the market research process can be categorized into three distinct areas. Under each broad area are the distinct stages of the process that must be completed. This basic framework, while oriented toward formal market and customer research, is equally appropriate for other ways of learning about the market. Thus, the process as shown below is generic to all kinds of market inquiry processes.



FIGURE 11
DOING USEFUL RESEARCH – THE RESEARCH PROCESS



Planning for Research

Intelligent planning is an essential first step in developing an effective program of customer research. Effective planning will ensure both the technical and political success of the research effort. The research must be technically correct to avoid providing misleading or inaccurate information that can lead to poor decisions by management. However, simply providing technically sound research does not guarantee that the results will be used. An effective program of customer research must involve the entire organization. The credibility of the process must be established by involving key users of the research in the initial phases of development. Discussion should be encouraged. Objections and concerns should be listened to and addressed early in the planning process.

Planning for research requires a thorough understanding of how a market research project is conceived, designed, and executed. Customer research studies evolve through a series of steps, each representing the answer to a key question.

- **Why should we do this research?** Response to this question establishes the research purpose from the perspective of the management team that will be using the research. To answer this question one must understand the decisions that are to be made and/or the problems or opportunities to be studied.
- **What research should be done?** Here the management purpose of the research is translated into research objectives that tell researchers exactly what information is needed from the research study.
- **Is it worth doing the research?** Each research program should be evaluated as to whether the value of the information that is likely to be obtained from the effort is going to be greater than the cost of collecting it.
- **How should the research be designed to achieve the research objectives?** Design issues include the choice of the research approach – for example, qualitative or quantitative research – and the specifics of how to collect the data and what data to collect.
- **What will be done with the research?** Here, decisions need to be made as to how the data will be analyzed, interpreted, and used to make recommendations for action.

A customer research study is designed and implemented by following a process of sequential steps or stages that guide the project from its conception through the final analysis, recommendations, and ultimate action. The research process is a systematic, planned approach to ensure that all aspects of the research project are consistent with each other.

Using this process as a framework, a sample program and time line for a "typical" customer research program can be developed. Exhibit 7 illustrates a program / timeline for a "typical" quantitative research effort. For example, under a quantitative research effort that includes surveys, a time allowance of six months is common from initial planning to the development of recommendations resulting from the first wave of interviewing. Each stage of this process is very important and should not be rushed. A mistake at an early stage will result in a research program that does not achieve its basic goals and therefore is unlikely to be used.



**EXHIBIT 7
SAMPLE PROGRAM / TIMELINE FOR QUANTITATIVE RESEARCH PROGRAM**

Task	Weeks From Start														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Planning															
Agree On Research Purpose	█	█	█	█	█	█									
Define the Research Problem	█	█	█	█	█	█									
Estimate Cost of Conducting the Research	█	█	█	█	█	█									
Estimate Value of Information	█	█	█	█	█	█									
Determine Resource Requirements	█	█	█	█	█	█									
Draft Research Request	█	█	█	█	█	█									
Send Out Research Requests		█	█	█	█	█									
Select Consultant Team and Negotiate Contract		█	█	█	█	█									
Planning Meeting With Consultant Team			█	█	█	█									
Revise Work Plan As Needed				█	█	█									
Design the Research															
Design Sampling Procedure						█	█	█							
Determine Respondent Selection Instructions						█	█	█							
Develop Questionnaire						█	█	█							
Pretest and Revise Questionnaire						█	█	█							
Develop Analysis Plan						█	█	█							
Compare Cost and Timing Estimates with Anticipated Value and Current Work Plan						█	█	█							
Conduct the Research															
Train Field Supervisors and Interviewers							█	█	█						
Collect Data							█	█	█						
Coding and Data Entry								█	█	█					
Quality Review									█	█	█				
Analyze Data and Report Results															
Write Analysis Programs and Instructions										█	█	█	█	█	█
Run Statistical Analysis Routines										█	█	█	█	█	█
Inspect and Analyze Computer Output											█	█	█	█	█
Compose Report Tables and Graphs												█	█	█	█
Write Narrative Text of Report													█	█	█
Interpret Data and Develop Recommendations														█	█
Edit Report															█
Assemble and Duplicate Report															█
Deliver Final Report to Sponsor															█
Present Results															█
Follow-Up															█

The remainder of this chapter focuses on certain essential elements of the planning process for conducting customer research. Other chapters in the handbook provide detail on those aspects of the research process that apply specifically to customer retention research.

Agreeing On the Research Purpose

While each step in a marketing research project is important, identifying the research **purpose** is the most important. Launching a research study without a clear definition of the research purpose is a recipe for unusable findings and unhappy users. In fact, a survey of nearly 200 companies revealed that inadequate problem definition is a leading cause of failure of marketing research projects. Better communication and more involvement during this phase of the research process is the most frequently mentioned way to improve the usefulness of research.^{xxxiii}

The general purpose of customer research among current transit riders is clear – to obtain a valid and reliable assessment of an agency's performance from the customer's point of view. In short, the goal is to know what customers think about the transit agency and why. This information then provides a target for the strategic alignment of organizational resources to deliver what is most important to customers.

The research purpose comprises a shared understanding between the users of the research and the internal or external persons who are conducting research for three major issues as contained in Roadmap 1. Given the strategic nature of any quality improvement process, key sections of an agency must be involved in defining the research purpose. This helps clarify the needs of various information users, creates a sense of ownership of the process, and identifies how various levels of an agency may have to cooperate to plan action strategies to carry out the research. Equally important is determining how the information will be used once it is developed. Careful analysis of strategic and tactical organizational applications will ensure that issues of design, sample, analysis, reporting, and deployment are structured to provide customer-focused information that can be acted on most effectively.



ROADMAP 1 AGREEING ON THE RESEARCH PURPOSE – ISSUES TO RESOLVE

Issues	Nature of the Issues
✓ Problems / Opportunities To Be Studied	Which problems or opportunities are anticipated? What is the scope of the problems or opportunities and the possible reasons?
✓ Decision Alternatives To Be Evaluated	What are the alternatives being studied? What are the criteria for choosing among the alternatives? What is the timing or importance of the decision?
✓ Users Of the Research	Who are the decision-makers? Are there any covert purposes?

Also central to the process of agreeing on the research purpose is identifying what kind of research is most appropriate for the decision at hand. This does not entail deciding what method of data collection to use or what questions to ask. Rather, the focus is on identifying the kind of marketing or customer research appropriate for a particular situation. A useful guide has been developed that provides a specific and generally dynamic tool to assist in this process.^{xxxiv}

This guide borrows from the classification of marketing strategies developed by Igor Ansoff.^{xxxv} Ansoff states that growth can be achieved through the implementation of product / service strategies within a traditional framework of alternative growth opportunities. These growth opportunities are based on a classification of **products** – present or new – and **markets** – present and new. The guide illustrated

here is similarly substituting only the words "present" with "known" and "new" with "unknown." Then, instead of identifying the appropriate business strategy given the decision facing an organization, appropriate customer or market research strategies are identified. The resulting framework presents four research needs quadrants that illustrate the four most common situations or business scenarios for which a company would need marketing research.



**EXHIBIT 8
A DECISION-BASED FRAMEWORK TO RESEARCH**

	Known Products/Services	Unknown Products/Services
Known Markets	1. Monitor Progress/ Track Trends	3. Prescriptive Solutions
Unknown Markets	2. Descriptive Definition	4. Exploratory Exposure

To apply this framework to a specific decision problem, a manager needs to ask two questions.

- 1) In terms of this decision, how well do I know my customers and my competitors? Do I have (a) many questions and few answers (unknown markets) or (b) few questions and many answers (known markets)?
- 2) In terms of this decision, how well do my customers know my products or services? Do they have (a) many questions and few answers (unknown products / services) or (b) few questions and many answers (known products / services)?

Armed with the answers to these questions, researchers and managers now have a tangible starting point for discussing the purpose of the research, identifying objectives, and specifying the type of research that is needed. The following examples illustrate the application of this framework to some typical decision problems faced by transit agencies.

Unknown Markets and Unknown Products / Services

Agency A's traditional service focus is on fixed routes operating in an urban environment. This agency has developed a new ridesharing program targeted specifically at large employers located in suburban locations. The agency is entering **an unknown market** with an **unknown or unproved product** in terms of an application within its service area. Agency A has many unanswered questions regarding potential customers – users and employers – and just as many questions about both the attractive and potentially bothersome aspects of the proposed service. There is a need for further **exploration** to understand the decision problem. The purpose of the research would be to gain an understanding of this new market in terms of how it may respond to a new product. The following questions might be included. Who are the potential customers? When and where are decisions to use this service made? What aspects of the service represent a "hot" button? How will the new service perform?

Unknown Markets and Known Products / Services

Agency B is considering expanding an established and successful service – retail sales outlets for passes and other fare media – into a new market – suburban malls. This places Agency B into the **unknown markets but known products / services** quadrant. Agency B needs **descriptive** definitions of customers, competitors, and market potential for this service in this new market. The purpose of the research is to gain an understanding of the marketplace, the customer, and the competition. The research also will be used to serve as a benchmark from which to track the success of introducing the service.

Unknown Products / Services and Known Markets

Like many agencies today, Agency C's performance ratings for safety and security have been steadily declining. Consideration is being given to strategies to increase perceptions of safety – an **unknown product / service** – among current riders – **known markets**. What is needed is research that provides **prescriptive** solutions about the poor performance of one aspect of existing service. Questions that might be explored in the research might include "in what ways can or should safety and security measures be improved?" or "what would happen to riders' feelings of personal safety and security if a particular strategy is tried?"

Known Products / Services and Known Markets

Agency D has introduced a customer service initiative that requires a focus on delivering excellent service – **known products / services** – to its current riders – **known markets**. The purpose of the proposed research is to **monitor performance and track trends**, and, by doing so, alert management to impending changes in the market environment. It is believed that this research will serve as a proactive base on which to identify problems and opportunities as they arise.

Defining the Research Problem

"A problem well-defined is a problem half-solved."

The research problem is a statement, in as precise terminology as possible, of the purpose of the market research effort and the information that is needed to achieve the research objective. While this sounds like a simple process, it frequently is the most difficult – and potentially the most important – task a researcher can undertake. Poor problem definition can result in a host of undesirable consequences, including incorrect research designs, inappropriate or needlessly expensive data collection, assembly of incorrect or irrelevant data, and choice of the wrong population to sample.

What often makes the problem definition process so difficult is the communication between the end user of the research – the decision-maker – and the researcher or market research analyst. It is the general presumption in the process that the path to a clearly defined research problem is clear. That is, the decision-maker knows a problem exists, has clearly defined the problem, and the problem is clear to all concerned. Armed with this information, the decision-maker approaches the researcher who immediately produces a research design that clearly provides the information the decision-maker needs

to address this problem. This presumption is rarely the case. It is unfortunate, but true, that most end users of research do not explicitly state their research objectives.

Despite a popular misconception to the contrary, objectives are seldom given to the researcher. The decision-maker seldom formulates his objectives accurately. He / she is likely to state his objectives in the form of platitudes that have no operational significance. Consequently, objectives usually have to be extracted by the researchers. In so doing, the researcher may well be performing his / her most useful service to the decision-maker.^{xxxvi}

What is more often the case is a general feeling that "something is wrong," or a sense that some market or customer research "would be a good idea right now." The problems are buried under a heap of symptoms – financial statements, ridership figures, other research studies, memos, opinions, etc. Decision-makers often come to the researcher with only a vague definition of the problem and may rely heavily on the researcher to help work out a problem's full scope. While there is no single, all-purpose method for defining the research problem, Randall Chapman has developed a simple approach that offers a specific tactic to begin the dialog between the decision-maker and the researcher.^{xxxvii}

This approach has two components.

- The first phase involves formulating an explicit "**research objective**" to guide the research effort. The "*research objective*" is a single-sentence description of the purpose of the market or customer research effort.
- Next, the decision-maker and researcher formulate a series of "**research questions**" that, individually and in total, result in achieving the "research objective." Relevant forms of research questions include, "who?" "what?," "why?," "when?," "where?," and "how?". Some research questions may be cast in terms of hypotheses – "improved headways are more likely to retain current riders than improved access to service."

An iterative process is required to define the research objective and research questions. This process consists of the following steps:

- The decision-maker and the researcher jointly formulate a tentative research objective statement.
- The researcher conducts some exploratory research – literature review, stakeholder interviews, focus groups, etc. – to test the appropriateness of the tentative research objective statement and to develop possible research questions.
- The decision-maker and the researcher jointly revise the research objective statement and formalize the research questions in light of the exploratory research.

A particular problem in the design of transit research projects arises from the necessary procedures inherent in the "request for proposal" process. Here, researchers are frequently presented with a tentative problem definition statement that often takes a research design as the starting point – "I want to do a survey of . . ." or "I want to conduct focus groups with . . ." Even within the context of responding to a request for proposal, a good researcher can develop a clearer research objective. During this period, transit agencies should encourage an open dialog between those responding to an RFP and the potential end users of the research. Once the contract is awarded, this open dialog must continue. During this process, the researcher is likely to ask questions such as:

- What decisions will be made based on this research?
- How will market or customer research influence these decisions?
- What would be the most and least desirable outcome of the market research? Why?
- What information do you already have / What do you already know that is relevant to this decision?
- What information will make a difference in the decisions to be made?
- Why do you need to know this?
- What else do you need to know to make an informed decision?

Answers to these questions should lead to a problem definition statement and a listing of the research questions. It may require more than one pass through the three-step process defined above. As time and resources permit, the researcher and decision-maker should review secondary data, trade industry sources, publications, research studies conducted by other agencies, and the like, to learn more about the dimensions and context of the research problem. Exploratory research in the form of focus groups or in-depth interviews may be required. At the end of the process, however, a clearly written statement of the research objective and research questions should result. Exhibit 9 illustrates some research objectives and corresponding research questions.



**EXHIBIT 9
DEFINING THE RESEARCH PROBLEM**

SITUATION	RESEARCH OBJECTIVE	RESEARCH QUESTIONS
After some exploratory research, [agency] wanted to gain a better understanding of the causes for declining ridership.	To determine the factors that account for [agency's] decline in ridership among those using public transportation for nonwork travel during the first quarter of the year when there was no corresponding decline in ridership among other key segments.	<ol style="list-style-type: none"> 1. What tangible attributes of the service are most desired? 2. Have those riders who used public transportation for nonwork travel switched to another mode or do they no longer travel for nonwork purposes? If they have switched, why? 3. Has there been a change in nonwork travel patterns making the use of public transportation no longer a viable opportunity? 4. How do these riders perceive the [agency's] delivery of those aspects of service that are most desired (see question #1)? 5. Have these riders perceived any change in the agency over the last year? 6. Has there been a change in the perceived value of service among this market in the past year?



**EXHIBIT 9
DEFINING THE RESEARCH PROBLEM**

SITUATION	RESEARCH OBJECTIVE	RESEARCH QUESTIONS
<p>[Agency] operates a regularly scheduled shuttle service along a major corridor of business parks. The current service starts at a nearby train station. [Agency] is interested in assessing demand for a similar service serving the same corridor but originating at a park-and-ride lot in an area where there is no existing rail service.</p>	<p>To determine the market potential for [agency's] shuttle service between [park-and-ride lot location] and [corridor].</p>	<ol style="list-style-type: none"> 1. How often do persons working in this corridor travel between lot and corridor, when do they usually travel, and what mode of transportation do they presently use? 2. What factors do travelers take into account when choosing a travel mode? What are the relative importances of these factors? 3. What environmental trends may impact demand for transportation services in this corridor? 4. Under what circumstances would travelers find the proposed service to be of interest? 5. Assuming the introduction of the proposed service, what kind of service design – headways, access, etc. – and marketing programs would be appropriate?

To summarize, early conceptualization at the problem definition stage is crucial to conducting effective and efficient market and customer research. In addition to encouraging early thinking in the research process, the problem definition phase using this approach encourages an early dialog between the decision-maker and the researcher, thereby ensuring that the study is oriented toward a relevant managerial problem. This dialog also increases the chance that the study will have the maximum impact on managerial decision-making associated with the problem. Finally, it serves as a useful communications device to relevant "others" who, while not directly involved in the research effort, are stakeholders to whom the research effort may be of more than passing interest.

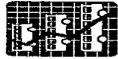
Estimating The Cost Of Conducting Customer Research

Many factors affect the cost of customer research. For example, in a random household telephone survey costs are influenced primarily by:

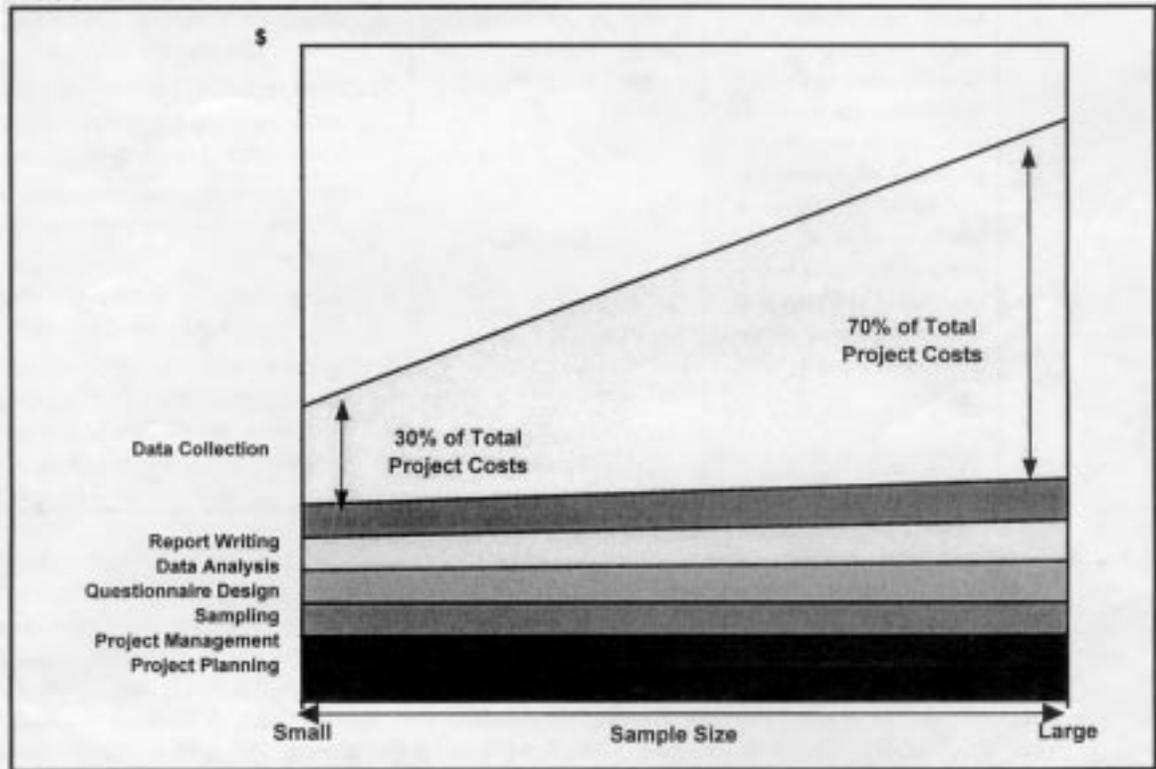
- 1) Sample size,
- 2) The "incidence" of qualified respondents in the population, and
- 3) The length of the survey.

A "typical" quantitative research effort can cost as little as \$5,000 or as much as \$250,000 or more. It would be misleading, therefore, to present in this handbook examples of budgets for a "typical" customer research program targeted at existing transit riders. Instead, an overview of major elements affecting the cost of customer research is presented.

Included in the cost of any research study are labor costs and direct costs for materials and supplies. Moreover, the cost of conducting research also consists of fixed costs – that is, costs that are independent of variable costs affected by sample size and survey length. Figure 12 illustrates the relationship or "elasticity" between fixed and variable costs as sample size increases.



**FIGURE 12
COST ELASTICITY**



In addition to sample size, two other factors typically drive the cost of data collection – survey length and the "effective study incidence" (E.S.I). Obviously, as survey length increases, so do the costs of data collection. A decrease in the "effective study incidence" also will result in an increase in data collection costs.

The ESI is the proportion of qualified respondents in any given sample.^{xxxviii} For example, if a transit agency wants to conduct a random telephone survey of riders in their service area, the effective study incidence would represent an estimate of how many persons would need to be screened in order to find a rider. The basic formula for the calculation of the effective study incidence is:

$$\text{Effective Study Incidence (ESI)} = \frac{\text{Total Number Screened and Eligible}}{\text{Total Number Screened}}$$

The lower the ESI, the greater the costs of data collection. Exhibit 10 shows the relationship between the length of the survey, the effective study incidence, and the cost of data collection as measured by the number of interviews that can be completed in an hour. The actual cost of data collection can be estimated by multiplying the number of completed interviews or "completes" per hour times the labor rate charged for data collection – interviewing and supervision time.



**EXHIBIT 10
EFFECTS OF SURVEY LENGTH AND EFFECTIVE STUDY INCIDENCE ON
DATA COLLECTION COSTS**

ESI	Survey Length (in minutes)					
	5	10	12	15	20	25
100%	4.0	2.3	2.0	1.7	1.2	1.0
90%	3.8	2.3	2.0	1.7	1.2	1.0
80%	3.6	2.2	1.9	1.6	1.2	1.0
70%	3.4	2.1	1.8	1.6	1.2	0.9
60%	3.2	2.0	1.8	1.5	1.1	0.9
50%	2.9	1.9	1.7	1.4	1.1	0.9
40%	2.5	1.7	1.5	1.3	1.0	0.9
30%	2.0	1.5	1.4	1.2	1.0	0.8
20%	1.5	1.2	1.1	1.0	0.8	0.7
10%	1.2	1.0	1.0	0.9	0.7	0.6
5%	0.5	0.4	0.4	0.4	0.4	0.3

In addition to labor costs, there are a number of non-labor or direct costs that influence the total cost of a research project. These include long-distance telephone charges, purchased sample or lists, reproduction, faxes, delivery charges, travel, etc. There may also be subcontractor fees or charges for special services such as translating and/or administering multi-lingual surveys, the use of sophisticated data analysis procedures, or presentations.

When estimating a project, a research firm will typically break the project down into stages or tasks. Costs are then assigned by task either as a lump-sum amount or by determining the number of hours associated with a task and multiplying those hours by the labor rate of the person performing the task. When requesting a proposal, responding firms should be asked to break down their costs by a specified list of tasks. This will allow those at the transit agency evaluating the responses to better compare the amounts charged and to better evaluate the amount of effort being expended on any given task.

As demonstrated above, the costs of customer research are a function of three or four factors. Therefore, research firms responding to a request for proposal with clearly specified tasks and criteria are likely to submit budgets within a narrow range – typically ranging 10 percent around the average bid amount. When evaluating research proposals, the client should be aware of extremely low bids. It is likely that this firm has left out certain elements and/or the technical quality of the resulting project may not be as good. Alternatively, the client may be faced with a change order requesting more money midway through an important project when you have little room to maneuver.

Generally speaking, qualitative research projects are less costly than quantitative efforts. A "typical" focus group with customers averages between \$2,500 and \$3,000 per group. These charges include cost of recruiting, facility rentals, moderating, analysis and reporting, respondent fees, and incidental charges.

While the "bottom line" cost of a typical qualitative research project is less than a quantitative program, on a per respondent basis, qualitative research is very expensive – between \$250 to \$300 per respondent compared with anywhere from \$20 to \$50 per respondent for survey research. Moreover, because focus groups and other qualitative research work is less "scientific" than quantitative research, there may be an even greater temptation to cut costs. The same careful attention, therefore, should be paid to the design of qualitative research as to quantitative research. A lack of commitment at this point because of the perceived relatively small "investments" in this effort can lead to less than satisfactory results. Transit agencies, or the suppliers responding to a proposal request may be tempted to

economize by eliminating elements that help contribute to an effective focus group session. However, as illustrated below, reducing or cutting back on elements associated with qualitative research can diminish the effectiveness and potential application of any results.



**EXHIBIT 11
POSSIBLE IMPLICATIONS OF FREQUENT ECONOMIZING STRATEGIES
EMPLOYED IN QUALITATIVE RESEARCH**

ECONOMIZING STRATEGIES	POSSIBLE IMPLICATIONS
Conduct the session in the agency's conference room instead of facility specifically designed for focus groups	<ul style="list-style-type: none"> • Lack of separation between focus group participant and agency representatives can discourage free flow of thoughts.
Avoid financial incentives for potential participants.	<ul style="list-style-type: none"> • Those still volunteering to participate may not feel as obligated to provide their thoughts on the subjects raised. • Lack of an incentive may cause a bias in the groups that would be difficult to control without careful screening. • Groups may favor those who have lower incomes or are economizers by nature. Also may favor those with a specific agenda or message to deliver rather than a representative group of participants.
Avoid using an "outside" panel moderator.	<ul style="list-style-type: none"> • Can result in less-than-candid input from respondents regarding key issues. • Moderator may be too close to the subject or vested in the outcome to be unbiased. • High potential from peers or superiors to make sure outcome of groups supports the management's position. • Results may be suspect because of a lack of trust in objectivity of moderator.

Estimating The Value of Information

While all information has at least some inherent value, not all decision problems facing an organization require customer research. In a number of situations, it is best not to conduct customer research at all. These situations include:

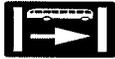
- **A Lack of Sufficient Resources:** There are two situations when a lack of resources should preclude the use of customer research. First, an organization may lack the funds and/or human resources to do the research properly. For example, a project may call for a sample size of 800 interviews to provide a reliable estimate. However, due to the low incidence of qualified respondents in the population, the budget only allows for 200 interviews. In this latter case, the quality and reliability of the information may be highly suspect. Alternatively, funds may be available to do the research properly, but insufficient to implement any decisions resulting from the research. For example, customer research may show a need for the construction of new bus shelters or the purchase of new buses for which an agency has no budget and no viable means of obtaining money for this major capital investment.

- **The Research Results Would Not Be Useful:** Sometimes research is conducted to gather information that is of little use for decision-making. For example, consider a study that finds that the primary reason former riders no longer ride transit is because they have purchased a car. A service planner would be hard pressed to use this information.
- **Poor Timing in the Marketplace:** Market or customer research should not be undertaken if the opportunity for the successful introduction of a new program or service has already passed or if the research cannot be completed in a timely enough manner before the decision can be made.
- **The Decision Already Has Been Made or Is Predetermined:** Decisions are driven by many factors. In some cases, the nature of the decision is predetermined or management has made up its mind as to what the decision will be. No amount of information will change their minds. Here, undertaking a marketing research study not only is a waste of money but also may raise a number of ethical questions.
- **Managers Cannot Agree On What They Need to Know:** Although it may seem obvious that research should not be undertaken until objectives are specified, it sometimes happens. More often, important potential users of the research are not consulted regarding their information requirements. On the other hand, these users are unable to agree on the research purpose and information requirements. Despite these drawbacks, an organization may simply say, "Well, let's just go ahead and do the study anyway and maybe we will better understand the problem and know what steps to take." Here, the wrong phenomena may be studied or key elements needed for management decision-making may not be included.
- **The Information Already Exists:** There is a wealth of secondary and primary research available to all organizations. Sometimes, one department or division of an agency may have undertaken a study that another department knows nothing about. Under these circumstances, additional research is redundant and a waste of money.
- **The Costs of Conducting Research Outweigh the Benefits:** There is a cost to gathering any information. Even a trip to the local library to conduct a data base search of relevant literature has costs attached in terms of manpower, computer time, and copying or printing charges. Research should be undertaken only when the expected value of the information is greater than the cost of obtaining the data.

How should a transit agency go about determining the value of customer research? While there are elaborate models to estimate the value of information, a simple, qualitative analysis can be undertaken. The value of customer research to a transit agency depends on three main factors:

- 1) The cost of making a wrong decision,
- 2) The degree of uncertainty surrounding the decisions or actions, and
- 3) The amount of uncertainty the customer research can reduce.

Each of these factors should be assessed carefully to estimate the value of the research. Then the expected value of the research can be compared to the expected costs of conducting the research and a decision made as to whether the benefits of the research outweigh its costs. **As a general rule of thumb, the potential value of the information should be at least two or three times the entire cost of the customer research.** Roadmap 2 illustrates those factors that determine the value of customer research.



ROADMAP 2 DETERMINING THE VALUE OF CUSTOMER RESEARCH

<i>Factors Indicating High Value</i>	<i>Factors Indicating Low Value</i>
✓ The cost of selecting a "bad" alternative ("go" error) or failing to select the best alternative ("no-go" error) would be relatively high.	✓ The cost of selecting a "bad" alternative ("go" error) or failing to select the best alternative ("no-go" error) would be relatively low.
✓ There is a high degree of uncertainty about which alternative to choose, based on existing information.	✓ There is relatively little uncertainty about which alternative to choose, based on existing information.
✓ Customer research is likely to reduce a large proportion of the existing uncertainty.	✓ Customer research will remove only a small amount of uncertainty surrounding the decision.

Customer research is conducted to **reduce the risk** inherent in any decision and the **cost** of making the wrong decision. There are two basic types of decision errors as illustrated in Roadmap 2. They might be labeled "go" errors and "no-go" errors. "Go" errors are the more obvious of errors. **"Go" errors** result when a decision-maker takes a course of action that proves to be costly or unsatisfactory. "Go" errors are also frequently referred to as "down-side" risk. The simplest example of when a "go" error might occur is in the instance when an agency is considering the introduction of a new program or service. The basic decision is whether to proceed with the introduction. A "go" error would result if the agency went ahead with the introduction and it failed.

"No-go" errors are more obscure. "No-go" errors result when a decision-maker either fails to take some action that would have positive results, or does not select the alternative that would have the most positive results, choosing instead some less positive course of action. "No-go" errors may also be viewed as "opportunity costs." A "no-go" error might also occur in the introduction of the same new program or service discussed above. Here, however, the agency may have several alternatives to consider. For example, structuring a new route involves questions regarding the frequency of service, number of stops, and whether or not transfers are required. A "no-go" error would result if the agency introduced this new route without the optimal configuration of these characteristics.

In general, the greater the potential gains or losses inherent in a decision or set of decisions, the greater the cost of uncertainty. Customer research that can reduce very costly uncertainties has commensurably more value.

The **amount or degree of uncertainty** is a separate issue from the cost of uncertainty. In some cases, the decision-makers may be sure about what decision to make. There may already be a large amount of information available about the issues at hand. In other cases, there may be a large degree of uncertainty surrounding the decision. Moreover, there is little or no information about the issues available.

Here, the evaluation of the value of information comes down to two basic questions:

- 1) What is the cost of making a "go" or "no-go" error?
- 2) How much uncertainty surrounds the decision?

The greater the cost of making an error and the more uncertainty surrounding the decision, the greater the value of customer research.

The final issue in determining the value of customer research is an evaluation of whether the proposed research can **reduce the uncertainty**. No single research program can provide perfect information – that is, completely reduce the uncertainty inherent in the decision. Some proposed research addresses nearly all the issues or problems at hand, greatly reducing the uncertainty. For example, if a transit agency wants to know just before an election the proportion of voters likely to support an initiative on the ballot supporting a tax increase for an improved bus system, it could design a research program that would reduce nearly all uncertainty. In other cases, only some of the uncertainty can be reduced. For example, in the same voter survey a transit agency may want to gain an understanding of the relative importance voters place on a complex set of issues surrounding the development of a transit plan. Here, a well-designed customer research program may reduce only a relatively small part of the uncertainty.

Even when a customer research program can address a specific set of questions or issues, the degree of uncertainty that can be reduced may depend on how the research is going to be used. If the research is being used to describe the environment in which a new product or service is going to be introduced, a great deal of uncertainty may be reduced. For example, if a transit agency wants to understand the degree to which riders use existing programs or services, a research program could be designed that provides nearly definitive results. On the other hand, if the research is being used to predict the success of a new product or service, the results may be far more tentative. For example, determining the extent to which riders will continue to use existing programs and services in the future would lack the same degree of certainty as the previous question.

In summary, **research should be conducted only when the benefits of the research outweigh the costs of conducting the research**. The benefits of the research can be estimated by making a thorough evaluation of the costs of making the wrong decision, the degree of uncertainty surrounding the decision, and the extent to which this uncertainty can be reduced through a well-designed and conducted customer research program.

Determining Resource Requirements

Conducting customer research often involves several people. Large research projects may require the services of a hundred or more people. Different aspects of the work may have special roles and responsibilities to be formed by different people. Some of these people may be internal personnel at a transit agency. In many cases, outside firms – research, planning, marketing, and/or advertising consultants – may also be used. During the planning and initiation of a research effort, the major focus is on the roles of:

- 1) Those who sponsor the survey, pay for it, and seek the information it will generate, and
- 2) Those who actually design and conduct the research.

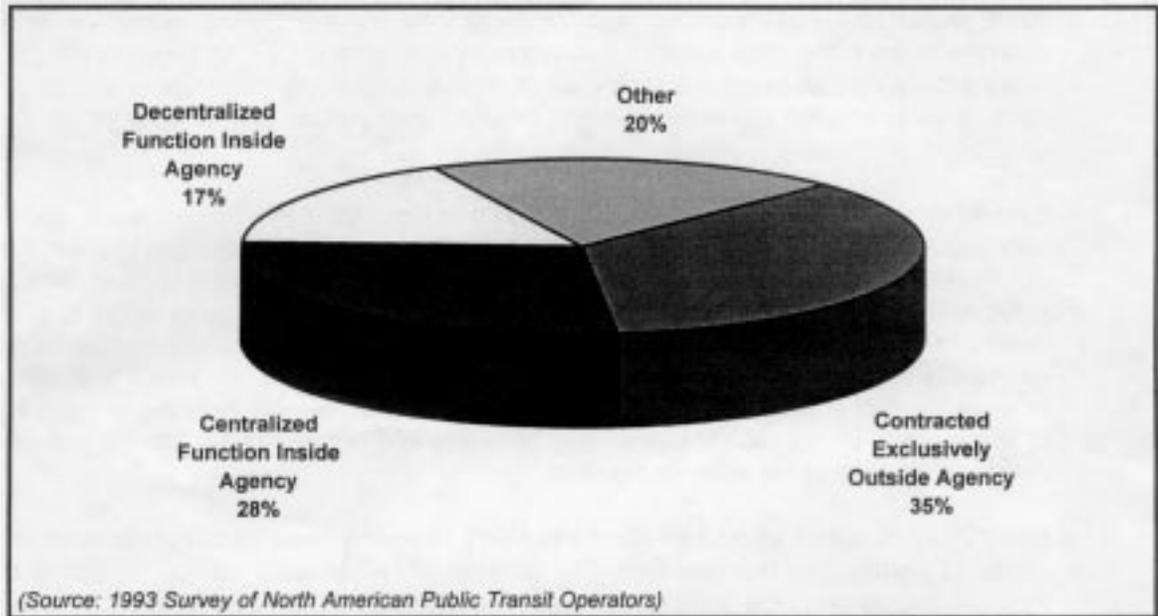
In general, managers can acquire the necessary information for decision-making from two basic sources: in-house resources and external suppliers. In-house resources may be an actual research department; however, one or two people may be assigned the responsibility of managing the market research function on an ongoing basis. In other cases, a person may be assigned the responsibility of managing a specific research effort.

A survey of transit agencies showed that 28 percent have a centralized market research function or department within the agency. More (37 percent) rely on a more decentralized function or some other organization. More than one out of three agencies have no in-house resources, relying exclusively on outside agencies to perform the market research function (Figure 13).^{xxxix} As would be expected, the

market research function varies by the size of the agency. Large agencies most often have central market research departments. Mid-sized agencies are characterized more by contracting out market research exclusively.



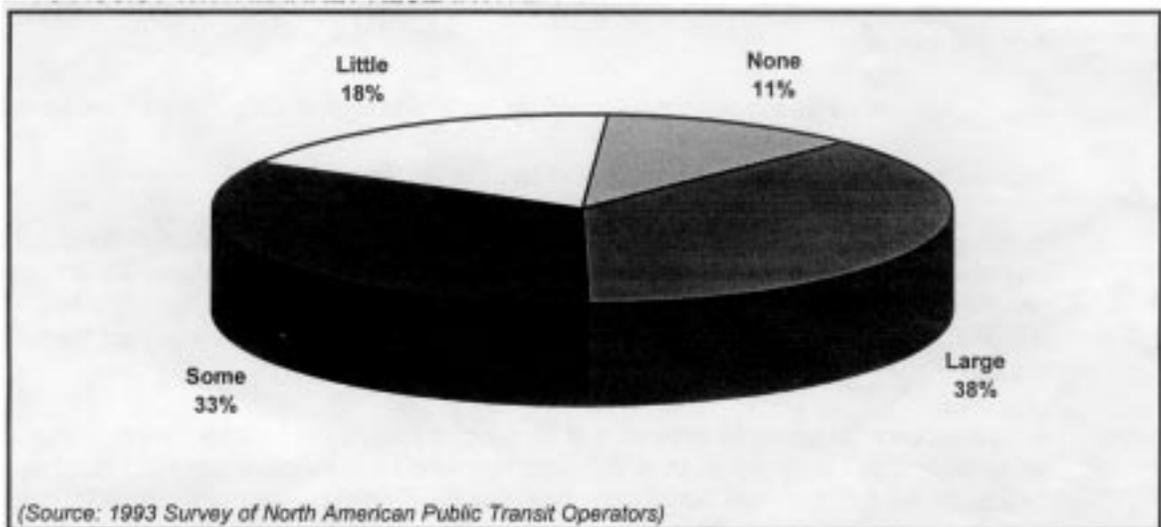
FIGURE 13
THE MARKET RESEARCH FUNCTION



Usually, transit agencies use a mix of in-house and external resources. Over seventy percent of agencies that have done market research in the past three years used outside consultants to assist in their efforts to "some" or "a large" extent (Figure 14). Large agencies are more likely to use external resources than are mid-sized or small agencies. Transit agencies most often rely on market research consultants or firms and/or transportation planning consultants to assist them in their market research efforts.



FIGURE 14
EXTENT TO WHICH TRANSIT AGENCIES USE OUTSIDE CONSULTANTS TO ASSIST WITH MARKET RESEARCH EFFORTS



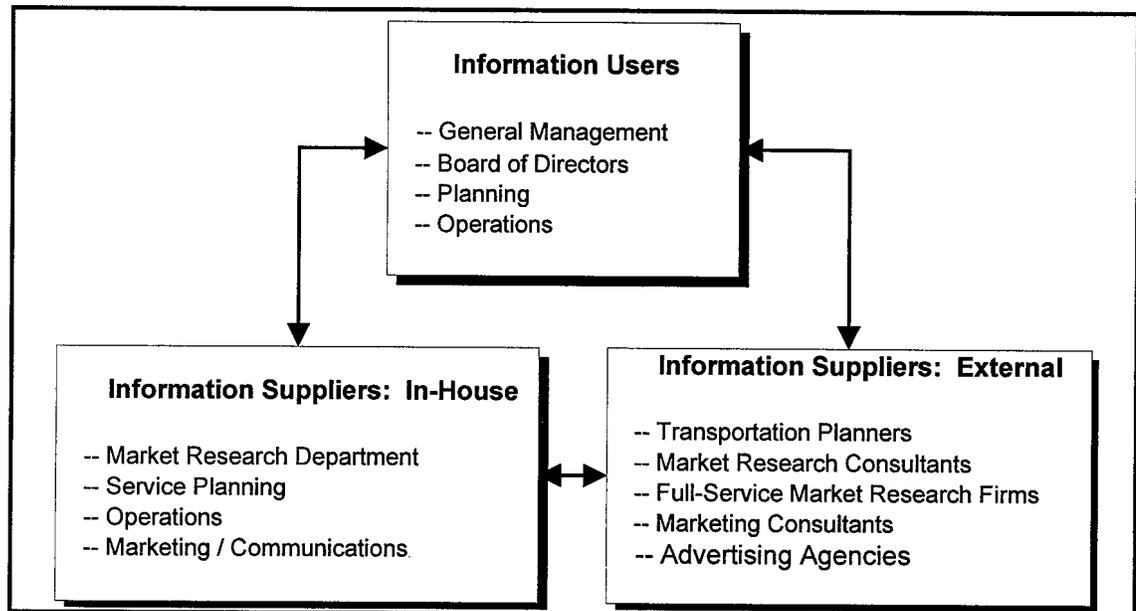
Typically, outside suppliers get their direction from and provide information to an internal contact assigned to the research. This internal person carries out several tasks including:

- Translating into specific information requirements the problems and issues as identified by sections within the agency who will be using the information,
- Deciding how the information will be collected and by whom, and then
- Working with agency staff to interpret the findings.

Figure 15 shows the interaction between the participants in a typical market or customer research activity.



**FIGURE 15
PARTICIPANTS IN A TYPICAL MARKET RESEARCH ACTIVITY**



As Figure 15 illustrates, there may be many different participants in the research process. Transit agencies frequently do a good job of identifying who within the agency should be involved in the research effort. Moreover, they will frequently include external information suppliers early in the process. For example, projects related to marketing and communications agencies will generally include representatives from marketing as well as their advertising agency. Projects related to service planning will generally involve service planners and transportation planning consultants.

When developing a research project, managers also should consider who beyond an organization's management team might be research customers. The nature of the research and the methods of presentation may relate to these other clients. Others beyond internal management may have a profound ability to support the application of research or hinder its effectiveness. Included in this external research client group may be:

- An agency's governing board or council.
- Other government agencies with oversight or cooperative arrangements with the transportation agency (i.e. metropolitan planning organizations (MPOs)), state and federal governments, and the local jurisdictions in which an agency operates.

At most transportation agencies, very few major decisions are made without board or council involvement. Yet, many of these governing groups are never exposed to research available within their organizations. In some cases, this is deliberate; because senior management doesn't want to expose board members to "excessive" detail. In others because senior management itself does not feel confident enough in the research to expose themselves to board questioning. Moreover, in some cases, they fear the board is not capable of understanding the research.

Though board makeup varies considerably from agency to agency, the later fear "of the board not understanding" is probably the least valid reason for not presenting research to the group. Many, if not most, governing bodies are made up of elected officials (either directly elected or on the board by virtue of being elected to another office). Research – in the form of polling – is usually an integral part of these officials' careers. In many cases, they are far more familiar with the value of market research than a transit agency's senior staff. Other boards include members of the business community with varying levels of marketing research sophistication.

The key to working with these governing agencies is for senior management to conduct an informal survey of what level of sophistication and detail the board is interested in before research results are presented to them. For major projects, it is probably a good idea to have board participation and input into the initial planning of a research project. If board members have participated in the development of a research project it is a great deal more likely they will "buy into" its findings.

The results of a particular research project also may be of interest to a variety of other government agencies within a transit operation's jurisdiction. For example: market share/ mode split information may be of interest to an MPO, or attitudes toward transit performance may be of interest to an agency's funding contributors such as state governments.

One way to ensure that research is used by all appropriately is to conduct a "research inventory" check of agencies that are likely to share research information. This inventory combined with discussions with other potential information users should be conducted before a research project is fielded.

Understanding the needs of other governmental bodies with a legitimate interest in the transportation agency's research can be helpful in planning research projects. Cooperation between various agencies can ensure that apples are indeed compared with apples and that one group doesn't unnecessarily duplicate the efforts of another.

Though the nature of the market research function frequently dictates that outside help be sought, there are cases when certain types of research can be done more efficiently and economically in-house. A caveat to all the examples listed below is that someone on staff has the expertise in market research and the time needed to conduct the studies.

- In situations where survey work is continuous, requiring a fixed level of staffing, research is frequently most effectively conducted in-house. For example, some agencies are now conducting monthly mini-studies to track various public perception shifts on an almost "realtime" basis. It is the type of project where a fixed level of staffing can be determined and hired at likely savings to the agency.
- Small-scale standardized route or station-specific studies can frequently be conducted efficiently utilizing open in-house staff time as available. If a series of these types of studies can be planned – well in advance – appropriate staffing might be retained to reduce the cost of outside consulting.

- Hybrid projects where work is split between outside consultants and in-house staff. Many annual or semi-annual tracking surveys lend themselves to a higher level of in-house participation for design and analysis. The outside research firm's roll may be restricted to data collection and entry with all the planning, processing and analysis conducted in-house.

The common element in all the above examples is that they are routine repetitive projects, for which staff time can be regularly allocated. Research efforts that require intensive effort for short periods do not lend themselves to efficient use of in-house staff.

At some time, nearly all research users will use the services of outside research specialists. The role of these specialists may be limited to raw-data collection, with the research approach, questionnaire, and sampling method provided by the transit agency. At the other extreme, the agency may assign the entire task to the outside consultant who then becomes responsible for every step up to the completed report and action recommendations. Many related considerations will influence the decision to "go outside", including:

- Internal personnel may not have the **skills or experience**. Few but the largest agencies have specialists in those four major resource areas that are usually associated with market research tasks: 1) focus group moderators, 2) data collection (including facilities and personnel), 3) statisticians, and 4) project managers. In addition, outside suppliers have special facilities and/or expertise – an established telephone bank, focus group facilities, bilingual interviewing – that can support a research task. Frequently, outside assistance is used to gain this specialized expertise. Moreover, outside help may be called in to **boost internal capacity** in response to an urgent deadline.
- It may be **cheaper** to go outside for services. Specialists who have encountered similar problems may be more efficient in dealing with the problem, and because they are not on staff, there is no risk of under-utilizing their time.
- **Political considerations** may dictate the use of outside research specialists whose credentials are acceptable to all parties in an internal policy decision. An outside supplier of research services can provide an objective, third-party view on such an issue. Also, an outside supplier can be used to impart information that may be difficult for an internal staff member to put forth.
- Finally, customer research is used increasingly in litigation or in proceedings before regulatory and legislative bodies. The **credibility of the findings** generally will be enhanced if the study is conducted by a respected outside resource. Moreover, this kind of research often is subjected to critical questioning and scrutiny. It is more likely to stand up if designed to high standards that may exceed those used within the agency for routine decision-making purposes.

Drafting the Research Request

If a decision is made to use outside resources to assist in the research effort, there still remains the question of which consultant or supplier to retain. Transit agencies typically are required to use a formalized "request for qualifications / proposal" to identify and select qualified firms. It is very important that this research request ask responding firms to provide recommendations on the most appropriate research design for the decision problem.

The components of a good research request should include, but are not limited to the following seven major elements:

- **Action** – the actions that are contemplated on the basis of the research.
- **Origin** – the events that led to a need for the decision to act. Even though the events may not directly affect the research that is conducted, they help the researcher understand more deeply the nature of the research problem.
- **Information** – the questions that the decision-maker needs to have answered to take one of the contemplated courses of action.
- **Use** – a section explaining how each piece of information will be used to help make the action decision. Supplying logical reasons for each piece of the research ensures that the questions make sense in light of the action to be taken.
- **Targets and subgroups** – a section that describes from whom the information must be gathered. Specifying target groups helps the researcher design an appropriate sample for the research project.
- **Logistics** – a section that gives approximate estimates of the time and money that are available to conduct the research. Both of these factors will affect the techniques finally chosen and avoid the submittal of designs that simply cannot be completed in the time frame available or that are too expensive given the current allotments.^{xi}
- **Comments** – a final section of the research request can be used to include other comments and information relevant to the project that will help the writer better understand the problem and address the scope of work. This may be additional background information or may simply focus on the logistics of submitting the proposal – for example, date and time due – or the basis for evaluating responses.

Roadmap 3 illustrates how the request can be developed so that potential suppliers can effectively address each of these components. Under this scenario, a transit agency will be carrying out construction activities that will result in temporary service disruptions. The research will focus on developing information that will help the marketing and operations staffs develop a communications program that will help minimize customer dissatisfaction and possible loss of riders.



ROADMAP 3 COMPONENTS OF A RESEARCH REQUEST

Component	Example
<p>✓ Decision: Describe the decision problem facing the agency that requires research. Ensures that the response focuses on what information is needed and provides a guide to the researcher in creating the research design and analysis plan.</p>	<p>How to communicate information to customers about planned service disruptions.</p>
<p>✓ Origin: Provide a statement of the events that led up to the decision to act.</p>	<p>Construction at rail stations will cause schedule changes as well as temporary closures of the stations.</p>
<p>✓ Use: Explain how the information will be used to help make the actual decision. Gives reasons for each piece of the research and ensures that the questions make sense in light of action to be taken.</p>	<p>Results will be used by the marketing departments and operations division to develop an integrated communications program to minimize customer dissatisfaction and possible loss of riders.</p>
<p>✓ Information Requirements: List the questions that need to be answered to take action. Carefully considering this area improves the efficiency of the research and ensures that the questions make sense in light of the action to be taken.</p>	<p>Provide insight into experience with service disruptions and impacts on satisfaction and perceptions of effectiveness of methods to notify riders about service changes. Identify the best methods of communication and the information required. Assess reactions to current and proposed materials informing riders about service disruptions.</p>
<p>✓ Targets and Subgroups: Describe from whom the information must be gathered for the action to be taken. Helps the researcher design the sample for the research project.</p>	<p>Current riders of rail lines that will be experiencing service disruptions.</p>
<p>✓ Logistics: Time and budget constraints affect the research design selected for a project. Provide approximations of the amount of money available for the project and the amount of time that exists to complete the project. With this information, a more realistic research approach is likely to be developed. Also, responses will be based on a similar set of assumptions. Comparisons among proposals can focus on other issues, such as quality, expertise, etc.</p>	<p>Service disruptions are scheduled to begin within the next ten to twelve weeks. At least four weeks are needed to produce and place the final communication materials. Moreover, announcements should begin at least one to two weeks before the schedule disruption. The agency has budgeted approximately \$20,000 for this project.</p>
<p>✓ Comments: Include other comments and information relevant to the project that will assist the researcher in fully understanding the nature of the problem.</p>	<p>Submit a written statement of qualifications and a scope of work by [date]. Interviews will be held by phone on [date] and a final decision made by [date].</p>

Selecting the Consultant Team

In many cases, the final decision of what consultant to use is based on the estimated cost for services. In some cases, agencies must accept the "low-cost" bid. Past performance on other contracts also is an important consideration. The judgment of which supplier to use should be made only after the following steps have been followed:

- A thorough search for names and companies who have acknowledged expertise in the area of the study.^{xli}
- The selection of a small number of bidders.
- Interviews with the person who would be responsible for the project, asking for examples of work on similar problems, their procedures for working with clients, and the names of previous clients who would provide references.
- A check of references of each potential supplier, with special attention to comments on their depth of competence and expertise, their creativity in dealing with problems, and the quality and adequacy of resources available.
- Selection on the basis of how well the problem and objectives have been understood, the comments by the references, and whether the quoted price or fee is a good value in light of the research approach that is proposed. Seldom is the lowest quotation going to be the best value. To minimize the problem of comparability, have all bidders respond to the same, precise study specifications.^{xlii}

Transit agencies use many methods to evaluate responses to a research request. Some agencies use a highly structured method with points allocated to each criteria used for evaluation. Others use a less formal process, relying more on a qualitative assessment of suppliers that includes a general comfort level with the firm and the key personnel.



ROADMAP 4 CRITERIA FOR EVALUATING A MARKET RESEARCH PROPOSAL

<i>If more than one research firm is asked to submit a proposal, the prospective client or "sponsor" should indicate how the successful proposal will be determined. Factors that might be used to select the contractor could include:</i>
✓ Understanding of how the results of the research will be useful.
✓ Recognition of the types of information that will be used.
✓ Ability to provide the necessary resources, that is, personnel, facilities, equipment, etc..
✓ Relevant experience of the research firm.
✓ Background / experience of individuals who will be assigned to the work.
✓ Recognition of the limitations of the research.
✓ Specificity, with respect to the procedures to be used, can and should be outlined in detail before beginning the work.
✓ Cost of services.
✓ Statements of commitment to follow ethical and professional procedures at all time.
<i>(Source: Council of American Survey Research Organizations (CASRO) Code of Business Practices.)</i>

Planning Meeting

Whether using outside firms and consultants to assist in the research effort or an in-house research department, the transit agency and the researcher have certain responsibilities to ensure the most effective communications and use of resources throughout the research effort. A planning meeting following the selection of the consultant team represents an excellent opportunity to openly discuss all aspects of the proposed research program and to reach a consensus on the ultimate research purpose and study objectives.

Often those requesting the research are unfamiliar with the research process or the specific methodology that is proposed. They may be executives, managers, or professionals whose areas of expertise are not research-related. Their understanding of the customer research process may range from accurate perceptions to only vague notions. On the other hand, they're also likely to be quite familiar with the problems, decisions, actions, conditions, and perhaps the "conventional wisdom" of their own discipline, industry, or institution. To increase the usability of the research results and to ensure that information obtained is targeted to the decisions at hand, during the initial planning meeting the managers requesting the research should clearly indicate the ultimate purpose of the survey. They should also give researchers enough background information to provide them with a basic understanding of issues being considered and potential application of research results. Finally, managers should be prepared to provide researchers with clear guidelines concerning the time requirements for the research effort and the general level of funding or resources that are allocated to the project. The overall sponsor's role in carrying out research activities is outlined in Roadmap 5.

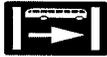


ROADMAP 5 CHECKLIST FOR SPONSORS INITIATING MARKET RESEARCH

✓	Furnish the researchers with sufficient background information about the setting and operations.
✓	Provide a description of the issues, problems, or uncertainties that lead to consideration of market research.
✓	Indicate the type of information that would solve the problem or reduce the uncertainty.
✓	Describe what decisions, choices, or actions will be based on the research results.
✓	Provide the researcher with information regarding the value of the information, based on potential risks or opportunity costs.
✓	Specify the time requirements and level of funding and other resources allocated to the project.

Researchers should be thoroughly familiar with the capabilities and limitations of customer research in general, and specifically the methodology proposed. The researcher should inquire thoroughly about the information needs, the nature of the decisions, and actions to be based on the research results, and the overall operation of the agency sponsoring the research. The researcher can then portray the alternatives and point out the research methods that might be used.

To achieve this dialog, the sponsors of the research program must have a sense of trust in those conducting the research. They should feel free to provide the information required in order for the researcher to fully understand the decision problems and information requirements. The overall role of the researcher in carrying out research activities is outlined in Roadmap 6.



ROADMAP 6 CHECKLIST FOR RESEARCHERS DURING PROJECT INITIATION

✓	Know the capabilities and limitations of survey research and indicate them to sponsors when appropriate.
✓	Obtain background information about the operations, policies, and procedures of the sponsor.
✓	Inquire about the nature of the uncertainty, problems, or issues to be the focus of the research.
✓	Ask what decisions, choices, or actions are to be based on the results of the research.
✓	Seek indications of the time requirements for the research and the resources available.
✓	Describe the type of cooperation and participation that will be required of the sponsor over the course of the project.
✓	Explain what ethical responsibilities regarding the project the researcher has to the sponsor and the respondents.
✓	Encourage the confidence and trust of the sponsor through candor and professional conduct.

The results of this planning meeting should be summarized in a final work plan. The work plan should clearly outline any changes in or additions to the original Scope of Work that may have been presented in the consultant's original response to the research request. Moreover, this work plan should contain a detailed schedule of all tasks and the resource requirements required for each task. This work plan should form the basis for all work on the project. Many agencies include this final work plan as part of the consultant contract. Any deviations from this work plan should be agreed to by both parties – the agency and the researcher – and documented in writing.

Getting Started: The Three Keys To Success

Market and customer research provides an important link between the organization and its market environment. The process of conducting market and customer research consists of a series of stages or steps that guide the research from its conception to the final recommendations. **The initial planning for a research project is key to its success.** The first step in planning for a research project is to agree on the research purpose. The specification of the research purposes involves the identification of the:

- Problems and opportunities to be studied,
- Decision alternatives to be evaluated, and
- Users of the research.

To be successful, the agency must plan for how the information will be used and integrated into strategic decision-making after it has been collected and analyzed. Active involvement by representatives of different areas throughout the agency in the planning stages will increase the understanding of the process, strengthen the acceptance of the research results, and inspire a commitment to improvement. This involvement should include:

- Determining who within the agency will be involved in the planning phase.
- Understanding how the various levels of the organization will obtain and use the survey results.
- Involving the entire organization in the process; stimulating discussion, confronting objections and issues.
- Communicating the intent of the research to employees.

Finally, agencies should decide early in the process whether they will use external resources – market research consultants and suppliers – to help conduct the research. Early involvement of these persons or firms when needed will enhance the overall value of the research.