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TCRP Report 37

A Handbook: Integrating Market Research into Transit Management

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Report 37

A Handbook: Integrating Market Research into Transit Management

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Subject Areas

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TRANSIT COOPERATIVE RESEARCH PROGRAM

The nation's growth and the need to meet mobility, environmental, and energy objectives place demands on public transit systems. Current systems, some of which are old and in need of upgrading, must expand service area, increase service frequency, and improve efficiency to serve these demands. Research is necessary to solve operating problems, to adapt appropriate new technologies from other industries, and to introduce innovations into the transit industry. The Transit Cooperative Research Program (TCRP) serves as one of the principal means by which the transit industry can develop innovative near-term solutions to meet demands placed on it.

The need for TCRP was originally identified in *TRB Special Report 213—Research for Public Transit: New Directions*, published in 1987 and based on a study sponsored by the Urban Mass Transportation Administration—now the Federal Transit Administration (FTA). A report by the American Public Transit Association (APTA), *Transportation 2000*, also recognized the need for local, problem-solving research. TCRP, modeled after the longstanding and successful National Cooperative Highway Research Program, undertakes research and other technical activities in response to the needs of transit service providers. The scope of TCRP includes a variety of transit research fields including planning, service configuration, equipment, facilities, operations, human resources, maintenance, policy, and administrative practices.

TCRP was established under FTA sponsorship in July 1992. Proposed by the U.S. Department of Transportation, TCRP was authorized as part of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). On May 13, 1992, a memorandum agreement outlining TCRP operating procedures was executed by the three cooperating organizations: FTA; the National Academy of Sciences, acting through the Transportation Research Board (TRB); and the Transit Development Corporation, Inc. (TDC), a nonprofit educational and research organization established by APTA. TDC is responsible for forming the independent governing board, designated as the TCRP Oversight and Project Selection (TOPS) Committee.

Research problem statements for TCRP are solicited periodically but may be submitted to TRB by anyone at any time. It is the responsibility of the TOPS Committee to formulate the research program by identifying the highest priority projects. As part of the evaluation, the TOPS Committee defines funding levels and expected products.

Once selected, each project is assigned to an expert panel, appointed by the Transportation Research Board. The panels prepare project statements (requests for proposals), select contractors, and provide technical guidance and counsel throughout the life of the project. The process for developing research problem statements and selecting research agencies has been used by TRB in managing cooperative research programs since 1962. As in other TRB activities, TCRP project panels serve voluntarily without compensation.

Because research cannot have the desired impact if products fail to reach the intended audience, special emphasis is placed on disseminating TCRP results to the intended end users of the research: transit agencies, service providers, and suppliers. TRB provides a series of research reports, syntheses of transit practice, and other supporting material developed by TCRP research. APTA will arrange for workshops, training aids, field visits, and other activities to ensure that results are implemented by urban and rural transit industry practitioners.

The TCRP provides a forum where transit agencies can cooperatively address common operational problems. The TCRP results support and complement other ongoing transit research and training programs.

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The members of the technical advisory panel selected to monitor this project and to review this report were chosen for recognized scholarly competence and with due consideration for the balance of disciplines appropriate to the project. The opinions and conclusions expressed or implied are those of the research agency that performed the research, and while they have been accepted as appropriate by the technical panel, they are not necessarily those of the Transportation Research Board, the National Research Council, the Transit Development Corporation, or the Federal Transit Administration of the U.S. Department of Transportation.

Each report is reviewed and accepted for publication by the technical panel according to procedures established and monitored by the Transportation Research Board Executive Committee and the Governing Board of the National Research Council.

To save time and money in disseminating the research findings, the report is essentially the original text as submitted by the research agency. This report has not been edited by TRB.

Special Notice

The Transportation Research Board, the National Research Council, the Transit Development Corporation, and the Federal Transit Administration (sponsor of the Transit Cooperative Research Program) do not endorse products or manufacturers. Trade or manufacturers' names appear herein solely because they are considered essential to the clarity and completeness of the project reporting.

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FOREWORD

*By Staff
Transportation Research
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This handbook focuses on the status of market research as practiced in transit agencies and identifies major market issues confronting them. The handbook also evaluates market research strategies appropriate for transit and provides guidance to integrate and institutionalize market research into decision-making processes of transit agencies. Finally, it examines some institutional barriers that limit the use of market research. The handbook is intended to expose transit managers and staff to current market research practices and cutting-edge ideas in market research.

Transit managers and marketing professionals are continually looking for effective ways to recruit new riders, retain existing riders, and build constituencies. It appears, however, that some of the "old rules" concerning what factors most influence transit use may not be applicable in today's environment. Market research strategies, tools, and methods can help transit professionals learn more about the markets they serve and identify new markets and market niches in today's changed environment.

Under TCRP Project B-2, *Integrating Market Research Into Transit Management*, research was undertaken by Northwest Research Group, Inc., to examine current market and organizational theory as it applies to the integration of market research into decision-making, to document current practices, and to provide examples of the successful use of market research in the transit industry.

To achieve the project objectives, the researchers first defined the state of practice of market research as applied in transit agencies and the level of integration into transit management. Next, the researchers, via survey, identified the market issues now confronting transit agencies and the information required for effective decision-making that can be generated by market research. The results of the survey were analyzed and, on the basis of those results, in-depth case studies of a range of transit agencies were performed. Further, market research design strategies and processes were described and refined.

The executive summary to this report, "Directions: A Simple Guidebook for Integrating Market and Customer Research into Transit Decision-Making to Become Customer Oriented," summarizes the analyses and case studies performed during the course of the project. It is available as "TCRP Web Document 3" on the Internet at www2.nas.edu/trbcrp.

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Assisting in this effort were Larry Sauve of LRS Associates (Bellevue, WA), Karen Jones-Savage of KJS Associates (Bellevue, WA), Lynne Morsen of Transcom Marketing (Seattle, WA), and Ray Shea of RS Omnicom (Seattle, WA).

This report is the result of a two-year collaborative effort. Gwen Chisholm, TCRP, administered the Project that was guided by TCRP Panel B-2, chaired by Joseph Caruso, and included: J. Barry Barker, Harold W. Barley, Kathryn Coffell, Peter Everett, Steven Githens, Cynthia Nordt, Lynn Ritter Otte, Catherine Ross, and Bert Arrillaga. They provided thoughtful oversight for the project and the necessary direction for this handbook.



Moving Targets

Managing Change by Integrating Market and Customer Research into Transit Management

TOOLBOX

- **Service Diagnosis – Declining Ridership:** Identification of the Problem
- **A Mechanic's Dilemma:** Customer Acquisition vs. Customer Retention
- **Your Service Plan:** Market and Customer Research
- **The Nuts and Bolts:** An Overview of the Handbook

Today's Challenge: The Issue of Declining Ridership

Maintaining ridership is a significant challenge facing public transportation agencies today. Historically transit's share of total travel has been declining. This problem has been compounded by recent ridership decreases in many key properties such as Toronto, New York, and Washington, D.C.. In one recent survey of 147 transit agencies, three out of ten agencies reported that in the past three years, ridership on their system had decreased.ⁱ In another survey of more than 200 transit agencies nationwide, 44 percent of all managers said ridership – particularly the problem of declining ridership – is one of the most important current issues for their agency. Even funding – the most frequently cited problem – is related as a lack of riders leads to lower farebox recovery rates.ⁱⁱ

Other statistics further support the depth of this issue. In recent years, annual aggregate transit ridership has dropped 3 percent nationwide from 8.67 billion unlinked passenger trips in 1990 to 8.45 billion in 1993.ⁱⁱⁱ Fortunately, this is not a universally bleak situation. The most significant ridership declines have largely occurred in about a dozen large urban bus systems. Other agencies, notably those operating rail systems, have experienced increases in ridership. However, a closer examination of the situation shows that these successes largely resulted from service expansions into new geographic areas, route takeovers, and serving previously unserved markets, for example school children as opposed to attracting more riders in the traditional transit markets, such as commuters.

Ridership declines are a result of many factors. Changing demographics, geographic patterns of population, and employment trends have profoundly changed the transportation needs of the consumer. For example, as "baby boomers" age the demand for transit has decreased because transit use is more prevalent in younger rather than middle-aged generations. The baby boomers' residential pattern has also affected transit use. The sheer size of this cohort has magnified the effects of the

historical trend for families with children to move from central cities to suburban areas that are more dispersed and less well served by public transportation.^{iv}

The explosion of women in the work force also has had enormous effects on transportation. The numbers of single parents and families in which both parents work have increased dramatically since 1970 and are now in the majority. By the year 2000, white women alone are forecasted to make up 42 percent of the work force.^v Although transit use tends to increase with increases in employment, the patterns of trip making have greatly changed. For example, research at Metro Transit in Seattle, Washington has shown that the work trips, which used to be well represented by single travel "links" from home to work and work to home, are now represented by a multi-link chain of trips that include child care, errands, shopping, and other stops along the way. When these links are part of the definition of a work trip, 45 percent of all trips are part of work trips in contrast to the previously estimated 23 percent.^{vi} By their very nature, these multi-link trip chains are not compatible with the use of traditional fixed route public transportation services.

Finally, the growth of business activities in suburban areas and the resultant growth of "edge cities"^{vii} imply an increased need for transportation alternatives from city to suburb and from suburb to suburb. Again, fixed route public transportation services are an inefficient means to serve these usually low-density origin and destination trips.

All these factors contribute to a changing pattern of travel, lifestyle, and value changes to which most transit agencies have been slow to adapt. Recently, however, more agencies have recognized the need to change to meet these trends. These agencies are increasingly adopting the growth strategies long used in the private sector and other public sector organizations facing competitive pressures.

The Response: Customer Acquisition versus Customer Retention

As transit agencies begin to address the issue of declining ridership, there has been a flurry of marketing and service development activities. However, without a proper focus, these efforts will fail. Transit agencies must recognize that growth in ridership is likely to come from three sources and that these sources vary significantly in their likely contribution to ridership.

First, attracting new riders to the system can increase ridership. This has been the route followed successfully by many agencies.

Phenomenal growth in the outlying areas of the Los Angeles area has fueled major increases in transit ridership at Riverside Transit Agency, Riverside County. Annual ridership increased 21.8 percent in 1991, 7.6 percent in 1992 and 12.8 percent in 1993. Major contributors to this growth are new service initiatives including expanded use of bike racks, addition of intercity express services, headway reductions from sixty to thirty minutes in key corridors, and feeder routes to rail stations serving MetroLink. The agency began community based planning initiatives focusing on a strong working relationship with locals and developers in service design, plus efforts to coordinate with individual businesses that moved locations. Finally, marketing and information initiatives including a "new look" design scheme and special marketing to "new" residents all worked together in an integrated program of communications.

The Lynx system serving Orlando, Florida has experienced double-digit ridership increases annually since 1990. A May 1994 study showed that ridership increased 34 percent over the previous eighteen months. While an aggressive and ongoing expansion of service and service types is largely responsible for this growth, aggressive marketing and a focus on the quality and differentiation of services also has contributed to Lynx's success. A variety of bold marketing initiatives assure that the quality of the travel experience is high. Unique vehicle paint schemes, informal driver uniforms, and the name change to "LYNX," are a few of the creative

steps taken. Attention has been placed on the quality and differentiation of services, responsive customer contacts and service monitoring. Services are adjusted rapidly to meet customer needs. LYNX has developed special programs to target specific markets. These include an "Advantage Program" for seniors, the KISS (Kids in School) program for students, local area circulators, demand-responsive services, and others. Finally, pass programs and promotions have led to expanded sales and expansion of sales outlets.^{viii}

Second, increasing the frequency of riding among current riders can increase ridership. Few agencies have focused on this effort. Moreover, it is not clear how much ridership would increase, as most riders tend to be regular riders – for example, commuters to and from work. Similarly, among transit-dependent riders, frequency of riding is likely to change only if travel patterns change and these are relatively stable over time. Finally, as many regular riders use monthly or annual passes, increased ridership may not affect fare box revenue. However, one agency – MCTO in Minneapolis, Minnesota – tested a "frequent rider" program similar to the awards programs offered for many years by airlines.

The MCTO Frequent Rider test program – promoted as Fare Game to the general public – was intended to measure customer's reactions when offered an incentive for increasing their use of transit and/or reaction to an award given as a way to say thank you for being a frequent user of MCTO service. Riders that successfully participated and "won" by riding MCTO forty times in a six-week period received an award booklet with coupons worth over \$100 from local merchants.

While most riders did not ride more often – they already rode four to five days a week – one out of ten riders did ride more to win. Moreover, results from follow-up research clearly showed that offering a discount on future purchases of an MCTO ticket or pass would be most effective in achieving the desired goal of customer loyalty and increased frequency of riding.

The 1994 test program provided a broader and better understanding of MCTO customer behavior as it relates to incentive programs, how future programs might best be structured, and what their chance and magnitude of success might be. MCTO is rolling out this test program on a wide basis.

Third, agencies can increase ridership through a strong rider retention effort. Surprisingly, transit agencies have only recently begun to recognize rider attrition as a major factor in declining ridership and focus their service planning, marketing, and operations efforts on this issue. The following example demonstrates the significance of rider attrition.

Since September of 1991, the Metropolitan Transit Authority of Harris County, Texas (METRO) has experienced flat or negative growth in ridership between both its local and park-and-ride users. METRO survey data from market research studies conducted between December 1991 and April 1992 revealed that while new riders continue to enter the system, riders are leaving the system as quickly as new riders enter.

Prompted by concern over this net loss of riders, METRO commissioned The Gallup Organization to undertake a large-scale assessment study to help determine the cause of this ridership attrition. This research showed that one in four (24 percent) regular local / express service riders – 4.9 percent of total adults – are no longer riding METRO. Nearly as many (17 percent) park-and-ride service riders – 1.6 percent of total adults – also have abandoned the system. Besides the riders who have left METRO's system entirely, 22 percent of current riders report they now ride the system less often. Reports by current and former riders show a 4 percent loss of trips in the past two years. Simultaneously, this ridership loss has been only partly countered with the addition of new riders and increased riding frequency among current riders. Three in ten current riders – 1.8 percent of all adults – are new METRO riders within the past year. Six percent of current riders – .4 percent of all adults – are riding METRO more often than last year.^{ix}

Research by other transit agencies, including Westchester County Department of Transportation and Tri-County Metropolitan Transportation District of Oregon (Tri-Met) show similar rates of rider attrition. In response to these concerns, these agencies have emphasized the development of programs and services specifically targeted at the needs and expectations of existing riders. Moreover, customer service programs, including operating training, have been introduced.

The Tool: Market and Customer Research

An effective program of customer and market research is essential to making decisions to increase ridership through customer acquisition and through customer retention.

First, there is strong support for a program of market research, service development, and marketing communications targeted specifically at customer retention. The private sector and many public utilities have long recognized the importance of customer retention. Initial customer satisfaction research by Peters and Waterman – *In Search of Excellence* – suggests that both satisfied and dissatisfied customers dramatically affect a firm's bottom line. They quantify three contributing factors:

- One hundred satisfied customers generate twenty-five new customers.
- For every complaint received, twenty other customers feel the same way but do not bother complaining.
- The cost of getting a new customer is five times as great as the cost of keeping a satisfied customer.

It is clear from these figures that customer retention efforts are an important factor in increasing the "profitability" of an agency due to the high costs of getting new riders. More important, customer retention efforts lead to increased ridership because loyal customers use a product or service more easily and more often. Finally, loyal customers provide excellent word-of-mouth advertising for an agency. Research has shown that the first thing many potential new riders do when considering riding is to ask a friend or relative who rides about their experiences and for information on how to ride.

The importance of customer retention efforts is perhaps more important in transit than in other industries – both public and private. The new environment in which transit finds itself operating is one of tough economic times. Increasingly, agencies face belt-tightening, layoffs, and elimination of nonessential services and programs. As a result, agencies are being asked for accountability. The very essence of accountability is an environment in which the agency values the customer and customer satisfaction. Agencies shown to be accountable are likely to survive – and even thrive – as they are provided with long-term allocation of resources.

Moreover, as agencies make service improvements and opportunities for new services present themselves, they will be faced increasingly with decisions that require the allocation of scarce resources to a variety of challenges. A key question agencies need to answer is, "What alternatives represent the greatest opportunity to acquire new riders for the least cost?" An effective program of market and customer research makes a major contribution to clarifying and resolving issues, and then choosing among decision alternatives.

The Handbook: An Overview

Although satisfying customers, retaining existing riders, and acquiring new riders may seem elementary ideas, serious research in this area is a new endeavor for many transit agencies. Very few agencies presently conduct rigorous market and customer research. Even fewer of them act effectively on the results of the research. Moreover, market and customer research has yet to be integrated thoroughly into key strategic and policy decisions at most transit agencies. The real value and success of customer research that is yet to be discovered hinges on incorporating the findings of market and customer research into the quality-improvement process.

This handbook focuses first on identifying market research programs that successfully provide information for the development of operations, service, and marketing strategies targeted at achieving growth through the retention of existing riders. Next, we explore market and customer research programs specifically targeted at achieving growth by reaching new markets and attracting new riders.

The purpose of this handbook is to give transit managers and staff a broad exposure to and knowledge of current practices and cutting edge ideas in customer research as it applies to these areas. Using a mix of theory and real-life experiences, users should gain an understanding of how to approach customer research, current measurement methodologies, and their application. Users also will learn how to make informed decisions about measurement models appropriate for their agencies, and how they can integrate these practices into the organization. Finally, the handbook examines some institutional barriers that limit the use of market and customer research. Strategies for converting an organization to a "learning organization" are presented.

The specific objectives of this handbook are to:

- 1) Examine the current marketing and organizational theory as it applies to the integration of market and customer research into decision-making.
- 2) Identify state-of-the-art approaches that can raise current standards for measuring customer expectations and needs for public transportation products and services.
- 3) Examine strategies for setting up a successful customer research program that provides relevant information that can be used to plan for and develop transit services, and to develop marketing strategies targeted at achieving ridership growth by retaining existing customers and acquiring new ones.
- 4) Provide transit agencies with specific tools and methodologies for developing a market and customer research program.
- 5) Develop a market-based model for a market and customer research program.
- 6) Identify a variety of perspectives on how to develop and deploy an integrated market and customer research process in a transit organization.
- 7) Examine strategies used by organizations to focus and direct improvement and corrective action initiatives resulting from a sustained market and customer research program.
- 8) Provide examples of the successful use of market and customer research in transit.

We have divided the handbook into two sections. Section I covers the basic principles outlined above. An extensive review of literature sources in the field of marketing, organizational behavior, and market research forms the basis for these principles. We have borrowed liberally from this literature to provide a broad-brush exposure to these principles. Footnotes and a detailed bibliography are provided for those who wish to explore these principles in more depth.

Section II contains twelve case studies that illustrate the use of market and customer research in transit management. The agencies chosen for study were chosen to represent the successful use of market and customer research in decision-making successfully, both at an operational and policy level. The agencies were selected to represent different types of properties – small versus large agencies, rail only versus bus only – and different regions of the country. Also, these agencies demonstrate the use of innovative approaches to market research, a high degree of exchange between the market research function and key decision-makers, and clear examples of both successes and failures regarding how market research has related to transit management.



A Customer- and Market-Orientation

The Role of Market and Customer Research in Achieving a Customer- and Market-Orientation

TOOLBOX

- **The Speed Bump Paradox:** Customer- and Market-Orientation, Customer Satisfaction, and Agency Follow-Through
- **Crossing the Line:** A "Customer-Orientation" Questionnaire
- **Hazard Cones and Crossing Gates:** Barriers to a Customer- and Market- Orientation
- **Green Means Go:** Becoming Customer- and Market-Oriented
- **Changing Lanes:** Managing Change With The "A Victory Model"

Are We Customer-Oriented?

A customer-orientation has been a paradox in the field of management. On one hand, businesses have stressed the importance of the customer. However, examples of products and services brought to market with apparently little consideration of customer needs, wants, and expectations abound.

For more than forty years, managers in every field have been exhorted to "stay close to the customer," to "put the customer first," and to define the purpose of a business as the creation and retention of satisfied customers. The earliest proponent of this philosophy was Peter Drucker, who in 1954 argued that creating a satisfied customer was the only valid definition of business purpose.

There is only one valid definition of business purpose: to create a satisfied customer. It is the customer who determines who the business is. Because it is its purpose to create a customer, any business enterprise has two – and only these two – basic functions: marketing and innovation.

Actually, marketing is so basic that it is not just enough to have a strong sales force and to entrust marketing to it. Marketing is not only much broader than selling, it is not a specialized activity at all. It is the whole business seen from the point of view of its final results, that is, from the customer's point of view.^x

Despite this, American firms generally, and transit agencies specifically, have failed to make major strides toward becoming truly customer-oriented. For example, one study revealed four fundamental factors about most companies.

- First, they say they want to know their customers.
- Second, they say that they want to deliver the products and services that meet the needs of their customers.

However,

- Seventy-five to ninety-five percent of all people in the companies studied have no idea who the company's customers are and do not see how their jobs affect the customer.
- Many customers report that from their perspective, these very companies seem incapable of coordinating efforts to get them what they need.^{xi}

This suggests that after forty years, the notion of matching the resources of the agency with the needs of the market has permeated business thinking, and companies would like to implement this concept. However, few companies have carried out this idea successfully.

The past fifteen years have seen only incremental refinements in many fundamental ideas that stem from a customer-orientation. Identifying target markets has become more precise, leading to microsegmentation. Product and service positioning has become more sophisticated by using better statistical techniques. Thus, although there have been incremental improvements in the extent to which firms are customer-oriented, there has been little in the way of substantive innovations.

More recently, however, there has been a refocusing of American firms on the concept of a customer-orientation. In a survey of CEOs in industries including fabricated products, financial services, agribusiness, and consulting, respondents were asked to rate twelve factors as to how critical each is to the success of 21st-century enterprises. Only four criteria were rated as critical by more than half the respondents.

- First, and foremost, was a customer-orientation – rated as critical by 73 percent of the respondents.
- Related criteria followed this including:
 - Value-added quality focus (69 percent),
 - Flatter organizational pyramid (60 percent), and
 - The ability to formulate and communicate to staffers a corporate vision (55 percent).^{xii}

Given the importance of a customer-orientation, it is noteworthy that in the same survey only slightly more than half of the respondents suggested that their organization has undertaken the steps used to measure an organization's degree of customer-orientation. These three are:

- The integration of customer requirements in the product-development process,
- The ongoing measurement of customer satisfaction – and that such satisfaction is a key criterion for awards – and
- The existence among all employees and corporate groups of a strategy to ensure customer-orientation.^{xiii}

Transit agencies have generally followed other American businesses in the extent to which they have adopted a customer-orientation. For many years, many agencies paid lip service to being customer-oriented without developing the tools and infrastructure to support a customer-orientation.

With the recognition of the challenge of declining ridership, many agencies are again embracing the notion that a customer-orientation should play a central role in the agency's long-term success in retaining existing riders and attracting new ones. For example,

Houston Metro has begun a Customer Culture Program, the purpose of which is to enhance the culture of the organization to be more customer-focused, saying, "Creating and maintaining a strong customer culture is just good business practice."^{xiv}

It is unclear at this time, however, whether these agencies are continuing the practices of the past or are beginning to develop the organizational culture and structure essential to a customer-orientation.

The purpose of this chapter, therefore, is to explore the idea of a customer-orientation and how the use of market and customer research relates to an agency's customer-orientation. We first introduce measures to identify the extent to which an agency is customer-oriented as well as potential barriers to adopting a customer-orientation. Next, we present a model that examines an agency's readiness to become more customer- and market-oriented by using customer and market research to give you an idea how your transit agency can improve its effectiveness with customers.

Becoming Customer- and Market-Oriented

What Is a Customer or Market Orientation?

Just what is a customer- or market-orientation? While the idea of a customer-orientation has been bandied around for more than forty years, it is only in the last five years that research has been conducted that more clearly describes a customer and/or market-orientation and its key characteristics. According to this emerging literature, an agency with a customer and/or market-orientation has superior skills in understanding and satisfying customers.^{xv} The three principle features of a customer-orientation are:

- A set of beliefs that puts the customer's interest first.^{xvi}
- The ability of the organization to generate, disseminate, and use superior information about customers and competitors.^{xvii}
- The coordinated application of interfunctional resources to the creation of superior customer value.^{xviii}

The Role of Market and Customer Research

It is clear from the above definition that market and customer research is central to successfully adopting a customer or market-orientation.

First, having a customer focus involves obtaining information from customers about their needs and preferences. However, it can be argued that to be truly customer-oriented the research

must go beyond this simple form of customer research. This broader scope of research involves taking actions based on what has been termed "market intelligence" that considers:

- Exogenous market factors (e.g., competition and regulation) that affect customer needs and preferences, and
- Current and future needs of customers.^{xix}

This broader scope does not challenge the importance of customer research. Rather, it reflects an expanded, more strategic concern related to customers.

Second, having a market-orientation requires concerted action by various departments in an organization. The coordination of market intelligence is critical to this effort. This would suggest that a market-orientation entails:

- One or more departments engaging in activities geared toward developing an understanding of customers' current and future needs and the factors affecting them,
- Sharing this understanding across departments, and
- The various departments engaging in activities designed to meet select customer needs.^{xx}

Market and customer research, therefore, serves an important role in developing a customer and market-orientation by:

- Generating information about customers' current and future needs and the factors affecting them,
- Assisting an organization in reconciling these customer needs with what an organization is capable of and willing to present to the market, and
- Monitoring the effects of the activities designed to meet select customer needs in achieving organizational goals and objectives.

The Evolution of a Customer-Orientation

Becoming customer-oriented is not something that simply happens overnight. For an agency to become truly customer-oriented, a major shift in corporate philosophy must exist. Such a change in orientation is typically the result of a gradual, evolutionary process.

It has been suggested that a firm must pass through at least three stages to become customer-driven.^{xxi}

Stage One: Ignorance is Bliss

The first stage – bliss – would be exemplified by agencies that feel they offer good products and services because they have instituted strict quality control procedures. The agency tries to treat its customers fairly and wants to keep its customers satisfied. The blissful agency has a customer service function – usually the telephone information service that also provides routes and schedule information – that listens to and handles customer complaints. When a rider complains to a blissful agency, they will listen carefully to their questions and concerns and tell them they will consider this during the next service pick. They may send the complaining rider a ticket for a free ride.

The problem with a blissful agency is that this agency is in a reactive, status quo mode. By using its service representatives to monitor and distribute customer complaints, the agency is not recognizing that typically fewer than 5 percent of dissatisfied customers actually complain to the company itself. The remaining 95 percent simply stop riding when the opportunity presents itself. The blissful agency does not recognize that the cost of getting a new rider may be as much as five times the cost of keeping an existing one. Finally, the blissful agency is comfortable with its current transit operations and has not established an environment for innovation and improvements.

Most blissful agencies do little or no market or customer research. As a result, they do not really know or understand their customers. Although they can probably describe their target market, they have not attempted to develop long-term relationships with their existing customers. They think their riders are generally satisfied – citing internal statistics on performance, reliability, and safety. They believe that if they operate at a 98 percent on-time performance level, riders will continue riding indefinitely. At best, these agencies have some rough data on the frequency and causes of customer complaints resulting from on-board customer comment cards that contain the title – Customer Satisfaction Survey. Typically, however, blissful agencies do not use this data to fix the root problem that causes the complaints.

Stage Two: Awareness – Getting to Know You

The second stage in the transition to becoming customer-oriented is awareness that customer satisfaction is important. An aware agency is similar in many ways to a blissful agency but is more proactive. Aware firms not only say customers are important, they have actually begun to carry out practices that show they mean it. Many transit agencies have evolved to this stage.

Like blissful agencies, aware agencies have customer service departments or telephone information services. However, aware agencies will operate these services for extended hours. They may provide toll-free calling or they may have a bilingual staff. Above all, they publish the number in many sources and easy to find locations.

Aware agencies also take such proactive steps as conducting regularly scheduled customer satisfaction surveys. A truly aware agency has worked carefully to design this survey to measure customer needs and expectations from the customer's point of view as opposed to from the agency's perspective. Aware agencies pay attention to the results of the surveys and use the information to help improve its products and services.

Aware agencies are finding that while taking the proactive step of seeking information from their customers is useful, it is not enough. Ongoing customer satisfaction research at many of these agencies has shown almost no change in customer satisfaction. In some cases, despite improvements to products and services, customer satisfaction has declined. The telephone information lines and customer satisfaction surveys used by aware firms continue to represent "after-the-fact" attempts to measure or deal with sources of satisfaction or dissatisfaction. This represents the equivalent of attempting to put out a grease fire once it has started. Such "after-the-fact" efforts are unlikely to result in significant and long-lasting improvements in customer satisfaction. A much more comprehensive approach must also be pursued to achieve true customer satisfaction and loyalty.

Stage Three: Commitment – All the Way

The third stage – committed – is defined as agencies that realize that achieving customer satisfaction does not result from simply doing the traditional things better. Committed agencies recognize that customers are a valuable asset and source of innovation. Committed agencies have actively developed mechanisms for customer involvement and participation in decision-making comprehensively throughout the organization.

Committed agencies take a long-range view of their customers, viewing them as valuable assets. Thus, they recognize that customer retention is at least as important as customer acquisition, if not more so. Committed agencies also use the term "customer" broadly and include more than riders. Committed agencies also include potential riders, those that are never likely to ride but provide support through taxes and otherwise, and key stakeholders such as employers, businesses, local municipalities, etc. as customers. Committed agencies use market and customer research extensively, relying on a variety of methodologies to collect this intelligence. Clear systems are in place to distribute this intelligence throughout the organization.

How Customer-Oriented Are You?

So how customer-oriented are you? The simple questionnaire on the next page is presented to help you gain an understanding of the extent to which businesses are market-oriented. It also can serve as a tool by which these businesses can measure changes in market-orientation as they introduce intervention programs. We have adapted it to reflect the typical environment and organizational structure in which transit agencies operate.

The "Customer-Orientation" questionnaire examines specifically:

- The degree to which a firm generates market intelligence, including the collection and assessment of both customer needs and preferences, and the forces that influence the development and refinement of those needs.
- The process and extent of marketing information exchange – that is dissemination of information – within an organization.
- The responsiveness of an organization to the intelligence that is generated and disseminated.^{xxii}

The "Customer-Orientation" questionnaire consists of thirty-two scale items and is illustrated in Exhibit 1. You can take this quiz to learn how customer-oriented your agency is. Simply rate your agency on each item using a five-point scale where "1" means this item does not describe your agency at all and "5" means this item describes your agency very well. The higher your total score – a completely customer-oriented firm would have a score of 160 – the more customer-oriented you are. You can also use the subtotal scores to identify those areas that may be factors in achieving the extent of customer-orientation you want.



EXHIBIT 1
HOW CUSTOMER-ORIENTED ARE YOU?
A "CUSTOMER-ORIENTATION" QUESTIONNAIRE

	Item Score 1 = "Does Not Describe At All" 5 = "Describes Very Well"
Intelligence Generation	
1. We talk with or survey customers at least once a year to find out what products or services they will need in the future.	
2. Individuals from our operations and planning departments interact directly with customers to learn how to serve them better.	
3. In this agency, we do a lot of market and customer research.	
4. This agency is quick to detect changes in customers' preferences for products and services.	
5. We often talk with or survey those who can influence current and potential riders (e.g., employers, businesses, etc.).	
6. We collect industry information by informal means (e.g., attending conferences, lunches with industry friends).	
7. We survey customers at least once a year to assess the quality of our products and services.	
8. In our agency, intelligence on our operating environment is generated independently by several departments.	
9. We are quick to detect fundamental shifts in our industry (e.g., technology, regulation, and competition).	
10. We periodically review the likely effect of changes in our operating environment (e.g., regulation) on customers.	
Intelligence Dissemination	
11. A lot of informal "hall talk" in this agency concerns changes in our operating environment.	
12. We have interdepartmental meetings at least once a quarter to discuss market trends and developments.	
13. Marketing personnel spend time discussing customers' future needs with other functional departments like service planning and operations.	
14. Our agency periodically circulates documents (e.g., reports and newsletters) that provide information on our customers.	
15. When something happens in our operating environment, the whole agency knows about it within a short period.	
16. Data on customer satisfaction are disseminated at all levels in this agency on a regular basis.	
17. There is considerable communication between marketing and planning or operations concerning market developments.	
18. When one department finds out something important about our operating environment, it is quick to alert other departments.	



EXHIBIT 1
HOW CUSTOMER-ORIENTED ARE YOU?
A "CUSTOMER-ORIENTATION" QUESTIONNAIRE

	Item Score 1 = "Does Not Describe At All" 5 = "Describes Very Well"
Responsiveness	
19. It does not take us long to decide how to respond to changes in our operating environment.	
20. Principles of market segmentation drive the development of new products or services at this agency.	
21. We do not ignore changes in our customers' product or service needs because of internal or external pressures.	
22. We periodically review our product / service development efforts to ensure they are in line with what customers want.	
23. Our service plans are driven more by market research than by technological advances.	
24. Several departments get together periodically to plan a response to changes taking place in our business environment.	
25. The services and products we offer depend more on real market needs than on internal politics or other external political pressures.	
26. If a major change occurs in our business environment, we would implement a response immediately.	
27. The activities of the different departments are well coordinated.	
28. Customer complaints are listened and responded to.	
29. If we come up with a great marketing plan, we are able to implement it in a timely fashion.	
30. We are quick to respond to significant changes in our operating environment.	
31. When we find out that customers are unhappy with the quality of or service, we take corrective action immediately.	
32. When we find that customers want us to modify a product or service, we make concerted efforts to do so.	
Scoring Instructions:	
A. Intelligence Generation Score: Sum items 1 – 10.	
B. Intelligence Generation Discrepancy Score: A perfect Intelligence Generation Score is 50. Subtract A from 50.	
C. Intelligence Dissemination Score: Sum items 11 – 18	
D. Intelligence Dissemination Discrepancy Score: A perfect Intelligence Dissemination Score is 40. Subtract C from 40.	
E. Responsiveness Score: Sum items 19 – 32	
F. Responsiveness Discrepancy Score: A perfect Responsiveness Score is 60. Subtract E from 60.	
G. Total Market Orientation Score: Sum items A – C	
H. Market Orientation Discrepancy Score: A perfect Market Orientation Score is 160. Subtract G from 160.	
Source: Adapted from MARKOR, a Measure of Market Orientation developed by Ajay Kohli, Bernard Jaworski, and Ajith Kumar published in the <i>Journal of Marketing Research</i> (November 1993), pp. 467 - 477	

Barriers to a Customer-Orientation

There are several barriers to becoming more customer-oriented. However, these barriers are relatively simple and solvable.

- **Commitment is limited to perceived constraints.** Top management at the agency is committed to serving the needs and expectations of the customers but only if those needs and expectations can operate within the constraints of offering traditional public transportation services or within a certain political climate or under certain budgetary constraints.
- **No market mentality.** Most functional areas in transit agencies do not understand the notion of being truly driven by the market / customer needs. Few agencies have a formal marketing function and if one exists, it may or may not have a marketing plan. Even where a marketing plan exists, it is frequently not well communicated to those who must carry it out – telephone information operators, drivers, maintenance crews, and others.
- **No market-responsive behavior.** Most employees do not know how to translate their classic functional responsibilities into market-driven, customer-responsive actions. Moreover, they do not know where and how to look at the market from their functional perspective and do not recognize opportunities in the market.
- **Lack of intra-agency communication.** Many functional areas do not understand the roles of the other functions in the agency. For example, how familiar are most marketing personnel with the daily functions of the service planner and vice versa. As a result, they do not know what information they should send to the other functions about the customer and what information they should seek from those other areas. Often, each functional area operates from a defensive position, protecting the integrity of their goals, budgets, and plans.
- **Lack of front-line input.** Employees in each functional area do not have meaningful participation in the strategic direction of the agency although they are often closest to the operational characteristics of the marketplace. For example, how many agencies have drivers and/or telephone information personnel sit in on strategic planning or marketing planning meetings?^{xxiii}

Even agencies who have top management support for a market-driven, customer-orientation and who have tried to integrate a customer-orientation through every level of the organization have met with variable levels of success. All too often the solutions they have tried are incomplete because they:

- **Deal just with the strategic issues at senior management levels.** They have outlined, tested, and defined the goals and objectives. However, they have identified few specific actions. Moreover, they do not ask employees to identify specific actions to reach these goals and objectives.
- **Focus on either academic ideas** – for example, quality circles – **or functional behavioral skills** – for example, customer service – and do not integrate them.
- **Are often focused on the functional areas** as though they are independent as exemplified by many classic training programs used.
- **Offer a "canned" solution** that ignores valuable ideas from people with years of experience.

- **Do not provide for a comprehensive plan** for designing, developing, carrying out, and rewarding a cohesive, market-driven system.
- **Ignore the importance of synchronizing the strategic and/or marketing plans** with the people who carry them out.
- **Operate as a "one-shot deal"** with employees participating in a single training program or making a single change to the organizational structure with the expectation that this will result in a long-run change in the organization's values and beliefs.
- **Create an expectation that results and rewards will be immediate.**

Becoming Customer-Oriented

Having identified the features of a market-driven, customer-oriented agency and also examined some barriers to becoming such an agency, it is possible to outline some basic requirements for achieving this goal.

Develop Customer-Oriented Values

First, the agency must embrace a set of customer-oriented values and beliefs that top management supports. Top management support is so important that Theodore Levitt, in his seminal statement of the marketing concept argued that customer needs must be the central focus of the firm's definition of its business purpose and that this is the primary responsibility of the firm's senior management.

The organization must learn to think of itself not as producing goods and services but as buying customers, as doing the things that will make people want to do business with it. And the chief executive himself has the inescapable responsibility for creating this environment, this viewpoint, this attitude, this aspiration.^{xxiv}

This means that the customers determine quality and service. The agency defines itself both in terms of the customer needs it is committed to service and its distinctive competence in satisfying those needs – that is its way of delivering value to the customer. These basic beliefs and values must include a commitment to quality and service as defined by customers. This commitment must come from top management. If top management does not put the customer first they have, by definition, put something else first. Everyone else in the organization will know what that is and behave accordingly. Top management at agencies must give clear signals and establish clear values and beliefs about serving the customer.

Commit to Change

Next, changing to a customer-driven orientation should be viewed as a long-term evolutionary process. Only newly created organizations, or ones facing severe crises, are open to major change occurring at once. Change is always discomfiting. What is a small change to some in an agency may be a major change to others. Even seemingly small, isolated changes can have unexpected multiplier effects. Simply considering organizational change is not without its consequences. Therefore, the most fruitful course to follow is to carry out change incrementally.

Gain Full Organizational Involvement

Third, developing a customer-driven orientation must involve all organizational levels and areas. Most important, it should not be limited to staff personnel. Those ultimately responsible in the daily lives of customers – the front-line – must be involved. If all levels are involved, the importance of a customer-driven orientation is unmistakable. An elegantly conceived strategy developed by top management and passed down to subordinates will not achieve instant – if ever – success. Employees who actually contribute to customer satisfaction must execute change efforts. This means moving beyond simple participatory management. Real delegation and empowerment must occur so employees have a stake in the agency's long-term success. An organizational culture that thrives on change and improvement, and rewards all employees for their contributions must be established.

Commit to Training and Development

Fourth, developing a customer-driven orientation requires extensive training and development of the work force. Everyone must understand how his or her job contributes to customer satisfaction. Employees must not only know their roles, they also must recognize that they can change their jobs to enhance customer satisfaction.

Monitor Performance

Finally, a customer-driven orientation must be evaluated, monitored, and reinforced. Commonly, this has meant conducting "complaint analysis" or regularly monitoring customer attitudes by using surveys. While these efforts are a start, they must also be translated into internal systems where behavioral change in the agency is rewarded at all organizational levels, intrinsically or extrinsically.

An Agency Contract for a Customer and Market Orientation

Exhibit 2 summarizes the central ideas of an agency that is truly customer and market-oriented.



EXHIBIT 2 A CONTRACT FOR DEVELOPING A CUSTOMER AND MARKET ORIENTATION

GIVEN:

Marketing is an agency wide activity.

THEREFORE:

There is a need for the generation of, dissemination of, and responsiveness to market information throughout the agency.

THE CUSTOMER AND MARKET RESEARCH FUNCTION MUST:

Help all internal customers hear the voice of the market by providing information and the support necessary to use it effectively in the decision-making process.

AS A RESULT:

The quality of agency wide marketing is enhanced.

THIS IS IMPORTANT BECAUSE:

The quality of agency wide marketing affects customer perceptions of an agency's long-term commitment to providing high value in its product / service offerings.

AND:

Customers' commitments arise from their perceptions of the agency's commitment to providing high value in product / service offerings.

Research Readiness

The generation and dissemination of market and customer research, and the responsiveness of an agency to this information is a major component of a customer-orientation. Integrating a market and customer research function into an agency commonly represents a major change in the corporate culture. As with becoming customer-oriented, the most fruitful course to follow is to carry out change incrementally. Incremental changes that produce modest improvements enhance credibility and can be used to launch further change.

Ideally, the introduction of a market and customer research function at an agency should go hand in hand with the formation of other agency systems. For example,

As part of a state-mandated audit, Houston METRO completed an evaluation of the entire agency's organization and functions. The consulting organization doing the evaluation uncovered and emphasized the need for METRO to become more market-oriented. To accomplish this, a greater emphasis was placed on the need to use market research in the planning process. The board supported this recommendation, feeling that METRO should give the development of new transit services a higher priority.

As a result, in July 1993, the agency moved the market research function from the marketing department to the department of Service Development. The new Market and Service Research, Analysis, and Evaluation division was developed around the idea of basing service expansion, contraction and productivity modification, marketing, and other authority decisions on a market-driven basis. This new division consolidated the data collection activities previously spread among three different departments. Under this reorganization, METRO considers the Market and Service Research, Analysis, and Evaluation division as a blend of analytical activities that will drive cost-effective, market-responsive decisions. Moreover, they believe that this move will enhance the ability of the market research function to support service planning and development, while still continuing to provide information required for developing and refining effective marketing programs.

Agents of Change

Typically, transit agencies do not recognize market and customer research as central enough to warrant such a comprehensive approach. Unfortunately, this situation becomes a self-fulfilling prophecy, reinforcing the idea that market and customer research does not have much to contribute and should not be given much prominence and support. To overcome these beliefs, researchers and other champions of market and customer research must become agents of organizational change. In this role, they must:

- Convey to others in the agency the principles and concepts of a strong market and customer research function,
- Demonstrate how it addresses important agency needs, and
- Reduce barriers between those who provide and those who use information.

Key Questions

Successfully introducing organizational change requires an understanding of two components:

- The issues, and
- The people – as individuals and as groups – who will be affected by the change.

In deciding whether to introduce change, the change agent should ask six key questions.^{xxv}

- Have top managers agreed that there is a need for the proposed change? Has the agency designated champions – that is, has the agency given a specific person or group both the responsibility and the authority to make the change happen? The agency must answer "yes" to both parts of this question or continuing with the proposed change at the present time is probably not appropriate.
- Who has participated in the planning for the change and who has not? All parties likely to be affected by the change should be consulted or their opinions solicited.
- What, if anything, does the change modify or replace? How will the personnel make the transition from the old to the new? Attention must be paid to help those affected to change their current attitudes and behaviors.
- Who will benefit immediately from the change and who will benefit in the longer term?
- Who will suffer immediately from the change and who will suffer in the longer run?
- How will the change affect major relationships in the organization? These relationships include individual job relationships plus organizational, social, and other informal contacts.

The "A Victory Model"

Armed with a "yes" to the first question – "Is there a need for change?" – and having considered thoroughly the answers to the other five, the change agent can determine whether it is time for introducing organizational change and appropriate strategies for doing so. A planning model – the *A Victory Model* – is a useful tool to focus the change agent's attention on what is required to implement change in a market and customer research function successfully. It has been used in a variety of organizational settings for many years.^{xxvi} Both public and private health and social service organizations have used it extensively as a guide for improving the use of research, particularly research that evaluates marketing programs.

Following are the basic components of the *A Victory Model* as developed by Vincent Barabba and Gerald Zaltman for developing what they call an "Inquiry Center." It has been adapted to address the issues it raises for developing a research function in a transit organization.^{xxvii}

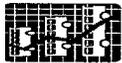
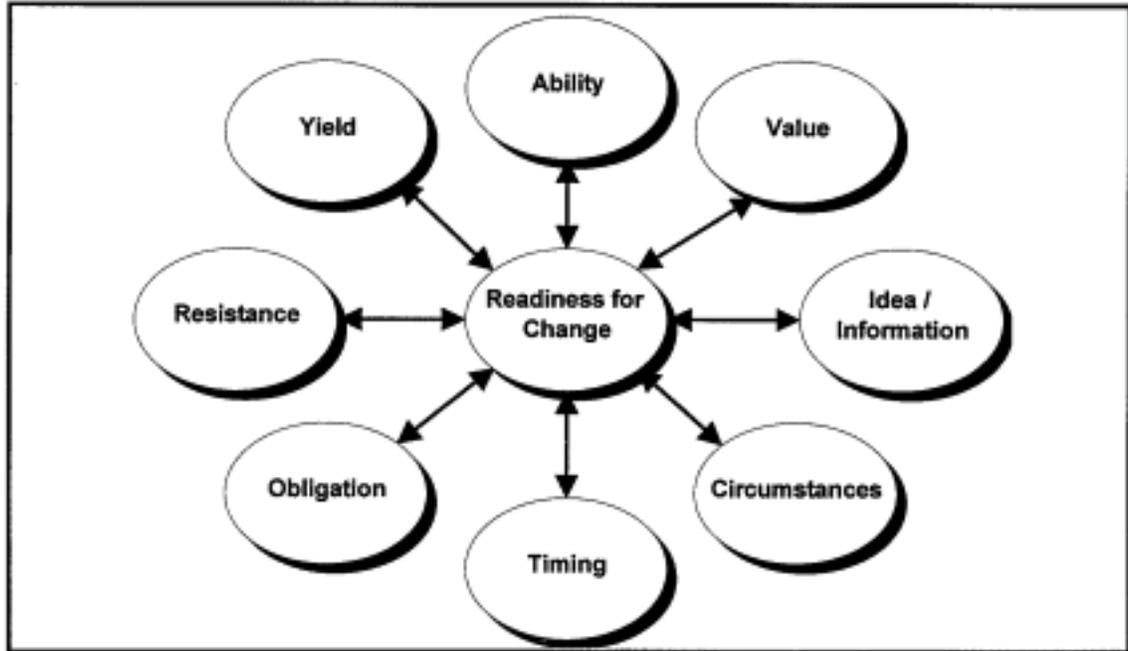


FIGURE 1
THE "A VICTORY MODEL"



- **A = Ability.** What are the agency's abilities and inabilities with respect to accepting changes in the research function? Are the necessary resources and capabilities – staff, training, facilities, funds, etc. – available to carry out, sustain, and evaluate the changes? For example, transit managers, unfamiliar with market research, may need training in how to develop assumptions, formulate issues, and interpret statistics to use market and customer research. These same skills also are helpful in creating a problem-sensing and a problem-solving orientation among managers.
- **V = Values.** How compatible are the values, norms, and attitudes required by the proposed change with current attitudes and practices? Many transit managers consider the idea of planning ahead for future research needs as foreign to their activities. Some may prefer a research function that promotes better thinking. Others are looking for better decisions. Still others may want better products or services, or more satisfied customers. Focusing on any one of these will result in a different orientation within the research function. Each requires a somewhat different supportive value from top management.
- **I = Idea / Information.** How clearly understood are the nature of and reasons for the proposed change in the research function? One type of change in the research function involves an established feature of the research function that is perceived as new by current or new information users – for example, broadening an annual survey of transit users to include nonusers to assess their satisfaction with a system they do not use. Alternatively, this functional change could be an actual change the researcher would like current information users to accept. In each case, the change has attributes that affect its acceptance. These attributes are features of the research function that should be given special attention as individuals in an agency are encouraged to use information.
- **C = Circumstances.** What factors or features in the organization may affect the acceptance and implementation of a research function? Have there been significant personnel changes? Recent reorganizations? How does the structure of a company affect its response to new

ideas? Most transit agencies are highly centralized and formal in their procedures. They may be slow to decide on the proposed innovation but quick to embrace it once they decide. The reverse is true for agencies that are decentralized and less formal.

- **T = Timing.** How ready is the organization to consider the proposed change? Is it an "idea whose time has come?" Are current circumstances advantageous for introducing the change? For example, a merger of transit agencies to form a regional agency might be an excellent time to propose a new role for marketing research. Alternatively, as a transit agency moves into a previously unserved geographic area, a new role for marketing research can be developed.
- **O = Obligation.** What is the perceived need for change among relevant decision-makers and potentially influential "champions?" What is their level of commitment? Here, the issue is whether promises to various constituencies might be used to support the case for an expanded role for marketing research. For example, marketing research's role in voter surveys as part of the process of gaining approval for a regional transit authority or expanded service might be the basis for arguing that research should receive additional consideration because of these past successes.
- **R = Resistance.** Who – individuals or groups – are likely to be resistant to change? Frequently, research is threatening to individuals. Much like individuals resist going to doctors and dentists because of the fear of hearing bad news, transit managers may prefer not to know how well their system is operating. The task is to convince individuals harboring these concerns that research can be useful in identifying potential trouble situations when they are still manageable.
- **Y = Yield.** What are the benefits of the change for those who are asked to approve it, implement it, or who are otherwise affected by it? Can these benefits be measured? Because research so frequently deals with uncertainty, benefits are not easily quantifiable. However, success stories suggest that research can yield substantial benefits. It is critical that such benefits be measured and documented. For example, research undertaken prior to a service change that predicts reactions to the change should be compared with actual results. Of course, forecasting is one of the most challenging tasks in research, so it is important that expectations are realistic.

Taking the Challenge

Clearly, to address the challenge of declining ridership, transit agencies must adopt a market-driven, customer-orientation. Central to this orientation is the generation of, dissemination of, and responsiveness to market and customer research. The chapter presented a "quiz" that allows agencies to assess their overall customer-orientation and also identify specific areas that may be barriers to fully adopting a customer-orientation.

Presently, transit agencies – like many businesses – are still struggling with how to embrace a customer-orientation. For most, it requires organizational change – often fundamental change. Introducing change in any organization requires careful planning and a sensitivity to the variety of forces affecting the acceptance or rejection of new ideas and practices. This is especially true when the change involves something as fundamental and important as how the organization uses market and customer research in decision-making.

The first step in beginning to integrate market research into transit decision-making is to obtain a clear commitment from top management to improve the firm's existing market intelligence or market research function. Next, the agency must identify a change agent. The role of the change agent is to build

support for a market and customer research function with an agency. Notably, the change agent must identify those individuals and/or groups of individuals that are most likely to be affected by the change and/or who are most resistant to the change and address their needs and concerns. Since most agencies do not have a formal research function, this responsibility will likely fall on a manager or managers in another functional area.

The change agent must consider important questions and criteria when introducing change. Knowing the answers to these questions can simplify the process of improving the quality of decision-making by improving the quality of the market and customer research function.



Going Public with Customer Research

The Current State-Of-The-Practice in Market and Customer Research as Conducted by Transit Agencies

TOOLBOX

- Nickels, Dimes, & Quarters: How Much Does Transit Need to Change?
- Journey to Work: Market Research as Your Agency's Primary Mode
- Rusty Parts & Squeaky Wheels: Barriers to the Increased Use of Research in Transit
- On-Time Performance & Service Quality: Market and Customer Research in Transit – Your Quality Improvement Tool

How Much Does Transit Need to Change?

Given the importance of market and customer research to a customer- and market-orientation, just how far does transit need to travel to develop an effective and efficient market and customer research function? Comparing the use of market and customer research in public transportation with its use in the private sector and in other public agencies provides insight into how much transit needs to change.

Private sector demand for technical assistance from market research has increased over the past several years. Businesses seek and use competitive intelligence and marketing information to develop strategies to improve quality and retain customers. Moreover, rapid changes in the marketplace and business environment have sparked a more rapid rise in the demand for research support. To keep up with this demand, a variety of methods has been developed to gather pertinent and reliable information. Moreover, market research functions have become integrated into the organizational structure and strategies to increase the effective use of market and customer research have been developed.

Despite their inherently different missions, public agencies face similar demands as businesses for improving services while becoming more cost efficient. However, conventional wisdom has maintained that public sector issues are too complex, political, emotional, amorphous, or simply too irrational to lend themselves to the type of analysis commonly used by private business. Several factors contribute to this belief. First, government services – notably transit services – are labor-intensive and are produced and consumed simultaneously.^{xxviii} In addition, consumers of these types of services will typically judge a service on their reaction to the delivery agent as much as to what is delivered. Finally, there is a great deal of confusion over who the actual "customer" is.

Because of these factors, public sector agencies often lag behind their private sector counterparts in their use of market and customer research to guide strategic decisions. Moreover, public transportation industry lags behind other public sector agencies – notably electric and gas utilities. Even when transit agencies do research, the methods used are limited in scope and provide little insight into the real issues and challenges facing the industry today.

While there is some truth to these beliefs, the picture may not be so bleak as many feel. It is the purpose of this chapter to examine the "state-of-the-art" in research as conducted by business today. This will be compared with the current "state-of-the-practice" in transit industry research. Barriers to the increased use of market research will be identified. Finally, the important role market and customer research can play in transit decision-making will be defined.

The Use of Market and Customer Research in Business

The Explosive Growth of Market Research in Business

Unquestionably, market research is a growth industry. The need for market and customer research has exploded with the rapidly expanding number of products and types of services introduced into the market by the private sector. A survey of marketing research sponsored by the American Marketing Association showed that of 251 companies interviewed in 1993, only 8 percent do **not** do market research.^{xxix} Since 1985, real expenditures on market research – after adjusting for inflation – more than doubled! This growth has continued even during recessionary periods.

In 1993, 171 of the companies interviewed by the American Marketing Association spent a total of \$424 million dollars on research activities, up 7 percent from 1988. Average annual budgets range from as little as \$82,000 for small companies to as much as \$7 million for large consumer products firms. Among the 19 public utilities reporting, average budgets ranged from \$334,000 for smaller utilities to nearly \$4 million for the larger utilities. On average, reporting firms had budgets of \$1.35 million in 1993. This growth is largely a consequence of economic and social changes that have made better planning and marketing imperative.

With marketing the new priority, marketing research is the rallying cry. Companies are frantically trying to get their hands on information that identifies and explains the needs of powerful new consumer segments now being formed. Kroger Co., for example, holds more than 250,000 consumer interviews a year to define consumer wants more precisely. Some companies are pinning their futures to product innovations, others are rejuvenating timeworn but proven brands, and still others are doing both.^{xxx}

Not only are companies that always did market research doing a great deal more, but the breadth of research activities also continues to expand. Consider the following examples:

- Senior management is looking for more support for its strategic decisions. Researchers are focusing on acquisition and competitor studies, segmentation and market structure analyses, and basic strategic position assessments.
- Market research is being used by "nontraditional departments" – that is, departments other than marketing, and research and development. Legal departments now routinely use market research evidence to support positions. Corporate Affairs departments use market research to understand shareholders', bankers', analysts', key stakeholders', and employees' attitude

toward the company. Service departments continuously audit service delivery capability and customer satisfaction.

- Entire industries that used to be protected from competition – airlines, financial institutions, cable television, telephone – are being deregulated and are finding that market and customer research provides an important source of information on strategies to overcome product proliferation, advertising clutter, and high marketing costs resulting from more sophisticated customers and aggressive competitors.

In many companies and industries, market and customer research is a pervasive activity, viewed as the function that plans for, collects, and analyzes data relevant to decision-making and the communication of the results of this analysis to management. Exhibit 3 illustrates the nature of the research conducted by businesses today. While there has been a general increase since 1988 in all types of research being conducted, the greatest increases occurred in the number of firms doing studies on buyer behavior, notably those conducting research on product satisfaction and those doing segmentation research.



**EXHIBIT 3
BUSINESS RESEARCH ACTIVITIES**

	%		%
	<i>Doing</i>		<i>Doing</i>
A. Business and Corporate		D. Distribution Studies	
1. Industry/market characteristics	92%	1. Channel performance	39%
2. Market share analyses	85	2. Channel coverage	31
3. Internal employee studies	72	3. Export & international	32
4. Acquisition / diversification	50	4. Plant / warehouse location	25
B. Pricing		E. Promotion	
1. Demand analysis		1. Media research	70%
a. Market potential	78%	2. Copy research	68
b. Sales potential	75	3. Advertising effectiveness	67
c. Sales forecasts	71	4. Public image	65
2. Competitive pricing	71	5. Motivation research	56
3. Cost analysis	57	6. Sales promotions	47
4. Price elasticity	56	7. Competitive advertising	43
5. Profit analysis	55	8. Sales force compensation	34
C. Product		F. Buying Behavior	
1. Concept development	78%	1. Product satisfaction	87%
2. Product testing	63	2. Segmentation studies	84
3. Test markets	55	3. Brand awareness	80
4. Brand name testing	55	4. Purchase behavior	80
5. Competitive product	54	5. Purchase intentions	79
6. Packaging design	48	6. Brand preference / attitudes	77
Source: Thomas C. Kinnear and Ann R. Root (eds.), <i>1994 Survey of Marketing Research</i> . Chicago: American Marketing Association.			

Customer Satisfaction Research: A Critical Link

Customer research as it applies to customer retention efforts – notably customer satisfaction research – is one of the fastest-growing segments of the market research industry. The 1994 Honomichi Report of Marketing Research reported that customer satisfaction research is the fastest growing segment in the research industry – accounting for as much as 30 percent of all research dollars spent.

A study by John T. Mentzer, a professor in the Department of Marketing, Logistics, and Transportation at the University of Tennessee, looks at the use of customer satisfaction research in the private sector. He conducted a survey of 124 private sector companies to learn what is being done in customer satisfaction measurement and management.

All of the firms surveyed had some form of customer satisfaction research in place. Budgets for this effort ranged from as little as \$1,000 annually to more than \$500,000. Surprisingly, many firms surveyed had no specific amount budgeted for this task. The frequency with which customer satisfaction measurements are taken varied from annually (40 percent), to quarterly (27 percent), to monthly (30 percent).

Although, many firms report using more than one methodology to collect a variety of data from different customer groups, telephone and mail surveys represent the methodology of choice. Also popular are personal interviews and customer focus groups. Nearly all (98 percent) of companies responding use their current customers as the sampling frame for their customer satisfaction research. Less than one-third also includes noncustomers or former customers in their research.

Data analysis methods range from the widely used basic statistics to more rarely used multivariate analyses to provide greater insight into what the data means. Basic statistical methods might include cross tabulations, qualitative assessments, and descriptive statistics, such as means, standard deviations, and percentages. Studies that are more complex might include the use of regression analysis, factor analysis, content analysis, cluster analysis, discriminant analysis, and conjoint analysis.

Similarly, the degree of sophistication in using theoretical models to guide the development of customer satisfaction measures varies widely. Nearly half of all companies surveyed stated they did not know what theoretical base their company used to measure customer satisfaction. Approximately one out of four of the responding firms use the SERVQUAL model of service quality measurement developed by Zeithaml, Berry, and Parasuraman^{xxi}.

Most of the firms distribute the results from customer satisfaction research efforts widely. Only a few companies (6 percent) do not distribute the results of the research to their employees. Top management has the most accessibility to customer satisfaction information. However, other organizational levels and departments also have extensive access to the information – 92 percent of responding firms make the information available to middle management, 75 percent to staff personnel, and 65 percent to line personnel. Wide distribution to and use by many departments within a firm is more limited. Marketing, sales, and research are the departments within these responding firms with the greatest access to customer satisfaction information.

Customer satisfaction research is an important component of these firms' planning and strategy development efforts, and often, is an integral part of the company's mission statement. Responding firms use results of customer satisfaction research primarily to revise products, services, and corporate plans; assess their competitive position; and target new customers. Most firms include statements regarding customer satisfaction (75 percent), product or service quality (65 percent), and market leadership (60 percent) in their mission statements. Fewer include statements regarding customer service (56 percent) and a customer-orientation (49 percent).

The Growing Use of Customer Research in the Public Sector

Recognizing the importance of the marketing and customer research function, the use of market and customer research increasingly is entering the public domain. These new users often have very different purposes for conducting research and use the results from research in very different ways.

- A public utility conducts a research study to support a request for a rate change or the introduction of a change in service level. Results from the study are presented to a regulatory body.
- A nonprofit agency is developing a long-range plan regarding the use of key properties in support of current and proposed programs. Public meetings on the subject were highly emotional. The agency believed that the views expressed at the meetings did not represent the membership served by the agency. They conducted research to learn what a representative sample of the population felt about the proposed recommendations.
- A regional transit agency wants to build public support for the continuation of an experimental program involving "dedicated" bus lanes. Research proving the effectiveness of the program is to be presented to various public bodies and citizen groups.

Nineteen utilities responded to the 1994 Survey of Marketing Research conducted by the American Marketing Association. Their use of market research generally parallels that of business. However, their efforts are somewhat more likely to be concentrated in the areas of business / economic and corporate research, studies of buying behavior, and research on promotions. Perhaps due to the nature of the businesses they operate, they are less likely to conduct research on products, notably as it pertains to competitive studies, and distribution. This focus may change in the future as utilities become increasingly competitive with further deregulation.



EXHIBIT 4 RESEARCH ACTIVITIES OF NINETEEN UTILITIES

	%		%
	<i>Doing</i>		<i>Doing</i>
A. Business and Corporate		D. Distribution Studies	
1. Industry/market characteristics	100%	1. Channel performance	47%
2. Market share analyses	94	2. Channel coverage	20
3. Internal employee studies	88	3. Export & international	13
4. Acquisition / diversification	69	4. Plant / warehouse location	33
B. Pricing		E. Promotion	
1. Demand analysis		1. Media research	81%
a. Market potential	100%	2. Copy research	87
b. Sales potential	88	3. Advertising effectiveness	84
c. Sales forecasts	94	4. Public image	80
2. Competitive pricing analysis	77	5. Motivation research	79
3. Cost analysis	69	6. Sales promotions	80
4. Price elasticity	76	7. Competitive advertising	26
5. Profit analysis	69	8. Sales force compensation	50
C. Product		F. Buying Behavior	
1. Concept development	75%	1. Product satisfaction	94%
2. Product testing	44	2. Segmentation studies	100
3. Test markets	65	3. Brand awareness	73
4. Brand name testing	31	4. Purchase behavior	73
5. Competitive product	27	5. Purchase intentions	70
6. Packaging design	19	6. Brand preference / attitudes	60
Source:	Thomas C. Kinnear and Ann R. Root (eds.), <i>1994 Survey of Marketing Research</i> . Chicago: American Marketing Association.		

This research clearly shows the recognition of the importance of customer research among businesses and by many in the public sector. They are using market and customer research for a variety of purposes in the private sector: planning, problem solving, and control.

- When used for **planning**, firms are using market research to identify market opportunities. The emphasis is on determining those opportunities that are viable and those that are not promising to the firm. Planning research provides estimates of demand so that management can better assess the resources needed to develop them.
- **Problem-solving** research is used by businesses to focus on short or long-term decisions they make with respect to specific elements of the marketing mix – product, price, place, and promotion.
- Businesses use **control-oriented** market research to help management keep abreast of trends in the marketplace and how well the firm is operating in that environment. Moreover, control-oriented market research helps management isolate problems. Exhibit 5 illustrates the types of questions private industry usually asks in each of these areas.



**EXHIBIT 5
KINDS OF QUESTIONS MARKET RESEARCH ANSWERS**

<p>1. Planning</p> <p>A. What types of people buy our products / use our services? Where do they live? How much do they earn? How many of them are there?</p> <p>B. Are the markets for our products / services increasing or decreasing? Are there promising markets that we have not yet reached?</p> <p>C. Are the channels of distribution for our products / services changing? Are new types of marketing institutions likely to evolve?</p>
<p>2. Problem Solving</p> <p>A. Product / Service</p> <p style="padding-left: 20px;">i. Which of various product / service designs is likely to be most successful?</p> <p style="padding-left: 20px;">ii. What configuration (levels of attributes) for the product / service is likely to be most successful?</p> <p>B. Price</p> <p style="padding-left: 20px;">i. What price should we charge for our products / services?</p> <p style="padding-left: 20px;">ii. What is the likely effect of a price increase on demand / perceptions of value?</p> <p>C. Place</p> <p style="padding-left: 20px;">i. Where, and by whom, should our products / services be distributed?</p> <p style="padding-left: 20px;">ii. What kinds of incentives should be offered to encourage distribution of our product / service?</p> <p>D. Promotion</p> <p style="padding-left: 20px;">i. How much should we spend on promotion? How should it be allocated across products / services and to target groups?</p> <p style="padding-left: 20px;">ii. What combination of media – newspapers, radio, television, or magazines – should we use?</p>
<p>3. Control</p> <p>A. What is our market share overall? In each geographic area? By customer type?</p> <p>B. Are customers satisfied with our products / services? How is our record for service? Are there many returns? What is our rate of churn?</p> <p>C. How does the public perceive our company? What is our reputation within the industry or trade?</p>

The Use of Customer Research in Transit

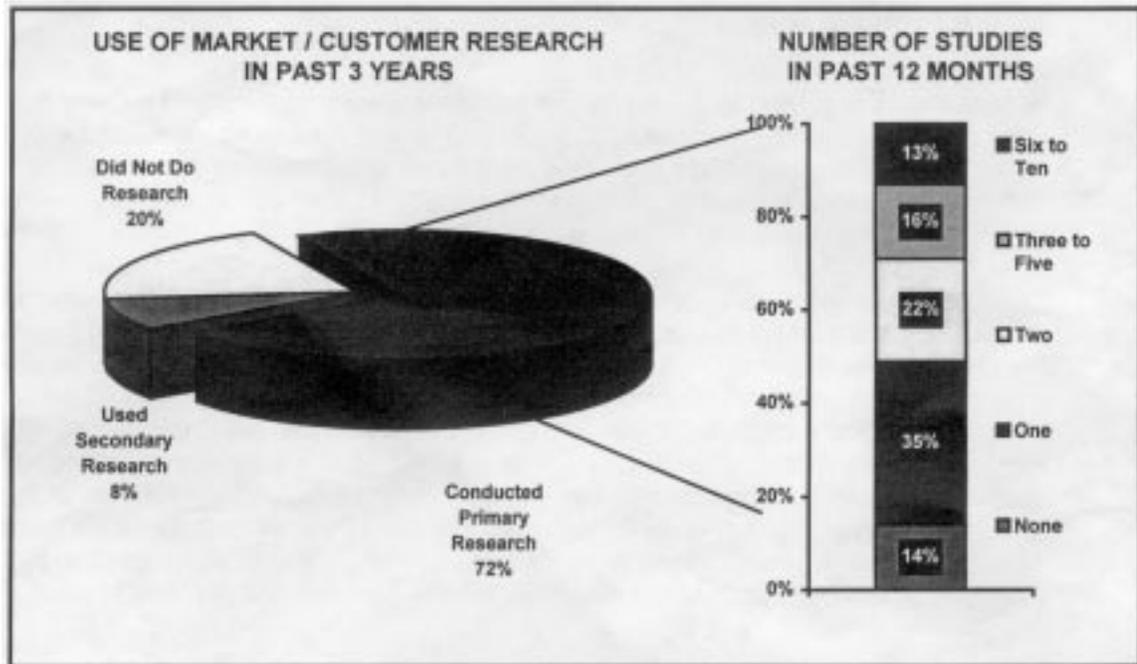
In contrast to the view that research is indispensable to the private sector, many working in and with the transit industry perceive that there is little use of market or customer research in transit. Moreover, many believe that the research conducted has been limited primarily to supporting and evaluating promotional activities. To understand the state-of-the-practice of market and customer research, a survey was completed among market research, marketing, planning and general managers at transit agencies in the United States and Canada. Together, 294 transit managers representing 233 agencies throughout North America participated in the survey. The primary purpose of the survey was to obtain a picture of the current use of customer research in transit. Specifically, information was sought on:

- The extent of past and current market and customer research in transit agencies and upcoming research plans,
- The purposes of transit market and customer research studies and methodologies used,
- The practical use of market and customer research results,
- Attitudes toward market and customer research, and
- Potential barriers to the integration of market and customer research in transit management.

Market and customer research efforts in transit are widespread. Most of the agencies surveyed (72 percent) report they had conducted market and/or customer research in the past three years. However, these research efforts are limited in scope and frequency. Most agencies (56 percent) had conducted only one or two studies in the past year. Moreover, the percent of transit agencies conducting market research is much less in the private sector and even among other public utilities.



FIGURE 2
THE USE OF MARKET / CUSTOMER RESEARCH IN TRANSIT AGENCIES



Research efforts in the transit industry are largely concentrated within larger agencies. Seven out of ten large agencies (those agencies serving areas with populations over 500,000) had completed at least one research study in the past year. More than half of the large agencies reported doing three or more studies in the past twelve months. On average, large agencies conducted seven studies in the past twelve months.

On the other hand, less than half the small agencies (those serving areas with populations of less than 200,000) had conducted research in the past year. Among those small agencies who conducted research in the past year, the majority (64 percent) had conducted only one study.



**EXHIBIT 6
USE OF MARKET RESEARCH BY AGENCY SIZE**

	% Conducted		Average Number In Past Year
	Primary Market Research In Past 3 Years	Research In Past Year	
Large Agencies	83	69	7
Mid-Sized Agencies	73	56	2
Small Agencies	62	45	1

*Agency size defined by population served as follows:
Large serving populations over 500,000; Medium serving populations between 200,000 and 500,000; Small serving populations less than 200,000*

The scope of market and customer research efforts in transit is limited and is seldom used to direct major policy decisions. Most research efforts at transit agencies are directed at assessing customer attitudes or satisfaction with services and public opinion about agencies' performance or image (Figure 3). That is, the purpose of research is largely limited to its control function and serves primarily to confirm past decisions. Small and mid-sized agencies limit their research efforts to measuring customer satisfaction – general agency performance and specific transit services – and planning routes and schedules. Large agencies, on the other hand, more often use market research to measure market characteristics and trends, develop or test advertising and marketing concepts, evaluate or track the success of advertising or promotional programs, develop or test new transit product or service ideas, and to estimate fare elasticity.

Research seldom is used to develop or test policies, measure voter support for agency plans or tax / bond initiatives, estimate fare elasticity, or develop or test advertising or marketing concepts. Also, transit agencies are much less likely than businesses and utilities to use research to identify and understand market segments – an important strategy for the development of new products and services as well as effective advertising and promotion campaigns.

Transit agencies rely heavily on on-board data collection efforts (Figure 4). Most agencies who had conducted research in the past year used on-board surveys. In many instances, the primary purpose of this research was to gather origin and destination information. Much of this data is required for federal reporting requirements or other purposes. Agencies often "tack on" other research questions to these efforts. The methods frequently employed by other businesses and public utilities – telephone surveys, in-person interviews, and focus groups – are used less often. The implication of limiting research efforts to on-board surveys is a failure to understand the needs, wants, and expectations of the many other stakeholders public transit must serve. Moreover, the amount and type of information that agencies can gather through an on-board survey effort are limited. Finally, without careful attention to sampling and data collection procedures, the reliability of data from on-board surveys is suspect.

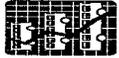


FIGURE 3
PURPOSE OF AGENCY MARKET RESEARCH IN THE PAST THREE YEARS

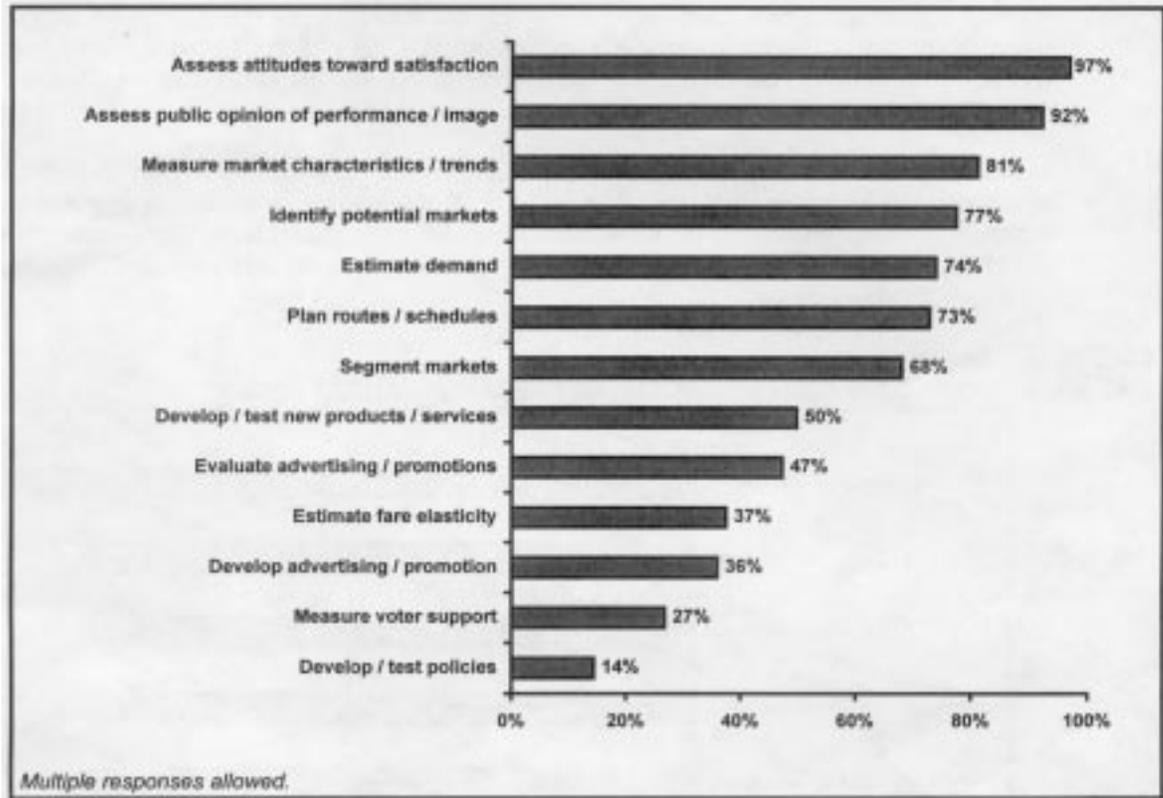
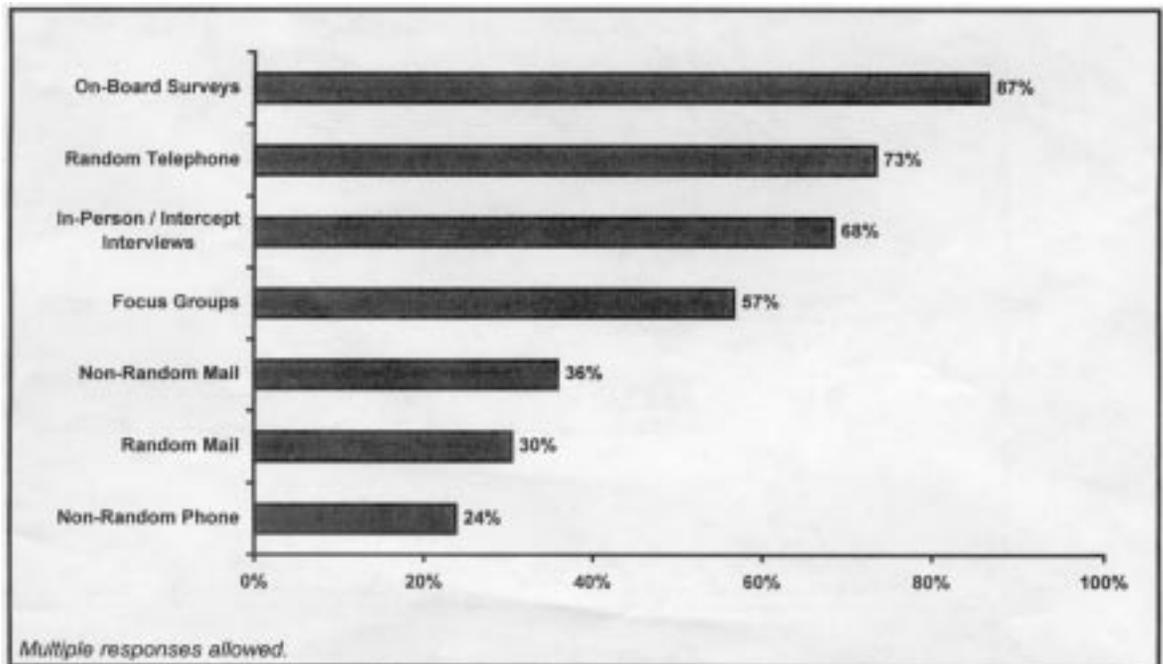
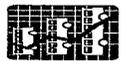


FIGURE 4
RESEARCH METHODS USED IN THE PAST THREE YEARS

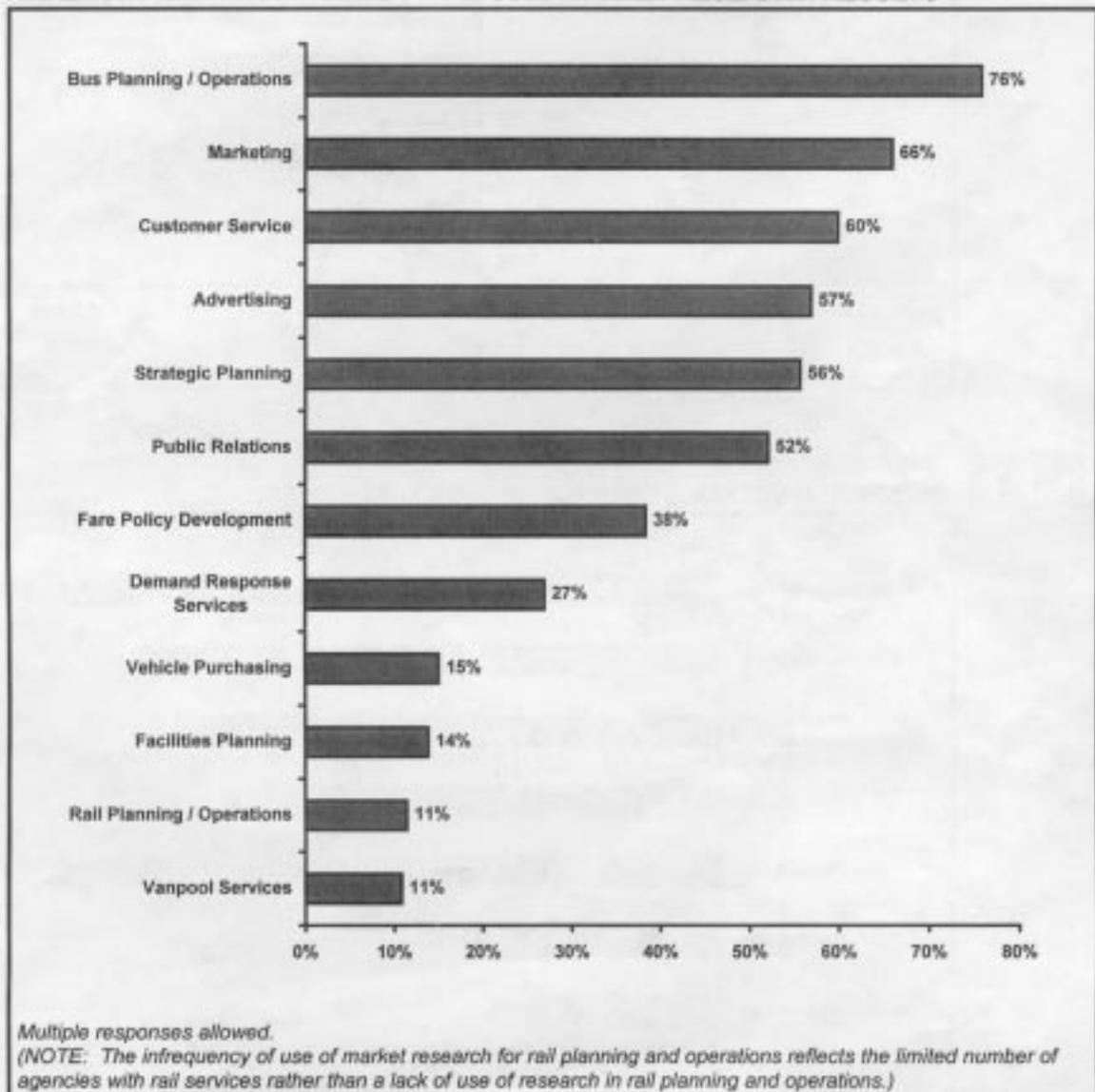


Despite this somewhat limited use of market and customer research, nearly all responding agencies said their management or other policy makers used market or customer research study results in making agency decisions. One out of three respondent agencies used market research to a large extent; over half (57 percent) used it to some extent. Only one out of ten agencies suggested that management or other policy makers at the agency did not use market or customer research in making agency decisions.

Market research is used most often by those involved in decisions regarding bus planning and operations. Research is also used frequently by those in marketing, customer service, advertising, strategic planning, and public relations. Those involved in decisions about demand response services, vehicle purchasing, facilities planning, rail planning and operations, and vanpool services use research infrequently (Figure 5).



**FIGURE 5
AREAS IN WHICH MANAGEMENT HAS USED MARKET RESEARCH RESULTS**



Barriers to the Increased Use of Research in Transit

What factors potentially explain this somewhat limited use of market and customer research for transit agency decision-making? Many working in public transportation are acutely aware that they should be making more frequent and much better use of market and customer research, but, in fact are often doing the complete opposite. Negative experiences in using market information or unfamiliarity with methods and uses of different types of information inhibit the willingness to acquire information and use it effectively in many transit agencies.

Two areas were explored to determine the extent to which they represent barriers to the increased use of market and customer research in transit: attitudes toward market and customer research in general and impressions of the success of past research efforts.

Attitudes toward Market and Customer Research

Respondents were asked the extent to which they agreed or disagreed with a series of general statements regarding market and customer research. For example,

Planners should be left to do their jobs without worrying about what market research says.

Market research is better suited to consumer products than to public transportation.

It would be worthwhile for my agency to know more about market research techniques.

Transit managers would make better decisions if we had more market research as a guide.

Market research is generally worth the cost.

Past experience is a better guide to decision-making than market or customer research.

It takes so long to get market research results that relevant decisions have already been made.

Respondents indicated their agreement or disagreement with these statements on a five-point scale where "1" represented "strongly disagree" and "5" represented "strongly agree."

Factor analysis was used to identify underlying attitudinal dimensions among the individual statements that might indicate the way agencies thought about market and customer research. Four dimensions were identified and given titles to reflect the variables that loaded into each factor.[•]

- **Suitability of Market Research:** The first factor had to do with the appropriate focus of transit decision-making, whether market research is needed for or appropriate to transportation planning, whether transit agencies know what customers need without market research, and whether customers know enough to provide useful market research to planners.
- **Usefulness of Market Research:** The second factor had to do with the overall usefulness of market research and whether or not it is worthwhile, worth the cost, and leads to better decision-making.

[•] For a detailed description of the methodology used and results of the factor analysis, see [Integrating Market and Customer Research Into Transit Management: Final Research Report](#).

- **Usability of Market Research Results:** This factor deals primarily with the usability of market research results based on market researchers' understanding of transit, the clarity of their results, and the time it takes to get answers to market research questions.
- **Value of Market Research:** This final factor has to do with trust, that is whether agencies place trust in past experience and "gut feelings" as opposed to market research. Also correlated with this factor are concerns about the availability of money to spend on market research.

Next, an overall score was computed for each factor by averaging respondents' attitudes across the major variables contained in each factor. While factor analysis loads every variable to some extent to create each factor, this method creates variables that directly reflect the responses to the key questions represented by that factor.

Transit agencies agree that market research is suitable for transportation planning and market efforts – that is, market research is necessary for transportation planning and transit agencies do not know what customers want without market research. They also agree that market research is useful – that is, market research is worthwhile, worth the cost, and leads to better decision-making.

On the other hand, transit agencies are less likely to agree that market research is usable, based on market researchers' understanding of transit, the clarity of their results, and the time it takes to get answers to market research questions. Concerns were also expressed regarding the value of market research based on the trustworthiness of market research and the availability of money to spend on market research efforts. These factors, therefore, represent potential barriers to the increased use of market and customer research in public transportation.

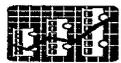
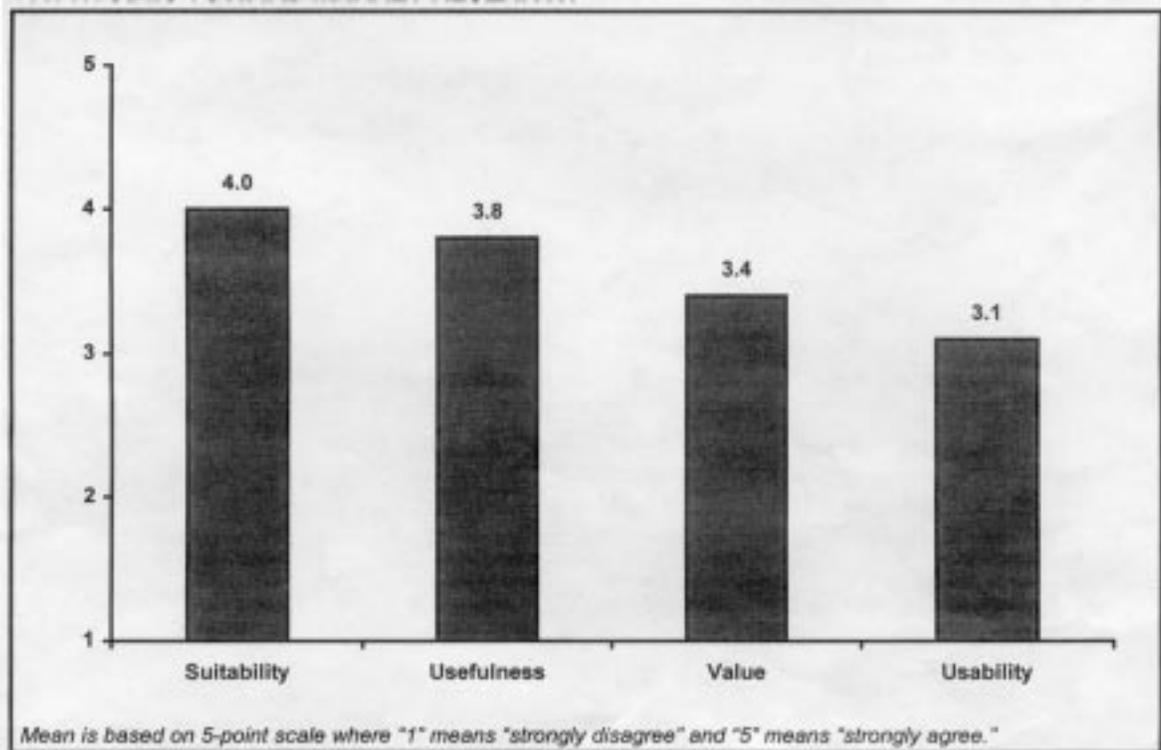


FIGURE 6
ATTITUDES TOWARD MARKET RESEARCH



Success of Past Research Efforts

The success of past research also represents a potential barrier to the increased use of market and customer research. As the old adage goes . . .

Once burned. Twice cautious.

Transit agencies give mixed reviews for the success of their most recent research effort in resolving the key issues for which they designed it. More felt the effort was "moderately successful" than "very successful." More than one in ten felt their most recent research effort was not at all successful.

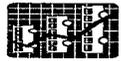
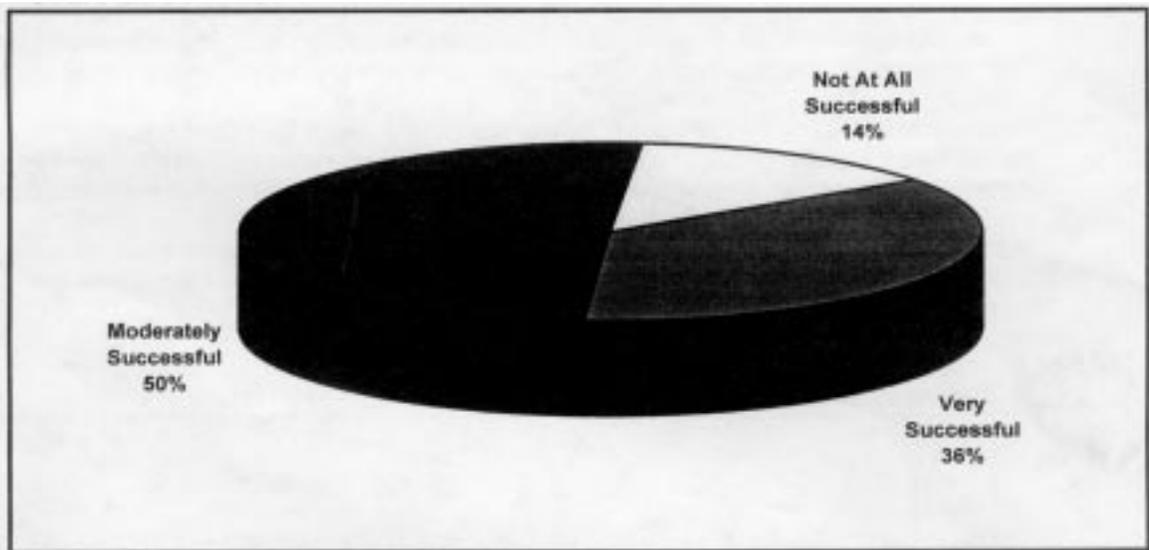


FIGURE 7
OVERALL SUCCESS OF MOST RECENT RESEARCH EFFORT



Responding agencies indicated the extent to which they agreed or disagreed with fourteen statements reflecting different aspects of the results of their most recent market research project and the final report. For example,

The conclusions contained in the report clearly followed from the data.

The overall quality of the report content was high.

The language of the report was clear.

The research provided explicit recommendations for action.

The results of the research contained some real surprises.

Without this research information, the agency would have taken very different actions.

The results from this research supported decisions already made.

The implications of the findings were politically acceptable to the organization.

Factor analysis was used to understand the underlying dimensions along which managers might evaluate their past research efforts. Transit agency managers evaluated their previous research efforts along four dimensions. These dimensions were given names based on the statements that loaded into (were correlated with) each dimension.*

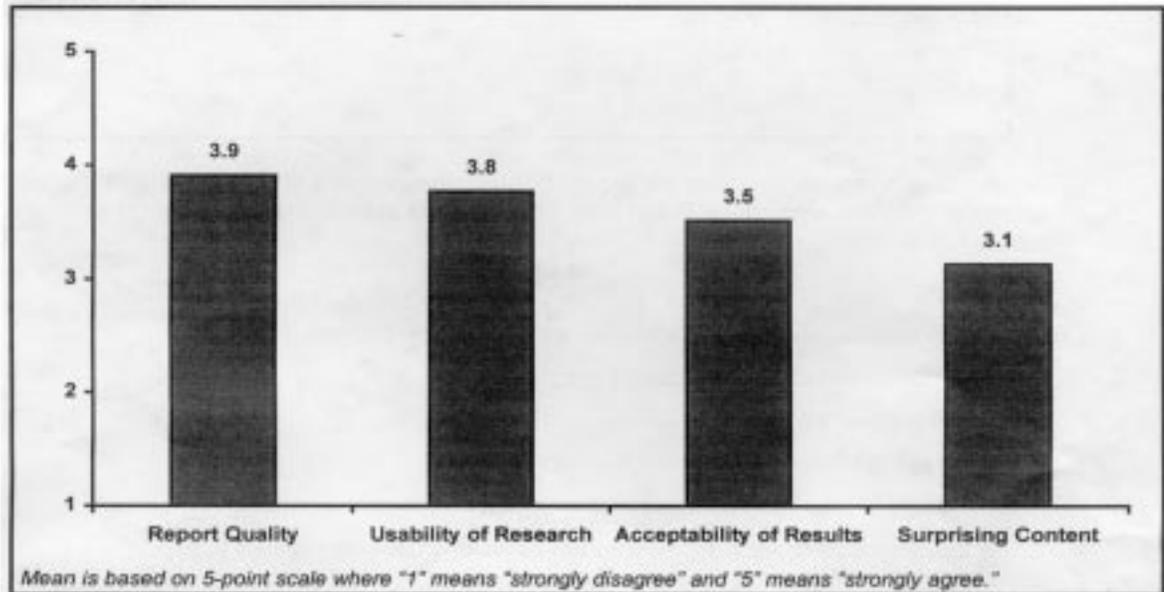
- **Quality of the Report:** This dimension pertains to transit agency managers' perceptions that the conclusions of the report related to the data, the quality and clarity of the report content, the complexity of data analysis, and the timeliness of the information.
- **Usability of the Research:** The second dimension has to do with the practicality of recommendations, whether recommendations were explicit enough, and whether they were used in policy decisions.
- **Surprising Content:** The third factor reflects responses regarding whether the results contained real surprises, whether the results were what was anticipated, and whether the agency would have taken a different action with the research results.
- **Acceptability of Results:** This final factor has to do with respondents' impressions that research results supported decisions already made or politically acceptable to the agency.

Next, an overall score was computed for each of the four factors to reflect respondents' agreement or disagreement with the factor. This part of the analysis shows transit agencies believe that the quality of the reports they receive is generally high. To a lesser extent, they believe that the research was usable.

Potential barriers to the increased use of market and customer research in transit management are concerns regarding the acceptability of the results of the research to the organization and the degree of surprising content in the research results.



FIGURE 8
DIMENSIONS ON WHICH MANAGERS JUDGE RESEARCH QUALITY



* For a detailed description of the methodology used and results of the factor analysis, see [Integrating Market and Customer Research Into Transit Management: Final Research Report](#).

Perceptions of the overall success of the research effort were related to respondents' perceptions of the quality of the report, usability of the research, and to a lesser extent the acceptability of the research. Agencies that had very successful research efforts gave high evaluations to both the report quality and usability of the research. Agencies that were only moderately successful gave higher evaluations to report quality than to the usability of the research, suggesting that usability of research and the agency's ability to integrate the research into their decision-making represents a major barrier to the use of market and customer research.

There was no relation between agencies' perceptions of the success of the project and the extent to which the results of the research contained surprises.

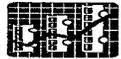
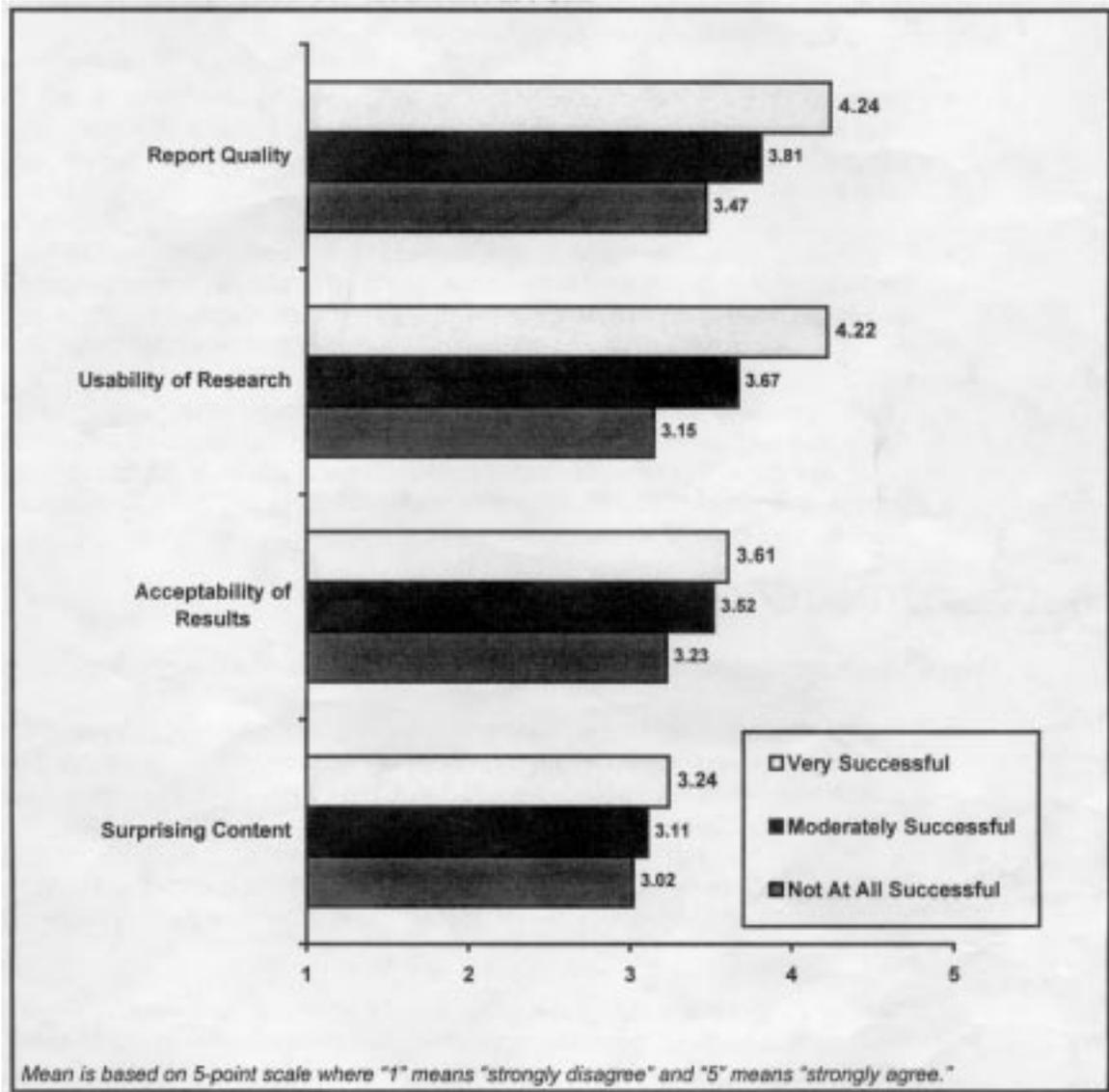


FIGURE 9
RELATIONSHIP BETWEEN QUALITY AND USABILITY OF RESEARCH AND
PERCEIVED SUCCESS OF RESEARCH EFFORT



The Road Ahead: The Importance of Market and Customer Research in Transit

Despite these barriers, the importance of market and customer research in public transportation cannot be underestimated. Yet this research suggests that much opportunity remains for the use of market and customer research in public transportation. Moreover, as the environment in which transit operates becomes increasingly complex and competitive, agencies have a growing need to be more sensitive to the voice of the market.

The Functional Roles of Research in Decision-Making

Market and customer research can serve three important functional roles – descriptive, diagnostic, and predictive – for decision-making in the public transportation:

- Its **descriptive** function includes gathering and presenting statements of fact. For example, what percent of the population has ridden the bus in the past thirty days? What are riders' attitudes toward the quality of service? Much of the research conducted by transit agencies serves primarily a descriptive function.
- The second role of research is the **diagnostic** function. Here, data and/or actions are explained. For example, what is the impact on ridership with the introduction of a new service or change in fares? In the past few years, some transit agencies, notably larger agencies, have begun using the diagnostic function inherent in customer and market research.
- Finally, market and customer research can serve a **predictive** function. In this capacity, descriptive and diagnostic research is used to "predict" the results of a planned decision or policy change. At this time, little transit market research serves in this capacity. However, this represents an opportunity for actionable research addressing many unique policy decisions faced by transit organizations.

The Increasing Need for Information

Several factors stimulate the need for more frequent and more effective use of information:

- The marketplace is increasingly characterized by a growing number of types of stakeholders – more diverse customers – that are changing more frequently. This means that a broader array of information may have to be used and that standard means of interpreting information may no longer be adequate.
- The time available for making decisions is getting shorter as agencies are better able to bring new products and services to market sooner and to enter new markets more quickly than in the past.
- The half-life for information – the average time for which it is valid – is shrinking as changes in the marketplace occur more and more often. This means that what is true today is less and less likely to be true tomorrow. Transit managers not only need to examine market conditions more often, but also must be prepared to translate data into action much more frequently.
- Agencies have many attractive options to pursue with increasingly scarce resources. More careful use of market research is necessary to decide the right thing to do and how to do it

right. This means that agencies need more exploratory or developmental market research, even at the expense of the confirmatory research that now accounts for most of the research budget in all but a few agencies.

Market and Customer Research: An Invaluable Tool

Market and customer research is an invaluable tool to managers in many functions. Organizations that have recognized the importance of market and customer research have identified many benefits to integrating a research function into their organizational decision-making.

Improving the Quality of Decision-Making

Most important, market and customer research improves the quality of decision-making by shedding light on the desirability of various alternatives. While market and customer research cannot guarantee the ultimate success of any single decision, reliable and valid research data can eliminate bad alternatives and provide input into the strengths and weaknesses of other potential alternatives. This significantly reduces the risk and uncertainty inherent in any decision.

Consider the following example where research clearly identified strategies that were unlikely to succeed, yet the results were not used when making the final decision.

A large suburban agency had a widely diversified ridership ranging from very upscale to very low income level demographics. The system had a monthly pass but found that those in the lower economic strata could not afford the up front costs of the pass, therefore missing a discount opportunity.

Through survey research, the agency found that the best way to give this group discounts was to offer discounted ticket books. The agency then conducted focus groups to learn the best way to offer tickets. The research results suggested that tickets would have to be readily available at multiple outlets in targeted neighborhoods. Moreover, cash was the preferred method of payment, since many low income people do not have credit cards or checking accounts.

Because of other pressures, the agency introduced the ticket program on a direct mail basis only. The result, according to the general manager, "Ticket sales were dismal. We're going to go back and use the research recommendations."

Several months later, the agency introduced ticket books at six outlets and supported the distribution by advertising. The ticket books sold out the first day they were introduced at the outlets.

On the other hand, consider this example of a small transit agency – Whatcom Transportation Authority (WTA) in Bellingham, Washington. After conducting its first major market research effort, it launched a successful new service, resulting in a significant ridership increase. Passenger Transport noted that WTA experienced the second largest percentage increase in ridership among reporting agencies – 47 percent – during the third quarter of 1994.

At the time of the survey, the Whatcom Transportation Authority (WTA) operated Monday through Friday between 6:30 a.m. and 6:30 p.m. and on Saturdays between approximately 9:40 a.m. and 5:40 p.m. A community survey of riders and nonriders suggested a strong interest in WTA extending its service hours.

WTA established the "Nightline" in 1993, extending its evening service to 11:20 p.m. The implementation of the new service helped WTA achieve increases in overall system ridership in 1994 – the first full year of Nightline service – as compared with 1993 levels.

Understanding the Marketplace

The second basic benefit of market and customer research is a better understanding of the external environment in which a system is operating. This has long been the primary use of market and customer research. However, with the escalating rate of change and the increased focus on the customer and customer service, organizations are recognizing that a research function that continually surveys the marketplace allows them to take a more proactive stance in the marketplace. That is, agencies introduce new products and services to take advantage of opportunities. They adjust existing products or customer service before flaws become major problems. It is the difference between viewing the turbulent environment in which many agencies operate as a "threat" – a reactive stance – or an "opportunity" – a proactive stance.

For example, one large regional transit agency knew little about the market it served. By that, it failed to recognize an opportunity for increased ridership.

A large regional transit agency provided service to a hub city, local service in a group of satellite cities, and regional service connecting the hub and local services. They based service decision primarily on results contained in a limited market research database, mostly as on-board survey results.

One satellite city was interested in attacking a severe traffic problem developing because of rapid growth in the area, spurred by a rapidly growing high-tech industry and the expansion of a major university. In spite of the resident and student population growth, ridership of the bus service provided by the regional agency had remained flat and, in some cases, declined.

The city approached the regional agency for research data to help explain the phenomena, but found the agency did not have data that they could apply to the local situation. The city developed its own research program that surveyed residents and students through a combination of on-board surveys, telephone surveys, and focus groups. Highlights of the findings included:

- More than 80 percent of the students on the 40,000-population campus did not know there was local or regional bus service available.
- Of those who were aware of the service, only 20 percent knew local service was available.
- While 75 percent of local residents were aware of some form of bus service, 90 percent could not say where the nearest bus stop was to their home.
- Students strongly preferred a prepaid pass associated with their student activity fee.

Armed with these results, the city in cooperation with the regional agency and the university launched a major public information and advertising program. In cooperation with the university, it also initiated a student activity fee prepaid pass program. The results – student ridership increased 300 percent in one year while resident ridership increased 25 percent. This was done without any major modifications to the regional agency's service or fares.

Had the regional agency had an adequate research base in the first place, they would have discovered this growth opportunity years before. Today, the agency has expanded its research function and has discovered several other opportunities.

Finding Out What Went Wrong

Under its diagnostic role, market and customer research is effective in identifying why something did not work out as planned. Instead of leaping to the conclusion that the decision itself was inherently flawed, research data can provide information as to whether some unforeseen change in the external environment caused the problem. Alternatively, it can identify what factor or factors in the implementation of the decision led to the problem. This information can then be used to avoid making a similar mistake in the future. For example:

The Washington Metropolitan Area Transit Authority (WMATA) has experienced a significant decline in ridership on the bus portion of the bus / rail system. Some reasons for the decline were apparent – a shift of employment from the Washington, D.C. core of the system to the suburbs of Maryland and Virginia, competition from newly formed suburban bus services, and a difficult economy. These factors, however, did not explain all the drop-off in ridership.

WMATA decided to begin a research process to identify and quantify other factors that may have contributed to ridership attrition and to develop strategies to reverse the process. The first step in the program was a combination of exploratory focus groups followed by a quantitative random telephone survey. Some findings of this first phase of the project included:

- The nature of the potential rider market had shifted to a relatively young but upscale group who had high expectations for service quality.
- There was very high awareness of WMATA services – nearly 90 percent knew where a nearby bus stop was – but little practical knowledge about what service was provided or how to get information.
- Familiarity and use of WMATA's Metrorail service did not necessarily translate into use of its Metrobus service.
- The agency's existing research database did not provide enough micro detail to allow it effectively to identify new suburban market opportunities or the precise reasons for ridership attrition on a particular service.

Based on the first phase study information, the agency is looking at expanding its basic transit information system and to conduct a complete review of its current bus service criteria. Moreover, WMATA will field a large-scale random telephone survey designed to identify reasons for attrition and possible opportunities for service areas and where possible by route.

In summary, in today's complex world it is no longer of value for a manager to seek only the "right" decision. Rather, the greatest value is in managing the decision-making process in a way that increases the chances of choosing the best decision among the available alternatives, and in having that decision effectively carried out. This type of decision-making process requires appropriate tools, expertise, and innovative momentum to achieve quality decisions.

Market and customer research is key to this process.