

Beyond Participation

Market Research as a Tool for More Effective Transportation Planning

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“Public” or “community” involvement in planning has become a standard practice in the United States, especially in the development of comprehensive or strategic plans (Klein, 1993a). Public meetings and outreach programs have in recent years been supplemented by such activities as visioning exercises and design charrettes. In all cases, the overt goal is to incorporate public opinion and values into the shaping of plans.

Transportation planners have had to pay special attention to the public participation process, for two primary reasons. First, transportation activities generate substantial impacts, both positive (mobility, time savings, and travel comfort and safety) and negative (traffic, noise, pollution, and potential danger), on communities. Second, investments in public transportation specifically seek to influence travel behavior, and hence must take into account the decisions made by individuals as to their mode of travel and their choice of destination. In the first case, public participation is typically oriented toward resolving the issue of the *externalities* of travel behavior, framed in terms of who will bear the costs and other impacts of such behavior; in the second case, community participation is typically sought to sell the potential benefits of investments in public transit services.

Even under the best circumstances, the ability of public participation activities to significantly impact traditional transportation planning is limited due to a number of factors.

■ More so than most other forms of regional planning, transportation planning has evolved into an engineering

discipline, in which public investments are primarily justified, if not determined, by demand models themselves informed by econometric analysis of the perceived utility of statistically-derived factors determining travel decisions and mode choice. The public participation process, typically involving public meetings, does not produce the kind of data that can be fed easily into this kind of planning model.

■ The counter-intuitive nature of many aspects of actual travel behavior leads to a large gap between what travel planners understand as feasible or practicable and what the public believes is possible. The most common example of this phenomenon is the “empty lane” debate frequently undertaken in the newspapers of cities that have recently established “HOV” (high-occupancy vehicle) or car pool lanes on local freeways; though the public sees “underutilized” lanes that could be pressed into service to “alleviate” congestion on the remaining lanes, transportation professionals can demonstrate both that the special lane is moving a greater number of people and that opening it to regular traffic would result in a *deterioration* of service for other users. These kinds of perceptual gaps work against citizen involvement: it becomes clear to participants that there is a relevant body of technical knowledge closed off to them. At the same time, and due to the same reasons, it becomes routine among transportation planners to dismiss comments or suggestions of that same public as “unrealistic.”

■ Public participation processes frequently involve only a small, self-selected subset of a given community. Since the goal of many investments in public transportation is to at-

tract new riders to such systems,¹ these projects require planning in part for those who do not yet identify with or use such services; it is precisely these people who are least likely to “get involved.” In the author’s experience, many, if not most, of the participants in community hearings on transportation projects are those most highly impacted by such projects, not those who merely will have new choices.

■ Public participation processes also tend to weigh against the interests of minorities unless specific, systematic attention is given to minority involvement (Klein, 1993b). The notion of majority/minority interests in conflict has resulted in lawsuits in both New York and Los Angeles (Fritz, 1994), in which minority representatives charged that transit systems were diverting funds to subsidize white, suburban riders at the expense of transit-dependent urban minorities.

■ Finally, although public participation processes at their best not only solicit citizen input but actively engage the public in the devising of solutions and plans, they are inherently *political* processes, meaning they generate a set of expectations as to how public contributions are to be used by planners and represented in the products of the planning process.

Of greater importance, the public participation process, as traditionally practiced in American transportation planning, has not resulted in the kinds of “Service Breakthroughs” (Heskett, 1986)—reconfigurations of a given service in ways that create new value for the public—needed if transit services are to attract significant numbers of riders who currently rely on automobiles for their urban transportation needs. Indeed, it has even been the case that most capital-intensive investments in transit infrastructure made in the past two decades have failed to achieve even the modest ridership goals projected for these systems (Pickrell, 1992).

The need to achieve a Service Breakthrough in the area of transit planning has inspired the transit industry to seek new strategies or approaches. The 1996 conference of the American Public Transit Association (APTA) proclaimed,

¹ The author, in a previous study, identified four primary reasons commonly offered by public agencies and individuals for investments in new public transportation infrastructure: alleviating road congestion, reducing air pollution, impacting urban sprawl, and meeting the needs of transit-dependent populations. Of these four reasons, the first three necessarily involve attracting “mode-choice” riders who otherwise would drive private passenger automobiles (Hoffman, 1995).

as its theme, “Breaking the Mold.” Still, it is far easier to proclaim a need for a new planning paradigm than to actually develop and implement one.

Marketing Strategy and Transportation Planning

Both urban and transportation planners have been preoccupied of late with the desire to create new “transit-friendly” or “transit-oriented” developments. The problems of low transit usage, and conversely of attracting new riders to transit, are defined more and more in terms of urban form. Proponents of the “new urbanism,” neotraditional planning and even the broader “transit-oriented development” thinking argue in favor of clustering mixed uses at high densities around transit stations, so that people (the public) will naturally shift to transit modes for many of their trip needs.

The *hypothesis* that “transit-oriented” development will lead to new levels of transit use—it is only a hypothesis—requires that several questions be answered first. Just *who* is expected to use more transit services? What does this specific person *want* or *need* in a transit mode? And, of greatest importance, *why* does this person make the transit and land-use choices she or he currently makes?

Though the answers to these questions are vital to planners, the questions themselves are *marketing* questions. Unfortunately, too many in the planning and development professions have a limited—and inaccurate—understanding of the marketing function and the ways in which this function, properly integrated into a planning process, can help planners devise both better solutions and more successful implementations.

The marketing function is broadly concerned with three primary tasks: identifying the persons one needs or wishes to serve, understanding how or why these persons make the kinds of decisions that characterize their daily choices, and creating new value for these persons in the form of better options that, at the same time, represent greater *value* for the person choosing the service. The stereotypical view of marketing—that of “getting the word out” or “selling” products—is derived from one of the more visible aspects of the marketing profession, that of *promotions*, but is only a fraction of what the marketing function embraces. This confusion is especially understandable given the reality that most marketing departments in organiza-

tions large and small are concerned primarily with promotions, the marketing function itself remaining in the hands of senior management.

Two fundamental strategies drive the marketing process. The first of these is *segmentation*. No single product or service can meet all needs equally; consequently, a solid marketing strategy must begin with the identification of those individuals or groups who *most* should be served by a given product or service. When major transit investments are made with the goal of reducing traffic congestion, containing urban sprawl, or cutting down on air pollution, it is clear, though by no means widely understood or accepted, that for these goals to be met, the transit services developed must pull people from behind the driver's wheel of their cars. For a segmentation strategy to be effective, it must identify groups of individuals, based on shared characteristics, who would be most likely to value the service being offered. Such a strategy can be based on demographics, though is more likely to be effective if based on psychographic characteristics (Heskett, 1986).

The second strategy driving the marketing process is that of *positioning* the product or service. A positioning strategy is one that relates the product or service to the clients' perceptions and to the competition. As an example, a frequent criticism of transit in the United States is that it is positioned in the marketplace as the "low cost, low quality transportation service" (Lovelock et al., 1987, 13). Implicit in this *de facto* positioning is the relationship of the service being offered—in this case, public transit—to competing services—in this case, the private passenger automobile. A positioning strategy tells "clients" what to expect of a service and for whom the service is intended.

These two fundamental strategies serve as the basis for the elaboration of the "marketing mix," a set of decisions relating to four key variables of product or service design:

- the actual design of that product or service;
- the pricing of that product or service;
- the choice of how to distribute that product or service;
- the means (and messages) by which the organization communicates with potential customers and by which these customers communicate with the organization.

What makes these variables *marketing* variables is that each, to be effective, must be based on a well-developed understanding of the customer. To what extent does the product design respond to those attributes most valued to the customer? To what extent does the way in which a

product or service is priced make sense for that customer? How well does the distribution strategy get that product or service into the hands of the customer when and where she or he wishes to have access? And what messages, through which media, will make most sense to this customer?

The norm in transportation planning has been for decisions involving the marketing mix to be made in the absence of an overall strategic vision; rather, marketing decisions have typically been made on an ad hoc and often uninformed basis. Yet, these kinds of marketing decisions are as much *planning* issues as are decisions about route structure, transit corridors, and station-area zoning. If a clear and focused marketing strategy is developed in advance of design and construction, it can inform all of the many physical and organizational decisions that go into establishing new transit services. If marketing decisions are ignored or trivialized, transportation planners miss a grand opportunity to ensure the utility of the services they are planning; worse, they are unlikely to produce the kinds of results necessary to ensure the truly successful satisfaction of project goals.

Marketing decisions necessarily rest on an empirical base. It is impossible to know with any great precision what potential customers value and understand in surveying their options without a prolonged, detailed, and comprehensive market research program. An effective market research program goes beyond traditional user surveys in its attempt to learn *what questions need to be asked* if the service development process is to generate relevant answers. Implicit in this program is the understanding that planners and managers need to first understand how potential customers frame and give meaning to their world, before any serious attempt can be made to measure the weight of any particular attribute of that world.

The nature of the market research process leads to a heavy reliance on qualitative methodologies (Roy Bostock, in Greenbaum, 1993, ix). Chief among these methodologies are focus groups, which are described (Krueger, 1994, 6) as:

a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, nonthreatening environment. It is conducted...by a skilled interviewer....Group members influence each other by responding to ideas and comments in the discussion.

The discussions which occur in these groups are then subjected to a systematic analysis to “provide clues and insights as to how a product, service, or opportunity is perceived” (Krueger, 1994, 6). By allowing these clues to emerge from a natural language process, marketing researchers are better able to fill in the context that surrounds opinions, beliefs, and preferences stated by focus group participants.

The results of focus groups do not depend on statistical testing to determine validity, as do quantitative surveys, though such results are frequently reformulated into testable hypotheses which then may be subjected to statistical processes. Rather, focus groups take advantage of the social context of perception—the tendency of people to move toward shared meaning—to identify the frameworks within which participants make meaning and express preferences. Focus groups cannot be used to generate statements such as, ‘60% of a target group chooses option X;’ they can, however, be used to generate statements such as, ‘when participants speak of option X, they typically use adjectives A, B, and C to describe it, regardless of whether they are in favor or against the option itself.’ Further discussion in the group can also uncover why these adjectives are used, why adjective D is not used, and what relationship might exist among these adjectives and other options.

Kenichi Ohmae gives an illuminating example of the usefulness of focus group technique when he speaks of research undertaken by a camera manufacturer interested in designing a camera useful to a non-technical market. He describes the breakthrough occurring when the researchers realized that the customer was not interested in a camera; she was interested in the photographs, for which the camera was little more than a means to an end. The company was then able to design a camera—the now ubiquitous autofocus, auto-exposure 35 mm. camera—that met with huge success in the marketplace (Ohmae, 1988). What is central here is that no amount of survey research could have generated the kind of customer knowledge generated in the focus groups, as no researcher could possibly have known to phrase a survey instrument to uncover this primary attitude toward cameras.

It is precisely this ability to identify the perceptual or social structures undergirding preferences that makes focus groups such a powerful research tool, when properly conducted. The utility of this tool for planners has been noted

in the focus group literature (Stewart and Shamdasani, 1990, 103):

It is often the case that government planners...and other professionals who design products and services believe that they understand what their clients or customers need or “should” want. Focus groups provide a tool for testing the reality of assumptions that go into the design of services, programs, and products.

Planners are generally not equipped to conduct focus groups on their own; effective group moderators have typically undergone specific training in the research methodology and have relevant sectoral experience (Greenbaum, 1993). Still, the potential contributions of focus group-based marketing research to the transportation planning process are significant enough to suggest that planners need to devise means for incorporating such research into their standard activities.

San Juan: The Use of Marketing Research to Inform Transportation Planning

San Juan, Puerto Rico, is among the most traffic-congested cities in the Americas, yet it has had limited success in attracting riders to public transportation. A new metro rail line, Tren Urbano, is now under construction; this line was conceived by Puerto Rican transportation planners as the first leg of a regional rapid rail system destined to improve mobility for metropolitan-area residents. Concurrent with the construction of this rail system is a plan to modernize and improve the functioning of AMA, the Metropolitan Bus Authority.

Both Tren Urbano and AMA will face the challenge of attracting new riders to transit; though demand studies have shown a large unmet demand for transit services from transit-dependent populations, the social goals established for transit investments—reducing congestion, environmental contamination, and urban sprawl—all require that riders be pulled from private passenger automobiles.

Conventional planning methods have produced data and design criteria that are insufficient for guaranteeing the success of the project in meeting public goals. The recent experience with the Moscoso Bridge, a privately financed and constructed project that has fallen far short of ridership projections, suggests the presence of decision factors not accounted for in current demand models. Moreover, there is little precedent for identifying what elements of transit

service might matter most for current automobile users. Of equal concern, the public participation process, including a range of public meetings and surveys, failed to generate the kind of data necessary to inform the details of project design.

A market research process was designed for transit services in San Juan in order to generate both an initial market positioning strategy and to identify the core elements of a proposed marketing mix for transit services targeted at the “mode-choice” market (those persons who have a car available and hence may more freely choose among competing modes). This process began with a strategy for segmenting the mode-choice market, and then used focus groups to develop an initial typology of public perception of transit options. This typology then served as the basis for elaborating the marketing mix proposed for transit services.

The market research process undertaken in San Juan had as its focus the ways in which targeted segments of the San Juan modal-choice transportation market conceptualize transportation modes, perceive issues of urban mobility, assign societal members to transportation modes, and value aspects or dimensions of transportation service (Hoffman, 1996, 12). Given that there existed little initial empirical base on which to explore these issues, a qualitative, exploratory study was indicated (Stewart and Shamdasani, 1990).

A total of four focus groups were conducted with targeted market segments. The segments chosen included secretaries from the Hato Rey commercial district, higher-level office workers from the same district, university-age students, and medical workers from the Centro Médico complex. This initial segmentation was driven by practical concerns: the first line of Tren Urbano would serve Centro Médico, the Rio Piedras campus of the University of Puerto Rico, and the Hato Rey district. Three of the groups were conducted in San Juan; the fourth, of university students, was conducted in Cambridge, Massachusetts. A moderator’s guide, consisting of a detailed outline of topics to be covered, was prepared in advance of the groups, each of which lasted approximately ninety minutes.

Each of the four groups was audio taped. Complete transcriptions for each group were prepared from these tapes; these transcriptions were supplemented by notes taken both by the group moderator and by observers. The transcripts were then subject to a “content analysis” following the five levels of analysis identified by Krippendorff (1980). Of chief interest were the “referential units,” or

basic themes around which discussion occurred. For each identified referential unit, “propositional units,” statements made about a given theme, were identified and collated. Finally, a series of “thematic units,” recurrent themes that spanned multiple groups, were identified.

The research, as well as the analysis, was conducted entirely in Spanish; the findings were then translated into English so that American project staff could share in the results.

Study Findings

Participants in the four focus groups expressed a range of attitudes toward congestion, transit modes, and places, as well as toward travel behavior. These findings were summed up in eight key themes.

The importance of peer or reference groups. Participants in the focus groups placed great value as to *who* they encounter in daily life. They described desirable and undesirable places in terms of the presence of others of their social class (or above). The implication to planning is significant: a place or service intended to serve the Puerto Rican middle classes, the targeted market for Tren Urbano, must pay careful attention to the mixing of social classes, and to being sure to attract the necessary “critical mass” of middle class users to make others of this class comfortable using this service.

The role of reliability. Particularly among office workers, the need for reliability was continuously stressed. These workers cannot afford to arrive late to work under virtually any circumstance. The implications for transportation planning are again significant: proven, reliable technologies would rate higher with the targeted market than less-reliable technologies that might promise marginal time savings.

The importance of composure. Female focus group participants consistently stressed the need to arrive at work with their composure intact. So strong was this sentiment, that some workers gave up or took time off from jobs when their only alternative was a commute by a mode, such as jitney, that could not guarantee their composure on arrival. The emergence of composure as a key finding was among the more significant results of this research process, especially as it had not been identified previously in the literature reviewed for the Tren Urbano project.

The process of attitude formation. It was discovered that a number of key attitudes had not been fully formed (for ex-

ample, preference for the location of transit access points). These attitudes were instead formed in group discussion; once formed, they became immutable. A marketing communications strategy, by understanding this process, can promote the development of positive attitudes toward transit where such attitudes are still tenuous.

The importance of the social. Most participants in the focus groups described travel time as social time. They also described how they like to socialize, see, and be seen. These insights can be used to create programs of public safety that “feel” safe, design urban spaces that attract Puerto Ricans, and answer many other questions of urban design surrounding transit projects. These findings are also a double-edged sword, as they suggest strongly that perceptions of time are heavily distorted in the presence of company, meaning that demand models that do not weight time differently for persons traveling accompanied are likely to overstate the value of time-savings to these individuals.

The role of walking. Participants rarely spoke of walking as a transit mode; rather, walking was viewed as a social, leisure-time activity. The aversion to walking was surprisingly little related to safety concerns, but was an outgrowth of issues of composure.

Being driven vs. driving. Attitudes toward driving varied widely. Men and women both expressed preferences for and against driving, leading to insights that can be useful in further developing an effective segmentation strategy.

Security and the fear of assaults. It is well known that residents of San Juan feel “besieged” by security concerns; the focus groups delineated a range of attitudes toward security issues and toward the kinds of places and spaces that “seemed” safe. Again, the results of the focus groups can serve as a basis for system design.

Implications for Marketing Strategy

The Puerto Rico study generated a range of implications for issues of marketing strategy, a number of which are currently being explored. While it became clear that further research would be necessary to refine the segmentation strategy, it also became clear that five rules should guide the market positioning strategy. First, transit services will need to be positioned as reliable, especially when compared to roads and road congestion. Second, transit will need to be positioned as the “social,” “safe” alternative. Third, “premium” transit services (those targeted at mode choice custom-

ers) need to be positioned as the “everyone uses it” service, even though “everyone” in this case necessarily implies the middle classes. Fourth, such “premium” services must be clearly differentiated from existing, low quality transit services. Finally, Tren Urbano should be renamed following the adoption of a complete positioning strategy, to reflect the attributes most important to the targeted market segments. Of course, for the positioning strategy to be effective, the service must be designed to achieve what the positioning strategy promises.

The marketing mix derived from the research study covers product (service design), pricing, distribution, and communications issues involved in establishing and promoting transit services. These points reflect the lessons cited above, operationalizing the lessons learned into concrete strategies and choices for transit systems development.

Conclusions

The San Juan experience clearly demonstrates not only the viability, but the utility of incorporating marketing research activities into the transportation planning process. The resulting marketing strategies proposed as a result of the four focus groups, taken together, specify concrete planning decisions which, because they are derived from underlying (and otherwise unstated) perceptions and values, will make transit services more likely to attract and serve the mode-choice constituencies for which they are intended.

It is also clear that the marketing strategy development exercise is a distinct process from the more traditional forms of public participation. The fact that participants in the focus groups were not asked explicitly to comment on the proposed transit projects is itself a break from typical public participation exercises; just the same, the resulting data directly addresses the kinds of questions planners face as they seek to design transit services aimed at attracting new riders.

A marketing strategy development process makes sense whenever planners need to ensure public acceptance of some given service or project. The key questions driving this process—who will benefit from or participate in a solution, and what needs to be present for this person to adequately value the solution—are questions that, if asked more frequently, could result in better projects, better plans, and better solutions to the problems of making cities more livable.

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