

# **PUBLIC PERCEPTIONS OF BUS RAPID TRANSIT IN THE SAN FRANCISCO BAY AREA**

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## **ABSTRACT**

AC Transit, a San Francisco Bay Area transit operator, has proposed a Bus Rapid Transit (BRT) route in the East Bay. This system is forecasted to significantly improve traffic congestion and travel times, yet concerns remain about adequate ridership and public perception. This study aims to examine local perceptions of buses and BRT in order to identify issues that might prevent BRT from reaching its potential. We propose that some of the issues can be addressed through information and advertising designed to overcome the public's negative perceptions of buses.

Bus riders and non-riders were surveyed about their perceptions of the bus and their opinion of a set of BRT features. The results of the study show that buses in general suffer from negative public perceptions, many of them associated with unreliable, slow or inconvenient service. Furthermore, responses to the BRT features indicate that respondents are unclear on the benefits of BRT. With appropriate infrastructure and communication, BRT has potential to increase ridership on the International Boulevard corridor from 25,000 to 36,000. The onus is on local government and regional transit operators to inform the public about the advantages of the proposed systems. Operators may choose to emphasize the features ranked as most important by the survey sample, such as reliability and safety, as they move forward with their marketing campaigns. However, while BRT has potential to make the Bay Area's transportation system more sustainable and robust, the first step will be to make sure that potential riders know what it is.

*Keywords: BRT, bus, transit, ridership, public perception, user surveys*

## **INTRODUCTION**

San Francisco Bay Area transit agencies are exploring Bus Rapid Transit (BRT) as an alternative to conventional buses or light rail for high-traffic corridors. A BRT system includes some or all of the following features: dedicated right-of-way, level boarding, off-board fare collection, energy efficient buses, signal priority, real-time travel information, and more frequent service. The most controversial feature of BRT is dedicated lanes due to their impact on local traffic patterns and parking.

BRT systems are often associated with decreased bus travel times. Decreases in the travel time lead to increased ridership, which leads to decreases in car use, fuel consumption and greenhouse gas emissions. Cain et al. (2009) found that the public sometimes perceives BRT performance to be better than more expensive alternatives due to intangible attributes like safety and fellow riders. However, the key to realizing all of these benefits is to get drivers out of their cars and onto BRT; this is a challenge that has plagued U.S. transit operators.

One of the hurdles to increasing ridership is that many people simply do not like riding the bus. In 2011, EMBARQ published a report that framed public transit's image problem as a lack of branding strategy and asserted that BRT can be sold to potential riders as a solution to a number of relevant problems, including high gas prices, congestion, slow door-to-door travel times on local buses, and difficult-to-use existing systems (Weber et al. 2011).

This analysis aims to support regional BRT marketing campaigns by exploring the existing perceptions of buses and BRT and identifying issues to address through information and advertising. Our methodology included surveying 100 people (both riders and non-riders) in North Oakland, CA to understand their perceptions of the conventional bus and BRT.

The goal of the survey was to understand the following: 1) Do East Bay residents perceive conventional bus service differently than BRT? 2) Can any differences be attributed to specific tangible and intangible characteristics? 3) If differences exist, do they translate into different levels of ridership attraction? 4) Can a branding strategy be used to improve the public perception of BRT and maximize ridership?

The results of the study show that, with appropriate infrastructure and marketing, BRT has potential to significantly increase ridership among both the rider and non-rider populations in the East Bay. Our survey highlights attributes ranked as most important to the bus riding experience and showed that the vast majority of individuals have never heard of BRT. Many of those who had heard of BRT are misinformed or uninformed about its characteristics. The results emphasize the need for better communication about the East Bay BRT project and the importance of marketing transportation products.

## **BACKGROUND**

### **What people think of the bus**

Today's concerns about growing population, rising fuel prices, a changing climate and increased traffic congestion make a strong case for increased public transportation investment, but progress is held back by a pervasive problem with perception—public transportation has a bad image. The fundamental issue is that “the need for public transportation solutions is perceptually not recognized or appreciated” (Wirthlin Worldwide and FJC&N, 2000, p. 20). This barrier is compounded by the public's lack of familiarity with, distaste for, and reticence to use public transit.

Principal reasons given for not liking public transportation are slow door-to-door travel times, lack of availability/access, inconvenient schedules, crowding, crude passengers or drivers, safety, expense and cleanliness (Wirthlin Worldwide and FJC&N, 2000, p. 13). Buses exemplify some of the strongest negative associations with public transportation. Cain

*et al.* (2009) ranked Los Angeles' public transportation services into four tiers based on surveys exploring tangible and intangible variables. Local buses were perceived to have the worst performance, and heavy rail (Red Line) was in the top tier of performance.

Public transportation solutions to greenhouse gas emissions and congestion require low costs and high ridership. Compared to light rail, buses are a low-capital, flexible public transportation option, but they suffer from negative public perceptions. Throughout the world, public transportation agencies have been using Bus Rapid Transit to address the common complaints against bus transit while minimizing costs.

## **What is BRT?**

Bus Rapid Transit (BRT) is a public passenger transport system that provides faster and more efficient service than ordinary bus transit systems. BRT utilizes intelligent traffic and operations management technology along with dedicated bus lanes and bus stations to emulate the service level of light rail transport. A BRT system might include any combination of the following main features and benefits:

- Dedicated right-of-way, which improves the operating speed, punctuality and safety of the transit system;
- Well-designed stations, including level-boarding platforms, off-board fare collection and real time bus information;
- Advanced technology vehicles that may feature articulated, easy-to-board, and environmentally friendly buses with modern propulsion systems;
- Intelligent transit operation management systems designed to improve operation service through global positioning systems, transit signal priority, automated scheduling and dispatching systems, and real time traveller information provided at stations and on vehicles;
- Service and operating plans that employ greater spacing between stations and all-day service similar to rail transit (Diaz *et al.*, 2004);
- Reduced implementation costs compared to light rail transit for similar benefits. Low marginal implementation costs over local bus service on streets and highways. Reduced externalized costs including time and environmental costs of congestion (Kittelson & Associates, Inc., 2007);
- Increased business and job opportunities along the BRT corridor due to decreased travel times. Significant urban development benefits through effective integration with the surrounding neighbourhoods.

## ***BRT in the Bay Area***

Several BRT projects have been proposed in the San Francisco Bay Area. The Van Ness Avenue BRT is proposed in San Francisco and extends about two miles from Mission Street to Lombard Street with two dedicated transit lanes. Geary Boulevard is currently a busy transit corridor in northern San Francisco. Over 50,000 transit riders rely on Geary bus service daily, which is often unreliable and crowded. The proposed BRT project on Geary Boulevard aims to improve service for existing patrons, attract new riders, and reduce

congestion caused by dissatisfied riders switching to driving. Santa Clara Valley Transportation Authority (VTA) has identified three near-term BRT corridors in the San Jose area: Santa Clara-Alum Rock, El Camino, and Stevens Creek. The current proposal will serve nearly 84,000 daily riders on the three routes with average costs of \$15.3 million per mile. AC Transit, the public transit authority for Alameda and Contra Costa Counties, has been developing a BRT project in the East Bay.

The East Bay BRT Project initially proposed to connect downtown Berkeley BART Station with San Leandro BART station passing via downtown Oakland (Figure 2). Subsequent community feedback resulted in more limited service from San Leandro to Oakland (DOSL: Downtown Oakland-San Leandro Alternative). In particular, the updated alternative was chosen to mitigate concerns about parking and congestion on the Telegraph Avenue portion of the route. The DOSL route, shown in Figure 3, will primarily serve International Boulevard, an important commercial corridor in the East Bay.



Figure 2: The East Bay BRT Project as originally proposed. Source: AC Transit

According to the AC Transit, the BRT project will reduce auto travel by an estimated 2,000 single trips and 8,000 miles per day. This leads to environmental benefits associated with reduced greenhouse gas emissions of 4,100 pounds of CO<sub>2</sub> equivalent per day. Furthermore, the East Bay BRT system will provide 25-28% faster travel speeds than conventional buses thereby attracting new transit users. AC Transit has projected an increase in ridership on the corridor from 25,000 to 36,000 patrons per day (AC Transit, 2012).



Figure 3: The Downtown Oakland-San Leandro Alternative plan for East Bay BRT. Source: AC Transit.

**Previous studies on public perceptions of BRT**

Due to its role as a bus image changer, public perceptions of BRT have been well studied in the past. Cain *et al.* (2009) explore the possibility of BRT capturing the more positive image of rail transit while maintaining the cost and flexibility advantages of bus transit. That paper explored a range of variables that play into public perception of Los

Angeles' transportation services including tangible attributes (travel costs, door-to-door travel time etc) and intangibles (safety, comfort, ease of use). The study places various modes including local buses, BRT, light rail and heavy rail into tiers of performance. Comparing the public perception of performance to cost leads the authors to conclude that BRT gives good value for money—the public perceives BRT performance to be better than equivalent-cost alternatives.

EMBARQ focused on BRT in their guide to marketing transit services, *From here to there: A creative guide to making public transport the way to go*. This report framed public transit's image problem as a lack of branding strategy. It offers specific advice for creating a brand for BRT and marketing it. Like any other product, BRT should be marketed to potential riders as a solution to a number of problems, including high gas prices, congestion, slow door-to-door travel times on local buses, and difficult-to-use existing systems. A comprehensive communications strategy will retain existing riders, attract new riders and galvanize political and financial support.

“For some time, it has been clear that cities need to create high-quality public transport systems to improve the urban environment. However, not until recently has it become clear that cities must also convince the public that these high-quality systems are in fact high-quality.”

*-From here to there*

## RESEARCH QUESTIONS

Within the timeframe of the current regional transportation plan, public transportation will become an increasingly important solution to the Bay Area's congestion, mobility and greenhouse gas emissions concerns. The specific incarnation of this solution must balance limited funding with a system design that will attract passengers. In the East Bay, AC Transit has selected Bus Rapid Transit as the public transit answer on the International Blvd corridor. As this project moved through the stages of approval and implementation, there has been a complex interaction between agency expertise and public perception.

In order to benefit from the branding strategies and research in the literature, it is necessary to examine the local perception of buses and BRT and identify attitudes that can be influenced through communication and marketing. The overarching direction of this project is to explore the possibility of an appropriately marketed BRT service that will overcome the public's negative perceptions of buses. We will pursue this research by exploring questions that examine the local perception of buses and BRT and the variables that can be addressed with communication and marketing:

1. How do East Bay residents perceive traditional buses and bus rapid transit modes?
2. If differences exist, can they be attributed to specific tangible or intangible factors?

3. If differences exist, do they translate into different levels of ridership attraction potential? To what extent can differences in ridership attraction potential be attributed to each tangible and intangible factor?
4. How can a branding strategy be used to improve the public perception of BRT and maximize ridership?

## METHODOLOGY

The fundamental questions being explored in this analysis relate to public perceptions of buses and bus rapid transit, so the primary methodology was to ask members of the public what they think. We formulated a survey instrument that targets bus riders and non-riders in North Oakland—a contentious battleground of the East Bay BRT project.

The sample targeted two populations – bus riders and non-bus riders. People who take the bus once per month or less were classified as non-riders. Riders were surveyed in-person at bus stops around the MacArthur BART station. Non-riders were targeted in the nearby Temescal shopping plaza in the same neighborhood (Figure 4). We surveyed approximately 50 members of each population for a total of 100 respondents.

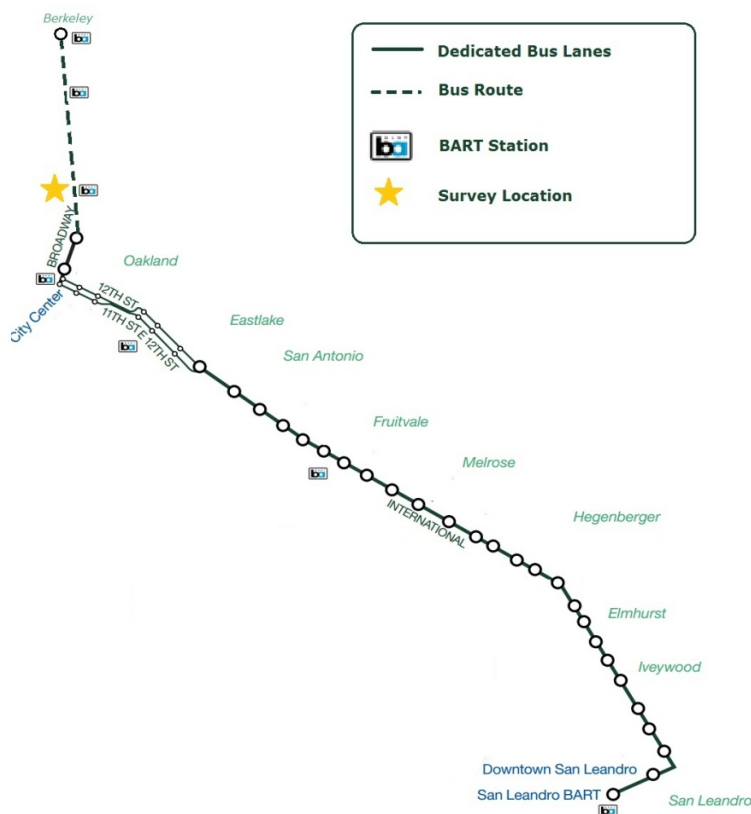


Figure 4: Map of the East Bay BRT Project showing the survey location.

The survey instrument used a branched flow to tailor the questions towards the respondent's travel behavior and included both open-ended questions and multiple-choice questions for statistical analysis purposes.

The survey was designed to address the topics raised in the Research Questions section by answering the following questions:

- How do riders and non-riders perceive the current bus system in the East Bay?
- What characteristics of the current bus system could be changed to increase ridership in each population?
- Could BRT features address these shortcomings or negative perceptions?

The survey methodology has limitations. In addition to the shortcomings associated with sampling and survey design, this survey is attempting to measure perceptions of a relatively unfamiliar entity. It is possible that, by providing basic information on BRT, the instrument may influence the very variable it is trying to measure. We mitigated the limitations of the methodology by testing the instrument before use and correcting for non-response biases with incentives.

## ANALYSIS

The survey sample consists of 100 complete surveys and 26 incomplete surveys. Demographic characteristics of the respondents were collected to ensure that our sample was balanced and was generally reflective of the local population. The characteristics of the sample are compared to the surrounding census tract (Alameda County Census Tract 4011) in Table 1. Overall, the sample is representative with the largest discrepancy observed for married and widowed respondents. The rates of transit use are not representative, but this is due to the survey design.

Characteristic	Survey Sample	Census Tract 4011
<b><i>Gender:</i></b>		
Female	47.8%	51.5%
Male	52.2%	48.5%
<b><i>Marital Status:</i></b>		
Single	56%	61%
Married	38%	21%
Separated	3%	2%
Divorced	3%	15%
Widowed	0%	1%
<b><i>Age:</i></b>		
Median	33.0	32.9
<b><i>Sample breakdown:</i></b>		
Riders <sup>1</sup>	51%	28%
Non-riders	49%	72%
<i>Total:</i>	126	4156

Table 1: Comparison of the survey sample and the local census tract. Source: US Census Bureau ACS 2006-2011 Form S0801.

<sup>1</sup> For the survey, riders are defined as respondents who ride the bus more than once per month. For the 2006-2010 American Community Survey, this group includes residents who usually commute by any transit mode. They are not directly comparable.

# What does the public think of the bus?

## What are the most important factors influencing decisions to ride or not ride the bus?

The survey asked respondents to rate nine characteristics of bus service based on relevance to the respondent’s decision to ride or not ride the bus. The aggregate results are depicted in Figure 5, where a rating of 5 indicates that the attribute was highly important in the decision and a 1 reflects indifference. From our sample, we determined that reliability of service, safety and ease of transfer connections are the three most important determinants in the decision to ride or not ride the bus. Conversely, cost, cleanliness, and comfort were among the least influential aspects.

These results indicate that some BRT features are specifically designed to address the issues that most concern the survey respondents. For example, stations for ticketed passengers only and dedicated rights of way address the safety of passengers accessing and waiting for the bus. Dedicated rights-of-way, level boarding, and off-board ticketing are features of BRT that are intended to mitigate reliability problems and may be effective at winning new ridership.

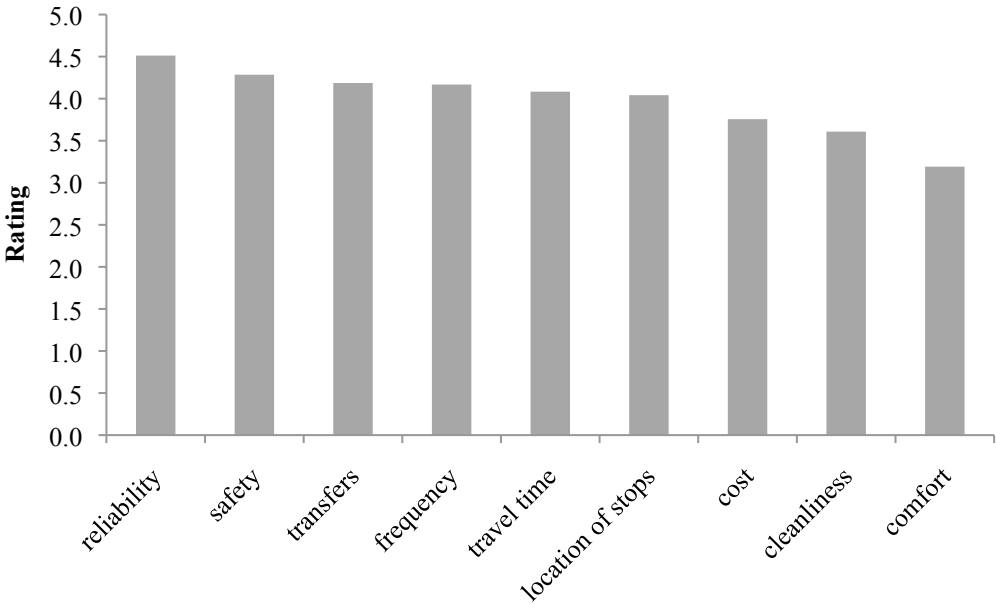


Figure 5: Value placed on characteristics of the bus in the decision to ride or not ride.

For most characteristics, riders and non-riders gave statistically identical answers (significance level of 0.05) as summarized in Table 2. Only two of the nine factors we assessed, cleanliness and cost (highlighted in gray), differed at the 0.05 significance level. Non-riders are more likely to cite cleanliness as an important factor in their decision not to ride the bus. Riders assign higher value to cost in their decision to use the bus, even though 56% of riders reported having access to a car.



Feature	Riders	Non riders	Total	p-value
reliability	4.5	4.6	4.5	0.66
safety	4.2	4.4	4.3	0.44
transfers	4.2	4.2	4.2	0.91
frequency	4.2	4.2	4.2	0.90
travel time	4.0	4.2	4.1	0.36
location of stops	4.2	4.2	4.0	0.88
cost	4.0	3.5	3.8	0.03
cleanliness	3.3	3.9	3.6	0.02
comfort	3.1	3.3	3.2	0.31

Table 2 : Average ratings of bus feature impact on decision to ride the bus. Scale is discrete from 1-5, 5 being the most important.

### Are there patterns of travel behavior within peer groups?

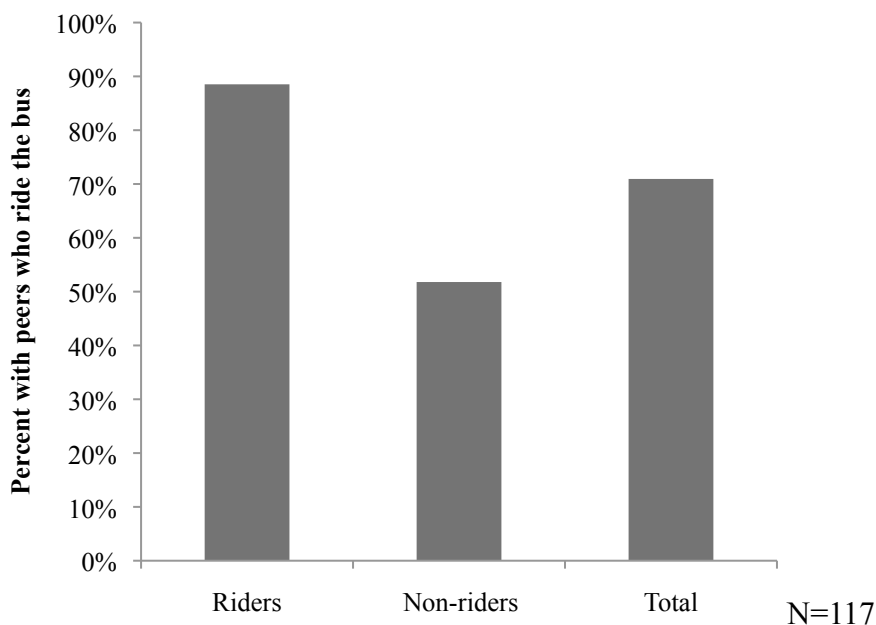


Figure 6: Respondents whose peers ride the bus.

In this survey, we found that both riders and non-riders had peers who ride the bus. As illustrated in Figure 6, around 70% of those surveyed had peers who rode the bus. However, at a p-value of 0.20, there is no statistical difference in the percent of peers who rode the bus between riders and non-riders. From this result, we cannot determine that there are significant class-level biases against the bus.

### How do non-riders perceive the bus?

The survey asked non-riders to name up to three things that they associate with riding the bus. The responses ranged from one-word answers like “big” to complex philosophical statements about the role of public transit in society. Figure 7 shows the 153 responses re-

categorized into broad topics. The most common responses related to the convenience of the bus. These comments regarded the location of stops, the speed of the bus, and the frequency of service. The second most popular category, aesthetics, encompasses responses that touched on the user experience on the bus including comments on cleanliness, crowding, and noise. None of the 153 responses reflected positive aesthetics. Fifteen non-riders mentioned the cost of the bus. Environmental and social co-benefits are an important attribute of the bus, according to fourteen respondents and nine said that they think of the bus as a service for lower classes. This result offers a more subjective perspective on the question of class bias in bus ridership—although about 70% of people have friends or co-workers who ride the bus, a minority see the bus “as a low-quality option of last resort for the elderly, disabled, or disadvantaged” (Cain *et al.*, 2009).

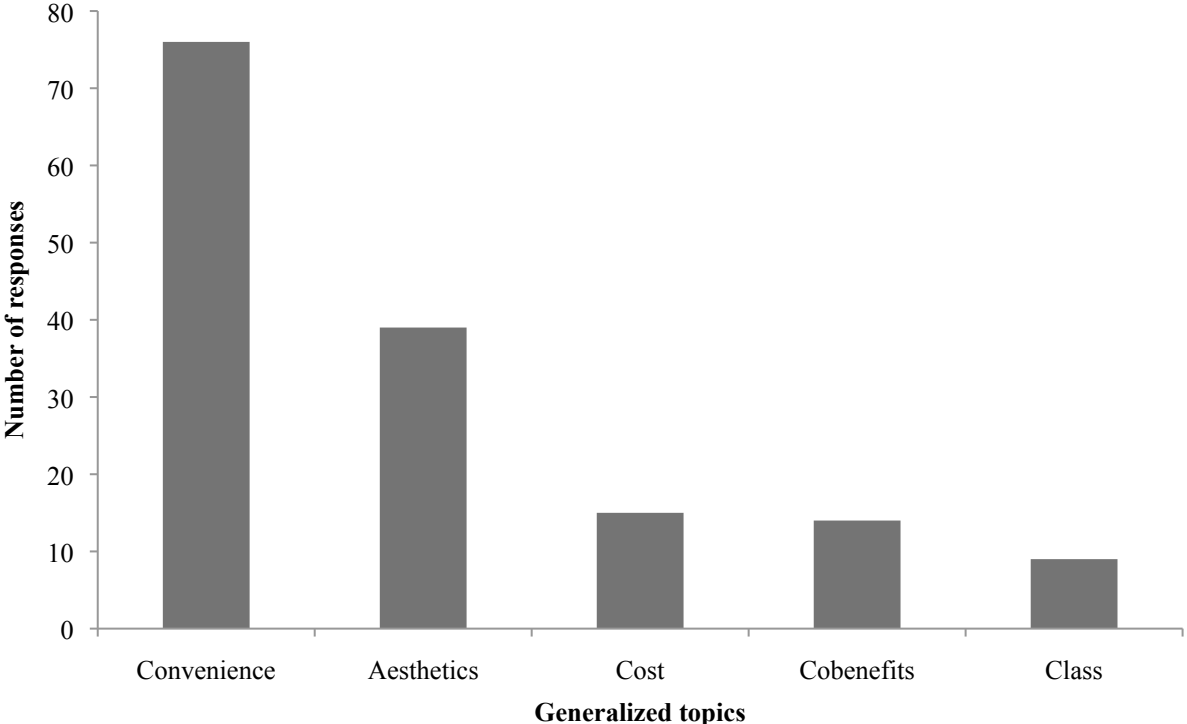


Figure 7: What non-riders associate with the bus. N=153.

A breakdown of the responses in Figure 7 show that the non-rider sample is ambivalent on certain issues. For example, about one third of the responses pertaining to convenience were positive and the others were negative. Approximately three times as many respondents said the bus is cheap as expensive. The balance between negative class associations with the bus and appreciation of the co-benefits further underscores the contradictory perceptions of the bus.

The mixed perceptions of the bus among non-riders carry over to their willingness to try the bus. Indeed, 48% of non-rider respondents said they considered the bus a viable option. Moreover, when asked to rate their bus experience on a scale of one to ten, ten being optimal, the average rating among non-riders was 6.2 (95% confidence interval: 5.8 to 6.6). The better-than-average response indicates that there is potential to shift some non-riders onto the bus. The responses of non-riders illustrate that while buses are an important aspect of

sustainable transportation in the public consciousness, there are considerable negative attributes that plague the acceptance of the bus as a viable option for many travellers.

**What does the public think of bus rapid transit?**

*Do people know what BRT is?*

Public awareness of bus rapid transit and its features was not high in our sample. Despite the concurrent public debate about BRT on Telegraph Avenue, only 20% of respondents had heard of the term bus rapid transit. Riders and non-riders are equally likely to have heard of BRT ( $p=0.83$ ). As shown in Figure 8, about half of the respondents who said they had heard the term did not know any defining characteristics of BRT. The other half was evenly divided between those who were familiar with a local application of BRT, those who were aware of a BRT system in another city (US or international) and those who were able to identify general features of a BRT system.

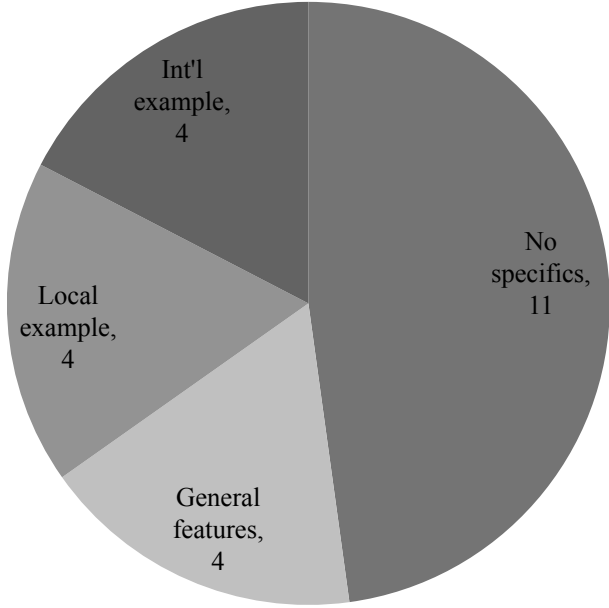


Figure 8: What respondents think of when they have heard of BRT. N=23.

This sample, which contains over 50 people who ride the bus more than once per month and was taken from a

neighborhood for which a BRT system was proposed and hotly debated, has a low familiarity with the concept. In contrast, 100% of the sample was familiar with the idea of a conventional bus. It is clear that if people do not know what BRT is, they are not going to ride it.

*How do people value BRT features?*

The entire survey sample, riders and non-riders, was asked to rate a set of BRT features based on whether the feature would convince the respondent to ride the bus more often. A response of 1 indicates that the feature would not increase their willingness to ride the bus and 5 indicates that it would have a strong impact on their disposition. Figure 9 shows that all the BRT features received positive responses (3 or higher). However, since small improvements can make travellers more willing to take the bus without actually succeeding in having anyone shift transportation mode, this result might be misleading. Analyzing the value of the features relatively rather than absolutely is more effective.

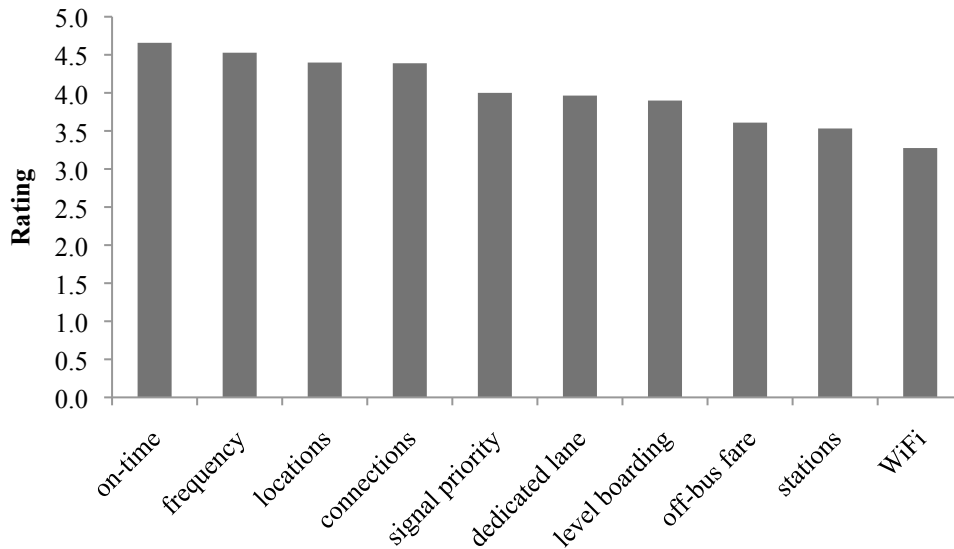


Figure 9: Which BRT features would make travellers more willing to ride the bus? N=112.

From Figure 9, we can see that on-time service, frequency of buses, convenient locations and ease of connections were the most valued characteristics. Notably, this group of four might be better thought of as secondary attributes of BRT—they are characteristics brought about by the primary features of the system. This prioritization agrees with the responses about characteristics of normal bus service—the respondents are consistent in their desire for better reliability and transfers.

Signal priority, dedicated lanes, level boarding, off-bus fare collection, and stations for ticketed passengers only (i.e. the suite of BRT-specific features) were deemed less motivational for increasing ridership. Based on the lack of familiarity with BRT discussed above, it seems likely that the respondents are less enthusiastic about these features because it is unclear how they will contribute to the broader characteristics of good transit service.

On-board Wi-Fi was the least popular feature, which may reflect an attitude that Wi-Fi is more of a luxury than a necessity. Alternatively, the response may reflect a trend in society—the riders who would take advantage of on-board Wi-Fi are also more likely to own broadband cellular devices (smartphones and tablets) that might be preferable in the tight quarters of a public bus.

Feature	Riders	Non riders	Total	p-value
on-time	4.7	4.6	4.7	0.48
frequency	4.6	4.4	4.5	0.19
locations	4.5	4.3	4.4	0.42
connections	4.5	4.3	4.4	0.17
signal priority	3.9	4.1	4.0	0.57
dedicated lane	4.1	3.9	4.0	0.36
level boarding	3.9	3.9	3.9	0.93
off-bus fare	3.5	3.8	3.6	0.21
stations	3.5	3.6	3.5	0.73
Wi-Fi	3.5	3.1	3.3	0.17

Table 3: Value of BRT features in the decision to rider the bus more often. Rider (N=57) and non-rider samples (N=55) are the same.

As shown in Table 3, responses to the BRT features were the same (p-values>0.05) between the rider and non-rider subsamples. The respondents who ride the bus most frequently (every day) did not show any more appreciation for the advantages of the BRT-specific features than non-riders. This result demonstrates a failure of communication between transportation providers and the public, even with those people who are already on the bus.

## DISCUSSIONS AND RECOMMENDATIONS

### Discussion of the study

Success of BRT depends on proper execution of service *and* marketing. This is especially clear in North Oakland where community resistance ultimately rejected the project. While the opposition was led by residents and business owners who were concerned about congestion and parking, the survey results imply that potential beneficiaries may have been unaware of the advantages of the project. As the survey demonstrates, only 20% of respondents claim to have even heard of BRT (and half those people could not name a single desirable feature of BRT). Any BRT proposal must start with a broad campaign to educate riders and non-riders about the upcoming service and how it might make commuting easier than their alternative.

The survey demonstrated that non-riders' past experiences on the bus (rated at 6.3 out of 10) was barely above average, and that non-riders associate the conventional bus with inconvenience and lower classes. Transit operators must convince potential riders that BRT is unlike the regular bus through targeted marketing. As shown in Figure 10, targeted marketing campaigns addressing local transportation issues (e.g. freeway congestion in Los Angeles) have been used in the past to convince people to start riding BRT.



Figure 10: Locally appropriate advertising campaign for LA's Orange Line BRT.

The survey results indicate that BRT could be effective at addressing some of the main deterrents to riding the bus. The top two factors in deciding to ride or not ride the bus are safety and reliability. BRT can feature enclosed stations for ticketed passengers and dedicated lanes, which improve the safety of riders as they access and wait for BRT. Reliability might be addressed through level boarding, off-board ticketing, dedicated lanes and signal priority.

The top-ranked BRT features include on-time reliability, frequency of service, convenient locations and connections to other transit. These attributes are characteristic of all high quality transit systems and are not unique to BRT. Reliability of BRT is determined by the appropriate combination of more specific features including level boarding, signal priority, dedicated lanes, and off-board ticketing. The lower value on these features implies that the respondents did not understand the impact that each improvement can have on the reliability and speed of the bus. For example, some of the respondents implied that they would value level boarding because it is more fair to people in wheelchairs or with strollers, but they did not acknowledge the time savings that all the riders would experience if the bus were not obliged to lower a wheelchair ramp. Clarifying benefits like this is an important task in marketing BRT.

An important concern for transit operators is that new transit options will draw riders from existing buses and rail rather than attracting discretionary riders who would otherwise drive their car. Since riders and non-riders value BRT features the same amount, it is possible that BRT ridership could draw from both populations. One third of riders of a BRT line in Los Angeles and 16% of Cleveland's HealthLine BRT ridership constituted new public transit users (J. Littlehales, VTA, personal communication, 15 April 2012).

Despite the similarities between riders and non-riders in this analysis, it is clear that there are important differences. Only about half of riders have access to a car. Moreover, riders identify cost as being more important to their decision to take the bus than it is to non-riders' decision not to take the bus. The opposite is true for cleanliness, which implies that clean vehicles are seen as an unnecessary luxury by those who are financially motivated to ride the bus. In the appeal to commuters to take the bus, it is essential to understand who is in the targeted audience of probable and potential riders.

## **Policy Recommendations**

The results of this survey show that public awareness of BRT and its features is low. In the absence of information about the positive attributes of a proposed BRT service, potential riders will be swayed by direct and indirect messages from vocal opponents, indifferent peers, and the automobile industry. In order to make BRT work as a viable option, local governments and transit operators must take a broader view of their BRT projects—implementing BRT requires local knowledge, improvements to service, public education and a marketing campaign. There are various policies that can facilitate this attitude.

### *Choose the right features*

One of the strengths of BRT is that it encompasses a portfolio of features that can be selected buffet-style to fit each application. In corridors with slow traffic speeds, dedicated lanes will provide highly valued travel-time improvements for bus riders. In areas where the bus travels at or near the speed limit, including Telegraph Avenue in Oakland, boarding-based improvements like off-board ticketing and level boarding will be more effective at making the bus an efficient transportation method (E. Deakin, personal communication, 11 April 2012).

Moreover, the choice of features must set BRT above and apart from a traditional bus, both in perception to attract new riders and in performance in order to maintain ridership (J. Littlehales, personal communication, 15 April 2012).

### *Cities that invest in transit must invest in educating the public about transit*

Many local and regional governments are expressing interest in BRT as a low-cost solution to transit challenges. When this interest translates to a commitment of funding for BRT, money must also be set aside to inform taxpayers of the value of the investment in BRT. While multi-million dollar funds signal support for the concept, the government must be explicit about its hope for the benefits of BRT. Lesson one of the public education campaign should be a locally-appropriate, standardized definition of bus rapid transit.

### *Communication is a required expense in the budget*

As EMBARQ's report illustrated, branding and marketing are essential steps in launching and operating a BRT system (Weber *et al.* 2011). If potential riders do not understand the BRT concept or the specifics of the service, they are not going to ride it. Necessary tasks include separating the concepts of buses and bus rapid transit, creating a unique brand for the service, sharing practical and detailed information about the service and the user experience, and connecting to potential riders through multiple electronic and traditional media. In addition, operators need to refrain from creating an alphabet soup of acronyms (E. Deakin, personal communication, 11 April 2012). Marketing cannot be an afterthought in the transit operator's budget—it must be a priority that starts early and continues throughout the process.

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