



# **BAY AREA BIKE SHARE CASUAL USERS SURVEY REPORT**

A COMPARATIVE ANALYSIS OF EXISTING  
AND POTENTIAL BIKESHARING USERS

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# ABSTRACT

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This report examines two groups of individuals who are inherently not well understood to Bay Area Bike Share and other public bikesharing operators: casual users and non-users (i.e., individuals who examine the system but choose not to use it). Using publicly available data from Bay Area Bike Share's website, researchers conducted a preliminary analysis to determine when and where intercept surveyors should be stationed. Two survey instruments were tailored specifically to casual and non-users. From the survey instruments, the researchers were able to glean information regarding demographics, socioeconomics, common trip purposes, reasons for choosing or not choosing to use Bay Area Bike Share, and other related data. Findings suggest that Bay Area Bike Share casual users are similar to annual members in educational attainment, income, and race but they differ in trip purpose, trip duration, and home city. Furthermore, researchers found that the majority of casual users did not fully understand the pricing structure, specifically relating to the fees applied to trips over 30 minutes. The pricing structure and the limited distribution of bikesharing stations were the two most frequently cited issues with the system by users and non-users. Overall, casual user satisfaction with BABS was relatively high.

**Key Words:** Public bikesharing; Casual users; Bikesharing members; Pricing structure; Bay Area Bike Share; Demographics; Trip purpose; Trip duration; Geographic profile; User profile

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# EXECUTIVE SUMMARY

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This study was designed to provide public bikesharing operators, both in the Bay Area and elsewhere, a better understanding of casual users and non-users. Non-users are defined as those who approached a station and seemed interested in using it, but decided not to use it. Casual users are defined as individuals who purchase a 24-hour or 3-day pass to the system. For a comparative analysis, researchers used aggregated data from previous surveys of Bay Area Bike Share (BABS) annual members.

The survey was administered over two weekends in July 2014 at two bikesharing stations along San Francisco's Embarcadero. The response rate was approximately 68%, and a total of 170 valid survey completions were collected (53 non-user and 117 casual user). Due to the regional scope of the Bay Area Bike Share system, it is important to note that the two stations surveyed may not fully reflect the use and demographics of casual users that used other stations in the system.

Researchers found that there are many socio-economic and demographic similarities among casual users, non-users, and annual users. The majority have a four-year or post-graduate degree (annual: 87%; casual: 82%; non-users: 79%); an annual household income of \$50,000 or more (annual: 89%; casual: 71%; non-users: 66%); and are Caucasian (annual: 75%; casual: 70%; non-users: 71%).

Understanding the geographic profile of casual users was also a primary goal of this study. Of casual users surveyed, 27% are from outside of the United States; 57% are from the United States but not the Bay Area; and 16% are from the Bay Area (n=106). Primary reasons for being in the Bay Area include sightseeing (64%) and work/business (19%).

Casual users also were probed regarding the pricing structure to gain insight into whether or not casual users understood the structure. Interestingly, researchers found that at least 53% of respondents did not understand the pricing structure, and the vast majority believed they were being charged less than they were.

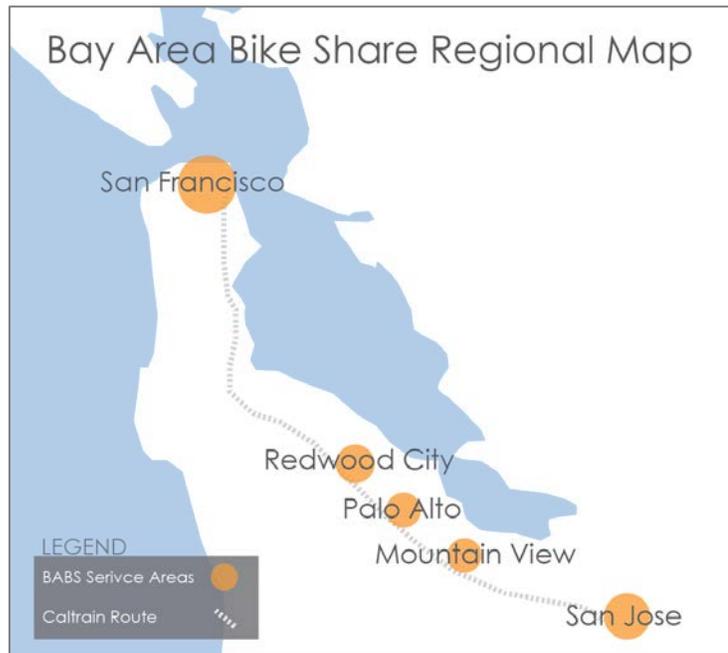
General satisfaction with the system was high among casual users. Eighty-five percent were "satisfied" or "very satisfied" with the system's ease of use; 82% were "satisfied" or "very satisfied" with Bay Area Bike Share bicycle; 81% were

“satisfied” or “very satisfied” with the pricing; and 46% were “satisfied” or “very satisfied” with the station locations.

## INTRODUCTION

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Public bikesharing has grown tremendously over the last ten years as governmental and non-profit organizations have recognized it as a means of increasing transportation accessibility and mobility, reducing vehicle miles travelled (VMT), and having positive impacts on public health (Shaheen, 2014). Researchers have been able to chart bikesharing’s growth, identify its impacts, and understand the travel behavior



and demographics of its annual members. Despite a growing breadth of academic literature on the topic, few works have focused on bikesharing’s largest subset of adopters: casual users. Casual users—those who purchase a membership that exists for 30 days or less—outnumbered annual members 20:1 and provided between 45% and 67% of operational revenue for a given program in 2012 (Shaheen, 2014).

This study was conducted by UC Berkeley’s Transportation Sustainability Research Center (TSRC) in partnership with Motivate (previously Alta Bicycle Share), the San Francisco Municipal Transportation Agency (SFMTA), and the Bay Area Air Quality Management District (BAAQMD) to gain a more thorough understanding of casual users and prospective users—or “non-users”—of Bay Area Bike Share.

Bay Area Bike Share launched in late-August 2013, with approximately 700 bicycles at 70 stations. It is the first system in North America to launch as a regional public bikesharing system, and it features docking stations in San Francisco, Palo Alto, Redwood City, Mountain View, and San Jose. Caltrain, a

Bay Area commuter rail line that connects San Francisco with San Jose, serves as the regional link between each set of stations (as shown in the map above).

As of June 30, 2014, the entire system had accrued 253,309 trips, averaging to 1.13 trips per bicycle per day. While this number is relatively low compared to other public bikesharing systems, 90% of the total usage took place in San Francisco, which is home to half of the system's bikes and stations (Bay Area Bike Share, 2014). Bicycles in San Francisco are used at nearly double the rate of the system as a whole, averaging 2.16 trips per bike per day.<sup>1</sup> Furthermore, stations in San Francisco account for 85% of all casual user memberships sold within the system.

Because of the disproportionately heavy use in San Francisco, this study focuses on two groups of people: (1) casual users that used the system in San Francisco and (2) individuals who examined the stations, seemed interested in it, but decided not to use it. The purpose of this study is to better understand the profile of casual users, a transient but large group of users, as well as identify the reasons individuals chose to not use the system.

## WHY CASUAL USERS?

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While bikesharing has experienced significant growth and has been successful in providing a point-to-point public transportation service at a low cost to both consumers and local governments, the industry has toiled with financial viability. Pricing structures have remained relatively consistent between operators and equipment suppliers. While new pricing structures have emerged recently, most operators offer annual memberships between \$45 and \$150 per year, and daily (or casual users<sup>2</sup>) passes for \$6 to \$10 per day (Shaheen, 2014). Most often, the first 30 minutes of each trip is included in the cost of membership—annual or casual—then each extra 30 minutes is an additional \$1 to \$7, depending on the program and trip duration.

Due to the relatively low cost for annual memberships compared to the high rate of usage, this pricing model has caused many programs to be dependent on casual users for financial viability. Casual users, which typically account for well under half of total system ridership but outnumber annual members 20:1 in

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<sup>1</sup> These figures were calculated based on there being 350 BABS bicycles in San Francisco; however, it is known that the number of bikes in service fluctuate day-to-day.

<sup>2</sup> Casual users also include those who purchase 3-day passes.

North America, usually generate the single largest source of revenue through membership and usage fees (Shaheen, 2014). These figures have been reported to range from 44% to 67% of a program's total revenue (Shaheen, 2014).

Despite the importance of casual users in supporting a given program's viability, public bikesharing programs typically only survey annual users given limited contact information is collected during the sign-up process on casual users and the transient nature of this group. To our knowledge, only one published academic study has captured casual users via an intercept survey, conducted by students at the University of Virginia, led by Dr. Ralph Buehler in Washington, DC (Buehler, 2012).

This Washington, DC study, conducted in fall 2011, found that 66% of casual users were either "international" or "national" tourists, and 53% of casual user survey respondents reported using Capital Bikeshare for "Tourism/Sightseeing" (Buehler, 2012). These findings support many assumptions that casual users tend to be tourists; however, it is unclear where outside of the United States users were visiting from and how these figures may differ in other bikesharing cities.

Given the proportion of revenue generated by casual users for programs and lack of research on this specific user group, we aimed to discover more about this dynamic group of bikesharing users.

## METHODOLOGY

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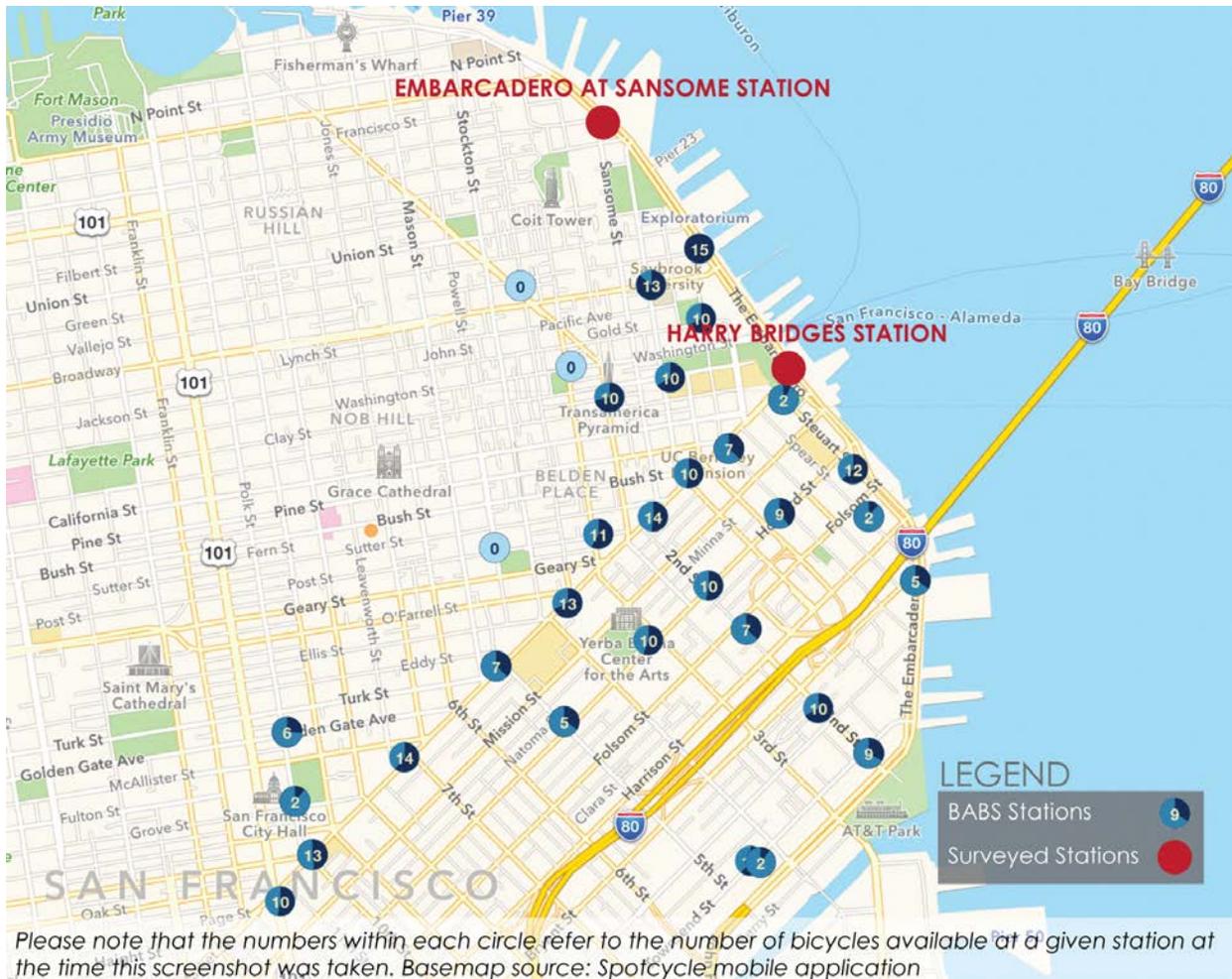
The research team developed an intercept survey, totaling 19 questions for subjects identified as "non-users" and 25 questions for casual users, who were either ending or beginning their trip. A non-user is an individual who approached the station, seemed interested in using the system, but decided to not use it.

Researchers received feedback on the survey from project partners including SFMTA, BAAQMD, and Motivate. Questions were created to identify the bicycle rider profile, socio-demographics, satisfaction with the bikesharing system, understanding of the pricing structure, helmet use, and others.

Resources on the Bay Area Bike Share website provide complete data on trips made since the launch of the system in August 2013 until February 2014. The "subscription" category in the raw data allowed us to analyze the records on

trips made by casual users only. From these data, we conducted an analysis of the spatial and temporal distribution of casual user trips to better understand where and when the highest frequencies of trips are occurring. Based on these findings, we recommended that the “clipboard” survey be conducted at two stations: Harry Bridges Plaza and Embarcadero at Sansome. See Figure 1 below for the location of BABS bikesharing stations and the two survey locations.

**Figure 1. Bay Area Bike Share Stations and Survey Locations in San Francisco**



Harry Bridges and Embarcadero at Sansome, which are both located along the northeast coast of San Francisco, are near some of San Francisco’s biggest tourist attractions including: the Ferry Building, the Embarcadero, and the Exploratorium.<sup>3</sup> The data showed that Fridays and weekends between 10 AM

<sup>3</sup> Due to the regional scope of Bay Area Bike Share, it is important to note that casual users and non-users who were surveyed at Harry Bridges and Embarcadero at Sansome may not fully reflect the socio-demographics and opinions of casual users and non-users associated with other stations in the system.

and 6 PM were when the stations saw the most use from casual users. Researchers collected clipboard survey data over two weekends (Friday to Sunday) in July 2014, for a total of 68 hours of surveying both casual users (n=117) and non-users (n=53).

BABS users were approached by a surveyor if they had just finished a trip (i.e., docked a bicycle) or if they were about to begin a trip (i.e., received a code from the kiosk to check out a bicycle). Non-users were approached by a surveyor if they examined the kiosk and seemed to consider purchasing a membership. The first question that was asked by surveyors of non-users was, "Were you considering using Bay Area Bike Share today?" If the answer was affirmative, they were asked if they would like to complete a short survey.

Both casual user and non-user respondents that participated in the study were handed a physical survey. The survey took between three and five minutes to finish, and casual users and non-users who completed the survey received a \$5 gift card to Starbucks. Approximately 250 total individuals were approached and eligible to complete a survey, and 170 individuals actually completed the survey for a response rate of approximately 68%.

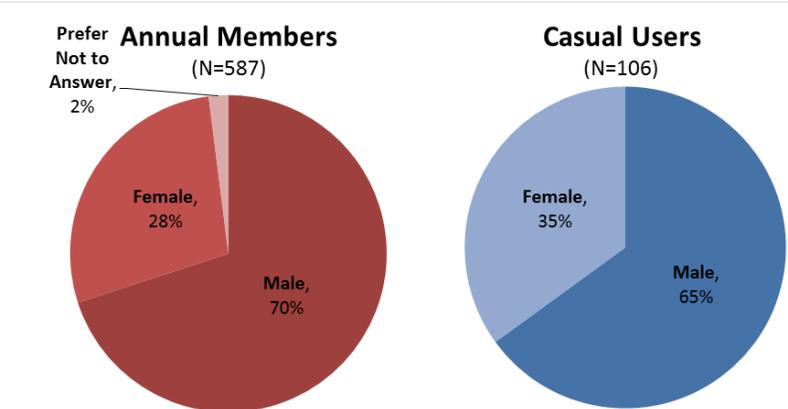
# CASUAL USER ANALYSIS

## SOCIO-DEMOGRAPHICS

Previous studies on monthly and annual bikesharing members have found that they are more likely to be white, male, well-educated, middle to upper income, and between the ages of 25 and 35 compared to the general population (Shaheen, 2014). With some minor exceptions explained below, the survey data reflects that this is also true for casual users of BABS. In this section of the report, BABS annual member demographic data, which was obtained through other surveys periodically administered by Bay Area Bike Share since its inception in August 2013, is referenced for comparative purposes.

**Gender** | As shown in Figure 2 below, BABS annual members are only slightly more likely to be male (70%) compared to casual members (65%), which suggests a correlation between gender and system use. Comparatively, non-users were less likely to be male (53%).<sup>4</sup>

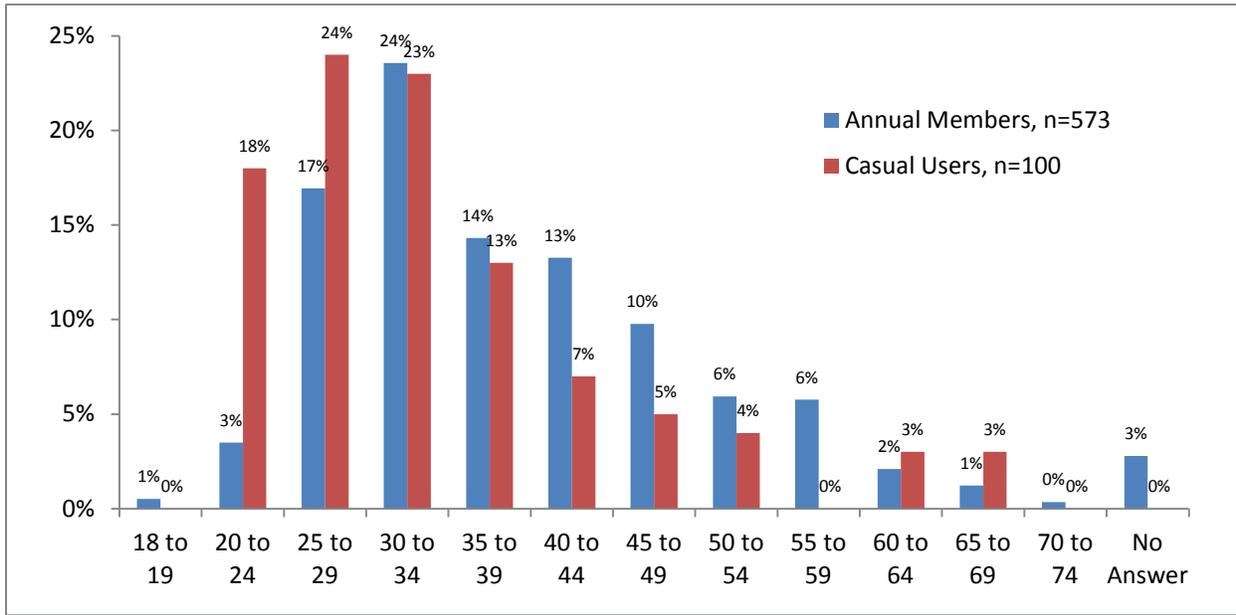
Figure 2. Gender Distribution



**Age** | In terms of age, 68% of casual users were between 20 and 34 years old, compared to approximately 44% of annual BABS members (see Figure 3 below). Both of these figures are well above the average for all of San Francisco—only 29% of which are between the ages of 20 and 34 (US Census, 2012).

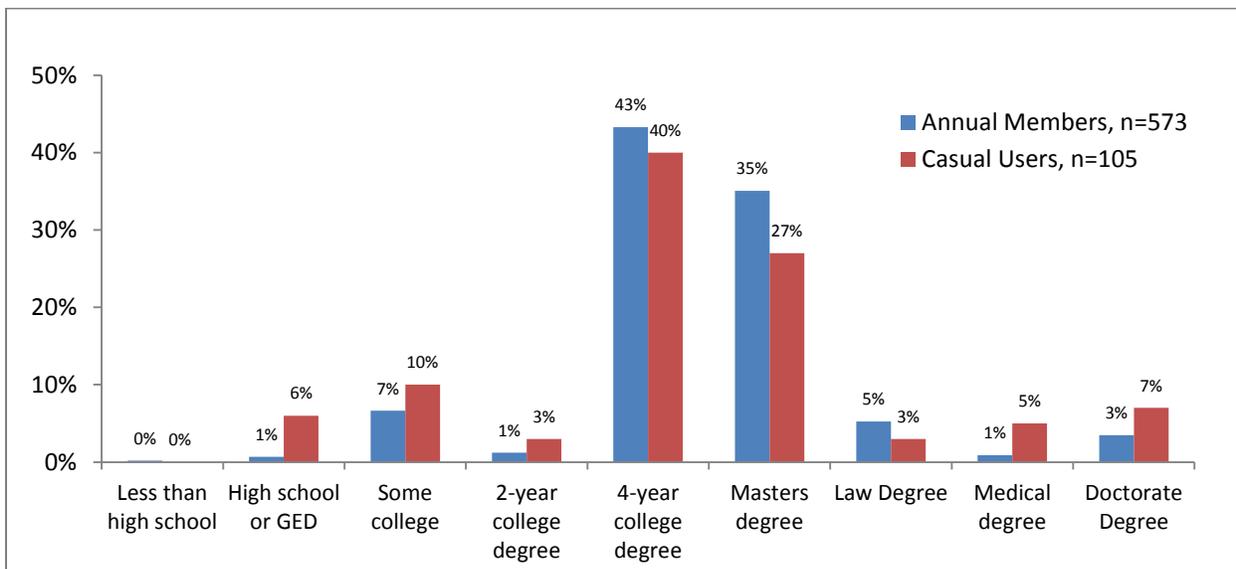
<sup>4</sup> Due to the relatively small sample size (n=52) and the nature of the intercept survey technique, we are unclear that it is representative of the larger group of individuals who would qualify as non-users.

Figure 3. Age Distribution



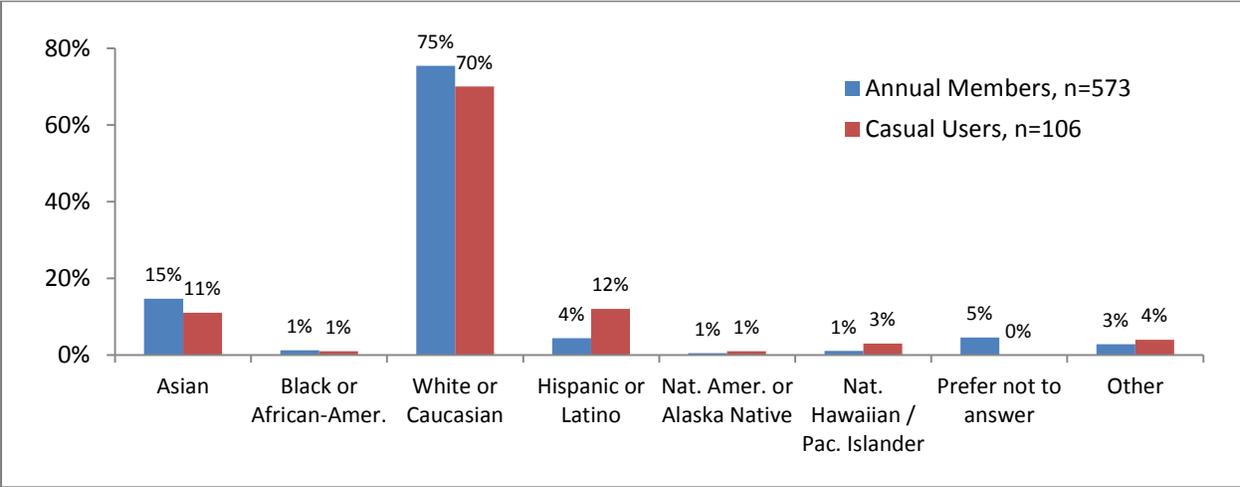
**Education** | Bikesharing members, both annual and casual, are well educated. Approximately 87% of BABS annual members and 82% of casual users have a four-year degree or higher (see Figure 4 below). Similarly, 79% of non-users had a four-year degree or higher. In contrast, only 30% of residents of City of San Francisco who are 25 years old or older have a four-year degree or higher (US Census, 2012).

Figure 4. Educational Attainment



**Ethnicity** | Of those casual users surveyed, 70% were Caucasian, compared to 75% of annual members (see Figure 5 below). Hispanic/Latino was the next highest reported ethnicity at 12% of casual users surveyed, and Asian the third highest at 11%. Non-users were distributed nearly identically across ethnicities as casual users. These figures differ slightly compared to annual members, who have a lower proportion of Hispanics/Latinos (4%). African Americans represent only 1% of casual and annual bikesharing member groups.

**Figure 5. Racial Distribution**



**Income** | The income distribution of casual users is slightly more spread over lower income brackets compared to annual members (see Figure 6 below). While 24% of annual BABS members report having a household income of at least \$200,000, only 13% of casual users reported having a household income that high. Interestingly, 13% of San Francisco residents also report having a household income of at least \$200,000. On the other end of the spectrum, 5% of casual users report having an income of less than \$15,000, whereas 1% of annual members and 13% of San Francisco residents report having such an income (US Census, 2012).

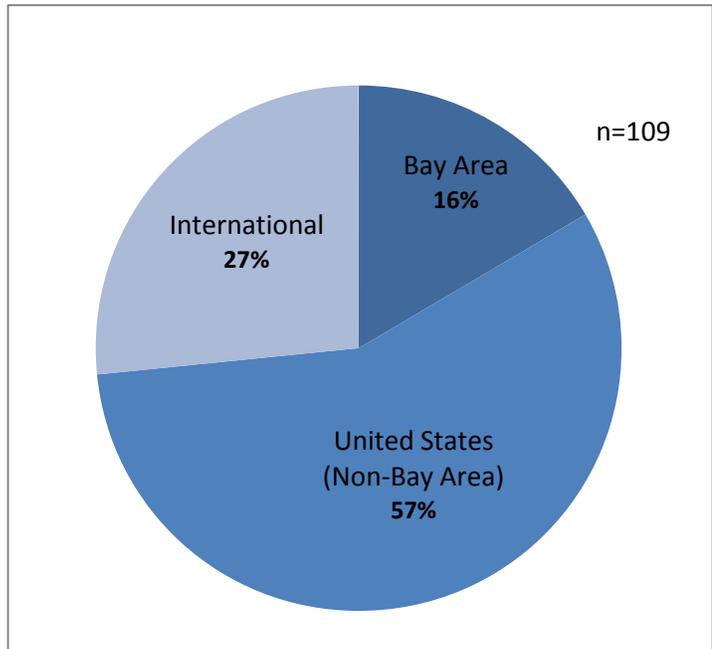
Figure 6. Income Distribution



## GEOGRAPHIC PROFILE

Casual users have traditionally been known to be predominately tourists, but it has been unclear where, specifically, they are visiting from. Figure 2. Geographic Profile of Casual Users shows that 16% of casual users are from the Bay Area region, 57% are U.S. tourists, and 27% are international tourists. The proportion of international tourists is over twice as large as in Washington, D.C., as reported in the 2011 study on Capital Bikeshare’s casual users (Buehler, 2012).<sup>5</sup>

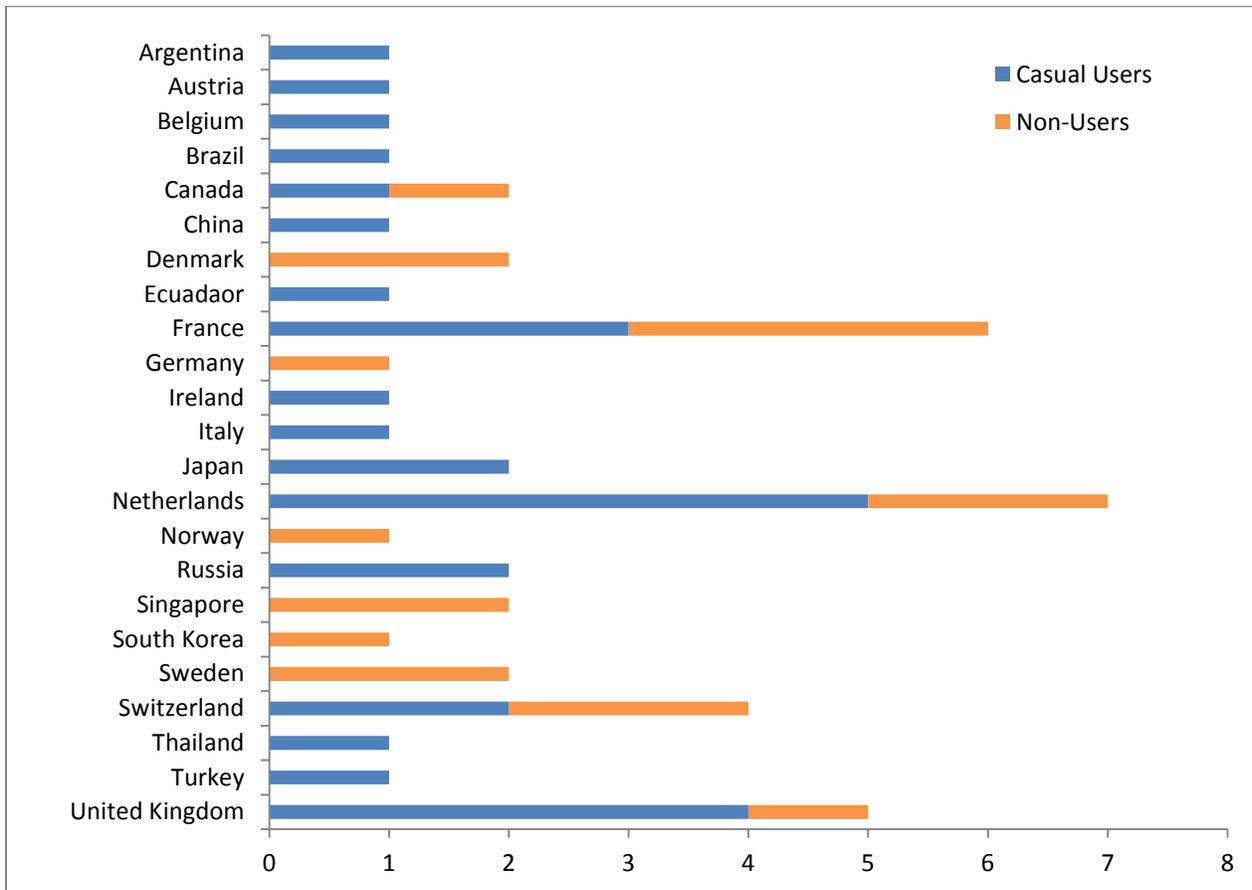
Figure 7. Geographic Profile of Casual Users



<sup>5</sup> This figure may have been even larger than what is represented the figure because of language barrier issues with some casual users who were approached but were unable to effectively communicate in English. However, anecdotally, the research team did not find this to be a common occurrence.

Of the casual users surveyed who were from outside of the United States, Western Europe was home to 55% (n=29). Of those 29 casual users, the most were from the Netherlands (5), United Kingdom (4), and France (3). The distribution of casual users and non-users from outside of the U.S. is shown in Figure 8 below. Of non-users who were not from the U.S., 77% were from Western Europe (n=18).

**Figure 8. International Distribution of Casual and Non-Users (non-U.S.)**

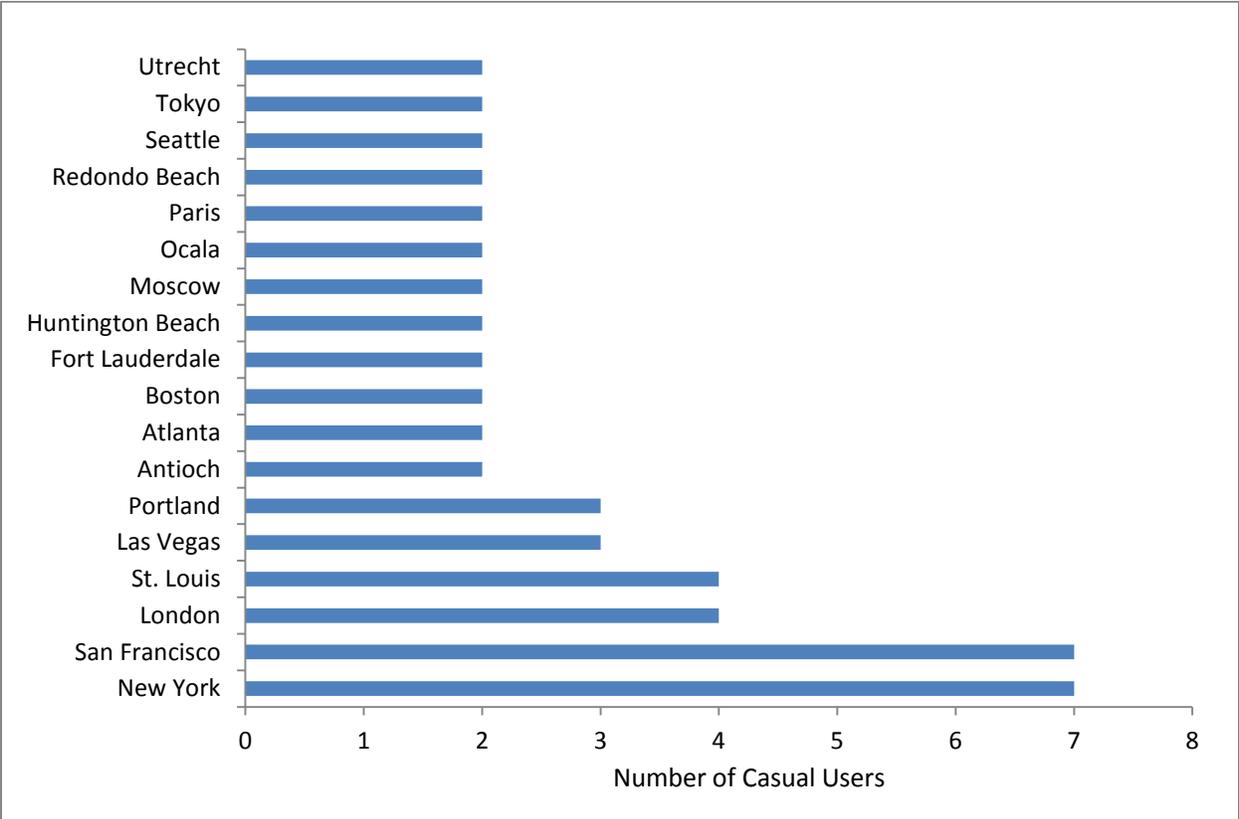


Despite having approximately ¼ the population of both France and the UK, the Netherlands represented the highest number of total international BABS casual users. This likely reflects the Dutch aptitude toward cycling as transportation. The Netherlands has some of the most bike-friendly cities in the world, including Amsterdam, which was home to the first bikesharing program, launched in 1965 (Shaheen, 2012).

Of casual user home cities, London appeared most frequently (as shown in Figure 9) and tied for the third most common city (St. Louis was also third) behind only San Francisco and New York City. Figure 9 displays cities that had at least

two surveyed casual users. Despite its size and relatively close proximity to San Francisco, there was only one casual user surveyed from Los Angeles (n=109).

Figure 9. Cities with at Least Two Casual Users

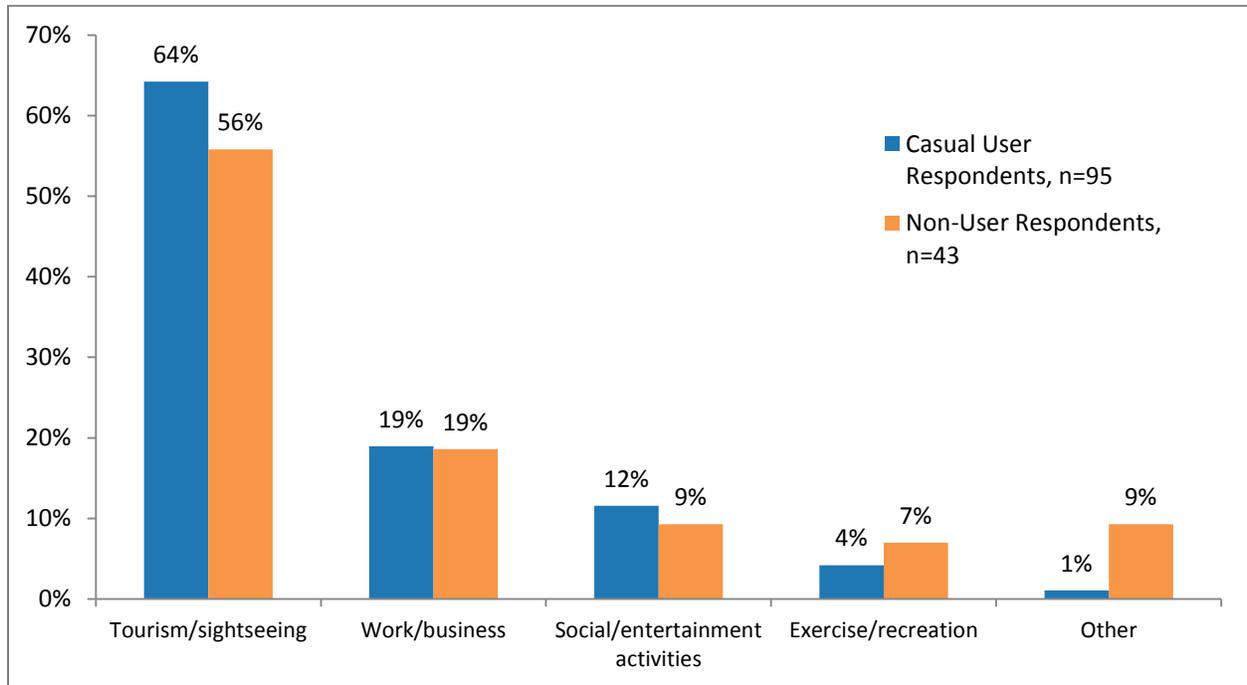


### CASUAL VS. ANNUAL MEMBERSHIPS

Of all casual users surveyed, 90% were 24-hour pass holders, and 10% were 3-day pass holders (n=105). The primary reason for becoming a casual user and not an annual member was “I don’t live here,” representing 80% of casual users. The next highest response was “I don’t use the service enough,” representing just 6% of casual users. Of those who are not from San Francisco, the primary reason for being in the city was “Tourism/Sightseeing” at 64%. The second most common reason was for “Work/Business” at 19%, and the third was “Social/Entertainment activities,” representing 12% of casual users surveyed. Non-users were less likely to be in San Francisco for tourism or sightseeing (55%) than casual users, and they were slightly more likely to be there because of business at 22% (n=51). The

most common write-in response was “Visiting family” for both casual users and non-users.

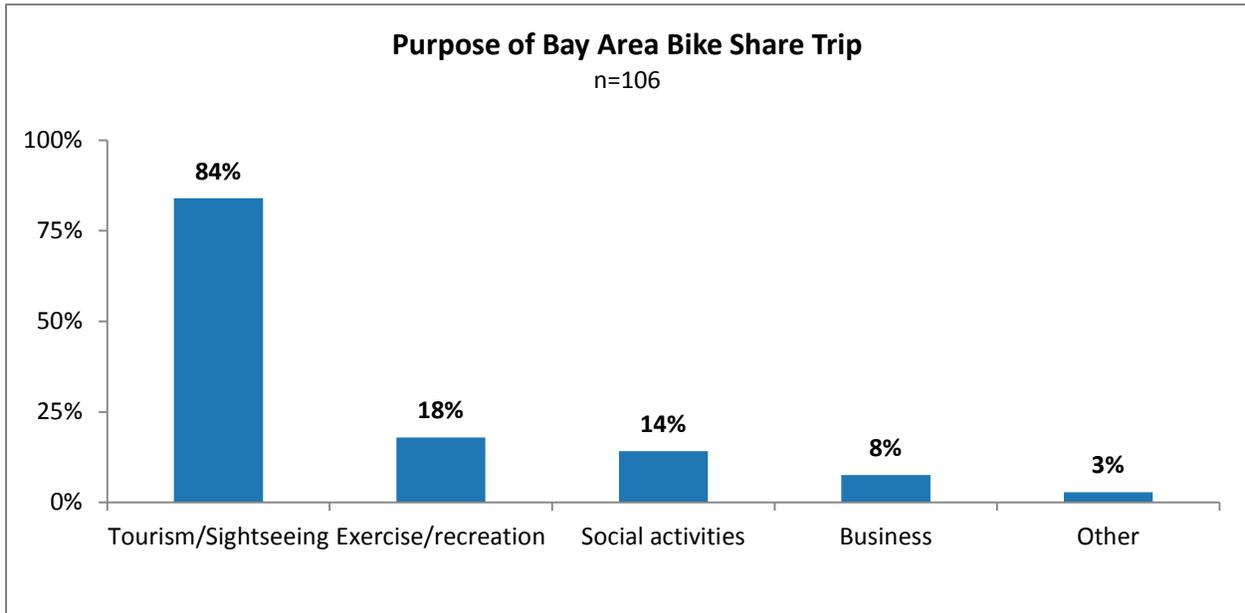
Figure 10. Purpose of Trip to San Francisco



## CASUAL USERS: TRIP ANALYSIS

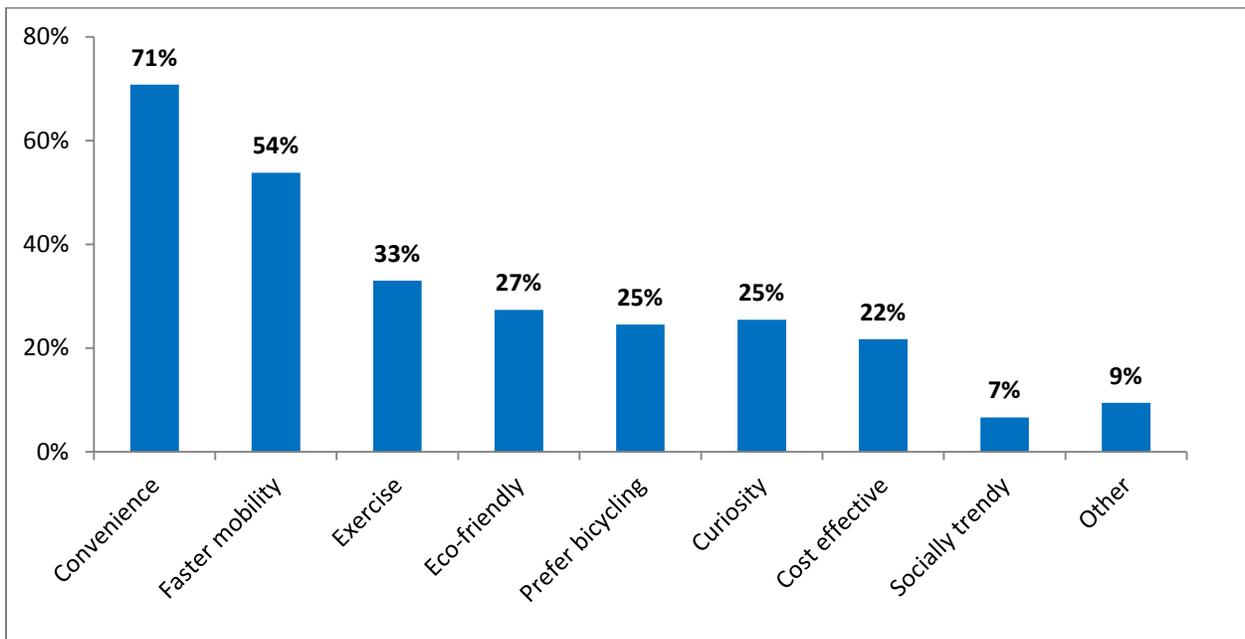
The majority of casual users were riding with one other person (58%) and using BABS for “Tourism/Sightseeing,” representing 84% of those surveyed (n=106). The next most common uses were for “Exercise/Recreation” at 18% and “Social/Entertainment activities” at 14%, as seen in Figure 11 below. Non-users were likely to use the system for similar reasons; 68% of non-users would have used it for “Tourism/Sightseeing,” while 15% would have used BABS for “Exercise/Recreation.”

Figure 11. Purpose of BABS Trip (n=106)



As seen in Figure 12 below, casual users chose to use BABS primarily because of its “Convenience,” a response selected by 71% of respondents, and it being a “Faster mobility” option, which was selected by 54% of respondents. Exercise was the third most popular option, which was checked by 33% of respondents.

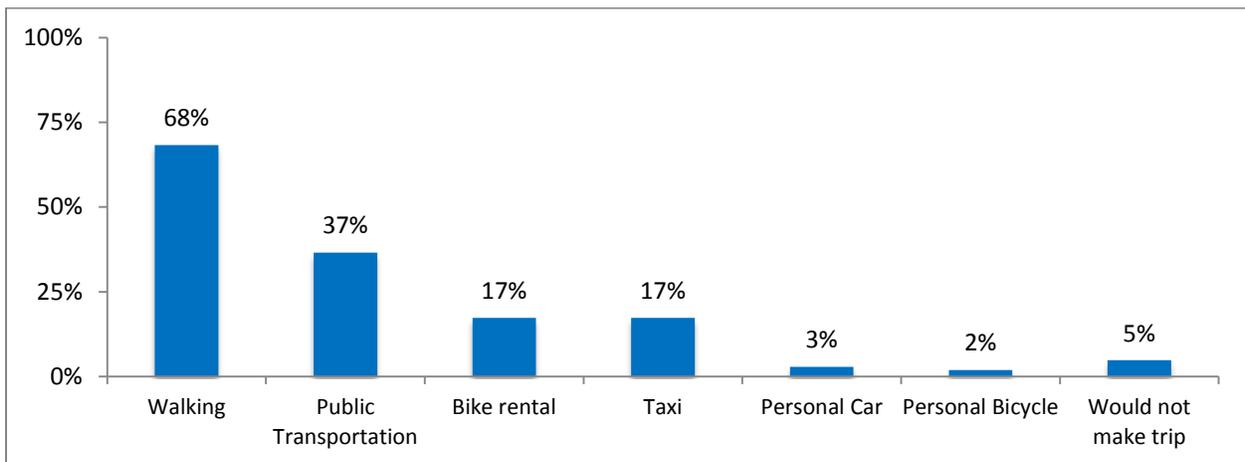
Figure 12. Reasons for Choosing BABS (n=106)



Interestingly, while 29% of non-users chose to not use BABS because it was “Too expensive,” 22% of casual users chose BABS at least in part because it is a “Cost effective” mobility option. This may be because those who expected the system to be too expensive would have liked to use the BABS bikes for longer than 30 minutes, while those who chose to use it because it was a cheaper option likely anticipated riding for shorter durations or may not have understood the pricing structure.

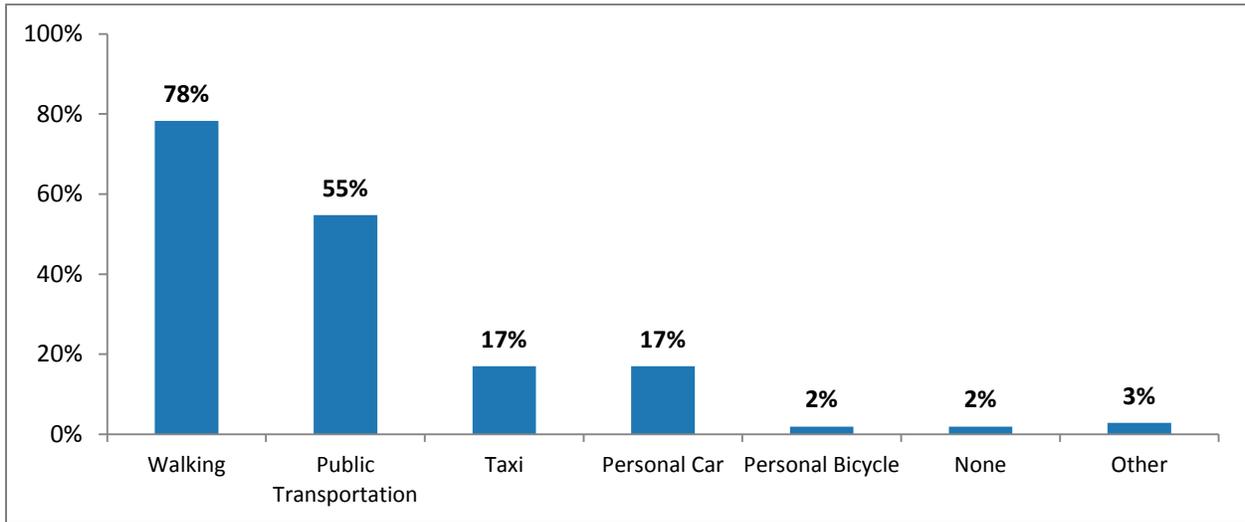
Casual users were asked, “If BABS did not exist, how would you have made your this trip? (Please check all that apply).” Of those who responded, 68% would have walked, 37% would have taken other public transportation, and 17% would have rented a bike (see Figure 13 below).

**Figure 13. How Would You Have Made this Trip without BABS? (n=104)**



When asked, “What other modes of transportation are you using in connection with this Bay Area Bike Share trip?,” the majority of casual users selected walking (78%) or other public transportation (55%) (see Figure 14 below). This illustrates the ability of BABS to bridge a connection to public transit and encourage healthier lifestyles (Martin and Shaheen, 2014). These findings also suggest that future BABS stations should be sited in walkable areas that are well served by public transit options.

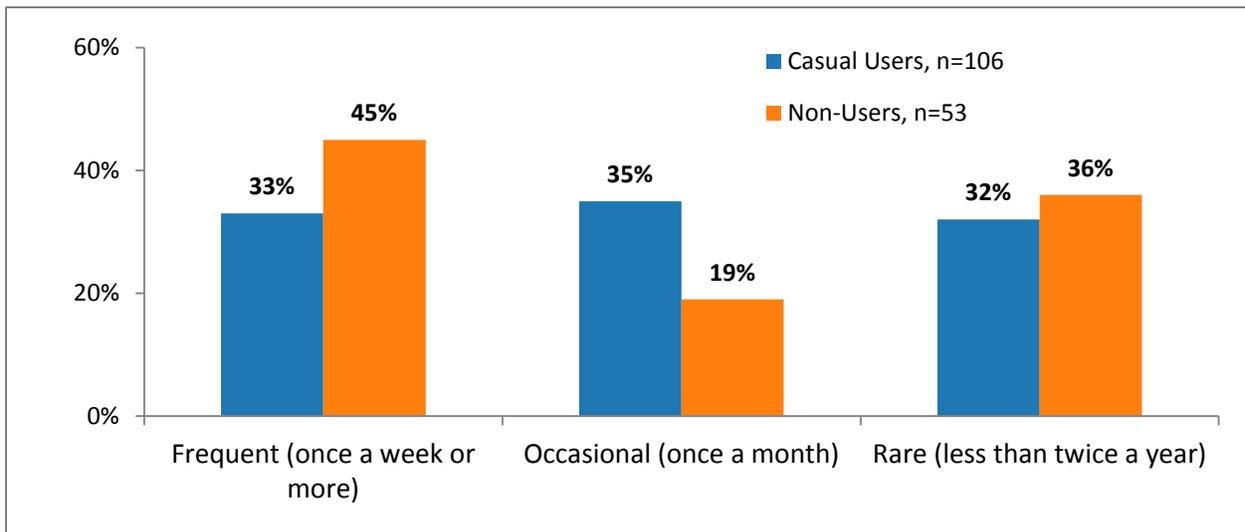
Figure 14. Other Modes Used in Connection with This BABS trip (n=106)



## CASUAL USER BICYCLE EXPERIENCE PROFILE

Casual users vary greatly in general bicycle and bikesharing experience (see Figure 15 below). Out of those surveyed, 33% bicycled (any bike) once a week or more, 35% were occasional cyclists (once a month), and 32% bicycled less than twice a year (n=106). Interestingly, of the non-users, 45% were frequent cyclists (n=53), which suggests that there is little correlation between being a frequent cyclist and using a bikesharing system.

Figure 15. Bike Riding Profile



Eighty-three percent of users reported that they learned about BABS by seeing stations or bikes on the street (n=106), which suggests that non-station-based systems may lose out on some ridership potential. It also emphasizes the importance of distinctive design, both in terms of the bicycle and the system's branding.

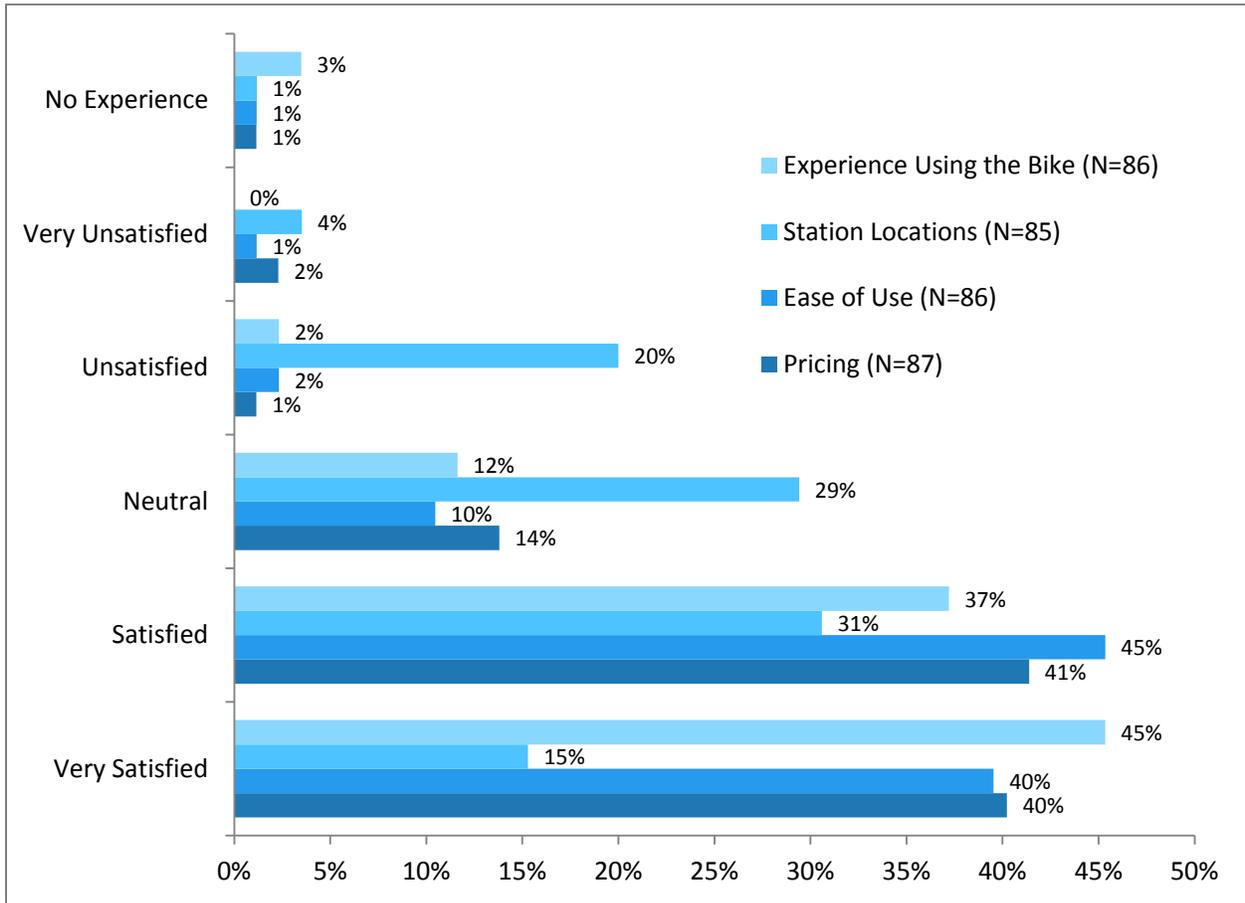
Helmet use is very infrequent for casual users, with only 3% of respondents having used a helmet during their trip. This low rate of helmet use corresponds with the notion that bikesharing use is often a spontaneous decision ((Fishman, 2012); (Shaheen et al., 2012); and Shaheen et al., 2014)).

Of the non-users surveyed, 11% claimed that they would use a helmet if they were to use BABS in the future, which suggests that offering helmets through vending devices may increase overall ridership; however, the cost of providing helmets would likely outweigh the revenue generated through the ridership increase.

## CUSTOMER SATISFACTION OF CASUAL USERS

In general, casual users surveyed had a high level of satisfaction regarding the system. The majority of respondents were "satisfied" or "very satisfied" with the BABS bike, the system's ease of use and the pricing structure. Fifty-three percent of users were either "neutral," "unsatisfied," or "very unsatisfied" with the station locations. Among the primary reasons that non-users chose not to use BABS (as shown in Figure 20 above) and the data reported below, it is clear that increasing the number of stations and the system's geographic coverage will be integral to the Bay Area Bike Share's ability to generate more trips and system revenue in the future.

Figure 16. Levels of Satisfaction with BABS



Overall, 88% of casual users surveyed said they would recommend BABS to friends or family, 10% were not sure, and only 2% would not recommend the system. This finding, again, shows that the vast majority of casual users are satisfied with the system.

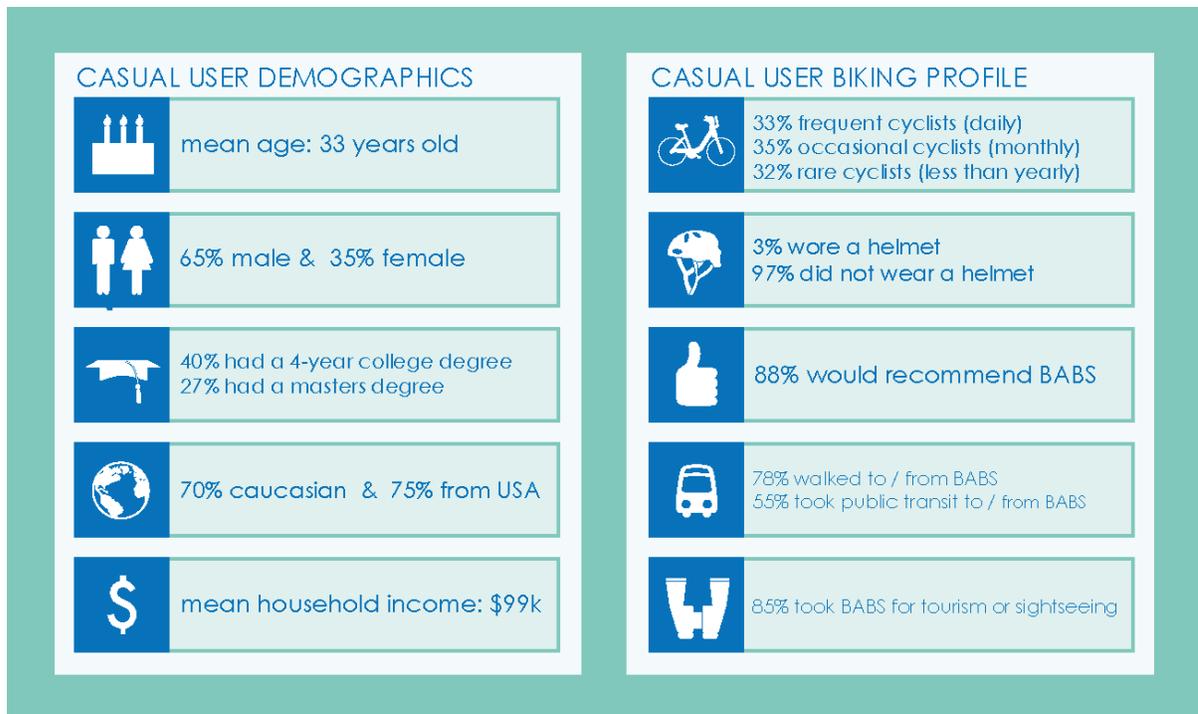
In addition to the survey, casual users were allowed to write-in comments about the system, some of which are paraphrased below:

- *If a helmet was offered, I'd consider using one.*
- *I had issues with the payment transaction.*
- *More stations would be great!*
- *30 minutes is too short of a rental period.*
- *An app showing the stations would be helpful.<sup>6</sup>*

<sup>6</sup> Given that several apps are available that display such information, it may be worth drawing additional attention to the apps on the kiosk.

Figure 17 below summarizes the various characteristics of casual users that have been presented in this section of the report.

Figure 17. BABS Casual User Characteristics (n=117)



## CASUAL USERS: THE PRICING STRUCTURE

Despite the aforementioned positive satisfaction rating by BABS casual users, bikesharing pricing structures have been notoriously confusing for bikesharing users across North America. In general, the pricing structure allows individuals to purchase 24-hour, 3-day, 7-day, monthly, or annual passes and have unlimited 30-minute rides at no additional cost. The most frequently purchased pass types are 24-hour and annual memberships, which range between \$5 and \$10, and \$45 and \$149, respectively (Shaheen, 2014).

If a trip goes over the allotted 30 minutes, the customer gets charged overages that usually get progressively more expensive the longer the trip. Casual users who misunderstand the pricing structure usually think that a 24-hour pass allows them to use the bike for 24 continuous hours at no additional cost. Most recently, this pricing structure sparked a series of critical articles by news outlets in Indianapolis, claiming that riders have “been confused by the fee structure”

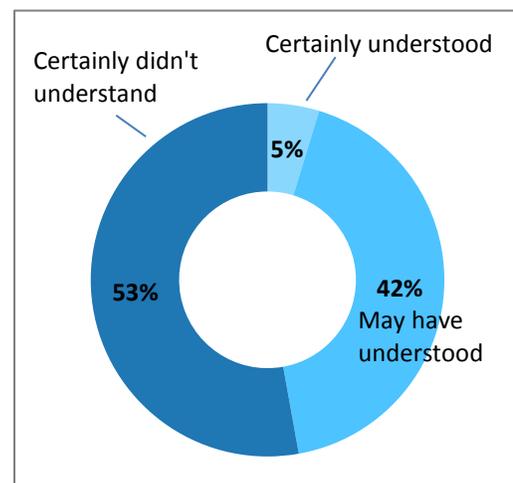
and under the impression that they were paying for a “24-hour pass and that meant I could have the bike for 24 hours” (Associated Press, 2014). Furthermore, both Citi Bike and Hubway have recently altered the way the information is displayed on their kiosks.

This pricing structure has also been an issue for Bay Area Bike Share’s operations. To better understand the comprehension of the pricing structure, researchers asked casual users the following questions:

- 1) *Approximately how long was the trip you just completed? \_\_\_\_ minutes/hours*
- 2) *How much do you expect your most recent Bay Area Bike Share trip to cost? (Please check one response)*
  - The cost of my trip will be included in my initial fee of \$9 or \$22*
  - I will pay my initial fee of \$9 or \$22 + \_\_\_\_ US Dollars*

Based on the trip duration and the anticipated additional cost that was reported by a respondent in the two questions above, we were able to determine whether or not the user understood the pricing structure. The data collected from these questions suggests that at least 53% of casual users do not understand the pricing structure. Figure 18 displays the distribution of pricing structure understanding.

**Figure 18. Casual User Pricing Structure Understanding (n=106)**



If a respondent reported, for example, that he/she used the bicycle for between 31 and 60 minutes and wrote that they would “pay my initial fee of \$9 or \$22 + 4 US Dollars,” they “certainly understood” the pricing structure. In this case, the respondent recognized that he/she would be charged a fee in addition to the initial membership cost because the trip duration was over the allotted 30-minute limit. If a respondent reported that they used the bike for less than 30 minutes and indicated that they would not have to pay an additional fee, they were considered to “may have understood” because, while they reported accurately, it was unclear if they were aware of additional charges in the event of a trip that is over 30 minutes. In the event where a casual user listed a trip that was over 30 minutes and reported that they would not pay any additional fee or if the trip was under 30 minutes and they noted that they would have to pay

additional fees, it was assumed that they did not understand the pricing structure.

Casual users were 14% more likely to have used a bikesharing system before than non-users, with 40% of users having some prior experience compared to 26% of non-users. Casual users who had used bikesharing previously were 61% more likely to understand the pricing structure, as shown in the cross-tabulation below in Table 1.

**Table 1. Understanding of Pricing Structure Based on Previous Bikesharing Use (n=89)**

		Did they understand the pricing structure?	
		Yes	No
Have you already used another bikesharing system?	No	39%	61%
	Yes	100%	0%

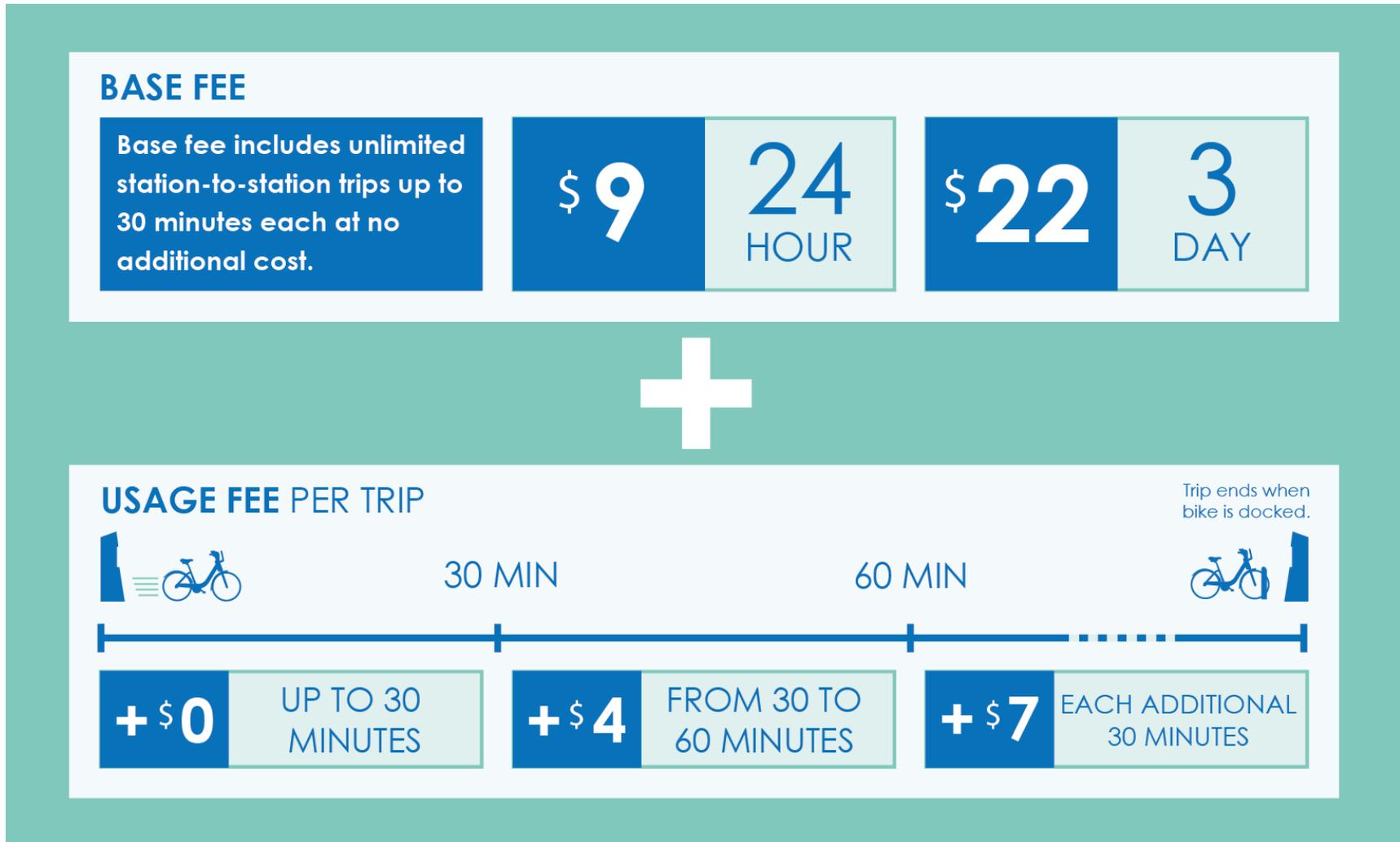
The reported duration for each surveyed casual user trip varied considerably, with 64% of all trips being estimated to be 30 minutes or more, and 15% were two hours or more (n=105). Of those who reported taking trips 30 minutes or longer, 67% did not understand the pricing structure based on responses to pricing structure questions (n=67), as shown in the below cross-tabulation (Table 1). Additional analysis regarding the pricing structure can be found in the section titled “Casual Users: The Pricing Structure” later in this report.

**Table 2. Trip Duration Based on Understanding of Pricing Structure (n=67)**

		How long was your trip?		
		From 30 to 60 mins	From 1 to 2 hours	Greater than 2 hours
Did they understand the pricing structure?	Yes	22%	7%	3%
	No	15%	31%	21%

Due to the high rate of casual users who did not understand the pricing structure, we have developed an alternative pricing structure decal for the kiosk to help emphasize the 30-minute trip limit via a timeline, shown on the following page in Figure 19. This kiosk decal was presented to the BABS project partners prior to the release of this report, and BAAQMD is currently exploring redesign options to the existing kiosk decal including this concept.

Figure 19. Suggested Pricing Structure Revision



# NON-USER ANALYSIS

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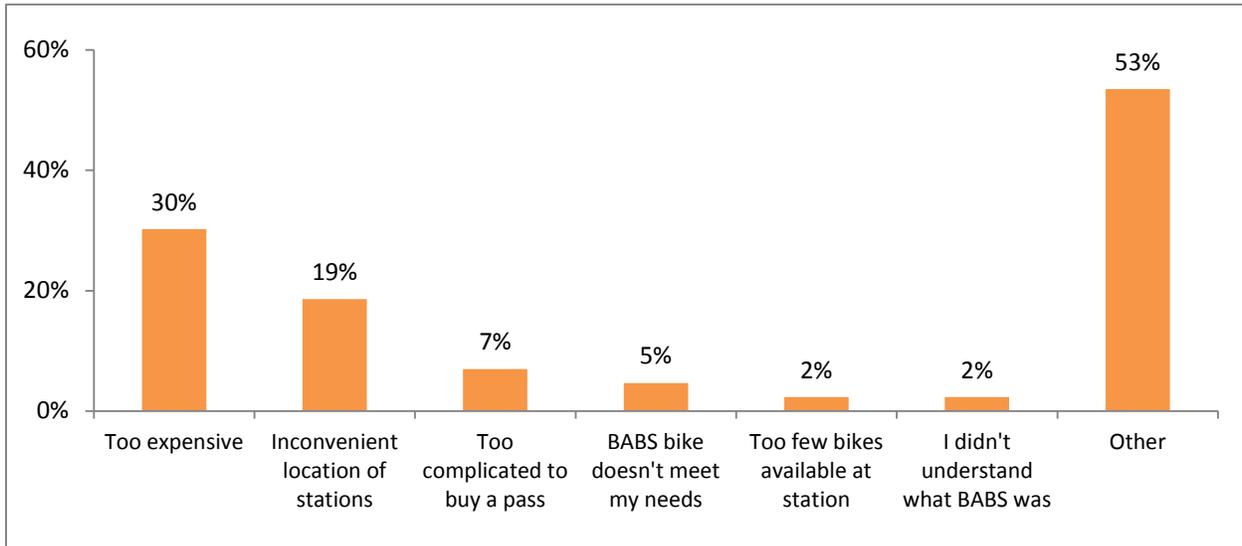
## NON-USERS: SOCIO-DEMOGRAPHICS

There were many similarities between the socio-demographics of BABS non-users and casual users. Similar to casual users, 73% non-users were likely to be white (n=51); 79% have an undergraduate degree or higher (n=52); and 66% have a household income of \$50,000 or higher (n=38). These traits are consistent not only with BABS casual users but also with other bikesharing users in other programs as well (Martin and Shaheen, 2014).

## NON-USERS: WHY NOT USE BAY AREA BIKE SHARE?

The survey responses portrayed that there were many socio-demographic similarities between casual and non-users; they were. A key goal of this study was to understand why non-users were deciding not to use BABS. Among those non-users surveyed, the most common single reason for not using BABS was that it is too expensive, representing 29% of respondents, as seen in the Figure 20 below. The next most common response was “Inconvenient station locations,” representing 22% of those surveyed. These responses are interrelated in instances in which a non-user would have liked to take a bicycle outside of the system area—roughly defined as the northeast quarter of San Francisco, as shown previously in Figure 1—but the user felt that it would be too expensive based on the inability to dock the bike for an extended period of time.

Figure 20. Why Did You Decide To Not Use BABS Today? (n=43)

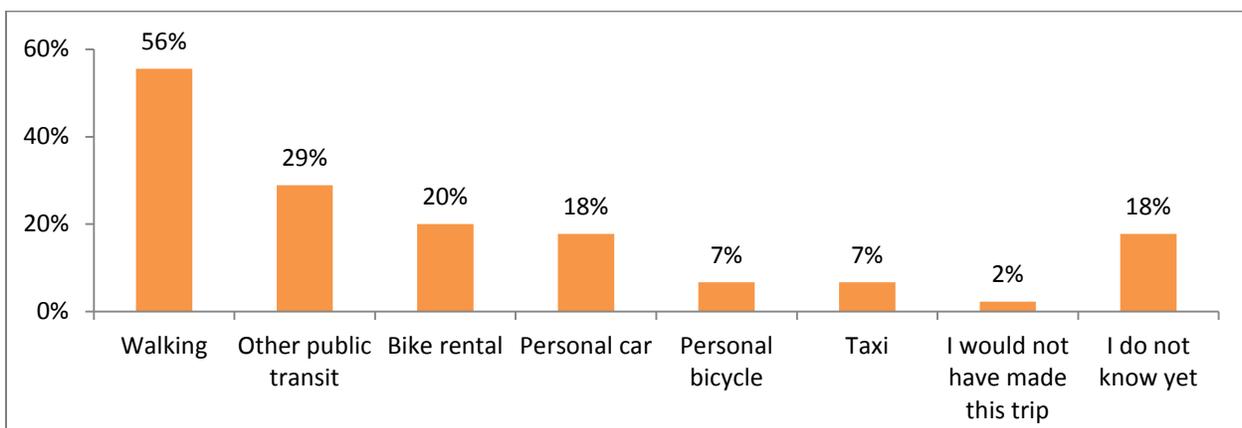


“Other” responses for not using the system included the following, which have been paraphrased for clarity:

- *I had my kid(s) with me;*
- *I am thinking about it and may try it later;*
- *The 30-minute limit is insufficient for my trip needs; and*
- *The \$101 deposit is too expensive.*

In lieu of a casual membership, non-users were most likely to: walk (56%), take public transit (29%), and/or rent a bike (20%) to get to their next destination (n=53), as shown in Figure 21 below.

Figure 21. How Will You Make Your Trip Instead? (n=45)



# CONCLUSION

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This study found that there are many consistent attributes between casual users, non-users, and annual members of BABS. Like annual members, casual and non-users are more likely to be male, Caucasian, well educated, wealthy, and between the ages of 20 and 35 years old.

Non-users decided to not use the system for a wide range of reasons, but the most common responses were because it was too expensive (30%) or the station locations did not meet the individual's needs (19%) (n=43). Many individuals chose to write-in responses for this question, and the most frequent answers related to the 30-minute limit not being sufficient enough for the planned trip. Several non-users expressed that they were still considering purchasing a casual membership. Instead of using BABS, non-users were most likely to walk (56%) or use public transportation (29%) to get to their next destination (n=45).

Twenty-seven percent of casual users surveyed were originally from outside of the U.S., 57% were from the U.S. but outside of the Bay Area, and 16% of casual users were from the Bay Area (n=109). The Netherlands had the most non-U.S. casual users, with five, and New York and San Francisco had the most casual users of any single city with seven each. Ninety percent of all casual users purchased a 24-hour pass. Many casual users either walked, used public transportation, or both in conjunction with their most recent BABS trip. In terms of helmet use, ninety-seven percent of casual users did not wear a helmet (n=109).

While casual users were generally satisfied with BABS, most of the negative feedback about the system related to the limited deployment of stations, as 24% of respondents were "unsatisfied" or "very unsatisfied." Inconvenient station locations (22%), along with the pricing being too expensive (29%), were the most common reasons that non-users decided not to use BABS. In lieu of using BABS, 55% decided to walk to their next destination, 32% planned to use public transportation, and 19% planned to rent a bike from a traditional bike rental company.

Other socio-demographic, trip purpose, and related attributes of casual users are summarized in the following list (n=117):

- Mean age: 33 years old;
- 65% male and 35% female;

- 67% had an bachelor's degree or higher;
- 70% were Caucasian and 73% were from the U.S.;
- Mean household income: \$99,000; and
- 78% walked to and/or from a BABS station, and 55% took public transit in conjunction with their trip.

One other noteworthy finding from this study was that at least 53% of casual users did not understand the pricing structure—the most common misconception being that casual users thought that a 24-hour membership meant they could use the bicycle for 24 hours straight. Of those who took trips longer than 30 minutes, 67% did not understand the pricing structure. These findings suggest that either the pricing structure should be adjusted or the pricing information should be portrayed in a different manner. We suggest that future research focus on examining pricing options that are easily understood by users while also supporting an economically viable business model for the operator

In addition to the pricing issues, the size of BABS in San Francisco—both the number of stations and its geographic scope—is arguably its biggest limitation in attracting additional users and providing an effective service. Strategically adding stations close to destination centers that are well served by public transit, bicycle, and pedestrian infrastructure should remain a paramount concern for BABS officials. With the system's expansion and a clarified pricing structure, customer satisfaction and overall ridership will undoubtedly increase.

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