National Scan of Bike Share Equity Programs: Approaches and Best Practices for Promoting Equity in Bike Share

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Approaches and best practices for promoting equity in bike share

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Acknowledgements
This project was made possible by a grant from the Better Bike Share Partnership, funded by The JPB Foundation. The Better Bike Share Partnership is a collaboration focused on building equitable and replicable bike share systems. The partners include the City of Philadelphia, Bicycle Coalition of Greater Philadelphia, National Association of City Transportation Officials (NACTO) and PeopleForBikes Foundation. We are also indebted to representatives of bike share systems, cities and community partners around the country who took time to take our questionnaire, discuss their equity programs and approaches with us, and share information and resources. Thanks to Lauren Mullarky-Williams and Charmelis A. Reyes for their assistance.

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Executive Summary

Equity is a complex topic – is a bike share system equitable if bikes are available in all neighborhoods, if anyone who wanted to could afford to ride or have a membership, or only if ridership reflects the demographics of the city? In this report, we seek to identify ways for cities and bike share systems to have these conversations with meaningful data. The report is a resource to help cities navigate the range of actions that have been implemented to make bike share systems more equitable, examine successful strategies employed by other cities and systems, and understand how those systems are measuring and articulating their successes (and challenges). In doing so, we hope the report helps bike share systems learn from the experiences of others, innovate, and more quickly move toward greater equity.

**Approach:** The findings in this report are based primarily on a questionnaire of bike share operators, cities, and community partners, as well as from data collected during a scan of systems, and follow-up with select cities and systems about their programs. We developed and tested a questionnaire designed to collect detailed information on the various programs and approaches that are being used in cities around the United States to improve equity in bike share. We sent the survey to 245 contacts working in 131 bike share systems, and received a total of 85 valid responses, including at least one response from bike share systems in 70 cities across 34 states. From those responses, we received information on 105 different equity programs (many systems having more than one program). The survey responses guided our selection of cities to do in-depth system spotlights, or case studies.

**Which systems have equity programs?** Small cities were much less likely to be actively working on addressing equity; less than half of the systems with fewer than 150 bikes had implemented any sort of equity effort. However, the vast majority of systems over that threshold are actively working to address equity, with 71 to 79% of systems having specific equity programs, and most of the rest having equity work infused in their efforts. Systems that received funding through the Better Bike Share Partnership (BBSP) all described having equity programs or efforts – unsurprisingly, since they specifically applied for and received funding to carry out such work. Of non-BBSP funded systems, about half have specific equity programs, and another 17% are working on equity outside of a specific program. Around a third of non-BBSP cities have not undertaken equity-focused efforts.

**Who are those programs targeting?** Of the 103 reported programs, 56% targeted low-income individuals, 34% targeted specific neighborhoods or geographic areas, 22% targeted specific racial or ethnic groups, 15% targeted people of all abilities, and 16% targeted other populations. “Other populations” included unbanked populations, people without smartphones or credit cards, and veterans or students. Note that some programs listed more than one target group.

**How are systems tackling equity in bike share?** The questionnaire asked about a variety of approaches to addressing equity in bike share, along with whether or not they collect data to assess the performance of that approach. Those approaches, along with the mean effectiveness rating assigned by respondents, are
shown in Table ES-1. Note that we included elements that respondents told us were not part of a specific program but were part of ongoing efforts to address equity. Effectiveness was rated on a 1-4 scale (1=not effective, 2=minimally effective, 3=somewhat effective, 4=very effective). Station locations, discounts and marketing were the most common approaches, along with a mixture of approaches to education, engagement and facilitating sign-ups.

Table ES-1. Equity Program Elements, Data Collection, and Effectiveness Ratings

<table>
<thead>
<tr>
<th>Program Element</th>
<th>Number of Systems</th>
<th>%collecting data</th>
<th>Average effectiveness rating</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Station siting, service areas, and balancing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bike/station locations</td>
<td>33</td>
<td>88%</td>
<td>3.25</td>
</tr>
<tr>
<td>Service area boundaries</td>
<td>21</td>
<td>53%</td>
<td>3.0</td>
</tr>
<tr>
<td>Rebalancing</td>
<td>20</td>
<td>59%</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Payment and fees</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income-based discount</td>
<td>30</td>
<td>81%</td>
<td>3.73</td>
</tr>
<tr>
<td>Alternative payment structures</td>
<td>30</td>
<td>72%</td>
<td>3.33</td>
</tr>
<tr>
<td>Cash pay option</td>
<td>30</td>
<td>70%</td>
<td>3.6</td>
</tr>
<tr>
<td>Reduction of fees</td>
<td>8</td>
<td>43%</td>
<td>3.33</td>
</tr>
<tr>
<td><strong>Education or facilitation programs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilitated enrollment</td>
<td>22</td>
<td>64%</td>
<td>3.41</td>
</tr>
<tr>
<td>Education programs</td>
<td>25</td>
<td>57%</td>
<td>3.5</td>
</tr>
<tr>
<td>Prescribe-a-bike</td>
<td>4</td>
<td>80%</td>
<td>3.5</td>
</tr>
<tr>
<td>Organized rides</td>
<td>22</td>
<td>57%</td>
<td>3.2</td>
</tr>
<tr>
<td>Ambassadors</td>
<td>23</td>
<td>39%</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Marketing, information and materials</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketing campaigns</td>
<td>30</td>
<td>34%</td>
<td>2.9</td>
</tr>
<tr>
<td>Non-English offerings</td>
<td>6</td>
<td>40%</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Mixed fleet options</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adaptive bicycles</td>
<td>10</td>
<td>75%</td>
<td>3.6</td>
</tr>
<tr>
<td>Electric bicycles</td>
<td>7</td>
<td>40%</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Internal operations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hiring practices</td>
<td>15</td>
<td>36%</td>
<td>4.0</td>
</tr>
<tr>
<td>Employee training</td>
<td>12</td>
<td>50%</td>
<td>3.75</td>
</tr>
<tr>
<td><strong>Transit integration</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transit integration</td>
<td>20</td>
<td>64%</td>
<td>3.0</td>
</tr>
<tr>
<td>Overall</td>
<td>70</td>
<td>61%</td>
<td>3.37</td>
</tr>
</tbody>
</table>
Select findings from across the variety of approaches to programming for equity:

- Overall, approximately 61% of the equity efforts described included a data collection component, although some popular programming types had very limited data collection taking place. For example, only about 34% of the marketing campaigns and 39% of the ambassador programs had any data collection that could be used to gauge effectiveness. Across many programming types, data collection was often limited to simple frequency data (# of events, stations, trips, etc.), without a system in place to translate data in program measurement or effectiveness. (Thus, effectiveness ratings presented here should be interpreted cautiously). A number of systems indicated that they rely on qualitative feedback (stories, examples, etc.) to gauge program effectiveness, but often do not have mechanisms in place to collect that data in any systematic way.

- Bigger bike share systems generally rate their equity efforts more highly than smaller systems. This appears to be in large part a matter of resources and the ability to craft more holistic equity approaches. Larger systems were more likely to have multiple equity programs, and each program they had was more likely to include more elements or approaches to tackling inequity.

- A number of systems noted that building successful partnerships with community organizations was a key element to connecting with underserved populations in their cities.

- Funding challenges were a top concern and barrier for bike share systems in being able to improve their equity programming. Knowing how to fund equity work, having a consistent stream of funding, and having dedicated staff were all challenges that we heard. Grants and foundation-based funding were the most common sources of funding, especially for small and mid-sized systems, but these sources were also generally less than $100,000 and limited in duration, leaving systems to figure out how to incorporate equity programming into their operating budgets, seek new sources of external funding, or scale back programming.

The many examples provided throughout the report and in the in-depth system spotlights show the challenges and creative ways systems are addressing bike share equity. In nearly all cases, cities and bike share systems are adapting and seeking to improve outcomes with each iteration. This report provides a detailed set of approaches being attempted all around the United States, along with the ways that systems are going about measuring program performance.
Background

As bike share systems around the United States have grown in number and size in recent years, there has been an increasing effort to ensure that those systems are accessible to all residents, particularly those who have the fewest resources or have been underserved in the past. The mobility landscape in 2019 is rapidly changing, with scooter and e-bike systems along with ride hailing and ride sharing companies contributing to a new and uncharted urban transportation scene. Meanwhile, bike share is still relatively new and changing quickly. In order to compete and excel in this changing landscape, particularly with regard to providing equitable service, bike share systems need to be able to better understand and document the outcomes of their programs so that they can articulate and replicate successes, identify and adapt when programs aren’t working, and continue to innovate as they seek to better serve cities.

Many of the industry standards in bike share have been established by trial and error, and by learning from the experiences of peer cities. This report seeks to provide a resource to help cities navigate the range of actions that have been implemented to make bike share systems more equitable, examine successful strategies employed by other cities and systems, and understand how those systems are measuring and articulating their successes (and challenges). In doing so, we hope the report helps bike share systems learn from the experiences of others, innovate, and more quickly move toward greater equity.
Bike Share Barriers

Many bike share systems began operations in central city areas and neighborhoods with demonstrated support for bicycling programs. Research has shown that these areas have tended to be disproportionately white (e.g., Ursaki and Aultman-Hall, 2016) and higher-income (e.g., Smith, Oh and Lei, 2015). Bike share users have also been disproportionately white, higher-income, young, educated, and male (e.g., Shaheen et al., 2014; Buck et al., 2013). Even when bike share stations are placed in lower-income communities of color, white and higher-income residents use the system disproportionately (McNeil et al., 2017).

Aside from physical access to a bike share station or bike, many other barriers may prevent people from using bike share. Our prior research found that many residents in lower-income communities and communities of color are less likely to have close social connections to people who use bike share, are less likely to have used it themselves, know less about how the system works, and often do not know about available discounts even when they do exist (McNeil et al., 2017). In addition to the burden of affording a standard membership, lower-income residents are also less likely to have a credit card or smartphone, which are key components to many bike share systems. Even when they have a credit card, some people may not want to use it for fear that they’ll be charged more than they expect due to overage fees or bike damage. Language barriers or the lack of ability to ride a standard bike share bike also prevent some people, while many others don’t think their local streets are safe for bicycling (McNeil et al., 2017).

All of these barriers present a formidable challenge for bike share systems when it comes to engaging underserved communities and working to make sure the systems serve the diverse needs of the cities in which they operate.

Key Resources

There are some great resources for making bike share systems bring the benefits of bicycling to diverse communities. The Better Bike Share Partnership (BBSP) has served as key funder of bike share equity initiatives around the United States, as well as a convening entity for knowledge exchange and documentation. The BBSP blog has documented efforts, best practices and challenges of those implementing bike share programs, and holds a wealth of collected wisdom. Other resources housed at the BBSP website included case studies, conference presentations, research and more.

As one of the four partners in the BBSP, the National Association of City Transportation Officials (NACTO) has produced a number of resources aimed at helping bike share systems to improve equity, along with other operations. These include:

- NACTO’s Strategies for Engaging Communities Report, released through its Bike Share Initiative in coordination with the Better Bike Share Partnership.
- NACTO’s annual reports on bike share and micromobility, including reports covering 2010 to 2016, 2017, and 2018.
- Bringing Equitable Bike Share to Bed-Stuy: Progress Report from Bedford Stuyvesant Restoration Corporation in Partnership with NACTO.
- Bike Share Intercept toolkit

Portland State University’s Breaking Barriers to Bike Share research project assessed bike share equity perspectives and barriers in a trio of reports looking at bike share operators, users, and residents in neighborhoods targeted by equity programs.

This report seeks to add a useful resource for cities, bike share operators, and community partners to use when tackling equity efforts related to bike share.
Methodology

This section outlines the methods employed by this study, along with who responded. First, we developed a list of bike share systems in the United States. Next, we developed a questionnaire that we sent to each location. Lastly, we used the survey responses to guide our selection of cities to do in-depth system spotlights, or case studies. After selecting the system spotlight study areas, we contacted respondents to conduct semi-structured interviews which we used to further understand a component of their system’s bike share equity efforts.

Bike Share Cities List

Between March and August 2018, we compiled a list of all the currently operating bike share systems in the United States that we could identify. While developing the list, we gathered several additional pieces of information including number of bikes, number of stations, system operator, bike share system type, if they received BBSP grant funding, pricing structures, contact information, and information around equity programming. This list was used to create the sampling frame for the study.

Questionnaire Development

A questionnaire was developed with the goal of gathering information about each system, focusing on equity programming efforts, approaches to assessing these programs, and future efforts. Topics included in the questionnaire were developed drawing from academic literature on bike share equity, institutional knowledge of bike share equity programming amongst the researchers, and profiles on a variety of bike share systems’ efforts to address equity issues. After the questionnaire was developed, the research team solicited feedback through a pilot study. Individuals who participated in the pilot provided feedback that was incorporated into a final version of the questionnaire.

Deployment

We sent the questionnaire to the key contacts identified during the bike share cities list creation. The questionnaire was open for five months, in order to get as large of a response rate as possible and to allow for adjustments in our contact strategy. Emails with links to the questionnaire were sent to bike share operations managers, key city administrators, and other individuals identified as key partners to a bike share system. We additionally sent emails to solicit responses from key figures working at the corporate level for Lime, Lyft, Jump Bikes, and Zagster/Pace. Follow up emails were sent to remind people to take the questionnaire and of the closing date for responses. In total, we invited 245 representatives of cities, bike share operators and community partners, representing 131 bike share systems, to take the questionnaire.

Analysis

Questionnaire responses were first reviewed for frequencies of various approaches, examples of best practices, challenges or successes, and recording metrics. We also examined data by system size, BBSP participation, and other variables to view differences between groups. Open-ended questions were generally coded into thematic categories based on the responses to the particular question. Totals reported throughout this report for the number of responses, systems or programs may vary slightly by question due
to which cities and systems responded to the specific question, and whether we are reporting on systems, responses (occasionally we had more than one response per system, such as from a city and operator), or programs (some systems reported multiple programs). When reporting on program efficacy, we were limited in our ability to report statistically valid rates due to the low number of systems reporting certain types of programs. Instead, we provide the raw numbers of reported programs rather than percentages.

**Spotlight Systems: Developing Case Studies**

Several bike share systems that were employing a unique combination of equity programs were identified as potential systems to do in-depth system spotlights. After generating a list of potential cases and respective foci, we reached out to questionnaire takers and other key figures to conduct interviews to further understand aspects of bike share equity in the system area. Interviews were supplemented with data gathered from questionnaire responses, newspaper articles, and other documents provided by the interviewees to provide a fuller understanding of their bike share equity efforts.

**About Metrics**

One of the goals of this project is to understand and share best practices for improving bike share equity. Essential to that goal is to understand the impact of programs and initiatives designed to address equity, which requires having tools and resources to measure that impact. Metrics for measuring the impact of these efforts can help to understand how effective a program is, to know when systems need to be changed or improved, to be able to articulate and share success stories, and more.

However, equity is a complex topic – is a bike share system equitable if bikes are available in all neighborhoods, if anyone who wanted to could afford to ride or have a membership, or only if ridership reflects the demographics of the city? Does equity require providing a transportation and recreation option to those who have the fewest such options? And, does a system need to achieve all these goals, or is providing a single person (or neighborhood) a means of getting to work or to transit, or a means of getting a dose of exercise, a success? While we can’t answer these questions in this document, we do seek to identify ways for cities and bike share systems to have these conversations with meaningful data. In some cases, this can be quantitative data based on hard numbers (number of enrollments, number of rides, etc.), but in other cases the successes can best be told through stories and examples.
Responding Cities and Systems

We received a total of 85 valid responses, including at least one response from bike share systems in 70 cities (Figure 1, Table 1) across 34 states. From those responses, we received information on 105 different equity programs (many systems have more than one program). In a few cases, we received responses from more than one entity in the same city, which in most cases included a representative of the system operator and from someone with the city or overseeing agency. We also heard from four national bike share operators with operations in multiple cities (Bicycle Transit Systems [BTS], Lime, Lyft/Motivate, and Pace/Zagster). Cities with at least one bike share system respondent are shown in Figure 1. Among the total respondents, 43% represented bike share operators, 56% represented cities or other government agencies, and 7% represented community organizations or nonprofits, with a few falling across more than one category (for example, with municipally operated systems).

![Figure 1 Map of Responding Locations]
Grouped by bike share system size, large systems of 750 or more bikes represented 20% of responses. Medium-large systems (350 to 749 bikes) accounted for 24% of responses, medium systems of 150 to 349 accounted for 30% of responses, and small systems of less than 150 bikes accounted for 26% of responses. Systems that had been BBSP grant recipients on either round 1, 2, or 3 of funding represented 24% of responses.

<table>
<thead>
<tr>
<th>Table 1 Responding Systems by Size</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Small Systems (0 to 149 bikes)</strong></td>
</tr>
<tr>
<td>Arbor Bike (Ann Arbor, MI)</td>
</tr>
<tr>
<td>Beverly Hills Bike Share (CA)</td>
</tr>
<tr>
<td>BikeMidland (Midland, MI)</td>
</tr>
<tr>
<td>Boise GreenBike (ID)</td>
</tr>
<tr>
<td>Cat Bike (Savannah, GA)</td>
</tr>
<tr>
<td>Colombike (Columbus, IN)</td>
</tr>
<tr>
<td>Des Moines Bcycle (IA)</td>
</tr>
<tr>
<td>Greenride Bikeshare (Burlington, VT)</td>
</tr>
<tr>
<td>Howard County Bikeshare (MD)</td>
</tr>
<tr>
<td>McAllen BCycle (TX)</td>
</tr>
<tr>
<td>Mountain Rides Bike Share (ID)</td>
</tr>
<tr>
<td>Pace Huntsville (AL)</td>
</tr>
<tr>
<td>Pedal Corvallis (OR)</td>
</tr>
<tr>
<td>Rapid City Bcycle (SD)</td>
</tr>
<tr>
<td>Spokies (Oklahoma City, OK)</td>
</tr>
<tr>
<td>Upgrade Bike Share (Evansville, IN)</td>
</tr>
<tr>
<td>Zagster Longmont (CO)</td>
</tr>
<tr>
<td>Zagster Roanoke (VA)</td>
</tr>
</tbody>
</table>

| **Medium Systems (150 to 349 bikes)**    |
| Bike Share ICT (Wichita, KS)             |
| Citrix Cycle (Raleigh, NC)               |
| GREENbike (SLC, UT)                      |
| Holy Spokes (Charleston, SC)             |
| Indiana Pacers Bikeshare (Indianapolis)  |
| Lime San Mateo (CA)                      |
| LimeBike Ithaca (NY)                     |
| Link Dayton Bike Share (OH)              |
| mBike (College Park, MD)                 |
| Nashville B-cycle (TN)                   |
| Pace ABQ (NM)                            |
| Pace Fort Collins (CO)                   |
| PaceRoc (Rochester, NY)                  |
| PeaceHealth Rides (Eugene, OR)           |
| Reddy Bikeshare (Buffalo, NY)            |
| RVA Bike Share (Richmond, VA)            |
| This Machine (Tulsa, OK)                 |
| Topeka Metro Bikes (KS)                  |
| Tugo Bike Share (Tucson, AZ)             |
| UHBikes (Cleveland, OH)                  |
| WE-cycle (Aspen & Basalt, CO)            |

| **Medium/Large Systems (350 to 749 bikes)** |
| Austin B-Cycle (TX)                        |
| Blue Bikes (New Orleans, LA)               |
| Bublr Bikes (Milwaukee, WI)                |
| CDPHP Cycle! (Capital District, NY)        |
| CoGo Bike Share (Columbus, OH)             |
| Denver Bcycle (CO)                         |
| Explore Bike Share (Memphis, TN)           |
| Fort Worth Bike Sharing (TX)               |
| Healthy Ride (Pittsburgh, PA)             |
| LimeBike Orlando (FL)                      |
| Long Beach Bike Share (CA)                 |
| MoGo (Detroit, MI)                         |
| Red Bike (Cincinnati, OH)                  |
| Relay Bike Share (Atlanta, GA)             |
| Swell Cycle (San Antonio, TX)              |
| Zyp BikeShare (Birmingham, AL)             |

| **Large Systems (750 bikes or more)**     |
| BIKETOWN (Portland, OR)                   |
| Biki (Honolulu, HI)                       |
| Bluebikes (Boston, MA)                     |
| Breeze Bike Share (Santa Monica, CA)       |
| Capital Bikeshare (DC)                    |
| Citi Bike (NYC, NY)                        |
| Divvy (Chicago, IL)                        |
| Ford GoBike (SF Bay Area, CA)              |
| Houston BCycle (TX)                        |
| Indego (Philadelphia, PA)                 |
| Metro Bike Share (Los Angeles, CA)         |
| Nice Ride (Minneapolis, MN)               |
| Ride On Miami (FL)                        |
| SoBi Hamilton (ON, Canada)                |
As expected, system size was highly correlated with city size (Table 2). In terms of median income, the largest systems and smallest systems were most likely to have higher median incomes, while medium and medium/large systems were a bit lower. Medium/large and large systems were in cities with higher non-white populations, on average, and large systems were the most likely to have higher rates of limited English proficiency. The mean poverty rates were mostly consistent across system sizes, with averages ranging from 17% to 22%.

Table 2: Demographic Summary of Responding System Locations by Size

<table>
<thead>
<tr>
<th>System Size</th>
<th>N</th>
<th>Stat</th>
<th>Pop.</th>
<th>Median income</th>
<th>% non-white</th>
<th>% Hisp.</th>
<th>% poverty</th>
<th>% limited English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small (0 to 149 bikes)</td>
<td>18</td>
<td>Mean</td>
<td>131,050</td>
<td>$57,994</td>
<td>33%</td>
<td>13%</td>
<td>17%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min</td>
<td>21,583</td>
<td>$36,956</td>
<td>12%</td>
<td>3%</td>
<td>4%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Max</td>
<td>629,191</td>
<td>$124,059</td>
<td>89%</td>
<td>85%</td>
<td>25%</td>
<td>18%</td>
</tr>
<tr>
<td>Medium (150 to 349 bikes)</td>
<td>21</td>
<td>Mean</td>
<td>287,196</td>
<td>$49,808</td>
<td>44%</td>
<td>15%</td>
<td>20%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min</td>
<td>10,946</td>
<td>$27,854</td>
<td>16%</td>
<td>3%</td>
<td>8%</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Max</td>
<td>853,431</td>
<td>$103,399</td>
<td>66%</td>
<td>49%</td>
<td>34%</td>
<td>11%</td>
</tr>
<tr>
<td>Medium/Large (350 to 749 bikes)</td>
<td>16</td>
<td>Mean</td>
<td>583,075</td>
<td>$46,273</td>
<td>61%</td>
<td>19%</td>
<td>22%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min</td>
<td>212,265</td>
<td>$27,838</td>
<td>35%</td>
<td>3%</td>
<td>15%</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Max</td>
<td>1,461,623</td>
<td>$63,717</td>
<td>90%</td>
<td>64%</td>
<td>37%</td>
<td>8%</td>
</tr>
<tr>
<td>Large (750 bikes or more)</td>
<td>13*</td>
<td>Mean</td>
<td>2,401,173</td>
<td>$61,657</td>
<td>62%</td>
<td>25%</td>
<td>18%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min</td>
<td>92,495</td>
<td>$33,999</td>
<td>29%</td>
<td>7%</td>
<td>11%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Max</td>
<td>10,105,722</td>
<td>$89,390</td>
<td>90%</td>
<td>72%</td>
<td>25%</td>
<td>33%</td>
</tr>
</tbody>
</table>

* SoBi Hamilton (Ontario) also responded to the questionnaire but is not included in demographic tallies
Equity Programs

Overview

Understanding efforts to address equity in bike share starts with asking how cities and systems articulate what equity is and how it relates to the system. This section examines how bike share systems define equity, which systems have equity-focused programming, and the stated goals and motivating factors of the equity programs.
Equity Definitions

To understand how bike share operators, city agencies, and community partners define and conceptualize bike share equity, the questionnaire asked if the organization operated from a definition of equity for the bike share system and, if so, to provide it. Of the 70 systems that responded, 57 provided some response to the question; however, 19 of those responses indicated that they did not have a working definition of equity. Thirty-eight systems provided more detailed responses, which varied between specific equity statements or goals for the bike share system (61%), equity policies passed through from the city or other entity (11%), or examples of equity programs or approaches in lieu of a policy or definition (29%).

Themes

The equity definitions and statements were qualitatively analyzed and thematically coded. Six key themes emerged from the data, and are displayed in Table 3: specific populations, equity goals, geographic areas, operations, addressing barriers, affordability and accessibility, and for all abilities. Of the 38 substantive responses:

- 71% discussed specific (or general) populations that should have access to bike share;
- 45% provided specific action goals;
- 39% indicated that bike share should be affordable and accessible;
- 29% mentioned specific geographic areas;
- 26% specifically identified addressing barriers;
- 21% mentioned improving access for users of varying abilities; and,
- 11% discussed operational aspects of equity.

Takeaways

Analyzing how respondents defined, conceptualized, and operationalized bike share equity provides insights into how the field is addressing equity issues. Bike share equity is generally conceptualized as addressing barriers to accessing bike share in order to create greater accessibility for targeted populations. Efforts towards cultivating equitable outcomes are often connected to larger goals and outcomes, such as empowering disenfranchised groups, having ridership reflect the demographics of the city, and using bike share as a means to reach other outcomes such as improving public health and economic development goals. These goals and intended outcomes can be the springboard for assessing and evaluating the effectiveness of equity programming and efforts.
Table 3 Equity Statement Themes

<table>
<thead>
<tr>
<th>Equity Themes</th>
<th>% Coded</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Populations</td>
<td>71%</td>
<td>Low-income/LMI; Racial/Ethnic Groups; Gender; Those in most need; Historically underrepresented and underserved; Local residents; Nation of origin; Transportation option to diverse range of people; Reflect municipality’s overall demographic makeup; For all people.</td>
</tr>
<tr>
<td>Equity Goals</td>
<td>45%</td>
<td>Fosters economic equity; Job creation; Empower; Extension of public transit; Improve public health; Support daily lives; Community asset- exercise, recreation, and alternative transportation; Ensure outcomes and opportunities for all.</td>
</tr>
<tr>
<td>Affordable and Accessible</td>
<td>39%</td>
<td>Offering affordable pricing and access; Ensure access for low-income, bike station locations, cash, text-based access; Geographic access, economic access, demographic access; Access locations; Affordability; Anyone who identifies as requiring subsidized access.</td>
</tr>
<tr>
<td>Geographic Areas</td>
<td>29%</td>
<td>Neighborhoods; Areas in most need; Growth focused on expanded geographic coverage; Identifying disparities and targeting areas for action, intervention, investment; Connect lower-income neighborhoods; Expanding systems coverage to underserved communities; station placement.</td>
</tr>
<tr>
<td>Addressing Barriers</td>
<td>26%</td>
<td>Bank-less; Credit cards; Economic barriers; Physical; Technological; Language; Cultural relevance; Engages and serves minority and low-income; Community driven; Use investments to reverse racial disparity...eliminate institutional racism, reduce non-financial barriers.</td>
</tr>
<tr>
<td>For All Abilities</td>
<td>21%</td>
<td>Accessible bicycles for disabled communities; People of all abilities; Elderly.</td>
</tr>
<tr>
<td>Operations</td>
<td>11%</td>
<td>Dependable, convenient, predictable; Services and operate in a manner that is just and free from bias or prejudice; Fair and just operations; Inclusive work environment, diverse staff; Training and hiring staff from underrepresented communities.</td>
</tr>
</tbody>
</table>

Gaps

As stated above, some notable gaps emerged in conceptualizing and designing bike share equity programs. First, many programs and bike share equity statements that discussed designing systems and programs for targeted populations often did not specify women or LGBTQ communities. Although efforts aimed at making bike share more accessible for lower-income populations, people of all abilities, and specific racial or ethnic groups may address some of the barriers women and LBGTQ communities face in accessing bike share, there also may need to be specific programming and efforts that make bike share more inclusive to these populations. Next, it was rare for equity statements to include specific targeted and measurable outcomes. For example, one of Portland’s BIKETOWN equity goals outlined what percentage of hours new hires from historically marginalized communities are going fill. These sorts of statements were rare. Creating accountability for reaching equity outcomes could be fostered through having specific, measurable goals outlined in these types of statements. Lastly, few of these statements and programs were aimed at advocating for more bicycle lane infrastructure or addressing a variety of safety concerns from different targeted populations, though safety is a major concern for low-income and minority communities while accessing bike share (e.g., McNeil et. al., 2017). Addressing these gaps may facilitate creating deeper and more inclusive equity efforts.
Equity Programs

Most of the questionnaire focused on equity programs or approaches. As with the question about specific equity policies, we were guided by the responding organization’s definition of equity - the specific question asked, “Has your organization been involved in efforts to increase bike share equity (for example, to improve access to bike share benefits for people that otherwise might be excluded)?”

We first asked if the organization had specific programming around bike share equity (or otherwise included equity considerations in the bike share system). Subsequent sections of the questionnaire asked about specific equity efforts and programming, including approaches taken. If no current programs existed, we asked if they were considering doing so, and concluded the questionnaire with a few questions about what barriers were keeping them from implementing programming as well as what resources could be useful in the future to address equity.

Which Systems Have Equity Programs?

When asked if they made efforts to address bike share equity, 60% of systems indicated that there were specific programs addressing equity, while 14% said there were not specific programs but work on equity efforts were a part of their system. Roughly 19% of systems indicated they had considered equity but had not implemented any specific elements, while 7% had not worked on equity at all (see For each equity program responding systems described, the questionnaire asked which populations the program was designed to engage. Of the 103 reported programs, 56% targeted low-income individuals, 34% targeted specific neighborhoods or geographic areas, 22% targeted specific racial or ethnic groups, 15% targeted people of all abilities, and 16% targeted other populations. “Other populations” included unbanked populations, people without smartphones or credit cards, and veterans or students. Note that some programs listed more than one target group.

Table 4). Most systems are taking some action to address equity issues, either through developing and implementing specific programs or by incorporating equity elements as a part of their system.

Small cities were much less likely to be actively working on addressing equity; less than half of the systems with fewer than 150 bikes had implemented any sort of equity effort (For each equity program responding systems described, the questionnaire asked which populations the program was designed to engage. Of the 103 reported programs, 56% targeted low-income individuals, 34% targeted specific neighborhoods or geographic areas, 22% targeted specific racial or ethnic groups, 15% targeted people of all abilities, and 16% targeted other populations. “Other populations” included unbanked populations, people without smartphones or credit cards, and veterans or students. Note that some programs listed more than one target group.

Table 4). However, the vast majority of systems over that threshold are actively working to address equity, with 71 to 79% of systems having specific equity programs, and most of the rest having equity work infused in their efforts. Systems that received funding through the BBSP all described having equity programs or efforts – unsurprisingly, since they specifically applied for and received funding to carry out such work. Of
non-BBSP funded systems, about half have specific equity programs, and another 17% are working on equity outside of a specific program. Around a third of non-BBSP cities have not undertaken equity-focused efforts.

**Barriers for Systems Without Equity Programs**

For those systems that indicated that they did not have any equity-oriented programming, we asked what barriers were keeping them for implementing such efforts. The predominant responses were along two similar themes. First, since many of these systems were smaller bike share systems, the size and available resources, both in terms of staffing and money, were very limiting. Related were statements about the system being very new, in a pilot phase, or otherwise not yet ready to take on the question of equity. One system indicated that they were just trying to keep the system afloat, while another mentioned that they needed to focus on putting bike share in places that would generate rides, and therefore revenue, or there “would not be a system at all.”

**Target Groups**

For each equity program responding systems described, the questionnaire asked which populations the program was designed to engage. Of the 103 reported programs, 56% targeted low-income individuals, 34% targeted specific neighborhoods or geographic areas, 22% targeted specific racial or ethnic groups, 15% targeted people of all abilities, and 16% targeted other populations. “Other populations” included unbanked populations, people without smartphones or credit cards, and veterans or students. Note that some programs listed more than one target group.

**Table 4 Equity Programming by System Size, and BBSP City Status**

<table>
<thead>
<tr>
<th></th>
<th>Has specific equity program</th>
<th>No specific programs, but equity efforts in parts of the system</th>
<th>Considered, not implemented</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>System Size</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small (0 to 149 bikes) n=18</td>
<td>22%</td>
<td>17%</td>
<td>39%</td>
<td>22%</td>
</tr>
<tr>
<td>Medium (150 to 349 bikes) n=21</td>
<td>71%</td>
<td>14%</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>Medium/Large (350 to 749 bikes) n=17</td>
<td>71%</td>
<td>12%</td>
<td>18%</td>
<td>0%</td>
</tr>
<tr>
<td>Large (750 bikes or more) n=14</td>
<td>79%</td>
<td>14%</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>BBSP grant recipient (Rounds 1, 2 or 3)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes (n=17)</td>
<td>94%</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>no (n=53)</td>
<td>49%</td>
<td>17%</td>
<td>25%</td>
<td>9%</td>
</tr>
</tbody>
</table>
**Program Goals**

We asked respondents to describe the primary goal of each program. The open-ended responses were coded into thematic groups in order to get a sense of the primary objectives of the programs. Some goal descriptions crossed more than one thematic group and were therefore coded into each group they touched on. We received responses for 73 programs from 42 systems. Each theme is shown in Table 5, along with the number and percentage of programs, as well as examples of goals that were coded into the theme. The most common theme was affordability, with 40% of the programs and about 69% of the systems having this as a primary goal. The next most common theme was access for particular groups (e.g., specific or general diversity goals, homeless individuals, particular age groups, and people with disabilities), at 27% of programs and 48% of systems. This was followed by providing access to a resource (e.g., transportation, recreation, or technology), promoting biking and bike share, providing access to the unbanked, underbanked and people with limited internet or smartphone access.

**National Programs**

Feedback from bike share operators serving multiple cities and systems shows that the push for equitable bike share is now being incorporated into national programs. We received responses from four national operators, including from Lyft/Motivate, LimeBike, Pace/Zagster and Bicycle Transit Systems (BTS).

Two operators serving some of the largest cities and systems, Lyft/Motivate and BTS, emphasized that their equity work was catered to the unique frameworks and situations within the specific location. Three of the operators noted specific discount programs for low-income individuals. Lyft has a “community pass” program, where low-income riders can have a monthly membership for $5 which includes unlimited 30-minute rides. Through the Lime Access program, qualifying riders can get 100 rides for $5 (95% off) for standard bikes, or 50% off for e-bikes. Pace/Zagster offers $5-per-month memberships as well. In each of these cases, the eligibility is based on providing proof of eligibility or participation in any state or federally run assistance program. BTS, while not offering the same discount program across all cities, does have income-based discounts in their two largest cities - Philadelphia and Los Angeles. Lime and Pace/Zagster both noted that they offer the ability to pay with cash (or PayPal in the case of Pace), along with the ability to unlock a bike/begin a ride via sending a text message, eliminating the need for a smartphone.

There are a number of private bike share operators that provide services in multiple cities. Although practical and political questions remain around the extent to which these national companies can adequately address equity issues, these examples illustrate that national operators are taking steps to address some of the barriers to accessing bike share. However, as illustrated in the Ithaca case study elsewhere in this report, there are concerns over how the changing operation models, business growth goals, and the extent to which cities and communities can shape the services these operators provide will impact the landscape of bike share and bike share equity.
<table>
<thead>
<tr>
<th>Goal theme grouping</th>
<th># of programs</th>
<th>% of programs</th>
<th>% of systems</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affordability</td>
<td>29</td>
<td>40%</td>
<td>69%</td>
<td>Affordable access; available to low- and moderate-income individuals; lower cost barrier</td>
</tr>
<tr>
<td>Access for particular group</td>
<td>20</td>
<td>27%</td>
<td>48%</td>
<td>Available to all; reflective of city, ethnically diverse; Latinos, people of color; homeless, housing insecure; youth; elderly; those with disabilities, needed modifications; low-digital proficiency; overcome language barriers</td>
</tr>
<tr>
<td>Access to resources</td>
<td>14</td>
<td>19%</td>
<td>33%</td>
<td>Access to transportation, recreation, digital/technology</td>
</tr>
<tr>
<td>Promote biking</td>
<td>9</td>
<td>12%</td>
<td>21%</td>
<td>Learn to ride and feel safe on streets, in urban environment; increase overall ridership rate in city; shift perceptions of biking; get people to try biking/bike share</td>
</tr>
<tr>
<td>Underbanked</td>
<td>8</td>
<td>11%</td>
<td>19%</td>
<td>Access for people without bank accounts, credit cards, debit cards; access for those without smartphones or computers; cash payment option</td>
</tr>
<tr>
<td>Access for geographic area</td>
<td>6</td>
<td>8%</td>
<td>14%</td>
<td>Serve areas most in need; outreach, marketing, encouragement to underserved neighborhoods, low-income neighborhoods; expand footprint</td>
</tr>
<tr>
<td>Safety</td>
<td>5</td>
<td>7%</td>
<td>12%</td>
<td>Feel safe riding on street; navigate to low-stress routes; safe transport option; bike safety education; provide safer streets</td>
</tr>
<tr>
<td>Transit access</td>
<td>5</td>
<td>7%</td>
<td>12%</td>
<td>Facilitate multimodal connections; first/last mile connections; free bike share access for transit users; promote bike share to transit users</td>
</tr>
<tr>
<td>Health</td>
<td>5</td>
<td>7%</td>
<td>12%</td>
<td>Access to healthy foods; promote bike share to HMO plan members; healthy transportation option; opportunity for healthy recreation; experience joy and health benefits of biking</td>
</tr>
<tr>
<td>General outreach</td>
<td>5</td>
<td>7%</td>
<td>12%</td>
<td>Connect with residents where they live, work, and play; ambassador programs as face of bike share to the community; encourage community members to try bike share; expand awareness</td>
</tr>
<tr>
<td>Marketing</td>
<td>4</td>
<td>5%</td>
<td>10%</td>
<td>Market and outreach to underserved areas; message that appeals to underserved populations; partners with community organizations to serve target areas and populations</td>
</tr>
<tr>
<td>Increase equity</td>
<td>4</td>
<td>5%</td>
<td>10%</td>
<td>Make bike share more equitable; reduce/remove barriers; break down barriers to bike share</td>
</tr>
<tr>
<td>Education</td>
<td>3</td>
<td>4%</td>
<td>7%</td>
<td>Bike safety education; shift views toward bike share; educate about how to use bike share</td>
</tr>
<tr>
<td>Internal operations</td>
<td>1</td>
<td>1%</td>
<td>2%</td>
<td>Hire staff from diverse and underserved backgrounds</td>
</tr>
</tbody>
</table>
Program Development Factors

For each program, we also asked which factors were the most important for driving the program’s development. The responses lend insight into the various reasons that organizations embarked on equity programs. The responses generally spoke to the underlying factors that drove the decision to initiate equity programming – those decisions may have been made by city staff or leadership, operators, or others, depending on the particular circumstances. Table 6 provides a selection of motivating factors and forces that led to various programs.

Table 6 Selected Motivating Factors for Equity Programs

<table>
<thead>
<tr>
<th>Key motivating factor</th>
<th>Examples</th>
</tr>
</thead>
</table>
| Awareness of inequity in terms of who was using the bike share system (or could use the system). | • Data showing that members were skewed toward being mostly higher income and white.  
• Broader city data showed high rates of low-income or unbanked residents.  
• Trends in membership and bike share use from other cities, or equity efforts in other cities. |
| Not wanting to exclude any potential bike share users, and understanding that all residents should have access to benefits of bike share. | • Potential barriers that shouldn’t prevent people from using bike share - for example, not having a credit card, smartphone, or other barriers.  
• Expand the system and have a bigger base of users, bicyclists, and support. |
| Feedback and conversations with people and organizations interacting with people who were left out of the bike share conversation in some way. | • Feedback that the system wasn’t serving or designed for particular populations, such as people of color or low-income residents.  
• Internal pressure coming from board members, staff, or bike share members to take steps to improve equity. |
| Ensure bike share system is serving the community progressively better over time.     | • Desire to improve things like the ability to verify program eligibility in a way that works for residents.  
• Identified gaps or barriers in programs and sought ways to fill those gaps. |
| Particular circumstances due to opportunity or necessity.                           | • Received funding to address equity.  
• A formal ADA non-compliance complaint provided impetus to get adaptive bike program off the ground. |
Station Siting, Service Areas, and Balancing

Decisions about where bike share bikes, stations and service areas should be placed, along with operational factors around balancing the bike fleet, are inherently decisions about who should have physical access to bike share. If people want to use bike share, they have to be able to get to a bike and end their trip near their desired destination. However, research has shown that people of color and lower-income people are less likely to reside within walking distance of a bike share station (e.g., *Ursaki and Aultman-Hall, 2016*).

This section discusses efforts to address bike share equity through bike and station locations, service area boundaries, and system balancing. Among the 74% of systems with current equity efforts, 51% had programs with a primary focus on service area determination, station siting, and/or bicycle placement and balancing.
Bike and Station Locations

Station siting consists of choosing locations to place bike share stations. Equity efforts that incorporate station siting attempt to place/expand bike share services to underserved neighborhoods; facilitate better connections with existing public transit options; increase access to other stations, bikes, and destinations; and ensure that station placement locations are attuned to community needs and concerns.

Questionnaire respondents indicated a variety of approaches to address equity through bike and station location strategies. These include identifying areas or neighborhoods that are currently underserved by bike share and public transit, have a higher concentration of a targeted group, or are next to amenities and resources that serve a variety of people, such as public libraries, transit centers, grocery stores, and community centers. Some operators are explicitly siting stations next to affordable housing, public housing, or in lower-income census areas. A number of respondents also indicated using community-informed approaches to siting stations. For example, the operator would do outreach in targeted communities, attend community meetings, solicit feedback about growth plans, and have a diverse representation of voices and perspectives on advisory groups. These efforts would guide station relocation, new stations, or rethinking siting practices as necessary.

These efforts are often coupled with seeking external funding for stations in lower-income areas because the stations may not generate enough revenue on their own to service that location. Operators with ambassador programs have focused on coupling outreach with siting practices by having ambassadors host events near or at these stations.

Dockless and hybrid systems are not fully dependent upon a station location to determine where users can access or drop off bikes. This presents an opportunity in that bikes could be quickly and cheaply positioned at locations that are identified as serving a program goal, such as providing access to a low-income neighborhood. However, it also presents a potential challenge in that existing riders and riding patterns might focus trips, and therefore bike availability (for the next rider) in certain neighborhoods, which may not coincide with neighborhoods identified by an equity program.

Examples:

- **Indego, Philadelphia**: Bicycle Transit Systems incorporates equity considerations into efforts to assess Indego station performance. They created a Station Report Card that grades each station on metrics tied to Indego’s three station goals of maximizing ridership, equity, and financial sustainability. The ridership element of the report card focuses on the sum of arrivals and departures at the station, excluding trips under one minute. The equity element is based on the
percentage of stations users who fall into an equity category, including Access Pass holders, black or Latino riders, or those with incomes below $25,000. The financial sustainability is based on a farebox recovery calculation derived from station revenue divided by station expenses. Indego notes that if a station performs poorly in all three areas, they consider alternative locations for the station. If they perform well in all three areas, they seek to replicate the station.

- **Holy Spokes, Charleston**: Through its Just Rides program, Gotcha bikes collaborates with Charleston Moves (a local walking, biking and transit advocacy group), Enough Pie (a local non-profit that engages lower-income communities around placemaking) and the City of Charleston to ensure low-income residents and targeted neighborhoods can access and utilize the bike share program. A key aspect of this program is adding stations to lower-income neighborhoods and prioritizing rebalancing at these stations. These efforts are used in combination with discounted membership options, facilitated cash enrollment efforts, and using community ambassadors, group rides, and other educational programming to engage and open opportunities for lower-income residents.

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### QUESTIONNAIRE RESULTS: BIKE AND STATION LOCATIONS

- 33 systems and 40 programs included bike / station locations
- 88% of the programs collected data to assess bike / station locations (30 said they are collecting data; 4 said they are not)
- 24 rated the efficacy of this element of the program. Of those:
  - Not effective: 1
  - Minimally effective: 3
  - Somewhat effective: 9
  - Very Effective: 11
- Mean effectiveness rating for bike / station locations: 3.25 out of 4
- Example Metrics:
  - Ranking stations based on trips to and from each station location.
  - Conduct community engagement about where to locate stations (surveys, meetings, focus groups, conversations, station location postcards/forms)
  - Collect demographic data at sign-up to see what percentage of our users are located in target areas
  - # of (discount) member signups from area near station; # of signups from affordable housing residents near station;
  - # trip starts/ends per station; # of trips from neighborhood equity stations.
  - # of bikes in target areas; # of working bikes per expected rider
  - Trip patterns - time, location, destination - attempt to assess the mobility benefit to the community
  - Types of trips by station
  - % of ridership by race, age and gender by station (focus on specific stations or target areas, using observational or user demographic data).
  - # of stations located in communities of concern.
Service Area Boundaries

In cases of station-based bike share systems, the service area is almost completely determined by the station locations since bikes must be checked out and returned there. However, with hybrid or dockless systems, the service area may be distinct (albeit closely correlated to) station locations. Further, in many cases, cities or operators with station-based systems identified desired service areas prior to selecting station locations, so the service area served as more of a planning tool than a functional distinction.

Among the responding systems, some focused on downtown or city center areas. Several systems, particularly municipally operated ones, defined the service areas by the city boundaries. Others pointed to a goal of being able to get anywhere by bicycle. When considering service areas through an equity lens, community meetings, surveys, and stakeholder interviews were steps in ensuring the reach of the system matched the goals of the community. A number of systems noted that they extended the service area in one direction in order to include underserved neighborhoods as a first step in moving toward equity. In several other cases, the goal was to have at least some service (e.g., a station) in every district or neighborhood of the city (or within a 10-minute walk of every resident). Common, competing goals that have an effect on equity are coverage and density. A city may have to decide between a system that reaches all corners of the community or if the system can achieve an ideal density.

There may also be key responsibilities of the service provider relating to the established service areas. In particular, communicating the

Explore Bikes Outreach

Prior to launching a bike share system, Explore Bike Share in Memphis, TN, underwent an extensive public outreach and planning period in order to ensure that the bike share system, service area and station locations were in line with community goals and interests. Notably, the grassroots approach began not with the assumption that Memphis wanted or needed a bike share system, but rather with the goal of identifying if bike share was a good fit and, if so, how to proceed. Explore Bike Share began in late 2014 with a group of residents who were curious about how to add tools to the emerging interest in biking. In 2015 the group obtained a grant to examine the potential fit of bike share, and kicked off a year of intensive public outreach. A steering committee of 30 to 40 residents and community leaders, who were broadly representative of the Memphis community from a demographic and socio-economic standpoint, was established to carry out this examination. After determining that residents saw bike share as a huge opportunity for both transportation and recreation options, a planning phase for bike share was initiated. The steering committee determined that the system should be a non-profit operation, should be privately funded, and identified the preferred service area for the system. A group of 12-15 steering committee members interviewed bike share vendors who responded to an RFP, and selected Bcycle as the Memphis bike share vendor. Although the community-led process took longer to get off the ground than some systems, this approach allowed the community to be invested in the process and choose a system that worked for them. By the opening of the system, there were 250 to 300 residents who volunteered to come to the Explore Bike Share warehouse to unbox and assemble the bikes and ride them out to all the stations in the system for the grand opening.
extent of the service area to riders and residents, including where one can ride or park a bike, and if there are penalties associated with parking outside of a service area. Organized rides and classes are one tool that was mentioned to help educate people around the extent of the service area.

Examples:

- **BlueBike, New Orleans**: Placing the BlueBike system area in the tourist and wealthy corridors of New Orleans would have been the easiest path to ridership and profitability. Instead, BlueBike consciously made their service area representative of the ethnic and economic diversity of the entire city. In terms of helping people navigate with that service area, they noted that they stress the boundaries in their educational programming, and design their rides to show participants how they can navigate the city while remaining in the service area.

- **Topeka Metro Bikes, Topeka**: Funding for Topeka Metro Bikes comes from the city tax base, and thus the bike share service area is set to the city limits.

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**QUESTIONNAIRE RESULTS: SERVICE AREA BOUNDARIES**

- 21 systems and 22 programs included service area boundaries
- 53% of the programs collected data to assess service area boundaries (9 said they are collecting data; 8 said they are not)
- 9 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 3
  - Somewhat effective: 3
  - Very Effective: 3
- Mean effectiveness rating for service area boundaries: 3 out of 4
- Example Metrics:
  - Demographic analysis of residents (including race, ethnicity, primary language, etc.) living within walking distance of station location (actual or proposed)
  - Following ridership in focus neighborhoods (e.g. those with ambassador programs)
  - % homes within a 10-minute walk of bike share
  - % of neighborhoods or districts with bike share access
  - % of employees/jobs within a 10-minute walk of bike share
  - Trips, bicycle availability, etc. in targeted areas
  - User or resident feedback (e.g. survey) on bike share service area - suggestions for change, improvement, etc.
Rebalancing

Rebalancing refers to the process of distributing and redistributing bicycles throughout a bike share system. A key element to addressing bike share accessibility issues requires not only having stations placed in underserved neighborhoods, but also ensuring that there are bicycles located and redistributed back to those areas and stations. Moreover, it is important to note that different types of bike share systems and bikes required different rebalancing strategies. For example, dockless systems require considering general accessibility and availability, not just station occupancy. While having mixed fleet options (e.g., offering e-bikes or adaptive bikes) requires considering how to ensure the equitable distribution of these types of bikes throughout the system.

Respondents outlined multiple strategies they used related to connecting rebalancing and equity efforts. First, in station- and non-station-based systems, operators used trucks, vans and e-bikes with trailers to rebalance bikes to meet demands from different areas and biking patterns. Some cities have tried to address rebalancing needs by providing incentives for vendors to rebalance bikes back to underserved

Bicycle Infrastructure

A number of systems indicated that a lack of bicycle infrastructure within the bike share service area was a key equity challenge. If people are going to be willing to try riding a bicycle, there need to be safe bicycle facilities near stations and on likely routes of bike share users, and people need to know about them. Several systems indicated that, while they have placed bike share stations in underserved neighborhoods, those areas often do not have safe and comfortable bike networks. Although bike share systems are usually managed separately from the transportation departments that would be responsible for bike routes, respondents discussed working with those departments to try to align bike share service with installation of safe bike routes, as well as encouraging bike share users to request facility upgrades from their local governments. Documenting functional bike facility conditions as they relate to the bike share system is one way to gather data to support the need for improved bike infrastructure. Metrics could include:

- area accessible from station via high-comfort bicycle facilities (bike shed);
- number of miles of facilities within half mile of station;
- percentage of nearby roads with bicycle facility accommodation; and
- for systems with access to bike share route data: percentage of trips on high-comfort bicycle facilities by user type (discount program vs other members, etc.).
neighborhoods. City contracts may also require vendors and operators to rebalance bikes based on a measure of equitable distribution. In these instances, reporting may be required to detail the rebalancing activity. Lastly, some systems promote rebalancing through fee incentive programs, where users receive money on their accounts for returning bikes to high-priority stations.

Rebalancing Examples:

- **Indego, Philadelphia**: Indego noted that many of their low-income users utilize the system to access resources in center city. Thus, a priority for system health and for equity is to ensure available docks and bikes near major resources such as the Central Library and the Municipal Services Building.

- **Citi Bike, New York**: Through Citi Bike’s Bike Angels program, riders can earn rewards points for moving bikes from crowded bike stations to those that need bikes (or are anticipated to need bikes soon). Bike Angel rewards include free rides or membership extensions, among other rewards.

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**QUESTIONNAIRE RESULTS: REBALANCING**

- 20 systems and 22 programs included rebalancing
- 59% of the programs collected data to assess rebalancing (10 said they are collecting data; 7 said they are not)
- 10 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 2
  - Somewhat effective: 6
  - Very Effective: 2
- Mean effectiveness rating for rebalancing: 3 out of 4
- Example Metrics:
  - Track the amount of balancing associated with program delivery
  - Use API data to track and make decisions about balancing efforts.
  - Access a data portal to find locations and usage records of each vehicle, which guides the rebalancing process
  - # bikes in target underserved neighborhoods
  - # bikes near transit stations
  - # empty or full stations (or # of stations within a desired occupancy rate); average number of bikes at a station
  - Usage by bike availability
  - % of service area with access to a bike within 5-10 walking
Payment and Fees

Even when someone has physical access to a bike share station or bike, other barriers, such as the actual and perceived cost of using the system, may need to be addressed. System costs are especially relevant for lower-income residents (McNeil et al., 2017).

Strategies to address financial barriers related to the cost of using bike share, including income-based and related discounts, alternative payment and membership options, cash-pay options, and reduced use and penalty fees, are discussed in this section. Among the 74% of systems with current equity efforts, 84% had programs with a primary focus on payment and fees. All of the large systems (750+ bikes) had such programs, compared to 86% of systems with 350 to 749 bikes, 77% of systems with 150 to 349 bikes, and 71% of programs with fewer than 150 bikes.
Income-Based Discount

Many bike share systems provide discounted memberships to people with demonstrated need, such as having low incomes. The goal of these programs is to eliminate cost as a barrier to accessing bike share services and making bike share a viable and affordable option for any resident.

There are a wide variety of approaches to facilitating discount programs. Some trends emerged that are worth highlighting. Many respondents indicated they provide a discounted annual pass, with some starting at between $5 to $10 per year and others at $3 to $5 per month. In addition to providing discounts, some operators provide other supports to reduce the price of using bike share, such as providing longer check out times (one operator provides 60 minutes for discounted membership, compared to 45 minutes for regular memberships), reduced fees (e.g., for going over time limits or outside service area borders), or entirely waiving fees for discount program members. In some cases, these discounts either partially or fully reduced after an individual was in the program for a period of time (e.g., one to two years). Lastly, some operators work with community partners to develop and provide tailored

Free pass distribution

One approach mentioned by a number of systems is the distribution of free bike share passes to help residents get over the initial hump of trying bike share for the first time. Numerous systems mentioned that bike share staff, ambassadors, and community partners were provided with free rides or free day passes to distribute either at classes, events or in other ways. Some systems offered longer passes, for a week, month or up to a year. In other cases, bike share access was made free across entire systems, coinciding with events like bike to work or school days (or months), or tied to sponsored promotions.

Examples include:

- **Healthy Ride, Pittsburgh**: To create enhanced partnerships with community organizations, Healthy Ride completed a successful fundraising campaign that paid for 500 annual memberships to be distributed through partner organizations, including a housing agency, food bank, and tax preparation assistance programs. The idea is that the partner’s organizations have better connections with community members and insights on who would be best served by a free membership.

- **Explore Bike Share, Memphis**: Explore Bike Share has worked with several sponsors to hold free ride days, which bring a benefit to residents by allowing them to try out bike share, as well as to the sponsor through promoting the event. When REI opened its first store in Memphis, they sponsored an Explore Bike Share free ride weekend. Separately, the Downtown Memphis Commission sponsored a free ride to promote their goal of getting people to travel around in ways other than by car.

- **Mountain Ride Bike Share, Ketchum, Idaho**: In 2018, Mount Ride Bike Share offered free season passes to low-income individuals and targeted racial and ethnic groups who lived in neighborhoods more than one mile away from public transportation. The goal of the program was to offer free bike share rentals to help targeted populations make first- and last-mile connections.
discount programs to meet the unique needs of the populations they serve.

In order to facilitate verification and reduce the burden on both the customer and service provider, eligibility for discount programs was often connected to being on other income-based assistance programs, such as the Supplemental Nutrition Assistance Program, Medicaid, public housing assistance, Social Security, or other local transit discount programs. Some establish eligibility through their own income thresholds (examples include anyone at or below 300% of poverty in one case, or anyone with a household income below $28,500 in another), while other systems provide students, veterans, and individuals over 65 with discounts. A few systems indicated that anyone who said that they are in need of subsidized membership could receive one (though they might require some particular level of participation, such as attendance at a training to complete sign up). A number of respondents also noted they work with community partners to review eligibility documentation, rather than the operator, in order to make the process more comfortable for residents. Residents are often informed about these programs at the sign-up process, through community organizations, social media outlets, informational cards and brochures, or other means.

Cities, corporations, and other community partners have a hand in shaping these programs. Some cities require operators to provide a discount option, which may or may not be subsidized through city funding. Other private operators, such as LimeBike, have created affordability programs for anyone who is on a state or federally run assistance program. While in some cases, cities (or states) have partnered with operators to provide funds to greater reduce membership costs. For example, the city of Boston subsidized memberships from the already-discounted rate of $50 down to $5 by paying the $45 difference.

### Red Bike Go - Findlay Market Partnership

Red Bike, Cincinnati: Red Bike offers a discounted membership to lower-income individuals who have a combined household income at or below 200% of the federal poverty guidelines and who live in Cincinnati or Northern Kentucky. Individuals can either sign up online, through the Red Bike app, or in person at a Red Bike Shop, Findlay Market, with Red Bike Outreach Ambassadors, or other outreach and educational events. The partnership with Findlay Market, a bustling public market in downtown Cincinnati, came about when the market’s director, a daily Red Bike commuter, approached Red Bike about selling Red Bike Go memberships at the market. Findlay Market staff were trained by Red Bike to help people sign up, and the market actually covers the $5 monthly fee (including renewals for people who go in person to renew). In addition to being a location to sign up for bike share, SNAP program participants can have their benefits doubled (up to $10) when buying food at participating markets, including Findlay. The success of the program in drawing in interested bike share customers is evidenced by the fact that 60% of Red Bike Go members sign up through Findlay Market. The Red Bike Go and Findlay Market partnership received a 2019 BBSP mini-grant to expand their efforts.
Discount Program Examples:

- **Link, Dayton:** Link Dayton Bike Share’s Access Pass is a $5 annual membership, which is supplemented through an Ohio Department of Transportation Active Transportation Grant. In addition to providing a discounted membership, Link Bike Share offers cash payment options, facilitated enrollment opportunities, and has a robust targeted marketing campaign. To help facilitate riders’ enrollment, Link Dayton staff offer on-the-spot, in-person training for new pass members, showing them how the card works, how bikes adjust, how to check out and return bikes, and the best practices for riding a bike around town in pictures and words.

- **Ford GoBike, Bay Area:** Ford GoBike’s Bike Share For All program targets low-income individuals and specific neighborhoods, with the overall goal of ensuring that their membership reflects the Bay Area’s diversity and provides transportation access to all who need it. This program combines a discounted membership option with station sitting efforts that locate stations in designated communities of concern, and provides informational materials in multiple languages and smartphone-free access to bike share. As part of their outreach around the program, they created a “Bike Share for All” logo and website (https://www.bikeshareforall.org).

- **Hamilton Bike Share, Hamilton, Ontario:** In an example from Canada, residents of Hamilton, Ontario, can self-identify that they are in need of the subsidy program and receive a subsidized membership. They must participate in a training program, as well as take a five-
question survey. The cost is $1 per month in year one and $5 per month in year two for unlimited access.

- **Zyp BikeShare, Birmingham**: Zyp BikeShare’s Access for All (AFA) program provides a subsidized annual membership for lower- and middle-income groups. The cost of an AFA annual membership is $15, down from $75. Additionally, AFA members can meet with an outreach coordinator to get assistance with enrollment and pay in cash for their membership, and are afforded a 60-minute ride instead of the typical 45-minute check-out time in an attempt to reduce overage fees they could incur.

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**QUESTIONNAIRE RESULTS: INCOME BASED DISCOUNT**

- 30 systems and 43 programs included an income-based discount
- 81% of the programs collected data to assess income-based discounts (30 said they are collecting data; 7 said they are not)
- 26 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 1
  - Somewhat effective: 5
  - Very Effective: 20
- Mean effectiveness rating for income-based discounts: 3.73 out of 4
- Example Metrics:
  - # of sign-ups for discount program membership; % who renew.
  - # of sign-ups; # sign-ups by location (e.g. target neighborhood or area code).
  - # of sign-ups by referral method (e.g. partner organization; program; ambassador, website, events, etc.)
  - # of sign-ups by eligibility type (e.g. affordable housing resident, income-based, etc.)
  - % of discount program members who opt for various program options (e.g. month-to-month if available; auto-renew; cash pay; etc.)
  - % of all members who are discount program members
  - Survey data from discount members - income; demographics; stated reasons they use bike share system; home location; etc.
  - Data for discount members - e.g.
    - # of trips
    - trips per day; frequency of use
    - trip start/stop time,
  - Location, distances.
Alternative Payment Structures

Offering a variety of flexible, convenient, and affordable pricing options that respond to community concerns is one way to address equity through pricing policy. The majority of U.S. bike share programs offer monthly, annual, or other installment membership options. Moreover, research suggests that offering monthly membership installment options increases overall enrollment and makes bike share more attractive to lower-income riders. Having alternative payment options also lowers the barrier for entry for a number of lower-income riders. A number of these alternative payment options include offering monthly passes (without the commitment to pay for a full year), cash payments, pay-per-trip options, and annual memberships.

Providing alternative payment structure options was connected with a variety of equity concerns, such as offering a lower initial entry cost for trying out the system, designing the payment system to mimic the existing transit fare system (e.g., having the cost for a transit ride and cost for one bike share ride both at the same price), or providing longer rental times in part due to concerns about missing deadlines and being charged fees. Some respondents noted that monthly payment options were provided because community partners suggested this would provide a more affordable and flexible way for lower-income individuals to use the bike share system. The Lime Access program provides eligible members 30-minute pedal bike rides for five cents.

Examples

- **Indego, Philadelphia: A Monthly pass option**: Prior to the last few years, most bike share systems required that members either buy an annual membership (often at a cost of $75 to $150), or use daily or weekly passes often designed for tourists and at much higher average daily costs. When monthly payment options were available, they often required a full-year commitment. This structure was designed in part to provide a discount to regular customers who would commit to supporting the system. However, one outcome of this approach is a high entry cost (often outside the budget of lower-income residents living paycheck to paycheck) or the high per-ride cost for those who chose the tourist rate. In an effort to restructure the payment equation, Philadelphia’s Indego launched with a month-to-month payment option, which did not require a full-year commitment and allowed users to take advantage of a lower cost per ride with a relatively low up-front cost.

- **Healthy Ride, Pittsburgh**: Healthy Ride developed a pricing model as a complement to public transit pricing. Transit rides in Pittsburgh are $2.50, so Healthy Ride designed a low-cost fee structure which mirrors transit. Healthy Ride uses a flat rate $2-per 30-minute fee, which does not require an annual membership or registration cost. Healthy Ride also offers a monthly membership option wherein customers can opt to pay $12 per month for unlimited 30-minute rides or $20 for unlimited 60-minute rides.

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Biki, Honolulu: Honolulu’s Biki bike share system offers the “Free Spirit Plan,” which provides the purchaser with a bank of 300 minutes of ride time for $20, which may be appealing to people who do not know how many rides they will take in a month, and may not want to pay for unlimited rides if they might only ride a few times in a month.

![Image of the $20 Free Spirit Plan](image)

Figure 5 Biki "Free Spirit Plan" (Biki website: [https://gobiki.org/fores/](https://gobiki.org/fores/))

### Questionnaire Results: Alternative Payment Structures

- 30 systems and 37 programs included alternative payment structures
- 72% of the programs collected data to assess alternative payment structures (23 said they are collecting data; 9 said they are not)
- 18 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 1
  - Somewhat effective: 10
  - Very Effective: 7
- Mean effectiveness rating for alternative payment structures: 3.33 out of 4
- Example Metrics:
  - # of signups and # of trips taken by payment level (per ride; per month; annual, etc.)
  - # of users receiving credits (e.g. for systems that offer credit for returning a bike to a priority station); # of users with positive credit balance in bike share account or % having enough credit to cover membership costs (e.g. not having to pay)
  - Sign-ups by payment type (credit card, cash pay etc.)
  - % of revenue from residents compared to visitors.
Cash Pay Option

A prominent issue facing many bike share operators is how to serve unbanked or underbanked populations and individuals who don’t own a smartphone. Being unbanked often precludes individuals from having or feeling comfortable using a debit or credit card, and inhibits their ability to access bike share services. Similarly, not owning a smartphone can significantly impede an individual's ability to access bike share systems, even if they can qualify for other types of equity programs. To overcome these technological barriers, some bike share operators have provided opportunities for users to pay with cash and check out bikes via text messaging services.

Cash payment programs are implemented in a variety of ways. Respondents described allowing just low-income or other equity program members the option to pay with cash, while others would allow anyone to pay with cash. There was a range of methods respondents used to accept cash payments. Some systems collected cash payments at a central bike share office, at a community partner/center, or with a bike share ambassador tabling at a community event. Other systems may also provide the option to sign up, accept payment, and issue membership and access cards at the same time. The most common approach among systems allowing for cash payment was to go through a vendor network that could accept a cash payment and credit it to a user’s account (e.g., the PayNearMe network which includes CVS, Family Dollar, 7-Eleven and Aces Cash Express stores). Online payment systems, such as PayPal, were also mentioned as alternatives to credit or debit card payments. Lastly, a handful of systems waive the first month’s fee so members can start riding or put down a cash deposit in lieu of a credit card number, which can be refunded at some point in the future. These efforts to get people riding as quickly as possible prior to making payment were mentioned as a way to make the bike share experience seem more immediate and tangible, and therefore nudge people to start using the system. Cities may also require a cash payment option as part of their permitting process.

Figure 6 Lime Tweet Touting Their Partnership with PayNearMe to Accept Cash Payments, Based on a System Developed by Indego
(https://twitter.com/limebike/status/1005084379742425089)
Examples:

- **Indego, Philadelphia:** According to the FDIC, 28% of Americans have little to no relationship with a bank. A major barrier to accessing bike share services is not having access to a debit card or bank account. Bike share systems often require a credit or debit card to sign up for a membership or require cash payers to make payments at their office. To address these barriers, Philadelphia’s Indego bike share first developed a cash payment option through PayNearMe. Indego riders sign up online and receive a barcode that is associated with their personal accounts. They can visit 7-11 or Family Dollar stores, where cashiers scan the barcode and put money into individual accounts. A number of systems have now initiated cash payment plans using PayNearMe.

- **Lime, National:** In the summer of 2018, Lime launched the Lime Access program, which accepts payment through PayNearMe, and allows qualified riders to receive 100 rides for $5, without the need to sign up through a smartphone. The Lime Access program aims to promote equitable mobility by removing two major barriers to accessing bike share: smartphone and credit card ownership. To qualify for the program riders must provide their name, phone number, and proof of low-income status, either through an EBT card or use of another state or federal assistance program. Once signed up for the program, riders can access bikes through a text-to-lock feature. This allows riders to access bikes without relying on the Lime app, thus eliminating the need to have a smartphone.

### QUESTIONNAIRE RESULTS: CASH PAY OPTION

- 30 systems and 41 programs included cash pay option
- 70% of the programs collected data to assess cash pay option (23 said they are collecting data; 10 said they are not)
- 15 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 0
  - Somewhat effective: 6
  - Very Effective: 15
- Mean effectiveness rating for cash pay option: 3.6 out of 4
- **Common Metrics Used**
  - # of sign-ups / payments using cash; location of sign-ups, as well as home location of cash payers.
  - # of rides by cash payers; location of rides by cash payers (within target neighborhoods)
  - # of cash pay enrollees to credit/debit enrollees (overall and within discount system).
  - # of cash payments
  - Ride characteristics for cash payers - ride duration; overage fees; etc.
  - # of sign-ups / payments using prepaid cards.
  - % of cash payers switching to credit payment (over time).
  - Survey feedback from users.
Reduction of Fees

Fees may be used to promote behaviors and actions from members, such as staying within the service areas, not keeping bikes out for extended periods of time, and parking bikes in appropriate places. These incentives (or disincentives) are designed to help the system operate smoothly. However, they may have equity implications as well. Fees may increase the perceived uncertainty around how much using the system will actually cost – a situation that would likely disproportionately affect the decisions of lower-income residents about whether or not to participate. Obviously, if fees are incurred, the actual cost of using the system increases for the user as well.

Several systems indicated that they offer reduced fees as a component of their equity initiatives. Fee reduction initiatives described by respondents ranged from eliminating or partially reducing fees for members of discount and equity programs, to working on fee reduction issues on a case-by-case basis. Working on a case-by-case basis may require members reaching out to the operator to plead their case or show that they cannot afford the fees.

Example:

- **BIKETOWN, Portland:** Individuals who are a part of the BIKETOWN for All program, BIKETOWN’s discounted membership program (see the “System Spotlight” on Portland for more details), have fees waived for parking outside of bike docks or going over the 90 minutes of daily ride time. BIKETOWN for All members can also earn credits to their account through returning bikes to docks or helping rebalance the distribution of bikes through their BIKETOWN Bonus program. These programs help support lower-income riders reducing the perceived and actual cost of utilizing the BIKETOWN system. The

![Figure 7 Portland Bureau of Transportation Tweet Promoting BIKETOWN's Pay It Forward Campaign](https://twitter.com/PBOTinfo/status/1075104237128830976)
BIKETOWN Bonus program also allowed Portland to think creatively about the $3 monthly membership fee it charges BIKETOWN for All members. Specifically, since a lot of BIKETOWN for All members were receiving enough bonus credits to take care of their monthly membership fee, they devised the Pay it Forward program, which waives the first month’s membership fee in order to facilitate more sign-ups. Pay it Forward participants simply had to agree that when they had over $18 in credits, they would pay back the $3 from that credit. It is also worth noting that BIKETOWN solicited credit donation from all members, and received enough donations to cover the first month of bike share for 400 BIKETOWN for All members.

### QUESTIONNAIRE RESULTS: REDUCTION OF FEES

- 8 systems and 10 programs included reduction of fees
- 43% of the programs collected data to assess reduction of fees (3 said they are collecting data; 4 said they are not)
- 3 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 0
  - Somewhat effective: 2
  - Very Effective: 1
- Mean effectiveness rating for Reduction of fees: 3.33 out of 4
- Example Metrics:
  - Surveys
    - % for whom fees, fear of fees, etc. were barrier
    - Feedback on motivations for signing up for program
Education or Facilitation Programs

Lacking the knowledge and confidence about how and where to ride a bike, along with how the bike share system works and how to sign up, are also potential barriers. Education about the system and facilitation of enrollment and use of the system are key components of many bike share equity programs.

In this section, we cover facilitated enrollment, education programs, prescribe-a-bike programs, organized rides, and ambassador programs. Among the 74% of systems with current equity efforts, 53% had programs with a primary focus on education and facilitation. A majority, 77%, of large systems (750+ bikes) had such programs, compared to 64% of systems with 350 to 749 bikes, 41% of systems with 150 to 349 bikes, and 14% of programs with fewer than 150 bikes.
Facilitated Enrollment

One barrier to accessing and using bike share is simply signing up to become a member, creating a rider account, and getting started using the system. This could be a result of not having access to a computer, the internet, or a smartphone. However, it could also be a result of a language barrier or simply not having an understanding of how bike share works or what is required to participate. A number of bike share operators have utilized facilitated enrollment programs to help individuals or targeted groups sign up for equity programs and create a bike share account. The overall goal of a facilitated enrollment program is to make the sign-up process easy and convenient, while also providing additional information and educational opportunities for new members.

Some systems indicated that they partner with community centers and community-based organizations to provide personalized enrollment assistance. Additionally, sometimes bike share ambassadors visit centers to do enrollments and assist community partners with enrollment, while also providing additional information and educational opportunities for the greater community about biking and using the bike share system. Other systems have special drop-in hours at city offices, provide enrollment opportunities while tabling at community events, offer the option to make in-person appointments at locations convenient to individual residents, and provide enrollment help at other specialized cycling workshops or classes. Enrollment opportunities may be part of a larger bundle of services offered by community partners, such as being a component of financial empowerment programming, job training and placement programs, and digital literacy courses.

Figure 8 UHBikes Provides Information and Signup Opportunities at Community Events (https://twitter.com/UHBikes/status/898196567055904770)
Examples:

- **Divvy, Chicago:** The Chicago Department of Transportation (CDOT) partnered with the Local Initiatives Support Corporation (LISC), which connects residents with various supports and services, such as job training and placement, financial empowerment, digital literacy, utility subsidies and more, at sites around Chicago. Divvy, through CDOT, worked with LISC at five Financial Opportunity Centers to train LISC staff to accept applications and provide one-stop, in-person enrollments for community members who qualify. Beginning in 2018 enrollments are conducted by Divvy outreach staff, but still at these LISC partner locations.

- **BlueBikes, Boston:** Staff at Boston's City Hall at the Boston Public Health Commission provide drop-in hours for enrollment help for BlueBikes. Enrollment help includes verifying users’ eligibility and completing online enrollment. Users can leave the drop-in center with an activated membership key.

- **UHBikes, Cleveland:** UHBikes staff attend community events such as open streets events with iPads and system information to allow people to try the bike share bikes and enroll. They focus on traditionally underserved areas.

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**QUESTIONNAIRE RESULTS: FACILITATED ENROLLMENT**

- 22 systems and 32 programs included facilitated enrollment
- 64% of the programs collected data to assess facilitated enrollment (14 said they are collecting data; 8 said they are not)
- 17 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 0
  - Somewhat effective: 10
  - Very Effective: 7
- Mean effectiveness rating for facilitated enrollment: 3.41 out of 4

**Example Metrics:**

- # of people attending workshops; how they heard about program
- # of people helped through enrollment process; # sign-ups
- # of organizations, agencies helping with enrollment
- # of events (table/booth locations)
- # of interactions; # of sign-ups by facilitator (e.g. ambassador); by organization; by site
- # of rides by people helped through enrollment; duration of rides
- Membership tracking; renewal, etc.
Education Programs

Knowing how to ride a bike and how to navigate city streets, along with having specific knowledge about how a bike share system works and what membership or use options are available, is critical for potential bike share users. Overcoming these barriers is key to making a bike share system equitable. A 2017 survey found that not having enough information about how to use bike share and not knowing about available discounts were major barriers for many lower-income people of color in neighborhoods with bike share programs (McNeil et al., 2017). Other knowledge and experience barriers may impact potential riders’ abilities to access bike share: feeling nervous about riding in an urban environment, not having ridden a bike in several years, being unaware of traffic rules, and not knowing how to use the bike share system to get around town. A number of bike share operators have tried to programatically address these knowledge and experience issues through offering a variety of educational programs. Some of these programs focus on how to sign up and properly check out and check in bikes, while others focus on teaching people how to ride a bike and incorporate bike share into their daily commute. Below we highlight the variety of approaches bike share operators have tried to address these gaps in experience and knowledge for riders, and how they have tried to encourage and empower people to bike.

Responding systems indicated that educational programs were an effective way to engage communities and address equity issues. Most described their educational programs as focused on teaching people how to ride, bike safety, bike skills, and holding bike test ride events. Some sponsored group rides, specifically showing where it’s safe and efficient to bike. Other types of educational programming focused on learning the basics of bike share, such as how the bike share system works, how membership works, checking bikes in and out, and service areas. Educational classes were facilitated by ambassadors, certified League of American Cycling Instructors, and in collaboration with community organizations and the operators. Some of the keys to success indicated by respondents included: doing programming at places where community members feel comfortable, getting community input on where and when to hold classes and group rides, and providing a range of ways for everyone to engage.

Examples

- **Ford GoBike, Bay Area**: Feeling confident riding in the urban environment can be a significant barrier to using bike share. Ford GoBike tries to address this issue by partnering with three bicycle coalitions in the Bay Area to sponsor quarterly “learn to ride” classes. The “learn to ride” classes target adults who either have not ridden a bike in a while, never learned to ride a bike, or have not developed the confidence, skills, and know-how for riding in an urban environment. In addition to providing instruction on these elements, participants from these classes have the opportunity to go on an organized ride with the instructors of these classes.

- **BlueBikes, Boston**: BlueBikes hosts a Community Ride Program, which not only stresses to residents where they can ride BlueBikes, but also how they can access a variety of programs. One of the first aims of the program is to show residents where they can ride bikes with the least amount of stress. Next, they describe the payment plans they offer, information about cash payment options, the
variety of adaptive options they have, and where trikes are offered. This educational program highlights the importance of sharing information about the payment and fleet options with residents, along with providing them information about how to use the system in a safe and low-stress way.

- **Indego, Philadelphia**: Indego’s Free Ride classes, conducted through a partnership with the Bicycle Coalition of Greater Philadelphia, provide riders with an opportunity to learn how to ride bikes and gain a better understanding of bike safety. Over the course of 2018, Indego reported hosting 111 classes and engaging over 600 people through these classes. These classes combine educational programming with organized rides and targeted community engagement to reach a wide variety of Philadelphia residents. Indego ambassadors work to organize classes and group rides near Indego stations in underserved communities, bringing these educational opportunities to underserved populations who face the greatest barriers to accessing bike share.

Bike share educational programming doesn’t have to be just about learning how to ride and commute. Indego’s Digital Skills and Bike Thrills is illustrative of how bike share educational programming can be utilized to address other economic, social, and educational needs of a community. In response to a growing need for greater digital literacy in the Philadelphia area and an organizational need for a physical location for residents to sign up for and ask questions about bike share, Indego launched the Digital Skills and Bike Thrills program². This four-week program combines a digital literacy

![Image of Indego Tweet Promoting Their "Digital Skills & Bicycle Thrills" Class](https://twitter.com/RideIndego/status/1137098204305068036)

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curriculum with helping residents learn about how to use bike share. Throughout this four-week program, participants complete online assignments related to learning how to use Indego’s app, how to check out bikes, use Google Maps to plan trips, and get adept at using Microsoft Word. At the end of the program, participants receive a six-month Indego pass\(^3\). Hosted in partnership with the City of Philadelphia’s Office of Adult Education and the Better Bike Share Partnership, this educational program tries to address educational and economic need in the greater Philadelphia area.

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**QUESTIONNAIRE RESULTS: EDUCATION PROGRAMS**

- 25 systems and 40 programs included education programs / classes
- 57% of the programs collected data to assess education programs / classes (17 said they are collecting data; 13 said they are not)
- 16 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 1
  - Somewhat effective: 6
  - Very Effective: 9
- Mean effectiveness rating for education programs / classes: 3.5 out of 4
- Example Metrics:
  - # of attendees; demographics of attendees
  - # of completed sign-ups
  - # riders; % of enrollees with rides
  - # of classes; instruction time
  - Attendee feedback; comfort with process, system, class
  - % of enrollees who follow program rules

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\(^3\) BBSP, Philadelphia Builds Skills by Combining Computer Literacy and Bike Share, (5/23/2017)
**Partnerships**

The prevalence of cities and bike share operators basing their equity efforts on a foundation of partnerships with community and advocacy organizations, as seen in our questionnaire responses, speaks to the importance of those relationships in achieving equity goals. In fact, 78% of the programs described in the questionnaire involved at least one partner, and 54% included two or more partners. In addition to the bike share operator, 51% of programs included a partnership with a local government agency, 31% with a community-based organization (CBO), 33% with a local advocacy organization (48% included a CBO and/or advocacy), while 10% included partnerships with private companies, 9% with a system sponsor, and 10% with foundations. Community and advocacy organizations often have the insight, trust and history with people in the neighborhoods and populations that have often been underserved, and whom equity programs are hoping to engage. They can provide insight into how the community might use bike share (or if they want bike share at all), where stations should go, how fares and memberships should be structured to appeal to community members, how to craft messages and programming that are interesting and informative and speak to residents in their own language (both figuratively and literally), and more. In many cases, these organizations are already working with target populations to provide access to other services, and thus can easily engage them in bike share, including assisting with enrollment. Capital Bikeshare’s “Community Partners Program” is one example of an effort to make partnerships easy and fruitful. The program, which has over 30 community partners, enables the partners to offer discounted memberships and other benefits to their members who receive ongoing needs-based services.

WE-cycle’s equity program, Movimiento en Bici, offers another example of how bike share operators can utilize partnerships to reach their equity goals. The goal of the Movimiento en Bici program is to encourage ridership amongst lower-income and Latinx riders, reduce economic barriers to accessing bike share, and ensure that the organization is a relevant service to the Latinx community. To accomplish this goal, WE-cycle offers complimentary passes to Latinx residents in the Aspen-Basalt area, places stations in or near lower-income neighborhoods to offer first- and last-mile connections, provides and distributes marketing materials in Spanish, and places stations near relevant community amenities and services for the target population.

WE-cycle works with a handful of community partners to accomplish these goals, including non-profits that provide services to assist new immigrants successfully adjust to living in the United States and major employers of Latinx in the region. WE-cycle collaborates with the Valley Settlement Project and English in Action to help guide programming and decision making. These partners work with WE-cycle on how to engage the Latinx community in the Basalt-Aspen region. Specific efforts that illustrate the dynamics of these partnerships include hosting group ride events and picnics in collaboration with English in Action. BBSP grant funding supported programming in these communities. Next, WE-cycle not only placed stations near low-income neighborhoods, but also near the English in Action office. Other education programs were done in spaces such as libraries because they provided safe, comfortable, and convenient places to host events for the Latinx community. The combination of these various partnerships helps WE-cycle engage the Latinx community and make their services culturally relevant, useful, and accessible – all components that help WE-cycle reach its equity goals.
Prescribe-a-Bike

One impetus motivating the construction of bike share systems is to increase access to the health benefits of biking. “Prescribe-a-bike” programs aim to utilize bike share services to address health concerns through increasing access to bicycles and offering alternative ways to increase physical activity, especially for disadvantaged populations. Bike share systems such as BlueBikes (formerly Hubway) and Citi Bike, in conjunction with health care providers and non-profits, have structured programs that target residents with health issues, lack access to physical recreation, and face historical, social, and economic barriers in accessing health care institutions. The prescribe-a-bike programs employed in Boston and New York City offer insights into how bike share systems can address systemic disparities in health-related outcomes and barriers to accessing active transportation and recreation options.

Examples:

- **Citi Bike, New York**: Interfaith Medical Center, in conjunction with the New York City Department of Health and Mental Hygiene (DOHMH) and Citi Bike, launched a prescribe-a-bike program in 2016. The program allows doctors at the Bishop Walker Health Center, located within the Bedford-Stuyvesant neighborhood, to prescribe bikes to patients. The prescription includes a free one-year membership to Citi Bike, a helmet, reflective gear, and access to group rides and adult bike riding classes. The Interfaith Medical Center program grew out of a BBSP-funded project, wherein a partnership led by the Bedford Stuyvesant Restoration Corporation (BSRC) supported Interfaith in launching a subsidy program to offer hospital staff access to free and low cost memberships. Overall, the prescribe-a-bike program is designed to provide free transportation to low-income residents and the underserved, while also

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promoting regular exercise to address a variety of health concerns. To promote the program, Interfaith Medical Center and the DOHMH center in Bed-Stuy created a group of ambassadors to attend community events, host classes, facilitate bike safety classes, and conduct nine community rides. This outreach effort, modeled on BSRC outreach efforts, led to over 2,500 residents and Interfaith employees being informed about the program. During the pilot over 70% of people receiving bike prescriptions were from an underserved population, and these initial successes led to securing additional funding to continue the program.

- **BlueBikes, Boston**: In 2016, BlueBikes (then Hubway), the City of Boston, and the Boston Medical Center teamed up to create a prescribe-a-bike program to address health disparities, fight obesity, and increase the overall health of Bostonians. The program specifically targets Boston residents, age 16 or older, receiving public assistance or with a household income of no more than 400% of poverty level. Along with providing reduced one-year memberships, the program offers free helmets and classes on bike safety. To spread the word about the program, Hubway reached out to hundreds of community organizations, held events, produced flyers, and conducted group classes to inform residents about the program.

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**QUESTIONNAIRE RESULTS: PRESCRIBE-A-BIKE**

- 4 systems and 7 programs included prescribe-a-bike
- 80% of the programs collected data to assess prescribe-a-bike (4 said they are collecting data; 1 said they are not)
- 4 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 0
  - Somewhat effective: 2
  - Very Effective: 2
- Mean effectiveness rating for prescribe-a-bike: 3.5 out of 4
- Example Metrics:
  - Community surveys and partnerships with other researchers.
  - # vouchers handed out and redeemed.
  - # rides; ride time.
  - Feedback from prescribing physicians, health outcomes

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Organized Rides

A large number of bike share operators indicated that they utilized organized rides as a key component of their bike share equity programming. Organized rides were used to help new riders become familiar with the bikes provided by the operator, educate riders about safe routes to utilize, make stronger connections between the operator and targeted populations, and foster a sense of community. Some of these rides were specifically organized by the bike share operator, ambassadors, or bike advocacy organizations. Others noted that they offered opportunities for community members to organize rides themselves and use the bike share bikes. In many cases, city-run bike rides used bike share bikes too.

In general, organized rides are geared around offering a fun experience that helps people understand how the systems works and gain comfort using it. One system noted that providing snacks was a way to make the experience nice for participants. Summarizing their approach to organized rides as a bet on the allure of the bike share service, one system representative told us “we put a priority on offering our audience the opportunity to experience our bike. No strings attached - simply a fun bike ride. Our bet was, the experience alone will be what draws them in.”

Examples:

- **Charlotte B-cycle, Charlotte:** Charlotte B-cycle spent a considerable amount of effort in developing ways to engage Charlotte residents. As the system looked to expand from 26 to 52 stations, Executive Director Dianna Ward hosted a number of events to not only garner more support for the system, but also to host learn-to-ride events. Additionally, there has been a significant amount of time spent in letting locals plan events and rides. For example, Charlotte B-cycle launched Queen City Joyrides, a program that provided support, funding, and support for locally sponsored rides in areas and with communities that have not historically been represented in biking. A number of events and rides, such as the On the Table event, are meant to help build communities and address accessibility issues. Charlotte B-cycle has

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Figure 11 Charlotte B-cycle Tweet Promoting a Group Ride [https://twitter.com/CharlotteBcycle/status/1085651861405716485](https://twitter.com/CharlotteBcycle/status/1085651861405716485)
also played an organizing role for the local Open Streets 704 event, which aims to bring public input into reshaping street infrastructure and make it safer to have multimodal options on Charlotte streets\(^9\).

- **Tugo, Tucson:** In partnership with Living Streets Alliance, a non-profit promoting safe and vibrant streets, Tugo organizes free community bike rides to a variety of locations throughout Tucson. Anyone can rent a Tugo bike to ride for free during the events. Rides are on low-stress routes, non-competitive and no-drop.

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**QUESTIONNAIRE RESULTS: ORGANIZED RIDES**

- 22 systems and 28 programs included organized rides
- 57% of the programs collected data to assess organized rides (13 said they are collecting data; 10 said they are not)
- 15 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 3
  - Somewhat effective: 6
  - Very Effective: 6
- Mean effectiveness rating for organized rides: 3.2 out of 4
- Example Metrics:
  - # of rides; # of attendees
  - #sign-ups after rides,
  - Attendee and enrollee demographics.
  - Feedback from participants (surveys; informal; etc.) and reports from ride organizers.

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Ambassadors

Ambassador programs can be implemented in a variety of ways, ranging from formally hiring a set of workers to host events and rides, to informally enlisting members to hand out passes to other transit riders. Overall, the goal of these programs is to recruit people who have connections to target communities (for example, recruiting a resident of a public housing development to be a bike share ambassador to that housing development) to act as the face of the system in the community. Ambassadors may provide information to community members about certain features of the system like discount programs, facilitate deep connections between the bike share operator and residents, provide educational opportunities, and support targeted groups and neighborhoods that use the bike share system. Often ambassadors reach out to communities via tabling at events, hosting group rides and education classes, and partnering with other community groups to recruit community members or do outreach in specific areas such as providing informational seminars and hosting events with public housing residents. A number of respondents placed an emphasis on recruiting and hiring ambassadors from specific neighborhoods and from specific populations they were trying to target with their equity programming. Generally, ambassador programs have taken a variety of forms, including informing residents about an equity program they can utilize, hiring local members of a targeted population, facilitating deeper connections with targeted riders and communities, and gathering information from residents in order to inform the development and expansion of an existing bike share system.

Atlanta Bike Champions

 Relay Bike Share, Atlanta: The Atlanta Bike Champions are an ambassador program coordinated by the Atlanta Bike Coalition. Champions engage community members around bicycling and bike share. Atlanta Bike Share Champions program training focuses on creating authentic, responsive, and culturally competent outreach practices. A coalition of organizations in Atlanta, including the City of Atlanta, the Atlanta Bicycle Coalition, and Relay Bike Share, teamed up to produce a manual for training bike share ambassadors (or “champions”). With funding from the Better Bike Share Partnership (BBSP) and Fulton’s Partnerships to Improve Community Health, the manual presents a nine-day training curriculum with defined objectives for each day. In introducing the manual, the authors write: “This document is for nonprofits, municipalities or bike share operators starting a bike champions (or ambassador) program focused on equitable outreach. While our team believes every program should be tailored to the specific community, this document provides a strong baseline.” The manual outlines a curriculum for training bike share ambassadors, not only providing content to focus trainings on but also highlighting important logistical considerations when trying to train individuals from the same neighborhoods a bike share operator is trying to target with their equity programming. A PDF of the manual is available on the BBSP website at http://betterbikeshare.org/resource/atlanta-bike-champions-training-guide/.

Ambassadors may be hired as permanent staff of the bike share operator, though more common are arrangements where they receive a stipend for a season of work with the expectation that they attend a certain number of events and/or conduct a certain number of rides or classes. In some situations,
ambassadors were employees of community organizations or bike advocacy organizations that received funding from a grant or city program. In other cases, ambassadors were less well-defined, but might be people who are offered free ride time or other perks (e.g., the ability to check bikes out for others) in exchange for promoting the system. In addition to roles in promoting the system and educating the community about bike share, ambassadors also often serve as the eyes and ears of the bike share system, and can provide important feedback on how to improve the system.

Example:

- **Divvy, Chicago and MoGo, Detroit:** Divvy and MoGo have developed youth ambassador programs, aimed at hiring, training, and offering opportunities to use bike share system services. In Chicago, Divvy and West Town Bikes recruited, hired, and trained 30 youth bordering the 606 Trail to serve as Trail Ambassadors. The ambassadors engaged in community outreach and education efforts, providing help to trail users and information about Divvy and the discounted Divvy 4 Everyone program. MoGo offers youth employment opportunities through a partnership with the city’s Grow Detroit’s Young Talent program. During their six-week ambassadorship, MoGo Youth Ambassadors learn how to maintain bikes and stations, rebalance bikes in the system, and tackle administrative responsibilities. Additionally, the MoGo Youth Ambassadors assist with putting together projects and events that are aimed at engaging and introducing their peers with MoGo, coordinate group rides with local organizations, and assist with gathering intercept surveys.

![Figure 12 West Town Bikes Youth Ambassadors in Chicago (Photo credit: West Town Bikes)](image)
**Houston Bcycle, Houston:** In Houston Bcycle’s recently launched ambassador program, a conscious decision was made to choose one ambassador from each area in our network, with plans to bolster the low-income areas in the future. This decision was made with the understanding that word-of-mouth and grassroots information delivery generally works best in underserved communities, where folks might not think that the bikes are there for them.

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**QUESTIONNAIRE RESULTS: AMBASSADORS**

- 23 systems and 30 programs included ambassadors
- 39% of the programs collected data to assess ambassadors (7 said they are collecting data; 11 said they are not)
- 8 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 0
  - Somewhat effective: 4
  - Very Effective: 4
- Mean effectiveness rating for ambassadors: 3.5 out of 4
- Example Metrics:
  - # of ambassadors recruited; trained; completing season
  - # of workshops / classes conducted, feedback from surveys.
  - # events attended; # rides completed; etc.
  - # people reached / enrolled per ambassador
  - # promo codes distributed and redeemed (and ride / sign-up info for redeemptions)
  - Growth in ridership / change in ridership patterns in ambassador focus neighborhoods
  - Exit interviews for ambassadors.
Marketing, Information and Materials

Promoting and informing about the bike share system are important considerations for bike share systems seeking to bring in new users. How do you get the word out about your system, convey that it is fun and useful, and do so in a way that connects with members of the community you are trying to reach?

This section covers marketing campaigns and non-English language offerings. Among the 74% of systems with current equity efforts, 49% had programs with a primary focus on marketing, information and materials. A majority, 77%, of large systems (750+ bikes) had such programs, compared to 57% of systems with 350 to 749 bikes, and 29% of systems with 150 to 349 bikes or fewer than 150 bikes.
Marketing Campaigns

Many bike share operators couple equity program implementation with targeted marketing and public outreach, with the goal of increasing awareness of the program and helping people to have the information, motivation and confidence to see themselves using the system. As one system representative put it: “Marketing is key! What good is a program that no one knows about?” Targeted marketing programs include creating content that represents the diversity of the area the system serves, and specifically the groups and communities to which the program is seeking to engage. This can also include providing materials in languages and in places that the targeted group(s) can access. One system indicated that the marketing should show that the system is for people who live in the city, and not (just) a tourist amenity, while others noted that the marketing should help spread the word about available discounts or payment options, while presenting information in simple, encouraging language.

Marketing campaigns featured a variety of mediums for getting information out, including through social media, press releases, billboards, bus-stop displays and bike station panels, flyers and promotional materials for ambassadors and community partners to distribute, emails and more. Some marketing campaigns seek to create buzz through creative approaches like designing unique or custom bike share bikes, and encouraging people to spot and ride these “unicorn” bikes in the “wild.”

**Social Media Campaigns:** Bike share operators regularly reported utilizing social media to promote rides and classes, announce events, highlight partnerships, and share information about the system. A wide variety of social media platforms (Instagram, Facebook, Twitter, Snapchat, etc.) and tactics are being used by bike share operators to promote equity programs and activities to a broad range of the public. These tactics include using social media influencers to promote events; utilizing hashtags to connect to people, places, and other events; coupling stylized photos with narratives, stories, and other forms of educational information; and using a variety of forms of visual representation to illustrate the diversity of ridership in the bike share system. Each tactic and platform has strengths and weaknesses that need to be considered when crafting a social media campaign or creating social media promotional materials.

**Targeted Marketing Materials:** A number of bike share operators discussed creating promotional and informational materials for specific targeted groups. For example, WE-cycle bike share in Aspen-Basalt, CO, created promotional and informational materials in Spanish to encourage Latinx ridership through their Movimiento en Bici Program. In addition to creating bilingual materials, WE-cycle placed a variety of these promotional materials in areas their target audience could find and engage with them. Next, Pacer Bikeshare has made a concerted effort to promote lower-income ridership through sitting stations within two blocks of every subsidized housing building in their service area and providing discounted annual membership options. A key aspect of promoting ridership through the Everybody Rides program is using a combination of ambassadors and marketing materials to reach lower-income individuals to promote their discounted passes, group rides, and classes.
One way to approach creating a targeted marketing campaign is to engage the target communities to help produce the campaign. For example, reaching out to local youth to help create and be represented in a campaign targeting youth riders (where they are permitted to use bike share). One system specifically identified a local minority-owned firm to produce a campaign. In Philadelphia, Indego’s “Faces of Indego” campaign highlighted their ambassadors, including depicting how and why they chose to use Indego.

Example:

- **Link, Dayton:** After utilizing a special marketing team to facilitate focus groups with lower-income populations, Link Bike created an easy-to-understand brochure, bus ad panels, and audio advertisements. The ad panels and audio messages were targeted on buses and the brochures were stocked at local social service providers. Next, they built an additional page on their website to offer another platform for sign-ups and registration. Link Bike illustrates how marketing efforts through print and audio advertisements can be developed and employed to reach targeted audiences.

### QUESTIONNAIRE RESULTS: MARKETING CAMPAIGNS

- 30 systems and 45 programs included specific marketing messages or campaigns
- 34% of the programs collected data to assess specific marketing messages or campaigns (12 said they are collecting data; 23 said they are not)
- 14 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 3
  - Somewhat effective: 9
  - Very Effective: 2
- Mean effectiveness rating for specific marketing messages or campaigns: 2.9 out of 4
- Example Metrics:
  - Analytics on social media campaigns
  - Track promo codes, college/vocational discounts, etc.
  - Survey users: track event attendance; promo redemption; source of information or reason to join / ride; perception of messaging and program.
  - Running focus groups to review how people perceived messaging.
Non-English Offerings

Knowledge and language barriers can significantly shape the extent to which people access bike share services. Moreover, the language, symbols, and visual representation of materials can shape how various groups of people feel bike share services are more for them. Providing system information, marketing, and promotional materials in languages other than English and having multilingual ambassadors can help address and alleviate knowledge and experience barriers for non-English speakers. Moreover, providing non-English services and materials signals that bike share is for a variety of groups to engage with and use.

A number of bike share operators indicated they attempt to address knowledge, communication, and representational barriers through providing bilingual or multilingual services, materials, and programming. These attempts provide a brief overview of the ways bike share operators are producing and utilizing non-English services and materials to bridge ridership gaps, conduct outreach, and address bike share equity issues within their system.

One basic approach employed by bike share operators to provide non-English offerings is through offering non-English marketing and informational materials online and in print. For example, Houston B-Cycle, Metro Bike Share, Austin B-Cycle, and a number of other bike share operators provide websites and marketing materials that are in other languages. Other bike share operators have made a concerted effort to hire ambassadors and other staff who speak other languages in order to provide support and information to traditionally underserved populations that utilize their bike share system. Providing non-English marketing and informational materials can be further supported through bringing bike share classes, services, and stations to areas where ethnic minorities congregate, live, and access. For example, WE-cycle in the Aspen-Basalt area conducts outreach and marketing at local libraries, a place they found was an accessible and readily used service by the Latinx community in the area. When combined with other efforts, such as ambassador programs, targeted marketing, targeted bike share siting, and discount programs, providing non-English informational and marketing materials may address bike share equity issues.

Examples

- **BlueBikes, Boston**: BlueBikes has provided a number of ways to engage non-English speakers. They offer in-person enrollment assistance in English and Spanish, as well as providing assistance through a call center in many languages. In addition, all marketing materials were developed in five languages in addition to English (Spanish, Portuguese, Chinese, Vietnamese, and Haitian-Creole).

- **Sobi Hamilton, Hamilton, Ontario**: In Hamilton, Ontario, Arabic is the most spoken language among newcomers to the city. Thus, an Arabic translator was hired to create marketing materials and deliver training and group rides in Arabic.
Figure 14 WE-cycle Spanish-Language Poster (via Movimiento en Bici [https://www.instagram.com/p/BjZVXmgmuR/])

**QUESTIONNAIRE RESULTS: NON-ENGLISH OFFERINGS**

- 6 systems and 8 programs included non-English language offerings
- 40% of the programs collected data to assess non-English language offerings (2 said they are collecting data; 3 said they are not)
- 2 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 1
  - Somewhat effective: 0
  - Very Effective: 1
- Mean effectiveness rating for non-English language offerings: 3 out of 4
- Example Metrics:
  - # of signups at workshop
  - # of enrollees by language (particularly for in person sign-ups or via non-English language web page or click-through source).
Mixed Fleet Options

Some people may be interested in riding a bike, but are unable to ride a standard bike share bike. Others may feel standard bike share bikes are not useful for the types of terrain they encounter - going up steep hills, for example - or for the distances they would need to cover. A number of bike share systems are now starting to expand their fleets to include adaptive bicycles and electric bicycles, each of which may offer potential to attract new users.

Among the 74% of systems with current equity efforts, 18% had programs with a primary focus on mixed fleet options. Just 8% of large systems (750+ bikes) had such programs, compared to 36% of systems with 350 to 749 bikes, 12% of systems with 150 to 349 bikes, and 14% of programs with fewer than 150 bikes.
Adaptive Bicycles

Adaptive bike share programs aim to increase access to bicycle transportation by offering bike options that are ADA accessible. This means providing options for people who are not physically able to ride a standard bike, not comfortable riding a standard bicycle (e.g., balance concerns, etc.), or need assistance in the form of riding with another person (e.g., tandem). These options include, hand cycles, side-by-side tandem bicycles, heavy duty cruisers, tricycles, and recumbent bicycles. Adaptive bicycle options make bike share systems more equitable and accessible by offering options to people who would otherwise be unable to ride. However, only a few bike share systems provide or have started to launch an adaptive bike share program. Moreover, bike share systems that have provided these options often only have a single rental pick-up and drop-off location. Even though these locations are near paths and trails that are appealing to a broad spectrum of users, this approach does limit the use of adaptive bikes.

Launching an adaptive program may require purchasing and maintaining a more expensive fleet of bicycles, creating and sustaining community buy-in for these programs, and developing or possibly retrofitting existing docking stations and technology interfaces. Increasing adaptive options makes bike share systems more equitable through offering a greater amount of options to people who would otherwise not be able to ride a bicycle easily. Integrating the voices, perspectives, needs, and experiences of the groups that these programs aim to serve is especially important in not only creating buy-in but also creating an equitable and inclusive system.

Examples:
- **BIKETOWN, Portland**: Adaptive BIKETOWN was a trail blazer in terms of a major bike share system providing a variety of bike options, including tricycles, side-by-side tandems and hand-cycles, for people who are not able to ride a standard bike share bike. The Adaptive BIKETOWN program functions as a subsidized rental program, with a check-out location adjacent to the Eastbank Esplanade, a popular multiuse path next to the Willamette River. For more on Adaptive BIKETOWN, see the Portland “System Spotlight” later in this report.
• **MoGo, Detroit:** Piloted in 2018, Adaptive MoGo aims to offer bike share for people of all abilities through offering a combination of mixed fleet, adaptive options, including recumbent tricycles, upright cargo tricycles, hand tricycles, tandem bicycles, and tandem tricycles. On top of offering adaptive options, this program offers discounted passes to eligible riders, free one-day passes to riders who are needed to assist another rider, and a seasonal pass option. MoGo partnered with Programs to Educate All Cyclists (PEAC), a non-profit that directly works with individuals with disabilities, to plan the system and provide staff trainings for empowering and supporting people with disabilities through active transportation. Over the course of the pilot (from May to October 2018), Adaptive MoGo provided 174 rides. Currently, Adaptive MoGo riders with reservations start and end trips at Wheelhouse Detroit’s riverfront location. When riders come to this location they get fitted for their bike and can access riding along the Detroit River and downtown Detroit.

• **Bublr, Milwaukee:** Currently, a few systems are actively working to make adaptive bicycles integrated into their larger system, including Bublr Bikes in Milwaukee and PeaceHealth Rides in Eugene. For example, Bublr plans to integrate 22 adaptive bicycles into their system that can be locked at standard Bublr stations, meaning the bikes could be used for point-to-point trips. There are two major challenges to this approach: making sure people can find these adaptive bikes, since they make up a small subset of their fleet, and ensuring that there are bikes where people who need them can access them.

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**QUESTIONNAIRE RESULTS: ADAPTIVE BICYCLES**

- 10 systems and 10 programs included Adaptive bicycle options
- 75% of the programs collected data to assess Adaptive bicycle options (6 said they are collecting data; 2 said they are not)
- 5 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 0
  - Somewhat effective: 2
  - Very Effective: 3
- Mean effectiveness rating for Adaptive bicycle options: 3.6 out of 4
- Example Metrics:
  - # rentals; # users
  - Surveys with riders after rental period is over.
  - Data collected via annual user survey.
  - Collect usage info on each bicycle.
  - Rentals by bicycle type

---

Electric Bicycles

Meeting riders’ needs and opening opportunities for people with differing abilities to partake in bike share requires offering a variety of fleet options. A number of bike share operators aim to address rider needs through offering a variety of electric and mixed fleet options. These can range from adaptive options, such as recumbent to hand crank bicycles, to offering electric bicycles options and tricycles. Increasingly, systems are integrating electric bicycles into their fleets. This may not be motivated by equity in most cases, but there may be some equity effects, including helping those who may not be physically able to pedal a standard bike. Electric bike options have the ability to complement existing bike share groups through offering riders with an option that allows them to make longer trips, offering riders with disabilities or physical limitations the ability to make extended trips and simply access bike share, and provide an easier way to navigate steep terrain. Research has found that lower-income people of color were more likely to perceive distances as being too long to ride on a bike (McNeil et al., 2017). Electric bikes can help make those distances feel more bikeable, especially with some bike share bicycles that are bulky and heavy. Overall, mixed fleet and electric bike options are often targeted at people of all abilities and viewed as a means of increasing ridership and access for people not able to ride a standard bike share bike. The issue of cost has been raised with systems that have both electric and standard bicycles, where the use of e-bikes can cost an additional $1-2 per ride or a higher annual membership cost.

Examples:

- **Austin Bcycle, Austin:** Austin Bcycle tested 10 electric bikes during the 2018 season. Bcycle is now rolling the electric bikes out to other cities.

- **BIKTOWN, Portland:** As part of its Adaptive BIKETOWN program, BIKETOWN offers e-assist foot-powered tricycles.

- **Zyp BikeShare, Birmingham:** Zyp BikeShare is the first electric bike share system in the United States. Approximately 25% of its

Figure 16 E-bike Announcement on the Austin BCycle Webpage (https://austinbicycle.com/about/blog/the-future-is-electric-austin-b-cycle-testing-e-bikes)
300-bike fleet are electric-assist pedelec bikes. The bike stations act as charging stations for the electric bikes.

- **Red Bike, Cincinnati**: Red Bike has added 100 e-bikes to their fleet, which can be checked out as part of the membership.

- **JUMP**: JUMP is a national dockless bike share subsidiary of Uber located in 16 cities offering on-demand electric bicycles.

- **Citi Bike, New York City**: Throughout 2019, Citi Bike will add 4,000 pedal-assist e-bikes to its fleet. Users checking out an e-bike will have to pay an additional $2 per ride on top of existing rental fees. Bike advocates have called the extra cost a barrier and a burden for low-income New Yorkers.

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**QUESTIONNAIRE RESULTS: ELECTRIC BICYCLES**

- 7 systems and 7 programs included electric bicycle options
- 40% of the programs collected data to assess electric bicycle options (2 said they are collecting data; 3 said they are not)
- 2 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 0
  - Somewhat effective: 0
  - Very Effective: 2
- Mean effectiveness rating for Electric bicycle options: 4 out of 4
- Example Metrics:
  - # rentals
  - Trip distance; trip duration
  - Bicycle selection when electric and non-electric options are available
  - Monthly use reports.
  - Community surveys.
**Scooters**
Last year marked a major disruption in urban mobility with the roll-out of dockless electric scooter (e-scooter) sharing systems. As of spring 2019, about 10 scooter companies were operating in approximately 70 U.S. cities. NACTO estimates that 38.5 million shared scooter trips were taken in 2018. Cities have tried to keep pace with the rollout with varying degrees of oversight and regulations. These scooters provide a new mobility option for people, but they have also raised concerns and issues about how they are being deployed and used.

A number of respondents indicated that it was too early to tell the real impact on city bike share programs. The rollout of e-scooters has changed the business model for dockless bike share, especially private-owned systems like Lime, Ofo and JUMP. Many of the approximately 44,000 dockless pedal bikes in the U.S. at the end of 2017 are no longer in operation or have transitioned to e-scooters. Additionally, many dockless bike share companies have retooled their fleets to focus on e-scooters. It is too early to know the true impact on the station-based bike share systems. Are scooters taking ridership from bike share systems or are they filling mobility needs of other people? The City of Portland found that only 5% of scooter trips substituted a personal bicycle and most riders were not BIKETOWN members. Nice Ride in Minneapolis estimates that scooters took away 10% of bike share trips in 2018. Scooter use is more likely poaching casual users, which has the potential to result in an impact on the bottom line. The erosion of revenues could challenge this business model for public systems.

As for equity concerns, scooter companies have taken different approaches. Some companies, like Lime, have national programs focused on low-income individuals to reduce the cost of rides and the ability to pay cash through partnerships like PayNearMe. Other equity outcomes are being driven by cities, which are placing pricing and access requirements in permits and regulations. For example, Portland requires 15% of its fleet to be deployed daily within the East Portland neighborhoods. These neighborhoods have limited transportation options and have higher percentages of low-income and minority residents.

Some respondents were not as negative on the impacts of scooters. E-scooters can have a positive effect of increasing participation in shared mobility services and increasing the usage of low-speed, personal-use, electric vehicles. This in turn complements the bike sharing system if the systems are coordinated and regulated appropriately. Additionally, it is expected that e-scooters will appeal to a different segment of the population, and, in conjunction with existing bicycling, will increase use of and demand for high-quality bicycle/personal mobility infrastructure and multimodal options.

Overall, however, most respondents were concerned that the e-scooter programs will hurt bike share numbers and are planning to study the impacts in 2019.

![Figure 17 Electric Scooter Riders in Denver](Image)

*Figure 17 Electric Scooter Riders in Denver (Photo Credit: Toole Design)*
Dockless bike share

Dockless bike share has transitioned from being a fringe concept to being a core driver of the bike share conversation. At its core, dockless bike share is a technology-enabled concept that allows a bike to be checked in and out outside of a hub, allowing quick penetration to neighborhoods without stations and the organic dispersal of bikes throughout a neighborhood. Hybrid systems may have stations or hubs, along with service area boundaries, to which bikes are balanced (or incentivized), but can also be locked up elsewhere. Dockless technology and implementation can affect equity in a few ways. By not having the physical presence of the bike share dock, bikes may be more challenging to locate, particularly for those without a smartphone, and may signal to residents that the service is not permanent. The typical pay-per-ride structure of dockless bike share also has the potential to be more costly for frequent riders than membership-based systems. However, dockless systems can more easily reach neighborhoods outside core (station-based) bike share areas, and can be quickly and (relatively) cheaply implemented. Most of the respondents to our questionnaire did not feel that dockless bike share necessarily helped or hurt equity efforts, but instead offered a potential tool to expand the overall reach of bike share as well as to offer insight into what approaches could help. A number of cities have designed specific regulations for dockless systems to ensure that they promote equity goals, such as specifying that a certain percentage of the fleet must be in specified underserved neighborhoods. Examples include:

- **Chicago Dockless Bikeshare Pilot Program** - The Chicago Department of Transportation (CDOT) ran a seven-month dockless pilot program in 2018 with the goal of assessing the potential for dockless bike share to provide service to underserved areas outside the core reach of the Divvy system. Pace, Limebike and Jump all participated, and were required by CDOT to provide options for people who do not have credit or debit cards, as well as for people without smartphones. Although data reporting by participating vendors was inconsistent, pilot findings showed about 101 trips per day were taken (with about 800 bikes), with trips most likely to occur near transit rail lines. Other takeaways from the pilot report include the conclusions that there was demand for the service and that multiple vendors can coexist.

- The New York City Department of Transportation’s **Dockless Bike Share Pilot** partnered with four dockless bike share operators (JUMP, Lime, Motivate and Pace) to bring bike share to the North Shore area of Staten Island, the Fordham area of the Bronx, and the Rockaways in Queens. The pilot is ongoing.
Internal Operations

Internal operations, including hiring practices and employee training, have equity impacts both directly and indirectly. Many bike share systems seek to provide job and growth opportunities for underserved residents, which has a direct impact on the people they employ. Further, training employees to be able to serve disadvantaged communities in a responsive way can be important in the ultimate success of the bike share in those communities.

Among the 74% of systems with current equity efforts, 22% had programs with a primary focus on internal operations. Of large systems (750+ bikes), 23% had such programs, compared to 29% of systems with 350 to 749 bikes, 18% of systems with 150 to 349 bikes, and 14% of programs with fewer than 150 bikes.

Photo Credit: New York City Department of Transportation www.flickr.com/photos/nycstreets/20875988088/
Hiring Practices

Besides striving to ensure affordable and easy access to bike share services, many operators have tried to make explicit commitments to hiring a diverse workforce and encouraging individuals from lower-income and disadvantaged communities to learn bike repair and maintenance skills. These internal practices and programmatic efforts provide another route for producing equity through bike share. These programs take a variety of forms, ranging from direct hiring practices and internal hiring policies to specific programs and events aimed at hiring people from a variety of backgrounds and life circumstances.

Respondents indicated they try to ensure equitable hiring practices through hitting specific target percentages of employees from diverse and disadvantaged backgrounds. Next, some systems specifically reached out to community partner organizations for assistance in recruiting staff and share job openings with those organizations on an ongoing basis. Hiring bilingual staff and not asking about criminal background were also key components of other bike share systems’ attempts to reach equity goals through hiring practices. Lastly, supporting employees throughout the organization was also highlighted as integral to having equitable hiring practices.

Example:

- **BIKETOWN, Portland**: The High Road Hiring program targets low-income groups and people from other disadvantaged and/or nontraditional bike industry backgrounds to work for BIKETOWN. The program focuses on hitting target percentages of employees from diverse and disadvantaged backgrounds. To open these opportunities to these target populations BIKETOWN collaborates with partner organizations to recruit and send out job openings. Another component BIKETOWN implements with this program is not asking questions about criminal background during the hiring process.
- **Bublr, Milwaukee:** Learning bike repair and maintenance skills can be a valuable way to gain work experience and facilitate finding a job within the bike industry. Bublr Bikes partners with the Boys & Girls Club of Greater Milwaukee and DreamBikes, a non-profit bike shop with a mission of providing hands-on training and employment to teens in low- to moderate-income neighborhoods, to teach teens how to fix and maintain bikes, with the hope of helping them gain valuable work experience and become certified bike mechanics. Over the course of six months, teens receive an in-depth introduction to bicycle mechanics and begin assisting with the daily functions of a local bike shop. Participants can earn two $100 stipends during the first two months of the program if they reach performance benchmarks. After the initial two-month phase, they work at the DreamBikes store to expand on their mechanical, professional, and customer service skills while earning $7.50 an hour. Finally, Bublr maintains a paid internship for BGC BIKE for the last two months of the program. At the end of their internship, participants have the opportunity to take the Bike Tech Certification Exam. Those who pass are considered for permanent or seasonal employment at Bublr, while also gaining access to the larger network of Milwaukee bicycle organizations and businesses. Whether a participant fully completes the program or not, they will remain in the Boys & Girls Clubs of Greater Milwaukee’s Career Development case load and have access to completing the steps toward Bike Tech Certification.\(^\text{11}\)

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### QUESTIONNAIRE RESULTS: HIRING PRACTICES

- 15 systems and 17 programs included Hiring practices
- 36% of the programs collected data to assess Hiring practices (4 said they are collecting data; 7 said they are not)
- 2 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 0
  - Somewhat effective: 0
  - Very Effective: 2
- Mean effectiveness rating for Hiring practices: 4 out of 4
- Example Metrics:
  - # of positions held or hours worked by employees in defined categories of a diversity policy and a practice to hire from a diverse pool of candidates
  - Anecdotal feedback
Employee Training

Bike share equity efforts require conducting outreach, interfacing, and collaborating with a variety of groups from disadvantaged neighborhoods and individuals with a variety of needs. Preparing employees to competently and appropriately interact with various groups of people is integral to promoting and achieving bike share equity. Employee training and internal operations are other key components of promoting equity within an organization. Overall, employee training is an integral component of creating authentic relationships with the community that are responsive to social inequities.

Bike share operators reported using employee trainings to prepare ambassadors and customer service staff to appropriately and effectively interface, communicate, and interact with various groups in a culturally competent and ethical manner. Next, bike share operators reported partnering with other organizations and community partners to better understand how to conduct outreach with targeted groups and train staff to be responsive to various rider needs. For example, MoGo partnered with Programs to Educate All Cyclists to lead trainings on how to best promote the Adaptive MoGo program to people who are not physically able to ride a standard MoGo bike, along with how to best support Adaptive MoGo riders. Other respondents described using weekly meetings to discuss barriers and brainstorm approaches to addressing community needs, while others described providing specific trainings on equity programs so that ambassadors could confidently answer questions about the equity programs.

Examples:

- **Topeka Metro Bikes, Topeka:** Topeka Metro Bikes sends their employees to a training that considers equity both in terms of needs and barriers related to biking but also in terms of equity in volunteer management.

- **BIKETOWN, Portland:** Through its Adaptive BIKETOWN program, BIKETOWN partners with Albertina Kerr, an organization dedicated to helping people with intellectual and developmental disabilities to "lead self-determined lives and reach their full potential," to train all staff who serve people with disabilities.
• **Indego, Philadelphia.** Indego’s ambassador training program highlights some key components of using employee trainings to promote and enact bike share equity. Indego has started to expand their ambassador training program to include bilingual training through incorporating Spanish into the existing ambassador training program. The goal of incorporating this training is to offer bilingual programming to an underserved and growing local community. The bilingual training is also connected to creating a deeper understanding of the cultural needs of Latinx communities and incorporating those needs into the development of the bike share system. This training not only helps conduct outreach to a targeted group, but also serves as a springboard for Indego to gain a deeper understanding of the transportation needs of Philadelphia’s Latinx community, which can be infused into cultivating a system that serves a historically marginalized community.

**Figure 19** Indego's "Ambassador Toolkit" covers the ins and outs of Indego, and being an ambassador

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### QUESTIONNAIRE RESULTS: EMPLOYEE TRAINING

- 12 systems and 15 programs included Employee training
- 50% of the programs collected data to assess Employee training (5 said they are collecting data; 5 said they are not)
- 4 rated the efficacy of this element of the program. Of those:
  - Not effective: 0
  - Minimally effective: 0
  - Somewhat effective: 1
  - Very Effective: 3
- Mean effectiveness rating for Employee training: 3.75 out of 4
- Example Metrics:
  - % of employees trained on serving equity programs / clients
  - employee feedback
Transit Integration

For bike share systems, transportation integration consists of creating greater connections to and with existing public transportation options in order to expand access to a variety of modes of transportation, ease bike-to-transit trips, and reduce barriers to utilizing either system for users. These efforts can take a variety of forms, including creating integrated payment systems, utilizing the same transit passes across systems, creating integrated reduced-fare programs, and placing bike share stations and bike racks at public transportation stops. Integrating bike share and public transportation systems aims to address equity issues through lowering barriers to system use through pricing structures, payment methods, easing bike to transit trips for transit captive populations, and facilitating greater connectivity. Linking bike share and public transportation systems is still a relatively new practice; however, a number of cases illustrate how transportation integration is evolving.

Among the 74% of systems with current equity efforts, 33% had programs with a primary focus on transit integration. Of large systems (750+ bikes), 39% had such programs, compared to 50% of systems with 350 to 749 bikes, 24% of systems with 150 to 349 bikes, and 14% of programs with fewer than 150 bikes.
Existing Issues: Pricing, Payment, Access

Across the examples presented in this section, there are variety of ways that bike share systems and public transportation systems have addressed integrating their access, pricing, and payment methods. Pittsburgh and Milwaukee demonstrate two approaches to addressing access across systems. Pittsburgh Bike Share and the Port Authority of Allegheny County utilize a single transit card to allow riders to access Healthy Ride for free (up to 15 minutes) if they are taking a trip to a public transportation stop. Although trying to develop a similar project, Bublr bike share in Milwaukee modified their approach because of the differences in existing transit access technology utilized by each system. Instead of utilizing two different cards, Milwaukee County Transit System (MCTS) pass holders can acquire a special Bublr Bikes sticker, allowing them to access each system. The sticker sends a different frequency signal to access bikes than the card is set at to make a payment on MCTS buses. These two examples illustrate how technology and existing processes can impact the approach bike share systems and public transportation authorities take to integrating access to their services and how to facilitate an easier bike to transit for riders.

Two other approaches to pricing and payment implemented in Fargo and Los Angeles illustrate some of the conflicts around how to approach linking systems. Fargo’s Great Rides, working with North Dakota State University, allows students to use their student identification cards to access both public transportation and the bike share system. A major factor contributing to the integration of these systems is that students at NDSU pay for access to both services through their student fees. In Los Angeles, Metro has worked to create a system of payment (a pay-as-you-go model, monthly pass, and yearlong pass) for bike share that mimics and mirrors the public transit fare so that it will feel like a familiar and natural extension to transit. They have also worked to create an integrated reduced-fare program, called LA’s Rider Relief program. Although riders can use cash to pay for bike share, riders who want to have an integrated pass still need to have a debit or credit card registered to use the bike share system. Having a credit or debit card on file is considered the only way to deal with overage fees, damages to the bike, and the pay-as-you-go option for accessing the bike share system. Having integrated payment options and reduced-fare programs requires coordination between a variety of entities and may create issues around providing cash payment options for unbanked or underbanked populations.

Examples:
- **Healthy Ride, Pittsburgh**: Healthy Ride is piloting a transit integration program with the Port Authority of Allegheny County, where transit riders can access Healthy Ride for free (in 15-minute increments). The goal of the program is to create a single trip experience, where riders can easily

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12 Cox, Stefani. Pittsburgh and Milwaukee Explain How They Linked Bike Share to Transit, BBSP (1/19/2018), [http://betterbikeshare.org/2018/01/19/pittsburgh-milwaukee-explain-linked-bike-share-transit/](http://betterbikeshare.org/2018/01/19/pittsburgh-milwaukee-explain-linked-bike-share-transit/)

13 Ibid.

14 Corbin, April. Why the Country’s Best Bike Share Might be in Fargo, BBSP (5/19/2016) [http://betterbikeshare.org/2016/05/19/countrys-best-bike-share-might-fargo/](http://betterbikeshare.org/2016/05/19/countrys-best-bike-share-might-fargo/)

15 Corbin, April. Bike Share or Bus? In Los Angeles, the Price Will be the Same. BBSP (3/29/2016) [http://betterbikeshare.org/2016/03/29/bike-share-bus-los-angeles-price-will/](http://betterbikeshare.org/2016/03/29/bike-share-bus-los-angeles-price-will/)
connect to bikes and public transit to complete their whole trip. The initial findings from the pilot show a 4.3% uptick in Healthy Ride ridership; however, revenue has not increased. Healthy Ride and Pittsburgh Bike Share said they will be looking for corporate sponsorship to keep the program moving forward as they expand their bike share system.

- **Bublr, Milwaukee**: Roughly 80% of Bublr bike share stations overlap with existing bus routes in Milwaukee. The current overlap between the systems provided a springboard for Bublr Bikes and the MCTS to pilot a transit integration system program. The program consisted of a variety of elements, including having buses announce when stops are connected to bike share stations, creating an integrated access pass, displaying stops with bike stations through the MCTS transit app, co-branding bikes, and exploring joint station maintenance and integrated decision-making processes.

- **Tugo, Tucson**: Tugo partners with Sun Tran, the public transit agency serving Tucson, to connect Sun Tran Bus Economy Fare passengers with bike share by giving them the option to add on “Tugo for All” for $5 for one year. While the fares still must be paid separately, the partnership means that those who qualify for the Sun Tran discount fare (which includes low-income residents, seniors, Medicare card holders and people with disabilities) are pre-qualified for the discount bike share program.

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**QUESTIONNAIRE RESULTS: TRANSIT INTEGRATION**

- 20 systems and 21 programs included Transit integration
- 64% of the programs collected data to assess Transit integration (9 said they are collecting data; 5 said they are not)
- 7 rated the efficacy of this element of the program. Of those:
  - Not effective: 1
  - Minimally effective: 0
  - Somewhat effective: 4
  - Very Effective: 2
- Mean effectiveness rating for Transit integration: 3 out of 4
- Example Metrics:
  - % of rides taken through joint pass
  - Start/stop of rides. Trips by station adjacent to transit.
  - Surveys sent to people who use transit integration programs. Use of bike share for first or last mile trips.

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16 Cox. (1/19/2018).
17 Ibid.
**Frequent pairings**

Bike share equity requires multipronged approaches in order to address some of the complex sets of barriers people may face, ranging from physical access, affordability, comfort, knowledge, and more. As such, bike share equity programs are often combinations of a variety of the approaches discussed in the prior sections. We examined how frequently each approach is combined with other approaches to identify common pairings. Table 7 shows common pairings for approaches, with a threshold of pairings that occur in at least 67% of cases (e.g., equity approaches that involve service area boundaries are paired with approaches that involve bike and station locations at least 67% of the time).

<table>
<thead>
<tr>
<th>Approach</th>
<th>Commonly paired with</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service area boundaries</td>
<td>Bike/station locations; Rebalancing</td>
</tr>
<tr>
<td>Rebalancing</td>
<td>Service area boundaries; Bike/station locations</td>
</tr>
<tr>
<td>Income-based discount</td>
<td>Cash pay option</td>
</tr>
<tr>
<td>Cash pay option</td>
<td>Income-based discount</td>
</tr>
<tr>
<td>Facilitated enrollment</td>
<td>Education program/classes; Specific marketing messages or campaigns</td>
</tr>
<tr>
<td>Prescribe-a-bike</td>
<td>Income-based discount; Education program/classes</td>
</tr>
<tr>
<td>Organized rides</td>
<td>Education program/classes; Ambassadors</td>
</tr>
<tr>
<td>Ambassadors</td>
<td>Education program/classes; Specific marketing messages or campaigns</td>
</tr>
<tr>
<td>Non-English language offerings</td>
<td>Specific marketing messages or campaigns</td>
</tr>
<tr>
<td>Adaptive bicycle options</td>
<td>Bike/station locations; Alternative payment structures</td>
</tr>
<tr>
<td>Electric bicycle options</td>
<td>Bike/station locations; Income-based discount; Alternative payment structures</td>
</tr>
<tr>
<td>Hiring practices</td>
<td>Specific marketing messages or campaigns; Employee training</td>
</tr>
<tr>
<td>Employee training</td>
<td>Facilitated enrollment; Specific marketing messages or campaigns; Hiring practices</td>
</tr>
</tbody>
</table>
Funding Sources

Many bike share systems are struggling to find revenue sources to cover both their capital and operating costs. Equity programs are rarely, if ever, viewed as driving revenue; more often, cities and systems are looking outside of their operating revenue to fund these programs. This section examines what funding sources are being used to support bike share equity programming, and where those funds are being spent.
Equity Program Costs

For each program, we asked about the cost of implementation, along with the primary funding sources. For 75 programs, respondents provided some information about either the cost of the program or the funding source for the program (see Table 8). Of those, half provided a program cost (or range), which were about evenly split between programs costing over $200,000, those costing $50,000 to $199,000, $20,000 to $49,000, and those under $20,000. For 15% of programs, respondents indicated that there was no cost associated with the program, while for 11% they indicated that costs were in staff time or other non-dollar costs. Finally, there were 19 programs which did not provide a cost amount, but did indicate a funding source.

Table 8 Equity Program Costs

<table>
<thead>
<tr>
<th>Program Cost</th>
<th># of Programs</th>
<th>% of Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost information provided</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$200k or more</td>
<td>10</td>
<td>13%</td>
</tr>
<tr>
<td>$50k to $199k</td>
<td>8</td>
<td>11%</td>
</tr>
<tr>
<td>$20k to $49k</td>
<td>9</td>
<td>12%</td>
</tr>
<tr>
<td>up to $19k</td>
<td>10</td>
<td>13%</td>
</tr>
<tr>
<td>Subtotal</td>
<td>37</td>
<td>49%</td>
</tr>
<tr>
<td>No cost or cost information not provided</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$0</td>
<td>11</td>
<td>15%</td>
</tr>
<tr>
<td>Unable to specify (staff time, etc.)</td>
<td>8</td>
<td>11%</td>
</tr>
<tr>
<td>No cost information provided</td>
<td>19</td>
<td>25%</td>
</tr>
<tr>
<td>Total</td>
<td>75*</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Total includes any program for which we were provided information about the cost of the program, or about funding sources
Primary Funding Sources

For each program, we asked if the primary funding source came from either a city or municipality, the system operator, a community partner, a sponsor, a grant or foundation, or some other source (Table 9). Of those programs for which cost information was provided, 39% listed a grant or foundation as the primary source of funding, followed by a city or municipality at 22%. About 28% listed a combination of sources (usually two or three of the source types).

Funding Source by System Size

Medium to large bike share systems of 350 bikes or more were more likely to receive funding for equity programming through a city or municipality (see Table 10), with around 25-29% of such systems receiving such funding. Systems of 150-349 bikes were more likely than other size systems to have equity programs with primary funding coming from the operator (27%), while smaller systems than that were the most likely to receive program funding from systems sponsors (at 33%). Small systems were also the most likely to cobble together funding from a variety of these source types. Grant or foundation funding was a significant primary source of equity programming funding for all systems larger than 150 bikes (ranging from 40% to 53% of programs by category).
Table 9 Equity Program Primary Funding Source

<table>
<thead>
<tr>
<th>Primary Funding Source</th>
<th>Program Cost</th>
<th>City or municipality</th>
<th>Operator</th>
<th>Community Partner</th>
<th>Sponsor</th>
<th>Grant or foundation</th>
<th>Combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost information provided</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$200k or more</td>
<td>3</td>
<td>33%</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>22%</td>
<td>1</td>
</tr>
<tr>
<td>$50k to $199k</td>
<td>3</td>
<td>38%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>4</td>
</tr>
<tr>
<td>$20k to $49k</td>
<td>1</td>
<td>11%</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>11%</td>
<td>5</td>
</tr>
<tr>
<td>up to $19k</td>
<td>1</td>
<td>10%</td>
<td>1</td>
<td>10%</td>
<td>0</td>
<td>0%</td>
<td>4</td>
</tr>
<tr>
<td>Subtotal</td>
<td>8</td>
<td>22%</td>
<td>1</td>
<td>3%</td>
<td>3</td>
<td>8%</td>
<td>14</td>
</tr>
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<td>No cost or cost information not provided</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>$0</td>
<td>0</td>
<td>0%</td>
<td>3</td>
<td>60%</td>
<td>1</td>
<td>20%</td>
<td>0</td>
</tr>
<tr>
<td>UTD staff time etc.</td>
<td>1</td>
<td>17%</td>
<td>1</td>
<td>17%</td>
<td>0</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
<td>No cost information provided</td>
<td>3</td>
<td>16%</td>
<td>0</td>
<td>0%</td>
<td>3</td>
<td>16%</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>18%</td>
<td>5</td>
<td>8%</td>
<td>2</td>
<td>3%</td>
<td>6</td>
</tr>
</tbody>
</table>

Among those 16 programs funded by a combination of sources, the funding sources includes operator (9x), partner (7x), sponsor (7x), grant (7x) and city (6x).

Table 10 Program Funding by System Size

<table>
<thead>
<tr>
<th></th>
<th>0-149 bikes</th>
<th>150-349 bikes</th>
<th>350-749 bikes</th>
<th>750+ bikes</th>
</tr>
</thead>
<tbody>
<tr>
<td>City or municipality</td>
<td>0%</td>
<td>0%</td>
<td>29%</td>
<td>25%</td>
</tr>
<tr>
<td>Operator</td>
<td>0%</td>
<td>27%</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td>Community partner</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>7%</td>
</tr>
<tr>
<td>Sponsor</td>
<td>33%</td>
<td>7%</td>
<td>0%</td>
<td>11%</td>
</tr>
<tr>
<td>Grant/foundation</td>
<td>17%</td>
<td>40%</td>
<td>53%</td>
<td>32%</td>
</tr>
<tr>
<td>Combination</td>
<td>50%</td>
<td>27%</td>
<td>18%</td>
<td>21%</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>15</td>
<td>17</td>
<td>28</td>
</tr>
</tbody>
</table>
Primary Funding Source by Type of Program

We also looked at primary funding sources by the type of approaches each program took to addressing equity (Table 11). Across a number of different approaches, grant and foundation funding were the most common primary funding source, providing primary funding for 51% of education programs, 48% of marketing and information programs, 43% of mixed fleet (electric or adaptive) programs, 41% of station siting programming, 40% of transit integration programming, and 34% of payment and fees programming. Cities were frequent funders of mixed fleet option programs (43%). Other primary funding sources for these program types were generally combinations of funding sources.

Table 11 Program Funding by Program Type/Approach

<table>
<thead>
<tr>
<th></th>
<th>Service area, stations, balancing</th>
<th>Payment and fees</th>
<th>Education, facilitation programs</th>
<th>Marketing, information, materials</th>
<th>Mixed fleet options</th>
<th>Internal operations</th>
<th>Transit integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>City or municipality</td>
<td>23%</td>
<td>18%</td>
<td>14%</td>
<td>16%</td>
<td>43%</td>
<td>11%</td>
<td>13%</td>
</tr>
<tr>
<td>Operator</td>
<td>0%</td>
<td>9%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>11%</td>
<td>0%</td>
</tr>
<tr>
<td>Community partner</td>
<td>5%</td>
<td>5%</td>
<td>3%</td>
<td>3%</td>
<td>0%</td>
<td>11%</td>
<td>7%</td>
</tr>
<tr>
<td>Sponsor</td>
<td>18%</td>
<td>9%</td>
<td>9%</td>
<td>10%</td>
<td>14%</td>
<td>22%</td>
<td>13%</td>
</tr>
<tr>
<td>Grant/ foundation</td>
<td>41%</td>
<td>34%</td>
<td>51%</td>
<td>48%</td>
<td>43%</td>
<td>22%</td>
<td>40%</td>
</tr>
<tr>
<td>Combination</td>
<td>14%</td>
<td>25%</td>
<td>23%</td>
<td>23%</td>
<td>0%</td>
<td>22%</td>
<td>27%</td>
</tr>
<tr>
<td>Total</td>
<td>22%</td>
<td>44%</td>
<td>35%</td>
<td>31%</td>
<td>7%</td>
<td>9%</td>
<td>15%</td>
</tr>
</tbody>
</table>
Funding Exercise

To get a sense of where bike share systems view the most immediate need for funding equity efforts, we asked them how they would use a hypothetical $100,000 to support their programming. In the exercise, responding systems had to allot the funds between these categories:

- Service area, stations, balancing
- Payment and fees
- Education, facilitation programs
- Marketing, information, materials
- Mixed fleet options
- Internal operations
- Transit integration
- Other

The results show that, in aggregate, systems would spread the funds across categories. Systems did highlight the most need to support *Payment and fees* (such as discounted memberships or rides, payment structures, cash payment option, reduced fees, etc.) with 22% of the funds. *Education or facilitation programs* (such as help with enrollment, prescribe-a-bike, classes, organized rides, ambassadors) and *Marketing, information and materials* (such as representing diverse communities, targeted messages or campaigns, non-English language materials) came in at a close second and third (18% and 17%, respectively). On average, the rest of the programs were distributed with 15% to *Mixed fleet options* (accessible bikes, e-bikes, bikes for older adults or youth); 13% to *Service area determination*, including station siting, or bicycle placement/balancing; 8% to *Transit integration*; and 5% to *Internal operations*, including hiring practices and employee training.

There are some differences with responses between the size of systems as seen in Figure 20. The most notable differences are that smaller systems (under 350 bikes) tend to value spending these additional funds on *Payment and fees* at the highest level and also on *Marketing, information and materials* compared to very large systems (greater than 750 bikes). In contrast, the large systems tend to look to spend the funds to support *Education or facilitation programs*.

One notable comment from a respondent from a larger system noted they would spend 100% of the funds on a full-time equity staff person to focus only on equity programs and work on further fundraising because “$100,000 is absolutely not enough to make any kind of serious impact.” Since the beginning of the Better Bike Share Partnership grant program, 35 grants have been awarded at an average award of $37,700. This statement shows the extreme funding need of these systems given limited funding available.
Figure 20 Spending Exercise Results by System Size
Reflections on Equity Programming

After asking about the variety of programs and activities bike share systems are undertaking around equity, we asked respondents to reflect on some of the success, refinements, and challenges they face, along with what resources they would need to improve their efforts.

This section presents summarized feedback from those reflections, along with summaries of element and program ratings.
Equity Program Elements Summary

Table 12 summarizes each program element by frequency, whether evaluation data are collected, and rated effectiveness. Note that we included elements that respondents told us were not part of a specific program but were part of ongoing efforts to address equity. Element effectiveness was rated on a 1-4 scale (1=not effective, 2=minimally effective, 3=somewhat effective, 4=very effective).

Table 12 Summary of Equity Program Element Responses

<table>
<thead>
<tr>
<th>Program Element</th>
<th>Systems</th>
<th>Programs/ Efforts</th>
<th>%collecting data</th>
<th>Average effectiveness rating</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Station siting, service areas, and balancing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bike/station locations</td>
<td>33</td>
<td>40</td>
<td>88%</td>
<td>3.25 / 4</td>
</tr>
<tr>
<td>Service area boundaries</td>
<td>21</td>
<td>22</td>
<td>53%</td>
<td>3.00 / 4</td>
</tr>
<tr>
<td>Rebalancing</td>
<td>20</td>
<td>22</td>
<td>59%</td>
<td>3.00 / 4</td>
</tr>
<tr>
<td><strong>Payment and fees</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income-based discount</td>
<td>30</td>
<td>43</td>
<td>81%</td>
<td>3.73 / 4</td>
</tr>
<tr>
<td>Alternative payment structures</td>
<td>30</td>
<td>37</td>
<td>72%</td>
<td>3.33 / 4</td>
</tr>
<tr>
<td>Cash pay option</td>
<td>30</td>
<td>41</td>
<td>70%</td>
<td>3.60 / 4</td>
</tr>
<tr>
<td>Reduction of fees</td>
<td>8</td>
<td>10</td>
<td>43%</td>
<td>3.33 / 4</td>
</tr>
<tr>
<td><strong>Education or facilitation programs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilitated enrollment</td>
<td>22</td>
<td>32</td>
<td>64%</td>
<td>3.41 / 4</td>
</tr>
<tr>
<td>Education programs</td>
<td>25</td>
<td>40</td>
<td>57%</td>
<td>3.50 / 4</td>
</tr>
<tr>
<td>Prescribe-a-bike</td>
<td>4</td>
<td>7</td>
<td>80%</td>
<td>3.50 / 4</td>
</tr>
<tr>
<td>Organized rides</td>
<td>22</td>
<td>28</td>
<td>57%</td>
<td>3.20 / 4</td>
</tr>
<tr>
<td>Ambassadors</td>
<td>23</td>
<td>30</td>
<td>39%</td>
<td>3.50 / 4</td>
</tr>
<tr>
<td><strong>Marketing, information and materials</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketing campaigns</td>
<td>30</td>
<td>45</td>
<td>34%</td>
<td>2.90 / 4</td>
</tr>
<tr>
<td>Non-English offerings</td>
<td>6</td>
<td>8</td>
<td>40%</td>
<td>3.00 / 4</td>
</tr>
<tr>
<td><strong>Mixed fleet options</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adaptive bicycles</td>
<td>10</td>
<td>10</td>
<td>75%</td>
<td>3.60 / 4</td>
</tr>
<tr>
<td>Electric bicycles</td>
<td>7</td>
<td>7</td>
<td>40%</td>
<td>4.00 / 4</td>
</tr>
<tr>
<td><strong>Internal operations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hiring practices</td>
<td>15</td>
<td>17</td>
<td>36%</td>
<td>4.00 / 4</td>
</tr>
<tr>
<td>Employee training</td>
<td>12</td>
<td>15</td>
<td>50%</td>
<td>3.75 / 4</td>
</tr>
<tr>
<td><strong>Transit integration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transit integration</td>
<td>20</td>
<td>21</td>
<td>64%</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>70</td>
<td>103</td>
<td>61%</td>
<td>3.37</td>
</tr>
</tbody>
</table>

1 data collection and effectiveness ratings not reported for all programs; see relevant section for details
Overall Program Effectiveness Ratings

For each program that respondents told us about, we asked them to consider how effective the program was when considering its primary goal (as provided earlier in the survey), on a scale of 0 (least effective) to 10 (most effective).

Across all programs, the average effectiveness rating was 7.4 out of 10. Because a variety of program approaches and elements can be combined within any given program, it was difficult to isolate how much individual components contributed to the overall ratings. However, programs that included education or facilitation elements, and particularly ambassadors, were rated more highly than those that did not. Programs with marketing elements were also rated more highly than those that did not. On the other end, programs that included rebalancing as an equity approach were rated less effective than other programs.

More significant than the individual elements were effects related to the bike share system size and the number of ways systems sought to address equity (Table 13). In particular, larger systems were more likely to have more distinct equity programs, and those programs are more likely to encompass a broader variety of approaches or elements. It appears that these broader approaches to equity, perhaps due to being more holistic approaches, result in higher effectiveness ratings. Systems with 350 or more bikes rated programs at 7.8 to 7.9 out of 10 in terms of effectiveness, while smaller programs had average ratings of 6.2 to 6.6.

Table 13 Program Ratings and Characteristics by System Size

<table>
<thead>
<tr>
<th>System size</th>
<th>Average # of programs</th>
<th>Average # of primary approaches per program*</th>
<th>Average # of elements per program**</th>
<th>Overall effectiveness rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-149 bikes</td>
<td>1.1</td>
<td>2</td>
<td>4.7</td>
<td>6.6 / 10</td>
</tr>
<tr>
<td>150-349 bikes</td>
<td>1.8</td>
<td>2.1</td>
<td>5.3</td>
<td>6.2 / 10</td>
</tr>
<tr>
<td>350-749 bikes</td>
<td>1.8</td>
<td>2.8</td>
<td>5.6</td>
<td>7.8 / 10</td>
</tr>
<tr>
<td>750+ bikes</td>
<td>3</td>
<td>2.4</td>
<td>5.9</td>
<td>7.9 / 10</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>2.4</td>
<td>5.5</td>
<td>7.4 / 10</td>
</tr>
</tbody>
</table>

* “Approaches” defined here as the broader categories of equity programming presented to respondents, including “Station siting, service areas, and balancing”, “Payment and fees”, “Education or facilitation programs”, “Marketing, information and materials”, “Mixed fleet options”, “Internal operations”, and “Transit integration.”

** “Elements” defined here as the sub-categories under each of the approaches.
# Categories of Data/Metrics

The questionnaire asked respondents to describe the types of data and specific metrics they use to assess and evaluate the success of their various equity programs. The variety of approaches to measuring and collecting data are featured in Table 14. The table describes both data sources and the type of data or metrics collected.

Table 14 Example Metrics Found in This Report

<table>
<thead>
<tr>
<th>Source</th>
<th>Data/Metrics</th>
</tr>
</thead>
</table>
| User surveys                  | • Demographics  
• Common origins and destinations  
• Trip purpose  
• Trip alternatives/substitutions  
• Barriers and motivations for using bike share  
• Event feedback  
• Perceived health, social, financial benefits of using bike share; System, program and discount awareness  
• Perception of messaging, programming, and marketing materials  
• Feedback and engagement on proposed changes in services and transportation needs |
| Membership Data               | • # discount passes sold/distributed  
• % of sign-ups by eligibility type  
• % of program members who opt for various program options (e.g., month-to-month; auto renew, cash payment, etc.)  
• % of members who are: female, non-white, with household incomes below a particular threshold - percentage change over time (e.g., year-to-year)  
• % of discount program members who are female, non-white, low-income  
• Discount members: # of trips, trips per day, frequency of use, trip start/stop times, location, distances  
• Fees incurred by membership status  
• # of active discount membership  
• # of all-time discount membership  
• % of discount members taking trips by month |
| Trip Data                     | • Trip counts  
• Frequency of trips  
• Length of trips  
• Time of day trips are taken  
• Destinations  
• Trip distance, duration  
• Bicycle selection when electric and non-electric options available; when adaptive bikes available  
• % of rides taken through joint pass  
• Trips by station adjacent to transit  
• Start and stop locations  
• Monthly/annual reports on user trip data; # of trips by discount members by month  
• # of trips by female, non-white, low-income  
• % of total trips by female, non-white, low-income, discount program members by month; trip data by use (work, recreation, errands)  
• % of trips at target stations by discount members  
• Change in # of trips by station, membership status, and demographics on year-by-year basis |
| Outreach, Education, and Events | • # of rides or events  
• # of attendees and attendee demographics  
• # of people helped through enrollment process  
• # of sign-ups  
• # of sign-ups by facilitator  
• # of sign-ups by site  
• # of sign-ups after group rides or workshop  
• # of enrollees by event type  
• # of promo codes distributed and redeemed  
• # of people reached per ambassador  
• # of views; analytics on social media campaigns; discounts used  
• # enrolled by language  
• Reports by ambassadors and event organizers |
<table>
<thead>
<tr>
<th>Source</th>
<th>Data/Metrics</th>
</tr>
</thead>
</table>
| Bike Data |  • API data  
  • Track travel time on bikes  
  • Location of bikes  
  • Usage records of each bike  
  • Average # of bikes at a station  
| |  • Usage by bike availability  
  • % of bikes located in targeted neighborhoods or geographies  
  • Distribution of bikes across system and stations |
| Payment, Revenue, Renewal |  • # of sign-ups for discounts  
  • # of sign-ups/payments using cash  
  • % of users that utilize cash pay option  
  • # of cash pay sign-ups by referral method  
  • Location of sign-ups  
  • Ratio of cash pay enrolled to credit/debit enrolled (overall and within discount system)  
  • Demographic and user trip data for discount and cash pay - ride duration, average fees, etc.  |
| |  • % of cash payers switching to credit payment (over time); % of members who renew  
  • % of discount members who renew  
  • % revenue from residents compared to visitors  
  • # of users receiving credits (e.g., for systems that offer credit for returning a bike to a priority station)  
  • # of users with positive credit balance on bike share account  
  • % of members having enough credit to cover membership costs |
| Station and Location Data |  • % of residents within “x” distance of bike share station (e.g., 1/4 mile)  
  • % of non-white, low-income, and English as second language with access within “x” distance of bike share station  
  • % of station users who are low-income, non-white, and/or discount pass users  
  • # of stations located in communities of concern  
  • % stations in low-income neighborhoods or tracts  |
| |  • # of trips from neighborhood equity stations  
  • Ratio of trips per day for stations in low-income areas versus other station (may be used as baseline for low-income station performance)  
  • Type of trip by station  
  • Bike share ride connections with other transportation options (first/last mile) |
| Community Surveys |  • Feedback on bike share service area  
  • Suggestions for change and improvement  
  • Community needs assessment  
  • Barriers and motivators  |
| |  • Perceptions of bike share and biking; Current and potential program awareness, support, interest  
  • Identify support for bike share |
| Focus Groups and Interviews |  • Exit interviews with ambassadors, staff, community partners  
  • Interviews with event attendees around experience and how they heard about program  |
| |  • Attendee feedback: Comfort with process, system, class; Feedback from prescribe-a-bike physicians  
  • Reports from ride organizers  
  • Focus groups to review how people perceive marketing messages |
| Employees and Internal Operations |  • # of positions held or hours worked by employees defined in the categories of diversity  
  • # of new hires from diverse pool of candidates  |
| |  • Feedback around workplace culture  
  • % of employees trained on serving equity programs/clients  
  • Employee feedback |
Successes

Bike share systems have accomplished a lot over the years in providing an affordable and accessible transportation option to residents throughout the United States. We asked respondents to tell us about some of the most successful outcomes of their equity programming.

Ridership by Target Populations

Some of the most notable successes are related to ridership numbers of targeted communities and/or specific program elements. For example, 19% of all MoGo (Detroit) memberships receive some sort of state benefits programs, such as Food Assistance, Cash Assistance/Family Independence, Healthy Michigan Plan, Children's Special Health Care Services, or Child Care Assistance. Indego Access members increase the diversity of users in Philadelphia. Of the users who purchased an Access Pass, 58% identified as female, 79% identified as non-white, and 87% had household incomes under $25,000. Some stations in low-income neighborhoods see upwards of 80% of their trips taken by Access Pass users. This success is due in part to the membership programs, but is also due to other program elements, such as outreach efforts and community partnerships.

Building Partnerships

An area of notable success mentioned by respondents is partnerships. Often the outreach efforts and community engagement are in conjunction with a community partner organization in the neighborhoods. Many of the neighborhoods lack affordable and convenient transportation options and have been underserved by local agencies. A number of bike share systems report building trust in these communities through successful partnerships. The partnerships have also raised awareness with partner organizations about the role biking can play in providing transportation to people who use their services and live in affordable housing.

Workforce Development

Another success that many programs reported is in workforce development. Many of the systems make a conscious effort to hire youth and individuals who live in the focused neighborhoods. One respondent mentioned the importance of hiring a team of Latinx residents to manage and operate the program. This gave the program a genuine feel that was relatable to the Latinx community they were serving. Others mentioned how ambassador programs provided youth job opportunities that gave them work skills and built pride and esteem.
Refining and Improving Equity Programming

Given the rate at which bike share has been expanding and developing in cities around the United States, it can be easy to forget that the overall model is still quite new. The focus on ensuring the bike share serves diverse and underserved populations is even more recent. Thus, it is not surprising that cities have had to creatively adapt on the fly, both in their general operations and their equity programming. We asked how the equity programs had changed since they were initiated, and heard a number of ways this was happening.

Refining Pricing and Renewals
In many cases, equity programs were initiated on a bootstrap with no or limited dedicated funding and based on the notion they had to get something on the ground. As the program matured and participants enrolled, the systems were faced with figuring out the next steps, including how to get people to remain enrolled when their initial membership ended. Quite a few systems adjusted prices as members came up for renewal in an attempt to keep people on board. This often meant that discounts that had been intended to be valid only for the first year (before the rate increased to the normal membership rate) had to be extended, or stepped up slowly. Others adjusted their pricing system by allowing monthly memberships where they hadn’t before, and adjusted trip ride time (e.g., extending ride time from 30 to 45 or 60 minutes).

Reworking Outreach Staffing and Approaches
Other systems discussed changes to their outreach and engagement. The most common change in this category was the need to make sure that in-house staff were focused on equity work, such as through bringing outreach staff on board. While having staff focused on equity work in-house, rather than having that work go through a community partner, was viewed as important, this change was not in lieu of working with community partners. In fact, a number mentioned getting better at basing their outreach around community partner activities and events rather than trying to create their own events. Another change mentioned was to conduct eligibility verifications in the field and at events in order to make sign-up more convenient (and not require people to come to an office location to sign up).

Moving and updating Stations and Bikes
Some other specific changes involved adapting infrastructure based on use and trends. This involved moving stations from underperforming areas to other areas in one case. In another case, the system transitioned to micro-stations in some areas of their system, particularly in lower-density neighborhoods, as a way to get more out of their fleet and to reach more areas of the city. A few systems had already begun integrating electric bikes into their fleet, and a number of other systems indicated that they were preparing for this change in the near future. Transitions to dockless bikes and scooters were also mentioned.

Taking a Long-Term Outlook
We heard some mixed plans around transition away from pilot discount and outreach programs. Several told us that they are planning to transition pilot programs into permanent programs, even though that meant
going from grant-funded programs to permanent costs on their budget. In other cases, we heard about a few outreach programs that will be sunsetting due to lack of ongoing funding, and without a plan to continue the outreach. Finally, a number of systems discussed changing and adapting their systems as an ongoing process. They described assessing their outreach methods and results, and refocusing efforts on successful efforts. Others mentioned that they look to other cities to see what's working well, with an eye toward adopting best practices. Another mentioned that upcoming plans involve assessing the effectiveness of their programming.
Challenges

Bike share systems have a range of challenges that make meeting equity goals difficult. Some of the challenges are the same as they are system-wide, such as lack of bike infrastructure, cold and wet weather, cycling barriers and users’ lack of cycling skills. Many systems mentioned the need for better and safer bike infrastructure, especially in underserved neighborhoods. Often these communities have not had adequate investments, which acts as a major deterrent to people using the system. Some respondents noted that negative community perceptions of bike share are based on worries that it is a harbinger of gentrification framed by decades of marginalization, underfunded investment in their communities, and lack of attention to community issues such as crime and violence. This puts the bike share organization and their activities in a situation where a lot of effort is needed to help build back trust before moving forward with system rollout.

Funding as a Key Challenge

The challenge most mentioned by respondents was funding. Often equity programs are funded with supplementary funds that are raised through grant opportunities like the Better Bike Share Partnership or other local foundations and community partners. Some systems reported the equity programs were unfortunately secondary to the core operations and marketing efforts and without external funds many elements would not receive the resources needed to succeed. These external funds tend to be small amounts (under a $100,000 per year) and limited in duration. Frequently these funds are used to pay for internal resources like an outreach coordinator or community ambassadors. These resources are important in managing and driving equity programs. In addition, external funds are used to offset the cost of memberships for low-income members, provide funding to support non-profit partners around outreach, and to pay for marketing efforts and materials. Many respondents mentioned that programs stopped or were put on hold when grant funds ran out or additional funds were being raised.

Discount Membership Unique Challenges

Developing and running discount membership programs creates challenges within the organizations. The policies, logistics, training, and customer service activities of creating an equity enrollment process differ from the standard enrollment process. Depending on the structure of the system, an operator, non-profit or city may manage these programs. Issues raised pertained to not having a cash payment system set up; not being able to create a membership on the spot, especially when in the field; contacting people by phone/email about their membership activation; not being able to get membership cards to those who signed up; and confusion about who is responsible for managing and encouraging sign-ups.

Managing Relationships with Partners

Finally, managing the process of engagement and community relationships has been a challenge for some systems. Some partners are more open and better suited to take on some of the tasks needed to build trust and run outreach. Some respondents mentioned the importance of managing expectations with partners and building relationships with organizations that are aligned with the mission. This issue of managing relationships with community partners and residents is exacerbated with staff turnover both internally and externally, particularly among ambassadors. Lack of stable funding is often a major factor in staff retention.
Resources Needed

Representatives from cities and operators were asked what specific resources or types of information would help them to move toward including or improving equity efforts. Many of the resources needed reflect the challenges that systems are facing.

Information on Funding Resources

Financial resources were frequently mentioned, with responses ranging from simply stating that more funding, staff and time were needed to responses suggesting that information about funding models and mechanisms would be highly valuable. One response mentioned that, in cities without an identified foundation that is supportive of bike share equity efforts, models for funding equity work are needed. Another mentioned that funding for bike infrastructure would help improve bike share equity.

Technology Assistance

Several responses discussed the need for certain types of specific technical understanding or resources that were needed. One mentioned the organizational need to better understand how to get software to facilitate their programming, including offering discounts, payments, and verification. Several mentioned not having the capability to allow people to sign up without a credit card or a smartphone.

Peer Learning Opportunities

Quite a few responses spoke about the general importance of information sharing and the value of forums for peer exchanges and best practice sharing. One response noted that “learning from other equity programs is always so beneficial,” and it “would be helpful to have a hub or a group where we could all connect and share information.” Another noted the value of NABSA and PeopleForBikes as information-sharing resources.

Key Topics and Subject Areas

Many responses focused on particular topics where they would like to see more information, including information pertaining to implementing bike share equity in particular types of locations or geographies, such as best practices in communities of concern for station siting and outreach; how to implement bike share in lower-density communities; how to implement equity programs in small cities; and understanding how bike infrastructure relates to displacement of communities, along with potential policy solutions. Another topic area pertained to emerging modes and connections, with interest in learning more about dockless bike share, adaptive bike share, and effectively integrating with transit. Other topics included best practices for ambassadors, and information about the feasibility (and liability) of including options for children’s seats on bike share bikes.
System Spotlights

We heard bits and pieces of many great stories in our questionnaire responses. We wanted to dig in deeper to understand the background, challenges, partnerships, and accomplishments of people and agencies working to improve bike share equity in cities around the United States. The system spotlights presented in this section are case studies that dig deeper to provide more context and give a fuller picture of these efforts.
System Spotlight: BIKETOWN

**City Facts**
- Portland, OR
- Population: 630,331
- Demographics:
  - 29% Non-white
  - 16% Poverty
  - 10% Hispanic
  - Median Income: $61,532

**System Facts**
- Name: BIKETOWN
- Operator: Motivate/Lyft
- Launch Year: 2016
- Number of Bikes: 1,000
- Number of Stations: 146

**Notable Practices**
- Adaptive bike share options
- Pay-it-Forward Program: Covering initial sign-ups for discounted memberships. This program is funded through members sharing earned bike credits.
- Eliminating fees for discount membership holders.
- Earning credits through returning and rebalancing bikes.
- Not including criminal background checks in hiring processes.

**Background**
Portland is a bike-friendly city that came late to bike share, officially launching the Nike-sponsored BIKETOWN system in 2016. Equity has played a central role in the history, development, and growth of the BIKETOWN system. As planning for the bike share system was underway, the city partnered with Nike, which provided a sponsorship of $10 million over five years, allowing the system to expand to cover a 60% larger service area than originally planned and that would expand beyond the central city. New bike share stations were located near low-income housing complexes and locations where social services are available (Yardley, 2017).

Prior to the launch of the bike share system, community activists and city officials articulated concerns about who the system would benefit, what communities and neighborhoods would have access to the system, how community input would be incorporated into developing the system, and if funds allocated to financing a bike share system would better serve other transportation projects. Accessibility, affordability, and the impacts of bike share on historically marginalized neighborhoods were also vocalized as important equity issues that needed to be addressed in planning, developing, and managing a bike share system. As BIKETOWN has grown, it has worked to address these concerns through a variety of bike share equity programs further discussed below.
BIKETOWN For All

BIKETOWN for All (BT4A) emerged as an effort to address equity concerns from community advocates. BT4A is a reduced-cost membership for Portlanders living on a low-income eligibility. Eligibility is extended to anyone who is an Oregon Trail Card (EBT card) holders, lives in affordable housing, qualifies for utility assistance, or receives other social services. BT4A members receive a $3 monthly BIKETOWN membership, which includes 90 minutes of daily ride time. Additionally, BT4A members can receive their first month of membership free, participate in education classes, pay for their membership in cash, and have their fees automatically waived if they park BIKETOWN bikes outside of bike share stations. Lastly, all BIKETOWN members can earn a $1 credit to their account each time they return a bicycle to a station.

Launch

The pilot for BT4A was launched on October 27, 2016. The program started as a partnership between the Portland Bureau of Transportation (PBOT), the Community Cycling Center, the Better Bike Share Partnership (BBSP), Motivate, and participating affordable housing communities, social service agencies, and local non-profits serving Portlanders with low incomes. It was primarily funded by a $75,000 grant from the BBSP, and has now been taken over by Lyft/Motivate, the operators of BIKETOWN, who are providing an in-kind donation of $54,000 by reducing the cost of 500 annual memberships to comply with an equity clause in their contract.
The initial funding from BBSP went to support the Community Cycling Center, which hosted educational workshops and facilitated enrollment efforts. The workshops provided free helmets for program participants and worked with affordable housing providers, community bicycling organizations, and Spanish-speaking populations to conduct education and outreach. Notably, BIKETOWN and PBOT have collaborated with the Hacienda Community Development Corporation to not only spread awareness of bike share and the BT4A program, but to install two new bike racks, designated as free BIKETOWN parking areas, in front of the Hacienda offices. Jaclyn Sarna, the Director of Youth and Family Services at Hacienda, emphasized that addressing transportation and bicycling equity issues for lower-income and new immigrant communities is complex. However, outreach is the most important step for this initiative to be successful and needs to be coupled with low-cost options and ways to overcome other obstacles such as digital literacy, smartphone access, and language barriers.

Jonnie Ling, Director of Programs and Enterprise at the Community Cycling Center, noted riders from the program are making bike share their main transportation method to get around the city and the success of the program is a result of collaborating with community groups. This was also noted by Danielle Booth, of BIKETOWN, who emphasized the importance of this “boots on the ground” approach to helping facilitate the growth of BT4A. Although integral to the growth of ridership, these efforts are expensive given the program’s limited budget. The funds are distributed across staff hours, organizing workshops, making connections with the community, and creating marketing materials. Labor costs account for the majority of the budget.
Cash Payment

The BT4A program includes a cash payment option, which allows people without bank accounts, smartphones, or computers to access BIKEtown bikes. These options are marketed through flyers, online promotional materials, and were outlined in a press release when the program started. BT4A members who want to pay using cash can attend an educational workshop held at various locations throughout Portland. Further cash payments can occur at the Parks and Recreation Department. Signing up for the BT4A option also excludes members from being charged fees for parking outside of designated parking areas.

Hiring Practices

Internal operations and hiring practices, although not directly a part of the BT4A program, play an integral role in addressing barriers that lower-income and historically marginalized communities face, especially in finding jobs within the biking industry. The High Road hiring program targets low-income groups and people from other disadvantaged and/or nontraditional bike industry backgrounds to work for BIKEtown. The program focuses on hitting target percentages of employees from diverse and disadvantaged backgrounds. To open these opportunities to the target populations, BIKEtown collaborates with partner organizations to recruit and send out job openings. Another component BIKEtown implemented with this program is not asking questions about criminal background during the hiring process. Overall, this program is heavily shaped by Portland’s equity plan that includes “High Roads Standards” around contracting and hiring. These standards are built on three principles: offer affordable pricing; train and hire Portlanders at a family wage from underserved populations; and expand the service area to more low-income areas in the city, focusing on areas highlighted in PBOT’s Equity Matrix.

Pay-it-Forward

Through the Pay-it-Forward initiative, BIKEtown members and account holders have a chance to donate credits to cover the first month of membership for BT4A members. The goal of this program is to remove an initial payment barrier for individuals living on a low income to join the BIKEtown for All program. Since the program was launched in 2018, over 300 new BIKEtown for All users have received their first month free from credit donations. This program is funded through system user credit donations. BIKEtown account holders can earn credits on their balance through helping rebalance the distribution of bikes in the system. For example, BIKEtown members can return BIKEtown bikes that are parked outside of a station back to a station for a $1 credit. Additionally, BIKEtown members can return BIKEtown bikes to identified stations that need more bikes for a $1 credit. These options allow BIKEtown users to quickly generate surplus credits that cover their monthly membership fees and can be reallocated to financially support other users.

Since the program was launched in 2018, over 300 new BIKEtown for All users have received their first month free from credit donations.

For the first month, the Pay-it-Forward program was solely supported through other BT4A members. As part of their membership, new BT4A members agree that when they generate enough credit to pay for their next six months of membership they will donate $3 from their account to the Pay-it-Forward program. The opportunity for all members to contribute and support the Pay-it-Forward program opened during the 2018
holiday season. To participate, members completed a simple online form indicating how much credit they would like to donate to the BT4A program.

Adaptive BIKETOWN
When BIKETOWN launched in 2016, it did not have any adaptive options. However, responding to disability activists and community concerns around access for people with disabilities, PBOT convened a working group and public process to develop an adaptive program (Cox, 2017). In July 2017, PBOT in partnership with Kerr Bikes, Different Spokes, and Metro, launched the first city-sponsored adaptive bicycle rental program in the United States, called Adaptive BIKETOWN. Adaptive BIKETOWN provides bike rental services for people with varying levels of ability, offering a mix of tandem, hand cycle, and three-wheeled bicycle options and three different types of adaptive bicycling accessories. In addition to providing these rental options, Adaptive BIKETOWN offers discounted rental rates for individuals who qualify for a TriMet Honored Citizens Pass or self-identify that they are unable to ride a traditional two-wheeled bicycle. There are also additional financial aid opportunities offered through scholarships. The overall goal of the program is to increase access to cycling for people of all abilities.

Figure 23 Adaptive BIKETOWN Launch (Photo Credit: Portland Bureau of Transportation)

As noted above, Adaptive BIKETOWN came to fruition through a combination of activism and public-sector initiative. After hearing concerns from disability rights groups and City Commissioner Chloe Eudaly, PBOT provided funding to convene a working group on how to address accessibility needs for people with disabilities. The three primary components of the city’s vision included listening to needs from the
community, finding partners and community leaders, and developing a city-run program with outside operations. Interviews, focus groups, and work group sessions yielded important information about how to develop an adaptive system. For example, there is no one solution that can be universally applied for all people with disabilities, there is desire to use adaptive services for exercise and recreation, and there are unique storage, access, and assistance needs that have to be built into any bike station that provides adaptive options. After taking these voices and perspectives into consideration and finding community-based partners, PBOT devoted $30,000 to launch an adaptive bike share pilot program.

Adaptive BIKETOWN provides services through Kerr Bikes, which is located on a paved trail next to a large parking lot. Nike provides sponsorship and assistance with marketing the program. Throughout the course of the 14-week pilot, there were 59 rentals. Of those 59 rentals, approximately 40% of users were someone with a disability, and 40% were caregivers of someone with a disability. The majority of users (77%) used tricycle options. PBOT declared the pilot successful and decided to continue the program with their partners (Cox, 2018).

We conducted interviews with a set of Adaptive BIKETOWN users, who generally expressed positive experiences using the system. Many expressed that riding along the river path was a fun and therapeutic form of recreation. Despite noting the recreational benefits of the program, some noted that it would be difficult to have adaptive options in other parts of the city and would like to be able to access businesses and other forms of recreation from the path and program location. Some users, however, found the location and parking to be difficult to navigate. Lastly, individuals interviewed commented that they appreciate these options because they may not have been able to access them without the Adaptive BIKETOWN program. Multiple users expressed that Adaptive BIKETOWN provided an inexpensive form of using adaptive bicycles.

Conclusion

BIKETOWN provides an important case for illuminating the variety of ways bike share operators can programmatically address bike share equity. They created discount programs that address key barriers to accessing and continuing to utilize bike share services through the Pay-it-Forward program, eliminating fees for people in discount programs, and showing a willingness to evolve and adapt new practices as necessary. BIKETOWN has also tried to increase the scope of accessibility through providing adaptive bicycling options, expanding service area boundaries, and creating avenues for riders to earn credits to their accounts through returning bikes. Lastly, BIKETOWN has tried to incorporate equity through their hiring practices. This case illustrates a variety of important practices that bike share systems can incorporate into their programming and internal practices, while also showing where more work can be done with regard to ensuring equitable outcomes in bike share.

In addition to responses to our project survey, this case study is based on personal interviews with representatives of BIKETOWN (Danielle Booth), the Portland Bureau of Transportation (Liz Hormann, Briana Orr), Kerr Bikes (Ryan Ross), Different Spokes (Julie Noel), the Community Cycling Center (Jonnie Ling), and Hacienda (Jaclyn Sarna). We also conducted interviews with several BIKETOWN for All and Adaptive BIKETOWN members/users. Other sources consulted for this case study include the BIKETOWN website and:


System Spotlight: Bublr

<table>
<thead>
<tr>
<th>City Facts</th>
<th>System Facts</th>
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<tbody>
<tr>
<td>Milwaukee, WI</td>
<td>Name: Bublr Bikes</td>
</tr>
<tr>
<td>Population: 599,086</td>
<td>Operator: Bublr Bikes</td>
</tr>
<tr>
<td>Demographics:</td>
<td>Launch Year: 2014</td>
</tr>
<tr>
<td>• 64% Non-white</td>
<td>Number of Bikes: 750</td>
</tr>
<tr>
<td>• 27% Poverty</td>
<td>Number of Stations: 100</td>
</tr>
<tr>
<td>• 18% Hispanic</td>
<td></td>
</tr>
<tr>
<td>• Median Income: $38,289</td>
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</tbody>
</table>

Notable Practices

- Developing partnerships with public housing authority.
- Paying for partner staff time if they are expected to engage in outreach and education.
- Taking the next step in making bike share accessible regardless of physical ability by bringing dockable adaptive bikes into the point-to-point system.
- Expanding the pathways into bike share by targeting recreational trip purposes as a first step (or pedal).
- Encouraging bike share users to advocate for more bike lane infrastructure to increase safety.

Background

Bublr Bikes is a station-based bike share system with stations in the city of Milwaukee and neighboring cities of Shorewood, Wauwatosa and West Allis. Bublr Bikes, which is operated by a non-profit (Midwest Bike Share, Inc.), was named after the local term for the drinking fountains located around Milwaukee - “bubblers.” The system was launched in 2014 with 10 stations, and has expanded to 750 bikes and 100 stations, with more on the way. The City of Milwaukee applied for and received federal funding through the Congestion Mitigation and Air Quality Improvement program for early stations and bikes, and has been involved in planning and site preparation for bike share stations. Shorewood, Wauwatosa, and West Allis have separate operating agreements with Bublr.

From the start, Bublr sought to build equity into the bike share system, with a mission of delivering “a sustainable, excellent bike share system for all” and a stated vision that “bicycles are an accessible, convenient and integrated travel option for everyone.” Shortly after beginning operations, Bublr commissioned a report on how to address equity and truly make Bublr “a bike share system for all Milwaukeeans.” The report, which was based on extensive outreach in communities around Milwaukee and surveys of residents, outlined a set of actions that Bublr and the City of Milwaukee should take to promote
equitable use of Bublr, particularly in lower-income communities. Recommended actions started with ensuring there were stations in such communities, having discounted passes and sign-up options that do not require credit cards or cell phones, involving the community in planning activities for the system, year-round community outreach, and hiring from lower-income communities.

Figure 24 Bublr Station (Photo Credit: Paul Sabelman https://www.flickr.com/photos/pasa/30277332977)

Housing Authority Partnership

Early on, Bublr faced a challenge when planning how to provide bike share in lower-income areas, specifically implementing an equity approach that provides a useful service to lower-income residents. Bublr did not want to just place stations in low-income neighborhoods and walk away. Moreover, they did not want to “just check a box” on equity by placing the stations in target communities if the stations were not going to get used. On a more practical level, stations without ridership do not pay for themselves, and so would not benefit anyone.

**Bublr did not want to just place stations in low-income neighborhoods and walk away.**

This led Bublr to partner with the Housing Authority of the City of Milwaukee (HACM) in a project that placed bike share stations at two public housing complexes, while working intensively with the Housing Authority staff to engage residents. This program, funded through a Better Bike Share Partnership grant, included a 90% discount off the normal annual pass rate (or $8 per year), a cash payment option, help with enrollment, classes on riding, and organized rides. James Davies, Bublr Director of Operations and Planning,
noted that having “all of the pieces in place,” including the stations, partnerships, grants to pay for outreach and reduced prices, “instead of just putting a station in some place and calling it done” was essential. This holistic approach allowed them to approach equity “in a way that hopes of accomplishing the actual goal of equity – not paying to maintain a station that no one is using anyway.”

The HACM sites included one senior housing location and one that was for lower-income residents. Davies noted that the uptake at the senior housing location exceeded expectations, and that they heard stories from people who were using bike share to get exercise and manage diabetes, who lost 25 pounds, or who used bike share to get to their volunteer jobs.

The original HACM grant allowed Bublr to provide funding to the housing complexes to pay for staff time. This funding was essential because, in many instances, the HACM staff were the frontline for the bike share system in the eyes of residents. Because the grant paid for part of their time, they were able to take the time to really engage with residents, lead aspects of the outreach, and not do so at the expense of their other work. Davies noted that when there is not funding to support staff time, they may still be a supportive and good partner, but that there are not as many boots on the ground to promote Bublr since HACM staff time is dedicated elsewhere.

**Program Expansion**

Originally based at just the two HACM locations, Bublr received two additional grants, a small add-on grant from BBSP and a grant from the Anthem Foundation (the philanthropic arm of Anthem, Inc., a health insurance plan provider), which combined to fund an expansion of the program to anyone living in HACM housing complexes. In 2017, it expanded eligibility for the discount program to any FoodShare recipients (FoodShare is Wisconsin’s food/nutrition assistance program, and recipients use state-issued benefits cards that are used to verify eligibility).

The FoodShare expansion, while allowing Bublr to provide discounted memberships citywide, also provides a cautionary example of challenges that can get in the way of efforts to engage the community. In launching the FoodShare expansion, Bublr sought to target several stations for intensive outreach, partnering with organizations in proximity to the target stations, including the 16th Street Community Health Center and Pete’s Fruit Market (a grocery store).

*The FoodShare expansion, while allowing Bublr to provide discounted memberships citywide, also provides a cautionary example of challenges that can get in the way of efforts to engage the community.*

Through an unfortunate set of bad luck, both the target stations had to be removed or were otherwise rendered unusable. First, a building facade adjacent to one of the stations (near Pete’s Fruit Market) collapsed on top of the station, destroying nearly all of the equipment and bikes parked there at the time of the collapse. Thankfully no one was hurt, however, Bublr has been engaged in a protracted effort to get an insurance payout to cover the damage and may have to swallow the costs. Meanwhile, at the other target
station, an adjacent building required foundation repair, and the bike share station had to be removed. Both of these issues occurred just as the peak summer season was getting started, with the stations being pulled out of service in June 2018. Davies noted that getting the stations back online was a serious challenge for Bublr, in part because they are a small non-profit and did not have the resources to quickly fix the problem (and restore service to these locations).

Adaptive Cycles

In another effort to work toward their mission of being a “bike share system for all,” Bublr is launching an adaptive bike share program in 2019, although the process to get there has been several years in the making. When initially planning Bublr, the city of Milwaukee received some pressure to commit to having adaptive bike share options as part of the system. However, because the bike manufacturer for the system did not offer adaptive bikes, there was no clear solution in sight. In an effort to identify a path forward, the city formed a working group that brought many interested and informed stakeholders to the table, including disability rights advocates, community partners and local universities. The working group sought to break down exactly what could be done, what was feasible, and how to start moving ahead with some adaptive bike options.

[T]he adaptive bike share program in Milwaukee needed to be integrated into the overall Bublr system.

In scanning the landscape of adaptive bike share programs around the country, Milwaukee looked to some of the trail blazers in this area, including Portland’s Adaptive BIKETOWN program and Detroit’s Adaptive MoGo program. Both of these adaptive bike share programs are based around the model of providing a fleet of adaptive bikes for rent on an hourly basis, with rentals occurring at a single location next to popular trails. However, the working group felt that the adaptive bike share program in Milwaukee needed to be integrated into the overall Bublr system, including allowing for point-to-point (station-to-station) trips and being available throughout the system. Meanwhile the city and Bublr still didn’t see a viable path to creating such a system with the available equipment and no integrated models to which to look.

ADA Grievance

In October 2017, an Americans with Disabilities Act (ADA) grievance was filed with the city, prompting the city to launch an ADA grievance procedure and applying pressure to bring adaptive bikes to Milwaukee as an integrated part of the bike share system. Representatives from both Bublr and the city indicated that, while they had wanted to have an adaptive bike share option before, the grievance increased the pressure to make something happen and elevated the matter to a top priority. It also created an opportunity to expand bike share to serve more of Milwaukee. They realized that, just because the right option didn’t exist yet, did not mean that there was nothing that could be done. Over the next year, the city and Bublr worked together on a plan to purchase adaptive bicycles and retrofit them to be compatible with the bike share docks in the system, enabling them to be located on the system map (app and online) and be checked in and out like other bike share bikes.
Toward a Launch

The adaptive bike program will launch with a total of 22 adaptive bikes (all technically tricycles), likely including nine side-by-side bikes, eight trikes, and five hand cycles. The City of Milwaukee bought 17 of the cycles, with Bublr buying the other five; Bublr will manage and operate the cycles. Five of the adaptive cycles will be based at a park facility in Wauwatosa, a western suburb of Milwaukee that offers recreational biking opportunities along the Menomonee River.

Bublr also received a grant from the Anthem Foundation to conduct outreach and community building activities, including five organized rides throughout the summer of 2019. The Ability Center, a Wauwautosa-based organization whose goal is to “provide a higher quality of life for people of all abilities by transforming greater Milwaukee into the most universally inclusive recreation destination in the world,” will be facilitating trainings on the adaptive bicycles on the second Saturday of every month once the program launches. Organized rides will seek to engage people riding Bublr bikes, including adaptive bicycles, as well as other Milwaukeans. Bublr’s adaptive bike share program makes Milwaukee the first major American city to integrate adaptive bikes into its bike share system.

Recreational Riding as an Entry Point

More people in the United States ride bikes for recreational purposes than for transportation purposes. A national survey of over 16,000 adults taken in 2015 found that 32% of respondents reported riding a bike for recreation, compared to 15% for transportation (PeopleForBikes, 2015). There is also evidence to suggest that people of color are more likely than white residents to view bike share as something they would try for recreational purposes, as opposed to for transportation purposes (Hannig, 2015; McNeil et al., 2017). Armed with this information, Bublr is seeking to use the allure of recreational riding to get people to try bike share and get comfortable riding on some of the many trails in Milwaukee.

Bublr’s Davies noted that he had seen some of the research on views toward bicycling and bike share, some of it written by City of Milwaukee Pedestrian & Bicycle Coordinator James Hannig (as part of his master’s thesis prior to joining the city staff). One takeaway that stuck for Davies was the notion that it may be easier to first get people comfortable riding a bike in a recreational setting. Looking to capitalize on the trails in Milwaukee, Bublr has been working to get more bike share stations at those trail locations with a goal of helping people get a baseline level of comfort on a bike, which might develop over time into comfort riding to work or riding to school.

Challenge: Lack of Great Bike Infrastructure, Particularly in Lower-Income Areas

“There’s no amount of engagement and providing bike share at whatever price that can overcome if people don’t feel safe riding their bikes to where they live.”
One of the biggest challenges facing Bublr in terms of increasing the use of bike share in lower-income neighborhoods is an issue that we heard from a number of cities: the lack of a connected network of safe and comfortable bike routes. As Davies put it, “There’s no amount of engagement and providing bike share at whatever price that can overcome if people don’t feel safe riding their bikes to where they live.” When Bublr has surveyed residents about bike share, the top barrier they always hear involves people not feeling safe riding in their neighborhood. Bublr shares these findings with the city, and directs (and encourages) residents to contact the appropriate policy and decision makers to request safe bicycle infrastructure. Davies hopes that bike share can play a role in increasing the number of people biking and advocating for safe infrastructure to the point where their voices are heard and acted upon.

**Conclusion**

Bublr’s path toward making a bike share system that equitably serves all of Milwaukee has been one defined by making iterative steps while rethinking and working to expand the definition of equity. Making bike share work better at actually serving low-income, historically marginalized, and underserved populations requires a combination of practices, partnerships, and funding mechanisms. There isn't a silver bullet approach to equity, but Bublr’s mission to serve all Milwaukeeans has been a guiding force pushing them to continue to evolve.

*In addition to responses to our project survey, this case study is based on personal interviews with representatives of Bublr Bikes (James Davies) and the City of Milwaukee (James Hannig, Kate Riordan). Other sources consulted for this case study include the Bublr website and:*

System Spotlight: Healthy Ride

<table>
<thead>
<tr>
<th>City Facts</th>
<th>System Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pittsburgh, PA</td>
<td>Name: Healthy Ride</td>
</tr>
<tr>
<td>Population: 305,012</td>
<td>Operator: Pittsburgh Bike Share</td>
</tr>
<tr>
<td>Demographics:</td>
<td>Bikes: Nextbike</td>
</tr>
<tr>
<td>- 35% Non-white</td>
<td>Launch Year: May 2015</td>
</tr>
<tr>
<td>- 20% Poverty</td>
<td>Number of Bikes: 650</td>
</tr>
<tr>
<td>- 3% Hispanic</td>
<td>Number of Stations: 112 (125 planned by end of 2019)</td>
</tr>
<tr>
<td>- Median Income: $44,092</td>
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</tr>
</tbody>
</table>

Notable Practices

- Often one program element is not enough to drive success in ridership. Healthy Ride has a suite of equity programming to support overall efforts and program goals.
- Experimenting with station size and density has given the organization more flexibility and adaptability in rolling out bicycles in new neighborhoods.
- Through a partnership with the local transit agency, the bike share system can provide important first- and last-mile connections for individuals moving throughout the city and increased access to the transit system.

Background

Bike Share Pittsburgh launched the Healthy Ride system on May 31, 2015, and by the end of the summer had 50 stations and 500 bicycles. In spring 2018, Healthy Ride started a system expansion; there are currently around 105 stations and 650 bikes. Although ridership is greatest during the warmer temperatures in spring and summer, with an average of over 10,000 trips per month, Healthy Ride bikes and stations are fully operational year-round including colder months, garnering around 2,000 trips per month. Popular station locations for both rentals and returns are Market Square, Southside Works, the Northside Trail, and stations in the Strip District.

Bike Pittsburgh, the city’s bicycling advocacy organization, initially raised capital from local foundations and donors to support a match for a $1.6 million Congestion Mitigation and Air Quality improvement grant from the Federal Highway Administration. This fundraising campaign covered planning and capital costs of equipment purchases. The current expansion is occurring with funding from the Pennsylvania Department of Community and Economic Development, Multimodal Transportation Fund and additional support from Pittsburgh’s foundation community.
Pittsburgh is a diverse community, 35% of which is comprised of people of color. In addition, roughly 20% of Pittsburgh’s population lives at or near poverty, subsisting on annual household wages of $44,100 or less for a family of four. From the start, Healthy Ride sought to build equity into the bike share system with a mission “to expand access to public transit through easy-to-use, affordable active transportation opportunities.” One of its core values is Equity & Inclusivity, in which “Pittsburgh Bike Share envisions using affordable active transportation systems like bike-sharing as a way to create equity for residents in underserved neighborhoods that have been traditionally challenged by deficiencies in urban mobility.”

![Figure 25 Healthy Ride Riders (Photo Credit: Pittsburgh Bike Share)](image)

To help meet the goals of Healthy Ride, increase use of the system in specific neighborhoods, and shift ridership demographics toward citywide demographics, the Pittsburgh Bike Share team has developed a comprehensive equity approach. The team has worked on developing programs related to community outreach and neighborhood initiatives, low-cost membership pricing, 500 free memberships to be distributed through community partners, and system planning to increase access for low-income and minority communities. Healthy Ride has been supported by the Better Bike Share Partnership, with an enhanced neighborhood ambassadors program that supports learn-to-ride classes, registration events at local businesses and partnership organizations, group rides, and targeted neighborhood marketing as part of their initiative in the Homewood, Larimer and Hill District neighborhoods.

Two of the more unique aspects of the overall equity program is their approach to “right-size” station density and locations and enhancing transit integration.
System Density and Stations

The Healthy Ride system is currently in the midst of expansion, which will increase the total number of stations to 175. The goal of this expansion is to create more density, connect new neighborhoods and locate more stations in underserved areas. One of the key components of the expansion is to right-size the stations. Instead of large stations with 19 docking points balanced with eight to 10 bikes at a station every five blocks, Healthy Ride would install smaller stations with six to eight docking points balanced with two to four bikes at a station. This allows more flexibility and the ability to build the system around the needs of the city with a more efficient use of resources.

An important feature of the smaller stations’ rollout is the “dockless” feature to the bikes. In case stations are full, bikes can be locked next to a Healthy Ride station without any available docking points and without additional fees, which eliminates the need for larger dock stations.

By placing smaller stations in a neighborhood, they could start a dialogue without a perception of intrusion.

One of the reasons the Healthy Ride team embraced this new strategy was in part from experience and feedback from installations in certain parts of the city. They found the placement of a large bike station surprised many residents and could draw criticism before the residents started to see the potential value and utility of bike share. By placing smaller stations in a neighborhood, they could start a dialogue without a perception of intrusion. They could also add density to the area and provide more locations nearby to people in the neighborhoods. The team has found that this strategy has helped in engagement and outreach efforts, especially in neighborhoods new to the system.

Transit Integration

In late 2017, the Healthy Ride system piloted one of the first-of-its-kind partnership with the local transit agency, the Port Authority of Allegheny County. All Port Authority ConnectCard pass holders received an unlimited number of 15-minute bike share trips for free, simply by linking their ConnectCard to their Healthy
Ride account. During the pilot in 2018, nearly one in every four trips recorded on Healthy Ride were attributed to ConnectCard users.

_All Port Authority ConnectCard pass holders received an unlimited number of fifteen-minute bike share trips for free, simply by linking their ConnectCard to their Healthy Ride account._

The development of this pilot was driven by Pittsburgh Bike Share and their vision that bike share can provide easy and affordable access to transit riders by filling the important gap in first- and last-mile trips and get more people experiencing the system. Though it took two years in working with the Port Authority to convince agency decision makers to create the program, it took only two weeks to implement the technology and system. This shows how sometimes the coordination can be much harder than the implementation.

The pilot was very successful in increasing new bike share ridership, and 20-25% of trips during 2018 were taken by people using the ConnectCard, especially by people in areas of the city where Healthy Ride had not yet expanded. There were some revenue impacts from a reduction in monthly members and some abuse of the 15-minute free rides. To minimize abuse of the free rides, users now have to register a payment method with their Healthy Ride account. Pittsburgh Bike Share is working with the Port Authority to analyze the ridership data and is in discussions to create a more formal partnership that would help offset some of the revenue loss. While lower-income people and people of color tend to be overrepresented among transit riders in general, specific demographic profiles of ConnectCard holders and those using the free bike share promotion were not available to assess the equity impact of the program.

![Figure 27 Healthy Ride Rider (Photo Credit: Pittsburg Bike Share)](image)
Conclusion

Pittsburgh Bike Share and Healthy Ride wagered on a number of innovative efforts to make bike share work for a broad swatch of residents. By adjusting the station size, they were able to adjust their system model to accommodate more neighborhoods while still accommodating the level of bike share activity occurring in areas that do not see as many rides. By partnering with the transit agency to offer free rides to ConnectCard users, they managed to increase the number of riders and open conversations about how to make the partnership manageable financially in the long run. These efforts, coupled with their community outreach, distribution of free memberships, and their ambassadors program have given bike share a solid foothold in Pittsburgh that looks primed to continue to grow in the coming years.

In addition to responses to our project survey, this case study is based on personal interviews with representatives of Healthy Ride (David White, Erin Potts, and Heather McClain) and the Port Authority of Allegheny County (Andrea Elcock). We also consulted the Healthy Ride website.
System Spotlight: LimeBike - Ithaca

<table>
<thead>
<tr>
<th>City Facts</th>
<th>System Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ithaca, NY</td>
<td>Name: LimeBikes</td>
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<tr>
<td>Population: 30,720</td>
<td>Operator: Lime</td>
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<tr>
<td>Demographics:</td>
<td>Launch Year: 2018</td>
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<tr>
<td>• 36% Non-white</td>
<td>Number of Bikes: 250</td>
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<tr>
<td>• 32% Poverty</td>
<td>Number of Stations: Dockless</td>
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<td>• 7% Hispanic</td>
<td>System</td>
</tr>
<tr>
<td>• Median Income: $31,967</td>
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</table>

Notable Practices:

- Collaborating with private bike share operators presents opportunities and challenges for cities and non-profits, not only in terms of service delivery but also in achieving equity goals.
- Grant funding plays a significant role in opening up opportunities to implement equity programming.
- Bike share ambassador programs are most successful when ambassadors have deep connections with the communities they are trying to engage. Repeated engagement with a community builds trust.
- Bike share events should combine skill building with community building. This occurs through designing events for a wide range of groups, with a wide range of abilities.
- Smaller cities can move quickly because they can do more with the same amount of money and may not have as fraught relationships between advocacy groups and other stakeholders.

Background

In April 2018, Bike Walk Tompkins (an active transportation organization) and the City of Ithaca partnered with Lime to introduce a fleet of over 200 dockless bike share bikes into Ithaca. Since the initial inception of the bike share system, Bike Walk Tompkins (BWT) and Lime have spearheaded equity efforts, such as coordinating a discounted, cash payment program and utilizing an ambassador program to conduct outreach and coordinate bike classes for the greater community. The strides taken towards cultivating an equitable bike share system, however, are facing challenges. As Lime pivots away from pedal bikes to providing more e-bike and e-scooter options, and funding for their ambassador program becomes a challenge to find, sustaining equity efforts becomes more difficult. This case study highlights how BWT and the City of Ithaca are navigating their relationship with Lime, and how smaller cities and bike share systems can provide insights into addressing bike share equity issues.
Figure 28 City Council Members and Bike Walk Tompkins Supporters Ride LimeBikes During the Launch Party at Greater Ithaca Activities Center (GIAC) (Photo credit: Edna Brown for Bike Walk Tompkins)

**Bringing Bike Share to Ithaca**

Bike share is often associated with large cities and metropolitan areas, where there are lots of tourists, easy first- and last-mile connections, and density. Ithaca, with roughly 31,000 residents, is a relatively small city to have a bike share system, let alone a system that has placed equity at the forefront of its agenda. Understanding how bike share came to Ithaca provides an important backdrop for illuminating the role bicycling advocacy groups can take not only in promoting bicycling through bike share, but also in shaping the landscape of bike share equity in the places they serve.

**Origins of Bike Share in Ithaca**

There were a number of factors that brought bike share to Ithaca, but two of the major motivating forces detailed by Hector Chang, the Active Transportation and Bike Share Coordinator for Bike Walk Tompkins, and Tim Logue, the Director of Engineer Services for City of Ithaca, were BWT’s role in advocating for more bicycling options and a grant from the New York State Energy Research and Development Authority (NYSERDA). Bike share had been on the minds of city officials, advocates, and citizens for some time before the initial launch of Ithaca’s bike share system, but the city did not have money to fund this type of program.

BWT engaged with city officials and representatives from Cornell to apply for an NYSERDA grant to develop a plan and research methods to double the bicycling transportation as a mode share in Ithaca. In March 2017, NYSERDA awarded BWT a $218,757 grant, which was used to develop a Blueprint for Better Bicycling and led BWT to craft a request for information (RFI), researching various private bike share operators and evaluating the proposals. BWT took on this role partially out of their position as an advocacy group and recipient of the grant, but also partially because the City of Ithaca didn’t initially have a strong stance on equity when it came to bike share.
Goals for Bike Share

Mr. Logue noted that the city thought bike share would help them meet their goals for tourism, economic development, and transportation, but that though “equity was not a large goal or priority for the city at first” it “was always on the agenda for Bike Walk Tompkins.” Mr. Chang noted that equity was a central component of the RFI because BWT had already been involved in equity-based work and was concerned about the history of how bike share rolled out in others cities: primarily serving upwardly mobile white people. BWT wanted bike share and bicycling to be accessible to everyone in Ithaca, so equity and lowering upfront and ongoing costs for users were major priorities in evaluating which bike share operator to choose.

Vendor Selection

BWT recommended that the City of Ithaca use Lime’s dockless bike share option. As Mr. Logue noted, a compelling reason to use LimeBike was the cost to the municipality – the city wouldn’t have to provide docks, operate the system, or maintain the bikes. Lime also offered low pricing for rides, a willingness to provide a cash payment option, and a smartphone free option through their Lime Access program.

The City of Ithaca signed a memorandum of understanding (MOU) that includes an operations oversight committee that consists of Lime’s Mr. Logue and Mr. Chang, and a representative from Cornell University. At these meetings, the members review operations, evaluate trip start and end data, and access Lime’s dashboard data. Lime shares data with the city and BWT. Mr. Logue noted this data allows the city to answer questions about bicycle riding patterns that other methods of data collection couldn’t illuminate. Despite including some language around having an oversight committee, the MOU does not include any language around requiring specific equity outcomes or keeping a specific ratio of the fleet as pedal bikes.

Equity Efforts

The Ithaca Bike Champions and Lime’s Lime Access program are major elements of Ithaca’s bike share equity strategy. These two efforts attempt to open access to bike share through providing community outreach and educational opportunities to targeted populations and by providing a discounted, cash payment option for users, which isn’t dependent on having a smartphone.

Ithaca Bike Champions

Ithaca Bike Champions (IBC) is a bike share ambassador program which aims to ensure that bicycling and bike share in Ithaca reflect the city’s population in terms of race and socioeconomic status. Ithaca was awarded $27,000 in the Round 3 Challenge grant from the Better Bike Share Partnership and also received grants from the Federal Transit Administration. The program cost approximately $35,000 to implement. Additional in-kind resources from the local Lime operator and Ithaca Youth Bureau helped support these efforts through staff time and free bike rentals.

An important component of the program: hiring individuals from or with strong connections to historically underserved communities.
With this funding and support, BWT hired and trained seven Bike Champions to organize outreach/education services related to the launch of the dockless system in the city, help sign up people for the Lime Access program, and advocate for bicycling within the community. The Champions were expected to do events that allowed the public to test out bikes, learn how to ride, and gain a higher degree of comfort riding on the road. To meet these goals, partners and bike share ambassadors hosted learn-to-rides and bike extravaganza events. At these events, people were allowed to try out a variety of bicycles and trikes, while also having the chance to receive one-on-one training. Mr. Chang noted that a major component of the events was taking into account the full range of participant skills and abilities, including those who needed training, those who were already comfortable riding, and those who wanted to participate from the sidelines. Moreover, Mr. Chang highlighted an important component of the program: hiring individuals from or with strong connections to historically underserved communities. Hosting events in the communities BWT was targeting, having ambassadors with strong connections in those communities, and leveraging a wide variety of supports helped make these successful.

“Getting [seniors] on board meant building their confidence up by providing other helpful options... this is different than assuming that people know how to ride a bicycle.”

A notable success of this program was its engagement with Ithaca’s senior population. One of the ambassadors had a strong connection with the senior community and a community center that hosted a number of senior events in Ithaca. Bike and bike share events engaging seniors were subsequently held at this space. Given this population’s concerns around falling, feeling comfortable balancing on traditional two-wheeled bikes, and breaks from riding, BWT purchased a recumbent tricycle, strider bikes, and other adaptive options to complement other options provided by Lime and a local bicycle rental shop. Mr. Chang noted, “[It] was necessary to provide a range of options that were suitable for seniors as they may not have bicycled in years.” Engaging seniors required not only considering ability but confidence about riding. Mr. Chang further emphasized, “Getting [seniors] on board meant building their confidence up by providing other helpful options... this is different than assuming that people know how to ride a bicycle.” Repeated engagements with bicycling and the organization helped build trust and interest in bicycling.
In reflecting on the successes and areas for improvement, Mr. Chang emphasized hiring a group of Champions with deep connections in other communities and areas they want to target, such as lower-income groups that live in mixed-income or subsidized housing. An ambassador’s connection to community groups and the target population proved crucial to the success of events and getting more people on bikes. Next, he emphasized applying lessons learned from engaging seniors to other populations, specifically not assuming that everyone coming to these events has experience riding bicycles or feels confident riding bikes. Getting people on bikes and engaging them in spaces they already use can not only push people to bike more, but also allows them to become advocates for biking. Lastly, he emphasized that managing seven part-time staff can be difficult, the events take a lot of staff time and resources to run successfully, and finding funding for this program ultimately determines the depth and breadth of doing this type of outreach.

**Lime Access**

A major motivating factor for choosing to partner with Lime was their ability to discount rides through the Lime Access program. Overall, the Lime Access program provides people without smartphones, data plans, bank cards, and lower-income individuals access to Ithaca’s Lime fleet at a discounted rate. Lime Access users can text to unlock bikes, pay in cash (via PayNearMe or at BWT’s offices), and receive discounts for both pedal bikes and electric bikes. Lime Access users receive a 95% discount on pedal bikes, which roughly equates to $5 for 100 30-minute rides. Lime Access users also receive a 50% discount on Lime e-bikes. Even though BWT plays a role in signing up riders for the Lime Access program, they do not have any control over setting the price for using the bike share system.

At the time BWT recommended that the City of Ithaca partner with Lime, Lime was just starting to put together the Lime Access program. The MOU the city signed, however, did not require Lime to provide a cash payment option. During the negotiation period, BWT leveraged the research they did on other companies to push for a cash payment system. Because of the limited options for accessing potential PayNearMe locations in Ithaca, BWT proposed that their headquarters could also act as a cash payment site.
Not only did this help create an easier place to access this service, but also helped simplify the process for signing up for Lime Access. Typically, individuals have to email sensitive documents and verify their socio-economic status with Lime. In Ithaca, however, BWT acted as a trusted partner, verifying income status and sending emails on their behalf.

Bike Champions have tried to expand these facilitated enrollment efforts by signing people up at events and in the field via their mobile devices. BWT has also sent Champions to soup kitchens and a women’s resource center to sign people up, which Mr. Chang reported as being a successful strategy. Additional marketing efforts have been through providing information about how to sign up for Lime Access through BWT’s website and through creating quartercards and posts to promote this option to the greater community.

E-Bikes, E-Scooters, and Equity
Over the course of the last year, Lime has started deploying more e-bikes, phasing out pedal bikes, and pushing to deploy e-scooters. There are concerns about the equity of this shift given the structure of the Lime Access program’s discounts for using pedal bikes versus e-bikes, along with concerns over safety and balancing associated with using e-scooters.

Lime began incorporating e-bikes into this system in September 2018. By December 2018, e-bikes were getting used at a higher rate than pedal bikes and now make up the majority of the fleet. When asked about the equity impacts of these operational changes, Mr. Chang said at this point it's hard to tell the impact on lower-income neighborhoods. For example, he is unsure if lower-income residents are using bike share less as a result of the increased cost. Mr. Logue reflected a similar sentiment. They both noted, however, that many residents have expressed liking the e-bike option because it facilitates navigating Ithaca’s steep hills, despite being considerably more expensive per ride at the regular rate and through the Lime Access program. Yet, if Lime phases out pedal bikes, there are clear concerns about keeping bike share affordable for lower-income groups.

At the end of 2018, local Lime Operations Manager Jeff Goodmark told Ithaca’s Common Council that Lime wanted to bring e-scooters to Ithaca in the fall of 2019. However, the Common Council declined. After conducting research on how other cities were approaching regulating and permitting e-scooters, the Common Council recommended the City of Ithaca do a pilot. Even though there is some concern over safety and parking, Mr. Logue reported that the council was partially motivated to do the pilot due to a fear that Lime would take away bikes or completely replace the bikes with scooters. The city is working on formalizing a new MOU with Lime to keep a certain ratio of pedal bikes and e-bikes to scooters.

Mr. Logue noted another complicated issue with introducing e-scooters in Ithaca: it is currently illegal in the state of New York to use e-scooters on the public right-of-way. Even though Lime has discussed doing some form of profit sharing with the city to operate e-scooters in Ithaca, Mr. Logue said doing so raises concerns around the government taking money for letting a company provide an illegal service.
The city is currently working to ensure that a certain ratio of pedal bikes will remain in the fleet through renegotiating the MOU as they go forward with an e-scooter pilot.

Bike Walk Tompkins, despite playing a role in advocating for bike share and bringing Lime to Ithaca, has no direct control over the type of bikes Lime provides. The city is currently working to ensure that a certain ratio of pedal bikes will remain in the fleet through renegotiating the MOU as they go forward with an e-scooter pilot. However, both Mr. Chang and Mr. Logue expressed concern that Lime could phase out pedal bikes because it is more profitable to focus on electric options. As a result, Mr. Chang believes that the best thing BWT can do is continue to advocate for bicycling in general and getting more people onto bikes.

Figure 31 City Council Members and Bike Walk Tompkins Supporters Ride LimeBikes During the Launch Party at GIAC
(Photo credit: Edna Brown for Bike Walk Tompkins)

Conclusion
The future of bike share and bike share equity in Ithaca are being heavily shaped by Lime’s changing operational model and how the city engages with Lime. This case illustrates the opportunities and challenges for using and relying on a private operator to provide bike share services in any city. Collaborating with private operators provides opportunities to understand biking behaviors at a deeper level through data sharing. It also allows cities to provide bike share services at no expense to the city, while also giving advocacy groups another avenue for promoting bicycling and other forms of active transportation. However, there may be limited opportunities to directly shape and determine equity outcomes, pricing structures, service delivery models, and mode of transportation provided by the company. These challenges point to having better upfront negotiations and strongly worded MOUs that place equity at the forefront, but also allow the city to be flexible and responsive to the changing operations and profit-making efforts that private companies deploy.
In addition to responses to our project survey, this case study is based on personal interviews with Walk Bike Tompkins (Hector Chang) and the City of Ithaca (Tim Logue). Other sources consulted for this case study include:


System Spotlight: Metro Bike Share

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<th>County Facts</th>
<th>System Facts</th>
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<tbody>
<tr>
<td>Los Angeles County, CA</td>
<td>Name: Metro Bike Share</td>
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<tr>
<td>Population: 10.16 million</td>
<td>Vendor: BCycle</td>
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<td>Demographics:</td>
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<td>• 74% Non-white</td>
<td>Launch year: 2016</td>
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<td>• 17% Poverty</td>
<td>Number of bikes: 1,400+</td>
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<td>• 48% Hispanic</td>
<td>Number of stations: 140</td>
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<td>• Median Income: $61,015</td>
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Notable Practices

- Metro Bike Share was one of the first communities in the U.S. to connect bike share and transit ticketing.
- Working with the Los Angeles County Bicycle Coalition and People for Mobility Justice, outreach and feedback in English and Spanish (20% of survey responses were in Spanish) allowed for a better understanding of the ways bike share could serve Los Angeles communities.
- A key factor in achieving equitable outcomes is a mutual understanding of what an equitable system means and the goals and actions to achieve it. The need to get to a shared understanding of equity is a best practice for partnerships working on this locally.

Introduction

The Los Angeles Metropolitan Transportation Authority (LA Metro) is the regional transportation agency that manages and operates transit and bike share within LA County. LA Metro’s vision includes three elements: increased prosperity for all by removing mobility barriers; swift and easy mobility throughout LA County, anytime; and accommodating more trips through a variety of high-quality mobility options. To bring this vision to fruition, LA Metro strives to ingrain equity within all they do – planning, designing, building, and operating their transportation network.

Metro Bike Share

Metro Bike Share, which launched in 2016, is administered and overseen by LA Metro in partnership with Bicycle Transit Systems (BTS), a third-party operator. It has expanded across the region, currently providing services to USC, MacArthur Park, Koreatown, North Hollywood, the Westside communities of Palms and Venice, and at the Port of Los Angeles. Participating cities enter into a MOU with LA Metro to split the capital and operating costs to bring bike share to their communities. The program has more than 1,400 bikes and 140 stations available to users, with plans to continue to expand the system.
LA Metro is one of the few U.S. bike share programs to incorporate bike share into their transit fare card (TAP card) system. When a transit rider purchases a TAP card, they can go online or call Metro Bike Share to register their bike share membership and link it to their TAP card. The bike share membership is a separate account that requires its own credit card registration to check out bikes and to cover any over usage fees or lost bikes (something not required for the transit function). Once the membership is registered, the bike share account is added to the RFID chip on the user’s TAP card and the card can be used at a bike share station to check out a bike. Because the transit and bike share accounts are separate, funds stored on the TAP card for transit cannot be used for bike share, and vice versa.

A major consideration for LA Metro has been the introduction of dockless technology – both in its own system and as competition from other systems in the area. LA Metro’s Venice system launched in 2017 with the same dock-based technology that was used in Downtown LA. By the time expansion planning to other Westside communities began in late 2017, the equipment vendor had added dockless smart-bikes to their fleet options and LA Metro strategized on how to best utilize the movement of the industry to dockless technology within the existing investment in dock-based technology. In early 2019, the Venice system was converted from a dock-based system to dockless smart-bikes so that they would be compatible with the new expansion into the Westside communities.

The system in the downtown core is still dock-based and has been expanded to USC, MacArthur Park, and Koreatown. At this time, the systems are separated from each other by distance and other barriers (e.g., the Los Angeles River and a number of freeways), but as they expand closer to one another, the possibility to connect is imminent. This will need to be considered in future expansion plans and some early ideas include creating “hybrid corridors,” where both dock-based and smart-bike equipment will be available at stations in the transition zone. This will allow parking of both types of bikes or transfer from one type to another.
LA Metro recently introduced a pilot program to test the use of electric-assist (e-assist) bikes in its bike share fleet. This has the potential to reduce some barriers to entry and allow for more people to use Metro Bike Share. Initial indications are that the electric-assist bikes are more popular than the standard bikes. Additionally, there is a dockless bike and e-scooter program with another 10,000 devices that are added to the shared fleet within LA.

**Equity Programming**

Bike share is a useful transportation option for communities experiencing transportation inequities that often lack affordable or reliable transportation options. Metro Bike Share has a number of programs intended to improve access to the system including:

- **TAP Card Integration**: The option to add a Metro Bike Share account to a Metro user’s TAP card allows a seamless transition between transit and bike share. The TAP Card integration also allows Metro Bike Share to provide reduced-face options for bike share users who already qualify for LA Metro’s reduced-fare transit programs. The Low-Income Fare is Easy (LIFE) program is Metro’s reduced-fare program and allows qualifying individuals to receive discounted monthly, weekly, or daily passes or single trips. To qualify, individuals apply to Metro and visit the agency in person to provide proof of age, income, or disability.

- **Cash Payment**: Given many low-income individuals are unbanked, Metro created a cash payment option for their TAP card. In its current form, individuals are required to have a credit card on file as “collateral,” but can increase their TAP value with cash. LA Metro Bike Share used to allow prepaid cards, but after an evaluation of the system showed a strong correlation between users of prepaid
cards and stolen or damaged bikes, Metro decided to remove that option. They are continuing to research cash-only options to better serve unbanked individuals.

- **Station Siting:** Metro conducts extensive crowd-sourcing to ask community members where they would like bike share stations. This includes posting informational flyers at all proposed stations. For those without internet access, a phone number was listed where they could provide feedback. Both these methods were highly used. Approximately 1,200 participants voted on the potential station locations. Demographics of the participants are unknown as LA Metro did not collect this information.

- **Metro Bike Share Dockless Smart Bikes:** As the system has expanded, Metro has had to balance their desire to equitably distribute bike share stations in underserved neighborhoods with residents’ actual desires to have bike share (often at the expense of removing on-street parking) and the economic viability of the program. While dockless smart bikes were not initially identified as a solution to this problem, they are now being seem as a potential stop-gap measure. In areas like the Fashion District where bike share stations were installed and then removed due to community push-back, having dockless bikes can help serve this community without the need for a bolted-in station, or for parking removal.

- **Privately Owned and Operated Dockless Smart Bikes:** In September 2018, the Los Angeles City Council approved rules to guide the use of dockless bikes and scooters in Los Angeles. The rules allow companies to operate a minimum of 500 and a maximum of 3,000 devices per company with the potential to add 2,500 devices in Disadvantaged Communities and another 5,000 devices in Disadvantaged Communities in the San Fernando Valley (i.e., up to 10,500 devices in total). Further expansion is dependent on meeting certain performance criteria. Operators must also provide a non-smart phone option for reservations, a cash payment option, reduced-fare program for low-income individuals, a multilingual mobile app, and a call center. The flexibility of dockless technologies and the large-scale rollout potential of these programs allows greater coverage and the potential to positively impact equity outcomes. These programs are outside of LA Metro and therefore Metro doesn’t have oversight of these programs. However, LADOT will evaluate the program and include several equity-based metrics in the evaluation.

**Better Bike Share Partnership Grant**

LA Metro continues to work with community partners to examine how it can improve transportation equity throughout the region. Part of this was possible through a Better Bike Share Partnership Grant. The LA County Bike Coalition was awarded grant funding from April 2016 to May 2017 to improve the equity of the Metro Bike Share system.

The project featured a variety of partners working together on this effort, including LADOT, People for Mobility Justice (formerly named Multicultural Communities for Mobility), Metro, LA County Bike Coalition, and Metro Bike Share’s operator, Bicycle Transit Systems. The work included developing a bilingual (English/Spanish) program for community outreach and engagement in the downtown pilot, developing a shared definition of equity among the five partners with a long term plan to reach it, and producing a report on the successes, lessons learned, needs and recommendations for future efforts. LACBC managed the
project and utilized People for Mobility Justice’s expertise and historical relationship with marginalized communities in the county to lead interviews and focus group meetings. LADOT and Metro served as jurisdictional partners, providing much of the local-match funding and in-kind hours as well as leading the online survey process and providing oversight to research methods. As part of the grant funded project, the team conducted surveys, interviews, community outreach and engagement in order to further define and refine equity goals and strategies to guide the bike share system as it expands beyond the downtown pilot.

The project focused on a qualitative approach to capture the perceptions of people whose experiences are missing from other evaluation tools. The project used intercept and online surveys, focus groups, workshops, and narrative captures to collect data. As stated in the Final Report for the BBSP Grant, the project surpassed the goal of reaching 500 people, predominantly from low-income communities of color:

- 426 surveys collected (112 in Spanish)
- 300 People for Mobility Justice equity handouts dispersed
- 21 focus group participants
- 15 narrative capture participants
- 97 attendees to our various workshops
- 49 different organizations asked to participate in workshop
  - 5 organizations participated
- 2,200 total attempted engagement efforts.

Based on the conducted outreach, the Final Report states that payment—both cost and method—was found to be the biggest barrier to bike share accessibility to potential low-income users and users of color. The cost was key concern and many people felt that bike share shouldn’t be the same as a transit trip, which could take them further. Further, many people are unbanked and therefore do not have access to credit or debit cards, other than prepaid cards. Prepaid cards are accepted at the Metro Bike Share kiosks, but many users did not know this. In addition to providing the cash or prepaid card option, increasing awareness about this option is important.

Lessons Learned

There are limitations to effective outreach and equitable transportation, as learned through Metro Bike Share’s work and the BBSP grant. Metro Bike Share has made great strides towards equity through implementing innovative programs and the BBSP grant brought together important partnerships to further understand the needs of the community and defining what an equitable bike share system means. As noted through interviews with LA Metro and the region’s other partners, the following are lessons learned that could be beneficial to other communities.

- **Different Definitions of Equity**: Managing and operating bike share requires many different partnerships and organizations, as seen with Metro Bike Share and managing the BBSP grant. Due to the involvement of different organizations and therefore different perspectives and opinions on what equity means, it is important to define equity and what the measures of success are for an equitable bike share system.

- **Community interest in the project.** Realizing community participation in any project can be very challenging. While project partners were able to reach over 500 community members (either
through surveys, focus groups, workshops participant, etc.), they struggled to engage community
groups – of the 49 community groups they contacted offering to present at their meetings, only six
groups took them up on the offer.

- **Language limitations.** Currently, Metro Bike Share stations and website offer instructions in English
  and Spanish. This limits the population that can find information and understand how to use the
  bike share system. On the bikes themselves, two-thirds offer only English instructions. The bike
  share operator is continuously proposing and adding more language options, including Korean, for
  kiosks, materials, and their website.

- **Lack of communication and marketing.** Most of the marketing and communication for Metro Bike
  Share occurs at the stations, which limits the amount and type of people exposed to it. This results
  in people not having access to information about bike share and/or knowing what programs could
  be applicable to them, unless they approach a kiosk.

**Conclusion**

Metro Bike Share is in a relatively unique position since it is run by the area transit agency, which provides
unique opportunities to facilitate the integration of bike share and transit, such as through the TAP payment
integration and station sitting. At the same time, Los Angeles is a tapestry of people, cultures, languages,
along with agencies and organizations working to provide transportation services and serve the community
 – making sure these various entities are working toward common goals with shared definitions of equity and
success is an incredible challenge. When embarking on a joint program, it is critical that goals, actions, costs,
timelines and deliverables are very clearly articulated and shared up front. Developing positive relationships
and systems of communication between organizations that can be built upon for future work is a worthy
achievement in and of itself.

*In addition to responses to our project survey, this case study is based on personal interviews with LA Metro
(Carolyn Mamaradlo), Bicycle Transit Systems (Sophia Nenner), LADOT (Marcel Porras and Jose Elias), LA Bike
Coalition (Tamika Butler), People for Mobility Justice (Rio Oxas), and Streetsblog (Sahra Sulaiman).*
References


## Appendix

### Full Demographics Table by System City

**Table 15 Demographics – Small Systems**

**Small Systems (<= 149 bikes)**

<table>
<thead>
<tr>
<th>System Name</th>
<th>City/Place</th>
<th>State</th>
<th>Pop.</th>
<th>Median income</th>
<th>%non-white</th>
<th>% HISP</th>
<th>% poverty</th>
<th>% limited English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arbor Bike</td>
<td>Ann Arbor</td>
<td>MI</td>
<td>119,303</td>
<td>$61,247</td>
<td>31%</td>
<td>4%</td>
<td>20%</td>
<td>5%</td>
</tr>
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<td>Beverly Hills</td>
<td>CA</td>
<td>34,506</td>
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<td>21%</td>
<td>6%</td>
<td>9%</td>
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<td>Midland</td>
<td>MI</td>
<td>41,958</td>
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<td>3%</td>
<td>12%</td>
<td>0%</td>
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<td>17%</td>
<td>9%</td>
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<td>2%</td>
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<td>Cat Bike</td>
<td>Savannah</td>
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<td>145,094</td>
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<td>64%</td>
<td>5%</td>
<td>22%</td>
<td>2%</td>
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<tr>
<td>Columbike</td>
<td>Columbus</td>
<td>IN</td>
<td>46,926</td>
<td>$57,535</td>
<td>21%</td>
<td>6%</td>
<td>12%</td>
<td>3%</td>
</tr>
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<td>Des Moines</td>
<td>IA</td>
<td>214,778</td>
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<td>13%</td>
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<td>5%</td>
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<tr>
<td>Greenride Bikeshare</td>
<td>Burlington</td>
<td>VT</td>
<td>42,453</td>
<td>$47,140</td>
<td>17%</td>
<td>3%</td>
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<td>3%</td>
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<td>Howard County Bikeshare</td>
<td>Howard Co.</td>
<td>MD</td>
<td>71,737</td>
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<td>3%</td>
<td>4%</td>
<td>4%</td>
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<tr>
<td>McAllen BCycle</td>
<td>McAllen</td>
<td>TX</td>
<td>139,838</td>
<td>$45,057</td>
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<td>85%</td>
<td>25%</td>
<td>18%</td>
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<td>Blaine Co.</td>
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<td>23%</td>
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<td>15%</td>
<td>3%</td>
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<tr>
<td>Pace Huntsville</td>
<td>Huntsville</td>
<td>AL</td>
<td>190,501</td>
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<td>41%</td>
<td>6%</td>
<td>18%</td>
<td>2%</td>
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<td>Pedal Corvallis</td>
<td>Corvallis</td>
<td>OR</td>
<td>56,224</td>
<td>$46,285</td>
<td>23%</td>
<td>8%</td>
<td>25%</td>
<td>3%</td>
</tr>
<tr>
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<td>Rapid City</td>
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<td>Oklahoma City</td>
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<td>5%</td>
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<td>Upgrade Bike Share</td>
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<td>3%</td>
<td>23%</td>
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<td>26%</td>
<td>12%</td>
<td>3%</td>
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<td>40%</td>
<td>6%</td>
<td>21%</td>
<td>2%</td>
</tr>
</tbody>
</table>

1. Unless noted, city boundaries were used when tabulating Census statistics.
2. Non-white includes all those who selected anything other than white alone, including those identifying as Hispanic.
<table>
<thead>
<tr>
<th>System Name</th>
<th>City/Place¹</th>
<th>State</th>
<th>Pop.</th>
<th>Median income</th>
<th>% non-white²</th>
<th>% Hisp.</th>
<th>% poverty</th>
<th>% limited English</th>
</tr>
</thead>
<tbody>
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<td>Bike Share ICT</td>
<td>Wichita</td>
<td>KS</td>
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<td>37%</td>
<td>17%</td>
<td>17%</td>
<td>4%</td>
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<td>Citrix Cycle</td>
<td>Raleigh</td>
<td>NC</td>
<td>449,477</td>
<td>$61,505</td>
<td>47%</td>
<td>11%</td>
<td>13%</td>
<td>3%</td>
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<td>UT</td>
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<td>5%</td>
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<td>Holy Spokes</td>
<td>Charleston</td>
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<td>10%</td>
<td>20%</td>
<td>1%</td>
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<td>26%</td>
<td>8%</td>
<td>11%</td>
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<td>4%</td>
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<td>TN</td>
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<td>44%</td>
<td>10%</td>
<td>16%</td>
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<td>Pace ABQ</td>
<td>Albuquerque</td>
<td>NM</td>
<td>556,718</td>
<td>$49,878</td>
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<td>49%</td>
<td>18%</td>
<td>4%</td>
</tr>
<tr>
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<td>CO</td>
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<td>19%</td>
<td>12%</td>
<td>16%</td>
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<td>PaceRoc</td>
<td>Rochester</td>
<td>NY</td>
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<td>18%</td>
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<td>6%</td>
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<td>2%</td>
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<td>NY</td>
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<td>30%</td>
<td>5%</td>
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<td>Richmond</td>
<td>VA</td>
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<td>6%</td>
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<tr>
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<td>Tulsa</td>
<td>OK</td>
<td>401,352</td>
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<td>16%</td>
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<td>14%</td>
<td>16%</td>
<td>2%</td>
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<td>Tucson</td>
<td>AZ</td>
<td>530,905</td>
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<td>23%</td>
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<td>OH</td>
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<td>66%</td>
<td>11%</td>
<td>34%</td>
<td>4%</td>
</tr>
<tr>
<td>WE-cycle</td>
<td>Aspen and Basalt</td>
<td>CO</td>
<td>10,946</td>
<td>$67,786</td>
<td>16%</td>
<td>11%</td>
<td>8%</td>
<td>3%</td>
</tr>
</tbody>
</table>

¹ Unless noted, city boundaries were used when tabulating Census statistics
² Non-white includes all those who selected anything other than white alone, including those identifying as Hispanic
<table>
<thead>
<tr>
<th>System Name</th>
<th>City/Place</th>
<th>State</th>
<th>Pop.</th>
<th>Median income</th>
<th>% non-white</th>
<th>% Hisp.</th>
<th>% poverty</th>
<th>% limited English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austin B-Cycle</td>
<td>Austin</td>
<td>TX</td>
<td>916,906</td>
<td>$63,717</td>
<td>51%</td>
<td>35%</td>
<td>15%</td>
<td>7%</td>
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<tr>
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<td>New Orleans</td>
<td>LA</td>
<td>388,182</td>
<td>$38,721</td>
<td>69%</td>
<td>6%</td>
<td>25%</td>
<td>2%</td>
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<tr>
<td>Bublr Bikes</td>
<td>Milwaukee</td>
<td>WI</td>
<td>599,086</td>
<td>$38,289</td>
<td>64%</td>
<td>18%</td>
<td>27%</td>
<td>4%</td>
</tr>
<tr>
<td>CDPHP Cycle!</td>
<td>Capital District (Albany, Troy, Schenectady, Saratoga Springs)</td>
<td>NY</td>
<td>241,711</td>
<td>$47,233</td>
<td>41%</td>
<td>9%</td>
<td>20%</td>
<td>3%</td>
</tr>
<tr>
<td>CoGo Bike Share</td>
<td>Columbus</td>
<td>OH</td>
<td>852,144</td>
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<td>43%</td>
<td>6%</td>
<td>20%</td>
<td>4%</td>
</tr>
<tr>
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<td>CO</td>
<td>678,467</td>
<td>$60,098</td>
<td>46%</td>
<td>31%</td>
<td>15%</td>
<td>5%</td>
</tr>
<tr>
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<td>Memphis</td>
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<td>35%</td>
<td>17%</td>
<td>7%</td>
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<td>Healthy Ride</td>
<td>Pittsburgh</td>
<td>PA</td>
<td>305,012</td>
<td>$44,092</td>
<td>35%</td>
<td>3%</td>
<td>20%</td>
<td>3%</td>
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<tr>
<td>LimeBike Orlando</td>
<td>Orlando</td>
<td>FL</td>
<td>269,414</td>
<td>$45,436</td>
<td>62%</td>
<td>30%</td>
<td>19%</td>
<td>8%</td>
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<td>CA</td>
<td>470,48</td>
<td>$58,314</td>
<td>72%</td>
<td>43%</td>
<td>19%</td>
<td>8%</td>
</tr>
<tr>
<td>MoGo</td>
<td>Detroit</td>
<td>MI</td>
<td>679,865</td>
<td>$27,838</td>
<td>90%</td>
<td>8%</td>
<td>37%</td>
<td>2%</td>
</tr>
<tr>
<td>Red Bike</td>
<td>Cincinnati</td>
<td>OH</td>
<td>298,957</td>
<td>$36,429</td>
<td>52%</td>
<td>4%</td>
<td>28%</td>
<td>2%</td>
</tr>
<tr>
<td>Relay Bike Share</td>
<td>Atlanta</td>
<td>GA</td>
<td>465,230</td>
<td>$51,701</td>
<td>63%</td>
<td>5%</td>
<td>21%</td>
<td>1%</td>
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<td>San Antonio</td>
<td>TX</td>
<td>1,461,623</td>
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<td>75%</td>
<td>64%</td>
<td>18%</td>
<td>8%</td>
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<tr>
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<td>212,265</td>
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<td>77%</td>
<td>3%</td>
<td>27%</td>
<td>1%</td>
</tr>
</tbody>
</table>

1 Unless noted, city boundaries were used when tabulating Census statistics
2 Non-white includes all those who selected anything other than white alone, including those identifying as Hispanic
Table 18 Demographics - Large Systems

<table>
<thead>
<tr>
<th>System Name</th>
<th>City/Place</th>
<th>State</th>
<th>Pop.</th>
<th>Median income</th>
<th>% non-white</th>
<th>% Hisp.</th>
<th>% poverty</th>
<th>% limited English</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIKETOWN</td>
<td>Portland</td>
<td>OR</td>
<td>630,331</td>
<td>$61,532</td>
<td>29%</td>
<td>10%</td>
<td>16%</td>
<td>4%</td>
</tr>
<tr>
<td>Biki</td>
<td>Honolulu</td>
<td>HI</td>
<td>350,788</td>
<td>$65,707</td>
<td>84%</td>
<td>7%</td>
<td>11%</td>
<td>13%</td>
</tr>
<tr>
<td>Bluebikes</td>
<td>Greater Boston</td>
<td>MA</td>
<td>964,492</td>
<td>$70,121</td>
<td>49%</td>
<td>17%</td>
<td>17%</td>
<td>11%</td>
</tr>
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<td>Breeze Bike Share</td>
<td>Santa Monica</td>
<td>CA</td>
<td>92,495</td>
<td>$86,084</td>
<td>35%</td>
<td>16%</td>
<td>11%</td>
<td>6%</td>
</tr>
<tr>
<td>Capital Bikeshare</td>
<td>Washington</td>
<td>DC</td>
<td>672,391</td>
<td>$77,649</td>
<td>64%</td>
<td>11%</td>
<td>17%</td>
<td>4%</td>
</tr>
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<td>NY</td>
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<td>$57,782</td>
<td>68%</td>
<td>29%</td>
<td>19%</td>
<td>15%</td>
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<td>Chicago</td>
<td>IL</td>
<td>2,722,586</td>
<td>$52,497</td>
<td>67%</td>
<td>29%</td>
<td>20%</td>
<td>8%</td>
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<td>SF Bay Area</td>
<td>CA</td>
<td>2,424,915</td>
<td>$89,390</td>
<td>67%</td>
<td>24%</td>
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<td>12%</td>
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<td>75%</td>
<td>44%</td>
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<td>14%</td>
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<td>Indego</td>
<td>Philadelphia</td>
<td>PA</td>
<td>1,569,657</td>
<td>$40,649</td>
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</table>

1 Unless noted, city boundaries were used when tabulating Census statistics
2 Non-white includes all those who selected anything other than white alone, including those identifying as Hispanic
System Data Links

Links to select data reporting pages are included below:

- CoGo, Columbus - https://www.cogobikeshare.com/system-data - trip data
- Ford GoBike, Bay Area - https://www.fordgobike.com/system-data - trip data
- Healthy Ride, Pittsburgh - https://healthyridepgh.com/data/ - trip data, select visualizations
- Indego, Philadelphia - https://www.rideindego.com/about/data/ - trip data
- Metro, Los Angeles - https://bikeshare.metro.net/about/data/ - trip data hub
Questionnaire Overview

A summary of the questionnaire sections and questions are included below.

Please note that the online survey is adaptive based on responses provided in the early parts of the survey, and so you may not see all these questions. We have tried to make the survey taking experience flow well – please don’t be intimidated by the list of questions presented below!

System Basics

- Your org type
- Primary bike share system name; City; State; Key System Sponsor(s), if applicable
- Equity Definition: Does your organization have a definition of equity for the primary bike share system that you work from?
- Your organization's role with regard to the primary bike share system

Programs

For each bike share equity program (if applicable – also note: Programs may be official programs, unofficial initiatives, or campaigns - however your organization views its efforts in this area):

- Program Name, Start Year, End Year
- Target audience of program
- Primary goal of the program
- Factors driving this program's development
- Key partners
- Most successful aspect and biggest challenges of this program?
- Approximate cost to implement (e.g. rough annual budget), and funding source?
- Significant changes to the program since it originated, or planned changes?

Which of the following approaches does your organization employ to address bike share equity as part of this program?

- Options include: Service area determination, station siting, or bicycle placement/balancing; Payment and fees; Education or facilitation programs; Marketing, information and materials; Mixed fleet options; Internal operations, including hiring practices and employee training; Transit integration; other.

Specifically, which of the following items are elements your organization employs for this program?
• Options include: Service area boundaries; Bike / station locations; Rebalancing; Income-based discount; Alternative payment structures; Cash pay option; Reduction of fees; Facilitated enrollment; Education programs; Prescribe-a-bike; Organized rides; Ambassadors; Marketing campaigns; Non-English offerings; Adaptive bicycles; Electric bicycles; Hiring practices; Employee training; Transit integration; Other.

• For each element selected above:
  o Briefly describe
  o Any data collection or evaluation done?
  o How would you rate the efficacy of this program element?

Closing Questions

• In terms of bike share equity, are there any specific changes or new programs that you are considering or would like to implement?

• Are there specific resources or types of information that would help you move toward including or improving equity efforts?

• Have you conducted any other planning, evaluations, assessments or research that touch on access to or use of bike share by underserved or equity target populations?

END: Option to upload supporting documents/reports/etc.
Frequently Paired Program Elements: Full Table

For each element included in an equity program, scan across the table to see how frequently that element was paired with another program element. Commonly paired elements (paired more than 1/3 of the time, are shaded orange. Infrequently paired elements (paired less than 1/3 of the time) are shared red.

Table 19 Frequently Paired Program Elements – Full Table

<table>
<thead>
<tr>
<th>Programs including element</th>
<th>Service area boundaries</th>
<th>Bike / station locations</th>
<th>Rebalancing</th>
<th>Income-based discount</th>
<th>Alternative payment structures</th>
<th>Cash pay option</th>
<th>Reduction of fees</th>
<th>Facilitated enrollment</th>
<th>Education program / classes</th>
<th>Prescribe-a-bike</th>
<th>Non-English language offerings</th>
<th>Specific marketing messages or campaigns</th>
<th>Adaptive bicycle options</th>
<th>Electric bicycle options</th>
<th>Hiring practices</th>
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NATIONAL SCAN OF BIKE SHARE EQUITY PROGRAMS
See the project page to download the full report, upcoming outreach materials on best practices and lessons learned, and related bike share research: trec.pdx.edu/research/project/1278