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# BICYCLE SHARE FEASIBILITY STUDY NEW ORLEANS

MAY 2012

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## A BIKE EASY PROJECT

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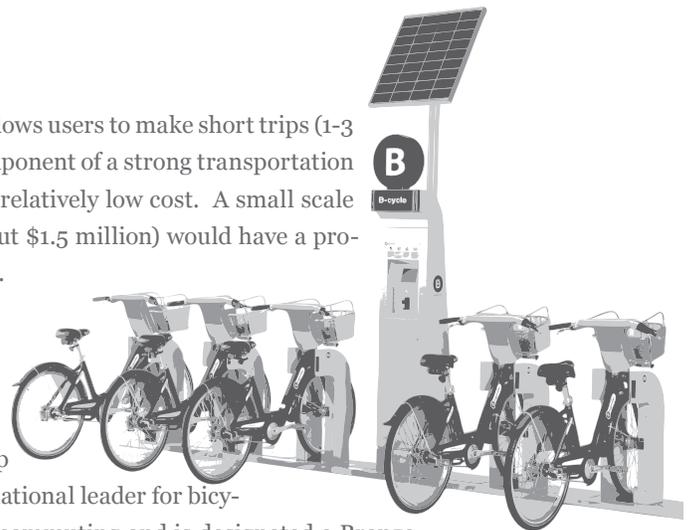
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### EXECUTIVE SUMMARY

Bicycle share is a network of bicycles and automated kiosks that allows users to make short trips (1-3 miles) quickly, conveniently and affordably. Bicycle share is a component of a strong transportation network, potentially moving 100,000 people or more per year at relatively low cost. A small scale Bicycle Share system (e.g. Phase 1: 200 bicycles, 20 kiosks at about \$1.5 million) would have a profound impact on improving New Orleans' transportation network.

The simple act of getting more people on bikes benefits public health, reduces motor vehicle traffic congestion, and improves access to economic opportunity. A bicycle share system in New Orleans achieves these goals and more, putting the city on the map as a progressive place to live and visit. New Orleans is already a national leader for bicycling and walking, ranking among the top 10 cities in the US for commuting and is designated a Bronze Bicycle Friendly Community by the League of American Bicyclists. A bicycle share system would solidify New Orleans as a national leader for these quality of life measures.



Bicycle share is simple to implement. Over 100 cities in Europe and 21 cities in the United States have implemented bicycle share systems. This experience elsewhere has produced a winning model for implementation. Bike Easy seeks to be the “convening entity” in our recommendations below. This report recommends New Orleans take the following steps to bring bicycle share to the city:

1. Create the Bike Share Implementation Taskforce, with representation from key stakeholders, to oversee the convening entity as it develops and executes the implementation plan.
2. Raise funds (approximately \$40,000) and hire a staff person to head the Bike Share Implementation Taskforce.
3. Develop an implementation plan that includes strategies to:
  - Secure capital and rolling stock funding.
  - Build relationships with municipal agencies and transit authorities, gaining official support through tools such as a memorandum of understanding, city council action (an ordinance or resolution), and/or contract.
  - Secure sponsorship commitments from private and public funders.
  - Develop a request for proposals (RFP) to find an experienced operator.
  - Convene a selection committee of the Bike Share Implementation Taskforce and municipal stakeholders (e.g. Regional Planning Commission, Department of Public Works, Mayor's Office and City Council) to review RFP responses.
  - Issue the RFP and select a winning candidate
4. Convening entity implements the plan.
5. Conduct outreach to the community and elected officials such as a “Demo Day” at City Hall where operators can show off their equipment.
6. Identify a funding recipient for capital and rolling stock costs – a municipal authority, nonprofit or municipality. These could be the City of New Orleans, the Regional Transit Authority, the Regional Planning Commission, Bike Easy or other nonprofit.
7. Convene an entity or municipal agency to issue the operator contract.
8. Issue RFP to bring in an expert operator.

We believe that New Orleans is ideally suited for bicycle share. By pursuing the above recommendations, launching Phase 1 of a bicycle share system in 12 months or less is a not unreasonable. Upon the success of Phase 1, future expansion could include sponsored kiosks or another capital campaign to expand into additional neighborhoods. We look forward to advising any interested parties as this process goes forward.

## ACKNOWLEDGEMENTS

This report was truly a collaborative effort. In-depth telephone interviews with bicycle share implementers gave us an up-to-date look at successful programs in the US. Thank you for the time and input in crafting this report from operators and implementers Tyler Reeder, Jessica Robertson, P.J. Lynch, and Jean Crowther. Members of the Sustainable Transportation Advisory Committee (STAC) were detail oriented reviewers adding context for New Orleans. Succinct and poignant draft review came from STAC members Dan Jatres, Ellen Soll, Jim Amdal and Jason Tudor. Thanks for keeping me on track.

Technical support from Tara Tolford and the project's champion, Dr. John Renne at the University of New Orleans Transportation Institute was invaluable; they catalyzed the process and gave the report purpose. Thank you to Max Meltzer for research as an intern at Bike Easy and to Max Williamson for reviewing early drafts and helping craft the vision of the document. Core champions at City Hall included Councilmember Kristin Gisleson-Palmer, Trevor Theunissen and Nicole Webre. While we had help from many sources, the author takes full responsibility for all errors or omissions.

Without diverse and solid financial support from the community none of this would be possible. Special thanks to our key supporters at the Merritt C. Becker Jr. University of New Orleans Transportation Institute and matching support from the New Orleans Convention and Visitors Bureau, New Orleans Downtown Development District, New Orleans Tourism Marketing Board and Harrah's Foundation – we know you want a bicycle share, with your support we will get there sooner rather than later.

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# TABLE OF CONTENTS

1	Introduction
1	New Orleans Bicycling Conditions <ul style="list-style-type: none"><li>Bicycle Infrastructure</li><li>Types of Riders</li></ul>
5	Benefits of Bicycle Share <ul style="list-style-type: none"><li>Transportation System Resilience</li><li>Public Health</li><li>Economic Impact</li><li>Fiscal Impact</li></ul>
7	Case Studies <ul style="list-style-type: none"><li>Minneapolis - Nice Ride Minnesota (Nonprofit Operator)</li><li>Boston - New Balance Hubway (ALTA/Bixi)</li><li>Miami Beach – (DecoBike)</li><li>Washington DC - Capital Bikeshare (ALTA)</li></ul>
10	Considerations for Bike Share in New Orleans <ul style="list-style-type: none"><li>Population of New Orleans</li><li>Model Systems – Who will manage the program?</li><li>Advertising Contract (For-Profit Advertising Firm)</li><li>Bicycle Share Concessionaires (Operator Granted Public Space)</li><li>Municipality Contracted (Franchisee Pays to Use Public Space)</li></ul>
12	Logistics: Fleet, Kiosks and Theft Reduction <ul style="list-style-type: none"><li>Special Events – Modular Systems</li><li>Safety and Helmets</li><li>City Liability and User Risk</li><li>Theft Protection</li><li>User Fees</li><li>Advertising Revenue</li><li>Phasing</li></ul>
15	Implementation Recommendations
17	Appendix – Bicycle Share Funding Opportunities
19	Works Cited

# INTRODUCTION

A Bicycle Share system is a network of bicycles and kiosks that residents, tourists and students can unlock and ride for a short time, then return to any station. Users provide a credit card and can purchase long-term or short-term usage for varying rates that are competitive with a mass transit fare system.

Bicycle Share has been around for over 4 decades, but not until 2007 did the technology exist to create a convenient and cost-effective system that can track usage, bike location and kiosk status remotely. These innovations increased usage, reduced theft and vandalism and caused an explosion of bicycle share systems.

These, so-called, “third-generation” bicycle share systems are in operation worldwide in at least 140 bicycle share systems globally, with 100 systems in Europe and over 21 city-based systems in the US. Smaller systems are operated at several college campuses in the US.



The purpose of this Bicycle Share Feasibility Study is to analyze how bicycle share has been started in similar US cities, identify options for bringing bicycle share to New Orleans and provide policy recommendations to encourage adoption of such a system in New Orleans.

## NEW ORLEANS BICYCLING CONDITIONS

### Plan for the 21<sup>st</sup> Century: New Orleans 2030

In June 2008, the City of New Orleans began setting a vision for the long-term to make New Orleans better than it was before Hurricane Katrina. The Plan for the 21<sup>st</sup> Century: New Orleans 2030, commonly referred to as the “Master Plan,” is a way of communicating New Orleanians’ shared vision for the city. Through a public engagement process, the City drafted

and then adopted this plan in August 2010.<sup>1</sup>

There are 14 chapters to the plan, and currently it is being applied to a new Comprehensive Zoning Ordinance. It has “the force of law” to ensure public expenditures, land use and capital improvements reflect the Master Plan.

Chapter 11 includes a transportation element to address rebuilding road and vehicle infrastructure, and specifically requires integration of several elements that will be crucial to a successful bicycle share program. These include goals 3, 4 and 5 which address on-street bicycling and walking, transit improvements and enhanced inter-city connections.

The economic element of the Master Plan is also relevant to launching a bicycle share program. Chapter 9 of the plan focuses on fostering emerging industries, preserving and enhancing the tourism industry, encouraging entrepreneurs and revitalizing downtown as a 24-hour place to be as an economic driver: all are benefited by the launch of a bicycle share program.

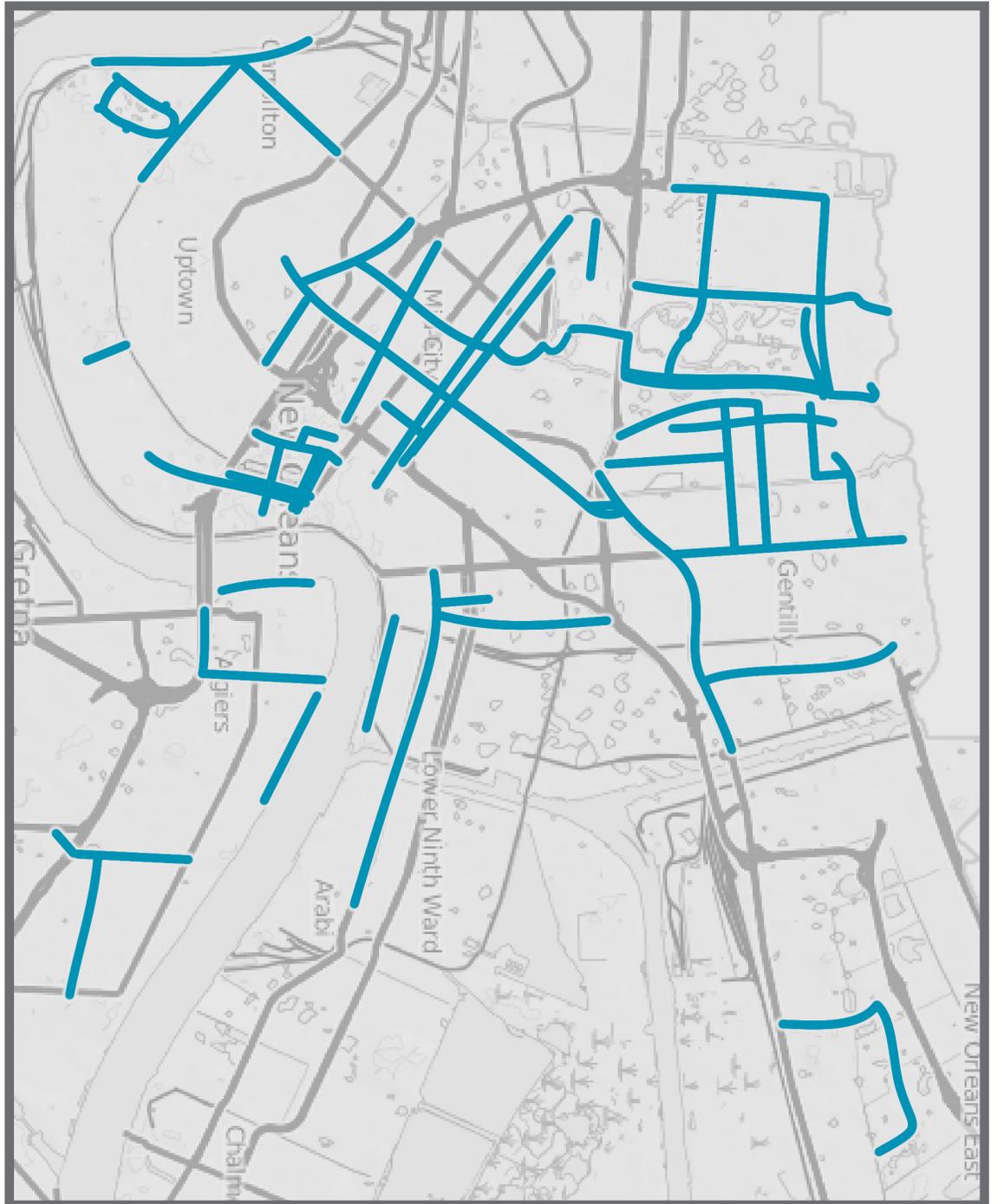
Bicycle Share is not only in line with the New Orleans 2030 Plan, such a program would act as a catalyst to achieve many of the goals in the plan at a lower cost than many alternatives.

## Bicycle Infrastructure

Between 2005 and 2012, New Orleans has seen a boom of bicycle infrastructure as the City has expanded bicycle routes from 11 miles of mostly off-street facilities to over 50 miles of mostly on-street facilities.<sup>2</sup> Additionally, New Orleans has seen a dramatic increase in bike racks and end-of-trip facilities. Over 150 “Where ‘Ya Rack?” bicycle racks have been installed by the Young Leadership Council in public places<sup>3</sup>, and the City has installed dozens of bicycle racks through a handful of capital projects, including Canal Street and Oak Street.



FIGURE – BICYCLE INFRASTRUCTURE IN NEW ORLEANS MAY 2012



## Bronze Bicycle Friendly City

From 2008 to 2010 New Orleans was recognized as an “Honorable Mention” by the Bicycle Friendly Community Program. In 2011, New Orleans finally achieved Bronze Status as a Bicycle Friendly Community.<sup>4</sup>

“**The Bicycle Friendly Community Program** provides incentives, hands-on assistance, and award recognition for communities that actively support bicycling. A Bicycle Friendly Community welcomes cyclists by providing safe accommodation for cycling and encouraging people to bike for transportation and recreation.”

– *League of American Bicyclists*<sup>5</sup>

According to the League of American Bicyclists, which runs the Bicycle Friendly Community Program, encouraging bicycling improves a myriad of public issues including:

- Public health
- Reduced traffic demands
- Improved air quality
- Greater physical fitness
- Higher quality of life
- Increased property values
- Business growth
- Increased tourism
- More transportation choices

New Orleans’ Bicycle Friendly Status should be leveraged to bring bicycling to more people and a bicycle share program would support that objective.



## New Orleans Complete Streets Program

In December 2011, the New Orleans City Council passed a Complete Streets Program that directs various administration agencies to work together to ensure that all users can eas-

ily move along and across our rights-of-way. This ordinance directs the administration to create internal policies that require engineers consider different design treatments (e.g. curb ramps, bike lanes, sidewalks and bus stops) when resurfacing or rebuilding roads. This ordinance institutionalizes the work the Department of Public Works and City Planning Commission have been doing (such as installing curb ramps and bike lanes) since Hurricane Katrina, and ensures these design methods continue as institutional processes instead of ad hoc decision making. The ordinance was strengthened by amendments to include coordinating below-ground work – to avoid digging up new streets to repair or replace underground utilities.<sup>6</sup>

With a Complete Streets Program in place, new bicycle and pedestrian facilities will continue to be developed in New Orleans that will support the users of a bicycle share program.

## Bicycling Demand and Crash Rates

As bicycle infrastructure has increased, so has ridership. In 2000, New Orleans was 13th in the country for the share of bicycle commuters to work. By 2009, New Orleans was ranked 6<sup>th</sup> in the nation.<sup>7</sup> This increase in bicycle riding is anticipated to reduce crash rates as a result of “safety in numbers”.<sup>8</sup> In New York,<sup>9</sup> as daily ridership has more than doubled from 80,000 to 180,000, the annual casualty rate (injuries and fatalities) has fallen from 5,000 per year to under 3,000 per year – a 40% reduction.

Safer streets will encourage more bicycle share riders and in turn their numbers will make the streets even safer for all bicyclists. Bicycle share program participants in Washington, D.C., London, and Paris were all less likely to be involved in crashes than cyclists riding their own bicycle. For example, Washington, D.C.’s Capital Bikeshare users were about half as likely to get in a crash as those that rode their own bike.<sup>12</sup> This phenomenon actually reduces crash rates and shows that bicycle share riding is safer than riding your own bike.

While there is no evidence yet, it is hypothesized<sup>13</sup> that bicycle share users might be less experienced than those who ride their own bike, making them more cautious and avoid mixing with traffic, ride slower and have fewer serious collisions. Another researcher suggested that people that have avoided bicycling until bike share made it easier are “less tolerant of risk” and are “more cautious people.” While there is no clear evidence that bicycle share riders are safer than those who own their bike, it is clear that with more bicycles on the road, all riders are safer.

In New Orleans, there has been a dramatic increase in riders in recent years. In fact, University of New Orleans Transportation Institute noted in their study, “Active Transportation Measurement and Benchmarking Development: New Orleans Pedestrian and Bicycle Count Report, 2010-2011” that at 17 locations around New Orleans, overall daily bicycle counts increased 20% in 2011 from 2010.<sup>10</sup>

Bicycle share systems increase overall number of riders. After bicycle share systems were installed total ridership increased in both Barcelona (234%) and Paris (250%).<sup>11</sup> More bicycle riders on the road made riding safer in Australia, Denmark and California. Even bicycle safety education did not reduce crashes as much as getting more bicycles on the road.<sup>12</sup> Bicycle share will increase the overall number of riders, and therefore make bicycling in New Orleans safer for all bicycle riders.

## Types of Riders

Nationally, 3/4 of riders are male, non-Hispanic Caucasians.<sup>13</sup> In New Orleans, we have a large base of riders of different types. These include commuters, including people who ride out of necessity, as well as recreational cyclists and casual riders. Two recent bicycle counts by University of New Orleans Transportation Institute<sup>14</sup> and the Prevention Research Center at Tulane University<sup>15</sup> determined that New Orleans is a regional leader in active transportation. While cyclists span the gamut in gender, age, occupation and time of day overall number of riders is increasing year over year. New Orleanians love riding their bicycles and bicycle share is one way to get more people on bicycles more often.

### Race

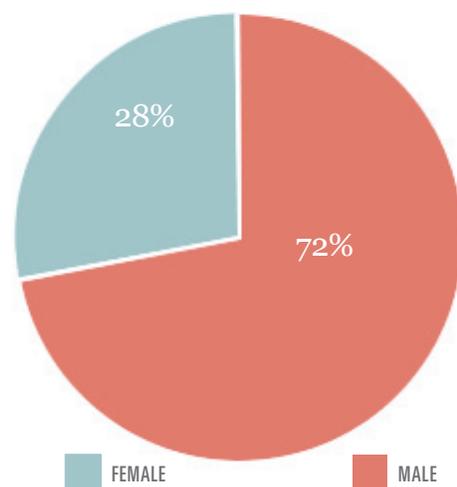
In 2012, graduate students at Virginia Tech released an analysis of the Capital Bikeshare users and operation of the program.<sup>16</sup> Particularly relevant to New Orleans is the low usage of the system by African Americans in Washington, D.C. While accounting for 50% of Washington, D.C.’s residents, only 5% of Capital Bikeshare riders were African American. Nationally, African Americans make up 10% of recreational riders.<sup>17</sup> As a large portion of riders in New Orleans, targeting this population for outreach is critical to program success. A study is underway in Minneapolis to determine strategies for increasing a more racially diverse ridership. This study should be considered in implementation of a New Orleans bicycle share system.

### Gender

Female riders are a key indicator of bicycle safety in a city.<sup>18</sup>

While many American recreational riders are male, bicycle share systems have a better balance of users among the genders and also usage in pairs or groups.<sup>22</sup> An increase in female riders is an indicator that streets are perceived as safer. Gender disparity exists even in cities that are national leaders in bicycle safety like Portland (31% female ridership) and Minneapolis (28% female ridership). In New Orleans, the PBRI study<sup>20</sup> saw a 20% daily increase in female ridership from 2010 to 2011, but remains low in New Orleans at twenty-eight percent (28%). These data indicate there is still room to increase ridership. Bicycle share could be a tool to get women on bicycles more often, increasing both perceived and actual safety for all cyclists.

FIGURE – NEW ORLEANS BICYCLE RIDERSHIP BY GENDER



### Low Income Riders

Bicycle share is part of the transportation system of a city, much like a mass transit system. In New Orleans, over 60% of bicycle commuters make less than \$35,000 per year, indicating that many ride out of necessity. Many riders in the city are utilizing their bicycle as a tool to move about the city since they have no other means available.<sup>10</sup> Access to a new bicycle share system can provide low-income users an opportunity to extend transit trips, and make more efficient trips without a vehicle to economically significant destinations such as shopping, work and school. Tools to lower barriers for these riders include a payment plan for annual membership, phone and in-person registration options, and promoting cash-to-card bank services for bike check-out.

A thorough economic analysis of bicycle share users has not been done, but a study from Virginia Tech<sup>14</sup> noted that many users were tourists and that additional outreach to low-income users could increase usage by this group. Most users in

the survey (81%) had college or advanced degrees. Alta’s Community Design Group is currently looking into how to make Nice Ride Minnesota more inclusive of this population.<sup>19</sup> This report will be available later this year.

**FIGURE — NICE RIDE MINNESOTA EXAMPLE FEE STRUCTURE**

SUBSCRIPTIONS	TRIP FEE
24hr- \$5.00	0-30 mins - free
30-day – \$30.00	up to 60 mins- \$1.50
1 year- \$60.00	up to 90 mins \$4.50
Student 1 year -\$50.00	additional 30 mins -\$6.00

**Residents**

Bicycle Share is designed to be priced comparably with public transit for residents. Many systems price a 30 minute ride as free for both one-day and annual subscribers. Under this model, workers in the Central Business District could utilize the system to go to a meeting, grab lunch or run errands more than 1 mile away in less than 8 minutes. That is less time than it takes to drive and park or take a bus. As a cost-effective, healthy and fun way to get around town, bicycle share is designed for workers. A bicycle share system would increase the “Park Once” strategy that is suggested by the Downtown Development District and compliment the proposed “Park-Once Circulator” bus.<sup>20</sup>

**Tourists**

Improving the mobility of visitors through Bicycle Share Systems extends the reach of their financial impact. Enhancing this industry, encouraging revitalization and entrepreneurs are all addressed in the New Orleans 2030 Plan. In New Orleans, many a business outside of the French Quarter laments about drawing tourists to their destination. The streetcar and bus system reach could be expanded with a bicycle share program, connecting tourists into new neighborhoods, increasing their economic footprint and help create jobs and build businesses.

Operations revenue for the system on one-day passes can be significant, as seen in Boston, Washington, D.C. and Miami. These types of passes are generally more expensive than annual passes, and the revenue generated can be over 50% of total revenue in a system.<sup>21</sup>

**Bike Easy Supporters**

In a 2010 survey, Bike Easy found that most supporters (n = 332) who responded (greater than 60%) ride to Mardi Gras

events, festivals and Jazz Fest. In congested areas, the bicycle is perceived as the easiest and best way to navigate New Orleans. The Bike Easy board, members and supporters consider bicycle share one of the best ways to achieve our mission: making bicycling easier, safer and more fun.

**BENEFITS OF BICYCLE SHARE**

Bicycle share programs are designed to be part of the public transit system complementing other modes of travel such as bus, streetcar and ferry lines. They are distinctly different from bicycle rental as they are intended for short trips (less than 30 minutes). Approximately half of all trips in the US are less than 3 miles, a distance easily covered by bicycle. In considering moving people around the city, bicycle share is an efficient way to improve access to economic assets, improve public health, relieve vehicle congestion and be fiscally smart.



**Transportation System Resilience**

Bicycle share systems offer an alternative transportation option and increases access to transit by extending the range of users. In addition to reducing vehicle traffic congestion, it can reduce travel times for short trips, mitigate overcrowded transit at peak times, and increase active transportation and therefore public health.<sup>21 22</sup>

As a part of the transit system, bicycle share increases transit ridership because it extends a trip in the first and last miles and improves connectivity in the system. Even in cases when bicycle share decreases transit ridership, as demonstrated in a study<sup>11</sup> from Lyon, France, transit revenues may remain consistent because many bicycle share users also hold transit passes.

## Public Health

Communities with the highest rate of active transportation (bicycling and walking) generally have the lowest obesity rates.<sup>23</sup> With high obesity rates and low rates of physical activity, New Orleans needs to improve in both categories.<sup>16</sup> Obesity increases the risk of heart disease and diabetes, which are the number 1 and number 6 causes of death among Americans. Replacing short vehicular trips (1-3 miles) with a bicycle requires minimal additional time, once you account for time spent searching for parking. But this small shift could have a profound affect on obesity, giving people the 30 minutes of recommended physical activity per day.<sup>24</sup>

## Economic Impact

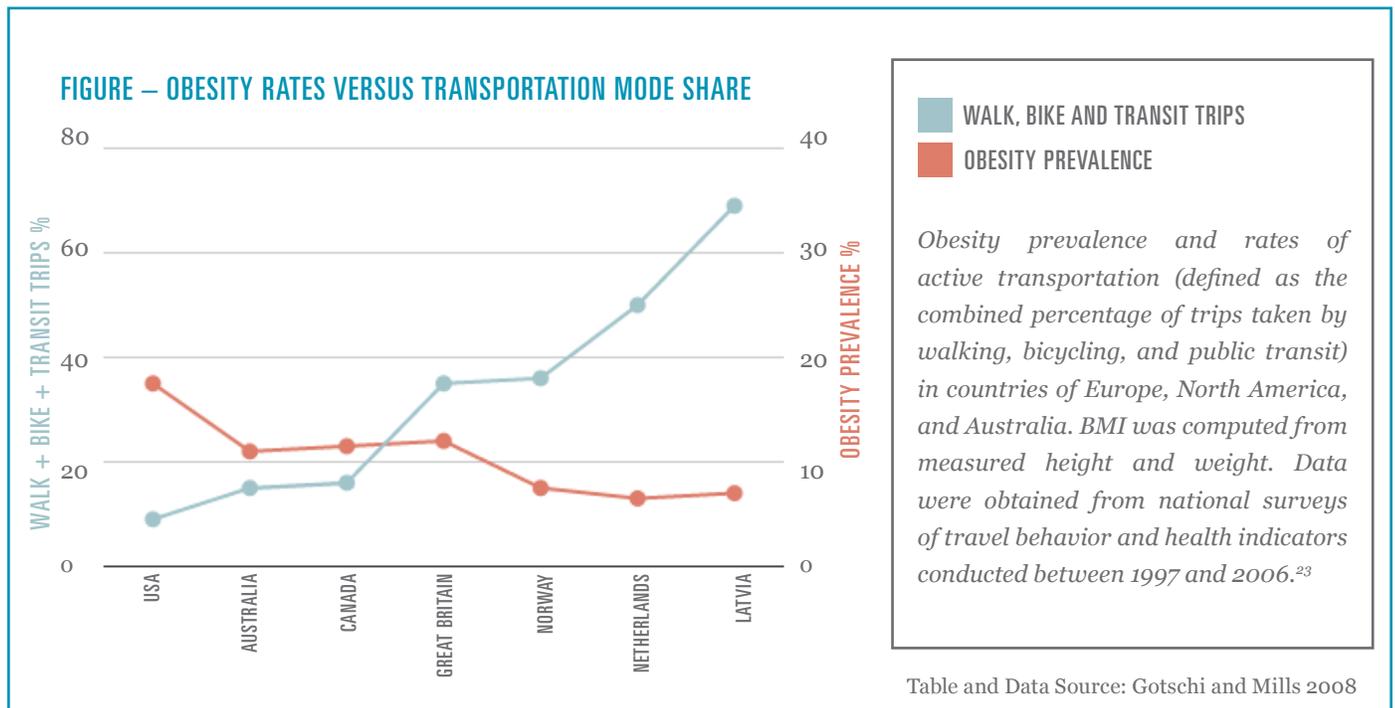
Bill Dossett, of Nice Ride Minneapolis, suggests bike share is an economic driver because it moves people beyond where they would ordinarily travel. “It gets people to come out to

lunch from office towers a mile away,” he said in a 2010 interview with Streetsblog.<sup>25</sup> In fact, by reclaiming lower used parking spaces for a bicycle share kiosk local businesses could see sales increases as was seen through bicycle facility installation in Portland and Toronto.<sup>26</sup>

## Fiscal Impact

Bicycle share systems are much cheaper than other public transportation alternatives. For example, capital costs for a 200 bike, 20 kiosk system that would be required for a successful start up in New Orleans would cost approximately \$1.5 million.<sup>27</sup> Compared to the cost of infrastructure and other public transit, where costs can run into tens of millions of dollars per mile, bicycle share is a very effective use of resources.

Transportation infrastructure for bicycles and pedestrians transports 5-10 times more people than driving, and costs \$3,000 - \$1 million per mile traveled depending on the infrastructure with bicycle lanes on the low end and bridges on the high end. For comparison, 1 mile of a four-lane urban freeway costs \$20-\$80 million.<sup>24</sup> Because bicycle infrastructure costs much less per mile traveled, municipalities that invest in a bicycle share as part of the transportation system are making a strong investment in the transportation infrastructure and public transit systems of their communities.



# CASE STUDIES

**FIGURE – BICYCLE SHARE SYSTEM CASE STUDIES**

SYSTEM	LOCATION	BIKES/KIOSKS	INITIAL FUNDING
Nice Ride Minnesota	Minneapolis, MN	1000/116	Non-Motorized Pilot, Donors
New Balance Hubway	Boston, MA	600/60	FTA, CMAQ, Donors
DECO Bike	Miami Beach, FL	650/72	100% private funding
Capital Bikeshare	Washington, DC	1,100/114	CMAQ, State DOT, Donors

## Minneapolis - Nice Ride Minnesota (Nonprofit Operator)

Nice Ride Minnesota is a nonprofit that was set up specifically to bring a \$3.2 million, 700 bike, 65 station, system to Minneapolis and St. Paul, Minnesota. The system was launched on June 14, 2010 and is available 24 hours per day, 7 days per week from April to November. The fee structure offers annual (\$60), monthly (\$30) and daily (\$5) options.<sup>28</sup> The launch and day-to-day operations are conducted by Nice Ride Minnesota, a nonprofit based operator formed solely to manage the Nice Ride bicycle share system.<sup>29</sup>

### Funding the System

Transit for Livable Communities, another Minnesota nonprofit, was designated by Congress to distribute \$21.5 million to local projects through the Non-Motorized Transportation Pilot Project in 2005. Of this funding, Nice Ride Minnesota received more than \$1.6 million, the remainder of the project funding came from tobacco settlement money via Blue Cross Blue Shield of Minnesota (\$1 million) and \$600,000 raised by local business donors (e.g. Target) and the City of Minneapolis.

### Logistics of Opening the System

As a nonprofit builder and operator, Nice Ride Minnesota pieced together many different players to build their bicycle share system. ALTA Planning & Design analyzed and recommended kiosk placement while, Public Bike Share System Co. (developer of the BIXI system in Montreal) supplied equipment and rolling stock, as well as coordinated assembly and installation.<sup>30</sup>

### Phasing and Expansion

Limited capital funds require that bicycle share programs phase in new stations and bicycles. In March 2011, phase 2 was funded by \$1.78 million of additional private and public donations, expanding the system to 116 kiosks and 1000 bicycles.

## Boston - New Balance Hubway (ALTA/Bixi)

Hubway Bicycle Share is a 600 bike, 60 station system in Boston, Massachusetts, with plans to expand the system by 20 stations and 200 bicycles in spring 2012 to the neighboring municipalities of Somerville, Cambridge, and shortly thereafter Brookline.<sup>31</sup> The system operates 24 hours per day, 7 days a week but only for 3 seasons. The system is stored off street during the winter months. The system’s day-to-day operations are run by ALTA Bicycle Share and through a contract with each municipality and coordinated by the Metropolitan Area Planning Council (MAPC). The operating contract ensures that both municipalities and the operator share risks and rewards.

System ridership has far exceeded expectations, reaching 100,000 riders in just 10 weeks. Minneapolis and Denver’s systems took 6 months and 7.5 months respectively to reach similar ridership goals. Population density and locating stations close to one another are linked to the success of this program; as most under-performing stations are located on the edge of the system.<sup>32</sup>

Approximately 45% of riders are annual members and 55% are day-pass users, with fee structures similar to other systems (e.g. \$85 annual pass, \$5 day pass, \$12 three-day pass).

### Regional Coordination

Launched in the summer of 2011, this bicycle share system was initiated by the Metropolitan Area Planning Council (MAPC). MAPC is a regional planning agency given authority by legislative action by the Commonwealth of Massachusetts that supports smart growth and regional collaboration and has helped 4 local municipalities (Boston, Somerville, Cambridge and Brookline) establish a regional bicycle share program.

Utilizing a regional organization with state appointed authority helped secure funding, procure a vendor, facilitate regional sponsorship, and negotiate a contract between the individual

cities and the bike share vendor; all while maintaining a seamless user interface to provide whole system continuity. This model is essential when metropolitan areas contain dense populations across adjacent municipalities.

### Funding the System

Initial capital expenses and rolling stock acquisition were funded through three methods: Federal Transit Administration (FTA) Bus Livability Initiative, Congestion Mitigation and Air Quality Improvement Program (CMAQ) and local sponsors and donors. Several lessons are to be learned from MAPC's experiences with these funding sources.

#### FTA – Bus Facilities Livability Program

MAPC won funding from this FTA source because of new guidelines that allow certain bicycle and pedestrian improvements within 1/2 mile for pedestrian improvements and 3 miles for bicycle improvements. In Boston, bicycle share systems were deemed eligible within 100ft of transit stops.<sup>32</sup> In all, this funding paid for 1/3 of capital costs and 3 years of operation.

*“The Bus Facilities Livability Program makes funds available to public transit providers to finance capital projects to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities, including programs of bus and bus-related projects for assistance.”*

*-Bus Livability Program Public Announcement<sup>33</sup>*

These funds include a required 20% local match and a capital expense restriction. Bicycles are not counted as capital as they are “rolling stock.” To solve this problem, MAPC used this FTA funding to cover launch fees (e.g. website and backend development) as well as kiosk and maintenance equipment.

For local match funding to be considered part of the grant it had to be without a quid pro quo (e.g. advertising space) and solicitation has to begin after the FTA grant is submitted.

#### Congestion Mitigation and Air Quality Improvement (CMAQ) Program

Three of the four municipalities in the Hubway system utilized Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds. In order to utilize this federal money, the Massachusetts Department of Transportation (MASS DOT) had to approve use for bicycle share programs and the municipalities had to qualify based on the federal air quality standards.

The Louisiana Department of Transportation and Develop-

ment (DOTD) allows for bicycle and pedestrian projects with CMAQ funding but has yet to award such a bicycle share grant. Bicycle share would fall under the bicycle project type outlined in the Local Public Agency Manual Specific Program Information Congestion Mitigation and Air Quality Program (CMAQ) and was used in Boston's Hubway system.<sup>34</sup> Greater New Orleans has generally not qualified for CMAQ funding in the past, but recent revision to DOTD policies and air quality standards open the door to potential CMAQ funding.<sup>35</sup>



#### Local Donors

Larger markets have better access to this capital. In New York City, Boston or Los Angeles, many times a system can solicit 100% of private funds required from one or a few large donors. In New Orleans, the operator will need a strategy to solicit several smaller donations to meet the local match.

Additionally, as stated above, MAPC learned that timing of these donations is critical to meet granting agency match requirements.

#### Logistics of Opening the System

ALTA Bicycle Share was awarded a 3-year, \$6 million contract from Boston to operate the front and back end of the system in April 2011.<sup>36</sup> Each municipality in the system must sign a separate contract with ALTA. MAPC helps negotiate among the parties and with procurement of grants and funding. The Boston launch was rolled out on July 27, 2011 with 47 stations.

The contract between ALTA (the operator) and Boston (the municipality) reduces risk exposure to the City of Boston, and provides baseline funding from the municipality through a monthly operations fee to the operator. This fee covers about 1/2 of operations expenditures. The operator collects all user fees from the bike share system to pay the other 1/2 of projected

costs. If the operator is efficient and operates with lower expenditures than projected, they may keep this marginal profit. If additional profit is made beyond projections, the city and operator split the additional profits 50/50. The city is required to invest some of this money back into the system. The operator is required to reinvest half of their profits into the system.<sup>37</sup> By sharing risk and reward, both partners are committed to the success of the program. This model would increase the likelihood of sustainability of a bike share program in New Orleans because it commits both the City of New Orleans and the operator to adjust and attain success. However, the complicated nature of the agreement could make it more difficult to launch a system.

## Miami Beach – (DecoBike)

Deco Bike launched a 650 bicycle, 72 station system in March 2011 in Miami Beach, Florida and reached 180,000 rides by July 2011. Operations are active 24 hours per day, seven days per week. Their fee structure offers two monthly plans and several hourly block plans, but no annual membership.<sup>38</sup> Revenue comes from advertising on the kiosks and membership fees only.



Source: DecoBike LLC

### Funding the System

DecoBike is unique in the US, having funded the \$4 million program entirely without public funding as a concessionaire for the City of Miami Beach. In order to use Miami Beach's public spaces for their kiosks DecoBike pays the city 12% of membership fees and 25% of advertising revenue estimated to be worth \$13 million to Miami Beach over the 6 year contract.<sup>39</sup> Operating expenses are projected to be \$1.8 million annually, with 1/3 covered by advertising revenue, and the remainder, and any profit, coming from user fees.

### Operating the System

Advertising revenue is significantly less than they expected, bringing in about \$100 per bike. Due to their agreement with Miami Beach, DecoBike is not allowed to advertise on the kiosks themselves.<sup>40</sup> While allowing such ad placement would improve both DecoBike and Miami Beach's revenue take in the venture, public sentiment is that they would detract from the aesthetics of the neighborhood - a valuable lesson for deploying such a scheme in New Orleans, where historic charm is highly valued. Residents and tourists of Miami Beach are both taking advantage of the system, with over half of rides taken by locals.<sup>40</sup>

### Phasing and Expansion

DecoBike has an inventory of 350 bicycles that go unused, ready to deploy but is still negotiating locations with the City of Miami Beach and other transportation agencies like the Florida Department of Transportation.

## Washington DC - Capital Bikeshare (ALTA)

Smartbike DC was the first North American bicycle share system started as a pilot project in 2008 by Clear Channel with 120 bicycles and 10 stations as an outdoor advertising concessionaire. Smartbike did not succeed because it was not large enough or concentrate the kiosks enough to generate the user fees necessary for sustainability. In the same year, Arlington, Virginia was also working on its own system and in partnership with Washington, D.C. developed Capital Bikeshare, unveiled in May 2010. It has since developed into the largest system in the US – a 1,100 bike, 114 station system operated by ALTA Bicycle Share with Public Bike System Company (BIXI) bicycles. Capital Bikeshare employs 22 full-time and part-time staff members.

### Funding the System

Building the \$6 million system was funded with a mix of federal, state and local sources, including CMAQ funding (first 100 stations). The 20% local match came from the Virginia State Department of Rail and Public Transportation, Arlington County and local sponsors including the Crystal City Business Improvement District.

### Logistics of Opening the System

As of April 2012, the system was almost in the black, having generated \$2.47 million in operational revenue, and spent \$2.54 million in operational costs. Additional capital costs must be covered by sponsorships or grants to replace old parts or expand the system.<sup>53</sup>

# CONSIDERATIONS FOR BIKE SHARE IN

## NEW ORLEANS

The case for bicycle share in New Orleans is clear, with a need for increased physical activity, obesity reduction and transit connectivity. Several components for a successful program are already in place: an active rider base, new infrastructure improvements and a large tourism industry.

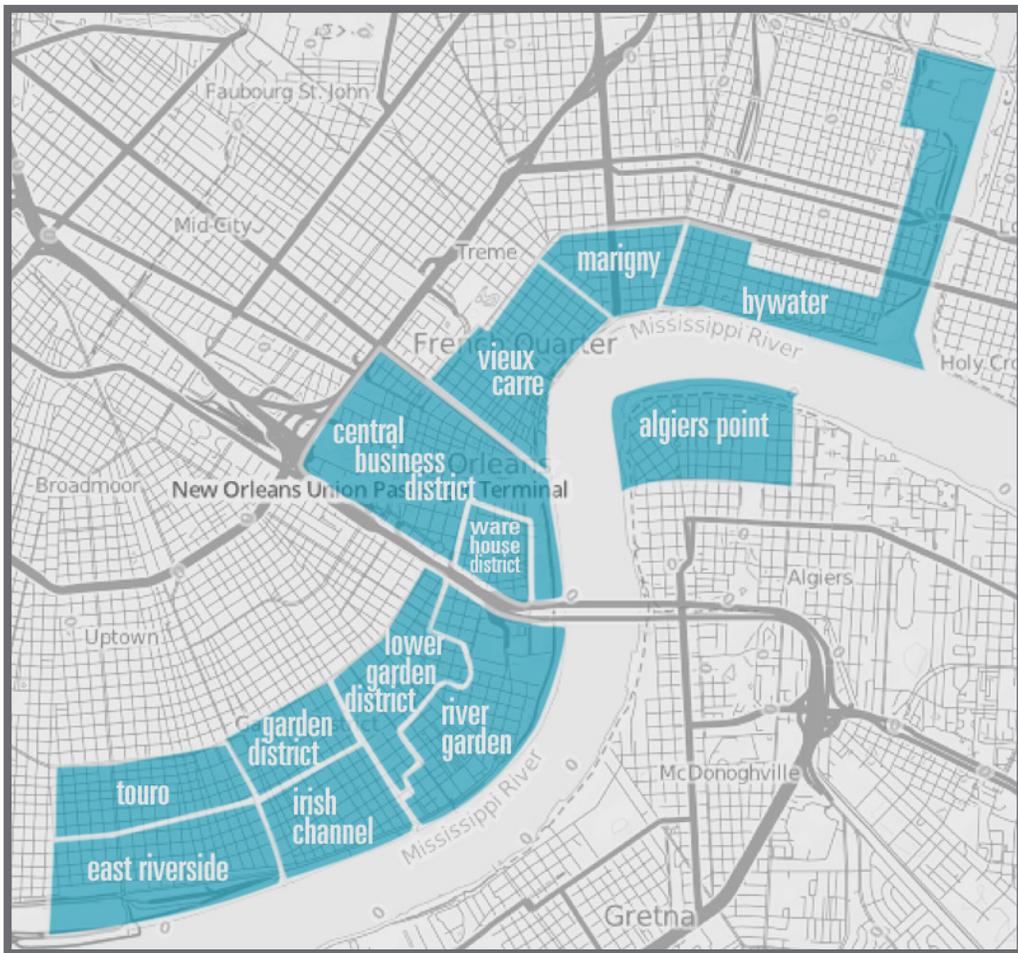
### Population of New Orleans

As reported in the 2010 Census,<sup>41</sup> New Orleans' population was 343,829 individuals with a population density of 2,029 per square mile. However, using USGS GAP Program data, a more accurate density of 3,790 individuals per square mile is determined by only accounting for dry developable land.<sup>52</sup> While New Orleans is slightly less dense than successful bicycle share communities such as Minneapolis (382,578 & 7,088/sq mi), Denver (600,158 & 3,922/sq mi) and Washington D.C

(601,723 & 9,865/sq mi) the downtown core has a day-time population of 120,000,<sup>20</sup> a number similar to the cities above and a significant tourist population of 7.5 million per year.<sup>20</sup> Day-time population and tourist population density are critical determinants for placement of bicycle share infrastructure, with the highest population density generating the highest number of rides and income for the system.<sup>42</sup>

Kiosk placement and system layout are critical to sustainability of a system because over 70% of revenue from the systems analyzed come from user fees. Outlying "satellite" or "corridor" bicycle share kiosk layouts reduce the revenue of the system and those kiosks produce the least amount of income. If locating a bicycle share kiosk in a culturally important location (e.g. City Park, Audubon Park, university campuses) must be done, then the costs associated with this placement need to be analyzed by the operator before those kiosks are placed. An expert operator would be best suited to answer this question as part of an RFP process. We recommend the placement of kiosks in the first phase of the system in the downtown core

**FIGURE – MAP OF DOWNTOWN-FACING NEIGHBORHOODS IN NEW ORLEANS**



and downtown facing neighborhoods. Any additional phasing to include other parts of the city requires careful analysis to determine if those parts of the system will be sustainable.

## Model Systems – Who will manage the program?

Many different models have been utilized world-wide. Bicycle share operators and providers have included municipalities, transportation authorities, universities, nonprofit organizations, advertising companies and other for-profit entities.<sup>11</sup> In North America, however, the predominant operator of 3<sup>rd</sup> generation bicycle share systems involve a municipality, quasi-government entity or nonprofit acquiring federal start up funds and contracting with a private entity to start up and operate the system. The two most predominant operators in the United States are B-Cycle (Denver and Chicago) and ALTA/Bixi (Washington, DC, Chicago, New York City, Boston). Third Generation bicycle share business plans and requests

for proposals in the US typically bundle the first three years of operating expenses and the capital expenses of starting a bicycle share into grants and financing of the program. Beyond 3 years, operating revenues from advertising and usage fees alone are expected to fund the ongoing bicycle share operations. Very few public transit systems expect to self-support their operations without public funds. Of capital funding sources, many are federal and require a state or local match to secure. There are several different models for building and operating a bicycle share system. Vendors typically execute a proposal requested by local municipalities and provide the technology, back-end systems and equipment for the system. In some instances, a municipality or nonprofit owns the capital and rolling stock while the vendor operates the program. In most instances, a municipality owns the capital and rolling stock, while the vendor operates the system. Three such structures could be used in New Orleans: Advertising Contract, Concessionaire or Municipality Contracted bicycle share system.

**FIGURE – BICYCLE SHARE CITIES AND OPERATORS**

NAME	WEBSITE	OPERATOR	SYSTEM	BICYCLES	KIOSKS
Capital Bikeshare	<a href="http://www.capitalBikeshare.com">www.capitalBikeshare.com</a>	ALTA Bike Share	BIXI	1200	140
New Balance Hubway	<a href="http://www.thehubway.com">www.thehubway.com</a>	ALTA Bike Share	BIXI	600	60
Boulder B-Cycle	<a href="http://boulder.bcycle.com">boulder.bcycle.com</a>	B-Cycle	B-Cycle	131	15
Denver B-cycle	<a href="http://www.denverbikesharing.org">http://www.denverbikesharing.org</a>	B-Cycle	B-Cycle	510	51
Des Moines B-cycle	<a href="http://desmoines.bcycle.com">desmoines.bcycle.com</a>	B-Cycle	B-Cycle	18	4
Hawaii B-cycle	<a href="http://hawaii.bcycle.com">hawaii.bcycle.com</a>	B-Cycle	B-Cycle	12	2
Madison B-cycle	<a href="http://madison.bcycle.com/">http://madison.bcycle.com/</a>	B-Cycle	B-Cycle	346	26
DECOBIKE	<a href="http://www.decobike.com">www.decobike.com</a>	DecoBike, LLC	DecoBike, LLC	1000	100
Nice Ride Minnesota	<a href="http://www.niceridemn.org/">http://www.niceridemn.org/</a>	Nice Ride Minnesota	BIXI	700	95
Omaha B-cycle	<a href="http://omaha.bcycle.com">http://omaha.bcycle.com</a>	B-Cycle	B-Cycle	35	5
WSU Green Bikes	<a href="http://www.greenbike.wsu.edu">www.greenbike.wsu.edu</a> ; <a href="http://www.bixisystem.com/what-we-achived/case-studies-info/?id=11">http://www.bixisystem.com/what-we-achived/case-studies-info/?id=11</a>	WSU	BIXI	32	4
San Antonio B-cycle	<a href="http://sanantonio.bcycle.com/">http://sanantonio.bcycle.com/</a>	B-Cycle	B-Cycle	189	20
B-cycle	<a href="http://spartanburg.bcycle.com">http://spartanburg.bcycle.com</a>	B-Cycle	B-Cycle	14	2
Charm City Bikeshare		B-Cycle	B-Cycle	250	30
Broward County B-cycle	<a href="http://browardcounty.bcycle.com/">http://browardcounty.bcycle.com/</a>	B-Cycle	B-Cycle	230	23
Louisville B-cycle	<a href="http://louisville.bcycle.com/">http://louisville.bcycle.com/</a>	B-Cycle	B-Cycle	750	74

## Advertising Contract (For-Profit Advertising Firm)

Advertising only contracts are not optimal for promoting bicycle share in North America. First generation systems in Paris and Barcelona were run by JC Decaux and Adshel as “Smart Bikes”. These early systems were not designed with a mission to provide a transportation system, but as an advertising mode. As a result, bicycle quality, rebalancing the system and customer service all suffered and some of these systems folded. An agreement with local municipalities with cost and expense sharing components helps all parties share risk and reward and thus provide proper incentive to all parties for success. It is highly recommended that this model is not utilized for a New Orleans bicycle share system. Advertising plays a critical role in operating funds, but should not be the sole motivation for operating a bicycle share system.

## Bicycle Share Concessionaires (Operator Granted Public Space)

In a concessionaire model, the operator is given rights to use public space to operate the program. The system does not pay for the space it uses as it is offering a service for the public good. These are common models for services such as transit, telecommunications, and water infrastructure.

In US bicycle share, there are nonprofit and for-profit concessionaires. A nonprofit concessionaire will work closely with the municipality to ensure both parties are invested in the programs success. In our analysis, Nice Ride Minnesota falls into this category. A for-profit concessionaire has similar motivations to ensure success, but in at least one instance the municipality shares no risk (DecoBike in Miami Beach). As a result, the system is struggling to bring in enough revenue from advertising and user fees alone. At the same time, the City of Miami Beach is unwilling to alter the original contract. The solution is found in other for-profit systems, such as Hubway (Boston) and Capital Bikeshare (Washington D.C.) operated by for-profit companies, they have entered contracts of revenue and cost sharing with the municipality to ensure local political buy-in.

By relying on user fees and advertising alone, Miami Beach is politically less able to make contract changes to make the program successful. If the City of Miami Beach were paying for part of the program, or if it were a player in bringing public funds to the table, the accountability of such a partnership would help ensure success. The public nature of transit programs exists because they are created for a public good. Bi-

cycle share should be born of the same mold. Any for-profit operator or model needs to enter a mutual risk, mutual benefit contract with the RFP issuing entity to ensure political will to make the program successful from the political establishment.

Bicycle share has many public benefits that a municipality should consider in negotiating with an operator. When the municipality that hosts the bicycle share doesn't have a stake in the success of the program they will be less flexible in renegotiating contracts to ensure success.

## Municipality Contracted (Franchisee Pays to Use Public Space)

In a franchisee model, the operator of the business that uses public space pays rent for that use. Examples include special events on public spaces like parades or festivals, vendors at public markets and gallery poles mounted into the sidewalk. Permanent or temporary usage of the space is paid for in rents by the operator, such as Madison B-Cycle.

Whichever corporate structure (nonprofit or for-profit), or land-use model (concessionaire or franchisees) is utilized, it is critical that the oversight agency take a strong role in selecting a well qualified operator that has had previous experience running a bicycle share system. As part of the transportation network, this point cannot be stressed enough. An operator with no experience with bike share will likely fail as profit margins are slim. After issuing an RFP in 2011, New York City received 6 proposals from professional bicycle share operators to run their new bicycle share systems.<sup>44</sup> New Orleans should expect a similar number of proposals as operators qualified to run such a system in the United States are limited.

## LOGISTICS: FLEET, KIOSKS AND THEFT REDUCTION

### How Will Fleet Size Be Determined?

Based on population size, vendors recommend several different sizes of fleets and kiosks. Locating bicycle share kiosks in close proximity to dense population centers, destinations and to each other are critical to a successful program.

Both ALTA and B-Cycle suggests that an initial system of about 20 kiosks and 200 bicycles could be sufficient to get the benefit of economies of scale in New Orleans. The actual number of bicycles and kiosks should be addressed by the operator in the RFP process.

## Where to Place Kiosks

In addition to density of users and kiosks, choosing equipment that has modular and movable kiosks can help with long-term placement. If there is low usage, or poor placement, moving the kiosk to a better location is easier in a modular system than permanently and physically fixed kiosks.

## Population Density Recommendations

Density considerations are important when deciding on kiosk placement to maximize usage. Placing kiosks close together (5-7 city blocks) allows flexibility in usage and thus increases the number of users. In all the case studies we analyzed, kiosks on the edge of the system, satellite stations and small pilot programs received significantly lower usage making the stations revenue negative. We recommend that all stations be placed in close proximity to each other as well as downtown amenities in the Central Business District, French Quarter, Warehouse District, Lower Garden District and Marigny neighborhoods. By centrally locating all kiosks, the system will be more accessible, more profitable and therefore more successful.

Bicycle share kiosks should be located in the most high density areas almost in exclusion to all other zones. Corridors of bicycle share equipment, as well as “satellite” stations would be inefficient<sup>45</sup> and revenue negative.<sup>46</sup>

## Sidewalk

By far the most popular placement in the United States, placing kiosks on the sidewalk reduces risk of damage by automobiles and improves access to casual riders and pedestrians. Placement should be considered on sidewalks with sufficient width to accommodate Americans with Disabilities Act (ADA) standards.

## Roadbed

Placement in the roadbed in the parking lane could be ideal in areas of narrower sidewalks or where sidewalks are used for other purposes (e.g. sidewalk cafes). Treatments such as “curb extensions” into the parking lane could calm traffic, as well as provide protected space for a bicycle share kiosk. New York City will make wide use of parking lanes for kiosk placement to leave sidewalks open and unobstructed. By reclaiming less used parking spaces for a bicycle share kiosk local businesses could see sales increases.<sup>47</sup>

## Public Spaces

Parks, squares, transit facilities and other public spaces provide excellent placement opportunities for bicycle share kiosks

for similar rationale as sidewalk placement. Coordinating with park, transit and public right-of-way management agencies is therefore critical to make these kiosk placements.

## Historic Neighborhoods

New Orleans takes pride in preservation of historic neighborhoods. In placing bicycle share kiosks it will be important to consult with these commissions. However, the right of way is governed by the Department of Public Works (DPW) and it will likely be required to get kiosk locations approved by the DPW with appropriate public engagement processes. In Boston, there are many preservation commissions and station locations were presented to each commission. Only one location was denied, and subsequently located a block away to a less desirable location with less pedestrian traffic and poorer lighting.<sup>32</sup> Color and logos can be designed to be lower profile and blend with the neighborhoods where they are placed.

## Land Use and Leasing

Utilizing public space for bicycle share kiosks is for the public good. This rationale is similar to that used to justify mass transit service from the Regional Transit Authority. Bicycle share helps the public in many ways such as improved public health, economic accessibility and reduced vehicular congestion. As such, an agreement with the operating entity should be reached with the City of New Orleans on a system for determining kiosk placement at minimal or no cost to the bicycle share program.

## Special Events – Modular Systems

With over 200 festivals per year, and an active convention industry, we have a large market for mobile or temporary kiosks. As thousands of conventioners or festival-goers descend on the Fairgrounds, City Park or other periodic destinations, utilizing bicycle share as a mode to get to and from the activity will be a vital part of our transportation network.

There are two ways to accommodate large, periodic demand associated with these events: by moving a number of modular kiosks every time there’s an event or setting up a virtual kiosk at the event.

## Modular Kiosks

Moving kiosks to the site would be beneficial in experiencing the full automated system which could encourage new riders by showing how simple it is to use. Consider that for each event, the rolling stock (bicycles) and capital would have to be trucked in and be physically secured in place.

## Virtual Kiosk

Denver B-Cycle, the bike share operator in Denver, Colorado has partnered with a local nonprofit, Bike Denver, to provide service at periodic events by setting up a booth with mobile computers and staffed with Bike Denver volunteers. Through this arrangement, Denver B-Cycle benefits from increased usage and new users, while Bike Denver gets more people on bicycles and is able to reach out to bicycle riders about their education and advocacy initiatives.<sup>48</sup>

## Safety and Helmets

Helmets are not currently required for adult riders by Louisiana state law or by any local ordinance. Sharing helmets has not been successfully implemented in other programs, but systems in New York, Denver and Boston encourage helmet use by offering discounts to annual members through partnerships with retail shops in the city.

Safety of bicycle share riders can be achieved through new member education, placards at kiosks and directions on the handlebars of the bicycles. Public service announcements and coordination with existing public transportation safety marketing (currently done through the Regional Planning Commission) could incorporate safety messaging to bicycle riders and improve adherence to rules of the road for bicycle riders.

## City Liability and User Risk

The City of New Orleans, in entering a contract with a concessionaire or franchisee, will determine the limits of their liability with that contractor. Systems exist at the City to determine what these limits are, as well as installing equipment on public property for the public good. Additionally, users of the system should be required to hold harmless the operator of the system as a condition of using the bicycles.

## Theft Protection

Crime and theft in New Orleans can be a problem. However, bicycle share can still be successful in the city. Counter measures include designing bicycle share bikes to look very different from personal bikes, with a step-through frame, plastic skirt-guard and distinctive handlebars. Any stolen bicycles are easy to identify, thus reducing their appeal as a target for theft.<sup>46</sup>

Many bicycle share systems in the US do not suffer from large levels of theft or vandalism as was seen in earlier versions of bicycle share in Paris and Madrid. As an early system, anti-

theft measures were not fully considered and Paris lost about 50% of phase 1 bicycles.<sup>54</sup> Madrid had 20% fewer stolen and damaged bicycles than Paris despite a higher crime rate. Madrid's system was opened later than Paris' and lessons learned in Paris led to development of an improved locking system in Madrid.

Many problems in the European systems were addressed in US systems by changing the locking mechanism, installing radio frequency identification (RFID) or GPS tracking on the bikes and launching a public relations campaign to instill pride in the systems. It should be noted that GPS tracking is generally avoided in bicycle share systems because of the high cost (\$100,000 installation cost) and low return (prevents \$10,000 in damage).<sup>1</sup> In Washington, D.C. the system lost 5 bikes out of 1,100. In Denver, 2 out of 700 and in Minneapolis, 1 bicycle was lost out of 700 in the first year of operation. Theft rates were significantly lower in the US than those in Europe and even far below estimates the system operators made themselves, often expecting to lose 10% of rolling stock.<sup>49</sup>

General precautions to be taken to reduce theft and vandalism include common sense solutions like placing kiosks in well-lit, public places. Locations that will have the highest use generally fit this profile. Bicycle share in New Orleans is possible to operate with relatively low theft rates.

## User Fees

User fees account for 75 – 85% of operational revenue in the case studies we examined. Bicycle share systems in the US generally institute a fee structure that encourages short rides. The target is to make short one-way trips affordable and discouraging all-day use with a graduated fee structure. By keeping fees low for short trips, users will opt to use the system as part of a transit trip. As a user keeps the bicycle longer, fees increase beyond the price of a private bicycle rental. This structure helps keep the bicycles available to every day users and encourages riders to pick up a bike at one kiosk and return it to a different kiosk at their destination. Then, check a bicycle out when they are ready for the return trip.

**FIGURE – NICE RIDE MINNESOTA EXAMPLE FEE STRUCTURE**

SUBSCRIPTIONS	TRIP FEE
24hr- \$5.00	0-30 mins - free
30-day – \$30.00	up to 60 mins- \$1.50
1 year- \$60.00	up to 90 mins \$4.50
Student 1 year -\$50.00	additional 30 mins -\$6.00

However, each market is different, and it is recommended that any request for proposals or a new operator of a bicycle share system commission a market study to see what prices the market will bear. Such a study would be critical to the long-term economic vitality of a bicycle share system.



## Advertising Revenue

Advertising accounted for 10 – 18% of operating revenue in the case studies we considered. New Orleans has a higher than average advertising rate for mobile advertising. For example, advertising rates for pedicabs are significantly higher in New Orleans than in other markets, and advertising revenue in a bicycle share system could have similar implications.<sup>49</sup>

## Phasing

Large capital and rolling stock expenses make phasing a feasible solution to build out a complete system with limited funding. For example, Nice Ride Minnesota unveiled a \$3.2 million 65 kiosk bicycle share system in 2010 and further expanded it to a 116 kiosk system in 2011. The second phase was funded by a more modest \$1.78 million funding infusion, \$780,000 of which came from private sources. By phasing, the system has a chance to demonstrate success, attract new sponsors as well as take advantage of similar sources of funding released in later years.

To properly phase a project, the initial phase should entirely be focused on high-density, high-activity areas where intense, short-term usage is significantly more likely, like the CBD, French Quarter and Warehouse District. A second phase is a great time to add funders and stations in good, but less ideal locations such as the other 8 “downtown facing neighborhoods”<sup>20</sup> in the city. A second phase also presents fundraising opportunities for additional sponsors of rack location near sponsors’ businesses (e.g. major employers, redevelopments).

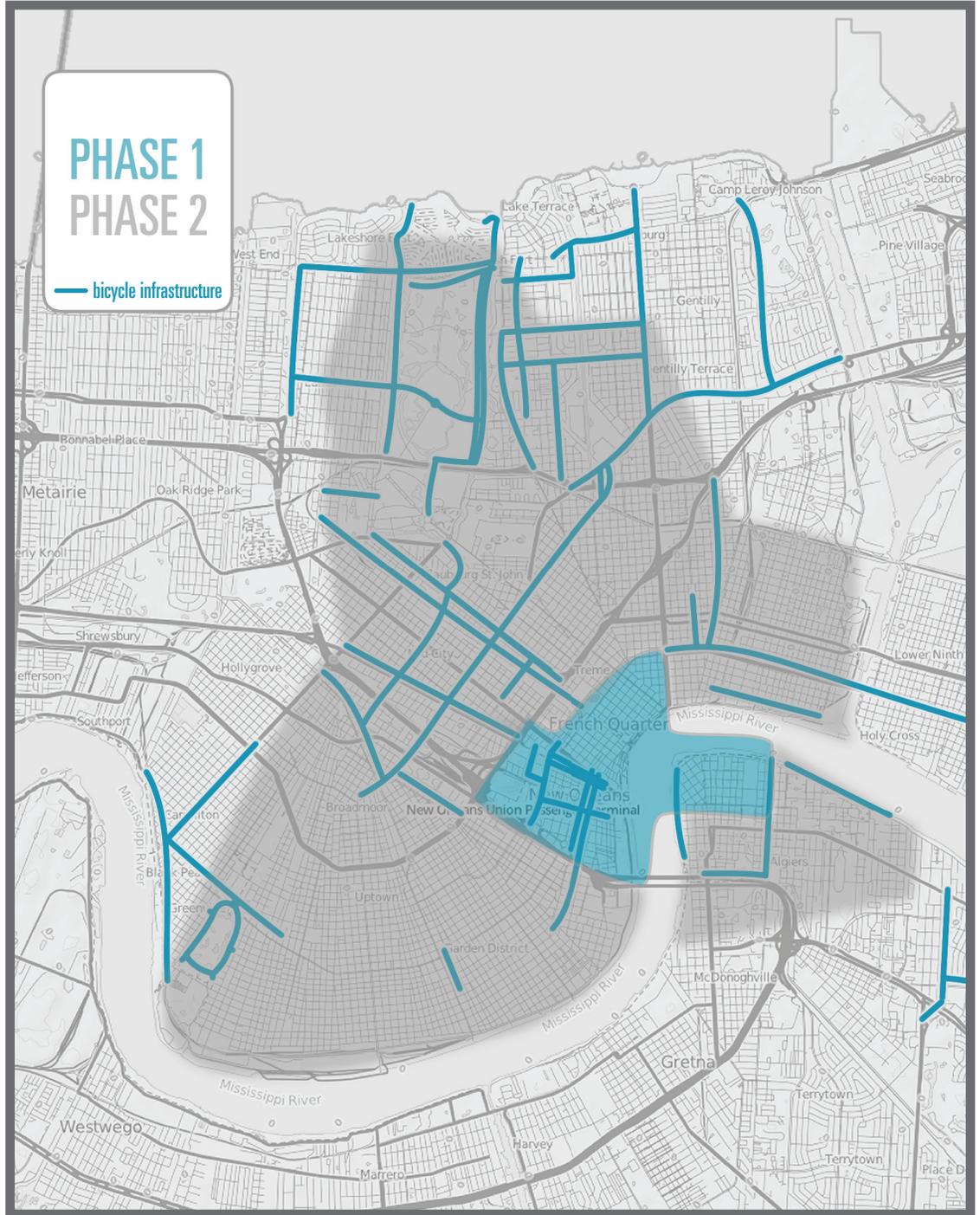
## IMPLEMENTATION RECOMMENDATIONS

From our analysis, New Orleans needs to take the following steps in order to bring Bicycle Share to the city. Bike Easy seeks to be the “convening entity” with our potential responsibilities outlined below.

1. Create the Bike Share Implementation Taskforce, with representation from key stakeholders, to oversee the convening entity as it develops and executes the implementation plan.
2. Raise funds (approximately \$40,000) and hire a staff person to head the Bike Share Implementation Taskforce.
3. Develop an implementation plan that includes strategies to:
  - Secure capital and rolling stock funding.
  - Build relationships with municipal agencies and transit authorities, gaining official support through tools such as a memorandum of understanding, city council action (an ordinance or resolution), and/or contract.
  - Secure sponsorship commitments from private and public funders.
  - Develop a request for proposals (RFP) to find an experienced operator.
  - Convene a selection committee of the Bike Share Implementation Taskforce and municipal stakeholders (e.g. Regional Planning Commission, Department of Public Works, Mayor’s Office and City Council) to review RFP responses.
  - Issue the RFP and select a winning candidate.
4. Convening entity implements the plan.
5. Conduct outreach to the community and elected officials such as a “Demo Day” at City Hall where operators can show off their equipment.
6. Identify a funding recipient for capital and rolling stock costs – a municipal authority, nonprofit or municipality. These could be the City of New Orleans, the Regional Transit Authority, the Regional Planning Commission, Bike Easy or other nonprofit.
7. Convene an entity or municipal agency to issue the operator contract.
8. Issue RFP to bring in an expert operator.

From the case studies we considered, once the third step above is reached it takes approximately 12-18 months to bring bicycle share to a city. We believe that bicycle share can have a profound positive impact on the quality of life, economic vitality and public health of our city and wholeheartedly endorse the concept of bike share and its realization in New Orleans.

FIGURE – PROPOSED PHASE MAP



## APPENDIX – BICYCLE SHARE FUNDING OPPORTUNITIES

A bicycle share program in New Orleans has a relatively low start up cost. Cost per mile and per person of a bicycle share system significantly outperforms all other transit options.

### Capital Costs – Federal Funding and Private Donors

Many federal funding opportunities are shifting; however, historically the federal government has given municipal planning organization (MPOs) and State Departments of Transportation (DOTs) flexibility in how they spend federal dollars. The transportation bill currently being debated in Congress (MAP-21) has many potential outcomes, but it is anticipated a similar model with local flexibility will prevail.<sup>50</sup> Therefore, it is important that the Louisiana Department of Transportation and Development (DOTD) and the Regional Planning Commission (RPC) are close partners in any bicycle share endeavor to help bring federal dollars to the project.

Bicycle share systems have been successfully funded through the Congestion Mitigation and Air Quality Improvement (CMAQ),<sup>35</sup> FTA: Bus Livability Program<sup>33</sup>, Surface Transportation Program (STP) and Transportation and Community and System Preservation (TSCP).<sup>51</sup> The US Department of Transportation cites 4 potential federal programs in addition to those listed above that could fund a bicycle share program in New Orleans. These sources include the National Highway System (NHS), Surface Transportation Program (STP), Transportation Enhancements (TE), and Job Access and Reverse Commute Program (JARC).

**FIGURE – BICYCLE SHARE FEDERAL FUNDING OPPORTUNITIES**

FUNDING SOURCE	CRITERIA
Federal Transit Administration - Job Access and Reverse Commute Program	Address the unique transportation challenges faced by welfare recipients and low-income persons seeking to obtain and maintain employment. Must be done as part of a locally developed transit-human services transportation plan.
Federal Transit Administration - Livability and Sustainable Communities	The Bus Livability Initiative makes funds available to public transportation providers to finance capital projects to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities, including programs of bus and bus-related projects
National Highway System	The purpose of the NHS is to provide an interconnected system of principal arterial routes which serve major population centers
Surface Transportation Program	The Surface Transportation Program improves highway and roadway safety. STP and CMAQ funds may be used for the construction of pedestrian walkways and bicycle transportation facilities and for carrying out non-construction projects related to safe bicycle use.
Congestion Mitigation and Air Quality Improvement	The CMAQ program was conceived to support surface transportation projects and other related efforts that contribute air quality improvements and provide congestion relief.
Federal Highway Administration Transportation Enhancement Activities (TEA)	Transportation Enhancement Activities offer funding opportunities to help expand transportation choices and enhance the transportation experience through 12 eligible TE activities related to surface transportation, including pedestrian and bicycle infrastructure and safety programs
Transportation and Community System Preservation	Investigate the relationships between transportation, community, and system preservation plans and practices and identify private sector-based initiatives to improve such relationships.

Federal grant programs have different limitations and exclusions. One common element is a local match, typically between 10%-20%. Some only cover capital costs, others excluding rolling stock and operating expenses, to name a few. Paying close attention to these details when determining the order to seek funding in can make or break a new program.

Each year, the Regional Planning Commission reports Federally Obligated Projects<sup>35</sup>, which is a good guide to seeking federal funding and should be utilized to pay for all or part of a bicycle share program.

## **Local and Corporate Donations/Match**

Bicycle share systems have found private money to fund the system through hospitals, insurance companies, universities, real estate developers, city bond issues and city general funding. Timing of receiving these match dollars is critical, because many times they must be identified, but not collected before a federal funding application is submitted.

## **Operating Costs for a New Orleans Bicycle Share**

Many programs roll the first 3 years of operating costs into the start up capital costs. These costs include maintenance, rolling stock replacement and repair, daily rebalancing (moving bicycles by truck), and backend expenses such as bicycle tracking, website, mobile apps and customer service.

## **Revenue Potential**

According to the four bicycle share systems we evaluated, their models show revenue generated from user fees and advertising cover most expenses in the first three years, and become revenue positive starting the 4<sup>th</sup> year of operation.

As we saw with pedicabs, advertising rates are higher in New Orleans than other cities.<sup>50</sup> With potentially higher revenue from one day passes purchased by our large daytime population of tourists, a New Orleans bicycle share system could reach a revenue-positive position before the 4<sup>th</sup> year.

## **Revenue Models**

Bicycle share relies on user fees to fund a majority of the program. In other cities 40-60% is from day pass users and 40-60% is from annual pass users. Advertising on the bicycles makes up 10-20% of annual revenue.

## **Expense Estimates Used in This Report**

Starting an effective bicycle share system in New Orleans will cost between \$1-2 million. Price will vary with fleet size, vendor and back-end system functions. A general estimate is that it costs \$3,000-4,000 per bike to open the system and operate it for the first 3 years. The bicycles themselves cost approximately \$1,200 each. These estimates were determined through interviews with ALTA and B-Cycle.

Installation of kiosks, back-end systems development, membership services, cost and revenue sharing agreements with the city and other operating costs need to be determined in the RFP process.

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