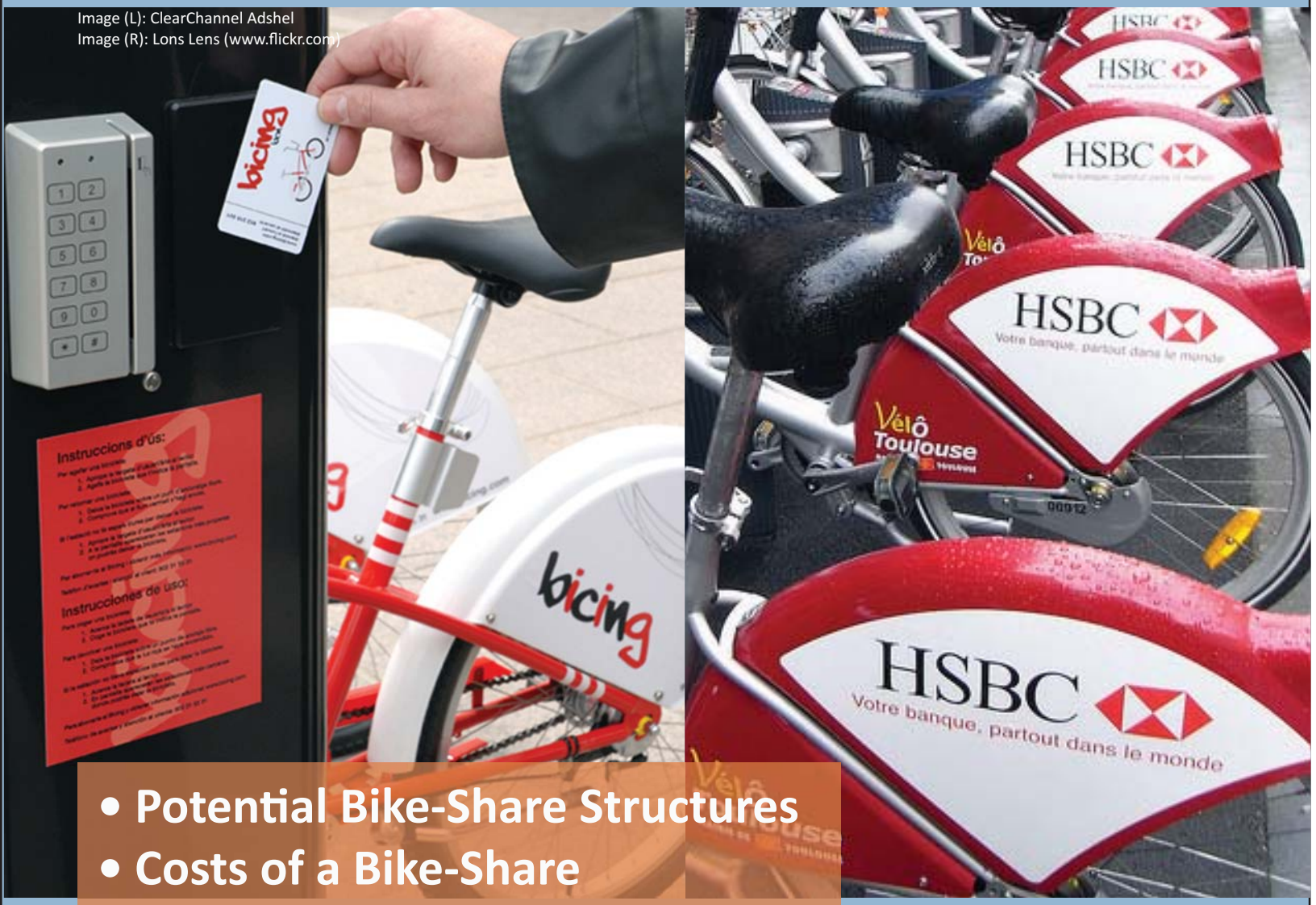
06 Paying for a NYC Bike-Share

Image (L): ClearChannel Adshel
Image (R): Lons Lens (www.flickr.com)



- **Potential Bike-Share Structures**
- **Costs of a Bike-Share**
- **Potential Revenue Sources**

POTENTIAL FINANCIAL STRUCTURES

This section outlines the regulatory environments associated with both city-built and franchise bike-share programs. Within the confines of those environments, this section also provides "back of the envelope" estimates for the cost and revenues for a New York City bike-share program at a variety of scales. Membership and use fees are considered the primary operating revenue source in all estimates; potential advertising revenues are discussed where appropriate. Capital funding sources—such as the New York City Investment Fund and other private grants—are covered in brief.

Bike-share programs are strong candidates for the public-private partnership model of provision of public services. Despite their obvious public transportation and health benefits, few cities have the capacity, money or desire to run bike-share programs on their own. As a result, most bike-shares are built, run and maintained by private companies who make a profit off the program or, more commonly, off the advertising in the bike-share contract. Because bike-stations are placed on public land—city streets and sidewalks—bike-share programs cannot be provided by the private sector alone.

Worldwide, bike-share programs are structured in two major ways, albeit with numerous permutations. Bike-share programs can be developed:

- As part of an advertising franchise authorized by the city and operated by the franchisee
- With city funds and operated by the city or by a service operator

Franchises are the dominant, but not the only, model for most of the world's bike-share programs. Paris and Washington DC, for example, have connected their bike-share programs to larger street furniture franchise contracts, allowing advertisers to earn revenues from advertising in exchange for building and operating bike-share programs. Toulouse has created a bike-share specific franchise which generates advertising revenues from the bicycles themselves. In contrast, the Barcelona and Montreal systems do not use advertising revenue. In Barcelona, the bike-share is separated from advertising and the city pays the operator (ClearChannel Adshel) to build and run programs out of other city revenue streams. In Montreal, the Montreal Parking Authority, a quasi-public authority, proposes to fund Montreal's Bixi program entirely off of membership/use fees and sponsorships.[1]

A city-built bike-share program could also later be combined with a franchise. A franchise model would allow for wider bike-share coverage, since the advertising revenues could help to offset both capital and operation costs. The process for franchise authorization is, however, lengthy and New York's current street furniture franchises limit options for bike-share. A city-built program could be implemented faster but coverage would be restricted to areas where membership and use fees could cover costs. A New York City bike-share program could begin as a city-built program in select high volume locations while NYCDOT begins franchise authorization proceedings.

1 The Call-A-Bike bike-share program in Germany is paid for by the German national railroad as part of their complement of services.

Potential revenue streams for a New York bike-share program depend on the program structure and related regulatory environment. However, certain revenue streams, like membership and user fees, will likely play a part in any structure as New York City and State face significant budget issues and as much of the city's street furniture is already consolidated under a franchise agreement. Advertising revenue is also important, although the use of advertising is only allowed within the confines of a franchise agreement.

Within the broad categories of Franchise and City-Built program, the following options exist:

	FRANCHISE			CITY-BUILT PROGRAM	
Option #	**Option 1a:**	**Option 1b:**	**Option 1c:**	**Option 2:**	**Option 3:**
Description	Renegotiate Existing Street Furniture Franchise	New Bike-Share Franchise	New Street Furniture Franchise + Bike-Share	City Build and Operate	City Build and Contract Out Operations
Contract Type	Franchise Contract			N/A	Service Contract
Capital Costs Assumed by…	Franchisee			City	City
Operating Costs Assumed by…	Franchisee			City	Operator
Primary Revenue Sources	• Advertising • Membership/User Fees			• City Funds • Membership/ User Fees	• City Funds • Membership/ User Fees
Other Revenue Options	• Federal/State Grants • Private Loans/Grants • City Funds			• Federal/State Grants • Private Loans/ Grants	• Federal/State Grants • Private Loans/ Grants

Franchise Options

In general, franchise contracts are used because they allow cities to implement bike-share programs without taking money directly from city coffers. Instead costs are borne by the franchisee/operator in exchange for revenue from advertisements placed on city property. Franchise based bike-share programs are not "free" however, because money the city could have earned from the advertising space in the franchise is now split between the city and the franchisee/operator.

Key to the development of a successful franchise based bike-share program is acknowledgement of the fact that municipal governments and private-sector companies have different bottom lines. Importantly, as New York City has found in other franchise contracts, locations that are the most lucrative in terms of advertising revenue do not always match the locations that a calculation of public needs, such as provision of public telephones or bike-stations, might dictate. The 2006 CEMUSA contract stipulated that NYCDOT select the locations for CEMUSA bus shelters, rather than leaving placement decisions up to the franchisee; similar terms would be necessary for a bike-share franchise.

In New York, franchises are defined in the City Charter as "grants by an agency of a right to occupy or use the inalienable property of the city to provide a public service" and typically are used for the private provision of public amenities such as private bus lines or bus stop shelters.[2] Franchises are proposed by the mayor and authorized by the City Council. The process for franchise authorization tends to be lengthy. The Authorizing Resolution and Uniform Land Use Review Process (ULURP) application for the 2006 CEMUSA Coordinated Street Furniture Franchise was initially submitted by the Giuliani administration in the late 1990's.[3]

Franchise Option 1a: Added into an Existing Street Furniture Franchise

Velib' in Paris and SmartBike in Washington D.C. are funded as part of larger street furniture contracts. In Washington, for example, ClearChannel operates DC's 120 bicycle program and gives the District 35% of the total advertising revenues.[4] In Paris, the 20,600 bicycle Velib' program is tied into the city's billboard contract with SOMUPI, a JCDecaux joint venture. The city of Paris broke its original JCDecaux franchise contract to create a new one that included bike-share.

New York's ability to add a bike-share program into one of its existing franchise is limited by the terms of those contracts. The 2006 Coordinated Street Furniture Franchise gives CEMUSA control over advertising on city bus shelters. In exchange, CEMUSA must replace and maintain the City's 3,169 existing bus shelters, 330 newsstands, and an unspecified number of public service structures, and build and maintain 20 automatic public toilets, for 20 years. In addition to being relieved of the responsibility for provision and maintenance of these structures, the City is guaranteed a minimum of $1 billion in revenue and close to $500 million in free advertising over the next 20 years.

Modifications to the CEMUSA contract to include a bike-share program may be difficult because they would require significant renegotiation between DOT and CEMUSA. Importantly, the current financial payout of the CEMUSA contract would be difficult to replicate if a bike-share pro-

2 New York City Charter, Section 362-b

3 McKenna, Brooke, NYCDOT, Coordinated Street Furniture Franchise; Interviews: August 2008

4 Grasso, Richard, Senior Vice President Business Development, & Martina Schmidt, Director SmartBike US; ClearChannel Adshel, Phone Interview: 30 April, 2008

gram were included, since the contract already covers most of what is traditionally thought of as "advertiseable" street furniture. Renegotiation of the CEMUSA contract would require a lengthy authorization process (as would any franchise).

It should be noted that, of the outdoor street furniture advertising companies the currently include bike-share programs in their repertoires, CEMUSA only has two programs currently in operation (nibici in Pamplona and Roma'n in Rome). Both programs are small—nibici has 350 bicycles and Roma'n has 200—and may not provide CEMUSA with sufficient expertise for running a New York sized program.

New York's phone booth contracts are another major existing city franchise. The city's 35 phone booth advertising contracts are handled by NYCDoITT and are set to expire in 2010.[5] As with other forms of street furniture, the revenues from phone booth advertising panels can be substantial. In the 2nd Quarter 2008, advertisements on the city's phone booths netted $340/month/ad panel or $4.2 million/month in total. The city currently receives 26% of the advertising revenues.[6]

Phone booth contracts are non-exclusive under the Federal Telecom statutes which mandate equal access. However, the declining use of pay phones has raised questions, and lawsuits, about the placement of phone booths as community boards and neighborhood groups have charged that street furniture advertisement companies are using phone booths to sneak ads into areas where ads are not permitted or not desirable.[7] As a result, phone booths are likely a poor funding option for a bike-share program.

Franchise Option 1b: A New Bike-Share Specific Franchise

Toulouse has used its bike-share program to create entirely new franchise options by advertising on the bike-share bicycles themselves. In Norway, ClearChannel Adshel's franchise includes advertisement located on the bike-stations. Such bike-share specific franchises are appealing because of the direct relationship between the advertisement and the program. Attaching the advertisement panel to the bike-stations or bicycles gives advertiser/operators an additional incentive to ensure that the program is well maintained and that the bicycles are constant use around the city. The revenue streams from on-bicycle advertisements are largely untested but have the potential to be substantial.

Franchise Option 1c: A New Street Furniture Franchise Which Includes Bike-Share

Unlike many street furniture contracts elsewhere, the CEMUSA contract is not exclusive. In theory this means that the city could issue a new street furniture franchise contract for additional bus shelters, newsstands, public service structures or automatic public toilets that could be used to fund a bike-share program. However, in practice, this option would be difficult as the City is required to allow CEMUSA to build their full allotment of street furniture before granting a new franchise contract for additional street furniture covered under the contract, which severely restricts this option. Other forms of street furniture—such as muni-meters—are not part of the CEMUSA contract, and these could be tied into a new bike-share/street furniture contract.

5 Schorr, Stanley, NYC DoITT, Finance Division, Phone Interview: 24 July, 2008
6 Kaylish, Wayne, NYC DoITT, Finance Division, Phone Interview: 4 August 2008
7 McGinty, Jo Craven, "As Billboards, Public Phones Always Work;" *The New York Times*, 17 August, 2007

City-Built Program Options

A city-built bike-share places the financial burden of the program on the city. A city-built bike-share program could be run by NYCDOT itself or contracted out to an independent operator using a service contract. Authorizations for the acquisition of bicycles and the placement of bike-stations would come from the NYCDOT Commissioner with approval of the Mayor. The Design Commission review is required. If the city were to choose to contract out the operations of the bike-share, it would follow the service contract rules as laid out in the City Administrative Code. Advertising is not an option, except under the auspices of a franchise contract.

Option 2: City Built/City Operated
A city-built/city-operated program would be developed under the auspices of NYCDOT. There is no set structure for operations.

Option 3: City Built/Contractor Operated
Bicing, in Barcelona, is paid for out of city revenues. The program cost is negotiated annually. In New York, a city-build/contractor operated program would be developed and overseen by NYCDOT. There is no set structure for operations.

BIKE-SHARE PROGRAM COSTS

The costs of a bike-share program vary depending on the number of bicycles and bike-stations, the size and density of the coverage area, and the bicycle and bike-station type and operator selected. Depending on the model of bike-station used, New York City's high installation and electrification costs could also contribute to the overall price tag of a program. For example, current estimates place the cost of manufacturing, installing and "trenching" (digging to the closest power source) for the new CEMUSA bus shelters at $15,000-$20,000 per shelter. These high costs are due partially to the complex subterranean environment below the city's sidewalks where water, sewer, and power lines, subway and building vaults and foundations all must be accommodated.

Capital costs for a bike-share program include provision of bicycles, manufacture and installation of bike-stations, purchase of service and distribution vehicles, development of a website, and purchase and installation of necessary hardware and software. ClearChannel Adshel estimates that each bicycle costs $550-600. District DOT in Washington DC estimates the capital cost for a ClearChannel Adshel model bike-share program at around $3,600/bicycle.[8] Velib's capital costs are estimated at $4,400/bicycle.[9]

Montreal's Bixi program suggests a valuable design innovation to reduce capital costs. The bicycle docking stations are mounted onto a metal plate which is in turn bolted to the ground. Excavation and trenching are not required, a significant capital cost reduction. The Stationnement de Montréal estimates its capital costs around $3,000/bicycle.[10]

Operating costs include salaries for maintenance and administrative staff, insurance, replacement costs for broken or stolen equipment, debt-service, gasoline and upkeep costs for redistribution vehicles, website hosting and maintenance, electricity charges for the bike-stations, membership cards and warehouse/storage fees. When averaged across programs, the average operating cost for a bike-share program is around $1,600/bicycle. Again, Stationnement de Montréal predicts the lowest operating costs; around $1,200/bicycle. Bixi's use of solar power (the Bixi bike-station is powered entirely by solar panels) may contribute to the lower cost. Operating costs may also rise with the uptake rate. This report assumes a conservative 20% increase in operating costs for every 3% uptake increase.

Economies of scale may be possible for larger programs. For both capital and operating costs, some costs, such as purchase and upkeep of maintenance and distribution vehicles, website hosting and wireless connectivity charges, are relatively constant regardless of the size of the program. In addition, unit prices may decrease as purchase order sizes increase.

8 Kelly, Alice, Program Manager, District DOT; Phone and email correspondence: 14 August 2008
9 Spitz, Eric, City of Paris; Email Correspondence: Spring 2009
10 Alain Ayott, Executive Vice President, Montreal Parking Authority/Stationnement de Montréal; Phone Interviews: 3 & 11 July & 14 October, 2008

POTENTIAL REVENUE SOURCES

For New York City, membership and use fees represent the primary revenue source for a bike-share program. Advertising, the major revenue stream for most bike-share programs worldwide, is limited in New York by existing franchise contracts. Advertising on bike-share bike-stations or the bicycles themselves remains a potentially lucrative but largely untested source of revenue. Other sources of capital, such as private loans from the New York City Investment Fund or federal grants are also available.

Membership and Use Fees:

Since bicycling is not the default choice for most commuters, bike-share programs that charge users more than they would pay to drive or take public transit have slim chances of success. As a result, membership and use fees for bike-share programs are typically kept low in order to encourage use. The European programs charge roughly $40/year. Montreal's Bixi program, the only program to attempt to cover costs with fees alone, will charge approximately $80/year.[11]

Even at low rates, membership and use fees can be significant sources of revenue, especially when the program is concentrated in densely populated, highly trafficked areas. Just over 500,000 people live in Manhattan south of 59th Street and just under a million more commute into that area each day from the rest of the city. 552,000 more commute into Manhattan south of 59th Street daily from New Jersey, Long Island, Westchester and upstate New York and Connecticut. A bike-share program could be used by such New Yorkers in their commute or to run errands at lunch or after work. In Paris (total population just under 2.2 million), the city of Paris earned $31.5 million from membership and use fees in Velib's first year.[12] As in Paris, the volume of visitors coming to New York also make one day passes a potentially valuable revenue stream. Visitors to Paris purchased 2.5 million one day (1€) Velib' passes in the first 6 months of the program alone.[13] In New York City, where a one day subway pass costs $7.50 and tourist bicycle rentals range between $35-99/day, higher rates may be possible. Price elasticity is unknown.

Assumed Rates	
Annual Pass	$60
Weekly Pass	$19
Day Pass	$5
1st Half Hour	Free
Subsequent Half Hour(s)	$2 each

A rough estimate for projected revenues from membership and use fees was developed for this report. Fees were tested over the four program size scenarios at 3%, 6% and 9% uptake rates. A projected "Net Operating Income" was developed for each scenario by assuming different uptake rates for different populations. For example, people who both live and work within the coverage area were assumed to be more likely to subscribe to the program (6%) than commuters coming in from Westchester, New Jersey or Long Island or elsewhere outside the coverage area (3%). Day passes were assumed to be more popular (9% of leisure tourists staying less than 4 days) than week passes (6% of leisure tourists staying longer than 4 days). Using data from other programs, 5% of all trips were assumed to go over 30 minutes. The demand assumptions for each scenario are included in Appendix D: Financial Assumptions.

11 Alain Ayott, Executive Vice-President, Montreal Parking Authority; Phone Interviews: 3 & 11 July, 2008
12 Erlanger, Steven, "A New Fashion Catches On in Paris: Cheap Bicycle Rentals," *The New York Times*, 13 July 2008
13 Bike-Share Blog Website, posted by Paul DeMaio, "Random Velib' Data," (http://bike-sharing.blogspot.com/2008/02/random-velib-data.html); Accessed 6/25/08

As scenario sizes expand to cover larger, less trafficked portions of the city (Queens, the Bronx and southern Brooklyn), other funding sources, such as advertising, would become necessary in order to maintain reasonable membership rates. In the scenarios that focus exclusively on New York's most densely populated, highly trafficked areas (Manhattan and parts of Brooklyn), the $60/year pricing produces net revenues after accounting for operations costs.

In conversations with NYC Department of Health and Mental Hygiene (NYCDHMH), concerns were raised that some of the health benefits of the bike-share could be lost if the program was priced out of the reach of New Yorkers in lower-income neighborhoods where obesity levels are highest. For people who would use bike-share to supplement their Monthly or Weekly MetroCards, currently priced at $81 and $25 respectively, with the bike-share program, the $60 annual fee could be a deterrent. In contrast, for commuters who use fixed value pay-as-you-go MetroCards, use of a bike-share program, which would allow bicycles to take the place of short subway trips, could result in a net savings.

Among DOHMH's recommendations to address the issue of affordability is a cost subsidy program for low-income populations.[14] NYCDHMH has introduced "Health Bucks" coupons for fruit and vegetable purchases at farmers' markets. Health Bucks are distributed in two ways—via community organizations and sites to community residents, and as an incentive for using Food Stamps at Farmers Markets. Health Buck redemption is most successful when they are distributed at point of purchase as an incentive for Food Stamp use (over 90%). Distribution via community groups and sites reaches additional populations such as potential first time farmers market visitors and non Food Stamp residents, but is less successful (redemption rates of approx 50%) and raises issues such as accountability and concerns about use by targeted groups. A similar system utilizing a cost subsidy system, via coupons or purchase codes eligible to those with an Electronic Benefit Transfer (EBT) card or number at points of purchase in low-income neighborhoods, could similarly be adapted to bike-share, to help decrease cost barriers for participation among low-income populations. These payment mechanisms would need to be evaluated to ensure that they provide adequate protections against credit card fraud and identity theft.

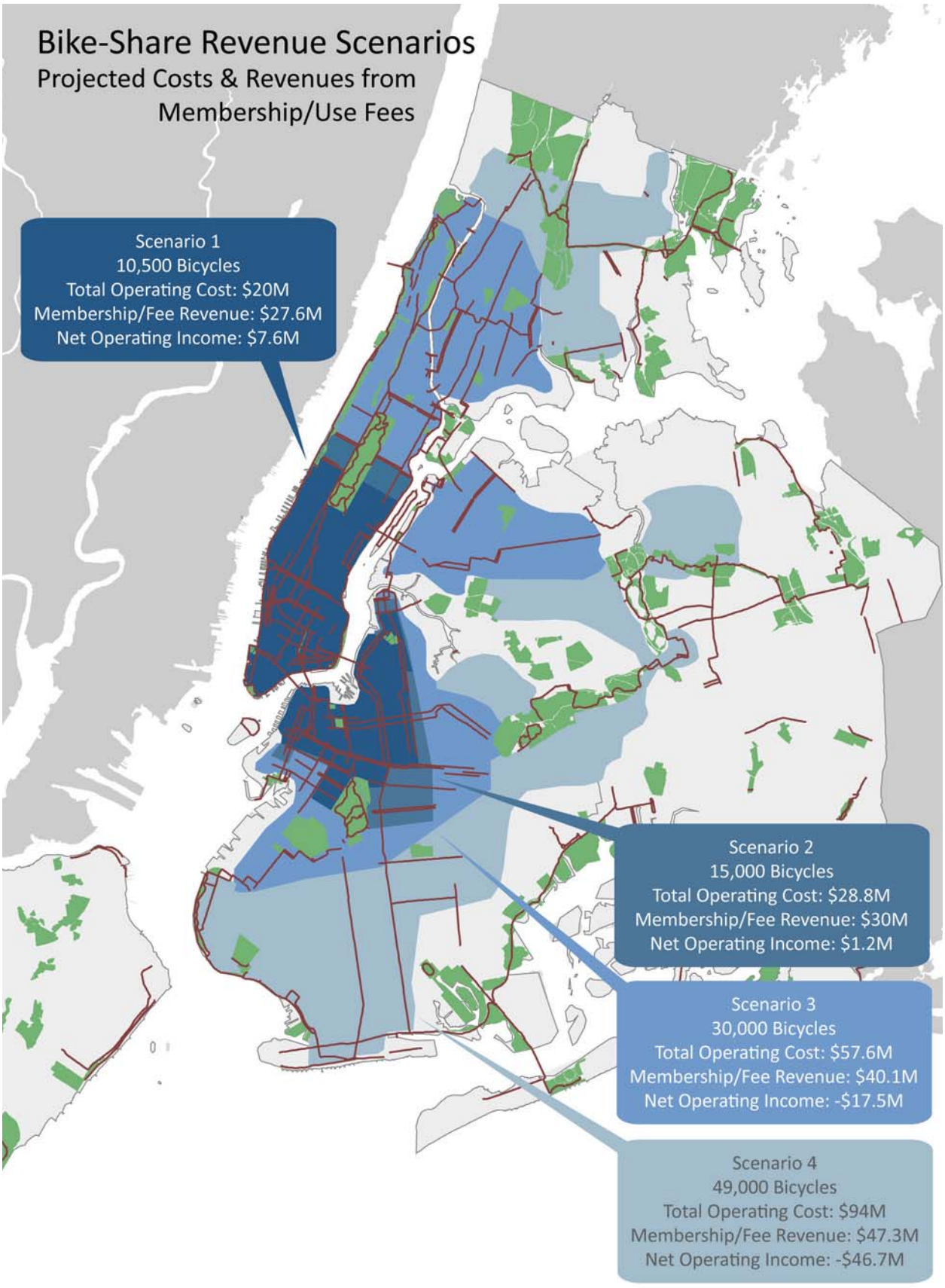
The credit card requirement, used to reduce theft, could pose some problems for lower income New Yorkers as they are less likely to have credit cards. In 2001 Casey/ Urban Institute Making Connections (MC) Survey found that, of the respondents, only 10% of households with incomes of $5,000 or less had a credit card in contrast to 78% of households with of $30,000 or more.[15] To further assess the magnitude of this issue in New York, NYCDHMH recommends further research into the availability of credit cards in lower-income areas, perhaps using MTA MetroCard purchase data and comparing the percent of credit card purchases (out of the total MetroCard purchases) in low-income areas with the percent of credit card purchases elsewhere in the city. Data could be collected either using the zip code associated with the credit cards or by looking at the total percent of purchases in stations in low-income areas made via credit card.[16] NYCDHMH also suggest that MTA data could be used to determine if there are correlations between income and types of MetroCard (Monthly or Weekly vs. Pay-As-You-Go) purchased.[17]

14 Communications with Bureau of Chronic Disease Prevention and Control, NYC Department of Health and Mental Hygiene

15 Casey/Urban Institute Making Connections (MC) Survey as provided by the NYC Department of Health and Mental Hygiene

16 Karen Lee, Deputy Director, & Victoria Grimshaw, Chronic Disease Prevention and Control, NYCDHMH; In-Person and Email Interviews: Summer 2008

17 Communications with NYC Department of Health and Mental Hygiene


Bike-Share Revenue Scenarios
Projected Costs & Revenues from Membership/Use Fees
Scenario 1
10,500 Bicycles
Total Operating Cost: $20M
Membership/Fee Revenue: $27.6M
Net Operating Income: $7.6M
Scenario 2
15,000 Bicycles
Total Operating Cost: $28.8M
Membership/Fee Revenue: $30M
Net Operating Income: $1.2M
Scenario 3
30,000 Bicycles
Total Operating Cost: $57.6M
Membership/Fee Revenue: $40.1M
Net Operating Income: -$17.5M
Scenario 4
49,000 Bicycles
Total Operating Cost: $94M
Membership/Fee Revenue: $47.3M
Net Operating Income: -$46.7M

Advertising:

On-bicycle or on-station advertising could be used to fund a New York bike-share program. The inclusion of advertising revenues could allow the bike-share operator to reduce membership rates and/or expand service over a larger portion of the city.

In the long term, the size of the bike-share program and determinations regarding the appropriateness of advertising are the limiting factors on the success of a bike-share franchise. Larger programs, which provide more advertising space, would generate higher revenues. In Midtown, bus shelter sized advertising panels earn $3,500-$5,000/month.[18]

In Norway, advertising panels are installed as part of the bike-station. Image: ClearChannel Adshel

However, advertising panels will not be possible or desirable on every bike-station. For example, for bike-stations that are placed on the sidewalk, in parks or on roadway medians advertising panels would block important sightlines or access paths. In Paris the Velib' bike-stations were designed to have a low profile and create minimal physical or visual intrusion into the streetscape. As result, none have advertising panels. Assuming a density of 28 stations/square mile and assuming that advertising panels were only attached to bike-stations in the city's commercial core (i.e. Manhattan below 60th Street), there would be 170-200 bike-stations with advertising in a New York City bike-share program.[19] This report estimates that those panels could earn $7-$8.5M per year in advertising revenues.

Advertising on bike-share bicycles is also an option. Revenues might be lower since there is limited advertising room on a bicycle and because it is a new and untested form of advertising. Velo Toulouse will be the first bike-share program to use on-bicycle ads. HSBC Bank has already purchased one year's worth of on-bicycle ads (1,000 bicycles) for $1M.[20]

On-bicycle ads provide revenue for the Vélô Toulouse program. Image: Mike Smiths flickr (www.flickr.com)

18 Outside of the city's core, revenues from bus-shelter sized advertising panels can drop to as little as $800/month.

19 Atelier Parisien d'Urbanisme (APUR), "Etude de Localization des Stations de Velos en Libre Service;" December 2006. P. 48

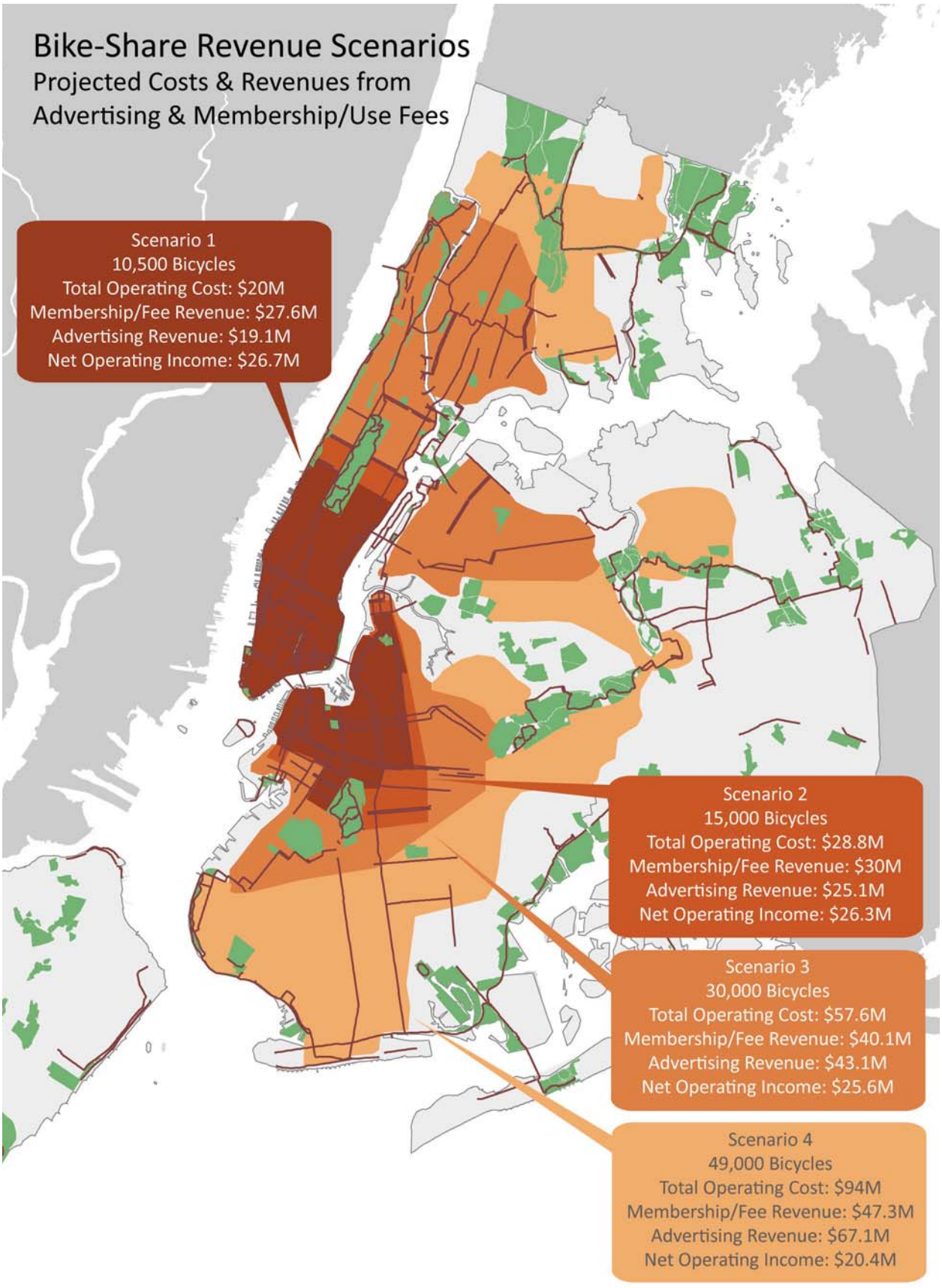
20 JCDecaux & HSBC; "PRESS RELEASE: HSBC Wraps Velo Toulouse;" (http://www.hsbc.fr/1/PA_1_3_S5/content/france/about-HSBC/press-releases/pdf/19-11-07_cp_velos_toulouse_GB.pdf); Accessed 06/25/08 & Squire, Josh, Bicycle System Manager, JCDecaux; Phone Interviews: Spring/Summer 2008

Estimates for the value of on-bicycle advertisements can be extrapolated from the value of other "in motion" advertisements: taxicabs. In New York, taxicab advertisements are worth $200-$350/taxi/month. ClearChannel Adshel estimates that an advertisement run on 200 taxicabs is seen by 25% of the adult population of the city of the course of a month.[21] Because on-bicycle advertising space is smaller than taxi advertising space, this report estimates that on-bicycle advertisements would generate less, around $100/bicycle/month. At this rate, the value of a logo on 15,000 bicycles would be worth around $18M per year to a sponsoring company. On-bicycle advertisements could be changed when bicycles were brought in for routine maintenance, approximately every 3 months. A high profile of a New York City bike-share program could mean that on-bicycle ads would sell well.

Bike-Share Franchise: Projected Advertising Revenue

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Bicycles	10,500	15,000	30,000	49,000
Bike-Station Ads	$7,140,000	$7,140,000	$7,140,000	$7,140,000
On-Bike Ads	$12,000,000	$18,000,000	$36,000,000	$60,000,000
Total Ad Revenue	$19,140,000	$25,140,000	$43,140,000	$67,140,000

21 Collings, Kevin, ClearChannel Adshel, ClearChannel Taxi Media, Phone Interview: 4 August 2008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Net Operating Income: $26.7M
Scenario 2
15,000 Bicycles
Total Operating Cost: $28.8M
Membership/Fee Revenue: $30M
Advertising Revenue: $25.1M
Net Operating Income: $26.3M
Scenario 3
30,000 Bicycles
Total Operating Cost: $57.6M
Membership/Fee Revenue: $40.1M
Advertising Revenue: $43.1M
Net Operating Income: $25.6M
Scenario 4
49,000 Bicycles
Total Operating Cost: $94M
Membership/Fee Revenue: $47.3M
Advertising Revenue: $67.1M
Net Operating Income: $20.4M

City Funds and Bonds:

City funds and bonds could be used to fund a bike-share program built by the city. The capital costs of a bike-share program can be addressed either with Municipal Bonds, from the city's Capital Budget, or with Pay-As-You-Go (PAYGO) funding, from the city's Expense Budget. The operating costs of a program could be addressed with membership and use fees as well as monies from the city's General Fund which are distributed through the annual Expense Budget. While money in the General Fund can theoretically be earmarked—for example, some portion of the $535M the city earned in parking violations in 2007 could be set aside for bike-share—they typically are not. Both the Capital Budget and Expense Budgets are proposed yearly by the Mayor and must be approved by the City Council. Differences between capital and operating costs are important as the City Charter has specific rules about what types of projects can be funded from its various revenue streams.

Operating funds come from the city's revenues from user fees, penalties, taxes, etc. Revenues generated from the bike-share program itself (membership and use fees) would cover the operating costs of a program focused on Manhattan and parts of Brooklyn. In addition, other funding sources such as Federal or private foundation grants could also be used.

Capital funds could come from Municipal Bonds (Capital Budget) and/or PAYGO funding (Expense Budget). In New York City, projects that are eligible for Capital Budget funding must have a dollar value of more than $35,000 and a "period of probable usefulness" of at least five years.[22]

Issuing municipal bonds is a traditional form of transportation financing meant to provide significant amounts of money for capital projects. For example, in Portland, Oregon floated $88.7 million in bonds, backed by a $.20/hour parking rate increase in city garages to fund the first phase of the Portland Streetcar project.[23] Bond financing means that the cost of an asset that lasts for many years is spread out over its lifespan instead of being the financial responsibility only of the first generation of users. Municipal bonds in particular are attractive to investors because the interest income is tax-exempt. Bonds can be problematic however, because the debt-service payments associated with bonds consume valuable city revenue resources. Rising interest rates, declining property values and concerns about state and local budget shortfalls in the near future mean that the city may be wary of issuing new debt.

Revenue bonds, where the debt issued to pay for the capital costs of a program are backed by revenues generated by that program (in the case of a bike-share program, membership or user fees) are also an option. However, as with any revenue bond, concerns from investors that the program would not be used widely enough to generate necessary revenues could lead to higher interest rates. In addition, bonds cannot be used to fund operations costs. Revenue from a bike-share program might be better used to pay for operating the program. The current financial crisis may limit the availability of bonds as a revenue source.

Legal issues may arise when projects funded through municipal bonds are mixed with franchise operating agreements as such arrangements can render interest income from the municipal bond

22 NYC Independent Budget Office, "Understanding New York City's Budget: A Guide," NYC Independent Budget Office 2006, p.5

23 Portland Streetcar Website, "History," (http://www.portlandstreetcar.org/history.php); Accessed 11/09/07 & Vicky Diede, Portland Streetcar Project Manager, City of Portland Office of Transportation, Email correspondence: 11/27/2007

ineligible for tax exemptions.[24] In such cases, the financing costs may become higher since investors must pay taxes on the interest earned requiring higher interest rates to earn the same profits. The legality of such a combination of municipal bonds and advertising would need to be confirmed with the city's Corporation Counsel and the Office of Management and Budget.

PAYGO funding is the second option for raising the capital funds for a city-built bike-share program. PAYGO allows the city to fund capital projects without contributing to the city's overall debt obligations. PAYGO money is taken from the city's annual Expense Budget. In years past, the PAYGO allotment in the city budget has been around $200M. However, in the most recent budget, PAYGO money was eliminated entirely, in response to the city's worsening financial health. PAYGO money could be returned to the budget by the Mayor.

Private, State and Federal Loans and Grants:
Grants may also be an option in bike-share funding, although they should not be counted on as a consistent stream of revenue since most must be applied for each year and are not guaranteed. Grants come from the Federal and State government or from private foundations. Loans may be available from private investors. In some cases, the use of Federal grants could limit the city's ability to pursue franchise or advertising options.

New York City Investment Fund:
The New York City Investment Fund is private fund that distributes low-interest loans for projects located within the five boroughs that will advance the good of New York City. While typical loans range from $500,000 to a few million dollars, the reputation of NYCIF, which includes on its board members of major New York City financial institutions and businesses, can help to leverage additional private capital for unusual projects like a bike-share program. NYCIF prefers to work with private sector or non-profit partners, making NYCIF funding an ideal combination with a franchise or in the case of a city-built program that was operated by an outside contractor. NYCIF money is not grant money and must be repaid since the fund is self-replenishing; however, a wide range of return options are available and each loan is specifically tailored to each project. NYCIF has job creation among its specifically stated goals. In preliminary, fact finding conversations, Maria Gotsch, NYCIF President and CEO, expressed interest in a New York bike-share program.[25]

Federal & State Grants:
Bicycle related projects can receive funding from the federal government through federal transportation legislation such as ISTEA, TEA-21 and most recently, SAFETEA-LU which set aside monies for pedestrian or bicycle related planning. While some funds are available directly from the federal government, most of the funding is available through specific programs and then funneled through state transportation departments and metropolitan planning organizations. In New York City, federal money for a bike-share program would be distributed to the New York State Department of Transportation and NYMTC, the New York City metropolitan planning organization, which in turn would distribute the funds to City DOT. The following programs could provide funding to a New York City bike-share program via the current federal transportation bill, SAFETEA-LU. SAFETEA-LU expires in 2009. A new federal transportation bill will be the responsibility of the new administration and Congress.

24 Olson, Jay, NYCOMB, Assistant Director; Phone Interview: 4 August 2008
25 Gotsch, Maria; President & CEO, NYCIF, Phone Interview: 26 August 2008

- Congestion Mitigation And Air Quality Improvement Program (CMAQ)
  ISTEA, passed in 1991, authorized the CMAQ program to fund surface transportation projects and other projects related to improving air quality. Both the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) distribute monies to State DOTs, MPOs and other transit agencies. CMAQ funds are meant to provide seed money for a project, not to be a permanent funding mechanism for new projects.[26]

- Surface Transportation Enhancement Program
  The Surface Transportation Program (STP) requires state DOTs and MPOs to set aside 10% of their funds toward transportation enhancements that are not traditionally included in typical transportation funding.[27] Examples of projects include providing funding for bicycle lanes and contributing to capital costs of a bicycle transit center.

- Transit Enhancements
  Funds from this program can be used toward projects designed to enhance bicycle and pedestrian facilities. In addition, transit agencies are eligible to use these funds towards adding bicycle storage and parking to trains and busses.

- Transportation and Community and System Preservation (TSCP)
  The FHWA, FTA and EPA developed the TSCP program to study offer grants for projects that are intended to integrate improve community's by enhancing the transportation system. TSCP is "designed to support exemplary or innovative projects" for transportation and improving the quality of life of communities.[28]

The programs mentioned above are not an exhaustive list of federal and state funding mechanisms designed for bicycle infrastructure. Federal public health grants in particular have not been explored as preliminary research indicates that most health grants are only available for research, not capital cost or program operation.

Private Foundation Grants:
Foundations often award grants to municipal governments, universities, not-for-profit organizations and advocacy groups for bicycle related projects. Award amounts vary. Over the past few years, foundations like Bristol-Myers Squibb Foundation, Robert Wood Johnson Foundation, Lilly Endowment, Richard King Mellon Foundation and the Ruth Mott Foundation awarded grants of $100,000 or more for bicycle projects. Other groups, such as the REI Bicycle Friendly Communities Grants Program, award grants that are less than $50,000 dollars for bicycle planning. Grants could be used towards initial start-up costs but should not be used as a consistent stream of revenue.

26 Federal Highway Administration (FHWA), "Congestion Mitigation and Air Quality (CMAQ) Improvement Program," (http://www.fhwa.dot.gov/environment/cmaqpgs/); Accessed 07/21/08
27 Federal Highway Administration Website, "Bicycle and Pedestrian Provisions of Federal Transportation Legislation;" (http://www.fhwa.dot.gov/environment/bikeped/bp-guid.htm#bp4); Accessed 9/8/08
28 ibid.