



bike'topia  
a pedal for every citizen

Sustainability Studio  
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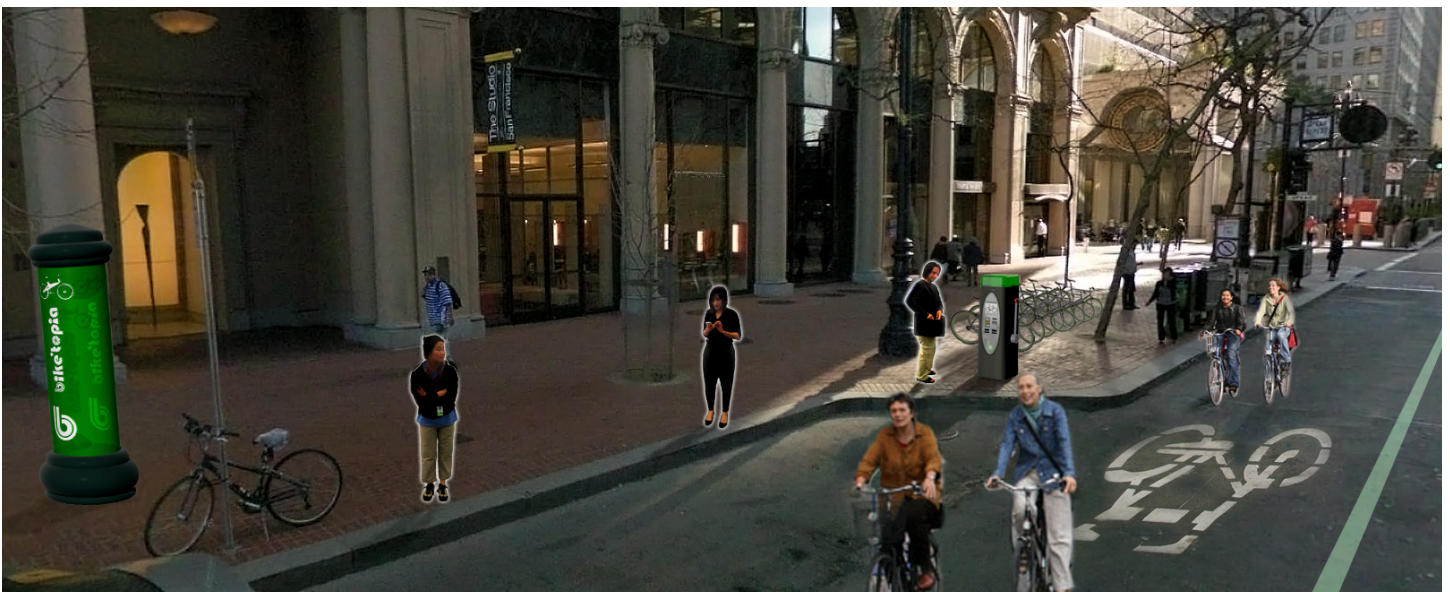
# Overview

Bike'topia is a premiere, privatized, easy to access bicycle sharing program to begin in San Francisco and grow to other cities. Its goal is to facilitate more everyday bicycle riding by providing bicycles to SF residents and those commuting or visiting the City from other parts of the Bay Area. Bike'topia aims to make it easier for our customers to choose cycling as their preferred means of transportation by providing a convenient and affordable alternative to cars. Bicycles are the most efficient way of transport, especially for distances of 5 miles and less, perfect for urban areas and this system is designed to human powered transportation, making errand running easy, accessible and downright cool.

Bike'topia's vision is a pedal for every citizen; and our mission is to become the preferred cycle sharing program of the Bay Area by offering more bikes in more areas in all shapes and sizes with self-service and rewards.

*We move people in more ways than one:*

- *Provide urban areas with easy, convenient and affordable access to bicycle travel.*
- *Create a healthier lifestyle*
- *Reduce the amount of carbon emissions released into the atmosphere*
- *Support local businesses*
- *Make the benefits of bicycling safely transparent*



ABOUT BIKE'TOPIA





# Our Values of Sustainability

As one of the most sustainable solutions, our goal is to facilitate more everyday bicycle riding to have an utmost impact in creating a sustainable lifestyle.

- A 15-minute bike ride to and from work five times a week burns off the equivalent of 11 pounds of fat a year
- Cyclists covering short distances can reduce their risk of death (caused by heart disease) by as much as 22 %
- Contrary to popular belief, a commuting cyclist is actually less exposed to air pollution than a commuting motorist
- Each person switching from driving to cycling to

work over a 4 mile trip each way saves 1.3 tons CO2 emissions a year

The social, economic, and socio-economic value potential will be great on a large scale and effect not only on our users but benefit the general public as well. To further promote the program as well as its transparent measurable benefits, the sustainability impacts will be tracked and shared with the general public. It will serve as an example that can applied on a national and global scale. Sharing programs exist, but Bike'topia strategically addresses the integrated triple bottom line.

	Natural Decrease in CO2 Emissions	Social Increase in quality of life by..	Financial
			
Increasing Bicycle As Preferred Mode of Transportation	taking cars off the road	getting people more active on a daily basis	discounts for consumers AND savings on infrastructure
Localizing Revenue	decreasing consumer good miles	more biking to local stores	increase local sales tax base
Recognition Through Bicycle Metrics	making more people want to ride than drive	recognition for personal achievement and contribution	lower personal health care costs
Reducing Risk Of Biking	making biking more safe for everyone	decreasing accidents	lower health care system costs
Transparent sustainable actions in an economically viable model	demonstrating best practices to other organizations	contributes to building a strong local community	increase in brand value and customer retention

# What We Offer

Our core offering is easy bike rental at strategically located stations all over San Francisco. Initially the bikes offered will be our basic bicycles by the hour. As the company grows, Bike'topia will offer premiere bicycles to their basic bike menu. The self-service kiosk is available 24 hours a day, seven days a week. Memberships include a discount on hourly rates and include bicycle liability insurance (for lost or theft.) The coverage is adjusted according to years of membership.

The bike menu allows options to choose a variety of wheels for a spin as well as accessories. Choose from a state of the art hi tech roadster or a sturdy commuter, from cargo bikes for shopping to trailer bikes for family outings. Premiere bikes will have special tracking devices, allowing the bikes to be reserved in advance for our members. Foldable helmets, locks and light gear will be available for

purchase.

Bicycles are available to rent from 1/2 hour to hours at a time. (Users will be charged a fee or cost of bike if not returned a bike station within 72 hours?)

## Rates & Pricing

Bike Basic \$2.50/hr; \$25/day (non-member price)

Premiere bicycle \$4~6/hr; \$40/day (non-member price)

Membership fee \$50/yr

Liability Insurance \$2/rental or \$5/day

Locking mechanism \$10~\$40

Foldable helmet \$15

Subterranean bicycle parking \$2 a day (for the bicycle enthusiasts)



# How It Works

## From Order to Drop-off

The self service kiosk will enable users to rent bikes by the hour using a credit or debit card, far less than any car share rate and less waiting than the MUNI system. Customers do not have to be members to ride, making the service available to the general public and for ad-hoc users. Premiere bikes are also available for members and able for reservations through the web site. The 400 bike stations will be located all over the city, strategically distributed near major transit systems and business districts, university, hospital and business campuses.



After selecting a bike and swiping payment, the patented proprietary Bike'topia pedal will be dispensed for the rider. The pedal is attached to the bike by the user, used much similar to a key for cars. The bicycle is returned to any bike station, and the pedal is returned back to the kiosk for the next user.

### The Pedal

Each pedal features RFID technology for tracking bicycles usage. This data is for tracking for user



Customized Trek Bike

flow and adjusting advertising rates for the bicycle stations. In addition, it helps track routes for selling contextual radius based advertising on the web site and on mobile devices.

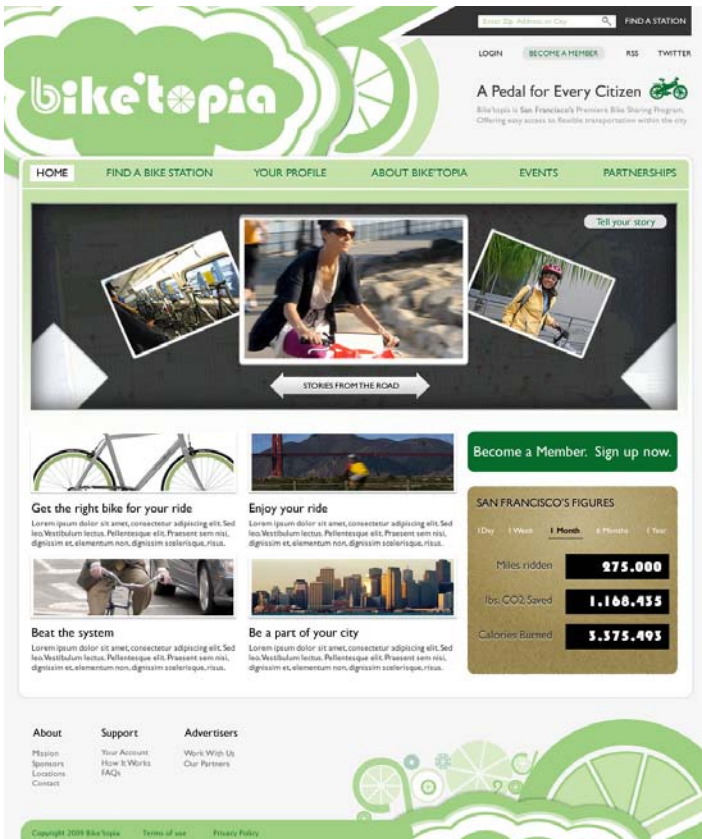
The data is also used to show personal metrics for the members to track personal impact and routes. The data collected on the pedal is synced to each account upon returning the pedal.

### Bicycles

Bike'topia makes every effort to make each aspect of the products and services of the company more sustainable, and this includes the bikes. The core basic bicycles we offer in mass use the latest technologies for durability. The bikes are chainless and have airless tires which reduce the amount of breakdowns significantly for our users, and reduces general maintenance needed on a regular basis.

### Stations

High traffic Bike'topia locations will feature a unique retrieval system capable of delivering a bicycle to the user from sub-level or elevated storage, allowing bicycle parking as an offer to our community cyclist



### Web Site

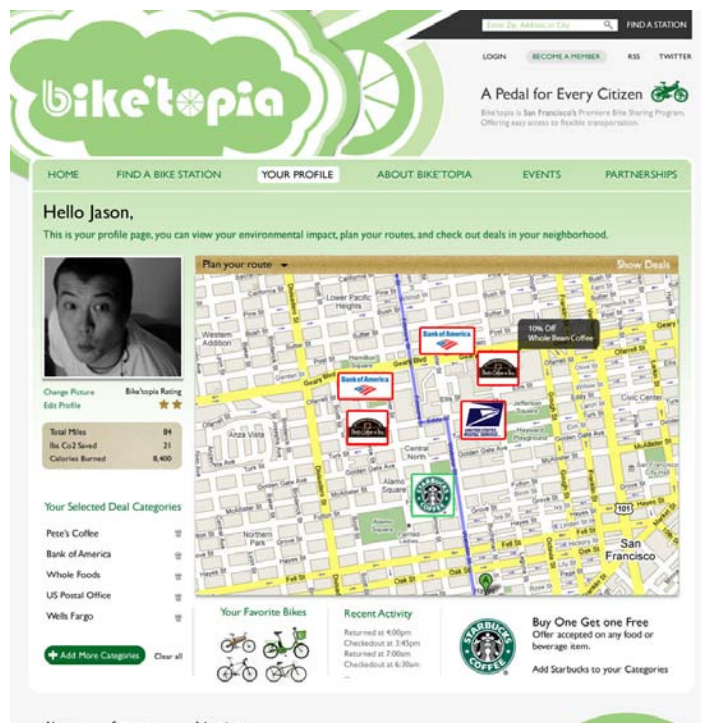
The Bike'topia web site will guide new users to the services available, as well as provide useful information for our members. It includes a running meter of the miles the community has ridden, pounds carbon dioxide emissions saved, and finally, calories burned.

The web site will also feature some basic bicycle riding and know-how guides specific to the City. It is also a place where members can share favorite routes and stories about the city and their rides and foster a friendly and encouraging community. Frequent riders and milestones will be recognized through stars marks.

A layer over Google maps shows bike stations, real time inventory, and context based ads. For members only, the routes taken will be plotted with various bike metrics for each individual rider and suggested

opting to use their personal bikes. While the kiosks are self-service and the bicycles are mostly self-maintained, there will be a service van to check and replenish both. Bicycles may accumulate to certain locations depending on circumstances (i.e. special events, etc.)

Many of the stations will be strategically located in high-traffic areas such as near other major transit systems, business districts, and large institutional campuses including hospitals and universities. Land owners leasing spaces to Bike'topia can offer this a benefit to their primary tenants (such as shopping centers and businesses) for their customers as well as a benefit to their employees. Allowing more traffic flow with less space occupied is a great added value, especially when Bike'topia will pay market rate for a monthly parking space.



### ABOUT BIKE'TOPIA

retailers. Bike metrics will include personal best times and length of rides, total personal miles ridden, calories burned and carbon emissions saved along with a log of past rentals. There is also an ability to map and meter the same metrics on a mobile application.

There is also a section for advertisers to acquire information about our effective advertising model available as a service to local businesses.

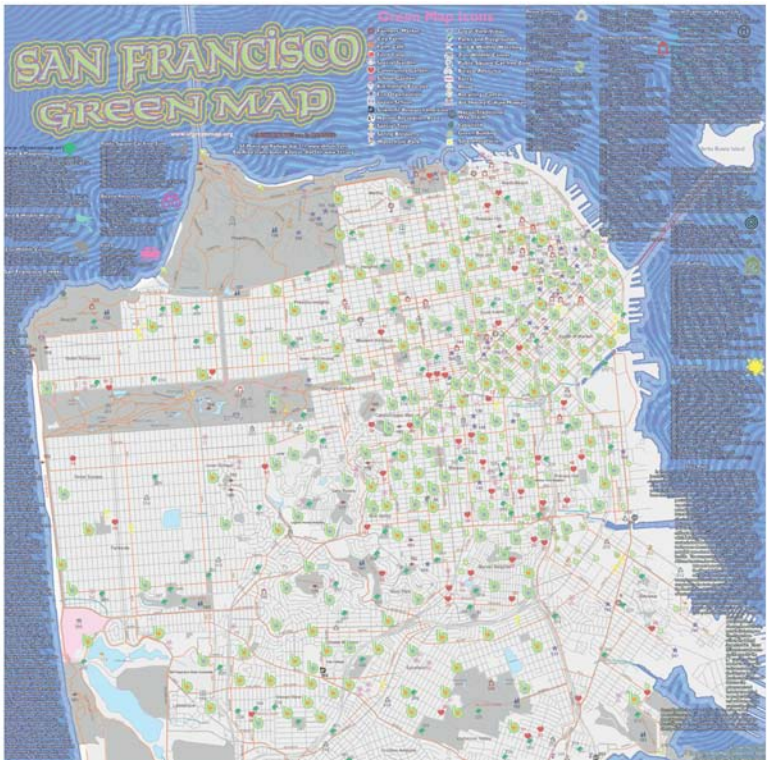
*Advertising*





Since the Bike'topia stations are in high-traffic areas, this works well for a unique advertising model. Advertisers are already used to advertising through other transit systems, and by endorsing a more sustainable service it creates an opportunity to

associate a better social value with their companies. Our research has shown bicyclists also utilize and pay attention to the local merchants at a higher level than drivers. To further make the advertising model more sustainable, advertisers will be more local and community oriented.

*Incentives*

To further encourage bicycling, Bike'topia offers discounts to local merchants. To build a better and localized community, bicyclists will raise their awareness to local shops and restaurants through their bike riding. Our discount partners will also be able to get higher traffic to their stores and also support a local sustainable system, increasing tax revenue to the local community as well.



	year 1:	2000: 100
	year 2:	3000: 200
	year 3:	4000:300/ intro premium bikes
	year 4:	4000: 400 + 600 replacements

# 4-Year Financial Projection

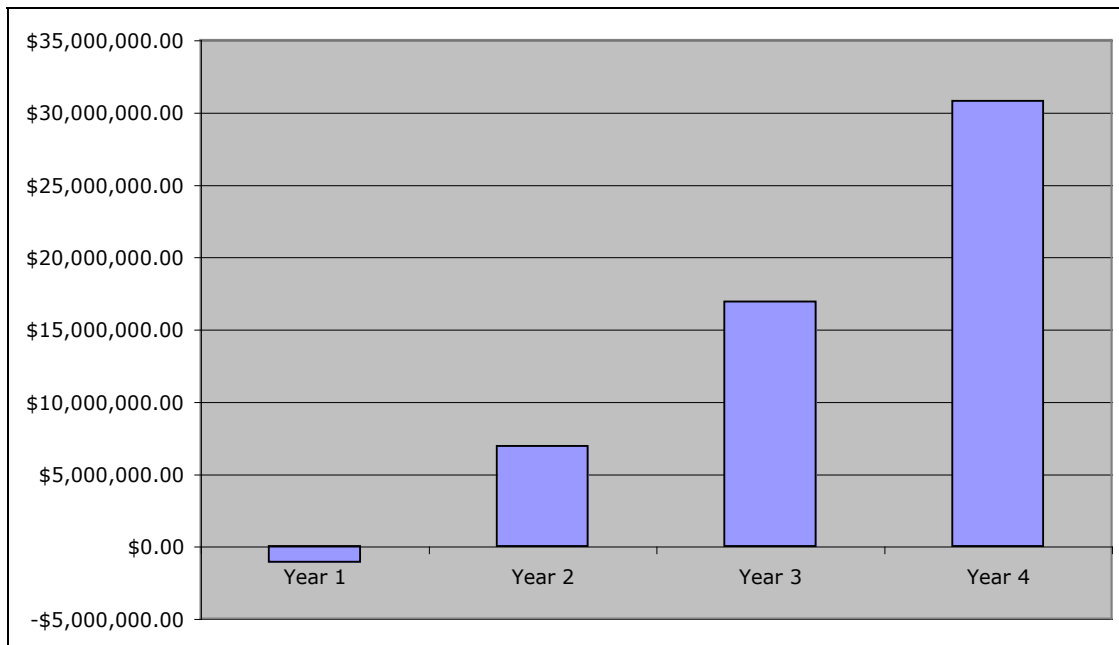
On the following page is a financial projection that demonstrates the viability of the Bike'topia service. We based these financial estimates on similar services, products and industry standards.

Bike'topia will be in development; ramping up in full by year two. There will be 2000 bicycles and 100 stations within the first year, and 1000 more bicycles every year after until we reach an average of 4000 bikes and 400 stations. Production will then be limited to replacements of bicycles lost and additional bikes to cover for bicycles out for repair.

While the plan will initially operate at a loss, this service will become profitable by the fifth quarter. The biggest costs will be in the initial implementation period, and will plateau in percentage as the system gets larger. Theft and loss will also decrease as the bicycles become more prominent and readily available. The current

estimation used for loss calculation up to year 4 is approximately 15% of active bicycles.

The statement covers the first four years of operation and a projected NPV of \$43.7M. Cost increases incrementally to include greater lease, maintenance and marketing costs.



FINANCIAL ANALYSIS





# Our Riders

## Basic/Ad hoc users

Going to places nearby and even unplanned? Have errands or meetings after school or work? Bike'topia is faster, easier and better for the environment than driving or local transit! Eliminate the time lost and costly expense of waiting or parking. There's no need to return your cycle to its original retrieval location. Bike'topia bikes can be deposited to any Bike'topia station.

Bike'topia is not just for San Franciscans. With stations convenient to existing transit hubs, visitors from out of town, or commuters from the greater bay area can use it too. With the flexibility to use basic bikes any time without reservations or membership – having to consider what to do with a bicycle or unforeseen changes in plan are easily managed. All the hassles of biking around has been augmented with convenience.

Commuting from the outside the City? Cycling to work is great for the environment but it can be difficult to take your bike with you onto Transbay Buses or BART when there are restrictions and limitation in capacity. With Bike'topia, you can still take pub-

lic transportation to SF and retrieve your bike to get around town easily either to work or off to see friends after work.

## Members

Annual memberships is available for a small fee of \$50 to cover storage and maintenance. Members get additional benefits beyond ad-hoc users:

- Discount hourly rates to Bike'topia
- Reservations to premium bicycles
- Personal metrics with an automatic carbon emission calculator, goal settings and calories burned, distances ridden.
- Maps of routes and tailored displays to interests near or on routes
- Discounts from local merchants around neighborhoods you ride in
- Parking available for a nominal fee per day for bicyclists who would like a secure parking area for their personal bikes.

*“Bike'topia let's me enjoy San Francisco a lot more. It's so easy and convenient. I get to where I want to go faster and healthier!”*



OUR COMMUNITY

# Local Partners and Hosts

Bike'topia's partnership with local merchants and hosts raises the visibility of local businesses. Interests in the "buy local" movement is expanding every year, and by bicycling our riders are a part of this growing movement.

Bike'topia give hosts a chance to expand profits by adding a monthly lessee to their parking or campus areas as well as by the increase in traffic as well as an opportunity to provide the station as an amenity to employees and customers.

Local partners have to the ability to increase exposure by discounts and other offerings. Our riders receive focused offers around their interest and their routes, much different from the traditional method of advertising where it is simply broadcasted to the general public, increasing the effect and visibility significantly.

*"I get more traffic by offering discounts to Bike'topia than my ad on the radio. People come looking for me since I'm on their way to or from work. I've gotten a lot of exposure. It's been great."*



*"I get to offer the service as a benefit for employees since we're so close to a bike station. One of my employees, Matt, even rides in with his uniform since he lives so close. It certainly turns heads."*

## *Flexible features in advertisements and promos!*

- Bike'topia shelter ads
- Web advertising
  - Context and favorites
  - Routes and radial
- Promotional giveaways at the kiosk
- Kiosk display ads
- Discount offerings to members
- Campaign bicycles (Orange ING bikes, Pink Susan G. Komen Cruisers!)
- Partner with us at our events!

# SROI Criteria

## Theories of Change:

Bike'topia seeks to increase bicycling in the City of San Francisco to the level of a major method of transportation. If the citizens of San Francisco are encouraged to shop locally by bicycle, there will be an increase in local business revenue and reduction in automobile use. With fewer cars on the road, automobile-induced carbon emissions will be reduced exponentially with less stress on the current public transit and traffic system. This improvement will create less impact environmentally and better air quality. In addition to the physical health benefits of riding of the bike, this will affect the health of the community and individual riders. Living a more active life through riding their bike entails burning more calories, which can work to reduce obesity and prevent cardiovascular disease, which happen to be two of the nations largest killers. City cycling as an activity is inherently a high-risk activity. Increasing the amount of bikers on average will also effect risk factors as a system. As more drivers become bicyclists, the urban biking experience is enhanced with fewer automobile-bicyclist incidents numerically as well as raising the awareness of bicyclists, and eventually influencing traffic policy.

## Activities/Inputs:

### *Localizing revenue*

- Develop easy access to bicycles and rental stations throughout the city in-between public transit areas, shopping areas and other institutional and business centers.
- Allow Bike'topia bicyclists to receive discounts to local participating stores that are part of their route
- Advertise as a service to contextually target customer needs

- Contextual advertising of local businesses to bicyclists will be delivered through online, on-bike, in-station, and mobile channels

### *Increasing bicycle as choice of transportations*

- Make Bicycles for ad-hoc travel and planned
- Availability in Mass and convenient areas
- Provide easy access
- Create incentives to help encourage folks to not only join the bike-share system, but proactively use it, time and time again (reuse).
- Raise awareness. Create measures to educate, inform, and promote, safe riding practices from route selection, gear, to safe riding/ traffic strategies.

### *Transparent sustainable actions in an economically viable model*

- Sustainable design & implementation
- System to monetize cyclesharing
- Leverage success of existing cycle share models (don't reinvent the wheel)
- Use systems/design thinking to overcome existing problems with cost, theft and maintenance
- Create a system that does not involve significant investment in infrastructure
- Monitor other programs on a global scale and compare metrics

### *Bicycle metrics*

- Enable members and system to track their miles biked.
- Enable members and system to convert miles biked into calories burned.
- Enable calories burned conversion into a relevant metric for the end user. An older person who is trying to lose weight, can convert

calories burned into pounds lost. A younger child can look at calories burned and convert it into how much muscle was gained. Reward users for accomplishing milestones.

- Promote and encourage bike riding for short-term transportation as a long term good health and disease prevention measure.

#### *Reduce risk*

- Design for Safety! Develop features to system and product to address visibility, and protection from bodily injury, as well as accidents and theft.
- Advocate by mass conversion for changes to city streets impacting bicycle safety.
- Provide insurance with every rental; or through partnerships
- Provide opportunities safety education through web site.
- Reward safe cycling with incentives
- Provide options for compactible riding helmets
- Online safe cycling training available

#### **Outputs:**

##### *Measures of local revenue*

- Sales for participating local businesses (and increase in local tax revenue)
- Increase in traffic to local businesses by switching to a pedestrian scale method of transport
- Increase in convenience for bicyclists to shop locally
- Advertising revenue for Bike'topia
- Use and amount of claimed savings for Bike'topia bicyclists
- Shop local and more frequent through accessibility

##### *Decrease in air quality and transit problems*

- Less Air Pollution Incident Reports
- Decrease in number of Air Pollution Complaints
- Measures of Particulate Matter tracked by Air Resources Board
- Decrease in the number of local Spare the Air days
- Decrease in direct amount of carbon emissions (carbon calculator per bicyclist): # of cyclists in City, # of cyclist trips
- Decrease in automobile traffic
- Decrease in rush hour time idling
- # mass transit users (possible increase)
- Increase in mass transit on-time rate

##### *Increase in bicycle usage*

- Increase in number of bicyclists
- Number of bikes stolen (Initial increase in numbers, eventual decrease through increased availability)
- Increase in number of riders
- Tracking of length of ride/duration of rental
- Frequency of Maintenance/Service calls
- Frequency and type of maintenance performed
- Cost of cycles by volume
- Life cycle use increase of bicycle

##### *Increase in awareness and areas of concentration*

- Number of participating companies
- Transaction quantity, frequency and cash amount
- Popular routes, times, products, etc.
- Conversion rate
- Requests for service through mobile app/ website

##### *Increase in direct health benefits*

- More calories burned for every member of the system.
- Lower blood pressure.
- More weight loss within the bike share community.
- Reduction in diseases including heart conditions, diabetes, and stress.

#### *Improvement in traffic safety*

- Decrease in cycling and motorist incidents
- Reduction in number of pedestrian and motorist incidents.

#### **Outcomes:**

- Increase in general local business revenue
- A creation of a 'shop local' culture
- Decrease in food miles
- Decrease in overall community carbon foot print
- Improved health benefits from cardiovascular exercise to riders
- Better air quality
- Improved respiratory health benefits through better air quality
- Conversion and then acceptance of a sustainable act
- Recognition and advocacy for sustainable practice
- Growth of human powered transport to other areas
- Community pride from leading change
- Better travel experience in San Francisco by all
- Lower health care costs
- A healthier population and proactive personal health care
- A wealthier population
- An active population

Data to quantify assessment would be collected from a variety of government, public, and private sources. The proposed sources below will serve as a starting point for collecting statistics creating base line as well as identifying current trends. Extensive data will be tracked and collected on members and users in addition to continued external data collection. Talking to stakeholders at all levels and quantifying risks associated with cycling in the city would be paramount as well.

#### **Supporting Data Sources:**

Bike'topia bicycle metrics  
 Bike'topia revenue streams  
 Sales data from participating partner businesses  
 SF Chamber of Commerce  
 City tax collector  
 Air Quality Measures  
 Bay Area Air Quality Management District  
 CA Air Resources Board  
 SF Government: Bicycle Advisory Committee  
 SF Bike Coalition  
 CalTrans  
 SF Muni/SFMTA  
 Bay Area Census Bureau  
 American Heart Association  
 Local disease trend research  
 Fitness Gurus  
 Metropolitan Transportation Commission (MTC)  
 Other market occupants (Washington DC, SmartBike/ Clear Channel, Paris/Velib)

# Competitive Analysis

As a shared mode of transport, our main competitors are other major modes of transportation including shared cars, public rail and bus, and cabs. However, given the most advantageous distance for bicycling is five miles, Bike'topia fills in the gap between walking distances and in between train station stops in an easy and convenient way.

While most methods of transportation are a "one size fits all" mentality to accommodate as many passengers as possible and increase fuel efficiency by load, they limit the destinations and fall short to accommodate many riders to their end destination, or in between stops.

On the other hand, many independent vehicles,

while attempting to fulfill individual and flexible needs are unable to do so due to the inconvenience presented in urban areas. The current urban lifestyle makes this act prohibiting with traffic jams, lack of parking spaces and cost. Bike'topia will be another transportation system that will ease the lives of everyone in the spectrum.

Below is a graph of some of the competitors. The following page contains d some competitive assessment from research in developing the concept.



Product/Service	Associated with a theme										Enhances life of current commuters	Encourages new people to commute by bike	Can be implemented today	Strengths	Weaknesses	Opportunities	Threats	Comments	
	Make purchasing decision an exercise in good judgment	Build transparency into the product	Appeal to gut instincts in the purchase process.	Enable small victories	Appeal to a sense of daily adventure	Provide freedom from the mundane	Emulate a daily reset	Make the owner feel like "getting away with it."	Provide opportunities to do it Yourself	Enable self expression	Build in durable craftsmanship	Keep products and services transformable	Yes/No	Yes/No	Yes/No				
Bike City	Y	Y	Y	Y	Y	Y	Y	Y	some	Y	Y	Y	Y	Y	<ul style="list-style-type: none"> <li>Harnesses physical kinetic energy to power the device.</li> <li>Ability to set personal milestones as well as ability to see collective progress</li> <li>Transparency in the metric (no arbitrary carbon calculator)</li> <li>Ability to share and encourage bicycling information</li> <li>Encourages to continue riding</li> </ul>	<ul style="list-style-type: none"> <li>Maintaining financial viability solely through sponsorship may be problematic</li> </ul>	<ul style="list-style-type: none"> <li>Many possibilities for partnerships</li> <li>Can easily expand to other communities</li> </ul>	<ul style="list-style-type: none"> <li>System down!</li> </ul>	Rewards the efforts and primary use is not for fitness purpose
SMheart link http://www.smheartlink.com/	Y			Y				Y			Y	Y		Y	Utilized as a platform and as a wireless bridge rather than a standalone product.	Not dematerialized, requires multiple devices for a complete metrics system	Works on spinning machines, not encouraging outdoor biking		Has connectivity to multiple devices
NewLeaf	Y	Y		Y				Y			Y	Y		Y	Free, automated data gathering while in use with SMHeart Link	Needs an iPhone			Has all kinds of metabolic data gathering, including the ability to hear your own heart rate
Spinning				Y				Y			Y			Y		Works also on spinning machines, does not encourage outdoor biking		Must be committed to fitness before using	Mainly a fitness tool
MapMyFitness	Y			Y	Y	Y		Y			Y	Y		Y	Maps personal routes sharing stories Training available forums	Membership based Website busy with too many things			Mixed for different type of fitness activities, including running
map my tracks	Y				Y	Y		Y				Y		Y	Personalized locator Can see locations of "family, friends" multiple sports	Simply locations			Mostly mapping tool
Lance Armstrong's Calorie App			Y	Y				Y						Y	Provides insight into daily caloric intake	Lacks the ability to automatically gather metrics, is used to add data manually, not very practical		Will be useless without an iPhone and a person to input the data by hand	An app that is very much like the NewLeaf
GarminEdge GPS	Y			Y				Y						Y	Portable Metric	Personal and not sharable		Must already be cycling, and only for fitness purpose	
WeightWatchers				Y			Y				Y			Y	"Training" by buddy system and leaders Sharing stories	Costly primarily educational	Easier to use website	Must start going in to solve a "problem"	Encouragement by using the community
Bucks for Bikes	Y													Y	Lowers initial barrier to bike (purchase of the vehicle)	Not long lasting (one time deal)		Could end up just being a bike purchasing program and not a behavioral change	Solano County
Commuter Check City Bike Share	Y							Y			Y	Y	Y	Y	Continual instead of one time Specifically commute related	Enhances commuter ride only monetarily (no education) Dependent on Employer	Could expand to include monetary checks for training courses		
Velib, Paris	Y			Y	Y	Y	Y				Y	Y	Y	Y	Largest bike sharing program	Safety a serious issue	JCDeaux has expertise in city contracts	For profit vs not for profit	
SmartBike, Washington DC (Clear Channel and DDOT)	Y	Y		Y	Y	Y	Y				Y	Y	Y	Y	Only private/public partnership active in US	most of them located downtown near Metro (subway) stops. The three-speed bikes can be used for up to three hours.	Advertising and expansion into other cities that Clear Channel partners with	Clear Channel vs a non profit or locally based group	same company currently partnering with SF
Bike Share, Philadelphia		Y			Y	Y	Y				Y	Y	Y						
New York Bike Share Project	Y	Y	Y	Y	Y	Y	Y				Y	Y			Good for generating publicity	only good for publicity	NYC is a large city with a large opportunity	safety and politics	Ongoing since 2007
SF Plan/Clear Channel's Smart Bike	Y			Y	Y	Y	Y	Y			Y	Y	Y	Y	City sponsored partnered with one of the largest current private company	Bogged down by politics. Too little too late.	Some public pressure and election cycles driving more attention	Politics, Politics, Politics. Too small and not ambitious enough.	
Zipcar	Y	Y					Y				Y	Y		Y	Experience in other markets. For profit	Not a wide SF distribution			Consensus that Zip Car better for longer drives
City Carshare (nonprofit)	Y	Y					Y				Y	Y		Y	Wide SF distribution and easy online system Not for profit	Somewhat expensive	SF based		Consensus seems to be that City CarShare is better for short drives
b cycle	Y	Y							Y		Y	Y	Y	Y	Provides an easy way to calculate the benefits of such a system and an easy way to engage ordinary citizens in the process	Isn't associated with any actual implementations	Partner with a major advertising firm AND Humana AND Trek Bicycle Corporation	Real world implementation	



# Resources

## Bicycle Research

Genentech Bike Club

<http://bikescape.blogspot.com/2005/11/commuting-together-genentech-bike-club.html>

San Francisco Bakfiet

<http://www.huckleberry-friends.net/sfbakfiet>

Folding Bicycle Backpack is a cross-country dream - Boing Boing Gadgets

<http://gadgets.boingboing.net/2009/01/20/folding-bicycle-back.html>

Wooden bicycle - Boing Boing

<http://www.boingboing.net/2009/03/12/wooden-bicycle.html>

MapMyRide.com - Map your Cycling and Mountain Biking Routes and join our Community of Cyclists. Cycling Social Network, iPhone, Topo Maps, Elevation Profiles, GPS Support.

Clipless Pedals

<http://www.thebikeshack.com/t-Pedals.aspx>

## Bike Sharing Programs

Abhinav Dapke - Bangalore, India - Tree Parking

[http://www.coroflot.com/public/individual\\_file.asp?from\\_url=true&individual\\_id=121139&portfolio\\_id=1165492&sort\\_by=1&](http://www.coroflot.com/public/individual_file.asp?from_url=true&individual_id=121139&portfolio_id=1165492&sort_by=1&)

Paris launches new, eco-friendly bike service - Europe - msnbc.com

<http://www.msnbc.msn.com/id/19685323>

Bamboo Helmet: Eco-friendly and Life-saving All At Once

[http://inventorspot.com/articles/bamboo\\_ecofriendly\\_and\\_lifesaving\\_all\\_at\\_once\\_16725](http://inventorspot.com/articles/bamboo_ecofriendly_and_lifesaving_all_at_once_16725)

In the Bike Lane

<http://inthebikelane.bicycling.com>

S.F. is gearing up for bike lane plans

<http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2009/03/23/BAVQ16LMV9.DTL>

Smartbike main site

<http://www.smartbike.com/how>

SmartBike DC Program

<https://www.smartbikedc.com/faqs.asp>

Mayor Office Press Room

[http://www.sfgov.org/site/mayor\\_index.asp?id=97480](http://www.sfgov.org/site/mayor_index.asp?id=97480)

The Bike-sharing Blog

<http://bike-sharing.blogspot.com>

Yamaha City-C

<http://www.inhabitat.com/2008/12/09/yamaha-pas-city-c-electric-bike>

Bike Photos

<http://www.metaefficient.com/bicycles/best-commuter-bikes.html>

Subterranean Japanese bike-parking robot - Boing Boing

<http://www.boingboing.net/2008/04/23/subterranean-japanes.html>

SF MTA Bike Sharing Plan

<http://www.sfmata.com/cms/bproj/documents/SFMTA-Citizens-GuideBike.pdf>

Bike Share Philadelphia 2007

<http://www.bikesharephiladelphia.org/learn/history>

Help us help the City to fulfill the promise of a complete bike network

<https://www.sfbike.org/?network>

Streetsblog -- The Impending Failure of San Francisco, Pilot Bike Share Program

<http://sf.streetsblog.org/2009/01/29/the-impending-failure-of-san-franciscos-pilot-bike-share-program>

Bicycle sharing systems

[http://en.wikipedia.org/wiki/Bicycle\\_sharing\\_system](http://en.wikipedia.org/wiki/Bicycle_sharing_system)

B Cycle

<http://bcycle.com/>

## Bicycle Safety

Bike Safety products

<http://www.shop.pedigreen.com/product.sc?categoryId=2&productId=176>

leah buechley - LilyPad Arduino - build - turn signal jacket

[http://www.cs.colorado.edu/~buechley/LilyPad/build/turn\\_signal\\_jacket.html](http://www.cs.colorado.edu/~buechley/LilyPad/build/turn_signal_jacket.html)

Laser bike lane

<http://dustbowl.wordpress.com/2009/01/09/light-lane-concept-from-altitudes-alex-tee-and-evan-gant/>

## Commuting Research

Commute by bike

<http://commutebybike.com/>

Metropolitan Transportation Coalition

[http://www.mtc.ca.gov/maps\\_and\\_data/datamart/stats/](http://www.mtc.ca.gov/maps_and_data/datamart/stats/)

Worldchanging: Bright Green: BikePower! (Pedal-powered Electricity)

<http://www.worldchanging.com/archives/004285.html>

Bike to Work Day San Francisco

<http://btwd.bayareabikes.org/>

Bike Hugger Blog

<http://bikehugger.com/mobile-socials>

Bike Journal

<http://bikejournal.com>

Bike Commuter blog

<http://www.bikecommuters.com/category/commuter-profiles/>