Victoria Bike Share Program
Planning and Design

2012

Jessie Abraham
Tim Cheng
Ryan Cook
Lee Haney
Callum McClure
Alasdair Rothnie
Philip Sikorski

Prepared for the City of Victoria
11/30/2012
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SITE SELECTION CRITERIA</td>
<td></td>
</tr>
<tr>
<td>DEMAND</td>
<td>3</td>
</tr>
<tr>
<td>SUPPLY</td>
<td>11</td>
</tr>
<tr>
<td>ADMINISTRATIVE &amp; MARKET RESEARCH</td>
<td>18</td>
</tr>
<tr>
<td>SITE SELECTION</td>
<td>25</td>
</tr>
<tr>
<td>ENGAGEMENT STRATEGY</td>
<td>38</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>53</td>
</tr>
</tbody>
</table>
A key component of Site Selection Criteria is determining demand levels required for the Bike Share Program. The feasibility of the program will be based on demographics of the City of Victoria, including population size & density, topography and climate. Demand will not only be determined by number of residents, but also by non-residents resulting from the tourist industry. In consideration of seasonal population variations, climate will also play a role in ridership throughout the year. By evaluating existing conditions of the city and comparing them to other bike share programs worldwide, we can determine the number of bikes required for the City of Victoria.

**POPULATION SIZE & DENSITY**

**POPULATION GROWTH**

• In 2008, the Capital Region as a whole had a population of about 364,000, while the City of Victoria had a population of approximately 83,000, and the Downtown Core Area had a population of about 6,050.

• According to population forecasts from the Capital Regional District (CRD), the Capital Region’s population will increase to 390,000 by 2016, and to 475,000 by 2038. This represents a 31 percent increase, or 111,000 new residents, in the next 30 years. The CRD estimates that Victoria’s share of that growth will be approximately an additional 20,000 residents, for a total population of just over 100,000 by 2041.

• According to Census information, the population in the Downtown neighbourhood increased by 17% between 2001 and 2006. The Harris Green neighbourhood population saw a 7% increase. Although more current Census information will not be available until 2012, the current population is assumed to be somewhat higher based on the various residential buildings that have been constructed since 2006 in these neighbourhoods.

**EMPLOYEES AND VISITORS**

• Based on 2008 statistics, on a typical workday in that year, the Downtown Core Area welcomed about 33,800 employees as well as thousands of additional shoppers and visitors.
Figure 1: 2006 Census – City of Victoria Population Size & Growth

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Burnside Gorge</td>
<td>5,210</td>
<td>4,950</td>
<td>260</td>
<td>5%</td>
<td>4,435</td>
<td>775</td>
<td>17%</td>
</tr>
<tr>
<td>Downtown</td>
<td>1,485</td>
<td>1,270</td>
<td>215</td>
<td>17%</td>
<td>970</td>
<td>515</td>
<td>53%</td>
</tr>
<tr>
<td>Fairfield</td>
<td>11,060</td>
<td>11,030</td>
<td>30</td>
<td>0%</td>
<td>11,260</td>
<td>-200</td>
<td>-2%</td>
</tr>
<tr>
<td>Fernwood</td>
<td>9,575</td>
<td>9,205</td>
<td>370</td>
<td>4%</td>
<td>9,410</td>
<td>185</td>
<td>2%</td>
</tr>
<tr>
<td>Gonzales</td>
<td>3,635</td>
<td>3,770</td>
<td>65</td>
<td>2%</td>
<td>3,895</td>
<td>-60</td>
<td>-2%</td>
</tr>
<tr>
<td>Harris Green</td>
<td>1,680</td>
<td>1,575</td>
<td>105</td>
<td>7%</td>
<td>1,045</td>
<td>635</td>
<td>61%</td>
</tr>
<tr>
<td>Hillside Quadra</td>
<td>7,280</td>
<td>7,180</td>
<td>100</td>
<td>1%</td>
<td>6,760</td>
<td>520</td>
<td>8%</td>
</tr>
<tr>
<td>James Bay</td>
<td>10,760</td>
<td>10,545</td>
<td>215</td>
<td>2%</td>
<td>11,120</td>
<td>-360</td>
<td>-3%</td>
</tr>
<tr>
<td>North Jubilee</td>
<td>2,975</td>
<td>3,125</td>
<td>-150</td>
<td>-5%</td>
<td>2,805</td>
<td>170</td>
<td>6%</td>
</tr>
<tr>
<td>North Park</td>
<td>3,395</td>
<td>3,070</td>
<td>325</td>
<td>11%</td>
<td>2,780</td>
<td>615</td>
<td>22%</td>
</tr>
<tr>
<td>Oaklands</td>
<td>6,365</td>
<td>6,550</td>
<td>-185</td>
<td>-3%</td>
<td>6,050</td>
<td>315</td>
<td>5%</td>
</tr>
<tr>
<td>Rockland</td>
<td>3,540</td>
<td>3,575</td>
<td>-35</td>
<td>-1%</td>
<td>3,630</td>
<td>-90</td>
<td>-2%</td>
</tr>
<tr>
<td>South Jubilee</td>
<td>2,240</td>
<td>2,105</td>
<td>135</td>
<td>6%</td>
<td>2,095</td>
<td>145</td>
<td>7%</td>
</tr>
<tr>
<td>Victoria West</td>
<td>5,985</td>
<td>5,575</td>
<td>410</td>
<td>7%</td>
<td>4,975</td>
<td>1,010</td>
<td>20%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>75,390</strong></td>
<td><strong>74,125</strong></td>
<td><strong>1,265</strong></td>
<td><strong>2%</strong></td>
<td><strong>71,225</strong></td>
<td><strong>4,165</strong></td>
<td><strong>6%</strong></td>
</tr>
</tbody>
</table>

Figure 2: 2006 Atlas of Victoria
Legend: Residential Population in Red; Density per Square Km in Blue
**TOURISM POPULATION**

The City of Victoria attracts over 3 million visitors every year. As of this year, 2012, between the months of April and October, 229 cruise ships docked at Ogden Point in James Bay bringing over 400 000 tourists. Tourists travel from James Bay into the Harbour and surrounding core region of Downtown Victoria. These areas will be key factors in determining demand of bikes required for seasonal ridership.

![Cruise Ship Dock at Ogden Point.](image)

**BICYCLE NETWORKS & FACILITIES**

Recent surveys conducted in Metro Vancouver and Portland have discerned that nearly 60% of any given population is ‘interested but concerned’ about cycling. Improving the pedestrian environment supports transit use, safety, and public health. The Capital Regional District already has some of the highest cycling numbers in the country (9% in some urban areas and 3.2 - 5% overall). If cycling facilities were built with the average person in mind (to accommodate skill and comfort levels), the CRD could achieve a 25% cycling mode share in densely populated areas.

Existing facilities, including greenways, bike lanes, and trails, will be beneficial to the success of bike share. In order for Bike Share to be successful, stations should be located in close proximity to existing bike routes and facilities. The maps below illustrate these existing conditions.
Figure 3: City of Victoria – Existing Bicycle Facilities
TRANSIT INTERMODALITY

The first phase of Bike Share in Victoria will provide densely spaced bike stations throughout the Downtown Core, including the Harbour, Chinatown, and Government Street, as well as James Bay and Cook Street Village areas. Coordinating bike share stations with transit stations will be vital in promoting ridership among residents of Victoria. Those transiting into the city for business will be able to utilize the bicycles available once downtown. As seen on the transit map below, a majority of buses run along Douglas, with key cross-town buses along Yates Street and Fort Street.

Figure 4: BC Transit – Regional Map of Greater Victoria
TOPOGRAPHY

The geography of Victoria is ideal for a Bike Share Program. The topography of the region, as seen on the Natural Atlas maps, indicate the easy cycling routes along the water, into the harbor, and flat routes into the Cook Street region. A lot of hills can deter ridership and be a key determinant in where bike stations should be located.

CLIMATE

Victoria, British Columbia’s capital city, enjoys extremely mild temperatures all year round. In fact, the city boasts the mildest winter in Canada and the lowest rainfall on the province’s west coast. Daily temperatures rarely rise above 30 °C or fall below 0 °C. Winters tend to be mild and rainy, summers are relatively dry, snow is a somewhat uncommon occurrence, while the city enjoys plenty of sunshine all year round.

In comparison to Montreal, a region of high snowfall, with a Bike Share Program which closes two months of the year, Victoria’s mild climate can support a program that can run year-round.
Existing Bike Share Programs

Figure 7: Hiroki Nakumara Tokyo Institute of Technology – Global Bike Sharing Data [31 October 2011] – In Order of Population Size

<table>
<thead>
<tr>
<th>#</th>
<th>Name of Bike-sharing</th>
<th>City</th>
<th>Country</th>
<th>Pop (Total number of people)</th>
<th>Area (total km²)</th>
<th>Planning or Study</th>
<th>Bikes</th>
<th>Electric-assisted Bicycle</th>
<th>Stations</th>
<th>Station/area</th>
</tr>
</thead>
<tbody>
<tr>
<td>210</td>
<td>BikeMi</td>
<td>Madrid</td>
<td>Spain</td>
<td>5,560,000</td>
<td>485</td>
<td>120</td>
<td>257</td>
<td>5</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>150</td>
<td>BiciMuseo</td>
<td>Bolzano</td>
<td>Italy</td>
<td>350,000</td>
<td>285</td>
<td>110</td>
<td>156</td>
<td>5</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>114</td>
<td>BiciLombardiana</td>
<td>Milan</td>
<td>Italy</td>
<td>2,600,000</td>
<td>210</td>
<td>145</td>
<td>130</td>
<td>2</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>100</td>
<td>BiciMilano</td>
<td>Milan</td>
<td>Italy</td>
<td>2,600,000</td>
<td>145</td>
<td>120</td>
<td>100</td>
<td>2</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>70</td>
<td>BiciRoma</td>
<td>Rome</td>
<td>Italy</td>
<td>2,600,000</td>
<td>120</td>
<td>100</td>
<td>70</td>
<td>2</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>219</td>
<td>BiciVenezia</td>
<td>Venezia</td>
<td>Italy</td>
<td>5,560,000</td>
<td>340</td>
<td>120</td>
<td>257</td>
<td>5</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>118</td>
<td>BiciVerona</td>
<td>Verona</td>
<td>Italy</td>
<td>1,400,000</td>
<td>145</td>
<td>120</td>
<td>100</td>
<td>2</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>200</td>
<td>Bicicletas</td>
<td>Lisbon</td>
<td>Portugal</td>
<td>2,800,000</td>
<td>145</td>
<td>120</td>
<td>100</td>
<td>2</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>101</td>
<td>Bicimobilo</td>
<td>Florence</td>
<td>Italy</td>
<td>1,000,000</td>
<td>285</td>
<td>110</td>
<td>156</td>
<td>5</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>70</td>
<td>Bikes4</td>
<td>Rome</td>
<td>Italy</td>
<td>2,600,000</td>
<td>210</td>
<td>145</td>
<td>120</td>
<td>2</td>
<td>25</td>
<td>0.01</td>
</tr>
</tbody>
</table>

The above is a small selection of cities similar to Victoria by population size. With populations of 80,000 – 100,000, number of bikes ranges from 37 – 400 (not including Miami), with an overall average of 120 bikes for this population range.

Figure 7: Hiroki Nakumara Tokyo Institute of Technology – Global Bike Sharing Data [31 October 2011] – In Order of Area (km²)

<table>
<thead>
<tr>
<th>#</th>
<th>Name of Bike-sharing</th>
<th>City</th>
<th>Country</th>
<th>Pop (Total number of people)</th>
<th>Area (total km²)</th>
<th>Planning or Study</th>
<th>Bikes</th>
<th>Electric-assisted Bicycle</th>
<th>Stations</th>
<th>Station/area</th>
</tr>
</thead>
<tbody>
<tr>
<td>71</td>
<td>Bicicleta</td>
<td>Milan</td>
<td>Italy</td>
<td>2,600,000</td>
<td>210</td>
<td>145</td>
<td>120</td>
<td>2</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>114</td>
<td>BiciLombardiana</td>
<td>Milan</td>
<td>Italy</td>
<td>2,600,000</td>
<td>210</td>
<td>145</td>
<td>120</td>
<td>2</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>70</td>
<td>BiciRoma</td>
<td>Rome</td>
<td>Italy</td>
<td>2,600,000</td>
<td>210</td>
<td>145</td>
<td>120</td>
<td>2</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>219</td>
<td>BiciVenezia</td>
<td>Venezia</td>
<td>Italy</td>
<td>5,560,000</td>
<td>340</td>
<td>120</td>
<td>257</td>
<td>5</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>118</td>
<td>BiciVerona</td>
<td>Verona</td>
<td>Italy</td>
<td>1,400,000</td>
<td>285</td>
<td>110</td>
<td>156</td>
<td>5</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>200</td>
<td>Bicicletas</td>
<td>Lisbon</td>
<td>Portugal</td>
<td>2,800,000</td>
<td>145</td>
<td>120</td>
<td>100</td>
<td>2</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>101</td>
<td>Bicimobilo</td>
<td>Florence</td>
<td>Italy</td>
<td>1,000,000</td>
<td>285</td>
<td>110</td>
<td>156</td>
<td>5</td>
<td>25</td>
<td>0.01</td>
</tr>
<tr>
<td>70</td>
<td>Bikes4</td>
<td>Rome</td>
<td>Italy</td>
<td>2,600,000</td>
<td>210</td>
<td>145</td>
<td>120</td>
<td>2</td>
<td>25</td>
<td>0.01</td>
</tr>
</tbody>
</table>

The above is a small selection of cities similar to Victoria (19.47 km²) by geographic size. The above cities range from 15-26 km², with varying numbers of 7 - 350 bikes, averaging 116 bikes for this geographic size.
Summary

By reviewing the demographic, geographic, and population patterns of the City of Victoria in relation to similar cities with existing bike share programs, it is determined that the number of bikes required for Victoria should be approximately 100-130. This number is largely based on geographic area and population size, but tourism should be a key determinant in increasing the number of bikes required seasonally.
A key component of Site Selection Criteria is determining supply for Victoria’s proposed Bike Share Program. By looking at leading manufacturers of bike share equipment around the world, and what is currently most commonly used in Canada for bike share programs, we can determine equipment, operational, and space requirements necessary to implement a bike share program in the City of Victoria.

**LEADING MANUFACTURERS OF BIKE SHARE EQUIPMENT**

Bike share programs are quickly gaining popularity around the world, more specifically, in parts of Europe and North America. Riding a bicycle is not only efficient and healthy, but it also reduces our carbon footprint, contributing to a cleaner and greener environment.

**Figure 7: List of Main Bicycle Sharing Systems around the World**

**Americas:**

<table>
<thead>
<tr>
<th>Country</th>
<th>Main Manufacturer(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>Mobilicidade</td>
</tr>
<tr>
<td>Canada</td>
<td>Bixi</td>
</tr>
<tr>
<td>Mexico</td>
<td>Clear Channel</td>
</tr>
<tr>
<td>United States</td>
<td>Bixi and B-Cycle</td>
</tr>
</tbody>
</table>

**Asia and the Middle East:**

<table>
<thead>
<tr>
<th>Country</th>
<th>Main Manufacturer(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Forever Bicycle</td>
</tr>
<tr>
<td>Japan</td>
<td>Community Cycle</td>
</tr>
<tr>
<td>Korea</td>
<td>Useful Bike</td>
</tr>
<tr>
<td>Singapore</td>
<td>Smoove</td>
</tr>
<tr>
<td>Taiwan</td>
<td>C-Bike and YouBike</td>
</tr>
</tbody>
</table>
**Australia and Oceania:**

<table>
<thead>
<tr>
<th>Country</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Bixi and Cyclocity</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Nextbike</td>
</tr>
</tbody>
</table>

**Europe:**

<table>
<thead>
<tr>
<th>Country</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>Nextbike</td>
</tr>
<tr>
<td>France</td>
<td>Cyclocity and Smoove</td>
</tr>
<tr>
<td>Germany</td>
<td>Nextbike</td>
</tr>
<tr>
<td>Ireland</td>
<td>Cyclocity</td>
</tr>
<tr>
<td>Italy</td>
<td>Clear Channel</td>
</tr>
<tr>
<td>Netherlands</td>
<td>VeloTron and OV-Fiets</td>
</tr>
<tr>
<td>Norway</td>
<td>Clear Channel</td>
</tr>
<tr>
<td>Poland</td>
<td>Nextbike</td>
</tr>
<tr>
<td>Spain</td>
<td>Cyclocity and Clear Channel</td>
</tr>
<tr>
<td>Sweden</td>
<td>Clear Channel</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Velopass and Nextbike</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Hourbike and OYBike</td>
</tr>
</tbody>
</table>

In Canada, Bixi is the leading bike share equipment manufacturer for bike share programs in three metropolitan cities: Toronto, Ottawa, and Montreal. There are 80 stations in Toronto with 1,000 bikes, 10 stations in Ottawa with 100 bikes, and 405 stations in Montreal with 5,050 bikes. Since Bixi operates smoothly in three of Canada's largest and most urban cities, it would only make sense to approach them if Victoria were to implement a bike share program of its own.

**THE BIXI BIKE SHARE SYSTEM**

Bixi’s fourth-generation public bike system can be customized to cities, municipalities, and campuses of all different sizes. So far, Toronto, Ottawa, and Montreal have chosen Bixi for the following reasons:

- Bixi offers a fixed-portable system where bicycles can be taken out from and returned to special stands at fixed, but not-permanent locations. It, unlike other fixed-permanent systems, does not require excavation or heavy construction, which makes set-up fast, labour efficient, and inexpensive.
- Bixi uses solar-power to provide energy for its stations to avoid creating unnecessary emissions and using the community’s energy grid. In addition, the system uses wireless communication instead of the community’s
telecommunications network. This reduces costs and installation time, as well as the need to excavate.
- The Bixi system is designed from the ground-up for heavy urban use to meet the unique needs of that city or community where it is to be implemented.
- Its time-tested operating system has proven to be reliable and technologically up-to-date.
- The system is able to withstand a variety of weather conditions in hot and cold climates.
- Finally, the system is environmentally conscious. It is designed to blend in with its urban landscape.

**EQUIPMENT REQUIREMENTS**

**THE BIKE**

Bixi’s bikes are designed for safety, comfort, and reliability. Its aluminum frame is lightweight, strong, and durable. All of its components including cables, tires, and chain are covered for better protection to prevent riders’ clothing from getting caught, as well as against dirt, grease, and debris. In addition, the bike offers front and rear lighting that is always active when in use, front and rear internal brakes, and adjustable seating. Bixi bikes are suitable for a wide range of riders.

*Figure 8: An Example of a Bixi Bicycle*
THE STATION

Bixi’s portable, solar-powered bike stations include bikes, bike docks, and pay stations that are easy to install, expand, and remove. The technical platform is a base and electronic hub for the bike dock and pay station. It requires no construction and is infinitely expandable depending on the number of bikes the city or community wants to have at the station. The bike dock features a simple, easy-to-use interface with a wireless payment system for customers who have already subscribed to the Bixi system. It also features a front-end protector that locks the bike’s front wheel at the same time. The pay station is equipped with solar panels and accepts various forms of payment including credit cards and user keys through a touch-screen interface.

Figure 9: An Example of a Bixi Station

HELMETS

Because British Columbia has a mandatory helmet law for those who choose to commute by bicycle or motorbike, helmet vending machines would be necessary for a bike share program in Victoria. Alta Bicycle Share, a company based out of Portland, Oregon, plans to provide steam-cleaning, helmet vending machines for Vancouver’s Bixi bike share program when it launches in spring of 2013. Alta Bicycle Share has already installed two vending machines in Melbourne, Australia.
CAPITAL RESOURCES

If the initial phase of the bike share program in Victoria were to be successful, the City would need: more vehicles for redistributing bikes between stations, station maintenance, and light bike maintenance; warehouse facilities for storage and bike maintenance that requires more time; IT equipment for continuous monitoring of stations, locations, and status of bicycles; as well as a logistics center for coordinating maintenance and repairs, redistribution, and customer service.

OPERATIONAL REQUIREMENTS

TURNKEY

Bixi’s basic package includes technical platforms, bikes, bike docks, pay stations, and software. It’s a very flexible system that can either be run on its own, or integrated into any public transportation network. In terms of customer service and communications, Bixi can provide call center, subscriber, and information management, as well as automated call routing. Essentially, Bixi is able to provide the resources needed to run a bike share system in a big, or small city.

Figure 10: Services That Bixi Can Provide:

<table>
<thead>
<tr>
<th>Station installation</th>
<th>Redeployment of bikes according to demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>System start-up</td>
<td>Addition or removal of stations based on usage</td>
</tr>
<tr>
<td>Station maintenance</td>
<td>Installation of short-term stations of any size for special events</td>
</tr>
<tr>
<td>Bike docks</td>
<td>Training</td>
</tr>
<tr>
<td>Pay stations</td>
<td>Installation and upkeep of stations in collaboration with local partners</td>
</tr>
<tr>
<td>Technical platforms</td>
<td></td>
</tr>
<tr>
<td>Solar-powered system</td>
<td></td>
</tr>
<tr>
<td>Bike maintenance</td>
<td></td>
</tr>
<tr>
<td>Daily maintenance</td>
<td></td>
</tr>
<tr>
<td>Minor repairs at workshop</td>
<td></td>
</tr>
</tbody>
</table>

INSTALLATION, USE, AND MANAGEMENT

Installing Bixi’s system is quick and efficient since there no excavation is required. Typically, each technical platform is equipped with 4 bike docks, however, because of its ‘plug and play’ ability, the platform can be customized to accommodate a bike station of almost any size and configuration in just a matter of hours. A single bike station with
4 bikes can be set up within a matter of minutes. In addition, the system is just as easy and quick to take apart without impacting the urban surroundings.

Through online services, users are able to find bikes that are available for rent at the nearest possible station. With quick forms of payment, they can rent the bike for any amount of time, and return it to any station in the city.

Behind the scenes, Bixi’s system runs on an upgraded version used by Montreal’s award-winning parking operations. Management can pinpoint the exact locations and status of bicycles and pay stations, as well as order extra bikes, bike docks, and stations to be redistributed to certain areas.

**HUMAN RESOURCES**

Like any business, the Bixi system will require employees to redistribute bikes, maintain stations and bicycles on site, perform repairs in the workshop or store equipment in the warehouse, and manage customer service and subscription management from a call center.

**SPACE REQUIREMENTS**

Based on demand and population size, we have determined that the number of bikes required for Victoria should be approximately between 100 – 130 spread out amongst 15 – 20 bike stations.

**LOADING AND UNLOADING OF EQUIPMENT**

Depending on the size of the bike station, more or less space will be required to load or unload equipment. If Victoria were to have between 5 – 7 bicycles per station, a single, smaller flatbed truck with an attached crane would be able to deliver the entire station to a specific location. A station with 5 – 7 bicycles would take up no more space than an average parking spot 5 meters in length (15 feet) by 2 meters in width (6 feet). The width of the station would only be as wide as the length of a bicycle.
Figure 11: Unloading of a Bixi Station

SUMMARY

By reviewing leading manufacturers of bike share equipment around the world, and what is currently most commonly used in Canada for bike share programs, we can determine that Bixi is the best option to fulfill equipment, operational, and space requirements necessary to implement a bike share program in the City of Victoria. Its modern portable system is efficient, easy to set up, take apart, environmentally friendly, reliable, safe, and is currently being used in Toronto, Ottawa, and Montreal.
1. **System Costs**

There are two primary costs associated with the bike share system - start-up (capital and launch) and operating. Summarized below are cost estimates for each of these components and presents a five- and ten-year cost forecast for the system.

Two important assumptions often occur during the initial phases:

1. Vendor and operator costs are included in these estimates, but costs for the administrator the executive director, and other administrative staffing are assumed to already be in place and funded.

2. It is assumed that an established and turn-key bike share technology will be chosen as the preferred equipment for the system, i.e., that there will be no research and development costs associated with creating a new technology (with the exception of developing/providing helmet vending machines – see below).

**Start Up Costs**

Start-up costs are inevitable, however vary and are crucial in providing any enterprise with foundational fiscal grounds to which the business can establish a strong footing during its initial phase(s) in the marketplace to which is hopeful to operate in.

**2 Types of Start Up Costs:**

Start-up (i.e. capital and launch) costs are placed into two categories – “general system start-up costs” and “phase start-up costs”.

1. **General System Start Up Costs**
General system start-up costs are costs that are required to set up the framework for the system and to establish overall efficiency from the very beginning. A number of direct expenses such as a storage warehouse, purchasing bike and station assembly tools, website development, communications and IT set-up, and prelaunch marketing are also to be considered essential to maintaining start up costs.

It is recommended that the start-up period will range from approximately 6 to 9 months, as is the case with similar implemented systems throughout North American and the world. This will insure that so called “kinks” are worked out prior to expansion. Although, seeing as Victoria is a relatively small city, there is validity in assuming that 6 months would be a more accurate estimate and perhaps even a shorter period of time would be viable too. The majority of employees (both part time and full time) will be hired within the last 1-2 months of that period.

The vendor and operator’s employee expenses for general system start-up include:

- General Administration Positions
- Operating Positions

System start-up will involve a number of direct costs (Mandatory). The non-profit (City of Victoria) will determine a financial model to hire a private contractor (Bixi for example). Under this arrangement the contractor will likely be responsible for the following costs:

- Operations Facilities and Equipment
- IT and Communications
- Bike Share Launch and General Upkeep Materials

2. Phase Start Up Costs

The calculation of costs related to purchasing, assembling, permitting and installing stations at various locations in downtown Victoria are as follows:

1. **Station Purchase** – planning for the system assumes an average 19-dock, 10-bike station. Learning from the competition we have learned in regards to the ideal station size, feasibility of placing the stations in the public right of way, and ideal bike-to-dock ratio. Some will be appreciably larger, e.g. other cities have stations with up to 50 docks (unnecessary in Victoria), and some will be smaller with the typical minimum
being 5 to 7 bikes (Rarely in Victoria). The 19 dock / 10 bike ratio is becoming the standard in regards to Bike Sharing system layouts throughout North America and the world. The 19/10-ratio model allows sufficient extra docks to accommodate high inbound demand, reducing rebalancing costs, which in the end will be an added bonus to the city and its private partner.

Each Station Will Require the Following:

- Station based system
- Solar-powered wireless communications and modular
- Stations that allow members to with a key card to retrieve a bike, or walk up credit card users
- Bike lights that retain a charge after bicycle movement has stopped
- Seven speed bicycles—an industry standard
- Map panel (City of Victoria)
- Helmet Vending Machines at each station

2. Site Planning and Permitting – This cost is for an outside consultant to obtain permits for each station. This can be done in house by agency staff, but will require significant staff time. Even in the case of an outside consultant, agency staff will be required to assist this process in a timely manner. Some items to decide internally and investigate prior to embarking on this process are:

How will the helmet requirement be addressed?

Bicycle Safety Helmets

*Province of British Columbia Motor Vehicle Act - Section 184*

**Note: A person who is convicted of an offence under subsection (1) or (2) is liable to a fine of not more than $100**

British Columbia by law requires all cyclists to wear a helmet while operating a bicycle. Fines range from $29-$100 for failure to obey this law (circumstances vary). A number of considerations have been proposed in regards to how to handle this issue in terms of a bike sharing system in Victoria.

It is recommended that the most effective way to make helmets easy and readily available to the public that a “Helmet Vending Machine” similar to those used in other jurisdictions should be implemented for the Victoria model in order to comply with British Columbia helmet laws.
Our proposal for Victoria B.C. includes costs to provide helmet vending machines as part of the station design and for the operator to stock, clean, inspect, and replace helmets. Although there is expected to be a percentage of the population that will not want use the system because of the helmet requirement, there will be other riders that will ride more often because there is easy access to a helmet. This has been accounted for in ridership and revenue estimates for the program.

**Helmet Costs (Estimate)**

Table 1 provides a cost estimate for providing this service based on a prototype design developed for the Alta Bike Sharing System (Scaled for Victoria).

<table>
<thead>
<tr>
<th>Item</th>
<th>Rate</th>
<th>Unit Cost</th>
<th>Units</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capital Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vending Machine</td>
<td>Per Station</td>
<td>$8,000 - $10,000</td>
<td>15 stations</td>
<td>$120,000 - $150,000</td>
</tr>
<tr>
<td><strong>Operating Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helmet Cost</td>
<td>Per station per year</td>
<td>$450</td>
<td>15 stations</td>
<td>$6750/year</td>
</tr>
<tr>
<td>Operations</td>
<td>Per station per year</td>
<td>$5</td>
<td>900 helmets</td>
<td>$4500/year</td>
</tr>
</tbody>
</table>

Note: Helmet cost assumes 20 helmets x 3 times overstock = 60 helmets per station at a cost of $7.50 per helmet. Operating costs include: stocking helmets ($1.50 / helmet / year), collecting helmets ($1.50 / helmet / year), and checking/cleaning/collection damaged helmets ($2.00 / helmet / year). It also includes overhead such as extra rent, staff, administration, and materials.
Helmet Vending Machine Example

3. System Rates and Fees

Rate Schedule

The user will pay 2 types of fees for use of the bike share system:

- **Access fees**: paid up-front to register to use the system. These are offered for a variety of time periods ranging from a 24-hour subscription to annual membership.
- **Usage fees**: charged to the user based on how long they use the system. Most systems offer a “free ride” period, typically between 30 and 60 minutes where the user pays no additional costs if the bike is returned within that time period. Fees are charged to users who exceed the free ride period.

**Format (Duration)**

- Annual (365 days)
- Monthly (30 days)
- Weekly (7 days)
- 5-day
- 3-day
- 24 hour
Table 2 (Below) shows a summary of membership options and pricing in North American bike share systems. For Victoria, these numbers will be scaled downwards in order to accurately reflect the significant smaller population and surface area.

Please note that tax is treated differently for different systems in different cities. Therefore, some of the prices below are plus tax, some are tax inclusive.

**Table 2: Membership Options and Access Fees for other North American Bike Share Systems**

<table>
<thead>
<tr>
<th>System</th>
<th># Of Bikes/Stations</th>
<th>Annual (30 day)</th>
<th>Monthly (30 day)</th>
<th>Weekly (7 Day)</th>
<th>5 Day</th>
<th>3 Day</th>
<th>24 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Bikeshare</td>
<td>1,110 / 119</td>
<td>$75</td>
<td>$25</td>
<td></td>
<td>$15</td>
<td></td>
<td>$5</td>
</tr>
<tr>
<td>Nice Ride Minnesota</td>
<td>1,200 / 116</td>
<td>$60</td>
<td>$30</td>
<td></td>
<td>$20</td>
<td></td>
<td>$6</td>
</tr>
<tr>
<td>Denver Bikesourcing</td>
<td>500 / 50</td>
<td>$65</td>
<td>$30</td>
<td>$20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miami DecoBike</td>
<td>1,000 / 100</td>
<td>$15-25</td>
<td>$20</td>
<td></td>
<td></td>
<td></td>
<td>$24</td>
</tr>
<tr>
<td>Boston Hubway</td>
<td>610 / 61</td>
<td>$85</td>
<td>$15-25</td>
<td></td>
<td></td>
<td>$12</td>
<td>$5</td>
</tr>
<tr>
<td>Madison</td>
<td>200 / 25</td>
<td>$50</td>
<td>$15</td>
<td></td>
<td>$15</td>
<td></td>
<td>$5</td>
</tr>
<tr>
<td>Des Moines</td>
<td>350 / 35</td>
<td>$65</td>
<td>$30</td>
<td></td>
<td></td>
<td></td>
<td>$10</td>
</tr>
<tr>
<td>San Antonio</td>
<td>18 / 4</td>
<td>$50</td>
<td>$30</td>
<td></td>
<td></td>
<td></td>
<td>$5</td>
</tr>
<tr>
<td>San Antonio</td>
<td>140 / 14</td>
<td>$60</td>
<td>$24</td>
<td></td>
<td></td>
<td></td>
<td>$10</td>
</tr>
<tr>
<td>Montréal Bixi</td>
<td>5,050 / 405</td>
<td>$78</td>
<td>$28</td>
<td></td>
<td></td>
<td>$12</td>
<td>$5</td>
</tr>
<tr>
<td>Toronto Bixi</td>
<td>1,000 / 80</td>
<td>$95</td>
<td>$40</td>
<td></td>
<td></td>
<td>$12</td>
<td>$5</td>
</tr>
</tbody>
</table>

Note: Each of these cities offers reduced student rates for their systems. Prices are contingent on a 3-month minimum commitment. Montreal and Toronto prices are displayed in CDN dollars.
Table 3 summarizes Usage Fees for other North American Systems

**Table 3: Usage fees for Other North American Bike Share Systems**

<table>
<thead>
<tr>
<th>System</th>
<th>Usage Fees (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-30 Min</td>
</tr>
<tr>
<td>Capital Bikeshare</td>
<td>$0</td>
</tr>
<tr>
<td>Nice Ride Minnesota</td>
<td>$0</td>
</tr>
<tr>
<td>Denver Bikesharing</td>
<td>$0</td>
</tr>
<tr>
<td>Miami DecoBike</td>
<td>$0</td>
</tr>
<tr>
<td>Boston Hubway</td>
<td>$0</td>
</tr>
</tbody>
</table>

- The impact to and encroachment on the bike rental market. The original intent of bike sharing is to provide a short trip mobility option **not** in competition with bike rental shops (Victoria Inner Harbour) that accommodate users for longer trips.

**Table 4: Membership Options for Victoria Bike Sharing System (Recommended)**

<table>
<thead>
<tr>
<th>System</th>
<th># Of Bikes/Stations</th>
<th>Annual (30 day)</th>
<th>Monthly (7 Day)</th>
<th>Weekly (7 Day)</th>
<th>5 Day</th>
<th>3 Day</th>
<th>24 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victoria</td>
<td>10/15</td>
<td>$65</td>
<td>$15</td>
<td>$15</td>
<td>------</td>
<td>------</td>
<td>$5</td>
</tr>
</tbody>
</table>

**Table 5: System Access Fees for Victoria Bike Sharing System (Recommended)**

<table>
<thead>
<tr>
<th>System</th>
<th>Usage Fees (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-30 Min</td>
</tr>
<tr>
<td>Victoria</td>
<td>$0</td>
</tr>
</tbody>
</table>
Site selection for the bicycle stations was collaborated by our own known knowledge of the area and consulting with Ismo Husu, the manager of parking services for the city of Victoria. Selection was based on demand in the area due to residential, tourism, retail, workplace and office space. Our pilot project consist of 15 bike stations with approximately 8 bikes per station giving a scale of operation of 130 bicycles. Through an examination of these 15 stations, it will become apparent why these stations are correctly located spatially within Victoria.

1. Selkirk Waterfront Development
Selkirk was chosen due to the proximity to the galloping goose, many residential and office spaces and fits in with the general vibe of the area being the ideals of a new urbanist.
2. Dockside Green Development
Dockside was chosen because of proximity to the galloping goose, current and future residential developments, shopping and retail centers, fitting in with a green sustainable development.
3. Wharf St. between Pandora Ave. and Johnson St.
Main reasons for choosing the wharf street location are proximity to retail, restaurants and shopping, as well as future development of residential spaces and transit infrastructure.
4. South East corner of Government St. and Fisgard St.
The corner of Government street and Fisgard street are a heavy tourist destination due to the Chinatown gate thus, a prime location for a station. Office spaces, City Hall and retail are all close at hand as well.
5. Langley St. and Yates St.
This site was chosen for its proximity to the Yates street parkade, one of the most heavily used parking lots in downtown Victoria. It is a location surrounded by office, retail, residential and entertainment spaces and is an area heavily used by tourists in summer months.
6. North West corner of Douglas St. and Yates St.
The downtown bus interchange is located on Douglas street between Yates and View streets and as thus this station is well placed for transit users. It is also close to retail and office space.
7. North East Corner of Douglas St. and Yates St.
Heavy entertainment, office, and retail spaces surround this area making a good location for individuals to have accessibility to the bike share.
8. South East corner of Quadra St. and Yates St.
A number of retail spaces such as The Market on Yates and London drugs are large economic draws to the area making the bike share usable. There is also numerous residential and office spaces in the area.
9. North East corner of Government St. and Fort St.
This location borders The Bay Center, a major shopping center. Office space and heavy tourism traffic are also large draws to the area.
10. North West Corner of Blanshard St. and Courtney St.
Government services such as Courthouse, Library and offices. There is also entertainment with the Royal Theater.

11. East Side of Douglas St. between Humboldt St. and Belleville St.
Government services, Victoria bus station, Victoria conference center, hotels and entertainment services.
12. Wharf St. between Broughton St. and Government/Humboldt/Wharf Intersection

Major tourist center of the inner harbour, with hotels, restaurants and activities such as whale watching. It is also close to the Victoria Seaplane Terminal and Harbour Authority docks for visiting and transiting people.
13. Menzies St. and Belleville St.
Hotels and entertainment services are abundant Seattle Clipper and Coho ferry services ferrying passengers to and from Washington State. It is also the location of the planned redevelopment of the historic CPR Steamship Terminal.

14. Menzies St. and Simcoe St.
The central core of James Bay, including retail space and a very high density of residential units surround this intersection. The bike share will reduce the amount of people requiring to drive to the Village center allowing quieter, safer streets.
15. Ogden Point
Ogden point serves as the cruise ship terminal for Victoria as well as the Heliport terminal for Helijet. Thousands of passengers come through this area yearly needed transportation routes into the downtown core.
INTRODUCTION

The ongoing success of a bike share program depends in large part on encouraging people to use and support the system. It is through effective civic engagement that the bike share program in Victoria will become successful and continue to be successful in the future. The City of Victoria has recognized the importance of strong civic engagement within communities as it ultimately affects our quality of life.

The Victoria Bike Share Program will use or follow the recommendations of the City of Victoria’s engagement strategies as well as implement its own unique strategies in order to gain the public’s interest in a bike share program. As a group working within the City of Victoria we must respect the guidelines already set out for such civic engagement and our outlined in the City’s engagement plan as follows:

1. Those who are affected by a decision have a right to be involved in the decision-making process
2. Promise that the public’s contribution will influence the decision
3. Promote sustainable decisions by recognizing and communicating the needs and interests of all participants, including decision makers
4. Seek out and facilitate the involvement of those potentially affected by or interested in a decision
5. Seek input from participants in designing how they participate
6. Provide participants with the information they need to participate in a meaningful way.
7. Communicate to participants how their input affected decisions.

Further objectives to ensure progresses on these principles are made and strategies, policies, procedures, and tools for improved engagement to continue are:

- Better understand the diversity and strength of public opinion
- Reach the “silent majority” of citizens more often
- Share different viewpoints and learn from each other
- Generate new ideas and solutions
- Build trust in decision-makers and more organizational capacity
- Enhance community capacity and social connections
- Identify barriers for engagement with “hard to reach” areas

Essentially the goal of these principles is to give every community member the opportunity to influence the bike share program and its implementation within Victoria. We want to ensure every citizen can have a voice and to not simply hear that voice but become engaged with it. These citizens could be the people to either make or break such a program so it is vital that we keep them interested and connected with the planning process of the bike share program.

**FOUR STRUCTURES FOR CIVIC ENGAGEMENT**

To ensure regular channels for civic engagement there are four main structures that offer regular, routine, and useful ways to access municipal government, keeping it *transparent* and *accountable* to *residents* and *stakeholders*. These channels include advisory committees, neighbourhood associations, presentations to council by groups or citizens, public dialogue sessions at the start or end of governance and priorities committee or standing committee meeting. These strategies are all about building trust with the local citizens and ultimately getting them engaged with the local community.

*Important definitions:*

*Stake holders:* organizations, community groups, and more formal associations that are representative of the wider community and have related interests

*Citizens:* the wider community and the general public, (incl. people who aren’t official voters)

In terms of the bike share program however, other structures for civic engagement should also be implemented to ensure a full range of participants when trying to determine public opinion about certain key issues. One incredibly effective tool that a large majority of people will have access to is an internet website for the bike share program with a page include a comments section, or a simply site survey to get to know a little more about the public’s opinion on some matters. We have to ensure that all avenues are open to the public to engage with such a large city project. Often time’s citizens will feel intimidated by going into a council meeting or just not interested in getting so involved with their local community. One of the main difficulties of this project will be trying to determine the overall public opinion of the bike share program.

As a group a great strategy similar to the **City of Victoria’s continuum of civic engagement** would follow the image below:
The role of the citizens in the decision-making is greatly emphasized as the process moves to a higher level. Each level of engagements builds up from preceding levels.

The idea that this is an ongoing process and throughout all stages of implementation we need to ensure we look back at the four original structures we’ve laid out but also use newer technologies and ways of communicating to spread the word in the local communities. The goal of civic engagement is not to achieve consensus or an agreement (which is nearly impossible to factor in everything) nor is it to impose a final decision on to the community.

**STEPS TO PLANNING ENGAGEMENT STRATEGY**

- **STRATEGY PART 1—IDENTIFYING BARRIERS**

  Part one focuses on identifying the key potential challenges a bike share program in Victoria will face. These key challenges will include resourcing, coordination, consistency, customer service, and communication. The key of our engagement strategy is to encourage a large representative of citizens to get involved with the ongoing process. This will include immigrants, youth, and people with disabilities to the discussion of a bike share program and how they would like to see it operate with the city of Victoria.

  Resourcing is the competing demands and priorities from citizens and council. We realize that not every issue can expect to receive extensive engagement, which can
pose a challenge in a community that has high expectations for providing input on city matters. Therefore we must establish our priorities early so that there will be sufficient staff and financial resources to complete the work. Otherwise expectations will not be met and relationships will ultimately suffer.

Coordination and consistency are seen as another issue since how and when to use what kinds of civic engagement methods when timelines and resources are often limited will be a very real problem. We also need clear instructions about what plans are being set forth as to not confuse any citizens as to why a particular method or process was used. Citizens are also concerned about engagement strategies that have little effect on the decision-making process. We have to ensure throughout this process that the citizen voice is not only heard, but welcomed especially when good ideas are presented. We want this program to come from the voice of the citizens, as an attempt to make it a community based project as well as a City organized venture.

Customer service and communication are other important factors to consider when implementing a large project such as this one. The ease of obtaining information will be essential for this project and a website would be highly effective in distributing information on a mass scale. Getting the citizens of Victoria to actively engage in this project is vital to its growing success because without strong citizen support the project will be unable to survive.

POSSIBLE BARRIERS TO ENGAGEMENT:

- Lack of Knowledge about engagement opportunities at municipal level – the general public being unaware about the ways they can be more involved in decision-making and civic participation.
- Possible indifferent attitude adopted by City in regards to subject matter of implementing a bike share program. Unknowingly, leaving out crucial input from diverse groups and organizations.
- Given limited time and supply, it is important to identify initial civic engagement priorities.
- Limits to resource capacity, such as staff. It is essential to have sufficient staff and financial support to meet the expectations of established priorities from citizens and council.
- Coordination & consistency – when and how to use proper methods and techniques.
- Inability to communicate and share information with the public effectively.
STRATEGY PART 2 – RECOMMEND ACTIONS TO ADDRESS BARRIERS/CHALLENGES

1. **Role Clarity**: Establish clear and distinct roles and responsibilities for council, staff, and citizens around civic engagement. The goal of is to give greater transparency of the dialogic process in decision-making.
   a. **The City Council** holds great responsibility for municipal decision-making granted on the understanding that it will represent and reflect the interests and values of the community. Thus, proper communication with citizens and identification of citizens’ priorities is a necessity.
   b. **City staffs** are often professionals and experts that help lead the project in planning, managing and reporting back from engagement initiatives. They need to cooperate with the City Council on establishing channels to identify engagement priorities and then ensure that the City responds with consistency on policies and procedures.
   c. **Public Advisory Committees** provide early and regular public input to Council on issues of the Environment and Infrastructure, Community Development, and Planning. Public Advisory Committees may play a role in the City’s civic engagement initiatives by identifying and providing recommendations for broader civic engagement.
   d. **Neighborhood Associations and community groups**: ensure the inclusion of community and stake holder groups to support civic engagement efforts.
   e. **General public**: have citizens willing to participate and help identify needs and priorities of the community. Convert the ‘silent’ majority into a participating majority.

2. **Prioritization**
   a. Identify the priorities that require more resource-intensive and in-depth engagement.
      i. When to organize large-scale and resource-intensive civic engagement?
      ii. When would it be appropriate to organize small-scale civic engagement?
   b. Provide resources for broad and in-depth engagement on important high-level plans
      i. Which policy is most important to engage in-depth?
   b. Citizens should be engaged as early as possible in the policy development cycle
      i. More quality information
      ii. More **empowered** participation
3. Resourcing
   c. What are the limits and capacity to engage?
   d. After priorities are established, appropriate engagement methods should be delegated to meet those priorities, and there must also be sufficient staff and financial resources to complete the work or expectations will not be met (which would lead to an unsatisfied general public). Victoria citizens and stakeholders often hold high expectations for the municipality on many issues.
4. Coordination and Consistency: Seen as key to maintaining trusting relationships and building a more engaged citizenry over time. Ensure coordination and consistency throughout the city engagement projects. Develop tools to ensure the application of guiding principles, a consistent engagement planning process, and metrics for engagement success.
   a. Will use indicators to evaluate and report on the short and long term engagement success.
      i. Inclusion: Qualitative Indicators
         • All groups affected by decisions are involved in the engagement
         • No practical or financial barriers to participating in this engagement process
      ii. Inclusion: Quantitative Indicators
         • Number of individuals participating in each engagement effort
         • Number of agencies or stakeholder groups participating in each engagement effort
         • Number of individuals or agencies participating from underrepresented groups

Recommended Actions
   • Budgeting time and staff for all levels of the engagement process
   • Develop city-wide process for reviewing all capital projects and determine engagement rating to assist in the budget development

5. Customer Service and Communications
   a. Eliminate the “one-way” communication process
   b. Coordinated approach that provides increased opportunity for dialogue
   c. Ease of access to information
   d. Ensure the use of standardized communication tools

Recommended Actions
   • Centralize customer service either through easy telephone access or a user interactive website
   • Post all relevant news to a place where every citizen would have an equal opportunity to reach it
   • Advanced notice of any council or city meetings are made available to the public
CITY OF VICTORIA’s 12 STEPS TO SUCCESSFUL ENGAGEMENT

1. Be clear on the objectives of the project
2. Be clear on the objectives of the consultation
3. Confirm the readiness of your organization and/or department for engagement
4. Collect existing information to improve knowledge and save resources
5. Identify the Stakeholders and the Range of Citizens to be engaged
6. Gather a small group to comment on the initial plan
7. Determine the most appropriate and effective engagement techniques
8. Determine the Resources (Budget and Time) That the project will need
9. Promote your public Participation process
10. Implement and Document the engagement activities
11. Ensure that the information you collect is used effectively, and report back
12. Monitor and evaluate

STRATEGY PART 3 – TOOLS & TECHNIQUES TO IMPLEMENT CIVIC ENGAGEMENT STRATEGY

These are techniques that we find to be useful for our project regarding civic engagement

Techniques to Share Information

The following techniques can be used to inform the community. The selected techniques seemed to fit in the goal is to provide the public with balanced and objective information to assist them in understanding any problems, alternatives, opportunities and/or solutions.

PUBLIC DISPLAYS & KIOSKS

These public displays can be placed in strategic locations throughout the community to engage people who would not otherwise come to you. They can be used to both share information, as well as gather input. Displays can be unattended, if left in recreation centres, libraries, and other municipal buildings. If kiosks are attended they could be staffed by either volunteers or students and could be placed in more public locations with large numbers of public traffic. This also gives a chance to do extra outreach in selected areas. There are a range of companies that can also help to develop interactive touch-screen information and survey kiosks. Displays are a great way of distributing a range of materials, fact sheets, and newsletters. We could also look into placing the kiosks near to possible bike share stations to get further public input right next to potential sites.

After implementation the kiosks could continue to be used as an electronic terminal which provides bicycle rental instructions, payment equipment (i.e. credit card device), and all other means necessary for the rental of bicycles.
WEBSITE

Websites are now a routine part of engagement efforts, and they provide avenues for a range of information sharing, feedback, and involvement. A website would allow younger audiences, or people who would otherwise not attend meetings to get involved with the bike share program and become more involved. We will have to be aware however that many people still do not have internet access e.g. low income, seniors. Therefore we cannot over-rely on the website to get all the information we need and just be aware of users that will not have access to this information. Websites, while they should be visually appealing, should also be accessible to people who use text-recognition software – make sure all links are labeled, and text is not presented as an image or graphic. Some interesting add-ons to the website could include a map where residents could click locations where they would like to see bike stations built. Also feedback pages where users can comment, ask questions, or make suggestions to the bike share program. As we want to make the bike share implementation as community based as possible it is important to receive feedback from many community members. In order to establish a successful and fully engaging website it is important to consider these tactics; contents personalization, metrics and analytics, social media engagement, customer/prospect collaboration, and SEO, that could prove critical for the success of the website.

- Content Personalization – every website visitor needs to receive personalized attention, whether or not they are doing business with us. By personalizing the content we can create huge impacts on the minds of website visitors, which ultimately lead to long lasting customer relationships. In order to have the most effective content we must ensure that everything is set up in a proactive and dynamic way. By showcasing certain relevant content for example we can ensure that the visitor is listening intently. If we are able to provide customized content targeted towards geography, behavior, and past visit attributes the website becomes a great strategy to engage with our visitors. Some examples of personalized content may include videos, newsletters, case studies, etc.
- Metrics & Analytics – This is important in order to track website activities of buyers, assess their product awareness levels, and engage with them. The more data we have can help marketers formulate customized campaigns and provide personalized feedback. With this data we have also help identify which content type is popular, and where the content gaps lie, so corrective measures can be implemented accordingly.
- Social Media Engagements- See Section on Social Media Below.
- Customer/Prospect Collaboration – involves all activities that enable prospects and customers to freely engage and provide feedback on the website in a simple manner. By providing easy access to information and asking fewer inputs, our prospects feel less threatened and tend to make frequent visits. Another way to
enhance our website engagement is allowing prospects and customers to engage with each other. It helps provide valuable insight into lack or need for product enhancements or installing new support systems.

- **SEO** – search engines are another important way to engage our customers and grow our brand. Most visitors begin their research from search engines so being listed on the first page results can guarantees some visibility.

**Techniques to Collaborate and Empower:**
The following techniques can be used to collaborate with and empower the community. The goal is to partner with the public in each aspect of decision-making.

**Joint Bike Share Programs to Promote Bicycling**
Not only do we want to implement a bike share program but also increase the visibility of bicycling within the municipality, helping to achieve larger mode-shift and climate change goals. Bike share systems can give additional impetus to efforts to improve bicycle infrastructure as well. Hopefully this will further encourage bicycling within all local communities. One idea would be to get involved with local bike communities already in Victoria, such as Critical Mass, to help promote the bike share program and bicycling in general. Some ideas include getting the critical mass group to meet at bike share stations that way if people without bikes would like to get involved they could easily grab a bike from the bike share location. In the end we want to promote a sense of joy, community, freedom, and have these feelings associated with our bike share program.

**Social Media**
Social media is one tool that is becoming increasingly important when trying to promote local businesses or in this case a bike share program. Focusing on Twitter and Facebook by establishing bike share accounts to help promote ideas, share information, and get further feedback from users. This will focus more on the next generation of bicycle transportation. This is a highly underrated tool in sharing information and should be used to further enhance user access to bike share information.

Social media changes the way consumers think and react to products, services and everyday life. It is essential that our bike share program has a strong social media engagement strategy to ensure we are connecting with customers and driving our business forward. There are three critical components of a solid social engagement strategy.

*Campaigns* – are essential to engage our key audience (community and tourists) and build a lasting relationship with all our customers. By building an effective integrated campaign, our bike share program will ensure that we are connecting with our key audience.
It is recommended that the bike share program have at least one monthly campaign in order to propel our brand forward. Through social media, it’s easy for companies to leverage a campaign this often. Campaigns are important to motivate users within your social network and keep them engaged throughout the campaigning process. By creating small-scale campaigns on a frequent basis we would be able to keep our customers interested and connected.

**Content** – another key element of social media engagement. Social media visitors look for good and useful information. Twitter, for example, is known for driving the most content and helping consumers stay up-to-date on key information related to their interests. Additionally, content gives consumers an opportunity to engage with us and share their views. By engaging in a two-way conversation with our customers, we are enhancing our brand profile and giving them another chance to fall in love with the brand.

In order for the content to flow, the bike share program can streamline it through a social content publishing calendar (Example – cultivatr.com). This can be established in line with specific campaigns we will pursue through social media networks. By networking various media outlets such as Facebook, Twitter, and Tumblr we can integrate the campaign to maximize its effect and reach.

**Connection** – perhaps the most important in social media engagement, connections are essential to build our brand through social media networks. Influencers are the most important as they will drive organic growth on our social media networks and continue to build engagement among the followers. Influencers are similar to key audiences that are identified before engaging in a marketing strategy. When we identify our influencers, it’s important to think about what we want to gain from building a relationship with them and how you can engage with them to make the relationship beneficial for the influencers.

For instance, our brand is about biking/community so the best option is to get the Victoria community and biking bloggers to blog about our website. Popular bloggers have large followings so if they like our bike share program, it will drive our customer base for our brand.

Social media engagement is the future of marketing. For businesses, it’s important to connect with customers through social media to propel brand engagement. Measuring the number of followers, comments, shares, and likes are some key figures to look at to gauge how well we have engaged with our customers.

**Techniques to Consult and Involve:**
The following techniques can be used to consult and involve the community. The goal is to obtain feedback on analysis, issues, alternatives and decisions, as well as to work
with the community to ensure that aspirations and concerns are understood and considered.

**Promoting Cyclist Safety - Helmet Use**

Helmet use should be strongly promoted and mechanisms should be used to increase access to helmets (i.e. making them available for discount purchase when applying for membership). One idea would be to join up with local bike shops for bike share users to rent helmets from these shops if they prefer not to purchase one. As the bike share program will be used by tourists as well it is important to consider that not every user will have a helmet with them and will need to know where they could get one.

**Integrated Bike Share Programs with Alternative Transit**

If we were able to start a program with the local transit authority we could provide further options to provide multiple choices depending on the direction and purpose of each trip. Users can go from bus, to bike, to car with relative ease and give them even more access to the city. Showing on the website potential bike trails only accessible by taking local transit could encourage the bike share community to explore the city using public transit rather than using personal transportation.

**STRATEGY PART 4 – MEASURING THE SUCCESS OF CIVIC PARTICIPATION**

Assessing our civic engagement strategies are helpful since we likely learn from the experience and therefore improve our future efforts.

**Looking at Outcomes**

1. The appropriateness and effectiveness of the public involvement process design and implementation, including the participants’ satisfaction with the process. Did the chosen process or approach fit the problem, and was it done well?
2. The real impacts on public decisions, policies and actions. Were the ultimate decisions different – and better – than would otherwise have been the case?
3. The effect on the community’s capacity for democratic participation. Has the public involvement process made it more or less likely that the necessary information, skills and willingness to get involved are present in the community?
4. How, if at all, has a particular public participation effort enhanced a local agency’s ability to effectively sustain and support civic engagement? Was the public engagement process considered a one-time affair, or have sponsors used it to build a more sustained capacity for soliciting the public’s ideas and recommendations?
Key Questions to Ask

1. Was a comprehensive plan in place? Did appropriate local officials develop and support a clear public involvement plan that included a stated purpose, ties to city vision or goals, participation targets, a process design, a timeline, clear staff roles, a budget and how local officials would integrate any developed recommendation into their ultimate decision-making?

2. Did participation meet your goals? Was the actual participation appropriate to the issue? Was the participant selection process effective? Did local officials make successful efforts to involve the community’s diverse population? What worked and what didn’t to help secure the participation you intended?

3. Was the process appropriate for participants? Was background information provided to participants so they were prepared to take part? Were materials used in the process helpful? Were there sufficient opportunities for deliberation among participants that allowed for the exchange of informed views, consideration of alternatives and the formulation of recommendations?

PRELIMINARY DRAFT OF BIKE SHARE PROGRAM ENGAGEMENT STRATEGY

PHASE ONE – PRE-LAUNCH

ENGAGEMENT INITIATIVES

Techniques to inform the community:

1. **Website**
   - Develop an official website dedicated to the Bike Share Program for the general public. Present vital information on how the bike share program would operate and function.
   - Put strong emphasis on cyclist safety, such as contemplating ways to deal with helmet issues.
   - Embed community-based feedback system on the website, such as online forums for users to comment, ask questions, or make suggestions.
   - Provide an online map on the website accessible to the public, indicating where the site locations would be prior to program implementation.

2. **Displays**
   - Advertisements of the program in public places, such as the library, city hall, etc.
   - Also ads displayed on other modes of public transit such as the ferries and the buses. (may require funding from corporations and organizations)
• Flyers and fact sheets distributed throughout city, such as telephone poles, bus stops, bulletin boards, etc.

3. Kiosks
• Provide information desks staffed by volunteers at strategic locations throughout the city.
• These kiosks can further provide additional info through flyers and distributing fact sheets.

4. Other Marketing Strategies
• Promotions such as early membership signup and registration.
• Getting the general public intrigued about the bike share program by laying out the dimensions of bike stations drawn with chalk that is used by the towing companies for towed vehicles and forensics when they outline the bodies of dead people. Then slowly reveal to the people of Victoria what these sketches mean as the launch date approaches. (requires very little resources; cost-efficient and requires minimal labor and hired staff)

Questions that come into mind during Pre-Launch Phase:
The answers to the following questions were provided by Ismo Husu, Parking Services Manager for the City of Victoria. Ismo was referred by Allison Ashcroft, Environmental Planner for the City of Victoria, both a wealth of knowledge about the Victoria Bike Share Program. Ismo provided the following insight into his experiences with engagement strategies regarding businesses on bike parking and pay stations. (These are his direct answers, no alteration, paraphrasing was done.)

1. If business owners who have storefronts in strategic locations where the placement of bike stations would eventually take place, how does the planning committee/planners from bike share program consult with them? What happens if the business owners feel like they need to be compensated, because of reasons that it would affect their business?
   • ISMO: I brought forward those blue pay stations so it’s very similar to this. Make sure you have proper information and visit each nearby business individually. I think if you have good info for them you'll have a lot of buy in. Have a good discussion, note any issue and ensure them the space is a trial area and that it's important it works for everyone. There is no compensation; most of the spots are public property.

2. How does the planning committee educate the general public about the program during pre-launch, to gain confidence and popularity? Where does the funding usually come from (I assume there would be a lot of ads and commercials)?
   • ISMO: An advertising budget would help. Depending on how much the City is involved there are some great cheap methods including the City website, on-street pay stations and the basic visibility and word of mouth that would
accompany just having them out there. Local media would be all over it as well as other local groups I would imagine.

**PHASE TWO – IMPLEMENTATION & TRIAL PERIOD**

**ENGAGEMENT STRATEGIES**

Techniques to collaborate and empower the community:

1. **Joint Bike Share Programs**
   - Establish further engagement with community stake holders by conjoining with other bicycling organizations and advocacy groups that have congruent goals and interests.
   - Conduct cyclist promotion events by partnering up with community cyclists such as Critical Mass. This could be done by coordinating rally points at selected bike share stations.

2. **Social Media**
   - Make use of the social media, such as Facebook, Twitter, and Youtube, to campaign the Bike Share Program.
   - Allows for an easy and effective way to help promote ideas, share information, and get further feedback from users.

**PHASE THREE – POST-LAUNCH EVALUATION**

**POST-LAUNCH ENGAGEMENT STRATEGIES**

Techniques can be used to consult and involve the community:

1. **Promoting Cyclist Safety**
   - If participants fail to comply with the law for wearing a helmet when bicycling, and the City finds the Bike Share Program impeding traffic and transportation or the general public shows complaint that cyclists are jeopardizing public safety, then further strategies to promote helmet use will be applied. Strategies such as making helmets more accessible/affordable by partnering up with local bicycle shops (or receive corporate funding from brand name sport or bicycle equipment retailers) and offer them at a discounted price during registration for Bike Share membership.
   - If partnered up with businesses that offer cycling equipments, the stores should offer equipment rentals at a very affordable rate for tourists and those who do not own any cycling gear. These retailers will offer rentals for helmets, optional mirrors mounted on handlebars, flags that will keep drivers aware of cyclists’ presence, and headlights/taillights for those urban cyclists that like to travel at night.
2. **Integrative Bike Share Program with other modes of Public Transit**
   - If participants start to complain about the Bike Share system not being compatible with the public transit, then we will most likely find a way to cooperate with BC Transit and Victoria Regional Transit System to develop a more accessible public transport infrastructure.
   - Develop a similar program to Google Maps (costly and requires a lot of work from analysts, computer engineers, and surveyors) or have BC Transit make the Bike Share Program part of the official public transit of the City and, in doing so, Google will most likely incorporate the system into their software. Thus, a highly integrative system of public transit will be developed, in which people travel throughout the city with relative ease. Users can travel seamlessly from bus, to bike, to the parking lot where they left their cars.

3. **Website and Customer Support**
   - Once the program gets going and revenues are on the rise, there should be a staffed online and telephone support in order to assist cyclists and customers.
   - Services should include assistance for participants experiencing cycling difficulties from damaged/faulty bicycle, allow users to report on traffic conditions/ incidents and broadcast the current traffic conditions through an online newsfeed, and GPS assistance for the nearest Bike Share Station.

**Questions that come into mind during Post-Launch Phase:**

1. What are some of the effective ways to get productive feedback from surrounding businesses as well as residents?
   - *ISMO:* Provide an email address and phone number. Ensure that you revisit the businesses after the trial begins, especially the ones that had concerns.

2. If the desired location is co-beneficial to the tourism industry and businesses alike, but happens to stagnate traffic in busy corridors, what does the planning committee usually do in this situation?
   - *ISMO:* This is a tough one and would try to foresee these issues to limit congestion. If it happens see work with Transportation to find a solution. I would say the bike share would have to adjust to make it work.

3. Usually how long does it take to consolidate fundamental infrastructure, before introducing new phases? And if the bike share program grows unpopular, how does the city and planning committee react?
   - *ISMO:* This may depend more on the supplier. If bike share is popular and there are easy sites I do not see a huge time restraint on expansion.
REFERENCES

Demand:

Figure 1: http://www.victoria.ca/EN/main/community/about/census.html
Figure 2: 
http://geodepot.statcan.ca/Diss/GeoSearch/index.cfm?lang=E
http://victoriacruise.ca/page/cruise-schedule
Figure 3: 
http://www.crd.bc.ca/transportation/plans/documents/CRDPCMPweb.pdf
Figure 4: 
Fig 5 & 6
http://atlas.nrcan.gc.ca/site/english/maps/topo/map
Natural Resources Canada – The Atlas of Canada
Climate

Supply:

Figure 7: 
Figure 8: 
http://2.bp.blogspot.com/-Rk83CVYItVQ/TYNHz4uhpyl/AAAAAAAABQE/ixt9VYQXJmU/s1600/Bixi.sized.jpg
Figure 9: 
http://0.tqn.com/d/gocanada/1/5/q/D/-/-/BIXI_bike_Montreal.jpg
Figure 10 and Bixi System: 
http://www.bixisystem.com/home/
Figure 11: 
Capital and Human Resources: 
http://www.tc.gc.ca/media/documents/programs/BSG.pdf
Helmets: 
Parking Space Dimensions: 
http://www.canadianparking.ca/files/ParkingDimensions_eng.pdf

Administrative & Market Research:

Province of British Columbia Motor Vehicle Act - Section 184
Table 1
Table 2 Chart Source: http://pugetsoundbikeshare.org/wp-content/uploads/2012/07/KCBS_Business_Plan_FINAL.pdf
Table 3 Chart Source: http://pugetsoundbikeshare.org/wp-content/uploads/2012/07/KCBS_Business_Plan_FINAL.pdf