



CITY OF KIRKLAND

Department of Public Works

123 Fifth Avenue, Kirkland, WA 98033 425.587.3800

www.kirklandwa.gov

Council Meeting: 09/04/2012

Agenda: New Business

Item #: 11. c.

MEMORANDUM

To: Kurt Triplett, City Manager

From: David Godfrey, P.E., Transportation Engineering Manager
Ray Steiger, P.E., Public Works Director

Date: August 23, 2012

Subject: Update on Puget Sound Bike Share

RECOMMENDATION:

It is recommended that the Council review the City of Kirkland's role in the Puget Sound Bike Share (PSBS) proposed program.

BACKGROUND DISCUSSION:

King County and partners from other cities and agencies have been actively exploring bike sharing for the last four years. Because bike sharing fits well with the Kirkland City Council's adopted goals, overall transportation strategy as outlined in the Comprehensive Plan, and Active Transportation Plan, the City of Kirkland has followed and participated in the County's efforts along with the following organizations:

- Cascade Bicycle Club
- City of Redmond
- City of Seattle
- King County Metro
- Microsoft
- Puget Sound Regional Council
- Seattle Children's Hospital
- Sound Transit
- University of Washington
- WSDOT

Bike sharing programs are similar to car sharing systems such as Zip Car[®]. Individual users pay a small amount to become a member of the system and then have access to bicycles that are stationed at kiosks throughout the service area. Kiosks are usually positioned 1000 to 1300 feet apart. Bikes are checked out from and returned to kiosks using a credit card, and users are charged based on the length of the time the bicycle is checked out. There is usually a free ride period of 30 minutes or so. Bike sharing has evolved over the past 30 years, and the popularity of current bike sharing programs is rapidly increasing.

In the US, programs in Denver, Washington D.C., Minneapolis, and Boston are successful, and bike sharing is planned for a number of other cities including Portland, Vancouver, New York, and Chicago. Many smaller cities are also beginning bike sharing programs.

Trips best served by bike sharing include short trips, trips that involve transit, and trips between areas where there is a high demand for movement. For example in Kirkland, Carillon Point and downtown Kirkland are a pair of destinations where bike sharing could be successful as part of a larger bike share network. Historically, areas with higher levels of density, varied land use, and high transit ridership are most conducive to bike sharing success.

In 2011, King County Metro received a grant to develop a business plan for bringing bike sharing to the County (Attachment 1). The entire Plan is available at the [Puget Sound Bike Share website](#). The Plan was prepared by a nationally recognized bicycle consulting firm and was managed by a group of representatives from the organizations listed previously. The Plan called for the formation of a non-profit organization that would hire an operator (see *Operations* below). The formation of the non-profit has spurred media interviews on several local outlets including [TV](#), [Radio](#) and [Print](#).

Developing the system

The Plan contains the following deployment phases and schedule as an initial proposal:

- Phase 1A (50 stations / 500 bikes / 3.1 square miles / launch in 2013) -- the initial launch is intended to maximize early success in Seattle's downtown core, south Lake Union, the University District, Sandpoint, and part of Capitol Hill;
- Phase 1B (60 stations / 600 bikes / 2.0 square miles / launch in 2014) -- will in-fill the initial launch area with more stations and expand the boundaries into more of Capitol Hill and north of the University District;
- Phase 2 (50 stations / 500 bikes / 3.4 square miles / launch in 2015) -- will expand the Phase 1 area to cover an additional 3.4 square miles;
- Phase 3 (60 stations / 600 bikes / 5.1 square miles / launch in 2017) -- will develop a series of sub-systems on the east side of Lake Washington in the cities of Redmond (including the Microsoft campus), Kirkland, Bellevue, and Renton;
- Phase 4 -- expand into other areas of the county such as Ballard, Northgate, Rainier Valley, Kent, etc. These areas can enter the system at any time with sufficient funding.

The Plan is designed to start with a relatively small system in the area where it is most likely to be successful and then build on the success of those first stations. It is important to note that depending on the availability of funding, this proposed schedule and/or scope could be extended, or compressed. For example, if funding were secured in the City of Kirkland, it would be possible to start that portion of the system sooner than the schedule proposes.

Operations

There are several models that are commonly used for operating bike share systems, and three such options are:

1. One public agency operates the system or hires an operator, taking responsibility for all aspects of its operation;
2. A non-profit agency is set up which hires an operating company to handle the system's day to day operations;
3. A privately funded organization funds and operates the system.

After examining possible operating models, Option 2 has proven to be the most popular funding model among other recently started bike sharing systems and was selected by the group as the preferred approach for this program. To that end, Puget Sound Bike Share (PSBS) was incorporated as a non-profit with the State of Washington in June, 2012.

The by-laws of PSBS include seats on the Board for each of the participating organizations. In addition to organizations identified earlier in this memo, at the August 22nd meeting of the Board, application by REI to become a member was approved, and they have also been added to the Board as an organizational member. The Board seats that are designated for governmental agencies are currently occupied by agency staff. David Godfrey is serving as the City of Kirkland representative. The Board may also choose to fill "elected" positions that can be occupied by individuals not representing specific organizations.

Consistent with the organizational structure under Option 2, PSBS is currently advertising for an Executive Director that will handle day to day operations of the organization. Initial expenses associated with the Executive Director are being paid for by the member organizations and includes \$5000 from the City of Kirkland. Kirkland's share is being funded through approved budget within the Public Works Department. One of the primary responsibilities of the Executive Director will be the development of additional private funding partners, and the current schedule is to have the Executive Director hired in October, 2012.

Program Funding

Bike share programs are typically funded through a mixture of private sector sponsorships, membership fees (paid by the users), and public sector grants. Other bike share programs have used grants and private sponsorship to provide initial capital for the system and then user-revenues and station sponsorship to cover ongoing operating costs. Beyond the initial costs for the Executive Director, PSBS will not be relying on member agency funding for the ongoing operational costs. The Plan identified that a bike share program in our region can be viable with revenue from users and from private sponsors. PSBS will also continue to seek grant opportunities.

The proposed funding strategy for the initial launch of the PSBS includes:

- Capital (\$3.7 million):
 - Private sponsorship: \$ 1.0 – \$2.0 million.
 - Grants or other funding: \$1.7 – \$2.7 million.
- Operating (\$1.4 million / year):
 - User revenues: \$0.85 million.
 - Station sponsorship: \$0.3 million.
 - Grants or other funding: up to \$0.25 million.

Over the longer term, private sponsorship is expected to cover all but \$2.15 million of the approximately \$14.4 million capital cost associated with launching Phases 1(A&B), 2, and 3. The combination of user-generated revenues and station / bike sponsorship revenues will be enough to cover annual operating costs (\$4.6 million per year) plus provide a surplus that can be used to pay back the initial capital shortfall or reinvested into the system to launch subsequent phases of the system. In the longer term, the system is expected to operate at a surplus, which can be reinvested into expanding the system.

Like the deployment schedule described earlier, to provide the highest likelihood of success, the proposed funding scenario in the Plan is designed to demonstrate the financial feasibility of the system and provide a guide for initial deployment. The funding strategy may be adjusted as the program matures.

Helmets

King County has a mandatory bicycle helmet law; however most bike share systems operate in areas where bicycle helmets are not mandatory. One issue with implementing the bike share

system in Puget Sound was the availability of helmets for those desiring to use the system. Several options were considered to address this issue, but providing helmets throughout the system was seen as an opportunity to reinforce the region's commitment to safety, increase the distribution of helmets to all bicyclists, and to showcase innovative technical and non-technical solutions to providing helmets.

The Plan 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 to 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.

Executive Summary

What is Bike Sharing?

Bike sharing is an innovative approach to urban mobility, combining the convenience and flexibility of a bicycle with the accessibility of public transportation. Bike share systems consist of a fleet of bicycles provided at a network of stations located throughout a city. Bicycles are available on demand, providing fast and easy access for short trips, transit-linked trips, and tourist trips.



Bixi, Montreal

Why do Bike Sharing?

Cities such as Montreal, Denver, Minneapolis, Washington D.C., Boston, Miami Beach, Toronto and over 300 other cities worldwide are investing in bike sharing as a relatively inexpensive and quick implementation urban transportation option.

These cities have been transformed by the many benefits of bike sharing that include improved individual and community health, economic development through green jobs and improved access to businesses, environmental benefits such as reduced vehicle emissions, and the community benefits of providing another mobility option as an extension of the transit system.

What are the goals for Bike Sharing in King County?

The Bike Share Partnership (BSP) is an ad-hoc group formed to guide the direction and development of bike sharing in the region. The BSP includes representatives from public agencies and institutions such as King County, the cities of Seattle, Redmond, and Kirkland, Sound Transit, the Puget Sound Regional Council, the University of Washington, and a number of other organizations including Seattle Children's, Microsoft, and the Cascade Bicycle Club.



Bike sharing extends the reach of transit.

The BSP has identified the following key goals for the program:

- Develop a regional bike share system that allows multiple jurisdictions to participate and provides a consistent user experience and single pricing structure.
- Provide a new mobility option for the region that extends the reach of public transit.
- Increase the opportunity for residents and visitors to take part in healthy physical activity.
- Reduce carbon emissions from the transportation sector.

Financial goals for the program include:

- Funding the system using a diverse range of sources and providing a balanced mix of public and private involvement.
- Minimizing risk while maintaining transparency and accountability for the agencies involved.

Is King County equipped for Bike Sharing?

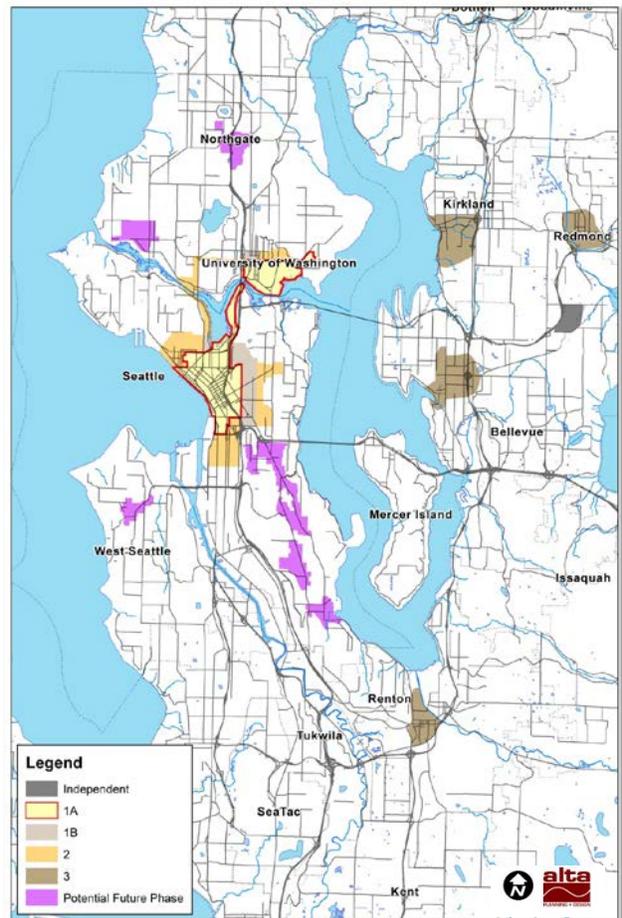
King County has many of the characteristics required to make bike sharing successful, including concentrated population and employment centers, an extensive public transit system, large numbers of visitors, a culture that supports cycling (including the largest bike club in the country), and a policy environment that supports the growth of walking and cycling.

Several issues were identified as potential barriers to success including: steep topography in a number of areas; limited bikeway infrastructure in certain parts of the county; King County's mandatory helmet requirement; local weather conditions, and limitations on signage and sponsorship. Strategies for addressing these concerns are presented below.

What part of the county will get Bike Sharing?

Eventually, it is hoped that bike sharing will spread throughout the county. However, to maximize initial success, the system will be launched in downtown Seattle, South Lake Union, the University District, Sandpoint, and part of Capitol Hill with a total of 50 stations and 500 bikes covering just over 3 square miles, before expanding to 220 stations and 2,200 bikes covering an area of 13.6 square miles in downtown Seattle, the University District, Redmond, Kirkland, Bellevue, and Renton.

Other areas that are discontinuous from the initial launch but could sustain smaller systems of their own, such as Northgate and Ballard, as well as areas not expected to have high demand, but that may benefit from the system, such as Seattle's Rainier Valley, Kent or Issaquah, can join the system at any time. Essentially any area of the county can join the system if sufficient funds are available to support and sustain operations. Any profits from the initial launch of the system will be reinvested into expanding the system.



Phasing Plan for King County Bike Share

Who will own and operate the system?

A number of business models were considered for administering and operating the system including an operating non-profit, direct contract with an operator, and privately owned and operated. The creation of an administrative non-profit with private operating contractor was recommended as the preferred business model as it maximizes potential revenue sources, utilizes the expert skills of the private sector to launch and operate the system, and strikes the greatest balance of minimizing risk while maintaining control and transparency for the agencies.

What is the launch schedule?

Establishing the non-profit framework, organizing funding, and procuring a vendor for equipment and operation of the system takes time. There is also lead-time associated with manufacturing the equipment and deploying it on the street. The system could be launched as early as fall 2012.

The following roll-out plan is proposed:

- **Phase IA** (50 stations / 500 bikes / 3.1 square miles / launch in 2013): the initial launch is intended to maximize early success in Seattle's downtown core, south Lake Union, the University District, Sandpoint, and part of Capitol Hill.
- **Phase IB** (60 stations / 600 bikes / 2.0 square miles / launch in 2014): will in-fill the initial launch area with more stations and expand the boundaries into more of Capitol Hill and north of the University District.
- **Phase 2** (50 stations / 500 bikes / 3.4 square miles / launch in 2015): will expand the Phase 1 area to cover an additional 3.4 square miles.
- **Phase 3** (60 stations / 600 bikes / 5.1 square miles / launch in 2017): will develop a series of sub-systems on the east side of Lake Washington in the cities of Redmond (including the Microsoft campus), Kirkland, Bellevue, and Renton.
- **Phase 4:** expand into other areas of the county such as Ballard, Northgate, Rainier Valley, Kent, etc. These areas can enter the system at any time with sufficient funding.

Where will stations be located and how far will I have to walk to get to a bike?

Stations will be placed an average of 1,000 to 1,300 feet apart, providing access to a bike within a short walk of anywhere in the service area and a variety of places to return a bike. Stations will require permitting approval, but are typically placed in sidewalks, public spaces, on-street (sometimes replacing on-street parking), or on public or private properties (in consultation with the land owner).



Example Station Placement

How will the helmet requirement be addressed?

King County has a law requiring all cyclists to wear helmets. Several options were considered, but providing helmets throughout the system was seen as an opportunity to reinforce the region's commitment to safety, increase the distribution of helmets to all bicyclists, and to showcase innovative technical and non-technical solutions to providing helmets.



Helmet vending machine in Melbourne Bike Share

The business plan 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.

Are there enough bikeways to have a bike share system?

North American bike share systems are relatively new and most European programs were introduced in cities with established bikeway networks – as a result there is limited data to determine whether a dense network of bikeways is necessary for successful bike sharing. However, North American cities, some of which have similar bikeway infrastructure to King County have, to date, experienced ridership exceeding projections, recorded no fatalities and very few injury crashes. The style and speed of riding is more conducive to safe riding and the increased number of bikes on the streets introduces a “safety in numbers” effect with drivers more aware of bicyclists.

What about other issues such as steep hills and rain?

There are steep hills in many of the proposed service areas, including downtown Seattle. The system will be designed to encourage routes with easier grades and the bikes will have more gears than bikes in other cities (seven gears rather than three). Electric-assist bikes were considered, but the additional capital, maintenance, and redistribution costs, coupled with the unreliability of current technologies removed this option from consideration at this time.

In comparison to Washington D.C.'s Capital Bikeshare, the most comparable system in the US, cool and rainy winters in King County will likely decrease demand, particularly amongst casual users that are not acclimated to winter riding conditions. However, moderate and low humidity summer temperatures will likely increase demand during summer months.

How much will it cost to use the system?

Users will pay a fee to access the system for a specific period of time. During that period, users can make as many trips as they like and for each trip are allowed to ride for a certain time (known as the “free ride period” – typically 30 to 60 minutes) without charge. To encourage short trips, additional charges are assessed for trips longer than the free ride period. The proposed rate structure is based on other cities, adjusted for the relative cost of living:

- Annual subscription: \$75.
- Monthly subscription: \$30.
- 24-hour (casual) subscription: \$5.

It is expected that over 450,000 rides will be taken in the first year with over 2 million rides per year once all three phases are in place.

How much will the system cost?

Cost estimates have been prepared based on experience in other cities. Initial launch of the system (Phase 1A) is expected to cost **\$3.7 million** with an additional **\$1.4 million per year** required to operate it. The first three phases of the system will require capital of \$14.4 million and \$4.6 million per year to operate. This includes purchase of the equipment, launch of the system, operation and maintenance of the system, marketing, customer support, and the cost of providing and maintaining helmets throughout the system.

How will this be funded?

It is expected that a diverse funding strategy will be required and could include some combination of user-generated revenues, sponsorship of the system and/or its bikes and stations, public or grant funding, and private foundation funding.

Other cities have used grants and private sponsorship to provide initial capital for the system with user-revenues and station sponsorship covering operating costs. The proposed funding strategy for initial launch of the system includes:

- Capital (\$3.7 million):
 - Presenting sponsorship: \$ 1.0 – \$2.0 million.
 - Grants or other funding: \$1.7 – \$2.7 million.
- Operating (\$1.4 million / year):
 - User revenues: \$0.85 million.
 - Station sponsorship: \$0.3 million.
 - Grants or other funding: up to \$0.25 million.

Over the longer term, presenting sponsorship is expected to cover all but \$2.15 million of the capital cost associated with launching phases 1, 2 and 3 (approximately \$14.4 million). The combination of user-generated revenues and station / bike sponsorship revenues will be enough to cover annual operating costs (\$4.6 million per year) plus provide a surplus that can be used to pay back the initial capital shortfall or reinvested into the system to launch subsequent phases of the system. In the longer term, the system is expected to operate at a surplus, which can be reinvested into expanding the system.



Decobike, Miami Beach

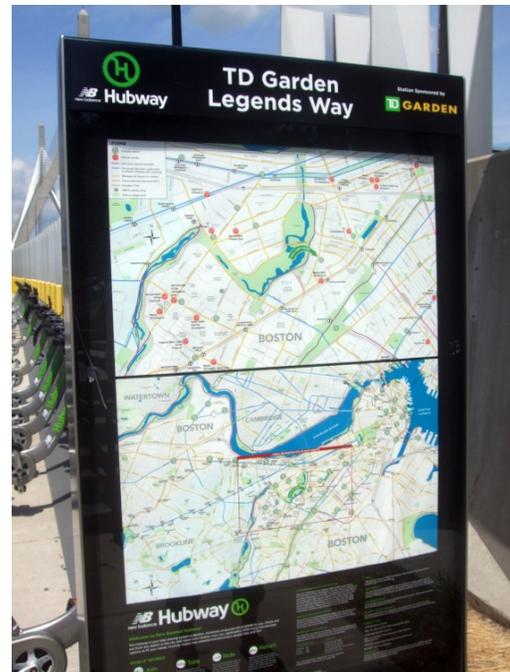
Is there interest from the corporate community to sponsor the system?

Initial discussions with the corporate community have shown considerable support for the program and interest, in concept, for sponsoring the program. Corporate partners can benefit from sponsorship opportunities as a way to increase brand recognition, as a means for community investment, and as a means to support commute trip reduction programs.

King County Bike Share Program Plan



Presenting Sponsor, Denver Bikesharing



Station Sponsorship, Boston Hubway

What are the next steps?

The BSP is currently working to establish a non-profit organization (NPO) to administer the program. An interim board of directors and executive director will be appointed. The NPO will guide the remainder of the process, which will include identifying and pursuing funding (including approaching potential corporate sponsors and applying for public and grant funding), preparing a set of consistent regional guidelines, establishing a common procurement process, and issuing an RFP to potential equipment vendors and operators.