



## UNITED STATES' EXPERIENCE

### TITLE: Bicycle Sharing in the U.S.A.



**Country:** USA

**Institution:** U.S. Department of Transportation, Washington, D.C., USA

**Other institutions involved:** Toole Design group; Pedestrian and Bicycle Information Center

**Webpage:** [www.bicyclinginfo.org/promote/bikeshareintheus.pdf](http://www.bicyclinginfo.org/promote/bikeshareintheus.pdf)

#### Context

Bike sharing is an innovative transportation program, ideal for short distance point-to-point trips providing users the ability to pick up a bicycle at any self-serve bike station and return it to any bike station located within the system's service area.

Bike sharing is a non-motorized transportation service, typically structured to provide users point-to-point transportation for short distance trips (0.5 to 3 miles). It provides users the ability to pick up a bicycle at any self-serve bike sharing station in the network and return it to any other bike sharing station, including the trip origin point. There are not-for-profit and for-profit versions of bike sharing that are used in the USA.

We have studied programs in Boston; Washington, DC; Miami; Spartanburg, SC; Minneapolis, Denver; Boulder, CO; San Antonio, and Irvine, CA. We are also analyzing several areas of the USA where planning is in progress. Those areas include Atlanta, Baltimore, and Chicago. Macro facets of these programs are applicable for any metropolitan area in the Western Hemisphere. Our work is particularly useful, we think, for communicating "lessons learned."

#### Objectives

Bike sharing systems have evolved primarily as a means to make bicycle travel in urban areas available to a wider range of people. A shared bike service makes both spontaneous and planned urban trips possible by bike and can be an ideal complement to transit trips as it provides first mile and last mile connections. Bike sharing can contribute to reduce traffic congestion, reduced use of fossil fuels, reduced pressures on motor vehicle parking supply, and increased use of transit and other single occupant alternatives.

**Relevance**

Bike sharing can reduce the personal cost of urban transportation by offering an affordable public transport option. In the process, it can offer environmental, social, economic, and public health benefits. Some cities are implementing a bike share program to reduce their carbon-related emissions. There are health benefits in calories burned. Bike share programs can also support a variety of economic development initiatives including tourism and urban redevelopment. Thus far there is very little concrete data on costs and benefits of bike sharing. Anecdotal evidence does suggest that the programs are very popular for tourists.

**Implementation**

As with any new transportation service, bike sharing requires an up-front planning phase prior to launching service. The characteristics of this planning have greatly varied among the communities throughout the USA that have implemented bike sharing programs. Some have conducted formal feasibility studies, while others have proceeded with various aspects of the planning process in a less formal structure. Where there have been implementation feasibility issues, the best path to eventual implementation of a full program is a small pilot effort.

**Distribution of tasks**

After the successful completion of the planning phase, a jurisdiction is ready to begin implementation of a program. The issues to be addressed are typically:

- Selection of service hours and the operating season
- Program marketing and sustainability planning
- Considerations of safety and liability
- Redistribution of bicycles
- Considerations of theft and vandalism

**Achievements and results**

As of early 2012, three types of business models have generally been used for bike share programs in the USA: jurisdiction owned and managed, nonprofit owned and managed, and for profit owned and managed. The characteristics of each particular model determine how the program will be financed, who will undertake day-to-day operations, and what type of bicycle and kiosk hardware will be deployed. Anecdotal study and analysis of bike sharing in Washington, DC, suggests that bike sharing is “paving the way” to change the attitudes of automobile drivers to share the road more comfortably with bicycle riders.

**Unexpected achievements**

A surprise finding has been that partnerships with bicycle shops can benefit bike share programs. During the early stages of implementation, some bike shop owners have been concerned about the potential competition from bike share. However, anecdotal evidence suggests that bike sharing may actually benefit local bike shops because they get additional business from customers in search of protective gear and other accessories. Furthermore, some bike shops see bike share as a means of re-introducing adults to bicycling and expanding the customer base in the market for new bicycles.

**Capacity to replicate and potential for exchange of this experience**

Higher use bike share stations tend to be located in higher density areas, and with high levels of pedestrian activity. Topography is also an important consideration related to service area siting. Implementation of a system may be more complicated in jurisdictions with steep (or even rolling) terrain. Jurisdictions with steep slopes may want to first consider parts of the community that are flat.

Finally, the size of the service area will be dependent on the size of the jurisdiction. Existing bike share programs in the USA that were part of our analysis include a service area coverage of 1.5 square miles.

#### **Human, operational and institutional capacities**

Theft and vandalism have not been major issues in existing bike sharing programs. Current systems include highly secure locking mechanisms in their bicycles and station locks, which only allows users to unlock a bike with the use of a specialized radio frequency ID key or access code. Other issues helping to deter the theft of bicycles within bike sharing programs are the specialized shape, size, and branding of bicycles which make each bike immediately identifiable. In addition, unique parts that are not transferable to conventional bicycles further deter theft of components.

#### **Modalities to facilitate the exchange**

To facilitate the exchange of information about bike sharing, it is increasingly important to document the lessons learned by the pioneering programs and to identify lessons learned for the next wave of communities that will implement bike share. The U.S. Department of Transportation's U.S. Federal Highway Administration is a key source of information. At the U.S. Department of Transportation, we have benefitted from a bike sharing advisory group. The twelve existing and planned U.S. bike share programs have a wealth of knowledge to share. The League of American Bicyclists has worked in this area.

#### **Good practices and concrete lessons to be shared with other RIAC Members**

While the various models have core distinctions, there are several shared characteristics.

Jurisdictions have encountered siting and permitting issues, although some business models all for more efficient expedition of public space permitting. Finding the appropriate space for a station and filing the appropriate permitting paperwork can be burdensome.

Federal funding for bike share programs may be subject to additional regulations. Because some jurisdictions do not allow certain types of advertising on publicly-owned equipment, or in a public space, some revenue sources within each business model can be precluded from the funding mix.

In terms of optimum size of programs, our analysis is that small to medium size bike share systems (2 to 50 stations) tend to use the nonprofit model. Some larger systems (50 or more stations) have had more government involvement with the program.

#### **Experiences and subjects to learn from other RIAC members**

Our research suggests that there is no standard measurement of success for evaluating a bike share program. The goals and expectations from each jurisdiction are varied. Key factors are 1) the ability of the program to become self-sustaining, 2) its ability to help make bicycling more visible, 3) the program's ability to promote healthy living, and 4) the program's ability to provide connections for underserved communities.

#### **Key persons involved in the design, implementation, and evaluation**

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