Bike Share Feasibility Study for Greater Downtown Detroit

PREPARED FOR:
Detroit Bike Share Partnership

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Acknowledgments

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Executive Summary

The Detroit Bike Share Feasibility Study Group, an unofficial group consisting of a number of influential organizations in Detroit, and coordinated by Wayne State University, commissioned a feasibility study to explore the potential for a bike sharing system in Detroit. These organizations have shown a commitment to the revitalization of Detroit through efforts such as Live Midtown, Live Downtown, the Woodward Corridor Initiative, and 15 x 15.

It is hoped that a bike share system can encourage more people who are living, working, going to school, and visiting the city to explore the many restaurants, shops, cultural attractions, and other amenities that Detroit has to offer and might help spark new investment in residential, retail, and commercial developments. Bike sharing supports Detroit’s goal of increasing the use of the bicycle as a viable, low-cost transportation option.

What is bike sharing?

A bike share system consists of a fleet of bikes made available for shared use by people who do not own them. Bike sharing is a cost-effective and practical mobility option for trips too far to walk, but not long enough to take transit or drive. It is a relatively inexpensive and quick implementation extension to a city’s public transportation offerings.

Bikes can be provided at a central location (i.e. a lending library), at a network of stations located throughout the city, or at dispersed locations where bikes are locked up without a formal station and accessed via a cell phone or the internet. Bike sharing is typically priced to encourage short, spontaneous trip-making where a bike can be taken from a station and returned to any other station.

Boston, Denver, Madison, Minneapolis, and over 300 other cities worldwide are investing in bike sharing. These cities, like Detroit, recognize the potential economic, environmental, and social benefits of bike sharing.

What are the goals for bike share in Detroit?

Other cities have employed bike sharing for a variety of reasons and although there are a number of very visible measures of success, such as high ridership and profitability of the system, each community has a different vision of what they want bike sharing to bring to their community. Stakeholders in Detroit were asked: “What would make a successful bike share system in Detroit?” Responses were consolidated into a set of program goals that include:

1. To provide a system that achieves visible success through positive media, financial performance, and high ridership representing a broad spectrum of users.
2. To provide an effective transportation option that becomes a valuable piece of the broader “transportation ecosystem”, compliments existing and future transit, and enhances the mobility and public health of Detroit residents.
3. To strengthen connections between the vibrant nodes of Greater Downtown Detroit and broaden people’s experience of Detroit.
4. To contribute to the revitalization of Detroit and increase the viability of the City as a place to live, work, and visit.
Executive Summary

5. To bring together partners from throughout the region and showcase Detroit’s “can-do” attitude through innovative project delivery and showcasing local innovation and technology.

6. To use bike sharing to add to the growing momentum of bicycling in Detroit by encouraging new riders, increasing the visibility of bicycling, and leveraging increased investment and support.

Can Detroit support a bike share system?

The consultant team believes that Greater Downtown Detroit can support a bike share system for the following reasons:

- There is a diversity of different public, private, and non-profit organizations with a proven ability to deliver public-private infrastructure projects. There is an overall culture of collaboration and a shared commitment to the revitalization of Detroit.
- Greater Downtown Detroit includes a dense core with a mixture of activities and land uses. There are a variety of potential users all well represented in Greater Downtown Detroit including Downtown residents, transit and vehicular commuters to Downtown, students, and out-of-town visitors. There are a number of vibrant neighborhoods that provide a variety of destinations within just a short ride.
- Bike sharing provides a convenient, on-demand transportation mode to complement existing and planned transit. It will allow transit users to get further, faster and facilitate the first and last mile of a trip. The significant number of Downtown commuters will use bike sharing as a means to get around during the day without having to unpark their vehicle.
- There is a solid network of existing bike facilities and comfortable biking streets that can be utilized by the bike share system to connect between neighborhoods. Bike sharing will offer an inexpensive way to introduce Detroiter's to cycling.
- There are numerous opportunities for the program to tie in with existing organizations, programs, and funding sources to serve low income and other traditionally underserved populations. Bike sharing is a tool in addressing increasing concerns around community health and wellness.

What challenges will Detroit face to implement a bike share system?

There are a number of challenges that need to be addressed prior to implementing a bike share system. None of these are considered insurmountable obstacles:

- Advertising is not currently allowed in the public right-of-way and a clarification on the use of sponsorship at the stations is needed. Sponsorship is likely to be an important source of revenue to operate the system.
- Permitting can cause delays. It will be important to get further confirmation on whether stations will be permitted in the street or on the sidewalk, how parking replacement will be addressed, whether the permitting process can be expedited, and whether there are special permitting considerations such as Historic Districts that could delay the process.
- Expandability. The study identified a number of areas outside the Greater Downtown that may be candidates for future expansion. However, it is uncertain whether expansion of the system to other parts of the City can be sustained through the traditional revenue sources.
- Theft and Vandalism. Technological advancements such as credit card transactions, RFID chips, and non-standard bike parts provide accountability and deter theft and vandalism. However,
there are still some concerns about the costs of replacing damaged or vandalized system infrastructure.

What type of bike share system best meets the goals of the program?

Although a final decision on the desired technology type has not been made, the majority of recent high-profile bike share installations in the United States utilize station-based technology. A station-based bike share system appears most supportive of Detroit’s bike share goals and offers higher visibility and greater reliability to users that they will find a bike where and when they want one. However, station-less bike share systems are lower cost and the technology continues to evolve. It is recommended that the Detroit Bike Share Group monitor technology advancements prior to making a final decision.

What Business Model Makes Sense for Detroit?

The consultant team reviewed a number of options for who should own, administer, and operate the system. A nonprofit owned and administered system is likely to be the most successful model in Detroit. The nonprofit – either an existing nonprofit or a newly formed nonprofit – would represent public and private organizations with an interest in bike sharing and be responsible for raising funds, selecting a vendor, purchasing the equipment, and overseeing the contract for operating the program. The nonprofit could also operate the bike share system or contract these services out to the private sector.

Phased Implementation

The study identifies an initial (Phase 1) bike share system to launch in Greater Downtown Detroit with 35 stations, 350 bikes, and 595 docks with the goal of subsequently expanding to a 60 station, 600 bike, and 1,020 dock system.

Based on available funding, a smaller initial system is also possible. Twenty stations would be considered the minimum for a bike share system in Detroit. However, a 35 station system would allow for at least two stations in each of Mexicantown, Corktown, Woodbridge, New Center and Lafayette Park and still provide a reasonable density of stations in Midtown and Downtown.

Phase 1 of the system is expected to cost $7.5 million over five years including capital, launch, administration, and operating costs. User fees are expected to generate nearly $3 million over the five years while sponsorship could provide another $2 million. This would leave approximately $2.7 million that would need to be sourced through grant funding, private foundations or other sources

Conclusion

The feasibility study identified that there a number of opportunities for bike sharing to be successful in the Greater Downtown. In particular it offers a means to strengthen connections between neighborhoods, complement existing and future transit services, serve as an amenity to both residents and visitors, and support the revitalization of Detroit. Bike share appears supportive of the goals set forth at the onset of the study and the challenges outlined above are not considered insurmountable. Raising enough money to supplement user revenues and support bike share in Detroit seems possible given the existence of stakeholders in Detroit with a strong interest in bike share, a commitment to Detroit, and a precedence of coming together to support similar projects.