**BUSINESS REQUIREMENT ANALYSIS FOR BIKE SHARING SYSTEM**

**GROUP D**

Bike sharing system allows users to check out bikes from public locations at key areas around town. Each location contains multiple bikes and is conveniently located for short trips near businesses, entertainment, recreation destinations, and transit.

Bike share bikes are typically available from a larger network of locations, and designed so that riders can easily rent a bike at one station and drop it off at another. While bike share can be used for recreational riding, stations are often located to connect popular destinations, employment and population centers and transit hubs. Bike share is also designed for shorter trips as most systems incentivize riders to complete their rides within 30-60 minutes, making bikes available again to new riders.

**GOALS**

The analysis and recommendations explore what a bike sharing system would look like, where it would go, how it would work, and how it could operate sustainably over time. Specifically, the goals of this plan include:

1. Identifying how bike share can be of a benefit.
2. Identifying the local demand for bike share.
3. Identifying the preferred system options and technologies for Olathe.
4. Identifying locations in Olathe with the most potential for bike share use.
5. Developing a feasible and sustainable business model.

**BENEFITS**

Bike sharing gives people more convenient opportunities to get physical activity, and also boosts mental health. Bike share users report improved fitness, reduced stress, and improved mood.

Accessibility: Bike sharing can complement the transit system and give residents low-cost access to jobs and services. Because it extends the range of those without access to a car, bike share can enhance the function of the transit system, and expand the number of destinations accessible to users.

Quality of Life: More options for short trips around town means less traffic on the road and less pollution in our air. Bike share also increases the visibility and popularity of cycling and active living throughout a community. Most bike share users use their own bike more after using the bike share system.

**USER EXPERIENCE**

The proposed bike sharing system would provide an intuitive and user-friendly experience that allows users to engage the system in multiple ways.

**USERS**

* Register
* Use the app to find the nearest bike station.

**REGISTERED USERS**

* Login
* Update profile
* Book for bike
* Entering a unique user ID and pin via touchscreen on the bike.
* Secure an OTP on the mobile app to unlock the bike
* Checking out a bike using a mobile app
* Checking out a bike by regenerating another OTP to lock back the bike using the app.
* Reaching out to the customer service if critical issues occur.

**ADMIN**

* Login
* Add/update bike
* Delete bike
* Reallocation of bikes
* Handle customer service
* Monitors all bikes in every location using Google map GPS

**PAYMENT SYSTEMS**

In addition to providing multiple points of access, the proposed Bike sharing system would also offer multiple methods of payment, including credit card, cash and online payment.

Payment systems should provide options for online payments as well as payment made through a mobile app, and accept both credit and debit cards.

Security measures will ensure that bike share operators never directly handle customer credit card information. Security features on bikes and stations will make it difficult for unauthorized parties to access system components. Access to potentially sensitive areas would be restricted and logged to make it difficult to disable core security features.

**WEB BASED APPLICATION**

A public facing website is a key component of a successful bike sharing system.

The bike sharing web based application will provides both static information (what is bike share, how do you use it, etc.), as well as real-time maps and information on bike availability. The website provides a platform for prospective users to complete online subscriptions, purchases, renewals, and upgrades, and can include a member portal with personalized data (profile information, ride and payment history, health and environmental impact, and rankings.

**MOBILE APP**

The mobile application will be the most important point of access for riders. The mobile app makes bike share accessible and appealing to more users because it helps to remove barriers to entry. The features will include mobile app providing an easy way for new users to join and navigate a system, and provides existing members tools to find bikes, rent bikes, and interact with the bike share operators.

GPS and bike data will inform when and where bikes need to be moved to ensure bikes are available where they are needed in popular locations. As data becomes more robust and regular, geo-fenced locations and bike distribution can be adjusted to meet demand with less need for substantial, ongoing rebalancing efforts.

**SYSTEM MAINTENANCE**

A comprehensive system maintenance plan should be developed for the Olathe bike share system. The maintenance plan should include: • A fully equipped maintenance facility • On-the-ground supervision during all hours the system is manned • A staff team with an emphasis on cross training – allowing scheduling flexibility and efficiency in staffing • A service vehicle with the capacity to transport multiple bikes • Unique maintenance records for each bike

**CUSTOMER SERVICE**

Prompt customer service response is important to respond to any issues that might arise for users of the bike share system. Local staff should be available by phone or email during regular working hours. One of the benefits of a bike share system is that it is available twenty-four hours a day, seven days a week. During off-hour times, customers should still be able to reach customer service for critical issues. A bike share system in Olathe should consider use of a customer service center that takes calls and handles issues twenty-four hours a day. A policy to respond to all customer inquiries within twenty-four hours is helpful.

**CHOICE OF PROGRAMMING LANGUAGE**