



FHWA E-bike Case Study Series

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Portland, Oregon Establishes Adaptive Bikeshare Program to Expand Mobility for Individuals with Disabilities

The city of Portland, Oregon is the largest city in the State of Oregon with a population of around 650,000. Over [seven percent of its population](#) typically commutes by bicycle, significantly outperforming the national average of less than one percent. In 2016, the Portland Bureau of Transportation (PBOT) launched [BIKETOWN](#), a docked bike sharing system that provides the public with short term bicycle rentals through an annual membership or starting at \$1 per trip plus 20¢ per minute. The system quickly grew in popularity and size but did not provide accommodations for individuals with disabilities. Shortly after the system's launch, PBOT received several formal requests for physical accommodation and began to explore alternatives that would provide individuals with disabilities access to bikeshare. PBOT developed a partnership with a local nonprofit and created an adaptive bikeshare program that included the use of electric bicycles (e-bikes) to expand mobility for residents.



Individual using an adaptive bicycle during the 2017 pilot. Image courtesy of PBOT.

Community Outreach and Pilot Formation

In response to the requests for accommodation, PBOT began an extensive outreach campaign to better understand the needs and interests of the community. This outreach included virtual and in-person open houses, presentations at clinics in the community, and the establishment of the Adaptive Bicycle Work Group,

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Creating more livable communities through transportation choices



which was composed of community members with disabilities and nonprofit and PBOT staff engaged with disability issues.

This community-driven engagement helped PBOT identify a common desire to provide a staffed adaptive bikeshare service that would provide individuals with disabilities with cycles and access to multiuse paths or trails in Portland. The coordination between partners led to the development of an adaptive bikeshare pilot program that ran from July to October 2017 and was the first of its kind in the U.S. In its first year, the program provided 59 rentals, 53 percent of which were to first-time adaptive cycle riders. The pilot program was extended for 2018, ran for six months, and provided 189 rentals, which represented a 220 percent increase from the previous year. The success of the pilot led PBOT to establish **Adaptive BIKETOWN** as a permanent program beginning in 2019.

Program Overview

Adaptive BIKETOWN operates through a contract between PBOT and Kerr Bikes, which is owned by Albertina Kerr Centers, a local nonprofit that provides programs and services for people with intellectual and developmental disabilities and mental health challenges. BIKETOWN and Adaptive BIKETOWN cross-promote through shared branding and marketing; however, the operations for the two systems are run separately. The separation between the two systems allows Kerr Bikes to use its expertise to provide a targeted service for individuals with disabilities and for PBOT to add adaptive bicycles after BIKETOWN launched. Through the contract, Kerr Bikes owns the adaptive cycles and provides servicing and maintenance, storage space, and technical expertise.



Individuals participating in a group ride with Adaptive BIKETOWN. Image courtesy of PBOT.

The system is run similarly to a bike rental program by allowing individuals to reserve a cycle online, by phone, or in-person for short-term use. Kerr Bikes is located along Portland's riverfront, providing users with access to several off-road trails and loops ranging from 2 to 11 miles. Kerr Bikes offers a range of different adaptive cycles to fit a diverse set of needs, and each rental includes a personalized fitting, a helmet, storage for a wheelchair or separate mobility device if needed, and a crate for a service animal during the rental time.

Adaptive BIKETOWN operates with a **flexible pricing structure** to ensure that the program is affordable and available to the public. Kerr Bikes offers discounted rates with the first hour free of charge and \$12 for three hours for individuals who qualify for a TriMet Honored Citizens Pass (i.e., those with disabilities, Medicare recipients, and seniors age 65 and over) or for others who self-identify that they are unable to ride a traditional two-wheeled bicycle, whether due to injury, illness, or ability. The hourly rate for additional hours is \$5. The rental rate for people who do not qualify as described above is higher and varies depending on the cycle. Within these parameters, the program also includes a limited amount of financial aid to ensure that the financial burden does not restrict individuals from participating in the program.

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Addition of E-Bikes

The program began by offering 14 adaptive cycles and, in the first contract year, Kerr Bikes retrofitted an existing adaptive cycle using an e-assist conversion kit and purchased a second adaptive e-bike. As of 2022, the system has expanded to 27 adaptive cycles, including six e-bikes. The electric-assist adaptive cycles are capable of traveling 30 to 40 miles on a single charge at speeds reaching 20 miles per hour under electric motor pedal assist. The integration of e-bikes into the existing system has proven especially popular among community members. E-bikes have expanded the program to a broader set of individuals by providing access for individuals who may not have been comfortable riding conventional adaptive cycles. In addition, the e-bikes allow users to travel longer distances during their rental period. Kerr Bikes is actively looking into acquiring additional e-bikes to meet interest and demand from the public.

Noteworthy Practices

While Portland is one of the few cities to integrate e-bikes into their adaptive bikeshare fleet, a number of jurisdictions have established adaptive bikeshare programs.

- [Adaptive MoGo](#) – Detroit offers 13 different adaptive cycles available for short-term use.
- [Bublr Bikes](#) – Milwaukee directly integrated adaptive cycles into its docked bikeshare system.
- [BORP Adaptive Cycling](#) – Berkeley and San Francisco have led adaptive bike share pilots.

Next Steps

Despite reduced ridership impacts from the COVID-19 pandemic, both Kerr Bikes and PBOT are continuing to identify ways to expand the program. In 2021 and 2022, the program offered one-hour rentals at no cost to users. Kerr Bikes has also continued to identify opportunities for partnerships with physical and occupational therapy clinics to reach a broader population who may be interested in the program. For example, the program partnered with Parkinson's Resources of Oregon at an adaptive resource fair event, in which attendees could try out adaptive bikes.

Key Takeaways

Adaptive BIKETOWN staff identified a number of best practices and considerations for other cities or jurisdictions that are looking into adaptive bike share programs.

Allow the community to influence the program. The development of the Adaptive Bicycle Work Group was instrumental in defining and shaping the program. PBOT helped to organize numerous collaborative events but encouraged the stakeholders and relevant communities to define the priorities and shape the program in a way that would best meet their needs.

Make equity a priority. Adaptive BIKETOWN was developed to improve mobility for individuals with disabilities. PBOT and Kerr Bikes went a step further by dedicating resources and structuring the program to minimize the financial burden on individuals and make the program as accessible to the public as possible. For example, the program has organized group rides to encourage ridership among the public.

Engage with experts. Kerr Bikes has extensive experience engaging with individuals with disabilities and their staff possess the necessary knowledge to operate a bikeshare system. The partnership allowed PBOT to manage and fund the program, while allowing the experts at Kerr Bikes to run the day-to-day operations and use their skills and resources to engage directly with the community.

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