



E-Bikes and Equity

Shared Mobility, an equitable transportation nonprofit based in Buffalo, New York, has helped several communities start e-bike libraries, which provide free rentals, repairs, and other services. Shared Mobility team members Shane Paul and Tyler Madell, at right, visit with members of the nonprofit Pacoima Beautiful to help build an e-bike library in Pacoima, California. Credit: Patrick Cray.

WHEN THE FIRST commercial U.S. bike-sharing program launched in 2008, the value proposition was clear. Putting more bikes on the streets was meant to reduce automobile usage and carbon emissions, provide urban residents and tourists with a flexible form of transportation, and offer a public health benefit to boot.

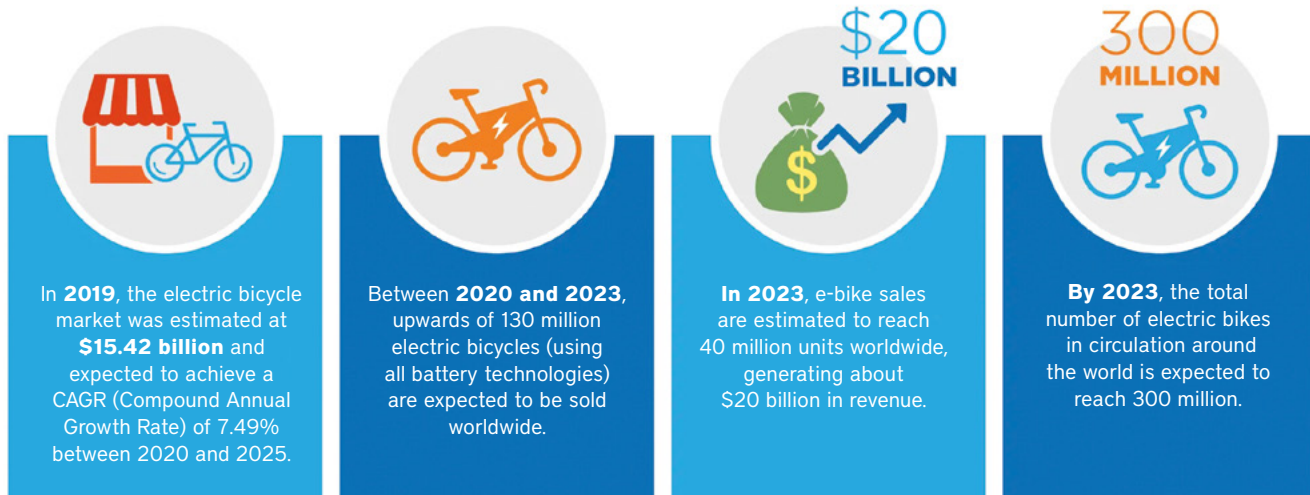
Over the next decade, bike sharing quickly expanded across the country. But because bike-share programs often rely on corporate funding or are operated by profit-driven micro-mobility businesses, they've rarely been available in low-income neighborhoods or cities that would benefit from having access to more transportation options. Recently, this familiar pattern has gotten a jolt from the rising popularity of e-bikes—that is, bicycles equipped with electric-battery technology that supplements or at times replaces traditional pedal power—and from cities and cycling advocates putting different spins on the usual bike-share schemes.

Over the last couple of years, bike-sharing experiments geared toward lower-income residents and communities have launched or been announced in cities including Denver, Oakland, Buffalo, New York; Youngstown, Ohio; and Worcester, Massachusetts.

Sales of e-bikes are booming worldwide, and the technology is proving to be a game changer. “All bike shares should be electric,” says John MacArthur, sustainable transportation program manager at Portland State University’s Transportation Research and Education Center (TREC), which released a report on the equity of bike-sharing in 2020. “I’m totally convinced of this.”

The key reason, MacArthur says, is that e-bikes have a track record of breaking longstanding barriers around who bikes. They attract older adults, people with physical limitations, individuals who haven’t biked since childhood, and those who have never identified with the sport or culture of bicycling. With traditional bikes, he says, “you will only reach a certain number of people.”

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Electric bicycle sales are booming globally, with e-bikes outselling electric vehicles two to one in the United States in 2022. Credit: Courtesy of ebicycles.com (www.ebicycles.com/ebike-facts-statistics).

In cities like Portland and New York that have built out all-electric or primarily electric fleets, users “ride them farther and ride them more often,” MacArthur says. A typical bike-share ride is about three-and-half miles, TREC found; e-bike trips tend to extend beyond five miles, and approaching twice that isn’t uncommon.

This can have a spatial and economic impact, potentially expanding access to neighborhoods, jobs, and services. “Bike-share equity” has become a recognized issue, and nonprofits and local entrepreneurs are stepping in to meet the needs of traditionally underserved communities and geographies. All of the recent initiatives have at least the partial goal of not only expanding transportation options, but also providing the boost to neighborhood vitality and economic independence that can come with it.

“Historical land use, banking, and other policies have led to a country with a very uneven geography of opportunity,” says Jessie Grogan, associate director of Reduced Poverty and Spatial Inequality at the Lincoln Institute. “The correlation between neighborhood assets and racial and ethnic segregation was not accidental—so undoing it won’t be either. While we need to work on making all neighborhoods places of opportunity, e-bikes can be an essential bridge between high- and low-opportunity places in the meantime. A cheap or free and convenient ride to another community for a good job, or a good

school, or a recreational opportunity could be a lifeline for people in underserved neighborhoods.”

Shared Mobility, an equitable transportation nonprofit based in Buffalo, New York, is among the entities trying to help local partners fill the gaps. In 2020, the organization acquired about 3,000 e-bikes that Uber was planning to scrap after selling off its Jump-branded bike-share business. The group partnered with the city’s East Side Bike Club (ESBC) to use some of the bikes to start an e-bike library in Buffalo, serving a low-income area with a predominantly Black population. E-bike libraries provide free bike rentals and bike-related education to community members; among other bike repair services and educational programs, ESBC now offers free weeklong use of its e-bikes. Shared Mobility has worked with partners in other communities in New York, California, and North Carolina to seed e-bike libraries in those places.

Michael Galligano, CEO of Shared Mobility, says the kind of community engagement ESBC and other groups are involved in can help them land grants and funding to sustain these programs. But he also argues that bike and e-bike programs should be treated by municipalities as a form of public transportation—and both planned for and funded accordingly. “Where does public transit stop?” he asks. “We think it’s not just buses and trains. It’s also biking, walking, car sharing, ride hailing.”

Galligano points to the Capital District Transit Authority, which serves Albany, New York, and surrounding municipalities, as an example of a long-time Shared Mobility collaborator that thinks this way—and will partially fund its own upcoming e-bike share program with transit dollars. In Massachusetts, meanwhile, the state government has pledged \$5 million to fund initiatives that make clean-energy transportation options like e-bikes more accessible to low-income populations; this will allow the city of Worcester to give e-bikes to 100 residents as part of a two-year study to learn more about the use and impacts of the technology.

Another e-bike initiative in a legacy city is relying on a hybrid funding approach. YoGo Bikeshare launches in Youngstown, Ohio, this spring with about 30 e-bikes distributed among four docking stations. The Black-owned business, funded by a loan from the Youngstown Business Incubator and an investment by its owners, is meeting a need in a city that other micro-mobility companies have passed over.

“Transportation in communities like Youngstown is a particular challenge, since decades of population and economic decline have led them to have very large and spread-out cities relative to their population size,” Grogan notes. “Poorer cities are also generally not very well-served by transit, so it’s particularly important to invest in mobility options in places like Youngstown.”

The philanthropic community is also getting involved with expanding e-bike access. MacArthur points to the work of Better Bike Share, funded by the JPB Foundation, which has an explicit goal of increasing “access to and use of shared micro-mobility systems in low-income and BIPOC communities.” Its most high-profile city partner is Philadelphia; efforts there over the past decade to build a more inclusive bike-share system have set an example, MacArthur says, and Better Bike Share grants have now funded multiple projects across the country.

Clearly all these experiments are smaller-scale, incremental steps, not massive citywide transportation projects or comprehensive

infrastructure overhauls. But incremental change can add up. At a minimum, the advent of the e-bike as a tool for expanding access to economic opportunity represents a chance to draw in more widespread popular support for transportation alternatives. And twinning the technology with neighborhood-level programs that double as community hubs, like ESBC in Buffalo, may be a useful way to reinforce that goal. Even if people are drawn in for recreation, or pure curiosity, MacArthur says, that introduction can be a gateway to seeing e-bikes as a useful means of transport, and can help inspire ambassadors to spread that message.

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For more than a decade, most of the attention on bike-sharing programs was focused on decreasing vehicle miles traveled and carbon emissions while increasing profits. But an evolution seems to be underway, as access to bikes expands, perceptions begin to shift, and the economic and equity-related benefits of e-bikes become clearer. The ultimate goal of bike-sharing, Galligano says, is to add to the “repertoire of transportation options”—and if this new technology is inspiring fresh experiments and reaching new audiences, so much the better: “It’s not one size fits all.” □

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