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Why US Cities Are Investing in Safer, More Connected Cycling Infrastructure

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Every year, [hundreds of cyclists die in traffic crashes](#) in the United States. Their experience is [a product of](#) high-speed roads, drivers who fail to acknowledge the people around them, and most importantly, street infrastructure that's unsafe for bikers.

To address this problem, many US cities have committed to the [Vision Zero](#) goal of eliminating all traffic fatalities and severe injuries. One key approach for many cities is improving bike lanes and other facilities. But are cities actually changing the way they invest in cycling infrastructure?

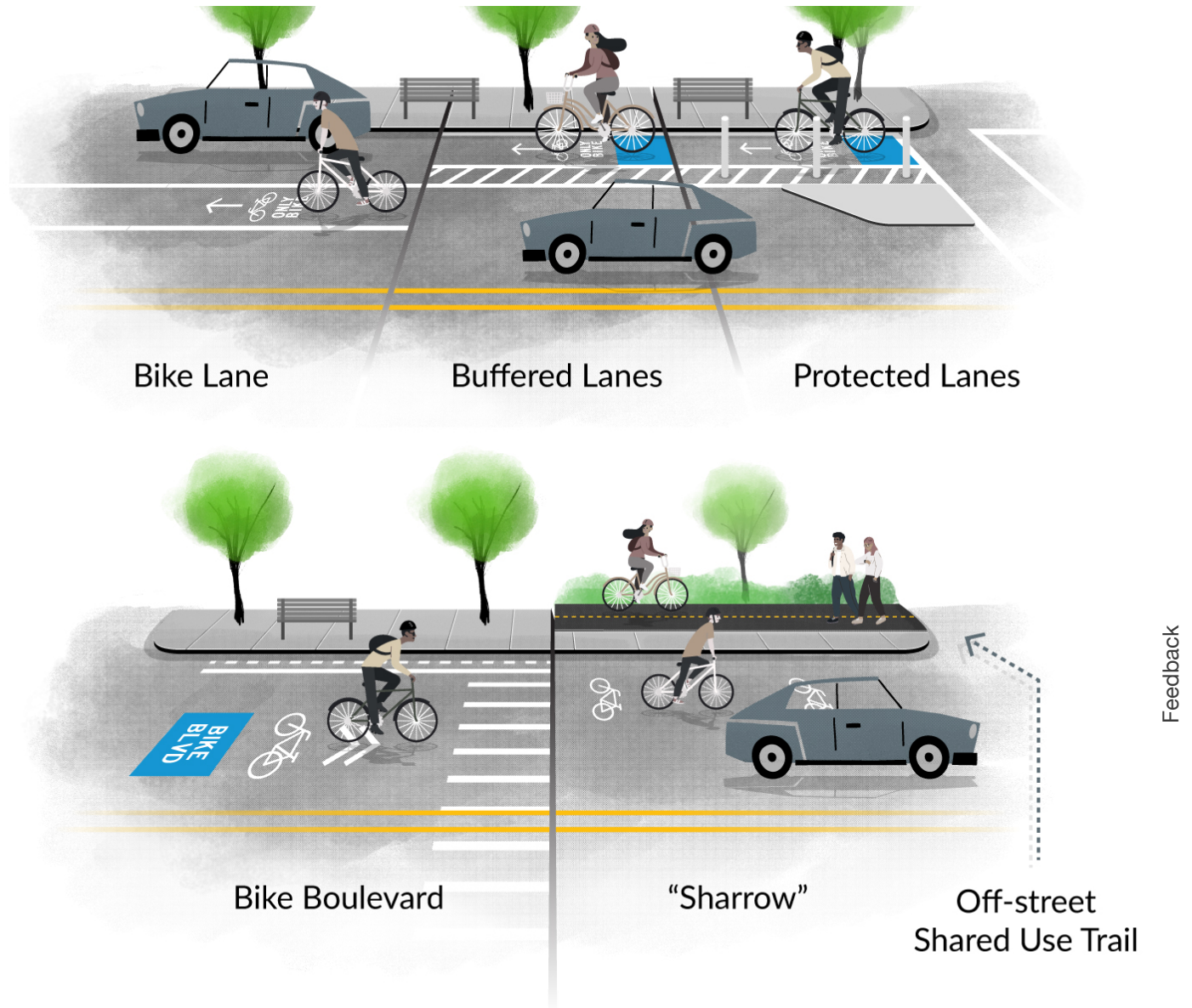
As part of [an examination](#) of the [Final Mile program](#), a philanthropically funded effort to encourage the development of complete, safe bicycle networks, we evaluated changes in cycling infrastructure choices by 13 cities nationwide. We found these cities have increasingly focused cycling investments on infrastructure that prioritizes safety in a way that produces better networks. These investments are likely to increase biking in US cities, but future investments would benefit from prioritizing equitable access and community-engaged decisionmaking.

Protected bike lanes produce economic, safety, and ridership benefits

Traditional bike infrastructure, often in the form of [bike lanes](#) and shared lanes called "[sharrows](#)," fails to protect cyclists by requiring them to share the road with cars. Protected infrastructure, on the other hand, offers cyclists safety from cars through separation in the right-of-way. Off-street trails, [buffered bike lanes](#), and [cycle tracks](#) ensure cyclists do not have to worry about drivers getting in their way.

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Evidence shows protected bike lanes improve the economies of surrounding neighborhoods, improve safety, and expand ridership. In 2013, for example, Salt Lake City converted nine blocks of parking to a protected bike lane. [Sales rose 8.8 percent](#) for stores located along the bike lane—compared with a 7.0 percent increase citywide.

New York City's injury rates for all road users, including drivers, pedestrians, and cyclists, typically decreased by [40 to 50 percent](#) (PDF) in areas where the city implemented protected bike lanes. In Montreal, streets with protected bike lanes had [28 percent lower](#) injury rates than other streets, on average.

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had built relatively large networks of protected bike lanes.

One explanation for this ridership increase might be a greater feeling of security when using the improved infrastructure. In [the San Francisco Bay Area](#), a majority of drivers and cyclists surveyed felt most comfortable on roads with greater separation between cars and bicycles.

Cities are increasingly focusing on constructing safer bike infrastructure

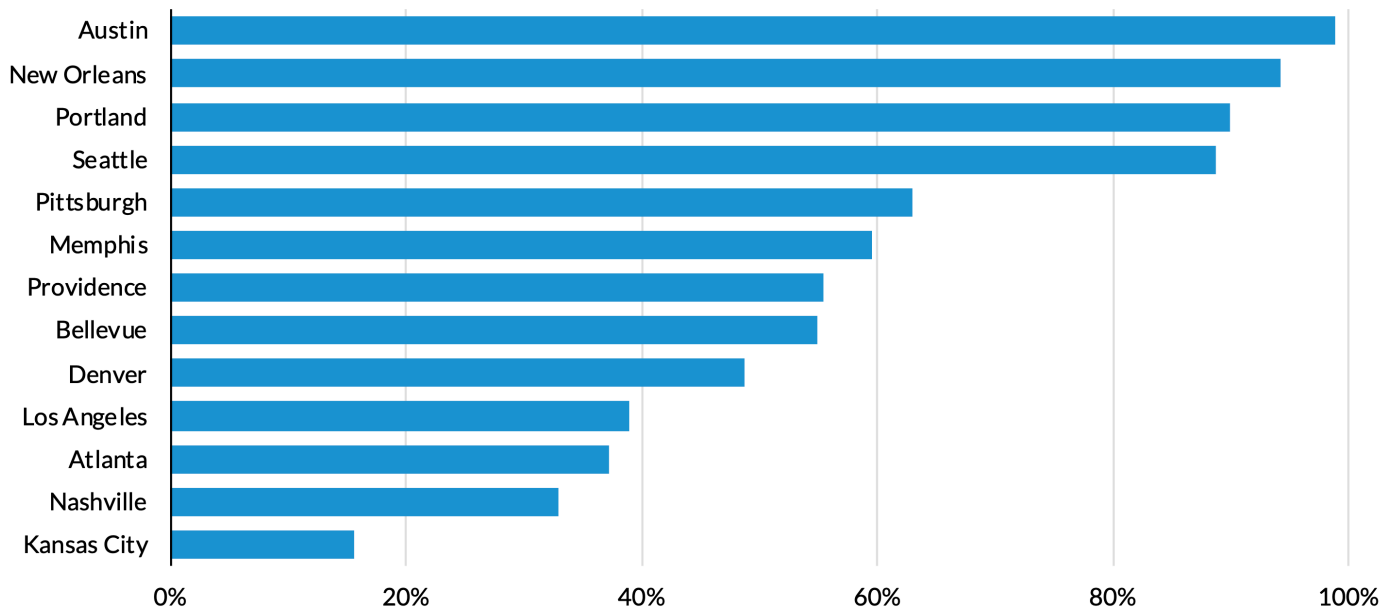
To explore whether local governments nationwide are creating safer, more secure cycling networks, we [examined cycling infrastructure investment](#) over the past five years in 13 US cities using municipal data.

Among these cities, the average share of their new cycling infrastructure that was protected increased from 57 percent in 2016 to 78 percent in 2020. This rate increased steadily across most cities, indicating a growing focus on ensuring safety. In Denver, approximately 5 miles of protected lanes and 18 miles of regular bike lanes were constructed in 2016, compared with 16 miles of protected lanes and 19 miles of regular lanes in 2021.

One interviewee in Denver said that protected bike lanes are “making the Mile High City safer, smarter, and more connected. By sharing just a little more of the street, we gain a whole lot more in safety. Plus, we get more clarity about the rules of the road, more equality in transportation, and more access to the Denver we love.”

But investment differed across cities during the study period. Austin, New Orleans, Portland, and Seattle focused about 90 percent or more of their new cycling investments—excluding [bicycle boulevards](#)—on secure projects, like off-street trails. On the other hand, most of the new lanes in Atlanta, Kansas City, Los Angeles, and Nashville were unprotected.

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Source: PeopleForBikes and open source data from city governments.

Notes: Only bike infrastructure in the form of bike lanes, protected/buffered bike lanes, or shared-use trails is counted. Sharrows and neighborhood bikeways are not included. Data for comparison cities are not complete for each year between 2016 and 2021; averages are only for years for which there are data.

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Cities are prioritizing building connected cycling networks

Research demonstrates that the presence of a well-connected bike network encourages more people—especially women and people with low incomes—to bike. The US Department of Transportation reports that a well-connected multimodal transportation network “can also improve health by increasing access to health care, goods and services.”

The good news is that many cities are developing more-connected bike networks.

An advocate we interviewed in Denver explained that “there has been a shift toward a connected network, from a series of disconnected street segments,” which they said had been the “previous approach.”

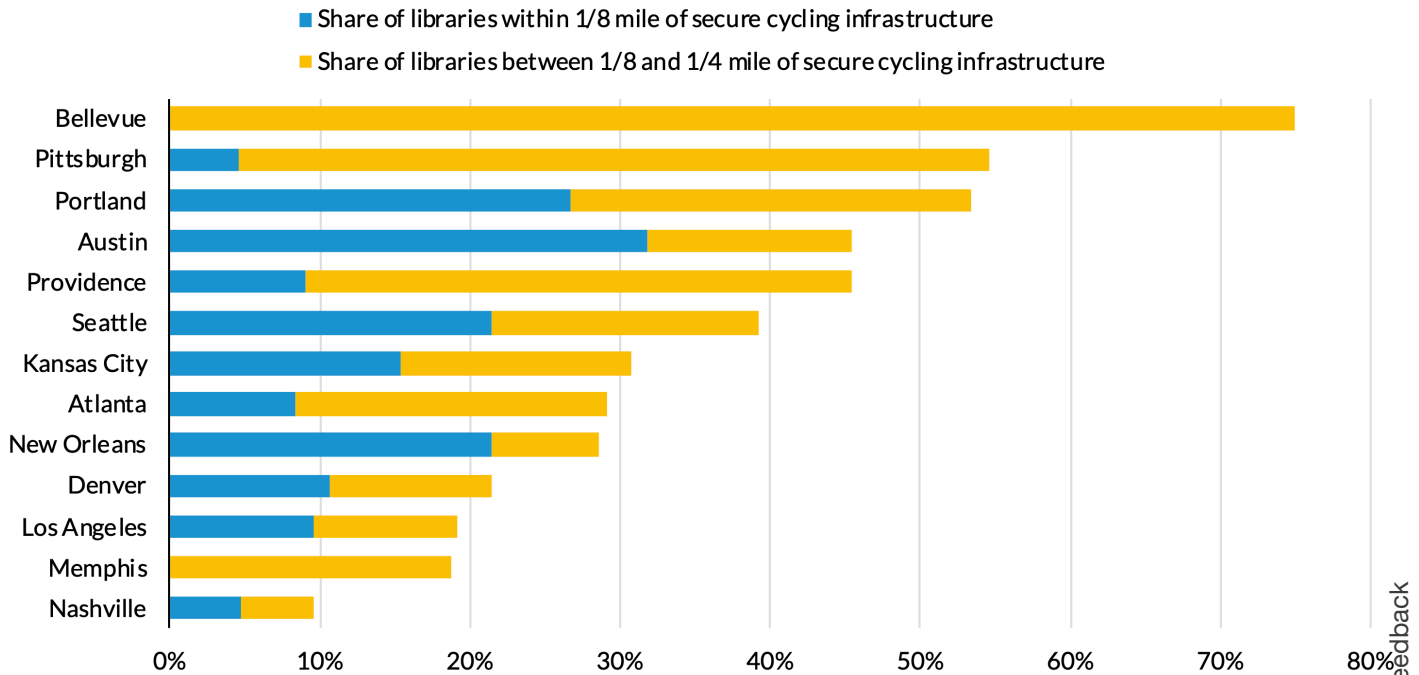
And city staff in Pittsburgh emphasized that the new cycling infrastructure had connected a “previously fragmented network.” As a result, although only 40 percent of lanes had previously been linked with one another, network connectivity increased to 80 percent after recent investments.

Greater network connectivity can create many social and health benefits, such as increasing residents’ access to public libraries, thus increasing their access to community-building resources, including the internet and events for underserved residents.

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infrastructure.

Many US Cities Still Lack Cycling Networks That Provide Access to Libraries



Sources: Data from PeopleForBikes, the American Community Survey 2015–19, Public Libraries Survey, and 2018 data from the Institute of Museum and Library Services.

Note: Data are from 2021, based on modified OpenStreetMap data from PeopleForBikes.

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Despite the benefits of protected bike infrastructure, opposition is common, often because such improvements require cities to remove parking. But those views are typically in the minority. Ultimately, removing parking spots and replacing them with biking infrastructure benefits community health, promotes safety, and provides economic benefits to businesses.

Recommendations for safe and equitable infrastructure

To ensure cycling projects benefit everyone, cities should work to promote equity of access in planning projects by prioritizing investments in communities with more residents of color and families with low incomes.

In some cases, this focus may raise residents’ concerns about bike lanes encouraging gentrification. As such, projects should be constructed with existing residents at the forefront of decisionmaking about routes and improvements.

Finally, cities can consider investing in programs that provide classes and bike purchasing assistance for families who might otherwise not have access to safe bike riding. With each

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