

Connectivity, safe bike lanes key to bike-share success

Peter Midgley

More than 700 cities around the world operate bike-share programs, with the aim of reducing polluting inner-city traffic. In Australia, Melbourne and Brisbane set up programs in 2010, but subsequent usage rates have been well below cities elsewhere. While Australia's mandatory helmet laws are often cited as the cause, another reason could be the lack of safe bike lanes and bike-lane connectivity.



Credit: [Jes Mugley](#) under [CC BY-NC-ND 2.0](#)

How important are bike lanes to successful bike-sharing? Judging by some bike-share maps, not at all. Surprisingly, very few online maps that show the distribution of bike-share docking stations include bike lane networks.

Safe bike lanes, and the knowledge of *how* those bike lanes connect together and in turn connect to other forms of transport, help to mainstream bike-sharing as a mode of transport and improve overall bike-sharing system performance.

[One recent study](#) even points out a statistically significant relationship between the number of trips by bike-share and the supply of bike lanes.

For this reason, integrating bike-share systems with networks of bike lanes is key to increasing ridership and making bike-share safe and desirable for users.

We need networks, not just lanes

Too many cities have bike lanes that go nowhere, end in unsafe conditions, or pass through dangerous intersections.

Continuity and connectivity are key ingredients to attract users beyond the typical cycling aficionados and make cycling more viable and comfortable for the everyday commuter.

A good example of this approach comes from [China's Xiamen Island](#), which is developing a 156-kilometre bike-lane network as an integral part of launching a new bike-sharing system.

The new system will boast a fleet of just over 11,000 bikes and 376 stations and is being developed with stations along six bike routes (1.5–2.5 metres wide) that run parallel to existing sidewalks, so that the network of existing footpaths can complement and augment the bike-sharing network.

Importantly, the city is developing a comprehensive and continuous bike lane 'network', not just a collection of disjointed bike lanes. Ensuring users know how to navigate these connected systems is another key, which cities like [Barcelona](#), [Buenos Aires](#), [Lyon](#), [Melbourne](#), [Tel Aviv](#), and [Washington DC](#) have honed in on.

Bike-lane safety prompts ridership

It's not enough for bike lanes to be connected to one another and to bike-sharing systems, they also need to be connected *safely*.

Over the past three years, New York City has installed 320 kilometres of bike lanes (bringing the total to an impressive 920 kilometres). According to a [recent study](#) from Hunter College at the City University of New York, over 50 per cent of cyclists in the city use these bike lanes.

Even more noteworthy, the study reveals that these lanes are used by 70 per cent of [Citi Bike](#) bike-share riders, revealing a 'greater tendency to ride on more "secure" street or avenue environments than their cycling counterparts'. This is especially the case with protected bike lanes, further echoing the need for safe cycling infrastructure to grow ridership.

Protected bike lanes save lives

Although [Transport for London](#) wrote that bicycle 'super-highways' can provide for 'safer, faster and more direct journeys into the city', a [2010 review](#) of London's bike-sharing system and cycle superhighways found that 60 per cent of respondents did not feel safer using the cycle superhighways.

A [recent article](#) in the Guardian called London's cycle superhighways 'inherently dangerous pieces of infrastructure ... that induce cyclists to travel with a greater sense of safety than is warranted'. One of the main issues with the superhighways has been lack of continuity, especially at junctions.

Now, London is transforming its 'cycle superhighways' into protected lanes following the deaths of three cyclists on Superhighway 2 in 2013. Other cities are moving in this same direction: according to an article in [Momentum Mag](#), the number of protected bike lanes doubled in North America in 2012, leading to marked increases in ridership.

Smaller cities are also recognising the importance of connectivity for bike-sharing system success and are working towards developing this infrastructure. [PeopleForBikes](#), a US non-profit organisation based in Boulder, Colorado, selected [Pittsburgh](#) and [Boston](#) as two of six new cities that will receive two years of financial, strategic and technical assistance to install protected bike lanes.

Resources for design and policy

Many cities are new to realising the importance of safe, connected cycling networks, and they need clear platforms for city leaders and planners to put this into action and implement cycling infrastructure.

The Dutch [Design Manual for Bicycle Traffic](#), as well as the [Cycling Embassy of Denmark's](#) publication [Collection of Cycle Concepts 2012](#), both have detailed sections on planning and designing cycling infrastructure that can help designers to create connected bike networks.

Also useful is NACTO's (the United States National Association of City Transportation Officials) comprehensive online [Urban Bikeway Design Guide](#), derived from best practices in cities around the world. Finally, [Cycling-Inclusive Policy Development: A Handbook](#) from Germany's GIZ contains a detailed chapter on designing bicycle networks.

The combination of policy and proof of connectivity's success should encourage cities around the globe to implement safe, connected bike lanes to improve bike-share and expand sustainable mobility.

Peter Midgley is the Urban Mobility Advisor for the [Indonesia Infrastructure Initiative \(IndII\)](#), an Australian Government-funded project designed to promote economic growth in Indonesia. For some years, he has been monitoring developments in bike sharing and established a bike-sharing database. Peter has over 40 years of experience in urban transport. He was a staff member of the World Bank for 25 years and he has supported the need to improve urban mobility throughout his career. This article is republished from [TheCityFix™](#) under [CC BY-NC-ND 3.0 licence](#).

From ECOS online <http://www.ecosmagazine.com/?paper=EC14212>