

## Case Study

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### GT Case 3: Infrastructure for mobility without cars

**Problem to resolve:** driving and parking cars use up too much public space and result in bad health through insufficient body exercise.

**Primary Tools:** shift in modal share of transportation

**Secondary Tools:**

- (1) Improvement of road infrastructure for non motorized mobility
- (2) Easy accessibility and shared use of bicycles



*Shared bicycle scheme in Beijing (F.Steinberg)*



## CASE STUDIES

### **Bike Rental schemes.<sup>1</sup>**

Since a few years, Chinese cities and the private sector have introduced bike rental schemes. Some work with fixed parking stations, others use independent systems. The **Mo-bike** system is one such scheme which uses a digital application (app) to locate and rent out bicycles. The app is being used to pay the rental fees. However, the absence of fixed parking stations has caused problems of uncontrolled disposal of bikes. The authorities have reacted to this and collected unutilized bikes in the city of Shenzhen.

“In Hangzhou, East China's Zhejiang province, a bike-sharing service moved a step closer to embracing the mobile internet era by enabling anyone with a smartphone to rent a bike by simply scanning a QR code. Many people say that Hangzhou is a city where you can survive with only a cell phone—everything can be paid for via mobile payment apps, including Alipay or WeChat Pay. ...with the scanning of a QR code enabling access to free biking almost anywhere in the city. An official app can be downloaded, but even without one, you will be fine, as long as you have the WeChat app on your phone, which has almost become a must-have for anyone living in China. For now, 100 stations around the West Lake area have been upgraded to enable mobile renting, but more are to follow. First-time users only need to scan the QR code beside the bike, register via text message, pay a refundable deposit of 500 yuan (\$75) and start riding, according to Tao Xuejun, general manager of Hangzhou Public Bicycle Service. As one of China's first cities to promote modern bike-sharing services back in 2008, Hangzhou is renowned globally and has been ranked by international news media outlets such as the BBC and USA Today as the friendliest city for bike sharing. As of May [2016], Hangzhou had 84,100 public bikes at 3,572 stations around the city. In populated areas surrounding West Lake, a station can be easily found every 500 meters or so. On average, 310,000 people use the service on a daily basis, with the peak daily volume reaching 448,600, according to official statistics. “



*Mobikes in Beijing (Photo: Florian Steinberg)*



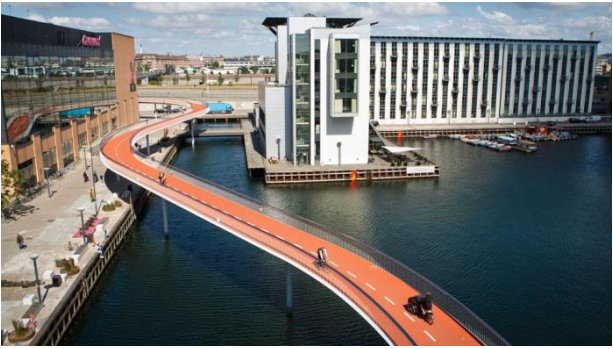
*A Hangzhou resident uses a public bike to commute. [Photo/China Daily]*

### **Bicycle highways.**

Sharing the road space with motorcars is dangerous for cyclists because of health concerns: First, breathing the toxic exhaust fumes and dust particles from motorcars exposes cyclist much more than other users of public space. Secondly the danger to get involved and injured in an accident is much higher than for other types of mobility because of the proximity to fast cars and the absence of a protective shield than the body of the car does for motorists.

European cities like Copenhagen were the first to build separate highways for cyclists. In China, the city of Xiamen in south-east China has just completed the longest aerial cycleway

in the world. The path is a 4.8m-wide four-lane carriageway stretching for 7.6km with 11 exits connecting to six public transport hubs. Xiamen’s commuters do not have to have a bike to use the system, as it comes with 355 cycles for hire, and has 253 parking spaces for private bikes on seven platforms. Much of the pathway is beneath the elevated road used by the city’s rapid transit bus line, which gives shelter on rainy days. For safety, the paths have 1.3m guardrails and 30,000 lights to illuminate the path at night.<sup>2</sup>



Copenhagen bicycle highway <sup>3</sup>



Chinese city gets world’s longest aerial cycle way



The longest aerial cycleway in the city of Xiamen in south-east China



Chinese cyclists

**Credentials:**

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**References**

<sup>1</sup> Source: Chen Mengwei. 2016. Hangzhou abuzz over bike sharing. *China Daily*. 1 September. [http://m.chinadaily.com.cn/en/2016-09/01/content\\_26665873.htm](http://m.chinadaily.com.cn/en/2016-09/01/content_26665873.htm)  
<sup>2</sup> <http://www.globalconstructionreview.com/news/chinese-city-gets-worlds-longest-aerial-cycle/>  
<sup>3</sup> Source: [https://files.guidedandmark.org/files/382/157578\\_Cykelslangen\\_foto\\_Ursula\\_Bach.jpg?qfix](https://files.guidedandmark.org/files/382/157578_Cykelslangen_foto_Ursula_Bach.jpg?qfix)