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## **The Market does not Believe in Tears—Brutal Growth of Bike-sharing Vs Well-Behaved Public Bicycles**

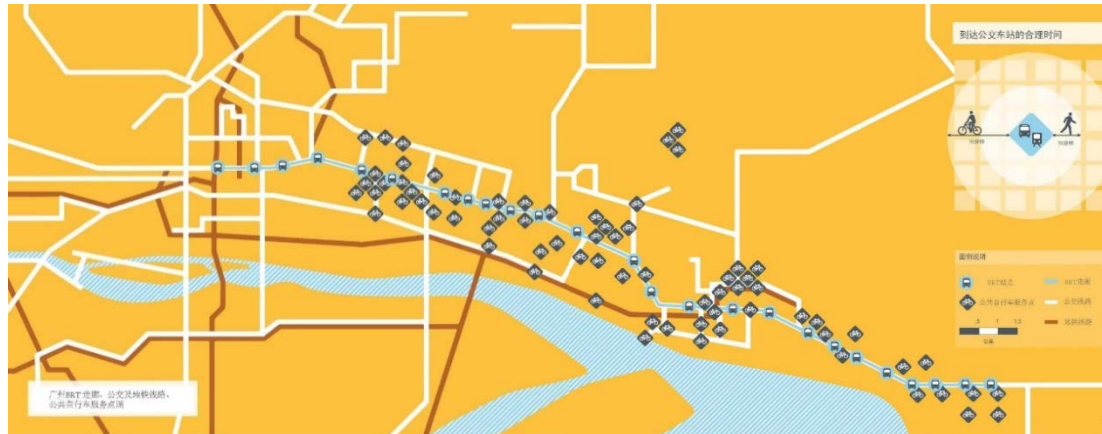
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With the rise of sharing economic concepts, and great development of payment technology on smart phone via the Internet as a medium in recent years, bike-sharing quickly entered the major cities in China in 2016. Virtually overnight, red, yellow, blue and other colors shared bikes spring up in every corner of the street. Same as the solution for “the last kilometer”, bike-sharing quickly go beyond traditional docking public bicycles in terms of quantity, radiating face, influence, user experience and other aspects. In the face of brutal growth of bike-sharing, many cities such as Guangzhou have pressed the “pause button” on public bicycles.

### **Development status of public bicycles in Guangzhou:**

Guangzhou public bicycle system was officially launched in June 2010, and the stations were located along the BRT corridor of Zhongshan Avenue. Public bicycle stations are mainly distributed in the BRT stations, surrounding residential and commercial areas to meet the "the last kilometer trip" and the short trip along BRT corridor. Guangzhou public bicycle system received a warm welcome from the general public since it was put into use. According to the data provided by Guangzhou public bicycle company, as of December 2016, the system expanded to 8850 vehicles, more than 110 service points from the initial 1000 vehicles, 18 service points, and provided bike rental service for 35,382,400 passengers in total.





Distribution Map of Guangzhou Public Bicycle Phase I (Source: ITDP)

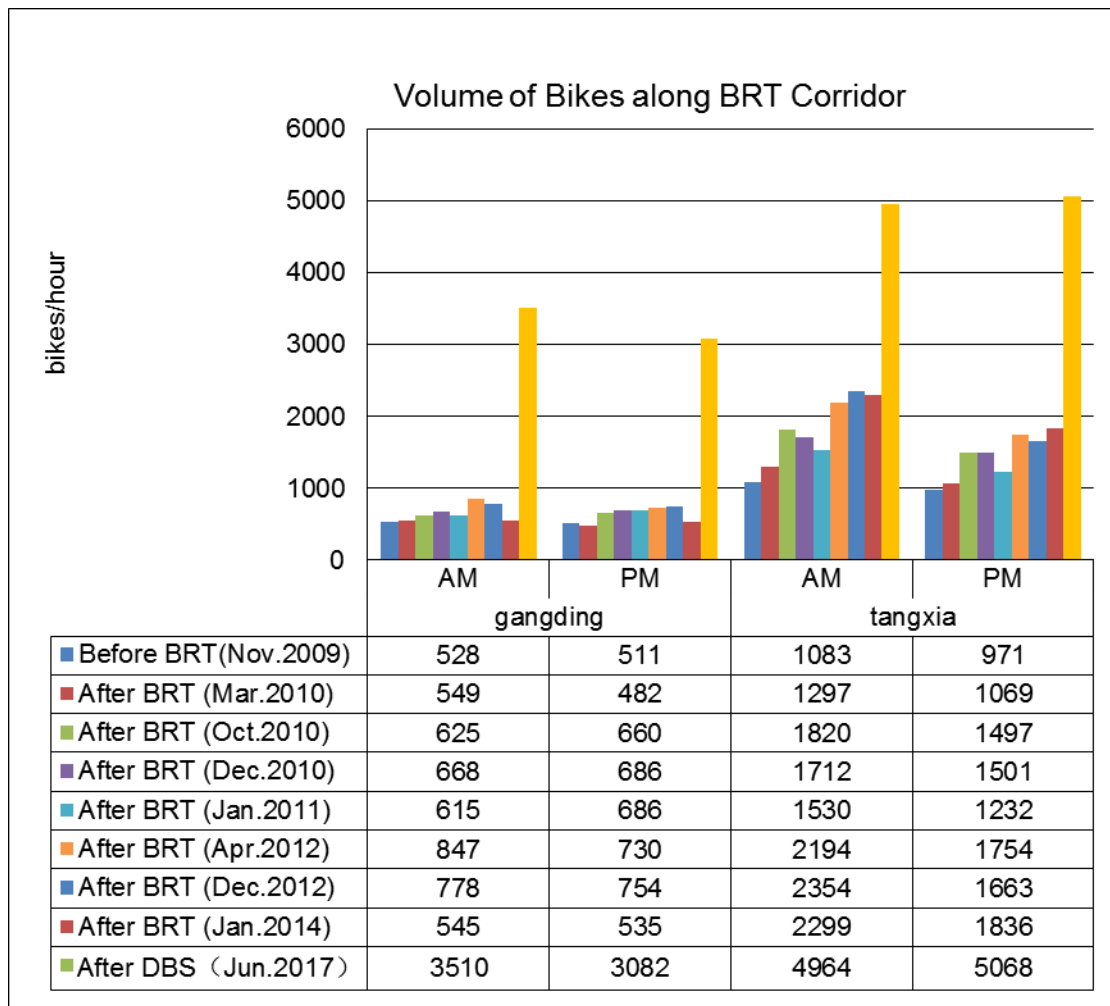
In order to further promote green travel, energy conservation and improve the atmospheric environment, Guangzhou government proposed the Work Program for the Development and Promotion of Guangzhou Public Bicycle Project in 2015. Guangzhou government planned to launch 100,000 public bicycles, and made the corresponding layout planning program. However, due to the outbreak of bike-sharing during this period as well as administrative barrier, distribution of land and electricity and other issues, public bicycle promotion plan had been stalled. According to the survey of Southern Metropolis Daily, public bicycles “served” in the market was less than 10,000 as of January 2017.

### The prevalence of bike-sharing

Since September 2016, Mobike, ofo and other bike-sharing companies have entered Guangzhou, and due to the characteristics of "convenient settlement based on mobile phones, rented free without fixed lock dock," bike-sharing showed explosive growth in the short term. Mobike, ofo, Xiaoming, Bluegogo, Ubike and Cuqi are the 6 main bike-sharing companies that currently operated in Guangzhou. As of the end of May 2017, more than 700,000 shared bikes were put in Guangzhou, with more than 7.5 million registered users and more than 4 million daily trips.

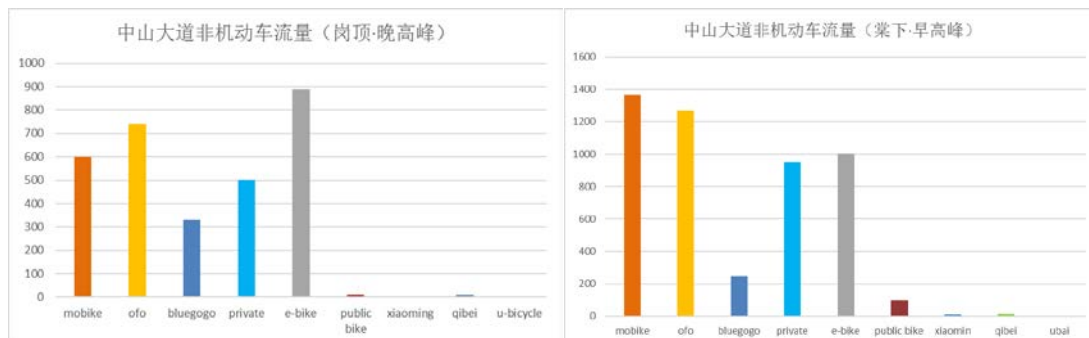


The Prevalence of Bike-sharing (Source: ITDP)



Bike flowrate tracking survey of road section of Guangzhou BRT Gangding Station and Tangxia Station (Source: ITDP)

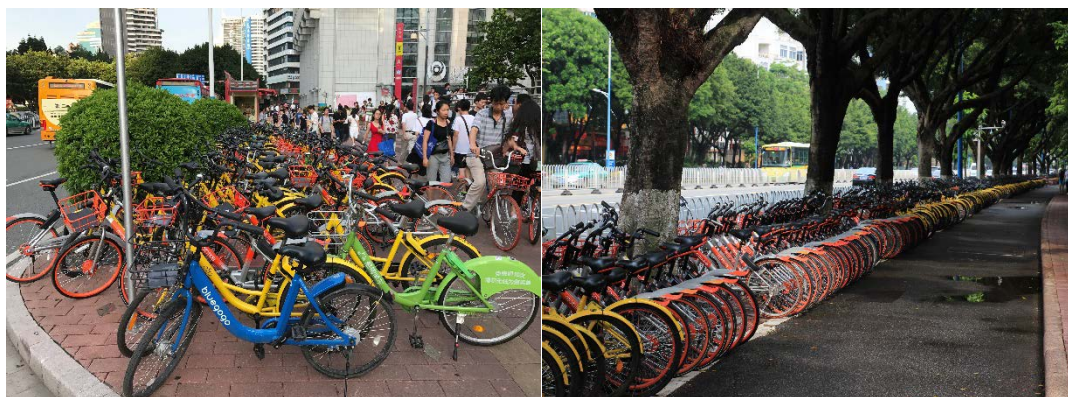
ITDP conducted a tracking survey of bike volume along the Guangzhou Zhongshan Avenue BRT corridor. The survey showed that after the bike-sharing stationed in Guangzhou (06/2017), the bike volume for the road section of Gangding Station and Tangxia Station is 500% and 100% respectively higher than that in previous years, with shared bikes accounting for about 55% of the road section flowrates while only 2% from the public bicycles.



The proportion of bike volume of road section of Guangzhou BRT Gangding Station and Tangxia



However, bike-sharing companies value launch over management for seizing the market. A large number of shared bikes are put into the market disorderly, the companies transferred its own operating costs to the free occupation of public resources.



Free occupation of public resources from shared bikes (Source: ITDP)

### Challenge to public bicycles

In response to the sudden strike from bike-sharing army and the consequent social problems, Guangzhou Traffic Committee has issued the Technical Guidelines for Urban Road Bicycle Parking Area in Guangzhou City Center and Guidance on Encouraging the Standardized Development of Internet Rental Bikes in Guangzhou (Exposure draft), which is undoubtedly a positive sign to bike-sharing - Guangzhou intends to open arms to bike-sharing. Meanwhile, the bike-sharing service survey report of the Consumer Council of Guangdong Province (Guangzhou City) claims that 73.9% of respondents also expressed support for the development of bike-sharing. However, this has had a considerable impact on the public bicycles that serve the public's short trips and the "the last kilometer" connection needs.

According to data provided by Guangzhou public bicycle company, daily use of public bicycles decreased from 14,000 person-time/day to 9,000 person-time/day after shared bikes stationed in Guangzhou. Guangzhou's promotion plan for public bicycles is also stalled while the turnover rate is reduced. A newspaper has visited three public bicycle delivery points along the Zhongshan Avenue BRT, Campus City and Jinshazhou that currently in the operational phase or test phase in January 2017, and reported that many public bicycles eclipsed, even part of the shared bikes squeezed on the public bicycle dock, just like "Dove accounted for magpie nest".

There are two self-reasons for the slow implementation of the public bicycles in Guangzhou: First, administrative barrier. The public bicycle project of Guangzhou is in the charge of public institution under the jurisdiction of Guangzhou Traffic Committee, which is not equal to the regional administrative level stationed, leading to the difficulty of implementing the "negotiation". Second, land and electricity problems. Land for public bicycle stations has to go through the approval procedures for construction land occupation, and the power supply of

lock docks needs to coordinate with the power supply sector or commercial power supply, and processes are cumbersome and difficult to implement.



Public bicycles along the Guangzhou Zhongshan Avenue are neglected (Source: ITDP)

### **Brutal growth of bike-sharing Vs Well-behaved public bicycle**

**Brutal growth of bike-sharing:** Although it has a certain public property as a market project, as a public service provider, it has a natural advantage in the scale of development and the improvement of service quality and efficiency in the market. In the early preparation and construction, as a result of innovative "dockless" mode, convenient registration, use, payment through mobile phones, available at stop and start, as well as small initial construction costs, bike-sharing quickly occupied the market. But the shared bikes are often excessively launched in order to seize the market, its cost-free occupation of public space and the difficulties of supervision and maintenance result in a certain degree of social order chaos, such as chaos parking, dangerous riding, and damage accumulation.

**Well-behaved public bicycle:** As a government-led public welfare project, its planning, construction and operation require thorough plan and feasibility studies. But due to the larger initial cost, land and electricity use at service points and many other issues, it basically relies on government funds, so it is difficult to achieve large-scale development. Model selection of public bicycle is more stringent than that of shared bikes. Public bicycle body is reinforced to meet the high frequency and high-intensity use, and more planned, comprehensive implementation of the scheduling and system maintenance can be implemented in the latter part, so that the public bicycle can do its part to protect the travel safety and maintain a good social order.

### **“The market does not believe in tears”- Guangzhou public bicycle is under transformation and upgrading**

In the face of the challenge of bike-sharing, Guangzhou public bicycles began "self-help". At present, Guangzhou is building a comprehensive information management service platform that is efficient, intelligent and convenient. In addition to the use of Yang Cheng Tong (One kind of transportation card) as a rental medium, the system also allows WeChat, APP, Alipay and other bike rental methods, to give the public a better service experience and meet plenty of demand for bike rental. At the same time, Guangzhou will be in-depth mining resources

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and commercial value of public bicycle stations by relying on public bicycle station resources, and actively carry out commercial operation of resource utilization. What's more, it will further increase the public bicycle system gains by introducing different custom service measures and offering a variety of bike rental methods.

**Other cities in China are also carrying out a "revolution" against the operation mode of traditional public bicycles**

Learn from the successful experience of bike-sharing, Hangzhou, as the birthplace of the urban public bicycles in China, changed "routine service based, 24-hour service supplemented" business model in the past from March 2017 onwards, it opened 2838 service points in main urban zone to provide 24-hour service; meanwhile, the guaranty of bicycle rental by scanning "Hangzhou Public Bicycles" APP also reduced from 500 yuan to 200 yuan, service points for code-scan rental has extended from the West Lake scenic area to the Riverside area with the number rose from 100 to 438, which will gradually increase in the future. Moreover, Hangzhou Jintong Technology recently launched new public bicycles, also using smart locks, can be rented by mobile scanning. In addition, the application of virtual electronic fence also makes public bicycles achieve "dockless parking" in the parking area, so as to obtain a similar experience with the Internet bike-sharing.



Hangzhou launched the new public bicycles (Source: [www.cjn.cn](http://www.cjn.cn))

Changsha has innovated the form of bike rental. On March 29, 2017, the Changsha public bicycle service was upgraded again and the contracted bike rental service was launched. After signing a bike rental contract, the public can rent a public bicycle at a price of RMB 15 per month (at least two months). During the lease period, the bike is completely dominated by the user, the innovative model both meets the bike demand and security need.

Qingdao launched the "Internet +" solution. Qingdao government developed its own public bicycle APP. Users can register an account online, and pick up the bike through scanning code after pay the deposit, so that people who have the learning ability do not have to apply for the



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bike card with ID card. In terms of bicycle return, Qingdao public bicycle is also toward the trend of dockless. The new model will add virtual docks, and the modified public bicycle will interact with the virtual docks to achieve "dockless return" in the narrow sense nearby the dock.

Zhuzhou is working with the bike-sharing company to introduce technology output of vehicle equipment and beacon electronic fence provided by the Xiaoming Bike. The local state-owned public bicycle company is responsible for regulating the management, providing basic supporting services, including the delineation of parking areas in public areas, the establishment of signs, etc., as well as responsible for inspection, collection, scheduling, maintenance, cleaning, curing and other operational services for Xiaoming bikes.

As the nation's largest traditional public bicycle operator, Yongan launched dockless shared bikes "Youon" by drawing on the bike-sharing model, hoping for seeking a breakthrough in the field of bike-sharing by the combination of "dockless" and "docking", while using its own operating experience to minimize operation and maintenance costs.

At the same time, Xiaoming, Mobike and other bike-sharing companies also realize that their brutal growth has brought social risks such as chaos in parking and difficulties in management. These companies have to study and implement the virtual "electronic fence" to standardize the user parking behavior while meeting the parking requirements, which also provide new bike-sharing management ideas for government department.



Xiaoming Bicycle Electronic Fence (Source: Shangguan News)

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### **Competition is the booster for the development**

Public bicycle and bike-sharing have their own advantages and disadvantages, both of which are carrying on reform and innovation in the continuous development, and learn from each other. Public bicycle is learning dockless and internet convenience from bike-sharing while bike-sharing is returning to rational development and docking order of public bicycle. They are moving in the opposite direction and meet in the compromise in both the convenience and order. Finally, public bicycle and bike-sharing will become an organic blend of co-offering a very convenient service for the public's "the last kilometer" and short trips.

