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ofo: Innovation and the Little Yellow bicycle

Professors Mingkang Liu and Hugh Thomas wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

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Austin Zhang, co-founder of Ofo (stylized “ofo”), a Beijing-based bicycle-sharing company, looked north over the 4th Ring Road from his 10th-floor window in the Ideal International Plaza, towards the sprawling Peking University campus. It was July 2017. Less than two years ago, he and four other bicycle enthusiasts—Dai Wei, chief executive officer (CEO) of ofo; Xue Ding; Yang Pinjie; and Yu Xin—had founded a global bicycle-sharing industry. Since then, Chinese bicycle sharing had grown from nothing into a dockless, smartphone application (app) service industry, with revenues of ¥3.9 billion per quarter[[1]](#footnote-1) and over 120 million monthly active app users, sharing over 30 million bicycles in cities across China and around the world (see Exhibit 1). Over 90 per cent of the bicycles were either ofo’s little yellow bicycles or the bright orange bicycles owned by ofo’s main competitor, Mobike. Zhang was not focused on the competition: “Actually the war has already ended. . . . We should always get more market share, but what is more important is what next? What is the future of sharing bicycles?”

Industry Background

Summer 2017 was not only ofo’s second year of bicycle sharing but also the 200th anniversary of the bicycle, invented by the German Karl Freiherr von Drais. Drais patented his spoked, two-wheeled, steerable wood-and-iron-framed velocipede (known in German as the *Laufmaschine* and in French as the *draisine*) in 1818, unleashing two centuries of innovation. Large-scale production of various designs took off in the 1860s after entrepreneurs, especially in France, developed fully iron frames, cranked peddle drives, wire-spoked wheels, and solid rubber tires. By the 1890s, a diamond-shaped frame, tube steel construction, pneumatic tires, peddle chain, rear-wheel drive, and mass production were transforming the bicycle into a society-changing mode of transportation. In the first third of the 20th century, the centre of bicycle production and innovation shifted to the United Kingdom, with Raleigh Bicycle Company of Nottingham becoming the leading manufacturer in the world; but by then, motorcycles and motor cars were displacing the bicycle.[[2]](#footnote-2)

In the two intervening centuries, between 1817 and 2017, the world produced a billion bicycles, half of which were made by the Chinese bicycle company Flying Pigeon. The original Flying Pigeon bicycle was reverse-engineered by Huo Baoji, an employee of the Changho Works bicycle factory in Tianjin, from his 1932 English Raleigh Roadster. By the 1970s, a bicycle—together with a watch and a sewing machine—was one of three items Chinese brides required of their grooms before marriage.[[3]](#footnote-3)

Then, in 1978, China embarked on its economic reform and opening policy, unleashing four decades of rising incomes, urbanization, highway and mass-transit construction, and the growth of a domestic automobile industry. By the time Zhang and his fellow founders at ofo enrolled in Peking University, China had become the world’s top manufacturer and consumer of cars, gaining global notoriety for its traffic congestion and air pollution.[[4]](#footnote-4) At the same time, after a long period of relative decline in bicycle use, China was experiencing a minor bicycle revival based on the pursuit of healthier lifestyles and environmental sustainability.

Ofo’s History

As Zhang, a graduate in archaeology and museology from Peking University, explained, “I am not a business person and did not set out to be an entrepreneur. I just simply love cycling.” In 2014, he and four friends started ofo (whose three-letter logo represented the two wheels and rider of a bicycle) to organize bicycle tours. They peddled around Taiwan, crossed Hainan, cycled through Luoping in Yunnan, and toured the sparsely populated and breath-taking natural landscape of Qinghai Lake in western China. But a year after they founded their company, they had made no money. Zhuang reflected:

It was a total disaster. We had to save the company to save our dream. . . . We told our parents and friends that we were short of money, but they just tried to persuade me to give up and find a new job in a museum. 2015 at Peking University was “the capital spring.” All of our friends had started businesses—in AI [artificial intelligence], in education—and they could get a lot of money, but we could get nothing. We were very frustrated. . . . Finally, we decided to insist on the bicycles but change direction. We looked at sharing bikes.

Sharing bicycles was not new. It had a 40-year history in Europe before the Chinese government introduced it on a large scale in 2007 for the Beijing 2008 Olympic Games.[[5]](#footnote-5) Beijing’s bicycle-sharing service was replicated in other Chinese cities, becoming successful in Wuhan and Guangzhou, but, as Zhang explained, it had weaknesses: users needed stored-value cards, sold at inconvenient locations; and bicycles had to be taken from, and returned to, limited docking spaces.

ofo was dockless. Initially, it restricted sharing to students and faculty within Peking University. It allowed those users to pick up and leave the bicycles anywhere they wished on the campus. ofo launched its bicycle-sharing service in June 2015 with bicycles from faculty and students. It was an immediate success. In September 2015, the company introduced 2,000 specially manufactured little bright-yellow ofo-branded bicycles. Again successful, ofoexpanded its fleet to 4,000 little yellow bicycles and six other campuses in north-western Beijing. By the end of 2015, ofo*’*s daily order volume had reached 20,000. The company secured its first external financing two months later and expanded to 20 campuses. Series B financing in May 2016 allowed ofo to expand to campuses throughout China, boosting daily orders to 400,000 at the start of September 2016.

ofo’s success was noticed. In April 2016, Mobike in Shanghai rolled out its city-wide, dockless, orange app-based sharing bicycles with GPS, a driveshaft (rather than a chain), and an electronic QR code–activated lock. Mobike’s founders—Hu Weiwei, a journalist with 10 years’ experience covering cycling, and Davis Wang, a business administration graduate with experience at Tencent Holdings Limited (Tencent) and Uber—stated that Mobike’s mission was “to solve the urban last kilometre problem.”[[6]](#footnote-6) When Mobike successfully received external financing and rapidly expanded to other cities in China, more competitors piled in.

As more bicycle-sharing companies raced into city markets, ofo’s management questioned its focus on campuses. Staying in its protected environment gave ofoa very high frequency of bicycle use. The cities were unfamiliar environments: how could ofo forecast bicycle demand and required distribution over large areas? Bicycles might be sabotaged by the underground drivers whose businesses would be affected by bicycle sharing. The partners worried about inclement weather, the complexity of city roads, and safety.

Just when the window of opportunity was about to close, ofo obtained series C financing of US$130 million[[7]](#footnote-7) to finance its entry into cities. As CEO Dai Wei said, “as long as our minds are on track, there will be more solutions than problems, so we should go into the cities immediately.” On the first day in the cities, ofo’s server was hacked multiple times and crashed. Rumours forecasting ofo’s failure flooded online chat rooms. In retrospect, however, Zhang concluded, “Going back two years, we should have gone straight into the cities and not wasted our time. . . . Time and speed are very important. During the time we were developing our service on the campuses, we [had] already lost some of our speed.”

ofo rented its bicycles for ¥1 per hour, which was comparable with the competition, but it required a deposit of only ¥99, compared to the ¥299 required by Mobike. To accelerate its entry into the cities, ofo embraced a partnership with Flying Pigeon and the traditional top-of-the-line Chinese bicycle manufacturer Phoenix Company Ltd. Yellow original equipment manufacturer (OEM)[[8]](#footnote-8) bicycles poured into the cities, bought with cash from ofo’s third round of external financing. By early 2017, over 70 bicycle-sharing companies[[9]](#footnote-9) were contending with Mobike and ofo for the market (see Exhibit 2).

Growing Pains and Gains

The flood of millions of dockless bicycles into China’s cities was disruptive. Difficulties included local oversupply and under-supply, mechanical failure, the random piling of bicycles blocking pedestrian and road traffic, theft, and vandalism. As one academic commented, “From about 20 years ago, China has turned its automobile industry into a pillar industry. . . . Therefore, you see Chinese cities today are built for the convenience of cars. Cities are very unfriendly for bicycles.”[[10]](#footnote-10)

Although it was each city’s responsibility to enact and enforce municipal traffic regulations, on May 22, 2017, Ministry of Transport of the People’s Republic of China issued a draft set of national guidelinesto facilitate solutions to the dockless-bicycle problem (see Exhibit 3).

Zhang considered short-term urban disruption a small price to pay for social gains, including a reduction in traffic and pollution and increased employment:

In 20 cities that suffer from traffic jams that are using ofo, 19 of the 20 cities reported traffic jam decreases. Taking Beijing as an example, morning and evening rush hour traffic jams in the city centre declined by 5 per cent. Secondly, there is a very obvious environmental issue: the reduction of carbon emissions. Domestic gasoline consumption in April in 2017 [in China] is in negative growth for the first time, dropping by 6 per cent compared with the same period last year. The expansion of bicycle sharing helps solving unemployment . . . the bicycle-sharing economy has expanded 100,000 employment opportunities.

These gains led Zhang to have an upbeat stance concerning ofo’s relationship with the government:

We really solve problems. We are creating jobs for people. And we are lowering PM2.5.[[11]](#footnote-11) And traffic congestion is declining. So we think we can provide value for society. . . . The Chinese government is very interested in us . . . Compared to governments in foreign countries, Chinese governments are very supportive. When we deal with foreign governments, they usually say, “Wait. We want to see what happens in China! And then maybe you can enter.”

Continuous Improvement and Quality Management

The little yellow bicycle that ofotook to the cities in October 2016 was chain driven and mechanically locked. Its OEM-manufactured cost of ¥400 was less than Mobike’s smart orange bicycle, manufactured in-house at a cost of ¥1,000. Although ofo’s was substantially lighter, owing to Mobike’s heavy driveshaft, the little yellow bicycle proved harder to locate than its orange rival, and its mechanical locks were more likely to fail or be hacked than Mobike’s digital locks.[[12]](#footnote-12) Zhang commented:

We used a massive number of mechanical locks, and I think that you have heard the stories. During fierce competition, you should make choices with what you have. At that time, we were still in the campuses and we wanted to make sure that we could be faster: always be faster than the competitors. So we made the choice to use mechanical locks. But now we have changed our locks to digital locks.

Through its 2017 partnerships with China Mobile Communications Corporation, Huawei Technologies Co. Ltd. (Huawei), and 700Bike, ofo redesigned and rolled out its improved little yellow bicycle in early 2017 (see Exhibit 4).

Zhang believed that three key features in the new model would improve the all-important user riding experience: the tires, the hub, and the lock. Normal bicycle tires were pneumatic, which made them comfortable and light but increased the risk of a blowout. The increased maintenance required for pneumatic tires rendered them unfeasible for shared bicycles, but the solid tires used for the first little yellow bicycles were hard and uncomfortable. To solve the problem, ofopartnered with BASF SE, the company that provided soles for Nike Inc.’s athletic shoes. The density of the external part of the tire, like that of the soles of high-quality running shoes, was then far harder than the interior, increasing riding comfort without sacrificing durability. ofowas also improving the hub to achieve its goal of allowing users to “peddle for five seconds and glide for two minutes.” But the most important innovation was the lock. The NarrowBand Internet of Things (NB-IOT) smart lock co-developed with Huawei and China Telecommunications Corporation could be quickly unlocked because scanning the QR code both recorded the actual rental and unlocked the bicycle at the same time. NB-IOT had strong enough signal penetration to allow a smartphone user to detect a bicycle parked in a basement parking lot. The battery of the NB-IOT lock would last for three years between replacements.

An equally important part of the user experience was locating a bicycle that was in good working order. As of mid-2017, about 5 per cent of ofo bicycles became faulty per day. The NB-IOT provided GPS location, tracking each bicycle as it was ridden and recording its location when the ride was over. Sudden decreases of speed during a ride or unauthorized shifts in the location of a locked bicycle could signal that a bicycle had become defective—perhaps because it had been vandalized or stolen. A bicycle left unrented for an unusual period of time could also indicate that the bicycle was no longer in good working order—either because it had been damaged or because a user had illegally “reserved” the bicycle for his or her exclusive use by double locking or hiding it.

Although ofo had only 3,500 full-time employees, it had 10,000 contract employees, whose jobs included repairing faulty bicycles, re-parking badly parked bicycles, and moving poorly located bicycles from areas of low demand to areas of high demand. Contract employees could quickly do simple repairs such as cutting double locks and removing fake QR codes. By mid-2017, only about 1.5 per cent of bicycles per month were completely written off as irreparably damaged or stolen, and this number was continuing to fall. Contract employees were directed by an app called ofo-work. Input from the ofo department that handled faulty bicycles showed which bicycles had not been used for long periods of time, the affected bicycles’ approximate locations on a map, and the work to be performed. ofo-workalso monitored contract employees’ work volume, checked for unusual spikes in dysfunctional bicycles (which might indicate a contract employee sabotaging bicycles), and calculated contract employees’ incentive pay.

User Credit and Data

ofo collected large amounts of user data, including each user’s identity, time of use, and the routes travelled.

We have 200 million registered users, but we want to increase that. . . . When you use our bicycles, you scan the QR code, and wherever you go is recorded on our system. So the most valuable thing is the location. We know whether you went to the bookstore or the grocery store or somewhere else. I think that data is very precious.

ofo protected its customer data by not sharing it with outsiders. ofohad a 40-person department dedicated to big-data analysis, headed by a former manager of Baidu Inc., a leading Internet and artificial intelligence (AI) company that provided China’s dominant search engine. The department’s main task was designing and monitoring the user credit system to determine the quality of users, reward those who were good users, and penalize those who damaged bicycles. The department also analyzed dysfunctional bicycles and contract worker performance. Zhang indicated that the department would ultimately predict locational bicycle demand, so that when users exited a bus, railway, or subway station, their need to locate a bicycle would be anticipated and met.

The E Round

On July 6, 2017, ofo announced its fifth (or E) round of raising external capital, which resulted in a $700 million injection that confirmed ofo’s status as a “unicorn.”[[13]](#footnote-13) The money would be provided by Alibaba Group Holding Limited (Alibaba), the world’s leading retailer and a major business-to-business product platform, and Hony Capital and CITIC Capital Holdings Limited, two leading Chinese private-equity firms. Additional participation came from investors who had participated in the $450 million D round in February 2017; these included Didi Chuxing Technology Co., China’s leading digital ride-sharing company, and DST Global, a private-equity company focused on the global internet (see Exhibit 5). ofo’s E round followed a similar E round for Mobike, which was led by Tencent—the world’s leading electronic games company and mobile messaging group, and (with Alibaba) one of China’s two leading mobile payment companies (see Exhibit 6).

ofo’s new funds would be used to buy bicycles for international expansion and to hire more talent. ofo’s management did not see any good opportunities to purchase companies: Mobike was not for sale, and smaller competitors were being forced out of the market by ofo and Mobike. ofo had no wish to vertically integrate, but it wanted to predict the future shape of the bicycle-sharing industry in order to formulate its strategy. As Zhang opined, “If you buy a manufacturer, it will cost you a lot of time. And time is very important. . . . We are not like Mobike. They chose to make their own bicycle (and we think it’s too heavy). And it cost them a lot of time.”

ofohad yet to turn a profit. External financing had allowed it to forgo profitability in pursuit of market share, but ofo had conducted tests of steady-state operations in two second-tier Chinese cities,[[14]](#footnote-14) and the tests had indicated that its bicycle-sharing model could break even.

Future Directions

ofo was young and international. Its employees’ average age was 26, and it was in 180 cities (the vast majority in China) and 17 countries. Zhang considered ofo’s comparative advantage to be its DNA: its culture of openness and its ability to design and connect bicycles. As he said, “We really love bicycles and know bicycles. And we really want to do something with bicycles. But for other companies, maybe they are just doing something to show off or make money.”

Zhang believed that ofo’s creativity flowed from its users. If its users had not provided the start-up bicycles in Peking University, he said, ofo’s bicycle-sharing platform would never have been created. Zhang was confident that ofo’s passion for cycling could help make the world more sustainable, equal, flat,[[15]](#footnote-15) and convenient. ofo had the resources and the platform to build and roll out more transport tools—not just one design of a little yellow bicycle but many bicycle designs—as well as vehicles beyond bicycles. He had only to identify and grasp the opportunities.

Exhibit 1: Industry Trends

1A: Monthly Use of All Bicycle-Sharing Apps and Average Frequency of Use

Note: Apps = applications.

Source: iResearch Consulting Group, “Share Cycling Q2 Market Size Exceeded 3 Billion More Users than the Q1 Sales Growth [in Chinese],” September 2017, accessed December 10, 2018, www.iresearchchina.com.

1B: ofo and Mobike Active Daily App Users

Note: Apps = applications.

Source: iResearch Consulting Group, “Share Cycling Q2 Market Size Exceeded 3 Billion More Users than the Q1 Sales Growth [in Chinese],” September 2017, accessed December 10, 2018, www.iresearchchina.com.

Exhibit 1 (continued)

1C: ofo and Mobike Users (Orders per Day) and Per cent of Orders That Are Repeat Users

Source: QuestMobile, “What is the Difference between a Mobike and an ofo Shared Bicycle? [in Chinese],” Sohu, January 10, 2017, accessed 6 November 2017, www.zhihu.com/question/50166272.

Exhibit 2: The Competitive Space

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Tier | MAUs | Companies | Name in Chinese | Headquarters | Partners | Focus |
| 1 | > 30 million | ofo | ofo | Beijing | Financed by Alibaba Group, Ant Financial Services Group, Hony Capital, CITIC Group, and Didi Chuxing Technology | China, International |
|  |  | Mobike | 摩拜 | Shanghai | Financed by Tencent, Sequoia Capital, TPG Capital, Hillhouse Capital Group, ICBC International Holdings Ltd., and Farallon Capital Management LLC | China, International |
| 2 | > 1 million | Hellobike | 哈罗单车 | Shanghai | Financed by Ant Financial Services Group, Fosun International Ltd., and GGV Capital | China. third-tier cities |
|  |  | Youon Bike | 永安 | Changzhou | Financed by Ant Financial Services | Profitable docking bicycles; expands to dockless bicycles; planned IPO, August 2017 |
|  |  | Xiaoming Bike | 小鸣单车 | Guangzhou | Financed with angel capital | Better location and lock technology |
|  |  | Ubike | 优拜单车 | Shanghai | Financed by Black Hole Capital | Design / China |
|  |  | Bluegogo | 小蓝车 | Tianjin | SpeedX bicycle manufacturer | Six Chinese cities and San Francisco |
| 3 | < 1 million | Qibei Technology | 骑呗单车 | Hangzhou | Ant Financial Services Group (credit system to reduce deposits) | Design / Technology |
|  |  | Green Bike-Transit | 拜客出行 | Guangzhou | “Ride of Silence”: International bicycle ride to commemorate cyclists killed in accidents | Social enterprise devoted to making cities bicycle friendly through regulatory change |

Note: Listing of first-tier competitors is exhaustive; second- and third-tier companies are illustrative only. MAU = monthly active users; IPO = initial public offering.

Source: iResearch Consulting Group, “Share Cycling Q2 Market Size Exceeded 3 Billion More Users than the Q1 Sales Growth,” [in Chinese], September 2017, accessed December 10, 2018, www.iresearchchina.com; iResearch Consulting Group, “China’s Shared Bicycle Market Research Report 2017 [in Chinese],” accessed December 10, 2018, [www.iresearchchina.com](http://www.iresearchchina.com); Mobike website, accessed December 10, 2018, <https://mobike.com/global/>; Hellobike website, accessed December 10, 2018, [https://hellobicycle.com](https://hellobike.com); Youon Bike website, accessed December 10, 2018, [https://youonbicycle.com](https://youonbike.com); “Xiaoming Bike,” Weibo, accessed December 10, 2018, www.weibo.com/u/6075615413?is\_all=1; Ubike website, accessed December 10, 2018, www.ubicycle.cn; Bluegogo website, accessed December 10, 2018, www.bluegogo.com; Qibei Technology website, accessed December 10, 2018, [www.qibeitech.com](http://www.qibeitech.com); Green Bike-Transit’s Facebook page, accessed December 10, 2019, www.facebook.com/GreenBicycleTransit/.

Exhibit 3: Excerpts from the Ministry of Transport’s Guidance concerning Encouraging and Regulating Internet Rental Bicycles, May 22, 2017

The following is a translation by the authors of excerpts from the document issued by the Ministry of Transport requesting comments from interested parties concerning developing national regulations for the shared-bicycle industry

Internet rental bicycles (commonly known as “shared bicycles”) are a new service model developed by merging the mobile Internet and bicycle rentals. In recent years, China’s Internet rental bicycle industry has developed rapidly and has played an active role in better meeting the needs of public travel, effectively solving the “last mile” problem of urban transportation, alleviating urban traffic congestion, and building a green travel system. However, it also has problems such as chaotic parking, inappropriate business operations and maintenance, irresponsible management, security risks regarding user deposits and private information, etc. In order to encourage and standardize the development of the Internet rental bicycle industry, the Ministry proposes the following guidance.

Overall Requirements

* Guiding ideology: Fully implement the spirit of the 18th [National] Party Congress [of the Communist Party of China]’s Third, Fourth, Fifth, and Six Plenary Sessions, thoroughly implementing the spirit of the important speeches of General Secretary Xi Jinping . . . promoting the “Internet +” action plan, encouraging and standardizing the development of Internet rental bicycles, improving the level of Internet rental bicycle services, optimizing the transportation structure, and building a green, low-carbon travel system to better meet the travel needs of the people.
* Basic principles:
* Be service-based.
* Reform and innovate.
* Standardize and be orderly.
* Localize. The people’s government of each municipality is the main body responsible for the management of Internet rental bicycles[,] . . .adapting to local conditions[,] . .[and] exploring development models that conform to local realities.
* Consider the interests of all stakeholders, tapping their enthusiasm and increasing industry self-regulation and public participation. . . .

Policy Implementation

* Scientifically determined development. Do a good job in planning for slow traffic in light of the characteristics of the city. . . . The development of electric-powered Internet rental bicycles is discouraged.
* Guide the orderly bringing of bicycles into circulation. . . . [E]ach city should . . . establish a mechanism for bringing bicycles into circulation that is compatible with the urban space carrying capacity, parking facilities’ resources, and public travel demand.
* Improve the bicycle road network. . . .
* Promote the planning and construction of bicycle parking spots. . . . Important urban commercial areas, public transportation stations, transportation hubs, residential areas, and tourist attractions should have . . . designated bicycle parking.

Exhibit 3 (Continued)

Standardize bicycle business operation and maintenance.

* Strengthen standardization by encouraging relevant social organizations and industrial technology alliances.
* Standardize business services. . . . Strengthen vehicle dispatching, parking, and maintenance management to ensure safe and convenient use of bicycles . . . Ensure that users give their real names. Clarify the rights and obligations of companies and users. . . . Renting to children under the age of 12 is prohibited. . . . Provide innovative insurance for personal accident and third-party liability. . . . Strengthen information reporting and timely sharing with local authorities. . . .
* Strengthen parking management, supervision, and enforcement . . . using electronic fences and other technologies . . . comprehensively adopting economic penalties to effectively regulate user parking behaviour. . . . Punctually clean up illegal parking.
* Encourage users to cycle safely and politely. . . . preventing double riding and installing child seats. . . . complying with traffic laws and regulations, and abiding by social morality.
* Strengthen credit scoring. . . . Establish a database of corporate and user credits, and regularly . . . integrate it with . . . the national credit-information sharing platform . . . to strengthen corporate service quality and user credit evaluation. . . .

Safeguard user deposits and personal information.

* Strengthen the management of user deposits. . . . Internet rental bicycle operators should provide rental services in a deposit-free manner. Companies that collect deposits and prepaid funds from users shall strictly segregate deposits from the companies’ own funds . . . placing the deposits . . . in special accounts. . . . Companies should establish and improve user deposit refund systems. . . . provided by banks and non-bank payment institutions. . . .
* Strengthen network and information security protection. . . . Information taken shall not infringe on the legitimate rights and interests of the users and the public interest, and shall not exceed the scope necessary for the provision of Internet rental bicycle services. The information and related data generated shall be stored and used in the country.

**Create a good environment for industry development.**

* Divide government department responsibilities clearly. . . .
* Strengthen public governance . . . Give full play to the role of industry associations and alliances . . . supporting the formulation and release of industry conventions and implementing relevant standards. . . . Increase the protection of consumer rights and interests and prevent the transfer of business risks to consumers.
* Establish a fair, competitive market. Internet rental bicycle companies . . . shall not hinder fair competition in the market and shall not infringe upon the legitimate rights and interests of users and the public interest. . . .

Source: “Ministry of Transport Guidance Concerning Encouraging and Regulating Internet Rental Bicycles, Guidance for Development (Draft for Comments) [in Chinese],” accessed December 10, 2018, <http://xxgk.mot.gov.cn>.

Exhibit 4: Ofo,Little Yellow Bicycle Specifications—mid-year 2017



Procedures for Using ofo:

1. Download the ofo app.
2. Open the app to look for the bicycle.
3. Find a bicycle on the map.
4. Look for the bicycle in a public space.
5. Unlock it by scanning the QR code.
6. At destination, put bicycle in the suggested area.
7. Lock it.

Note: app = application.

Source: Company files.

Exhibit 5: Press Release

ofo Raises over US$700 Million in Series E Financing Round

BEIJING, July 6, 2017—ofo, the world’s first station-free bicycle sharing platform and industry leader, announced that the company has raised over US$700 million in its latest round of financing, the largest in the bicycle sharing industry to date. The funding round is being led by Alibaba Group, Hony Capital and CITIC Private Equity, with additional participation from current investors Didi Chuxing and DST Global.

Since its launch in June of 2015, ofo has become the world’s largest bicycle sharing platform in regard to both size and market share. So far, ofo has connected over 6.5 million bicycles to riders in 150 cities across five countries, generating more than 25 million transactions daily. In total, more than 2 billion rides have been provided to over 100 million users globally.

“ofo is committed to providing global users with a convenient, efficient, green and healthy way of travel,” said Dai Wei, founder and CEO of ofo. “We will further upgrade our service for better user experiences, accelerate our global expansion strategy, and continue to lead the bicycle sharing industry. Our vision is to unlock every corner of the world, and make ofo the universal language.”

As one of the leading investors in this landmark financing, Alibaba is confident in ofo’s growth potential. “ofo has redefined short-distance commuting, enabling a low-carbon footprint experience and delivering value to users and society,” said Joe Tsai, Executive Vice Chairman of Alibaba Group. “ofo is the industry leader and we support its open platform strategy. We look forward to working closely with the ofo team to unlock the full potential of the bicycle sharing industry.”

John Zhao, Chairman and CEO of Hony Capital said, “Hony Capital thinks highly of ofo’s business strategy, innovation capacity and team execution. We believe that we will establish another flagship enterprise in the sharing economy.”

Didi Chuxing stated that Didi and ofo are both practitioners under China’s “Mass Entrepreneurship and Innovation” policy, benefit from the sharing economy, and hold common values. Didi has full confidence in the strategy and execution of ofo’s management team.

By the end of 2017, ofo plans to deploy 20 million bicycles to the bicycle sharing ecosystem, growing its service to reach 200 cities in 20 countries across the globe. Additionally, ofo has become one of the first enterprises to adopt the global NB-IOT (Narrow Band Internet of Things) technology for extensive commercial use. China Telecom will provide nationwide wireless Internet coverage for ofo, while Huawei has equipped ofo bicycles with NB-IOT chips and other useful telecommunication technologies. In the near future, ofo’s bicycles will serve as central hubs connecting riders to net-based resources via the Internet of Things and creating an AI-based eco closed loop.

Source: Company files.

Exhibit 6: Mobike and Ofo Financing

|  |  |  |
| --- | --- | --- |
| Item | Mobike | ofo |
| Website | www.mobike.com | www.ofo.so |
| Legal Name | Mobike Singapore Pte. Ltd. | Beijing Bicyclelock Technology Co. Ltd. |
| Primary Business | Application Software; Transportation; Social Platform | Application Software; Transportation; Social Platform |
| Year Founded | 2014 | 2013 |
| Co-founder and CEO | Davis Wang | David Wei |
| Business | The company raised US$600 million\* of series E venture funding in a deal led by Tencent, Sequoia, TPG, and Hillhouse Capital on June 15, 2017, putting the company's post-money valuation at an estimated $3 billion. BOCOM International, ICBC International, and Farallon Capital also participated in the round. The company, which had raised more than $900 million in total funding to date, intended to use the funds to accelerate the pace of global expansion, as well as to invest in Internet-of-Things and artificial-intelligence technology to support the brand. | The company was in talks to raise $1 billion in a deal led by SoftBank Group on July 26, 2017, putting the company's valuation at about $3 billion. Didi Chuxing also participated in the round. The company also raised $700 million of series E venture funding in a deal led by Alibaba Capital Partners, Hony Capital, and CITIC Private Equity Funds Management on July 6, 2017. Didi Chuxing and DST Global also participated in the round. The funds would be used to upgrade its services for a better user experience and to accelerate its global expansion. Previously, the company raised $450 million of series D and D+ venture funding in a deal led by DST Global and Ant Financial on April 24, 2017, putting the company's pre-money valuation at $550 million. The company was being actively tracked by PitchBook. |
| Series A | -- | 01-Jan-2016 $36.34 million |
| Series B | 22-Aug-2016 $10.00 million | 02-Sep-2016 $100.00 million |
| Series C | 30-Sep-2016 $100.00 million | 10-Oct-2016 $130.00 million |
| Series D | 20-Feb-2017 $300.00 million | 24-Apr-2017 $450.00 million |
| Series E | 15-Jun-2017 $600.00 million | 07-Aug-2017 $700.00 million |

Note: \*All dollar amounts are in USD; CEO = chief executive officer.

Source: “Mobike Company Profile” and “ofo Company Profile PitchBook,” PitchBook, accessed November 7, 2017.

1. ¥ = CNY = Chinese yuan renminbi; US$1 = ¥6.94 on July 1, 2017; iResearch estimated total industry sales as ¥33 million, ¥296 million, ¥937 million, and ¥3.878 billion in the four quarters from 2016 quarter 3 to 2017 quarter 2. “Shared Bike Market Exceeds 3 billion Yuan in Q2 [in Chinese],” accessed November 17, 2017, www.iresearch.com.cn. [↑](#footnote-ref-1)
2. Tony Hadland and Hans-Erhard Lessing, *Bicycle Design: An Illustrated History* (Boston: MIT Press, 2016). [↑](#footnote-ref-2)
3. “History: Flying Pigeon Bicycle Co., Ltd.,” Flying Pigeon, accessed November 7, 2017, [www.flying-pigeon.eu/historia.htm](http://www.flying-pigeon.eu/historia.htm). [↑](#footnote-ref-3)
4. Colum Murphy, “China’s Urban Nightmare: Gridlock,” *Wall Street Journal*, January 2, 2014, www.wsj.com/articles/no-headline-available-1388702641. [↑](#footnote-ref-4)
5. Susan Shaheen, Stacey Guzman, and Hua Zhang, “Bikesharing in Europe, the Americas, and Asia: Past, Present, and Future” (Davis, California: Institute of Transportation Studies, University of California, Davis, 2010), 159–167, <https://escholarship.org/uc/item/79v822k5>. [↑](#footnote-ref-5)
6. Jincheng Technology Internet, “Mobai Vs. ofo: Where Will the Battle Between the Walls Go? [in Chinese],” January 10, 2016, accessed November 2, 2017, www.zhihu.com/question/50166272. [↑](#footnote-ref-6)
7. All dollar amounts are in USD unless otherwise stated. [↑](#footnote-ref-7)
8. An original equipment manufacturer (OEM) was a company that produced items sold by another company that was often itself a manufacturer. In ofo’s case, Flying Pigeon and Phoenix were OEMs for ofo-designed bikes. [↑](#footnote-ref-8)
9. Xinhua, “New Guidelines to Keep China’s Bike Sharing on Track,” The State Council, The Peoples Republic of China, August 3, 2017, <http://english.gov.cn/state_council/ministries/2017/08/03/content_281475769343734.htm>. [↑](#footnote-ref-9)
10. “China’s bike sharing boom has put millions of new bicycles on city streets now mainly designed for cars, and that’s causing problems in a country previously known as the ‘kingdom of bicycles.’” Yang Fengchun, associate professor, Peking University, quoted in Josh Ye, “Why China’s Bike-Sharing Boom Is Causing Headaches*,” South China Morning Post*, April 9, 2017, accessed November 1, 2017, www.scmp.com/news/china/society/article/2085751/chinas-bike-sharing-boom-puts-pressure-planners. [↑](#footnote-ref-10)
11. PM2.5 was an index reporting the density in ambient air particles with a diameter of 2.5 microns or less. Inhaling substantial quantities of such particles could cause chronic health problems. See “Particulate Matter (PM) Pollution,” United States Environmental Protection Agency, accessed November 8, 2017, www.epa.gov/pm-pollution. [↑](#footnote-ref-11)
12. Li Chengdong, “What’s the Difference between Bike Sharing Mobike and ofo? [in Chinese],” Sohu, November 23, 2016, accessed November 8, 2017, www.zhihu.com/question/50166272. [↑](#footnote-ref-12)
13. A “unicorn” was a recently started company valued at more than US $1 billion. [↑](#footnote-ref-13)
14. A second-tier city in China was a city such as Changchun, Changsha, Chengdu, Dalian, Fuzhou, Guangzhou, Guiyang, Hangzhou, Harbin, Hefei, Jinan, Nanjing, Ningbo, Qingdao, Quanzhou, Shantou, Shenyang, Shijiazhuang, Suzhou, Taiyuan, Wuhan, Wuxi, Xi’an, and Zhengzhou—in other words, a substantial city with a population of several millions but much smaller than Beijing, Chongqing, Shanghai, Shenzhen, or Tianjin. [↑](#footnote-ref-14)
15. In describing the world as “flat,” Zhang was referring to the following book: Thomas Friedman, *The World is Flat: A Brief History of the Twenty-First Century* (New York: Farrar, Straus, and Giroux, 2005). Friedman used the idea of “flattening” to describe making the global playing field level and fair. [↑](#footnote-ref-15)