**The research of shared bike development**

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In the current era of mobile Internet, people have more choice of travel, travel when Shared areas after swept by drops, Uber, recently and is famous for its "smart sharing" in the two bikes became active in the streets. Orange wheel hub, silver V frame, which many people called "little orange car" is the recently popular "Mobike".

**1. Introduction**

On September 19 to 20 in the evening, in the morning worship the bike up to seven hours of downtime, but that's not it "strike" for the first time. This company with "Uber" gene opens the more complex and difficult to control the social market exploration. Intelligent lock, no fixed pile and open to the whole society of free riding become Mobike innovation, at the same time more free storage and access, heavy capital, user viscosity of unpredictability is also bother management continuously According to the technology, because I hope to build a four-year undergraduate degree of smart bike, mo worship goes a self-design, production bike route. In order to avoid the "chain", the bicycle used shaft rotation, simple pendulum arm technology, solid tyros, wheel hub, the design of the seat height fixed. Bicycle to weigh up to 25 kg. Many users reflect the bike was too heavy, are to the body, weighing 25 kg do not adjust the seat, no vehicle navigation, these in order to "maintenance free" unique design, can actually make the bike user experience widely criticized. It seems that in the short term, 4 years of maintenance free vision with good riding experience don't seem to be satisfactory. Fast scale expansion, large flexibility, high efficiency, low barriers to entry are Shared economic model, the characteristics of the design and production to replace outsourcing or recovery mode, while increased flexibility and autonomy, "worship the bike increases competition threshold, but also creates assets and drag to make profits out of the problem. Though after product iterations, now its cost has from the beginning of 6000 Yuan to 3000 Yuan, 299 Yuan deposit, the rules of every half hour is 1 Yuan, get a bike cost recovery and profitable time greatly elongated. Given Uber consistent style, of course, when innovative products and business models, when can make money in the short term may not care about this problem.

**2. British and American Shared cycling**

In May 2013, the bank invested $41 million in sponsored by the第三页United States a share in New York City bicycle project, pledged $6.5 million MasterCard, become sponsors pay system. Goldman sacs also provide some of the money. The project, the first batch of 10000 public bicycle building 600 sites. Citi bike also launched a special mobile application, to help users find near the site, and can show each site available bike card slot and cycling number, also can design the best route according to the destination. Citi bike" project is the biggest source of income to buy a bike with tourists, 24 hours per day for using the Citi bike at $9.95, and the use cost is $95 a year. Sandy hurricane attacks on New York in 2012, however, let the bike and site severely damaged. And Citi bike software often wrong, unable to pay. Multiple project operating company way under the decrease in the number of members, revenue declines. In October 2014, Citi bike get new financing project, operating company changed its name to Motivate. This year, ford has to Motivate in San Francisco, the United States, will be launched next year ford Go Bike bicycle, target is by the end of 2018 the San Francisco bay area to increase to 7000 bikes, and increase the service points, the user can be used through the ford Pass platform.

London in 2010 launched a public bicycle Boris bikes (named after the then London mayor Boris Johnson), at that time, is sponsored by Barclays bank (Barclays), more than 10000 public bicycle distributed in the city's 700 rental points, 24 hours a day for rent. Due to the London public bicycle poor operating conditions, the use of gradually reduce the public bicycle poor operating conditions, the use of gradually reduce the number of traffic accidents involving bicycles also frequent, Barclays bank in 2015 to stop the contract, Spain's banco Santander (Santander), identification of bicycle was transformed from Barclays blue logo Santander's red. Headquartered in Portland, Nike, a public bicycle project Bike town is teaming up to the local traffic department. The goal is to let people move. Nike to spend $10 million for this project, make the Portland existing public bicycle quantity increased from 600 to 1000.In addition, Nike is also responsible for the design of the bicycle, Air Max 95, Air Safari and inspiration in the design of Air Trainer 1, in the front of the bike will be loaded on the basket like Nike shoes and Nike logo (Nike Swoosh), bicycle lock and internal communication system. Portland city bike rental system allows users to pay a small fee, you can pick it up more than 3000 points in the urban area.

**3. Mobike and OFO**

Actually Shared the bike is nothing new. Online rental sites in the United States an after success, every industry with the aid of Shared economy caused a short rent. Main point to point short rent bikes services among Spinlister, Spinlister encourage people to leave their bike rental information in Internet, and commitment for each bike on insurance, maximum limit to $5000, to prevent burglary and damage delivered right to the use of idle resources.

Four years ago, bicycles have pile is obtained using began in big cities such as Beijing, as long as through the bus card, can be in a fixed parking pile location to ride, using a bicycle. But also the car is not convenient, temporary dock and the risk of loss. The most important thing is, whether it is the first application, or a bicycle itself exist fault repair, poor overall user experience. Today, in the context of the kernel, OFO: and the bike is not essentially different, even on the solution, the two sides are committed to work in three aspects. First is technically, realize the car network problems, through the use of a complete set of the closed loop by mobile phones, and determine the user identity; Followed by the hardware, through the distribution of car body sensors and intelligent hardware, even independent design way, and in accordance with this implementation increases with the increasing use stop; Finally is mobile payment, thanks to the Internet, make it possible for business closed loop. Their common face a problem is frequent vehicles use fault.

Mobike provides two solutions: a test by the software, the other is through a user fault report to maintenance. Both the warranty only by operating personnel will be according to the different fault code for maintenance. This cost is high. The efficiency is low, presses for a better solution. The earliest paper QR code, plastic glass, QR code, the worship team currently is developing metal QR code, and is trying to QR code covered with a special coating. Equipped with GPS, SIM CARDS and sensor intelligent bike can also record data more effectively.

Compared to the Mobile of "heavy", comes from the campus OFO: to “light” a lot FOFO: vehicles from second-hand acquisitions and part of the students, vehicle costs about 200 Yuan, the equivalent of worship the bike cost one over fifteen.“ Yellow” and on the riding experience and no different from ordinary bicycle, for solving the students of travel within just need, there is no too much user experience. However, "yellow" also face frequent maintenance. Due to start early, OFO: have successively propulsion set up perfect maintenance team, smart hardware development, user authentication (distinguish between tourists and teachers and students, adopt different standards), etc.

**4. The future developing trend**

From a long-term perspective, OFO or the Mobike, the success or failure of their meaning is not the case, but in the foreseeable future travel through them. Not only limited to sharing the trend of travel in the future, will also focus on environmental protection, intelligent. Tesla drive electric wave, or cycling culture...A sharp decline in air quality in the big cities, electric, new energy, environmental protection consciousness is more and more intense, supply side around the green transportation products and solutions is also arises at the historic moment. The worship and OFO: want to stand in draught, intelligent factors which may become more critical. Further enhance efficiency and standardization, digital, is the direction of the final decisive battle. Previously, much market speculation, drops will buy the bicycle. But, to a "reverse" indeed, science and technology enterprise from R&D to grow into mature stage of enterprise, on the one hand, there are in the process of technology and product research and development technology of failure risk, on the other hand new products on the market to accept there is uncertainty of market risk, and facing the industry competition, business management, and other challenges, makes its initial survival rate is very low, will cause may still OFO: highly fit and drops in the future vision, etc.

Technically, the worship and OFO: is not the true sense of Shared cycling. Mobike manufacturing costs and operating costs are high, is thorough B2C lease economy. OFO born in campus market, most of its vehicles are proprietary, C end users can also be their bike sharing to OFO: business, to get all the bikes for free use, 1 for N. From the pattern, OFO: closer to the concept of sharing drops. Bicycle sharing market with huge potential customers, “the last three kilometers” human needs is immense. Drops and OFO: two companies strategically are highly complementary, drops is now in the travel market has a large population, accumulated very rich experience in operating, these two characteristics can help to OFO: the young company. At the same time, OFO: offers an excellent complement to the drops of "the last three kilometers" solutions, efficient and environmentally friendly. All in all, sharing a bike has incoming, become an indispensable part of the city travel in the future. Specific scenario is also added "the last three kilometers" short distance travel.