



共享汽车实践及发展对策分析

——以重庆市为例


Analysis on The Practice and Development of Shared Automobile in Chongqing

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汽车共享起源于上世纪中期的欧洲，在经历了各种尝试后，随着智能终端、移动通讯、电子支付等技术的发展，其服务得到了提升，在欧洲、北美和亚洲全面开始发展。在中国，**2013**年提出分时租赁的概念，在电动汽车国际示范区的推动下，开展了新能源汽车分时租赁的服务，并迅速在全国推广开来。目前在重庆运营的共享汽车有**6**个平台，运营情况不佳，停车位、充电桩等公共资源短缺，成为制约行业快速发展的瓶颈。通过分析重庆目前运营的共享汽车存在的问题，展望共享汽车发展前景，提出在政策、规划、城市管理等方面的对策，为共享汽车的发展提供更好的环境。



Car sharing originated in Europe in the middle of last century. After experiencing various attempts, with the development of smart terminals, mobile communications, electronic payment and other technologies, its services have been upgraded and developed in Europe, North America and Asia. In China, the concept of time-sharing lease was put forward in 2013. Promoted by the International Electric Vehicle Demonstration Zone, the time-sharing lease service for new energy vehicles was carried out, and was rapidly popularized throughout the country. At present, there are six platforms for the shared automobiles in Chongqing. The poor operation and the shortage of public resources such as parking spaces and charging piles have become the bottlenecks restricting the rapid development of the industry. This paper analyzes the problems existing in the shared automobiles currently operated in Chongqing, looks forward to the development prospects of the shared automobiles, and puts forward countermeasures in policy, planning, urban management and other aspects to provide a better environment for the development of the shared automobiles.

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- 共享汽车在重庆的发展概况
 - 存在问题分析
 - 发展对策分析
 - Development of shared cars in Chongqing
 - Analysis of existing problems
 - Development countermeasure analysis

一、共享汽车在重庆的发展概况

目前我国有汽车共享企业**40**余家，车辆总数逾**4**万辆，**95%**以上为新能源车。目前在重庆运营的共享汽车有**6**个平台，分别为**Car2go**、盼达用车、众行**EVPOP**、长安出行、**EVCARD**、智道出行。除**Car2go**为自由取还及加油汽车，其余均为固定点取还。



Development of shared cars in Chongqing


At present, there are more than 40 car sharing enterprises in China, with more than 40 thousand vehicles and more than 95% new energy vehicles. At present, there are six platforms for the shared vehicles in Chongqing, namely Car2go, Panda, EVPOP, Chang an, EVCARD and Zhidao. In addition to the Car2go for free taking and refueling vehicles, the rest are fixed points.


目前重庆市运营的共享汽车概况

平台	租车模式	车型	运营商	费用	网点分布/规模	运营情况
Car2go	自由取还	奔驰 smart for two	德国戴姆勒	需缴纳注册费用99元且不退还,按照1.8元/公里+0.3元/分钟同时计算	理论上可以免费在市政停车位及龙湖商业的专用停车位停车。投放车辆600台左右。	购置成本约13万元/辆,加上停车位费、保险费、人力成本等约16万元/辆。从使用情况来看,使用频率低,在重庆区域,每1.2分钟有一辆Car2go汽车被租用,但在全球,该频率为1.4秒。car2go重庆项目在2017年2月底前的营业收入尚不到1200万元,而其付出的车辆购置成本则在7800万元。主要问题在于用户体验不好,一是费用高于出租车,二是难停车,使用不便。
盼达用车	固定点取还,换电模式	力帆品牌电动车	重庆力帆	保证金1000元,芝麻信用650分以上可免保证金,19元/小时,封顶价为129元	网点231个,分布在主城七区,沙坪坝区37个,南岸区26个,巴南区24个,大渡口区16个,江北北区34个,九龙坡区33个,渝北区61个。运营车辆约3000台。	车辆成本约8万元/辆,目前每辆车平均每天的使用时间约7小时。2016年,盼达用车实现营业收入584.68万元,亏损3828.31万元。2017年1-3月,盼达用车实现营业收入919.41万元,亏损2095.33万元。主要问题一是由于盼达采取定点还车的模式,使得还车流程相对更长,消费者还车后仍需“二次出行”,对1-2小时短期租车用户影响较大;二是能有效使用的车辆少,默认电量低于40%的车不再出租,导致可用的车却很少。

平台	租车模式	车型	运营商	费用	网点分布/规模
众行EVPOP	固定点取还	众泰 E200 电动汽车	宝驾出行与重庆众泰汽车工业有限公司联手	需缴纳保证金599元； 0.5元/分钟+2元保险费	网点89个，璧山33个，巴南区5个，渝中区4个，江北区4个，大渡口区1个，沙坪坝区23个，南岸区11个，九龙坡区8个。投放车辆1000台。
长安出行	固定点取还， 充电模式	长安逸动新 能源汽车	长安汽车	保证金1000元，芝麻信用分650分以上可免保证金；逸动EV200 29元/小时，179元/天；逸动EV160 25元/小时，149元/天	27个网点，渝北区7个，渝中区1个，南岸区1个，大渡口区2个，巴南区4个，九龙坡区4个，沙坪坝区6个，北碚区1个，璧山区1个。投放1000台车。
EVCARD	固定点取还， 充电模式	奇瑞 EQ、 长安新奔奔 (重庆市场)	上海环球车享	需缴纳保证金：普通车型1000元，高档车3000元，可使用信用卡预授权；租车费用：一般车型为0.5元/分钟，24小时180元封顶，包夜租从工作日18:00至次日8:00共80元，部分豪车含起步费	网点27个，渝中区9个，大渡口区16个，江津区2个。投放车辆200台。
智道出行	固定点取还	大众Polo、 别克英朗、 卡罗拉雷凌 (三分之一 电动车、三 分之一燃油 车)	重庆交运集团	保证金1000元；根据不同车型收费不同，大众Polo、丰田卡罗拉23.4元/小时，丰田汉兰达、现代全新胜达29.4元/小时，康迪K118 16元/小时。	网点46个，车辆120台

- 从使用情况来看，Car2go使用频率在重庆区域较低，每1.2分钟有一辆Car2go汽车被租用，但在全球，该频率为1.4秒；成本也较高，车辆购置成本约**13万元/辆**，加上停车位费、保险费、人力成本等约**16万元/辆**。
car2go重庆项目在**2017年2月底**前的营业收入尚不到**1200万元**，而其付出的车辆购置成本则在**7800万元**。
主要问题在于用户体验不好，一是费用高于出租车，二是难停车，使用不便。

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- The frequency of Car2go use is low in Chongqing area. Every 1.2 minutes, a Car2go car is rented, but in the world, the frequency is 1.4 seconds. The cost is also high. The cost of vehicle purchase is about 130,000 yuan / vehicle, plus parking fees, insurance fees, labor costs and so on, about 160,000 yuan / vehicle. The car2go Chongqing project had less than 12 million yuan in operating income before the end of February 2017, while the vehicle purchase cost was 78 million yuan. The main problem is that the user experience is not good. First, the cost is higher than the taxi. Second, it is difficult to park and inconvenient to use.

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- 盼达用车的运营情况也不容乐观，车辆成本约8万元/辆，目前每辆车平均每天的使用时间约7小时。2016年，盼达用车实现营业收入584.68万元，亏损3828.31万元。2017年1-3月，盼达用车实现营业收入919.41万元，亏损2095.33万元。主要问题一是由于盼达采取定点还车的模式，使得还车流程相对更长，消费者还车后仍需“二次出行”，对1-2小时短期租车用户影响较大；二是能有效使用的车辆少，默认电量低于40%的车不再出租，需要等待换电，这就造成车辆虽多，可用的车却很少的局面。

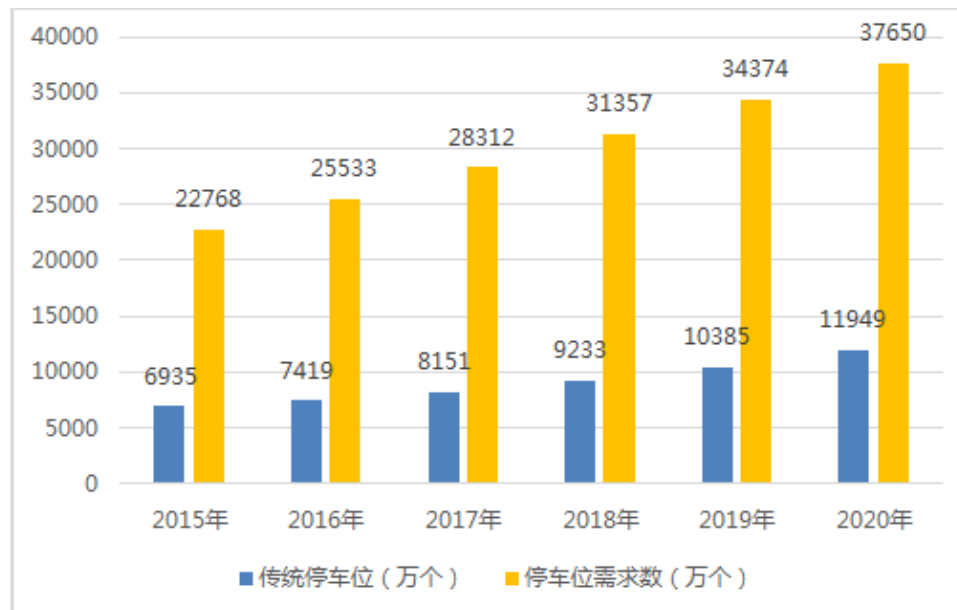
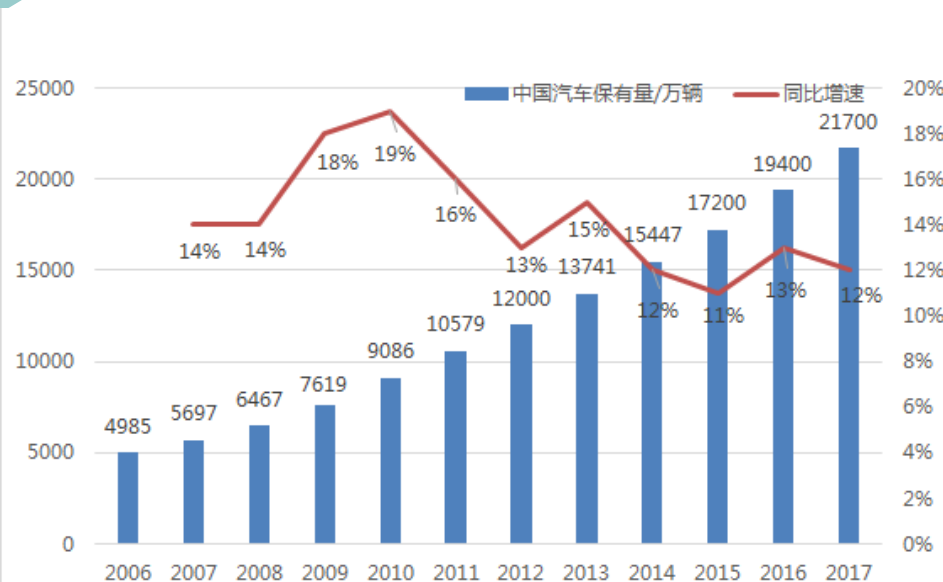
- The operation of Wanda vehicles is not optimistic. The cost of vehicles is about 80,000 yuan per vehicle. At present, the average daily use time of each vehicle is about 7 hours. In 2016, the company achieved a profit of 5 million 846 thousand and 800 yuan and a loss of 38 million 283 thousand and 100 yuan. In the 1-3 month of 2017, we hope to achieve a profit of 9 million 194 thousand and 100 yuan and a loss of 20 million 953 thousand and 300 yuan by car. One of the main problems is that due to the fixed-point return mode adopted by Wanda, the return process is relatively longer, consumers still need to "second trip" after returning the car, which has a greater impact on the short-term rental users of 1-2 hours; the other is that there are fewer vehicles that can be effectively used, and the default power consumption is less than 40% of the car is no longer rented, which needs to wait for a change of electricity, which causes the car. Although many cars are available, there are very few cars available.

二、存在问题分析 Analysis of existing problems

○ 停车问题 Parking problem

——停车资源紧缺：截至2017年底全国传统停车泊位缺口超过2亿个。

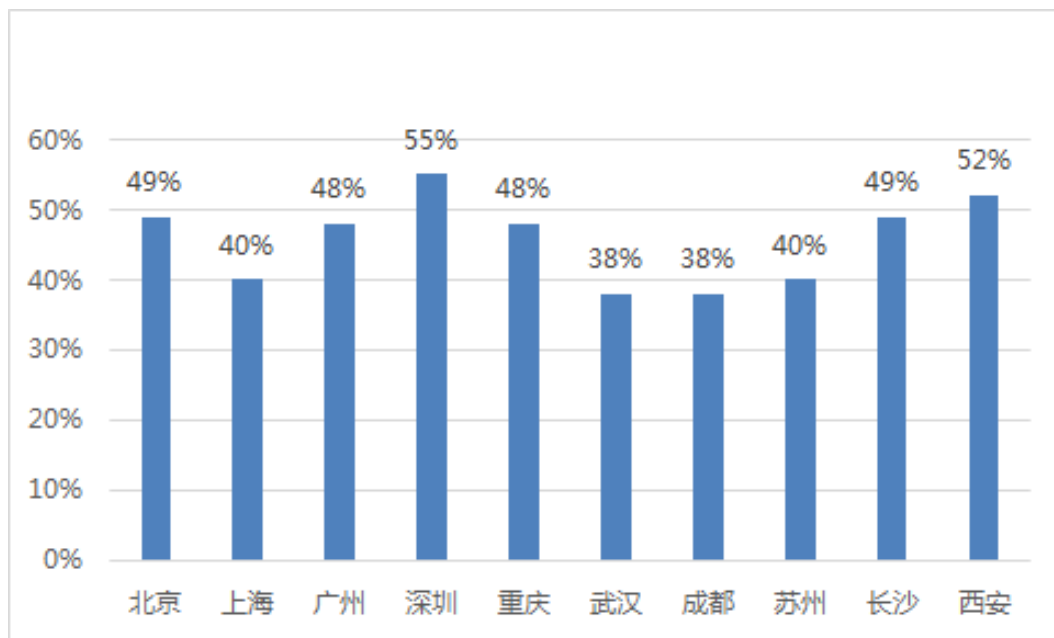
Parking resources shortage: at the end of 2017, there were more than 200 million traditional parking spaces in the country.



——车位缺乏共享机制，泊位利用率低


There is a lack of sharing mechanism for parking spaces, and the utilization rate of berths is low.

虽然我国停车位缺口率较大，但与此同时，车场的平均空置率也高达51.3%，其中重庆主城空置率达48%，存在严重的停车资源浪费现象，这正是导致停车难的另一大关键原因。



2017年核心城市车位使用率

数据来源：《2017中国智慧停车行业大数据报告》

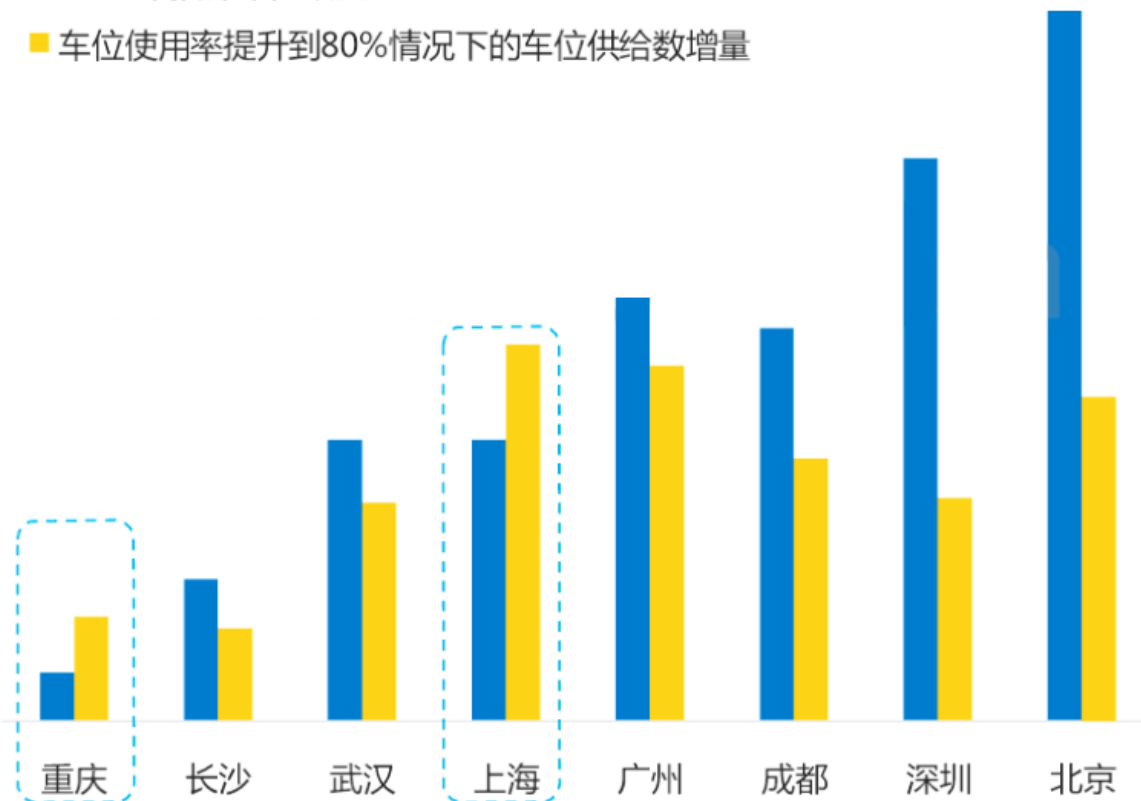
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特别注意到重庆和上海这两个城市的现有车位使用率分别只有40%和48%。通过数据分析得出：在车位使用率提升到80%的情况下，重庆、上海两个城市仅单纯通过提升车位使用率，就能满足2019年的全部车位需求。也就是说，只要车位使用率提高到一定水平，未来2年内，即便这两个城市不再新建车位，也能满足车主的需求。因此，车位共享、提高车位利用率绝不亚于新建停车场。

Noting in particular that the utilization rates of existing parking spaces in the two cities of Chongqing and Shanghai are only 40% and 48% respectively. Through the data analysis, it is concluded that Chongqing and Shanghai can meet the demand of all parking spaces in 2019 only by increasing the parking space utilization rate to 80%. That is to say, as long as the utilization rate of parking spaces increases to a certain level, even if the two cities no longer build new parking spaces in the next two years, can also meet the needs of owners. Therefore, parking spaces share and improve the utilization rate of parking spaces is no less than that of new parking lots.

■ 2019年预计车位缺口

■ 车位使用率提升到80%情况下的车位供给数增量



数据来源：车位缺口数据根据公开资料整理，车位使用率数据来自ETCP 数据说明：车位使用率

提升到80%情况下的车位供给量增量 = 车位总数 * (80% - 当前车位使用率)

*车位周转率；2019年车位缺口 = 目前车位缺口 * 1.1 * 1.1 (假设车位缺口按照每年10%的速度增长)

主要城市停车位供给与需求情况

图片来源：《2017中国智慧停车行业大数据报告》

——车辆停放不灵活 Vehicle parking is not flexible

目前业界只有car2go采取“摩拜”模式，即无固定停车位，但是汽车相比于单车大小不同，如果车停在很偏僻的位置，就会侵占公共资源，随便停放，还有可能造成违停问题。当前，共享单车的随意停放已经对正常的出行秩序产生了不利影响，如果问题得不到解决必然会导致共享交通工具的使用效率和使用价值大幅下降，甚至可能导致共享交通工具最终被市场淘汰。

At present, only car2go adopt the "Mobike" mode, that is, there is no fixed parking space, but the size of the car is different from that of the bicycle. If the car parks in a very remote location, it will occupy public resources, parking casually, and may cause parking violations. At present, the random parking of shared bicycles has had a negative impact on the normal travel order. If the problem is not solved, it will inevitably lead to a significant decline in the efficiency and value of shared vehicles, and even lead to the eventual elimination of shared vehicles by the market.

充电桩问题 Charging pile problem

——充电桩数量不足 Insufficient number of charging piles

在当前绿色、环保、经济出行的理念下，目前市场上90%以上的分时租赁汽车均为新能源汽车，而目前，新能源汽车推广的关键问题——充电桩。按照国务院制定出台的加快发展充电设施建设意见，到2025年要满足500万辆车的充电任务要求，要新建480万个桩，1.2万个站，届时，平均一辆电动汽车就会有一个充电桩。而目前在国内的几乎所有城市，都还没有得到很好的解决。

Under the current concept of green, environmental protection and economic travel, more than 90% of time-sharing rental cars on the market are new energy vehicles. At present, the key issue of the promotion of new energy vehicles - charging piles. According to the suggestions formulated by the State Council on accelerating the development of charging facilities, by 2025, the charging task of 5 million vehicles should be met. 4.8 million new piles and 12,000 stations should be built. At that time, an average electric vehicle will have one charging pile. At present, almost all cities in China have not been well resolved.

——充电桩未实现共享 Charging pile is not shared

目前，从事充电桩的企业还是比较多，特别是建设企业，它们建的是自己体系的充电桩，各建各的，很多充电桩的使用效率不高，甚至出现闲置，其原因在于充电桩网络从互联互通角度来讲没有实现共享、接口不统一。

At present, there are still many enterprises engaged in charging piles, especially construction enterprises. They build charging piles of their own system. Each of them has its own system. Many charging piles are inefficient and even idle. The reason is that charging pile network does not realize sharing and interface is not uniform from the point of view of interconnection and interoperability.



信用体系未健全 The credit system is not sound

分时租赁车辆丢失、剐蹭、毁损等风险性比较高，同时，违章之后用户是否会主动处理等，都会对分时租赁合理或者是更好地服务下一位用户、社会产生影响。

Time-sharing leasing has a high risk of losing, rubbing, damage and so on. At the same time, whether the users will take the initiative to deal with the violation will have an impact on the reasonable time-sharing leasing or better service to the next user and society.

○ 调度问题 scheduling problem


市民出行的潮汐现象。“大家都希望用车时有车，还车时有位。但是，早晨大家都去上班，把车开走了，下班了，车又扎堆儿开回来，这造成某个网点车、车位紧张。所以异地还车的压力比较大。”这就需要在核心区域或者是在规划的网点集中区域建一个囤车的中心网点，及时“补车”，而这需要一个庞大调度团队。

Tide phenomenon of public travel. "Everyone wants to have a car when they have a car, and there is a place when they return it. However, in the morning, everyone goes to work and drives away. After work, the cars come back in piles, which makes a network of cars and parking space tense. Therefore, the pressure of returning cars from other places is relatively large. This requires building a central network of car hoarding in the core area or in the planned centralized area to "replenish the car" in time, which requires a large dispatching team.

○ 成本问题 Cost problem

共享汽车前期车辆投入的高成本与后期超高的维护费、停车费让不少小企业力不从心。

购置车辆成本占了大头，以即行Car2go为例，其在重庆投放车辆为smart for two，市场售价大约在13万元。而盼达用车，尽管采用力帆330EV，价格约5万元，但这不包括换电、充电等成本。按照业内平均水平——每千瓦特电池成本为2000元计算，仅电池一项，每台EV330就要花费2万元以上。专业调查显示，一台共享汽车的运营维护成本平均在2000元/月左右，其中车辆的保险占比最大，其次是停车费用和运维费用。EVCARD曾测算，若想盈利，要保证每辆车每日产生超过120元的收入，重庆的数据暂时没有，但其在上海市的日均单车收入仅为51.41元，距120元的盈亏平衡点，尚有不小差距。




Sharing the high cost of vehicle investment in the early stage and the super high maintenance fee and parking fee in the late stage makes many small enterprises unable to work hard.

The cost of purchasing vehicles accounts for a large part. Take instant Car2go as an example. Its vehicle in Chongqing is smart for two, and the market price is about 130,000 yuan. Honda car, although using Lifan 330EV, the price is about 50,000 yuan, but this does not include the cost of power change, charging and so on. According to the average level in the industry, the cost of each kilowatt battery is 2,000 yuan, and each EV330 will cost more than 20,000 yuan for only one battery. Professional survey shows that the average operating and maintenance cost of a shared car is about 2000 yuan/month, in which vehicle insurance accounts for the largest proportion, followed by parking and maintenance costs. EVCARD has calculated that if you want to make a profit, you need to ensure that every car generates more than 120 yuan a day. Chongqing's data is not available for the time being, but its average bicycle income in Shanghai is only 51.41 yuan, which is still far from the break-even point of 120 yuan.

○ 相关法律政策问题 Related legal policy issues

现行法律法规与相关配套政策不够完善。为了杜绝发生交通事故时共享车辆拥有人的连带责任，除了签署责权利明确的汽车共享协议外，汽车共享企业大都通过购买大额保险来替车主防范风险。不过，前不久成都一位因违章驾照被扣12分的学生，借用朋友账号租用共享汽车致一死一伤，事故责任的划分就一度引发了争议。当然，对于运营者而言，更头痛的是在征信体系无法全覆盖的情况下，共享汽车面临的运营维护和监管真空地带：比如在车里睡觉等不良卫生习惯、拿共享汽车练车导致剐蹭、逃避违章罚款等。



The existing laws and regulations and related supporting policies are not perfect. In order to eliminate the joint and several liability of the owner of shared vehicles in traffic accidents, in addition to signing the automobile sharing agreement with clear responsibilities and rights, most of the automobile sharing enterprises purchase large amounts of insurance to guard against risks for the owner. However, not long ago, a student in Chengdu who was deducted 12 points for violating his driving license caused one death and one injury by renting a shared car on a friend's account, and the division of accident liability once triggered controversy. Of course, for operators, the more headache is that in the absence of full coverage of the credit information system, sharing the operation, maintenance and supervision vacuum areas facing the car: such as bad hygiene habits such as sleeping in the car, taking the shared car to practice, resulting in stumbling, evading penalties for violations, and so on.



三、发展对策分析

Development countermeasure analysis

- 城市交通政策方面
- 城市规划层面
- 城市管理层面
- Urban transport policy
- Urban planning
- Urban management

城市交通政策方面 Urban transport policy

- 政府要正确引导，出台促进共享汽车的相关鼓励政策。如出台在公共停车场设置共享汽车专用或优先停放区域，打造共享汽车基础信息平台等政策和规范。完善个人征信体系，划清现权，促进共享汽车市场的良性发展。**2017年8月8日**，由交通运输部会同住房和城乡建设部制定的《关于促进汽车租赁业健康发展的指导意见》，政策明确提出“鼓励分时租赁规范有序发展”，支持汽车分时租赁创新模式，分时租赁有了政策上的指导和支持，无疑给行业未来发展打了一针“强心剂”。**2017年10月**，深圳、广州、成都等城市也相继出台了有关汽车分时租赁的相关政策。**10月26日**，成都市正式实施《关于鼓励和规范新能源汽车分时租赁业发展指导意见》，明确至**2020年**，全市形成覆盖广泛的新能源汽车分时租赁服务网络，服务网点达到**5000个**，充电桩达到**20000个**。**2017年10月27日**，广州市交通委员会发布《关于征求促进广州市共享汽车（分时租赁）行业健康发展的指导意见》表示，鼓励使用新能源汽车分时租赁的发展，建议在营运的非新能源分时租赁汽车应逐步更新为新能源汽车。

The government should correctly guide and introduce relevant incentive policies to promote shared cars.

城市规划层面 Urban planning

鼓励发展新能源汽车，从源头调控小客车出行需求。

加快新能源汽车分时租赁服务网点布局建设，最大限度发挥既有电动汽车充电设施的作用，整体谋划、协同推进新能源汽车分时租赁服务网点布局建设。

- 规划完善公共停车场（库）充电设施，预留充电桩建设安装条件。鼓励建设占地少、成本低、见效快的机械式与立体式停车充电一体化设施，鼓励在具备条件的加油站配建公共快充设施，为分时租赁车辆充电提供便利。
- The development of new energy vehicles should be encouraged to control the demand for passenger cars from the source.
- Accelerate the layout of the new energy vehicle rental service network.
- Plan and improve the charging facilities of public parking lots, and reserve the construction and installation conditions of charging piles.

城市管理层面 Urban management

- 完善个人征信体系，划清现权，促进共享交通良性发展。需政府倡导市民绿色出行，降低城市交通拥堵。
- 对于分时租赁汽车的精细化管理，向政府提推荐停放区规划方案已经充电桩等设备。
- We should improve the personal credit reporting system, draw out the right of ownership and promote the healthy development of shared traffic. The government needs to advocate green travel and reduce urban traffic congestion.
- For the meticulous management of time-sharing car rental, the government is recommended to the park planning scheme has been charged pile and other equipment.



谢谢！
THANKS