China Startup Ecosystem Report: Mobility

Executive Summary

- 857 Chinese mobility startups that were founded after 2009 were identified to have received at least one round of equity funding

- These 857 startups have raised a total of RMB 550 billion through 2,121 investment rounds

- The largest amount of capital was invested in the different mobility startups during the years 2020 and 2021. In the first seven months of 2022, the investment amount is rather declining

- Due to the Shanghai Lockdown, investment amounts in mobility startups have dropped by more than 70% YoY

- Most of the identified mobility startups were based in the provinces of Beijing, Guangdong, Jiangsu, and Shanghai, attracting more than 85% of the investment

- Government-backed investment funds play a substantial role in the mobility startup sector. 29 % of all startups have at least a minority stake of a state investment fund. Twenty-four of the 30 most active investors in this mobility space are also government investment funds

- Of the more than 3,000 institutional investors from the 857 Chinese mobility startups, 13% were classified as state-controlled

- A large part of the capital has flowed into the mobility sub-segments of Automotive Producer, Connectivity/Network, Autonomous Driving, and Automotive Rental, Sharing, Hailing Platforms

- The companies with the most money raised are XPeng, Li Auto, and Manyun Software

Methodology

The collection of all relevant mobility startups in China was realized by a CIMK-specific company identification and evaluation process. The process includes the structured capture of companies from company databases, the merging of company information from different data sources, as well as the semi-automated analysis and categorization of startups. Finally, all data points are translated into English. These four key steps are explained below.

Company Identification

The startups are mainly collected via the Chinese company registry (国家企业信用信息公示系统/ National Enterprise Credit Information Publicity System) and private company databases (Tianyancha.com or Qcc.com), which mirror the official company registry.

Here, a high double-digit number of industry-specific keywords were used to identify relevant startups. Examples of used keywords are "Automotive", "Autonomous Driving", "Battery Technology", "Mobility", etc. These keywords are automatically compared with all company descriptions and business items. In addition, big data analytics technics are used to filter companies based on the foundation date, whether these companies are still active, and whether these companies have received a funding round. This research is only focused on companies that were founded between 2010 and July 2022 and have received at least one funding round. Since nearly all mobility segments are capital-intensive, it can be assumed that all relevant startups have conducted at least one funding round. In the first step, more than 12,000 mobility startups were identified.

Obtaining Company Data for Each Startup

In order to obtain all decision-relevant information about the startups, data from different platforms must be collected in a structured manner. A large part of the data is collected from the company databases, but further data is collected from other data sources, e.g., the business professional business network MaiMai (comparable with LinkedIn) or the company websites.

The official company names are always used as the unique search term. The collected information includes Chinese name, English name, website, address, province, city, district, date of foundation, number of employees, number of funding round, type of last funding round, aggregated amount of funding rounds, investors, shareholders (including the type of shareholder), company description, startup founder, and startup logo.

Startup Analysis and Categorization

After detailed information about all startups has been collected, the next step is to determine whether a startup is relevant and meets the requirements for a mobility startup. The prerequisite here is that the company mainly offers products and services in the automotive or closely related industries. If a startup is identified as relevant, the startup will also be classified into a sub-industry. Two Chinese-speaking automotive analysts perform this task. The sub-industries are Navigation & Maps, Autonomous Driving, Engine, Automotive Producer, Automotive Rental, Sharing, Hailing Platform, Charging Service, Parking, Testing Platform, Battery technology, Exterior Automotive, Smart City, New Materials, Value Add Software Service, eCommerce, Finance, Interior Automotive, Connectivity/ Network, Hydrogen Fuel Cell, Media Platform, UAV, Aftermarket, Safety and Security technology, Chips/ Semiconductor, Waste and Recycling. A detailed explanation of the categories can be found in the chapter "Category Deep Dive". A total of 857 relevant startups were recorded and categorized.

Information Translation

The data acquisition and data analysis were carried out entirely in Chinese. All information is being translated into English. For this purpose, a CIMK-specific translation module based on the Microsoft Azure Cloud Translation Model was used for the most part. Partially, own translation modules were built and applied. An example of this is the conversion of Chinese funding amounts to standardized numerical values. One example is the following transformation: 3亿人民币 to RMB 300,000,000.

China Startup Ecosystem Output

A high-level overview of the Chinese mobility startup ecosystem can be found in this report. The report provides a great insight into the aggerated developments, trends, and investment activities in the Chinese mobility industry. To get more detailed information on the startups, one must look at the additional Excel document, in which one can get detailed information for each startup and filter for relevant information. Finally, there is a one-page startup ecosystem overview chart in which all startups can be seen at a glance.

Industry Overview

Overall, 857 mobility startups were identified through CIMK's unique startup identification process. Looking at the general startup characteristics, it can be seen that the startups are geographically centered, had a startup foundation peak around 2016 and that there is wide variation in the startup funding. The chapter is divided into four subchapters "Startup Ecosystem Foundation", "Startup Mobility Categories", "Mobility Startup Investment Rounds", and "Startup Investor Overview".

Startup Ecosystem Foundation

A majority of the still active mobility startups established after 2010 were founded between 2014 and 2018. As a result of the initial shift to electric mobility and the proclaimed goal of the Chinese government to become the world market leader in the field of e-mobility, a high number of new automotive startups were started. The peak was reached in 2016 with 143 founded mobility startups. The total number of new mobility startups has then declined in recent years. However, it must be considered that this study only counts startups that have received at least one round of funding. On average, it could be seen that the companies need two years (exactly 737 days) to close their first funding round. Therefore, it is possible that some startups, which were founded between 2020 and 2022, have not yet raised a funding round but will do so in the future. The development of the mobility startup foundation can be seen in chart 1.

Looking at where these mobility startups were founded, it can be seen that Beijing, Guangdong Province (Shenzhen and Guangzhou), Jiangsu Province (Nanjing, Suzhou, and Wuxi), and Shanghai are the leading destination. 65% of all new mobility startups have their headquarters in one of these four provinces. This shows a clear concentration on local mobility ecosystems. These provinces already had an existing automotive, technology, and startup ecosystem before and could attract these new startups due to existing network effects. Outside of these four provinces, many new mobility startups are also based in the cities of Hangzhou, Hefei, Wuhan, Chengdu, and Ningbo. These cities were as well known for their present automotive industry. A detailed overview of the startups per province can be seen in chart 2.

With regard to the ownership structure, it can be said that the Chinese state has a significant influence on mobility startups. In around 30% of all mobility startups surveyed, public funds were invested in one of the mobility startups. In 18% of the cases, government investors even hold a significant double-digit share in the company and are thus clearly involved in the company's strategic development. An overview of the number of companies in which public investors are involved can be seen in chart 3.

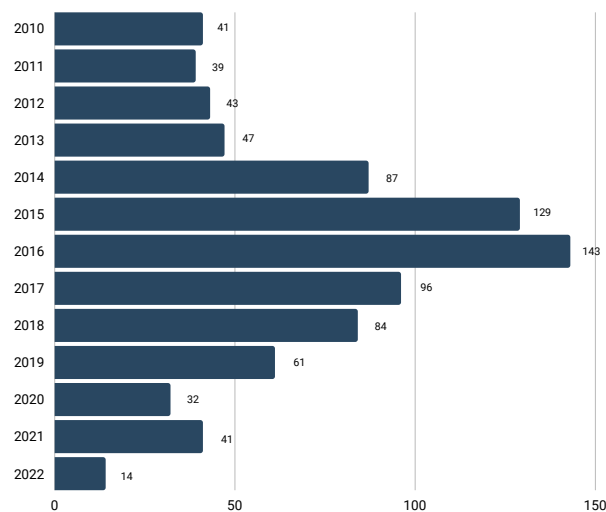*Chart 1: Mobility Startup Foundation per Year (n=857)*

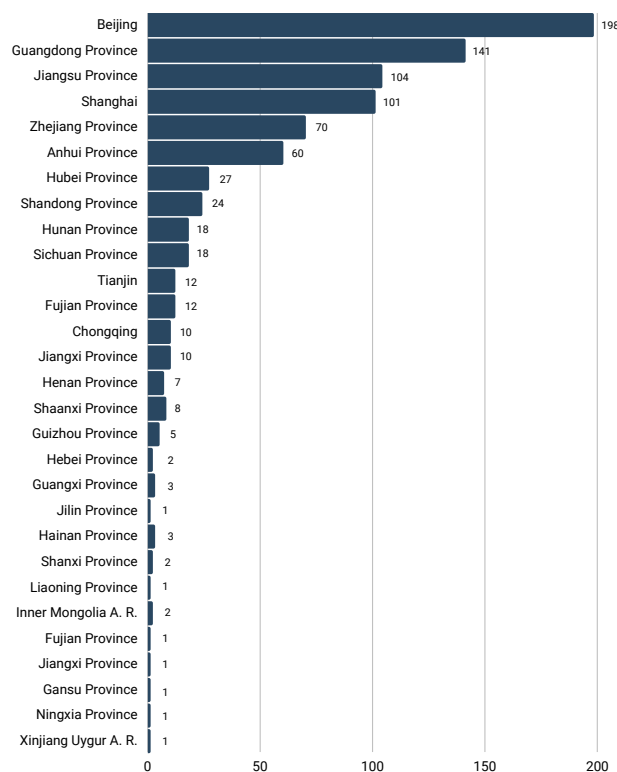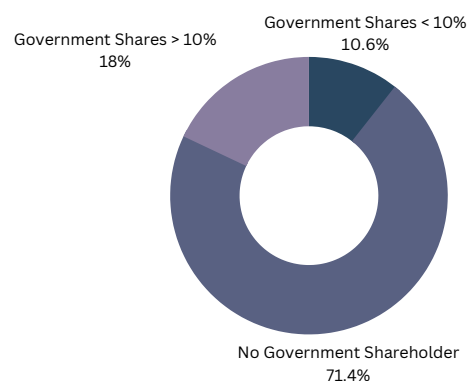*Chart 2: Mobility Startup per Province (n=857)*

Chart 3: Government Investor as Shareholder (N=857)

Startup Mobility Categories

The identified mobility startups were sorted into 24 different startup categories. This classification was done manually based on the company descriptions and the products and services offered by the startups. In general, it can be seen that most startups can be classified into one of the three dominant categories, which are autonomous driving, battery technology, and charging services. Alone in the field of autonomous driving, a total of 167 different startups could be identified. These startups still differ greatly in terms of the customer groups (commercial vs. end consumer vehicles solutions) or the value chain focus (full-time self-driving solutions vs. sensor technology, image processing, or chips).

In addition to self-driving technology, many batteries and charging solution startups offer new innovative technologies, products, and services for new electric vehicles. Much capital continues to be invested in these segments in order to remain global technological leaders in the battery and charging segment. Connectivity and smart cities also play an important role, as various network technologies are used to create smart connectivity within and between cars, enabling various efficiencies.

A total of 42 relevant startups were identified in terms of automotive manufacturers. These include well-known passenger vehicle manufacturers such as NIO, Li Auto, or XPeng, but also many manufacturers producing specialized electric commercial vehicles or two-wheeled vehicles. An overview of the number of startups per startup category can be seen in chart 4.

In terms of invested capital, it can be seen that, by far, the most funds were invested in the new automotive producer startups. Since automotive OEM development is very resource intensive, a lot of capital is required to scale up operations. Generally, the investment volumes are very concentrated in a few areas. The total amount of investment in these mobility startups in the period under review was RMB 551.82 billion. In addition, various software mobility platforms were also financed from the areas of automotive rental and hailing, eCommerce, or financing. However, it must be mentioned here that the amount of some financing rounds was not disclosed. For the companies inside of this report, over 55% of their investment rounds, the investment amount is not disclosed and, therefore, cannot be used in the aggregation at the category level. Consequently, it can only be referred to as a minimum investment amount per startup category. The actual amounts should be significantly larger. An overview of the investment volume in the different startup categories can be seen in chart 5.
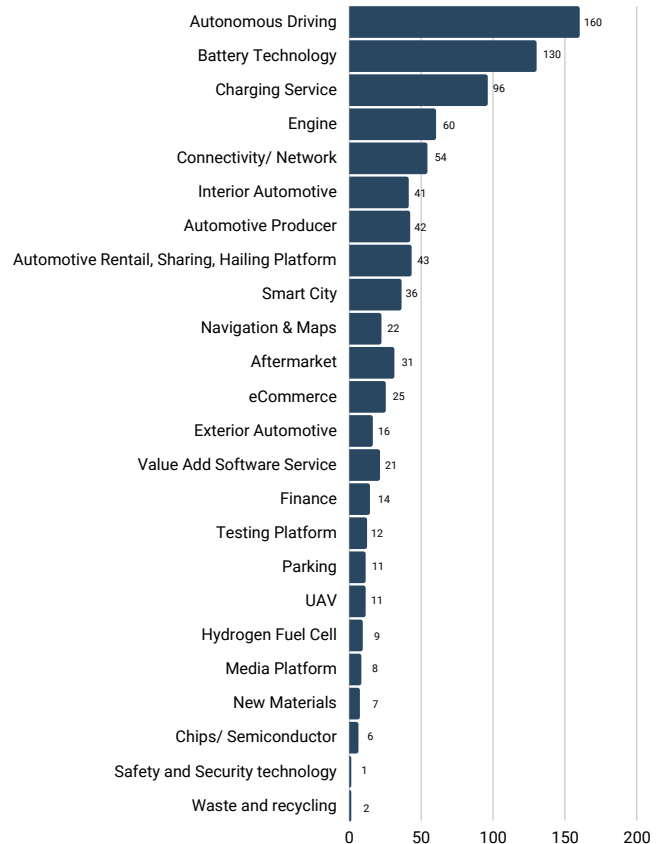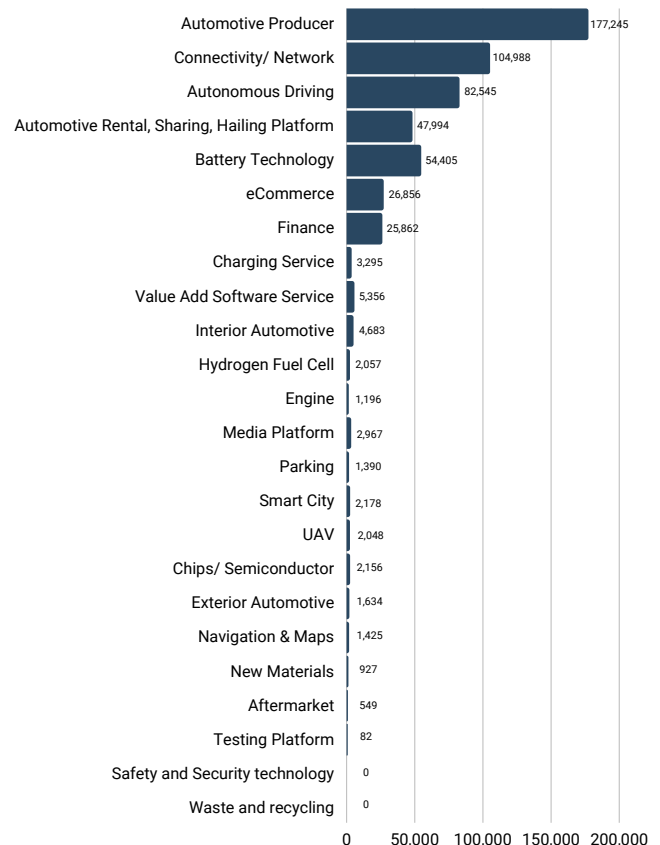
Chart 4: Mobility Startups per Startup Category

Category	Value
Autonomous Driving	160
Battery Technology	130
Charging Service	96
Engine	60
Connectivity/ Network	54
Interior Automotive	41
Automotive Producer	42
Automotive Rentail, Sharing, Hailing Platform	43
Smart City	36
Navigation & Maps	22
Aftermarket	31
eCommerce	25
Exterior Automotive	16
Value Add Software Service	21
Finance	14
Testing Platform	12
Parking	11
UAV	11
Hydrogen Fuel Cell	9
Media Platform	8
New Materials	7
Chips/ Semiconductor	6
Safety and Security technology	1
Waste and recycling	2

Chart 5: Mobility Startups Investment per Startup Category (in Million RMB)

Category	Value
Automotive Producer	177,245
Connectivity/ Network	104,988
Autonomous Driving	82,545
Automotive Rental, Sharing, Hailing Platform	47,994
Battery Technology	54,405
eCommerce	26,856
Finance	25,862
Charging Service	3,295
Value Add Software Service	5,356
Interior Automotive	4,683
Hydrogen Fuel Cell	2,057
Engine	1,196
Media Platform	2,967
Parking	1,390
Smart City	2,178
UAV	2,048
Chips/ Semiconductor	2,156
Exterior Automotive	1,634
Navigation & Maps	1,425
New Materials	927
Aftermarket	549
Testing Platform	82
Safety and Security technology	0
Waste and recycling	0

Mobility Startup Investment Rounds

A total of 2,121 funding rounds were recorded for the 857 mobility startups. The majority of the investment rounds took place in the years 2017-2021. However, there were also considerable investment rounds in the first seven months of 2022 (210 financing rounds). A detailed insight into the development of the number of mobility startup investment rounds can be found in chart 6.

Interestingly, the distribution in terms of investment volume per year looks significantly different. Here it can be seen that the most capital was invested in the years 2018, 2020, and 2021. This development can be explained by the fact that some of the mobility startups, which were founded in the years 2014-2017, now had the opportunity to conduct late-stage investment rounds and IPOs in recent years, which have a multiple of the investment volume of early-stage investment rounds. The total investment volume of the mobility startups over the entire period is more than RMB 550 billion. The investment volume in the first six months of the year 2022 is declining year-on-year. The investment volume per year can be seen in detail in chart 7.

If investment activity in the mobility sector is viewed on a monthly basis, the cooling of the investment activities can be seen even more clearly. While in peak months in 2020 and 2021, more than RMB 27 billion per month were invested in mobility startups, comparable figures in 2022 are significantly lower. The impact of the Shanghai Lockdown can also be seen here, as investment numbers dropped 70%-90% year-on-year in April and May. The total investment volume per month can be seen in chart 8.

Interestingly, it can be seen that there is an opposite development in terms of the number of investment rounds. In the first seven months of 2022, 210 investment rounds were recorded, which is 10% higher than the 190 investment rounds in the same period last year. This is a clear indication that in the early stage area, investment in the mobility segment continues to take place, whereas it currently looks rather negative in the late stage area.
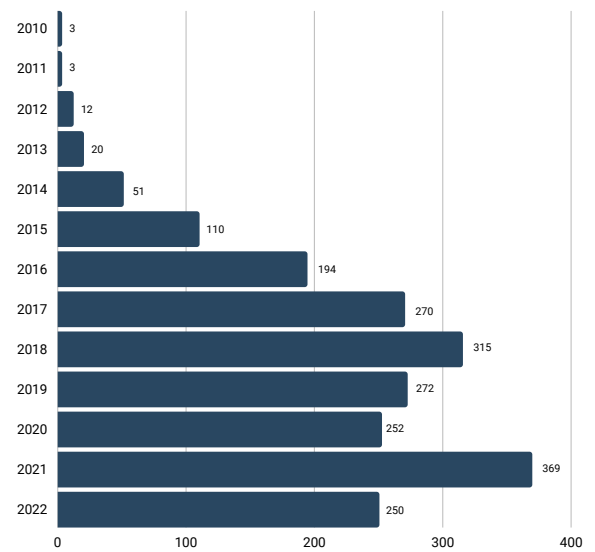

Chart 6: Startup Investment Rounds per Year

Year	Rounds
2010	3
2011	3
2012	12
2013	20
2014	51
2015	110
2016	194
2017	270
2018	315
2019	272
2020	252
2021	369
2022	250

Chart 7: Investment Amount per Year (in Million RMB)

Year	Amount
2010	1
2011	81
2012	51
2013	1,380
2014	1,624
2015	14,104
2016	37,314
2017	43,330
2018	84,613
2019	42,157
2020	125,037
2021	152,271
2022	57,415
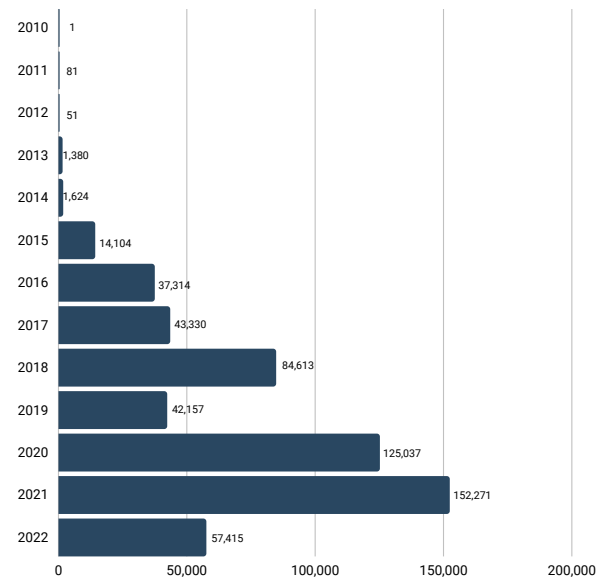
Chart 8: Monthly Investment Round since 2020 (in Million RMB)

27,349 · 27,345 · 27,646 · 11,542
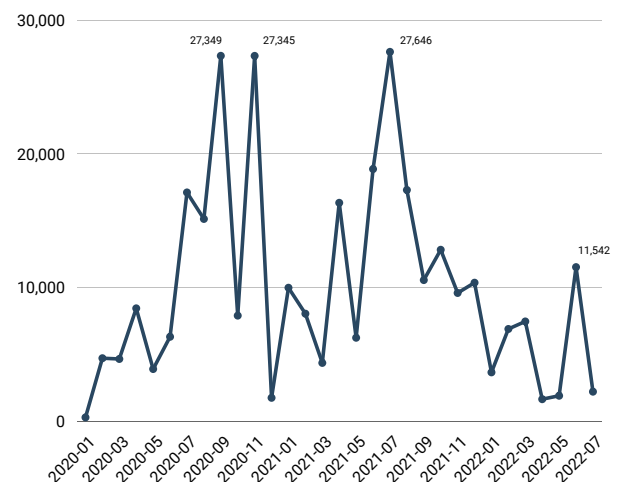
If one now considers what type of financing rounds the recorded startups have received, it becomes apparent that in addition to the classic venture capital rounds (A round, B round, etc.), there are also relevant investment rounds described as equity financing and strategic financing. Equity financing refers to the financing method in which the shareholders of a company are willing to give up part of their equity and introduce new shareholders by way of the directed capital increase. Thereby no traditional financial investor is present. Strategic financing refers to the process by which a company receives investors who do not have the sole objective of financial gain but rather industrial synergies or other objectives to raise capital. The company often brings in investors who significantly impact the business development of the company.

In terms of traditional venture capital investments, it can be seen that early-stage startups got 122 times an Angel round, 203 times an A round, and 74 times a B round as their last investment round. Looking at the later financing rounds, it can be seen that significantly fewer companies have reached these rounds. Currently, there are 34 companies with a C round and 17 companies with a D round as their last funding round. However, it must also be mentioned that 14 companies have achieved an IPO or pre-IPO. A usual pyramid distribution can be seen here, with fewer startups making it from the early stage to the late stage. Chart 9 shows an overview of all mobility startups' last available funding round.

A similar trend can be observed regarding funding amounts per province, like the foundation number of startups per province. Again, there is a strong concentration of startup investment in the provinces of Beijing, Shanghai, Jiangsu, and Guangdong. Startups founded in these four provinces have received more than 85% of all funding amounts, again showing how much capital is concentrated there. The overall distribution of investment volumes among the different provinces can be seen in Chart 10.

In addition, it can be seen that a large proportion of the mobility startups covered (46%) have closed only one funding round to date. The higher the number of funding rounds, the lower the proportion of companies that have achieved this. For example, only 33% of all relevant startups have had more than two investment rounds. The number of investment rounds received by the mobility startups can be seen in Chart 11.
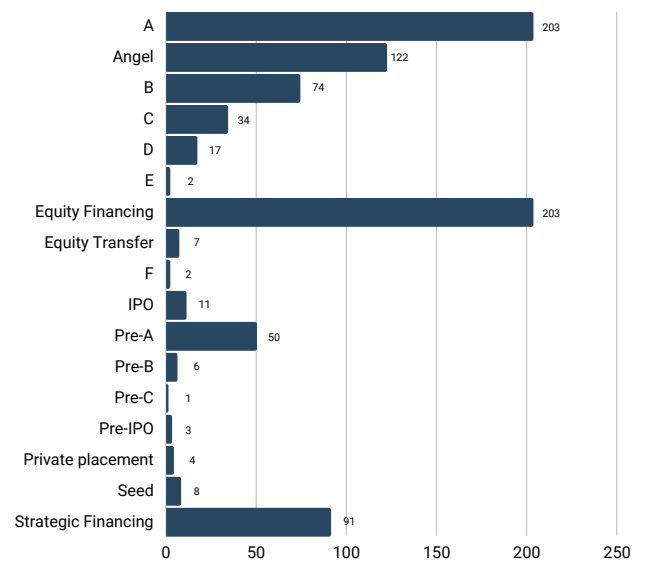

Chart 9: Last Funding Round of Startup

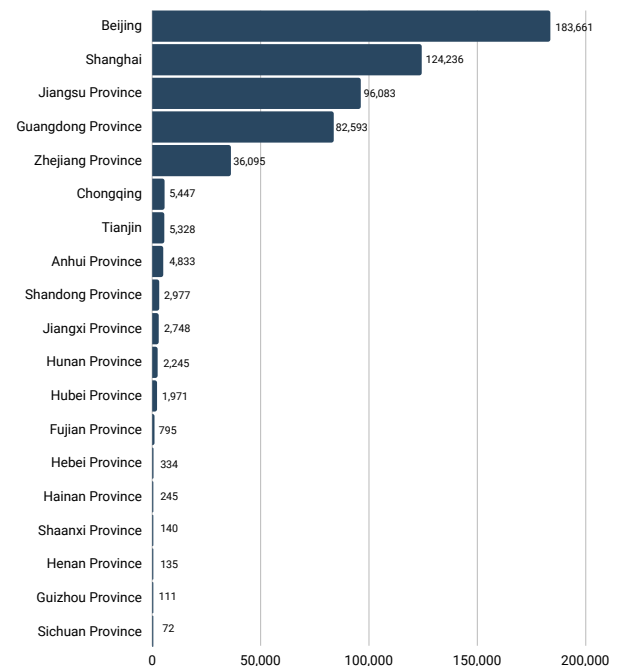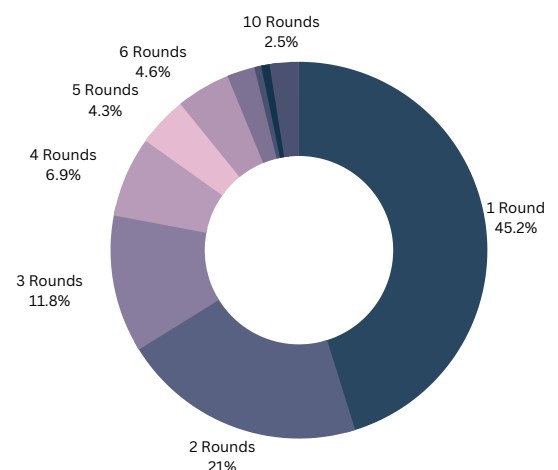*Chart 10: Funding Amount per Province (in Million RMB)*

Chart 11: Number of Funding Rounds of Startups

Startup Investors Overview

The 857 startups have a high number of different investors/ shareholders. A total of 5,286 unique shareholders/ investors were recorded for the startups. All these investors were examined and categorized manually. These investors can be business angels, investment funds, and regular industrial companies. This report focuses more on institutional investors; therefore, all individual investors are further excluded. Here, it can be determined that around 13% of all investors are government-backed investment funds. In comparison to the private investment funds, it could be seen that the government investment funds have done, on average, more mobility investments (1.15 investments vs. 1.079 investments). The following table 1 shows the leading mobility startup investors, including the number of investments made.

Table 1: Leading Mobility Startup Investors

English Name	Chinese Name	Province	City	Foundation Date	Type of Investor	Number of Investment
Advanced Manufacturing Industry Investment Fund II (Limited Partnership)	先进制造产业投资基金二期（有限合伙）	Jiangsu Province	Nanjing	2019-06-18	Gov. Investor	6
Hefei Angel Investment Fund Co.	合肥市天使投资基金有限公司	Anhui Province	Hefei	2017-03-06	Gov. Investor	6
Sanya Baichuan Zhixin Private Equity Investment Fund Partnership (Limited Partnership)	三亚百川致新私募股权投资基金合伙企业（有限合伙）	Hainan Province	Sanya	2021-06-01	Non Gov	5
Shanghai Zhongdian Ronghe New Energy Investment Management Center (Limited Partnership)	上海中电投融和新能源投资管理中心（有限合伙）	Shanghai	Shanghai	2015-10-16	Gov. Investor	5
Small and Medium Enterprise Development Fund (Shenzhen Limited Partnership)	中小企业发展基金（深圳有限合伙）	Guangdong Province	Shenzhen	2015-12-25	Gov. Investor	5
NavInfo Co.,Ltd.	北京四维图新科技股份有限公司	Beijing	Beijing	2002-12-03	Gov. Investor	5
Contemporary Amperex Technology Co.,limited	宁德时代新能源科技股份有限公司	Fujian Province	Ningde	2011-12-16	Non Gov	5
Ningbo Chentao Zhijia Equity Investment Fund Partnership (Limited Partnership)	宁波辰韬智驾股权投资基金合伙企业（有限合伙）	Zhejiang Province	Ningbo	2018-08-10	Non Gov	5
Wuhan Optical Valley talent venture capital partnership (L.P.)	武汉光谷人才创业投资合伙企业（有限合伙）	Hubei Province	Wuhan	2015-08-20	Gov. Investor	5
Shenzhen Capital Group Co.,Ltd.	深圳市创新投资集团有限公司	Guangdong Province	Shenzhen	1999-08-25	Gov. Investor	5
Shenzhen Clou Electronics Co.,Ltd.	深圳市科陆电子科技股份有限公司	Guangdong Province	Shenzhen	1996-08-12	Gov. Investor	5
Hubei Kaihui Yangtze Automobile Industry Equity Investment Fund Partnership(L.P.)	湖北凯辉长江汽车产业股权投资基金合伙企业（有限合伙）	Hubei Province	Wuhan	2017-06-27	Gov. Investor	5
Shanghai Zhangjiang S&t Investment Corp.	上海张江科技创业投资有限公司	Shanghai	Shanghai	2004-10-09	Non Gov	4
Beijing Zhongguancun Development Frontier Enterprise Investment Fund (Limited Partnership)	北京中关村发展前沿企业投资基金（有限合伙）	Beijing	Beijing	2019-04-26	Gov. Investor	4
Beijing Jiuhe Yun Chung Investment Center(L.P.)	北京九合云涌投资中心（有限合伙）	Beijing	Beijing	2015-08-11	Gov. Investor	4
Beijing Siwei Internet Fund Management Center (Limited Partnership)	北京四维互联基金管理中心（有限合伙）	Beijing	Beijing	2017-12-04	Gov. Investor	4
Huajiang Technology Transfer Co.	华控技术转移有限公司	Beijing	Beijing	2014-03-17	Non Gov	4
Taizhou Xili Equity Investment Partnership (Limited Partnership)	台州禧利股权投资合伙企业（有限合伙）	Zhejiang Province	Taizhou	2017-08-28	Gov. Investor	4
Lhasa Zhixing Innovation Technology Co.	拉萨知行创新科技有限公司	Tibet A. R.	Lhasa	2017-02-17	Non Gov	4
Hangzhou Chuangqian Investment partnership(limited partnership)	杭州创乾投资合伙企业（有限合伙）	Zhejiang Province	Hangzhou	2016-11-02	Gov. Investor	4
Shui Mu Hua Qing (Fujian) Investment Partnership (Limited Partnership)	水木华清（福建）投资合伙企业（有限合伙）	Fujian Province	Fuzhou	2018-03-29	Gov. Investor	4
Zhuhai Beiqi Huajin Industry Equity Investment Fund (Limited Partnership)	珠海北汽华金产业股权投资基金	Guangdong Province	Zhuhai	2017-11-29	Gov. Investor	4
Suzhou Qingyuan Huageng Venture Capital Enterprise (Limited Partnership)	苏州清源华擎创业投资企业（有限合伙）	Jiangsu Province	Suzhou	2017-05-09	Gov. Investor	4
Yangtze Chendao(Hubei)New Energy Industry Investment Partnership(Limited Partnership)复制	长江晨道（湖北）新能源产业投资合伙企业（有限合伙）	Hubei Province	Wuhan	2017-06-19	Gov. Investor	4
Qingdao Huajiang Growth Equity Investment Partnership (Limited Partnership)	青岛华控成长股权投资合伙企业（有限合伙）	Shandong Province	Qingdao	2019-12-24	Gov. Investor	4
Shanghai International Automobile City (Group) Co.	上海国际汽车城（集团）有限公司	Shanghai	Shanghai	2001-07-05	Gov. Investor	3
Shanghai Anting Industrial Development Co.,Ltd.	上海安亭实业发展有限公司	Shanghai	Shanghai	1997-03-27	Gov. Investor	3
Shanghai Ameba Baihui Venture Capital Partnership (L.P.)	上海阿米巴佰晖创业投资合伙企业（有限合伙）	Shanghai	Shanghai	2014-11-19	Gov. Investor	3
Dongfeng Jiaoyin Yuanjing Automobile Industry Equity Investment Fund (Wuhan) Partnership (Limited Partnership)	东风交银辕憬汽车产业股权投资基金（武汉）合伙企业（有限合伙）	Hubei Province	Wuhan	2020-11-30	Gov. Investor	3
Citic Securities Investment Co., Ltd	中信证券投资有限公司	Shandong Province	Qingdao	2012-04-01	Gov. Investor	3

Category Deep Dive

In the following chapter, the different mobility startup categories are presented. In total, there are 24 different categories into which all 857 mobility startups were sorted. The number of startups per category varies greatly. Some categories, like Autonomous Driving and Battery Technology, have more than a hundred relevant startups with investment rounds, whereas there are also categories with less than ten startups. Table 2 presents all startup categories, the number of startups per category, and the raised money per category. It should be noted that only investment rounds are included for which the investment size has been disclosed; therefore, the funding values per category are minimal figure.

Table 2: Startup Categories Overview

Startup Category	Startup per Startup Category	Startup Funding in Million RMB
Autonomous Driving	160	82,545
Battery Technology	130	54,405
Charging Service	96	3,295
Engine	60	1,196
Connectivity/ Network	54	104,988
Interior Automotive	41	4,683
Automotive Producer	42	177,245
Automotive Rental, Sharing, Hailing Platform	43	47,994
Smart City	36	2,178
Navigtion & Maps	22	1,425
Aftermarket	31	549
eCommerce	25	26,850
Exterior Automotive	16	1,634
Value Add Software Service	21	5,356
Finance	14	25,862
Testing Platform	12	82
Parking	11	1,390
UAV	11	2,048
Hydrogen Fuel Cell	9	2,057
Media Platform	8	2,956
New Materials	7	927
Chips/ Semiconductor	6	2,156
Safety and Security Technology	1	0
Waste and Recycling	1	0

Following this overview, all startup categories will be discussed individually. Each category receives a brief description and a graphical overview map of all included startups.

Autonomous Driving

Autonomous Driving describes all startups working on complete or partial solutions in the field of self-driving vehicles. There are companies that cover large parts of the self-driving value chain and some companies that only offer products in very specialized areas. In addition to universally applicable autonomous driving solutions, there are also a large number of specialized products for individual applications such as mining vehicles or public transportation.

Startup Map: Autonomous Driving
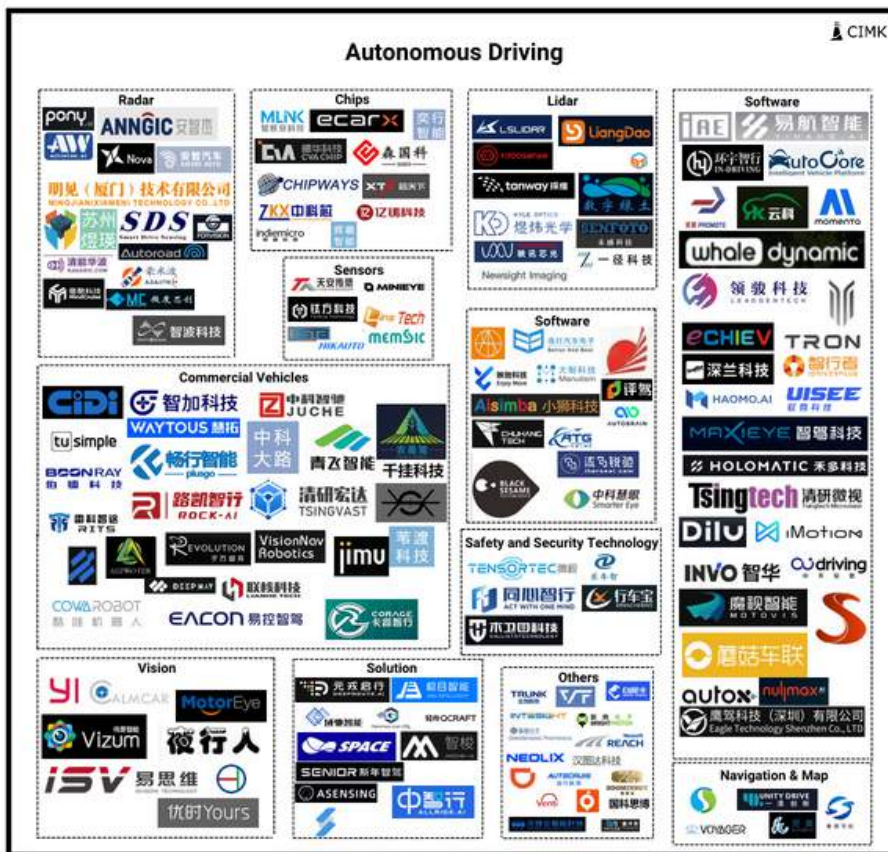
Battery Technology

Battery Technology describes all startups that produce, improve, and research batteries for mobility vehicles. Some companies offer completely own development battery systems solutions for vehicles, whereas many companies are rather suppliers and deliver crucial products and software for automotive battery producers.
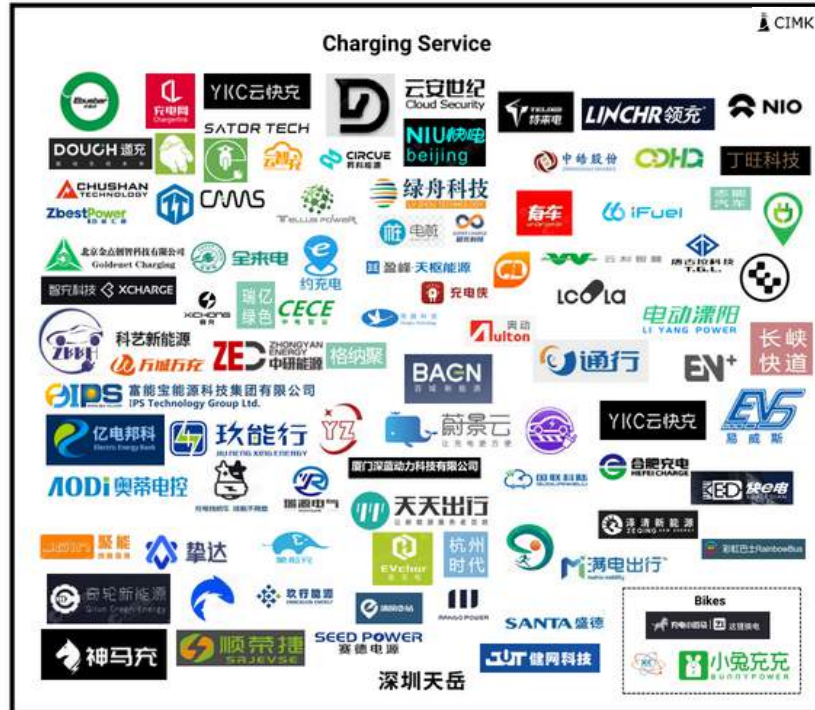
Startup Map: Battery Technology
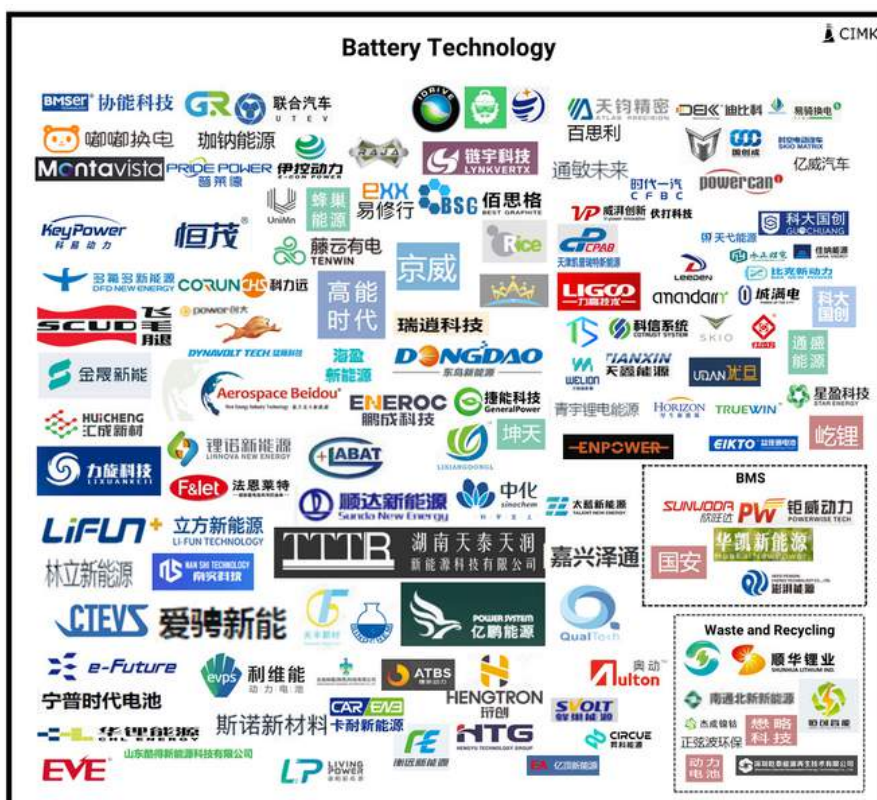
Charging Service

Charging Service describes all startups involved in developing and constructing a nationwide charging network for electric vehicles. Most of the solutions are aimed at electric cars, but a few providers also target two-wheeled vehicles.


Startup Map: Charging Service

Engine

Engine describes all startups that develop and produce novel engines or electrical parts for vehicles. This is a broad category with different areas like power systems, power engines, brakes technology, engine sensors, and emission reduction technology. It includes everything related to the central drive technology and its related fields.

Startup Map: Engine
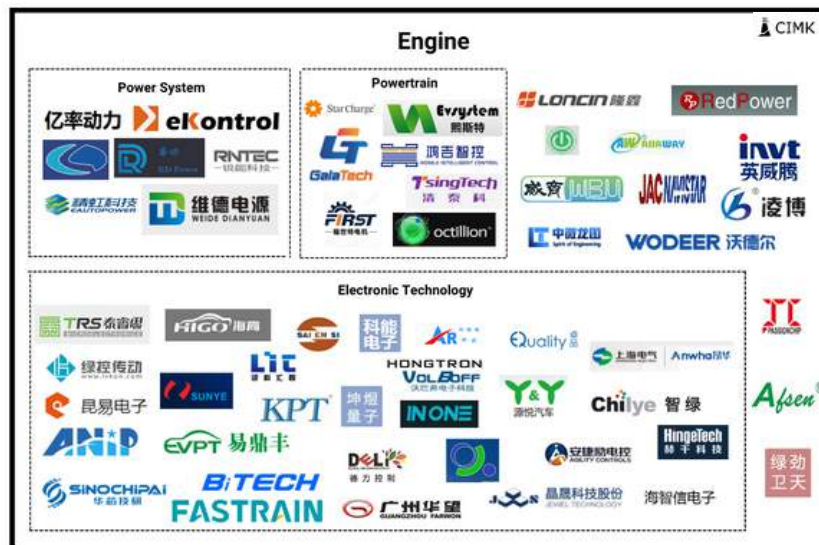
Connectivity/ Network

Connectivity/ Network includes different startups that focus on building an interconnected network between different automotive parts or different vehicles. They use technology like 5G to connect different data sources and offer new services and features that require real-time data exchange.
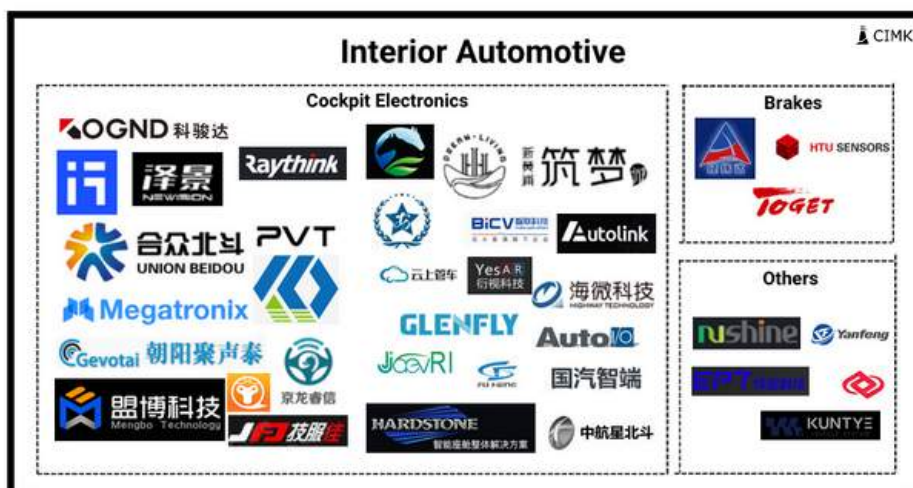
Startup Map: Connectivity/ Network

Interior Automotive

Interior Automotive deals with any type of new product that is installed within a vehicle and is visible to the customer. Examples are new cockpit entertainment systems, seats, or smart heating systems.

Startup Map: Interior Automotive

Automotive Producer

Automotive Producers include all companies that have started developing and producing their own vehicle and selling it to customers. This can be both private passenger vehicles and commercial vehicles for niche markets such as mining or agriculture vehicles. However, the manufacturers of passenger vehicles have clearly been able to gain the most investments.

Startup Map: Automotive Producer
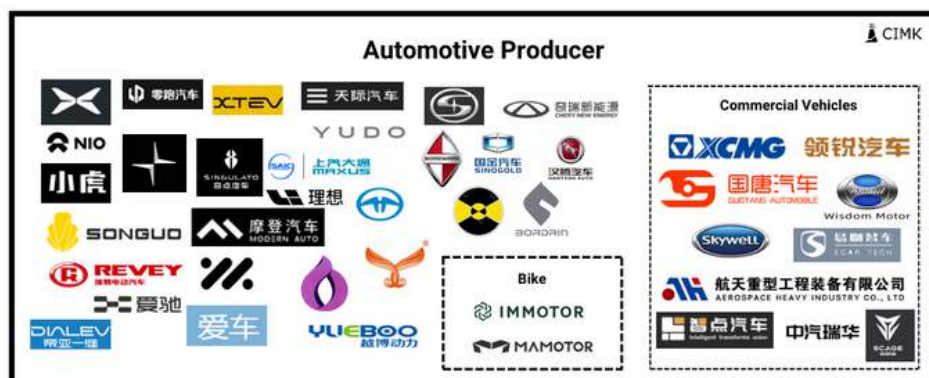
Automotive Rental, Sharing, Hailing Platform

Automotive Rental, Sharing, and Hailing Platforms describe different (mainly APP or WeChat mini program-based) software platforms that allow customers to rent a cab or vehicle for a ride. These are mostly asset-light models, in which the vehicles belong to other people who can earn money by providing the vehicle or service on the platform.

Startup Map: Automotive Rental, Sharing, Hailing Platform

Smart City

Smart Cities applications focus on optimizing and automating mobility on a city-level through network technology, big data analytics, and AI. For example, different technologies can be used to optimize parking space usage, avoid traffic jams, and increase the efficiency of public transportation systems.

Startup Map: Smart City
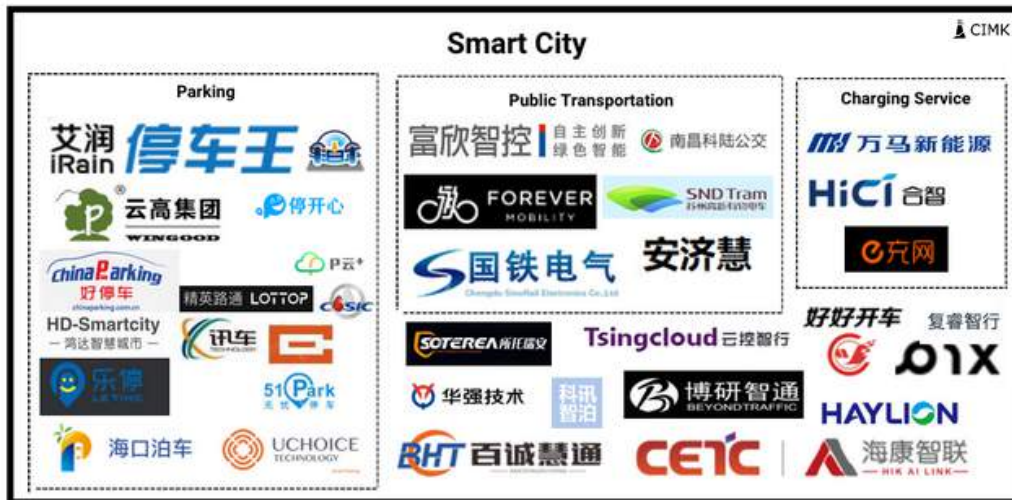
Navigation & Maps

Navigation & Maps includes all applications that enable customers to navigate better and more efficiently on Chinese roads. These software companies often offer their optimized navigation technology via third-party vehicles from other vendors.

Startup Map: Navigation & Maps

Aftermarket

Aftermarket companies provide service platforms for buying parts and accessories that are necessary for repairing or upgrading vehicles. Many new aftermarket startups are trying to shift this industry into the online space and are thereby closely connected to the eCommerce space.

Startup Map: Aftermarket

eCommerce

eCommerce is a growing segment in which customers can purchase vehicles online. Compared to other product categories, many vehicle sales still take place offline. This involves the purchase of a new car and the purchase and acquisition of a used vehicle.

Startup Map: eCommerce

Exterior Automotive

The Exterior Automotive field includes all vehicle parts that are visible from the outside of the vehicle. Examples are doors, paint, bumpers, or even windshield wipers.

Startup Map: Exterior Automotive

Value Add Software Service

Value Add Software Service includes any type of service that enables or significantly improves vehicle usage. This can be intelligent vehicle operating systems, smart logistics applications, or optimized car wash solutions. Excluded are services for vehicle booking and hailing.

Startup Map: Value Add Software Service

Finance

Finance is the area that focuses mainly on automotive vehicle financing. There are a greater number of online platforms that, through smart algorithms, allow customers to finance a new vehicle more easily and quickly.

Startup Map: Finance

Testing Platform

Testing platform startups focus on providing novel solutions that enable vehicle manufacturers to test their tools, production processes, and hardware and software products, which significantly increases the safety of the final vehicles.

Startup Map: Testing Platform

Parking

The parking sector includes all startups that make parking easier, faster, or more efficient or software systems that make parking space management more efficient. Some startups offer intelligent parking aids, while others focus on smart parking through information communication between vehicles and parking lots.

Startup Map: Parking

UAV

UAV stands for Unmanned Aerial Vehicle and refers to flying vehicles that do not have a human pilot or passengers on board. UAVs - sometimes called drones - can be fully or partially autonomous but are more often remotely controlled by a human pilot.

Startup Map: UAV

Hydrogen Fuel Cell

Hydrogen Fuel Cell refers to a new propulsion system focused on hydrogen technology. All startups which offer products that are related to this new type of propulsion technology are included in this segment.

Startup Map: Hydrogen Fuel Cell

Media Platform

Media Platform includes different online platforms for publishing content about automobiles and other vehicles and for users to exchange opinions about different vehicle topics.
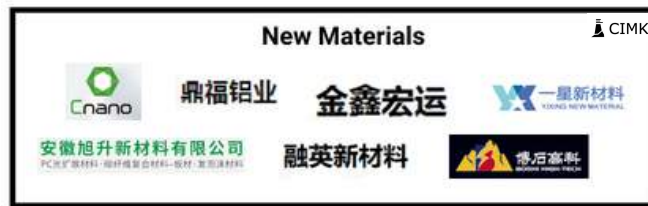
Startup Map: Media Platform

New Materials

New Materials includes all startups that develop new materials for vehicles in order to increase the quality of different vehicle parts. Some examples are polymer nanomaterials, cathode materials for lithium-ion batteries, and aluminum alloy plats.

Startup Map: New Materials

Chips/ Semiconductor

Chips/ Semiconductor describes startups that develop computer chips for automotive vehicles. Due to the global chip shortage and the increasing demand for automotive chips due to the further development of autonomous driving and connected vehicles, many new companies have been founded to solve this shortage.

Startup Map: Chips/ Semiconductor

Safety and Security Technology

Safety and Security Technology refers to a startup whose product line focuses on driving safety recording systems via video imaging system technology.

Startup Map: Safety and Securtiy Technology

Waste and Recycling

Waste and Recycling describes a startup that focuses on recycling waste lithium batteries, power batteries, and lithium-related waste.
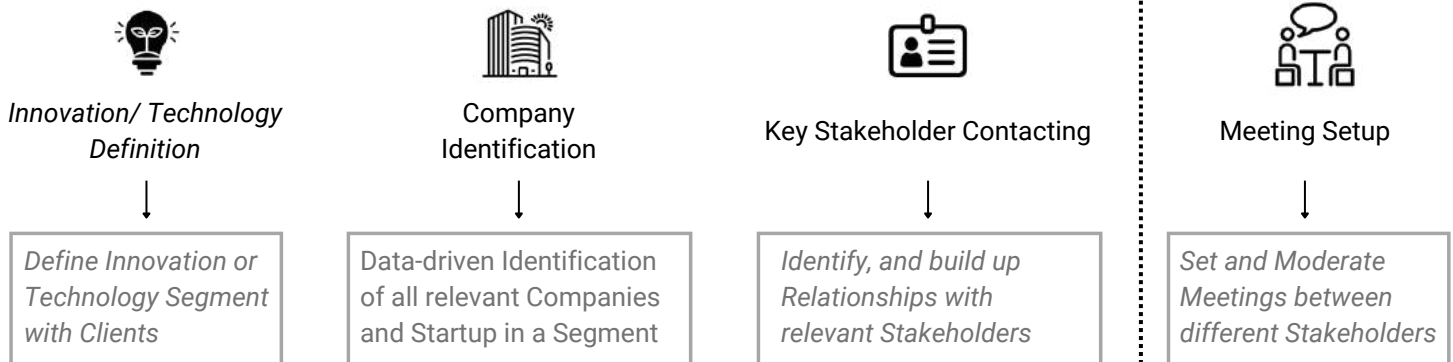
Startup Map: Waste and Recycling

CIMK is an **Innovation Intelligence and Data Analytics Company** based in China
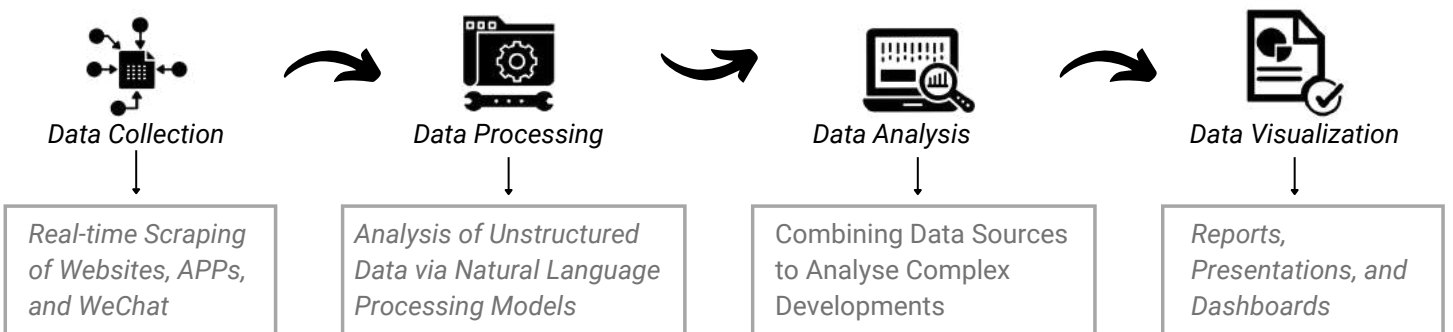
CIMK's Mission

CIMK uses technology to increase transparency around innovation, technological developments, and startups in the Chinese market. We offer our international clients an exclusive opportunity to identify innovations and technological developments in their industry while also offering to put them in direct contact with startups and industrial companies to facilitate mutual exchanges, interesting partnerships, and investments.

CIMK's Innovation Partnership Approach

Innovation/ Technology Definition

Company Identification

Key Stakeholder Contacting

Meeting Setup

Define Innovation or Technology Segment with Clients	Data-driven Identification of all relevant Companies and Startup in a Segment	*Identify, and build up Relationships with relevant Stakeholders*	*Set and Moderate Meetings between different Stakeholders*

CIMK's Data-Driven Approach

Data Collection → *Data Processing* → *Data Analysis* → *Data Visualization*

Real-time Scraping of Websites, APPs, and WeChat	*Analysis of Unstructured Data via Natural Language Processing Models*	Combining Data Sources to Analyse Complex Developments	*Reports, Presentations, and Dashboards*

Management Team

Our Nanjing-based team combines technical skills, industry-specific knowledge, and an intercultural mentality in a way that enables us to help our client to stay up-to-date with all innovations and technological developments in their industry in China.

Lukas Tatge
CEO

Eliyahu Kainyah Yalley
CTO

Shirley Xue
COO

Mandi Yang
Quantitative Research Director

China Startup Ecosystem Report: Mobility