



2017 China Leading Auto Tech 50

Executive Summary

KPMG China
KPMG Innovative Startup Center
August 2018



Contents

01

Auto Tech: Navigating the Future

4

02

Methodology

6

03

Key Insights

9

04

China Leading Auto Tech 50

16

05

Appendix

31

Policy and Regulatory Updates

32

KPMG's Auto Tech Experts

36

KPMG's Auto Industry Insights

37



About KPMG China

39



About the KPMG Innovative Startup Center

40

Disclaimers:

The information contained herein is of a general nature and does not constitute a full and comprehensive representation of KPMG on the short-listed enterprises. KPMG has not performed any audit or review procedures thereon. The information contained herein shall not be taken for professional advice or service. Readers shall not use any information contained herein as the sole basis for their decisions or allow it to influence their decisions. They shall seek the advice of qualified professional advisors before making any decisions or taking any actions.

The information contained herein is provided in its original form. KPMG makes no representations or guarantees, express or implied, with respect to the information contained herein. In addition to the foregoing disclaimer, KPMG does not guarantee that the information contained herein is accurate or satisfies any specific performance or quality standard. KPMG expressly disclaims any implied guarantee, including but not limited to guarantee of merchantability, title, fitness for a particular purpose, non-infringement, security, and accuracy.

Readers are at their own risk in making use of the information contained herein, and assume all liability arising from the use of the information contained herein and the risk of losses resulting from their use. KPMG shall not be liable for any special, indirect, incidental, dependent, or punitive damages or other liabilities arising from the use of the information contained herein. If any part of the foregoing terms is not fully enforceable for any reason whatsoever, the rest shall remain valid.



Honson To
Chairman, KPMG
China and Asia Pacific

Innovation: A business imperative for auto executives

Over the past eighteen years, KPMG has continuously held in-depth discussions with global auto executives to understand the key developments that are impacting the industry. In recent times, automakers are actively exploring opportunities to innovate, with companies under increasing pressure to transform their businesses in order to remain competitive.

The rise of new technologies drives this transformation. Advances in intelligent connected vehicle (ICV) technologies, for example, are reshaping the industry's competitive landscape. Similarly, new business models such as ride sharing are redefining industry conventions, as next generation automobiles are increasingly becoming content and service carriers in addition to being a means of transportation. Automakers need to act fast and adapt to this increasingly complex operating environment or risk being relegated to pure equipment manufacturers. To meet these challenges, many automakers are focusing on either autonomous driving and new energy technologies or transforming into integrated service providers.

It is imperative for auto executives to ingrain innovation as the top business priority. This includes cultivating a corporate culture that promotes internal innovation, and creating an ecosystem to better identify key trends and opportunities. The China auto industry continues to evolve in terms of policies, the operating environment, and market preferences. Successful companies must be ambitious to stay ahead of this ever-changing market and to keep any eye on competition and sector convergence.

Technological developments in autonomous driving and the rise of ride sharing are accelerating development within the Chinese auto industry, and are attracting the attention of leading global auto companies. The aim of this publication is to highlight the achievements made by the industry's top participants and, hopefully, trigger others to step up their game.

Joining hands to ignite auto innovation

As disruption sweeps through the global auto industry, the call for innovation and transformation is also gaining steam in China. Chinese consumers, in particular, have high expectations of what such changes could bring about, which can only be met if stakeholders collaborate and bring about across-the-board changes.

Based on conversations with key industry players and KPMG's own analysis, we found that automotive technology companies are collaborating in new ways: bringing together innovation, idea generation and technical ingenuity. Automotive technology companies are playing a key role in bringing about a new age of transportation that is green, smart, sustainable, and customer-centric.

During the selection process of the China Leading Auto Tech 50, KPMG gained a deeper understanding of the development needs of the industry. Consequently, we were able to leverage on our professional expertise to: (1) integrate resources and accelerate the growth of innovative companies; (2) take advantage of the latest industry trends by bringing together innovative companies with automakers; (3) analyse the various business models adopted by automakers and explore the opportunities for them to innovate and transform.

The focus on innovation and start-ups is a global KPMG strategy and a core component of our operations in China. In 2015, KPMG launched the Innovative Startup Center. A dedicated service team was set up to provide all-round support for innovative start-ups. Our efforts have contributed to the establishment of an innovation-based ecosystem, which encompasses start-ups, investors, corporates, incubators and governments. In addition, we help market participants overcome innovation, development and transformation challenges, accelerate the sharing of resources as well as enhance collaboration.



Philip Ng
Head of
Technology
KPMG China



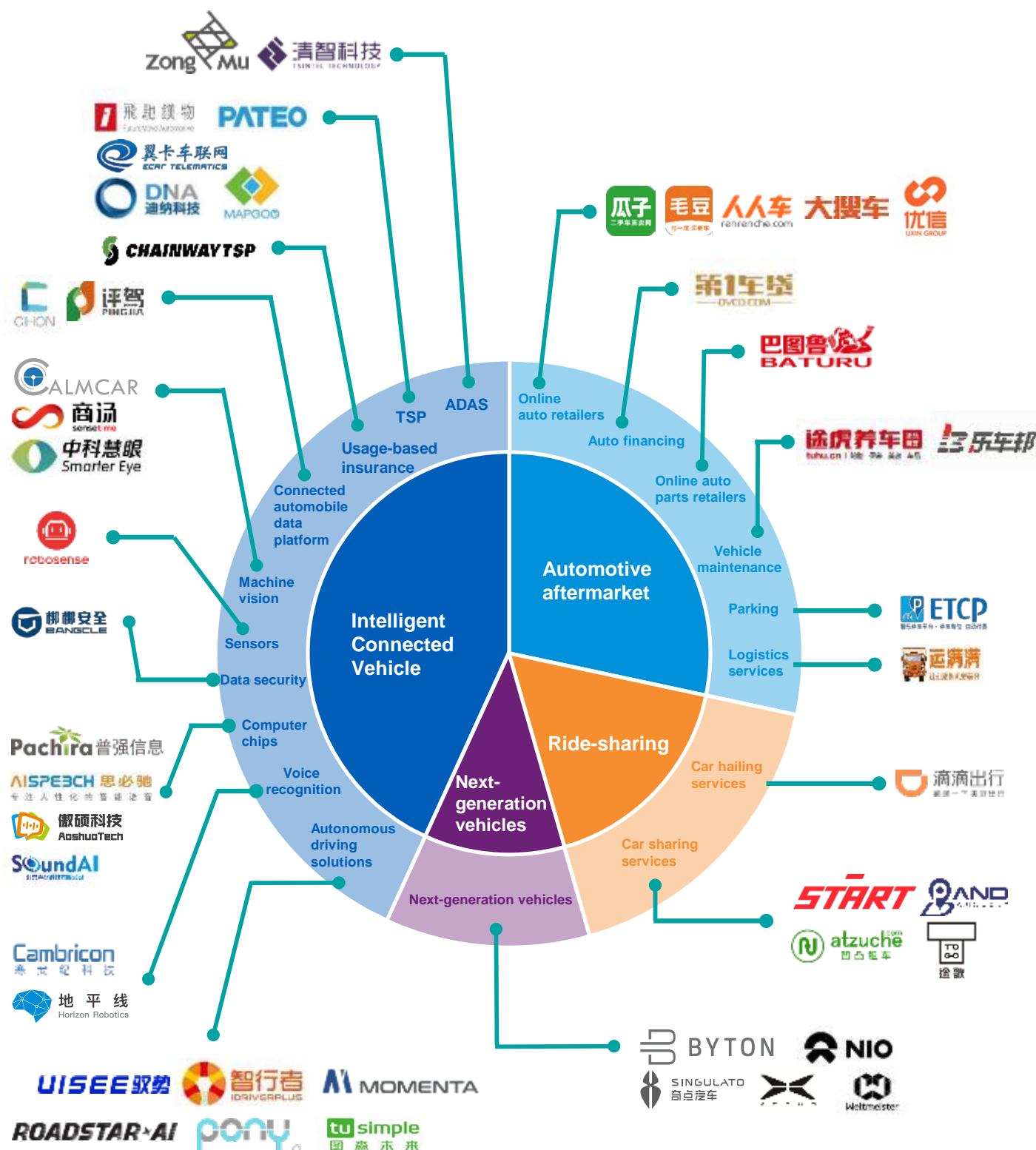
Huu-Hoi Tran
Head of
Automotive
KPMG China



01

Auto Tech: Navigating the Future

Auto Tech: Navigating the Future



Note: This is not an exhaustive list of companies in China Leading Auto Tech 50. This is for illustrative purposes only, with companies placed in no particular order.

© KPMG, a Hong Kong partnership and KPMG Huazhen LLP, a People's Republic of China partnership, are member firms of the KPMG network of independent member firms affiliated with KPMG International Cooperative. KPMG and KPMG Huazhen LLP, together with various affiliated entities operate in the People's Republic of China including Hong Kong SAR and Macau SAR, as KPMG China. KPMG International Cooperative is a Swiss entity. Member firms of the KPMG network of independent firms are affiliated with KPMG International Cooperative. © KPMG International Cooperative provides no client services. KPMG rights reserved.

02

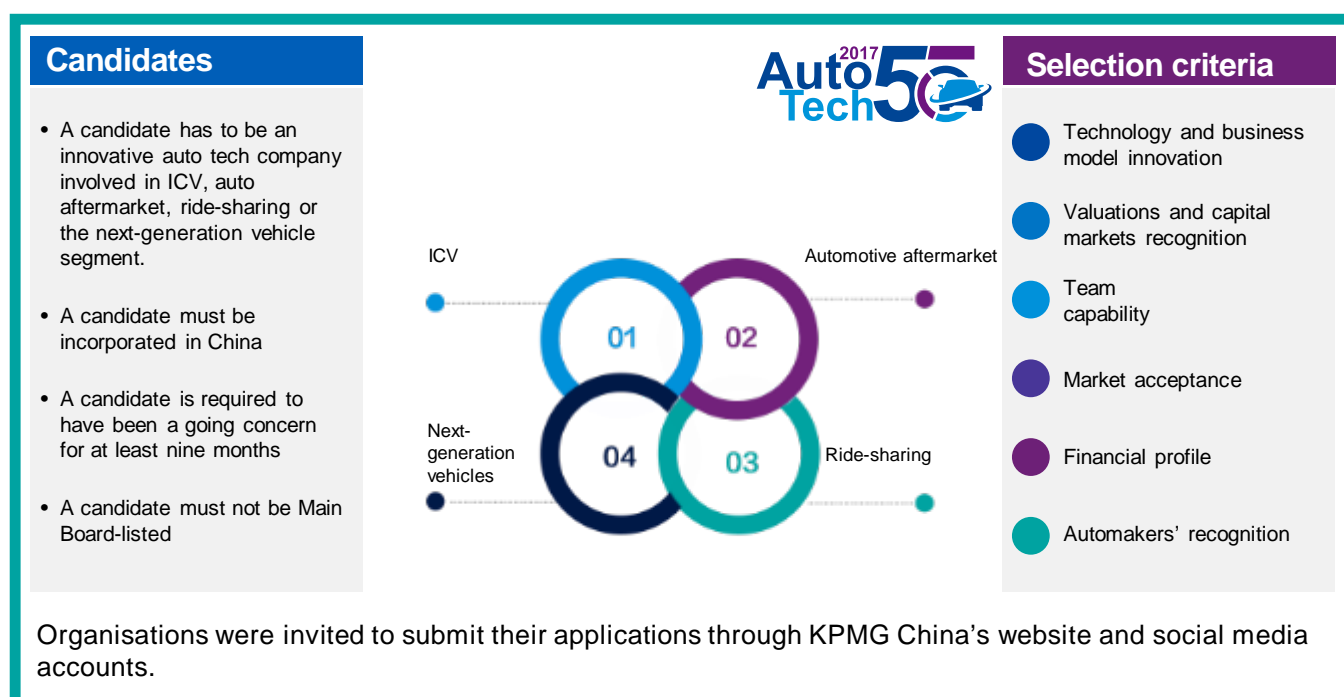
Methodology



About China Leading Auto Tech 50

As a leading professional services firm, KPMG has always viewed the technology industry with great importance. In recent years, advances in technology have brought about new business models and technology innovation, which have propelled the automotive and transportation services sector into new heights.

The China Leading Auto Tech 50 was established to promote the further development of China's automotive technology sector and support the growth of innovative start-ups. The selected companies are mostly Chinese start-ups involved in ICV, automotive aftermarket, ride-sharing and the next-generation vehicle segment. Selected companies are required to have been a going concern for at least nine months and are not listed on a major stock exchange. Companies are selected based on a comprehensive process involving online evaluations, interviews, and review by a select group of industry experts.



* Selection process

Companies were selected according to the KPMG business insights model and the decisions of our Review Board, which consisted of around 30 partners from KPMG China and other member firms globally. Their expertise encompass automobile, data analytics, cybersecurity, capital markets, venture capital and risk management.

The team of experts conducted on-site interviews to understand the candidates' general capabilities, technology and business model innovation, valuations and capital markets recognition, market acceptance, financial profile and future prospects.



Companies were selected based on the following method:

01 Desktop research

Our long-standing history with the auto industry enables us to conduct in-depth analysis on key market segments such as ICV, auto aftermarket, transportation means and next-generation vehicles. Initial research was conducted to uncover the latest developments in the industry ecosystem and benchmark companies against the leading players in each category.

02 Data analysis

We analysed the data of over 4,000 companies using KPMG's big data platform for China's auto industry. The KPMG business insights model was also adopted to quantitatively evaluate applicants. The evaluation was conducted based on a number of factors such as product quality, technology, team composition, market recognition, and financing capabilities.

03 Field interviews

The Review Board conducted on-site interviews with the founders and senior management of the applicants. The interviews reviewed applicant's operations and future development strategies as well as evaluated them based on six factors - general capabilities, technology and business model innovation, valuations and capital markets recognition, market acceptance, financial profile and future prospects.

04 Expert interviews

KPMG also took into account the views of industry experts, including senior business executives and researchers through a series of interviews and compared the results of the field interviews against the experts' perspectives on industry's development history, its current status and key future trends.



03

Key Insights

```
def poll(cls, context):
    return context.active object is not None
    mirror_mod = modifier_ob.modifiers[0]

    # set mirror object to mirror_ob
    mirror_mod.mirror_object = mirror_ob

    if _operation == "MIRROR X":
        mirror_mod.use_x = True
        mirror_mod.use_y = False
        mirror_mod.use_z = False
    elif _operation == "MIRROR Y":
        mirror_mod.use_x = False
        mirror_mod.use_y = True
        mirror_mod.use_z = False
    elif _operation == "MIRROR Z":
        mirror_mod.use_x = False
        mirror_mod.use_y = False
        mirror_mod.use_z = True

    #selection at the end -add back the
    mirror_ob.select= 1
    modifier_ob.select= 1
    bpy.context.select= 1
    print("selected" + str(modifier_ob))
    none = bpy.context.selected_objects[0]
    bpy.data.objects[one.name].select = 1
    except:
        print("please select exactly two objects")

class MirrorTool
    """This tool
    """
    bl_idname = "object_mirror_mirror_x"
    bl_label = "Mirror X"

    @classmethod
    def poll(cls, context):
        return context.active object is not None

class MirrorX(bpy.types.Operator):
    """This adds an X mirror to the selected object"""
    bl_idname = "object_mirror_mirror_x"
    bl_label = "Mirror X"

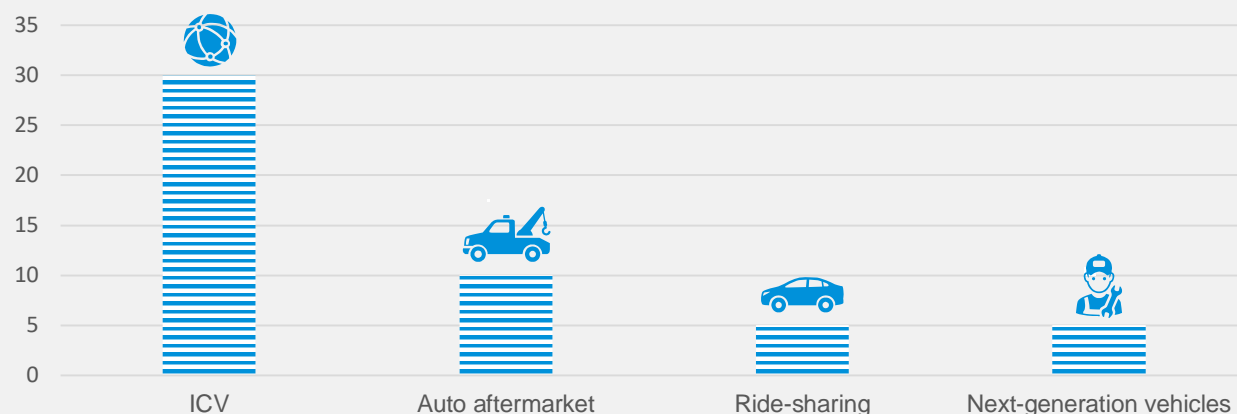
    @classmethod
    def poll(cls, context):
        return context.active object is not None
```

Key Insights

The following is a breakdown of the China Leading Auto Tech 50 companies:

1) Core business

Number of companies



Companies engaging in ICV were the largest group within the China Leading Auto Tech 50. Driven by technological advances, stimulus policies, and increased investment, the development of autonomous driving took off in 2017. A large number of start-ups are actively working on new products and conducting trials which strengthen the case for autonomous driving as a major component of future mobility.

The auto aftermarket segment also grew rapidly, with several companies emerging as market leaders. Following years of development, leading ride-sharing companies are now able to generate economies of scale, with some turning a profit through innovative business models. Meanwhile, the development of next-generation vehicles requires significant capital, which poses a high barrier of entry. Consequently, there are few start-ups operating in this segment.

Note: All analysis based on information disclosed by the enterprises

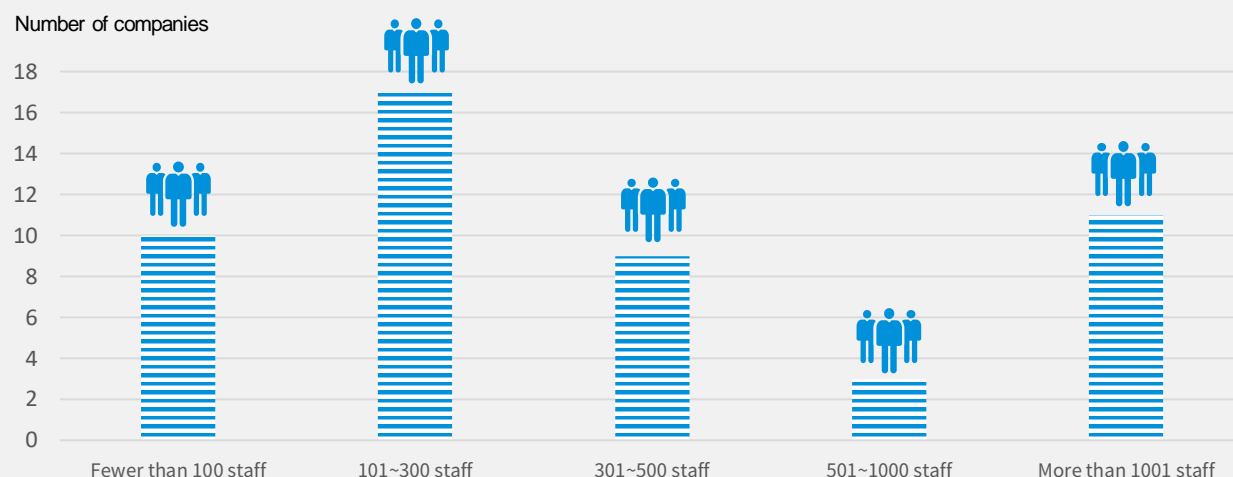
2) Geographical distribution



Automotive technologies bring together top talent from the information technology and automotive industries. Our analysis of the geographical distribution of auto tech companies revealed that tier-one cities, including Beijing, Shanghai, Guangzhou and Shenzhen, were able to better attract and train tech professionals. Neighbouring cities can complement tier-one cities by focusing on their advantages in automotive manufacturing and deep talent pool. Many vehicle parts manufacturers and aftermarket service providers are located in cities neighbouring Beijing, Shanghai, Guangzhou and Shenzhen.

Note: All analysis based on a company's city of incorporation

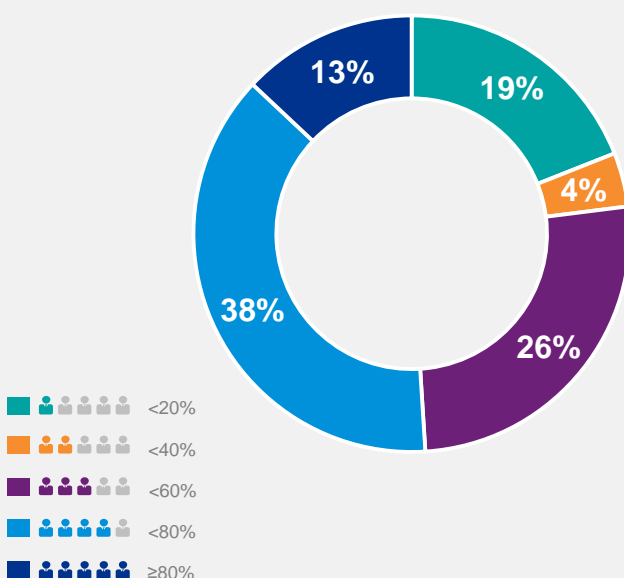
3) Company size



The majority of companies in the China Leading Auto Tech 50 have more than 100 staff. Firms with more than 1,000 staff are mostly operating in the auto aftermarket or next-generation vehicle segments.

Note: All analysis based on information disclosed by the enterprises

4) Proportion of technical professionals



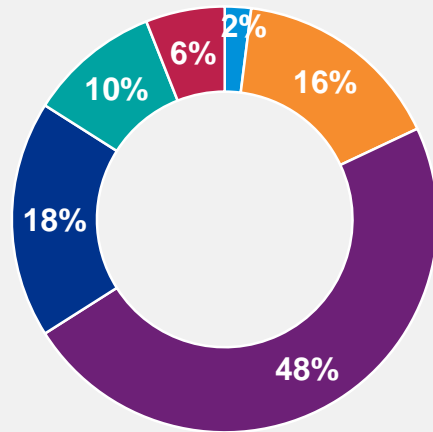
Product development and technological innovation are essential components of an auto tech company. Leading this charge for innovation is the firm's team of technical professionals.

According to our analysis, most ICV companies operate in the B2B segment and are particularly focused towards automakers. As a result, ICV companies tend to have a higher proportion of technical professionals.

On the other hand, auto aftermarket and ride-sharing service providers mostly adopt B2C business models, which require a higher proportion of marketing and operational professionals, and they have relatively fewer technical staff.

Note: All analysis based on information disclosed by the enterprises

5) Operating history



■ Within 1 year
■ 2-5 years
■ 7-10 years
■ 1-2 years
■ 5-7 years
■ Above 10 years

The majority of the companies on the list have been operating for two to five years.

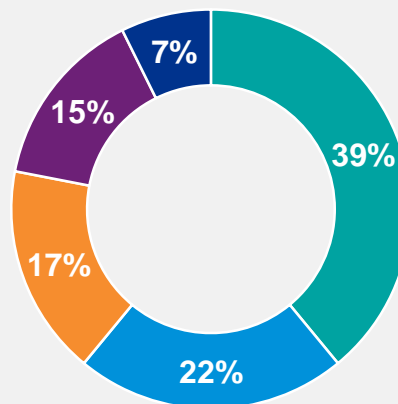
Based on our on-site interviews and observations, possessing a vibrant corporate culture and workforce of newer companies is a key driver of innovation, and these companies integrate talent with different lengths of industry experience.

Note: All analysis based on information disclosed by the enterprises and calculated from their date of incorporation

6) Valuations

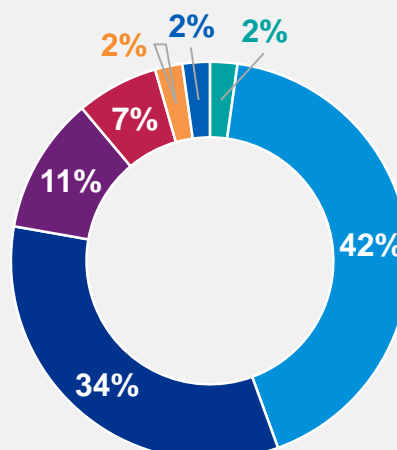
In recent years, auto tech companies have become a hot spot for venture capitalists, which resulted in a surge in valuations.

However, given the short operating history of the majority of auto tech companies, around 93% of the firms in the list were valued below RMB 20 billion.



■ \$ \$ \$ \$ \$ < RMB 1 billion
■ \$ \$ \$ \$ \$ < RMB 3 billion
■ \$ \$ \$ \$ \$ < RMB 7 billion
■ \$ \$ \$ \$ \$ < RMB 20 billion
■ \$ \$ \$ \$ \$ > RMB 20 billion

Most of the companies in the list have completed Series A and B funding. The majority are focusing on optimising their business models and expanding their market and customer base.



■ Angel investment
■ Series A
■ Series B
■ Series C
■ Series D
■ Series E
■ Strategic investment

Note: All analysis based on information disclosed by the enterprises

Key Insights Highlights

1

Traditional OEMs collaborating with Auto Tech companies to build open ecosystems

This collaboration goes beyond acquisitions or investment. It focuses on the establishment of incubators or accelerators and the creation of an innovative and entrepreneurial ecosystem. As cross-field collaboration becomes the new normal, data accumulation and rapid knowledge generation are now the fuel for innovation.

2

Autonomous driving solutions making progress in China

The pursuit of efficiency, safety and convenience has led to the rise of autonomous driving solutions in China. The segment's future success hinges on technological breakthroughs in areas such as sensor fusion technologies, chip processing performance and specific AI algorithms.

3

“Intelligent” cars: The link between machine, human and infrastructure

Developments in the vehicle-to-human (speech, gesture, facial recognition) and vehicle-to-infrastructure communication interface will be key to the development of “intelligent” cars. To achieve this objective, Auto Tech companies are focusing on interoperability and AI research.



Key Insights Summary

4 User-centricity the key focus of auto tech companies

Auto tech companies need to adopt a customer-centric approach in order to ensure that they are able to meet the changing needs and wants of customers in a timely manner. Many auto tech companies possess nimble operations and are able to bring products and services to market quickly, while by collaborating with OEMs, auto tech companies have the opportunity to scale their products and services quickly.

In addition, initiatives such as personalised products and loyalty or credit points can help companies collect customer behaviour data, which would enable them to provide better services throughout the product lifecycle and improve subsequent products.

5 Opportunities within the Internet of Vehicles ecosystem

Internet of Vehicles (IoV) offers opportunities for auto tech companies to innovate. For example, foremost intelligent services and intelligent transportation solutions such as Mobility-as-a-Service and Transportation-as-a-Service (MaaS & TaaS) are required to meet customers' mobility demands, which rely on the IoV ecosystem to function.

Business model innovation calls for a new approach towards data management and operations. This, however, requires OEMs and auto tech companies to have the foresight and readiness to undergo an organisational transformation.

6 Monetising data

Data is a valuable asset within the IoV ecosystem. Data can be collected within the car, exchanged by the vehicle to other systems (V2X), and also exploited to enhance the user experience. The key to monetising data lies in the use of big data solutions. A number of auto tech companies are already developing solutions such as MaaS and usage-based insurance (UBI).



Key Insights Summary

7 Shifting consumer mindset: Own, rent and share

Changing customer behaviors impact the way auto tech companies operate. Customers are currently transitioning towards a “own, rent and share” approach to vehicle usage and this is causing businesses to rethink their sales approach and keep users engaged in an online-offline-online cycle to reflect changing definitions of ownership and refining how products are offered.

8 Digital aftermarket

The auto aftermarket is going through a rigorous transformation as online platforms are providing customers better access to information and transparency. This is benefitting the used car market, while providing the opportunity for the parts business and aftersales services providers to offer new omnichannel business models.

9 Aftermarket competition benefiting customers

The aftermarket's transition towards online platforms will inevitably lead to a rise in competition. This forces businesses to innovate, provide more competitive pricing and higher level of service – all of which are beneficial to customers.

10 Policy-driven development

Policy makers are the biggest drivers of the China auto tech industry. A conducive policy and regulatory environment has helped propel the industry's growth over the past decade. This provides auto tech companies with a solid foundation to test and launch innovative products or services. Policies are expected to play a significant role in the short- to medium-term.



04

China Leading Auto Tech 50

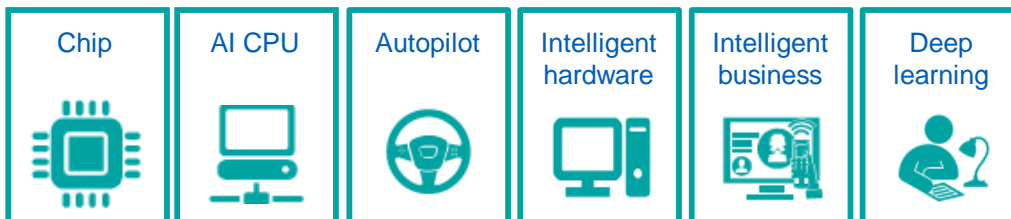


China Leading Auto Tech 50

Intelligent Connectivity – Chip (Electronics)

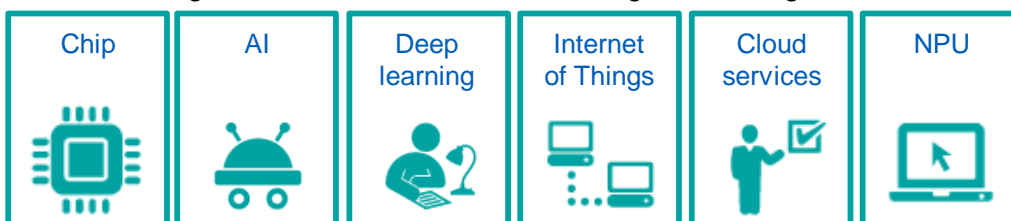
Horizon Robotics 地平线

Horizon Robotics creates high-performing, low-consumption, low-cost and open embedded artificial intelligence solutions. The company developed China's first world-class open embedded AI vision chip. Its business approach is based on the concept of "Algorithm + Chip + Cloud".



Cambricon Technology 寒武纪科技

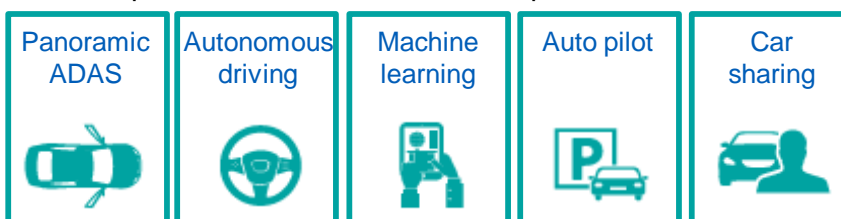
Cambricon Technology is a company dedicated to the production of AI chips, including Network Processing Units (NPU). The company creates core processor chips for all types of intelligent cloud servers, intelligent terminals, autonomous driving, and intelligent robots.



Intelligent Connectivity – Advanced Driver Assistance Systems (ADAS)

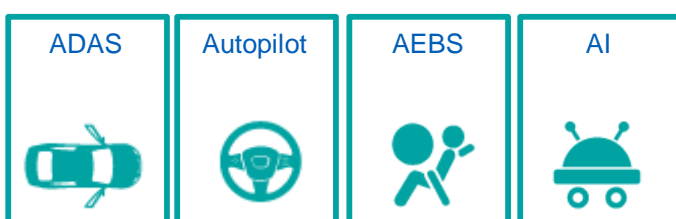
Zong Mu Technology

Zong Mu Technology aims to becoming a global leader in driving assistance and autonomous driving solutions. A first-tier supplier, the company incorporates AI algorithms into its auto products. Many of its ADAS products are included in mass-produced models.



Tsintel Technology

Tsintel Technology's industrialised R&D approach focuses on the reliability, safety and cost. Its core products can be found in ADAS & autonomous driving vehicles.



Source: Official company description, websites and interviews

China Leading Auto Tech 50

Intelligent Connectivity – Autonomous driving solutions

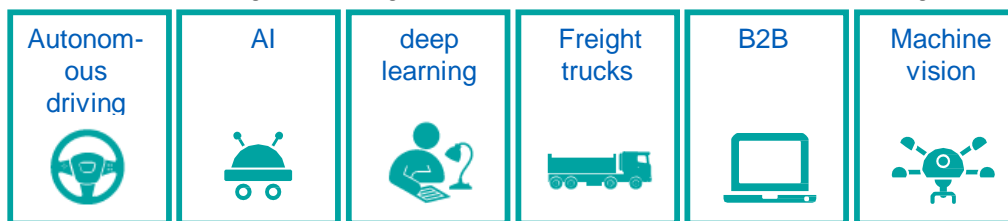
Roadstar **ROADSTAR·AI**

Roadstar.ai is an AI start-up that specialises in level 4 autonomous driving technologies. It focuses on providing efficient autonomous driving solutions for future transportation needs using a unique and robust multi-sensor framework.



Tu Simple **tu simple** 图森未来

Tu Simple is an AI company that focuses on the development and application of autonomous freight trucks. Their research centres in China and US are developing machine-vision-based level 4 autonomous driving technologies and have obtained road test licensing in California.



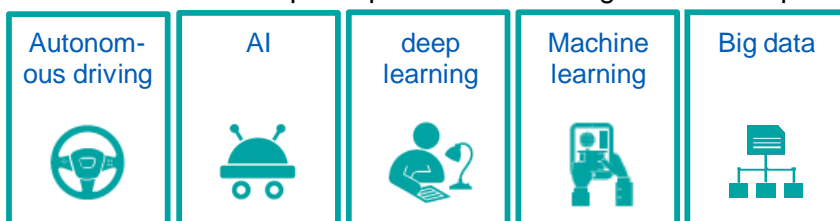
Momenta **MOMENTA**

Momenta develops autonomous driving technologies and data services. Its core technologies are environmental evaluation, high-precision mapping and a driving decision algorithm based on deep learning.



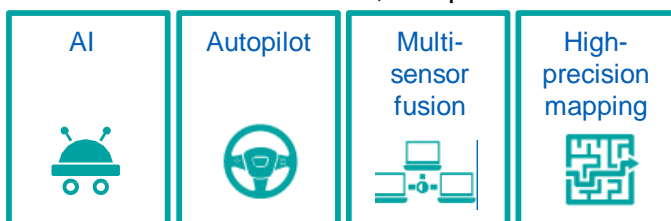
UISEE **UISEE 驭势**

UISEE Technology uses AI and big data to solve traffic and logistical issues related to autonomous driving solutions. UISEE has pilot operations revolving commercial parking and airports.



Pony.ai **pony.ai**

Pony.ai aims to create safe and reliable auto technologies for autonomous vehicles. It has research centres in China and the US, and plans to deliver its solutions globally.



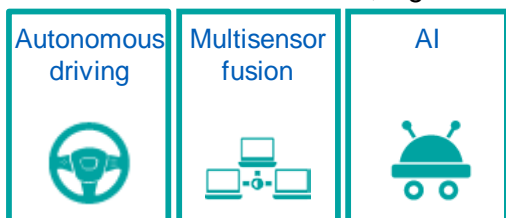
Source: Official company description, websites and interviews

China Leading Auto Tech 50

Intelligent Connectivity – Autonomous driving solutions

IDriver Plus

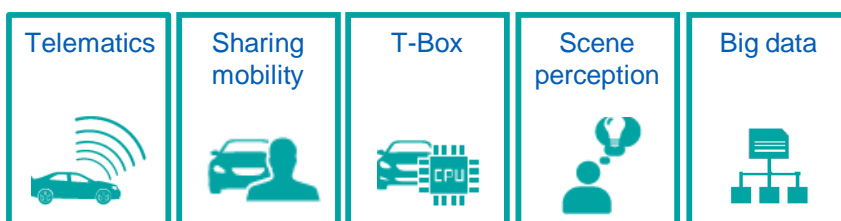
IDriver Plus manufactures both low-speed and high-speed autonomous driving vehicles. Its low-speed models consist of commuter, logistical and operational vehicles such as street sweepers.



Intelligent Connectivity – Telematics Service Providers

FutureMove Automotive

FutureMove Automotive provides service and information-based solutions to the Connected Vehicle industry. Its primary business includes a cloud-based platform, telematics (T-Box), digital operational support and mobility services.



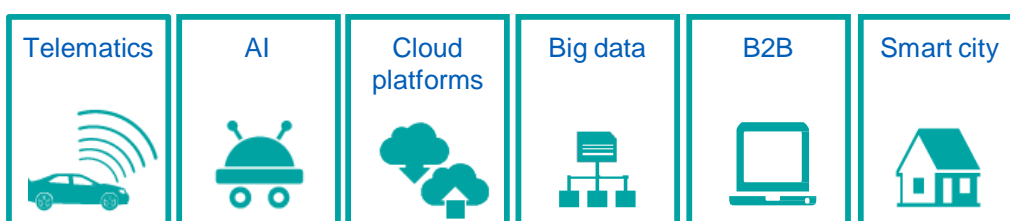
MapGoo

MapGoo specialises in telematics cloud services and big data operations. Its core businesses consist of the application of telematics cloud services, intelligent hardware, big data and AI.



PATEO

PATEO is a telematics company providing both hardware and software solutions for active safety technologies, auto electronics, communications, interfacing and customer experience, PaaS, AI, IoT and wearable devices.



Source: Official company description ,websites and interviews

China Leading Auto Tech 50

Intelligent Connectivity - TSP

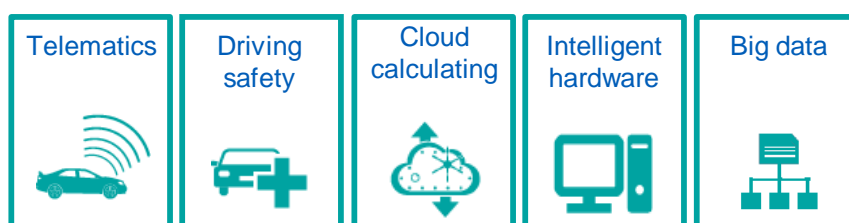
Ecar Telematics 翼卡车联网 ECAR TELEMATICS

Ecar Telematics is a traffic safety service platform, which is based on customer and vehicle data from free emergency-response services. Ecar provides data support services, including usage-based car insurance, high-precision maps, vehicle financing and autonomous driving.



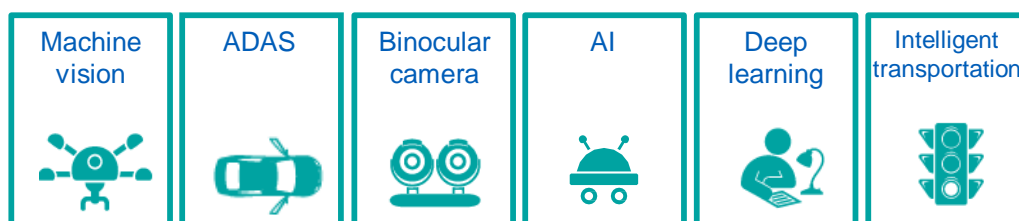
DiNA Technology DNA 迪纳科技

DiNA is a telematics platform and solutions provider. Its business includes comprehensive end products, telematics applications and tailored telematics solutions.



CalmCar CALMCAR

CalmCar develops embedded vision products based on deep learning technology. It provides visual perception systems for autonomous driving and driving analysis. CalmCar's products are used in active safety, mobile robots, intelligent transportation and intelligent security.



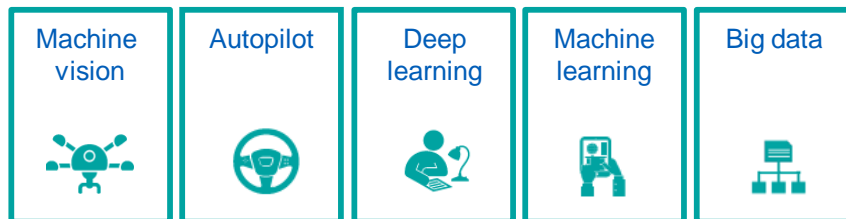
Source: Official company description, websites and interviews

China Leading Auto Tech 50

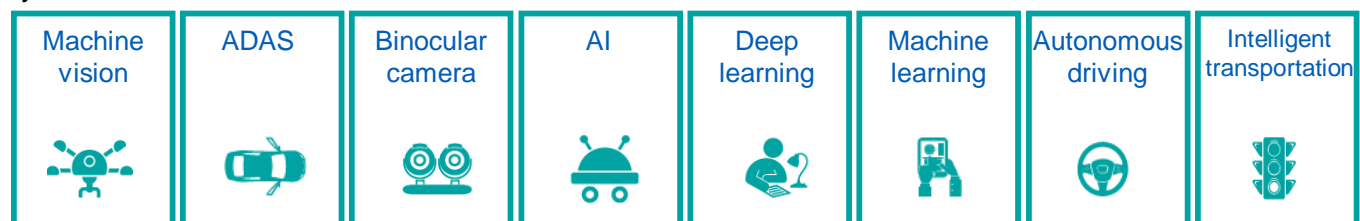
Intelligent Connectivity- Machine vision



SenseTime Technology is an AI company, which uses deep learning platforms and products to accelerate the industry's development. It is an integral part of China's deep learning and AI ecosystem.



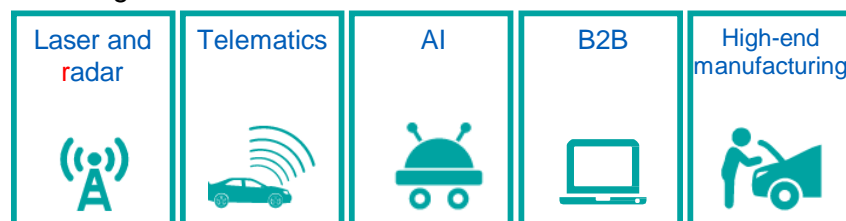
Smarter Eye is a high-tech company that focuses in the research and development of autonomous driving systems.



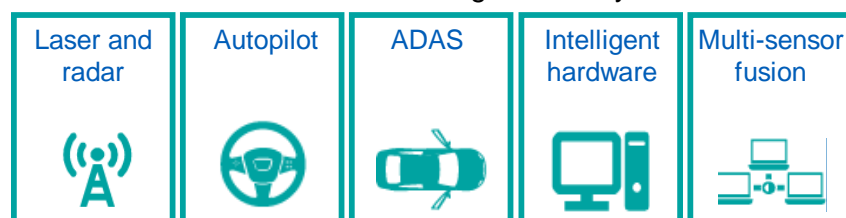
Intelligent Connectivity - Sensors



SureStar engages in the R&D of laser and radar systems as well as AI technologies. It claims to be the only company in the world with manufacturing capabilities in both measurement and navigational laser scanning.



Hesai Photonics is a laser sensor and autonomous driving solutions provider. It specialises in designing and manufacturing laser sensors, including LiDARs (3D scanners for self-driving cars and robots) and gas leak remote sensors for the natural gas industry.



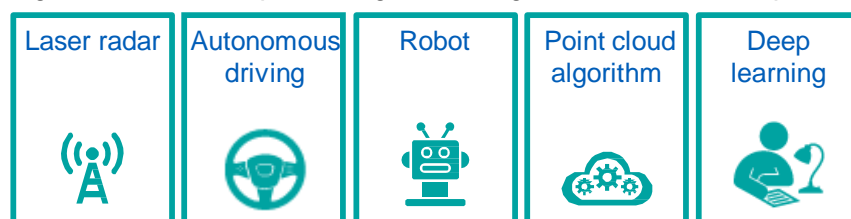
Source: Official company description, websites and interviews

China Leading Auto Tech 50

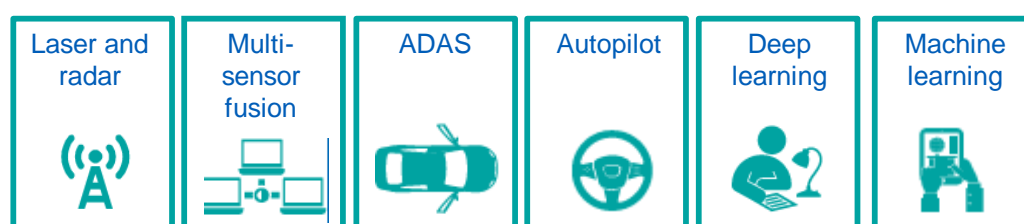
Intelligent Connectivity - Sensors



RoboSense is an autonomous driving solutions provider that focuses on laser radar environment sensors. It integrates laser and radar sensor hardware solutions, three-dimensional data processing algorithms and deep learning technologies with self-developed robot sensing products.



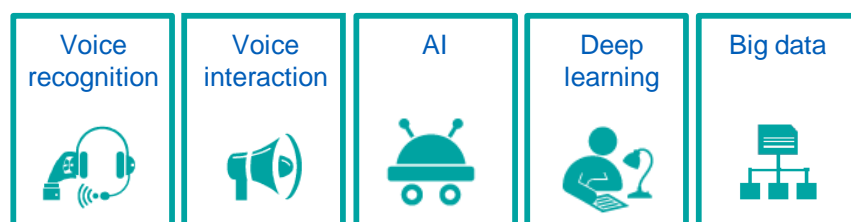
LeiShen Intelligent is a laser and radar system solutions provider. Its products are widely used in robot navigation and obstacle avoidance, ADAS, autonomous driving, industry automation, safety and security.



Intelligent Connectivity - Voice recognition



Aoshuo Tech develops intelligent voice recognition applications. It provides high-quality, integrated intelligent voice solutions for the automotive industry and other related sectors.



Pachira focuses on the R&D of AI and voice interactive technologies for automotive and telephone communication. It creates solutions based on customer interaction and data analytics.



Source: Official company description, websites and interviews

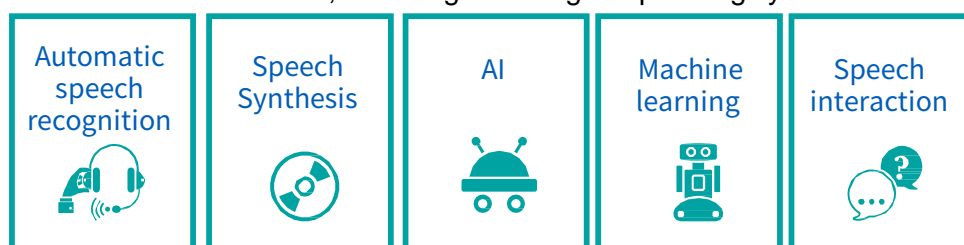
China Leading Auto Tech 50

Intelligent Connectivity - Voice recognition

AlSpeech



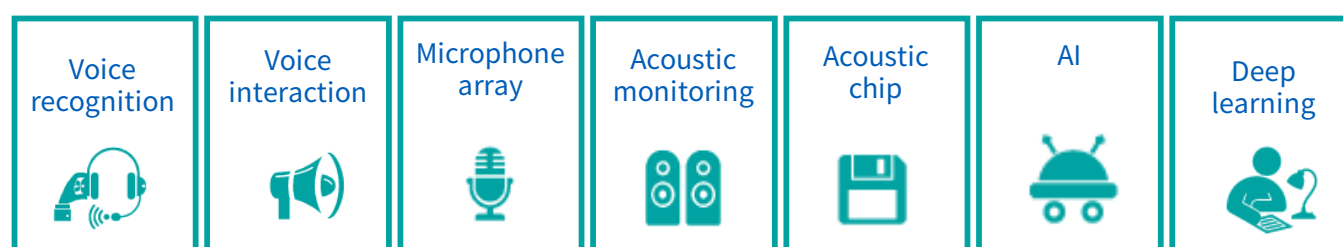
AlSpeech is a hardware-focused voice technology company. It provides natural language interaction solutions via IoT devices, including AI dialogue operating systems and AI chip modules.



SoundAI



SoundAI specialises in providing end-to-cloud acoustics and interactive AI technology solutions. Its solutions are often used in electrical devices, chipsets, and modules.

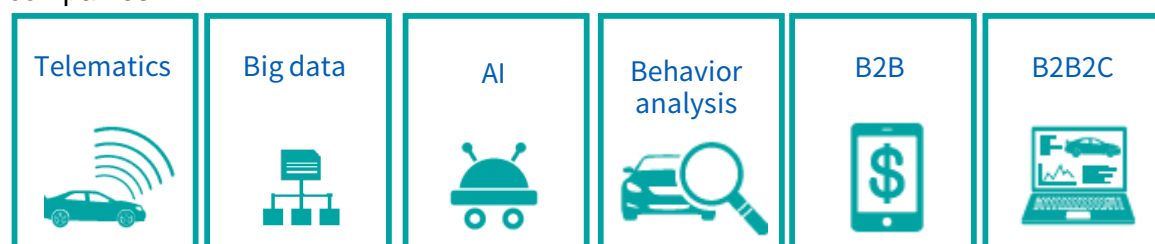


Intelligent Connectivity - Telematics data platform

PingJia Technology



PingJia is a big data operator and service provider that leverages customer data. It serves the auto and insurance industries with algorithm-based models, which are then validated by multiple insurance companies.



Source: Official company description, websites and interviews

China Leading Auto Tech 50

Intelligent Connectivity - Telematics data platform



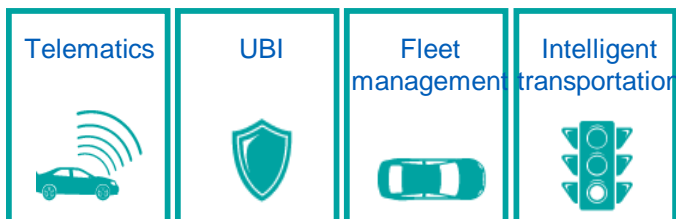
Cihon is a telematics and data analysis service company. Its core business includes insurance model development and data services for OEMs.



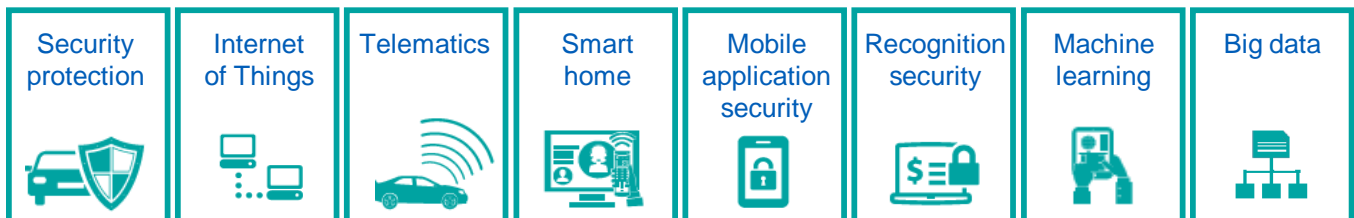
Intelligent Connectivity - Usage-based insurance & Data security



CHAINWAY provides telematics networking solutions and services for vehicle fleets. It seeks to improve the management of commercial vehicles, reduce accidents and improve road safety.



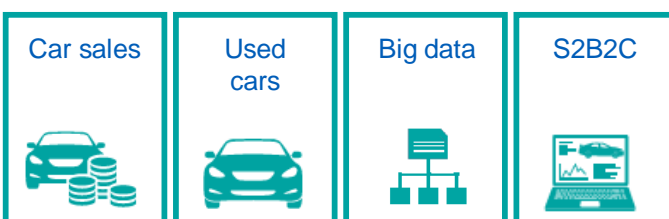
BANGCLE creates mobile applications and IoT security solutions for various industries, including the automotive industry.



Automotive aftermarket - E-commerce



Souche is a new retail platform for automotive services. Souche provides car dealers with one-stop services, including SaaS, financing, transaction and sales support.



Source: Official company description, websites and interviews

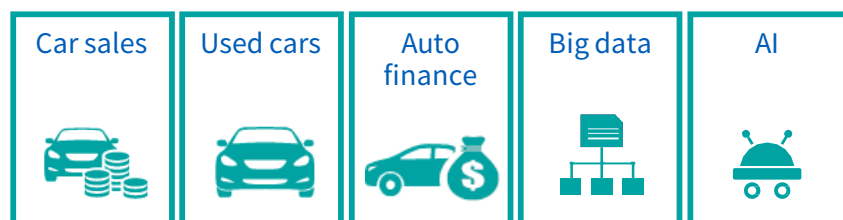
China Leading Auto Tech 50

Automotive aftermarket - E-commerce

UXIN Group



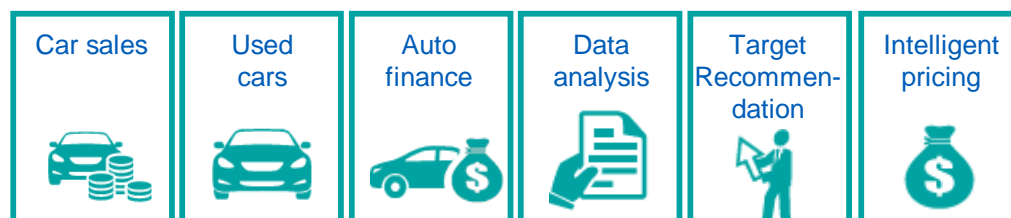
UXIN Group is an online used-car trading company that leverages mobile technologies. Its core business revolves around B2B, B2C, trading and derivative financing services.



Renrenche



Renrenche is used-car trading services platform based on a C2C online trading model. It supports both used and new car sales, as well as financial and after-sale services.



Guazi Maodou



Guazi is a B2B used-car trading platform. Its services include trading, valuation, financing and insurance products. The company seeks to integrate its online and offline operations through the use of big data and AI technologies.

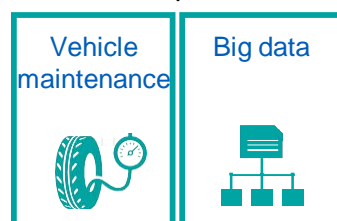


Automotive aftermarket - Vehicle maintenance

Tuhu.cn



Tuhu is an e-commerce platform that provides vehicle maintenance products, including tires, engine oil, and auto parts. Additionally, its vehicle maintenance services can be booked online.



Source: Official company description, websites and interviews

China Leading Auto Tech 50

Automotive aftermarket - Vehicle maintenance

LeCheBang 乐车邦

LeCheBang is an after-sales trading platform focusing on integrating the 4S shop service network, auto e-commerce supply chain and industry resources.



Automotive aftermarket - Logistics & Parts

Yun Manman 运满满

Yun Manman is a freight dispatching and logistics information platform based on cloud computing, big data, mobile internet and AI technologies.



Baturu 巴图鲁 BATURU

Baturu seeks to vertically integrate the automobile aftermarket supply chain through the use of e-commerce solutions. Its solutions are often applied in the auto aftersales market such as maintenance shops.



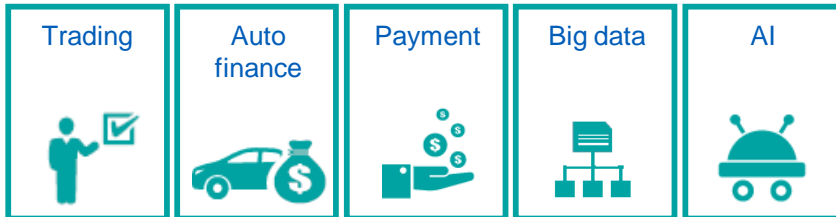
Source: Official company description, websites and interviews

China Leading Auto Tech 50

Automotive aftermarket - Financing & parking pilot

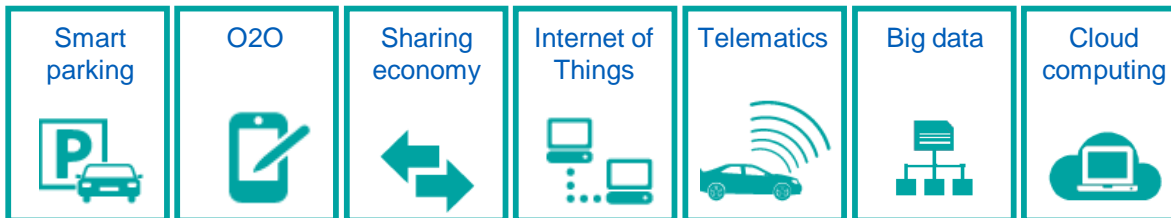
DYCD.COM 

DYCD is an automotive internet platform that provides financial and trading services for corporate and consumer end users in both the new and second-hand car market.



ETCP 

ETCP is an intelligent parking service provider and smart city solution provider. It leverages China's Internet Plus initiative to improve parking effectiveness and efficiency.



Sharing mobility - Timeshare leasing

PANDAUTO 

PAND is an intelligent mobility platform for new energy vehicles. It business revolves the auto-pick up and return of autonomous NEVs, which also includes charging and dispatching functions.



TOGO 

TOGO is a car-sharing application, which provides customers with instant short-haul travel services in urban areas. Consumers can rent nearby TOGO vehicle, which charges by the minute, and park the vehicle almost anywhere, similar to the modern bike-sharing model.



Source: Official company description, websites and interviews

China Leading Auto Tech 50

Sharing mobility - Timeshare leasing



Atzuche is a car sharing platform that encourages car owners to share their private cars by providing insurance incentives.



START *START*

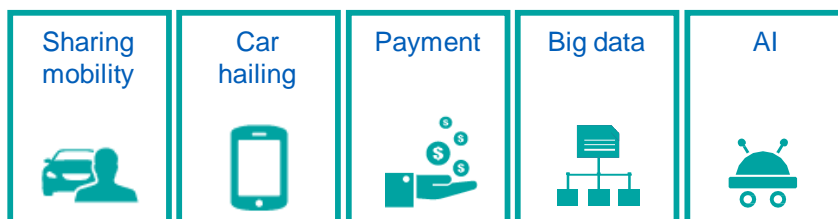
START is a C2C car sharing platform. Its asset-light, C2C business model mobilises idle private cars and accurately matches vehicle supply and demand.



Sharing mobility - Car hailing



Didi Chuxing is a leading mobile transportation platform. The company offers a full range of app-based transportation options that ranges from taxis to high-end luxury vehicles, enterprise solutions, and designated driving.



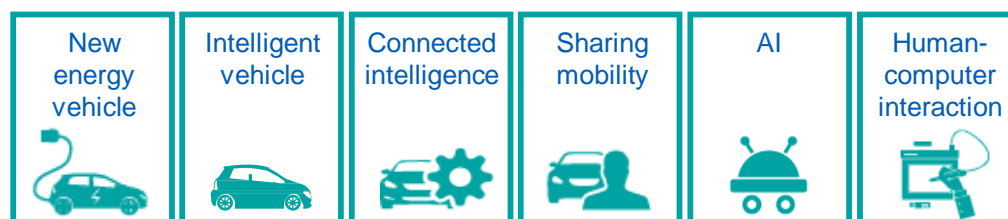
Source: Official company description, websites and interviews

China Leading Auto Tech 50

New original equipment manufacturer

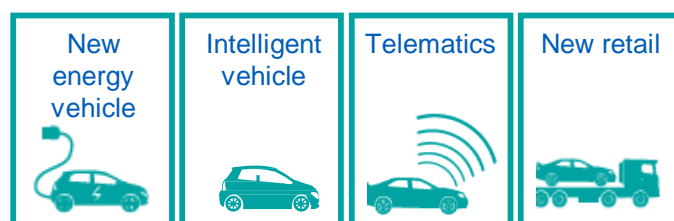
BYTON  **BYTON**

BYTON develops luxury intelligent electric vehicles, emphasising the use of digital technologies to improve the in-car experience for passengers.



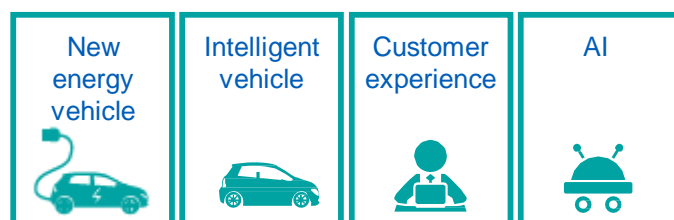
SINGULATO  **SINGULATO**
高点汽车

SINGULATO provides users with intelligent new energy automobile products and services. Its core business includes new energy vehicles, intelligent vehicle systems, telematics services and solutions.



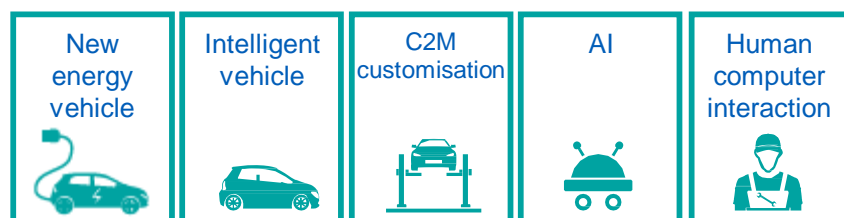
NIO  **NIO**

NIO focuses on the intelligent electric vehicle segment. NIO was the first to provide a battery swap station service system, which allows customers to provide mobile charging units. All its services are connected via an application.



Weltmeister Motor  **Weltmeister**

Weltmeister manufactures new energy vehicle products and is also a mobility solutions provider. It seeks to provide consumers with a complete, convenient and comfortable experience, which includes intelligent charging and renting platforms.



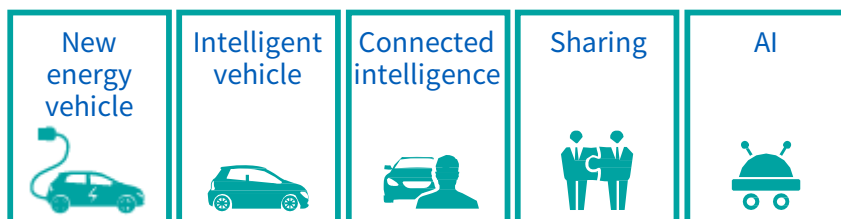
Source: Official company description, websites and interviews

China Leading Auto Tech 50

New original equipment manufacturer



Xpeng focuses on intelligent vehicles and seeks to integrate R&D with production and sales. The company's is to become a leading intelligent vehicle operator and manufacturer.



Source: Official company description, websites and interviews









05

Appendix

Policy and Regulatory Updates

Time	Document Number	Document Name	Issuing Authority	URL	QR code link
2018					
Jan	/	Announcement on Soliciting Opinions on Innovation and Development Strategies for Smart Vehicles (Exposure Draft)	National Development and Reform Commission	Click here	
2017					
Dec	MIIT Lian Ke [2017] No. 332	Guidelines for the Construction of a National Standard System for the Internet of Vehicles Industry (Intelligent Connected Vehicles)	Ministry of Industry and Information Technology, Standardization Administration of the P.R.C.	Click here	
Dec	Ministry of Finance, State Administration of Taxation, Ministry of Industry and Information Technology, and Ministry of Science and Technology Order No. [2017] No. 172	Announcement on Exemption of Vehicle Purchase Tax for New Energy Vehicles	Ministry of Finance, State Administration of Taxation, Ministry of Industry and Information Technology, Ministry of Science and Technology	Click here	
Dec	Ministry of Industry and Information Technology, State Administration of Taxation Announcement No. 58 of 2017	Notice on Issuing the Catalogue of New Energy Vehicles Exempted from Vehicle Purchase Tax (15th Batch)	Ministry of Industry and Information Technology, State Administration of Taxation	Click here	
Dec	/	Notice on Issuing the "Guiding Opinions of the Beijing Municipality on Accelerating the Work Related to Road Tests for Autonomous Vehicles (Trial)" and "Implementation Rules for the Administration of Road Tests for Autonomous Vehicles in Beijing (Trial)"	Beijing Municipal Commission of Transport, Beijing Traffic Management Bureau, Beijing Municipal Commission of Economy and Information Technology	Click here	
Dec	/	Three-year Action Plan for the Development of a New-Generation Artificial Intelligence Industry (2018-2020)	Ministry of Industry and Information Technology	Click here	
Dec	MIIT KE [2017] No. 315	Notice of the Ministry of Industry and Information Technology on Issuing the Three-year Action Plan for the Development of a New-Generation Artificial Intelligence Industry (2018-2020)	Ministry of Industry and Information Technology	Click here	
Dec	/	Measures for the Administration of Government Cars	Central Office of the Central Committee of the CPC, General Office of the State Council	Click here	
Dec	/	Opinions on Comprehensively Deepening the Development of Green Transportation	Ministry of Transport	Click here	
Dec	Ministry of Industry and Information Technology, State Administration of Taxation Announcement No. 56 of 2017	Notice on Issuing the Catalogue of New Energy Vehicles Exempted from Vehicle Purchase Tax (14th Batch)	Ministry of Industry and Information Technology, State Administration of Taxation	Click here	
Nov	GUO BAN FA [2017] No. 90	Notice of the General Office of the State Council on the Establishment of a "Made in China 2025" National Demonstration Zone	General Office of the State Council	Click here	
Nov	/	The Guiding Opinions of the State Council on Deepening "Internet + Advanced Manufacturing Industries" and Developing Industrial Internet	State Council	Click here	
Nov	/	The Opinions of the Ministry of Transport's on Comprehensively Deepening the Development of Green Transportation	Ministry of Transport	Click here	

Note: All information above were taken from publicly available sources. This is not an exhaustive list and is for reference only. For additional details, please consult the relevant institutions.

Policy and Regulatory Updates

Time	Document Number	Document Name	Issuing Authority	URL	QR code link
2017					
Nov	Yin Fa [2017] No. 234	Notice on Adjusting Relevant Car Loan Policies	People's Bank of China, China Banking Regulatory Commission	Click here	
Nov	MIIT LIAN ZHUANG [2017] No. 266	Notice on the Work Related to the Administration of Average Fuel Consumption of Passenger Vehicle Enterprises in 2016 and 2017	Ministry of Industry and Information Technology, Ministry of Commerce, General Administration of Customs, General Administration of Quality Supervision, Inspection and Quarantine	Click here	
Oct	/	Notice on Soliciting Opinions on the Guiding Opinions for Promoting the Healthy Development of the Carsharing (Timeshare Rental) Industry in Guangzhou	Communications Commission of Guangzhou Municipality	Click here	
Sept	Decree No. 44 of the Ministry of Industry and Information Technology, Ministry of Finance, Ministry of Commerce, General Administration of Customs, General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China	Administrative Measures on Corporate Average Fuel Consumption and New Energy Vehicle Dual-credit Scheme for Passenger Vehicle Enterprises	Ministry of Industry and Information Technology, Ministry of Finance, Ministry of Commerce, General Administration of Customs, General Administration of Quality Supervision, Inspection and Quarantine	Click here	
Sept	/	Guidelines for the Construction of a National Standard System for the Internet of Vehicles Industry	Ministry of Industry and Information Technology, Standardization Administration of the P.R.C.	Click here	
Sept	JIAO YUN FA (2017) No.141	Action Plan for Promoting the Healthy and Steady Development of the Road Freight Industry (2017-2020)	Fourteen ministries including Ministry of Transport, Development and Reform Commission, Ministry of Industry and Information Technology	Click here	
Sept	/	NDC started drafting the National Strategy for the Innovation and Development of Intelligent Vehicles	National Development and Reform Commission	Click here	
Sept	/	Agreement on Jointly Building a National Intelligent Transportation Testing Base	Ministry of Industry and Information Technology, Ministry of Public Security, Jiangsu Provincial People's Government	Click here	
Sept	/	Regulations on Verifying the Adaptability of Intelligent Connected Vehicles on Public Roads (Trial)	Equipment Industry Department of the Ministry of Industry and Information Technology	Click here	
Aug	Ministry of Industry and Information Technology, State Administration of Taxation Announcement No. 38 of 2017	Notice of the Ministry of Finance, the State Administration of Taxation, the Ministry of Industry and Information Technology on the Exemption of Purchase Taxes for New Energy Vehicles	Ministry of Industry and Information Technology, State Administration of Taxation	Click here	
Aug	/	Guidance on Promoting the Healthy Development of Small Bus and Microbus Rental	Ministry of Transport, Ministry of Housing, Urban and Rural Development	Click here	
July	GUO FA (2017) No. 35	Plan for the Development of Next-Generation Artificial Intelligence	State Council	Click here	







Note: All information above were taken from publicly available sources. This is not an exhaustive list and is for reference only. For additional details, please consult the relevant institutions.

Policy and Regulatory Updates

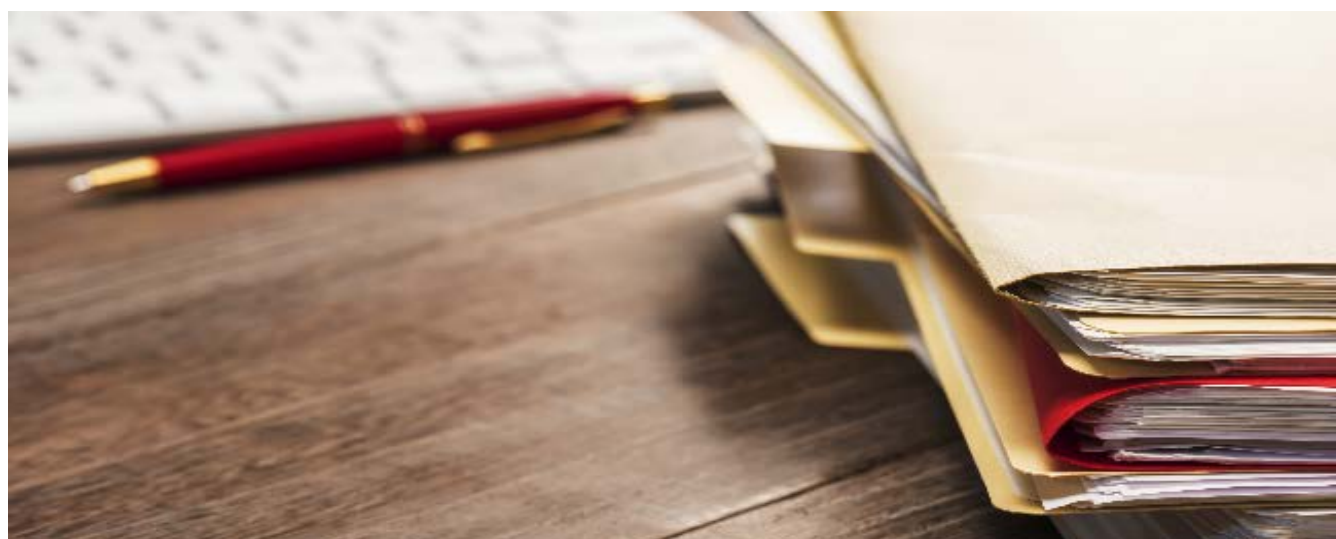
Time	Document Number	Document Name	Issuing Authority	URL	QR code link
2017					
June	/	Notice on Soliciting Opinions on the Guidelines for the Construction of a National Standard System for the Internet of Vehicles Industry (2017) (Exposure Draft)	Equipment Industry Department of the Ministry of Industry and Information Technology	Click here	
June	BIAO WEI BAN ZONG HE (2017) No. 101	Reply of the General Office of the Standardization Administration of the P.R.C. on Creating on Technical Sub-Committee on Intelligent Connected Vehicle under the National Technical Committee of Auto Standardization	Standardization Administration of the P.R.C.	Click here	
June	/	Guidance on Promoting the Healthy Development of the Car Industry (Exposure Draft)	Ministry of Transport	Click here	
May	/	Strategic Cooperation Agreement on Comprehensively Promoting the Development of Intelligent Transportation	National Development and Reform Commission, Ministry of Transport	Click here	
May	GUO FA (2017) No. 11	The 13th Five-Year Plan for the Development of a Modern Comprehensive Transportation System	State Council	Click here	
April	/	Notice of the Ministry of Industry and Information Technology, National Development and Reform Commission, and Ministry of Science and Technology on Issuing the Mid-term and Long-term Development Plan for the Automotive Industry	Equipment Industry Department of the Ministry of Industry and Information Technology	Click here	
April	Ministry of Commerce Decree No. 1 of 2017	Measures for the Administration of Automobile Sales	Ministry of Commerce	Click here	
March	/	Provisions on Used Car Appraisal and Used Car Transactions on E-Commerce Platforms filed with the Certification and Accreditation Administration of the P.R.C.	CAQC Certification Co., Ltd affiliated with China Automotive Technology and Research Center Co., Ltd.	Click here	
Feb	MIIT LIAN ZHUANG (2017) No. 29	Action Plan for Promoting the Development of the Automotive Power Battery Industry	Ministry of Industry and Information Technology, National Development and Reform Commission, Ministry of Science and Technology, Ministry of Finance	Click here	
Jan	/	Action Plan for Promoting the Development of Intelligent Transportation (2017-2020)	Ministry of Transport	Click here	
Jan	Ministry of Industry and Information Technology of the People's Republic of China Decree No. 39	Administrative Measures for New-Energy Vehicle Manufacturers and Product Entry	Equipment Industry Department of the Ministry of Industry and Information Technology	Click here	
2016					
Dec	GUO FA (2016) No. 67	The 13th Five-Year Plan for the Development of Strategic Emerging Industries	State Council	Click here	
Oct	/	Driverless Technology Roadmap	Ministry of Industry and Information Technology, Society of Automotive Engineers of China	Click here	

Note: All information above were taken from publicly available sources. This is not an exhaustive list and is for reference only. For additional details, please consult the relevant institutions.

Policy and Regulatory Updates

Time	Document Number	Document Name	Issuing Authority	URL	QR code link
2016					
July	FA GAI JI CHU (2016) No. 1681	Implementation Plan for Promoting "Internet Plus" Transportation and the Development of Intelligent Transportation	National Development and Reform Commission, Ministry of Transport	Click here	
June	SHANG JIAN ZI (2016) No. 8	Notice on Facilitating Used Car Transactions and Creating an Active Used Car Market	General Office of the Ministry of Commerce, General Office of the National Development and Reform Commission, General Office of the Ministry of Industry and Information Technology, General Office of the Ministry of Public Security, General Office of the Ministry of Finance, General Office of the Ministry of Environmental Protection, General Office of the Ministry of Transport, General Office of the General Administration of Taxation, General Office of the General Administration of Industry and Commerce, General Office of the China Banking Regulatory Commission, General Office of the China Insurance Regulatory Commission	Click here	
April	Ministry of Transport of the People's Republic of China Decree No. 37 of 2016	Decision of the Ministry of Transport on Amending the Provisions on Motor Vehicle Maintenance Management	Ministry of Transport	Click here	
March	GUO BAN FA (2016) No. 13	Several Opinions of the General Office of the State Council on Facilitating Used Car Transactions	General Office of the State Council	Click here	
March	/	Anti-Monopoly Guide for the Automotive Industry (Exposure Draft)	Anti-Monopoly Committee of the State Council, National Development and Reform Commission	Click here	
2015					
May	Guo Fa [2015] No. 28	"Made in China 2025" Plan	State Council	Click here	

Note: All information above were taken from publicly available sources. This is not an exhaustive list and is for reference only. For additional details, please consult the relevant institutions.



The KPMG China Partners Driving China Leading Auto Tech 50



Jeffrey Wong
Head of Advisory



Jacky Zou
Vice Chairman,
KPMG China



Raymond Ng
Head of Markets



Philip Ng
Head of Technology



Huu-Hoi Tran
Head of Automotive



Allen Lu
Partner, Corporates



John Fung
Partner, Corporates



Fong Wing
Partner, Corporates



Alex Shum
Partner, Corporates,
KPMG Asia Pacific



Martin Zhang
Partner, Advisory



Patrick Chu
Partner, Corporates



Linda Lin
Partner, Advisory



Michael Jiang
Partner, Advisory



Ricky Wong
Partner, Advisory



Luther Kang
Partner, Advisory



Linda Zhao
Partner, Corporates



Rayment Zhou
Partner, Corporates



Jessie Zhang
Partner, Tax



Bo Huang
Partner, Advisory



Wei Lin
Partner, Advisory



Vanessa Xu
Partner, Advisory



Samuel Liang
Partner, Corporates



Mabel Li
Partner, Tax



Oliver Xu
Partner, Corporates



Miguel Montoya
Partner, Advisory



David Frey
Partner, Advisory



Andy Qiu
Partner, Advisory



Willi Sun
Director, Advisory



Gary Xu
Director, Advisory



Giuliana Auinger
Director, Advisory

KPMG's Auto Industry Insights



Jan 2018

New energy vehicle technology trends



Jan 2018

Autonomous Vehicles Readiness Index



Jan 2018

Global Automotive Executive Survey 2018



Dec 2017

Excelling in China's auto leasing industry



Dec 2017

Electric Vehicles



Nov 2017

Islands of autonomy

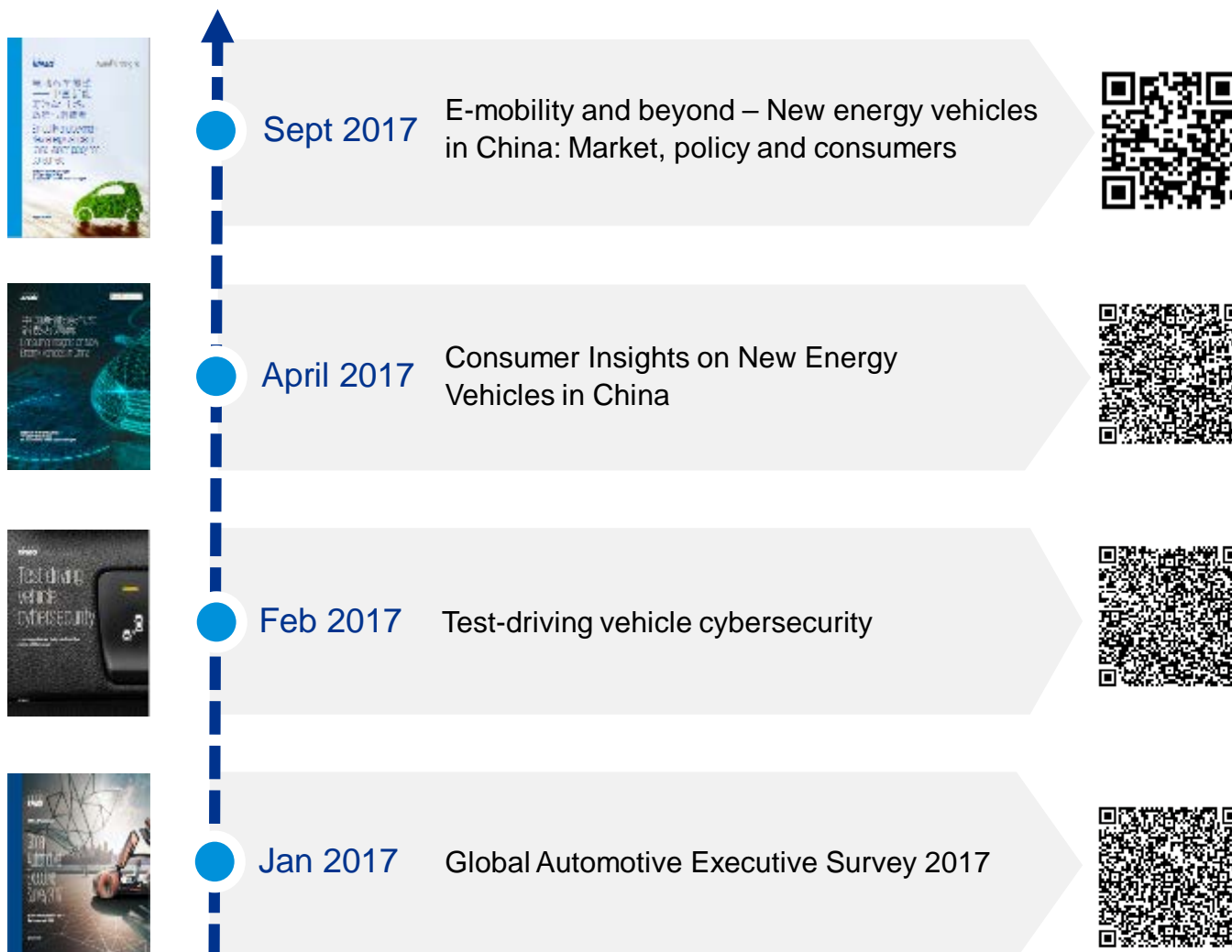


Nov 2017

Protecting the fleet... and the car business



KPMG's Auto Industry Insights



The KPMG China Leading Auto Tech 50 Project Team



Vivian Wu

Head of the KPMG Innovative Start-up Center
China Leading Auto Tech 50 Project Director
vivian.wu@kpmg.com
+86 186 1006 5182 / +86(10) 5875 2555



Dora Zhang
Project Specialist



Crystal Zhao
Project Specialist



Cathy Gui
Publicity Assistant



Lisa Li
Publicity Assistant



Jamie Li
Area Manager



Vida Pan
Area Manager



Bill Tang
Area Manager

About KPMG China



KPMG China operates in **19** cities across China

**with around
12,000 partners
and staff**

in Beijing, Beijing
Zhongguancun, Changsha,
Chengdu, Chongqing,
Foshan, Fuzhou, Guangzhou,
Hangzhou, Nanjing, Qingdao,
Shanghai, Shenyang,
Shenzhen, Tianjin, Wuhan,
Xi'an, Xiamen, Hong Kong
SAR and Macau SAR.



KPMG China's Hong Kong office can trace its origins to **1945**.

KPMG established the first office in Mainland China in 1983.



KPMG China established the first innovative startup center in Zhongguancun, Beijing in 2015

In 1992, KPMG became the first international accounting network to be granted a joint venture licence in mainland China.



KPMG China is the first among the Big Four to establish an Insights Center in 2015.



- **KPMG has been operating in Hong Kong for more than seventy years.**

The Hong Kong office can trace its origins to 1945. This early commitment to the China market, together with an unwavering focus on quality, has been the foundation for accumulated industry experience, and is reflected in the Chinese member firm's appointment by some of China's most prestigious companies.

- **The first international accounting network to be granted a joint venture licence in mainland China**

In 1992, KPMG became the first international accounting network to be granted a joint venture licence in mainland China.

- **The first to convert from a joint venture to a special general partnership**

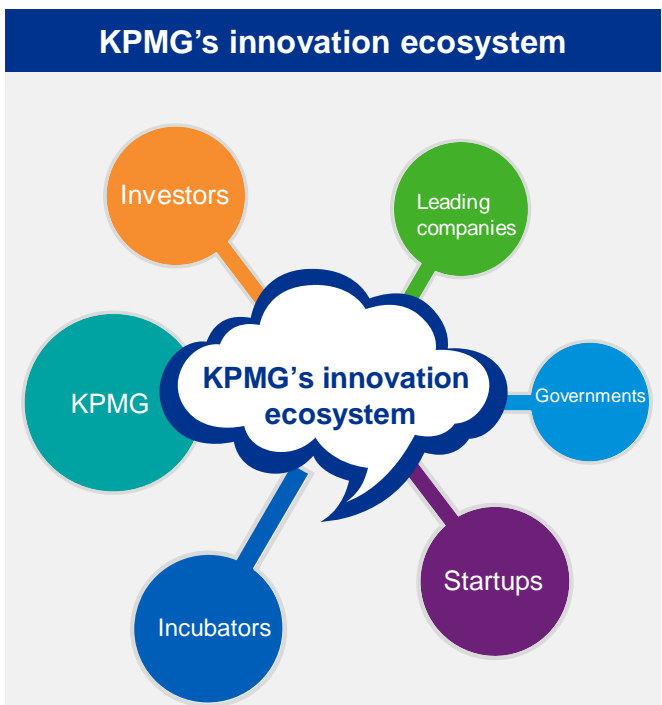
KPMG China was also the first among the Big Four in mainland China to convert from a joint venture to a special general partnership, as of 1 August 2012.

About the KPMG Innovative Startup Centre

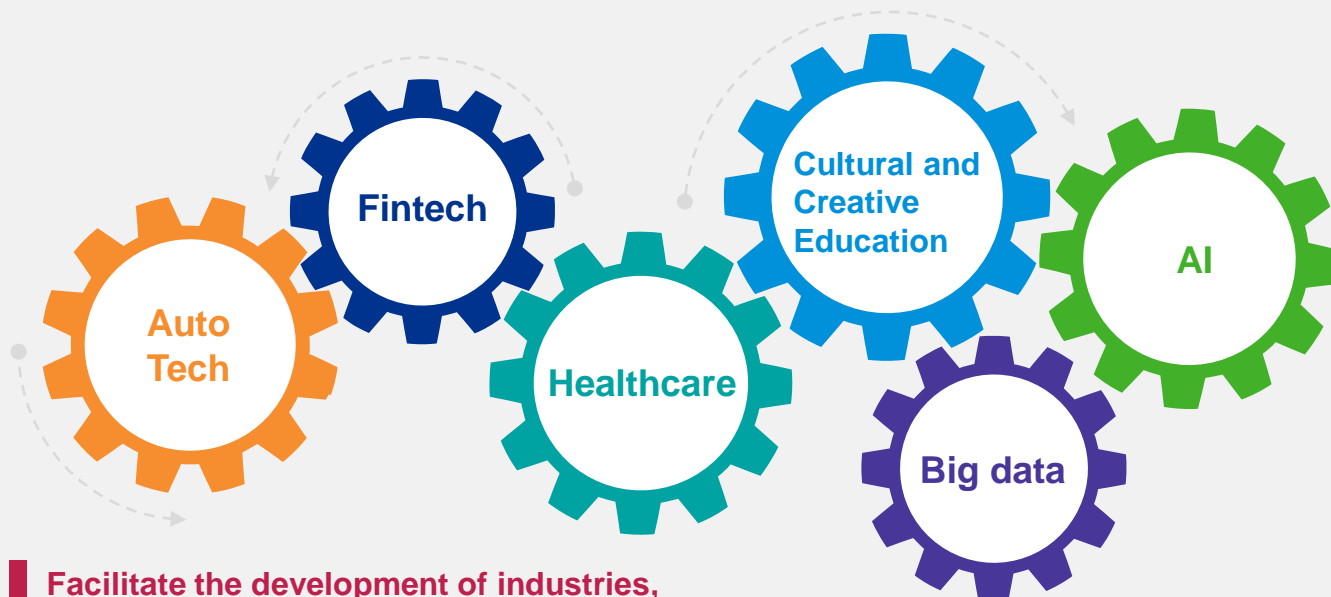
The KPMG Innovative Startup Centre is an important part of KPMG's global innovation strategy. It is committed to promote corporate innovation, mass entrepreneurship and the sustainable development of China's innovation and startup ecosystem. Since its opening, the Centre has been actively developing its business and diversifying its services to provide an effective global resources platform for connecting entrepreneurs, corporates and investors.



- 2014**
China included in KPMG's Global Innovation Strategy
- 2015**
Opening of the KPMG Innovative Startup Center
毕马威登峰计划
- 2016**
The KPMG Innovative Startup Centre recorded over 4,000 visitors. It served more than 50 startups, corporates and investors.
KPMG China 2016 Fintech 50
- 2017**
Licensed as a National Innovation Incubator
2017 China Fintech 50
2017 China Leading Auto Tech 50



About the KPMG Innovative Startup Centre



**Facilitate the development of industries,
empower businesses to grow**

From Seed to Speed

From Speed to Scale

Address: Room 603, 6th Floor, China Electronic Plaza B, 3 Danling Street, Beijing

Tel: +86 (10) 58752555

Email: kstart@kpmg.com

kpmg.com/cn/socialmedia



For information about KPMG China offices, please scan the QR code or visit our website:
<https://home.kpmg.com/cn/en/home/about/offices.html>

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

© 2018 KPMG Huazhen LLP (Special General Partnership) — a special general partnership in China, KPMG Advisory (China) Limited — a wholly foreign owned enterprise in China, and KPMG — a Hong Kong partnership, are member firms of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. All rights reserved. © 2018 KPMG, a Macau partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. All rights reserved. Printed in China.

The KPMG name and logo are registered trademarks or trademarks of KPMG International.

Publication Number: CN-ISC-0001