

The background of the slide is a close-up, slightly blurred photograph of an electric vehicle's charging port. A black charging cable with a white connector is plugged into the port. The overall color palette is muted, with greys and blues, and a semi-transparent dark blue overlay covers the entire image.

# The Solution Way

to the Pain Points of Electric Vehicle Service



TIAA (is short for Telematics Industry Application Alliance) established on February 4, 2010. It is an organization initiated by the MIIT (Ministry of Industry and Information Technology ), the MOT (Ministry of Transport), the SAC (Standardization Administration of China), TIAA is committed to applying advanced electronic information technology to mobile travel and mobile operations in the field of technology innovation and industrial application .

TIAA is oriented to three professional fields, which including traffic vehicles, agricultural machinery and construction machinery. TIAA takes achieving their digitalization, networking, intelligence, and finally unmanned as the main work goal. There are more than 600 TIAA members from 12 countries and regions such as China, the United States, Germany, France, Japan, Korea, the United Kingdom, the Netherlands, Sweden, Canada and Russia etc. TIAA has set up comprehensive committees on standardization and cyber security, unmanned operation in overall process agriculture sector, millimeter wave radar, intelligent transportation for mine, intelligent parking and charging, branch union (i.e. Korea branch-Union), as well as 15 technical working groups, 6 national representative offices in Korea, Russia, Japan, Hungary and other countries.



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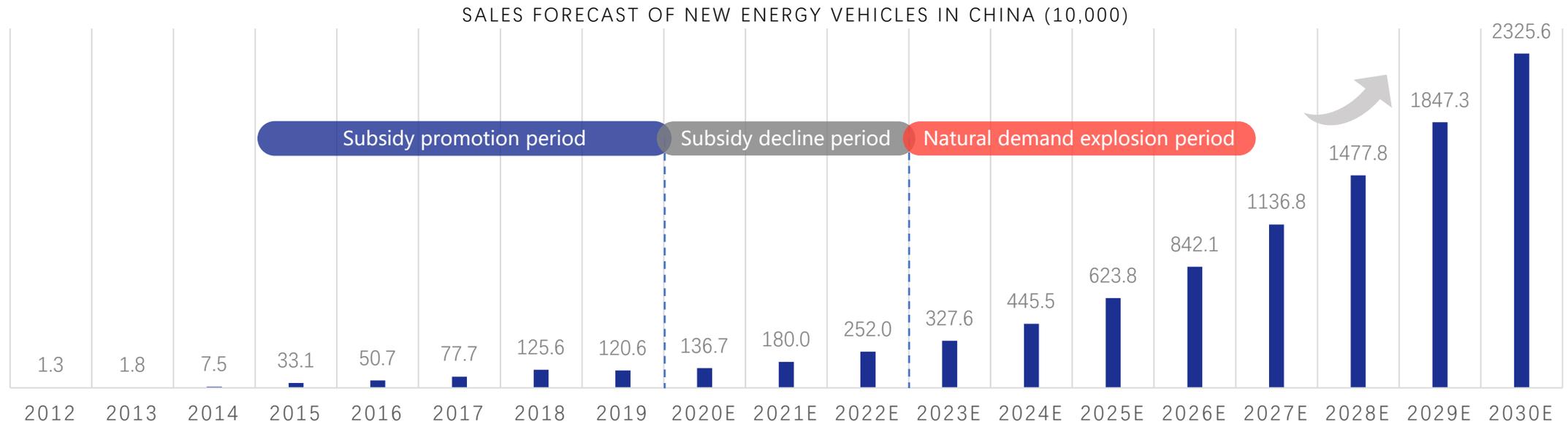
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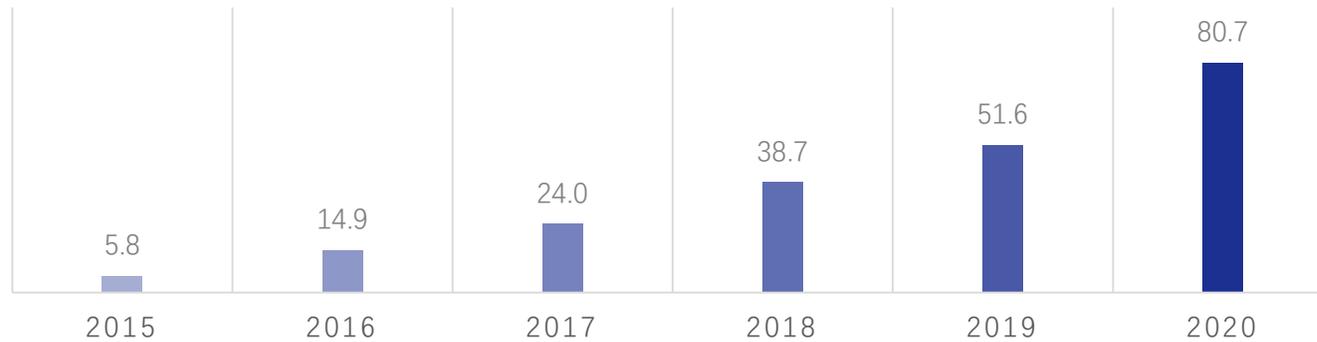
Introduction of head enterprise in  
EV operation platform

By the end of 2020, the number of EV in China had reached 4.92 million, accounting for 1.75% of the total number of vehicles, an increase of 1.11 million over 2019, an increase of 29%. Among them, there are 4 million pure EV, accounting for 81.32% of the total number of new energy vehicles. The increment of EV has exceeded 1 million for three consecutive years, showing a sustained high-speed growth trend. Chinese EV account for more than 40% of the world. At the same time, due to regional conditions, there is a large gap in the growth of EV market between South and North China. The south market with mild climate has a higher number of EV and stronger market demand.



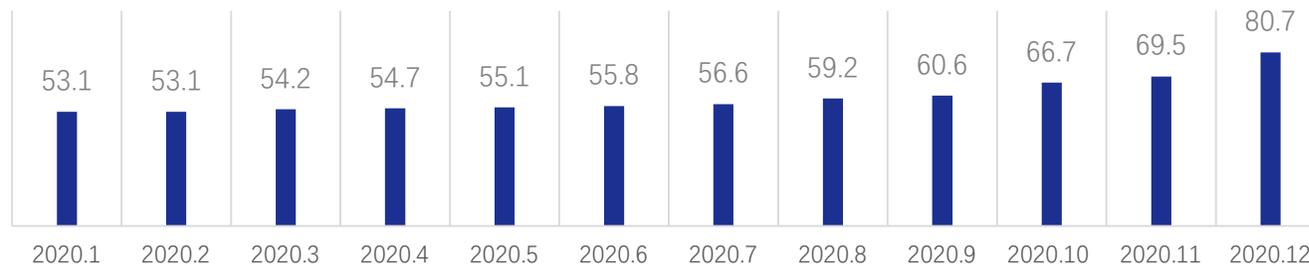
▶ According to Deloitte's Strategic Research Report on new energy vehicle industry on January 20, 2021, from China Automobile Association; IDC; China industrial economic information network; Bloomberg new energy finance

### Trend of public charging infrastructure ownership in China from 2015 to 2020



Number of public charging piles: 10,000 sets

### Trend of public charging infrastructure ownership in China in 2020



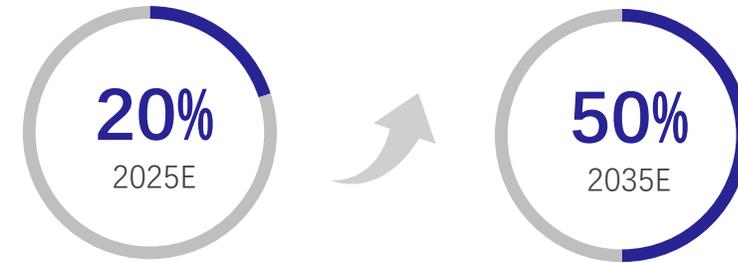
Number of public charging piles: 10,000 sets

By the end of 2020, EVCIPA has received a total of 807,000 public charging piles reported by members, including 498,000 AC charging piles (accounting for 61.68%), 30,9000 DC charging piles (accounting for 38.27%) and 481 AC/DC integrated charging piles (accounting for about 0.05%).

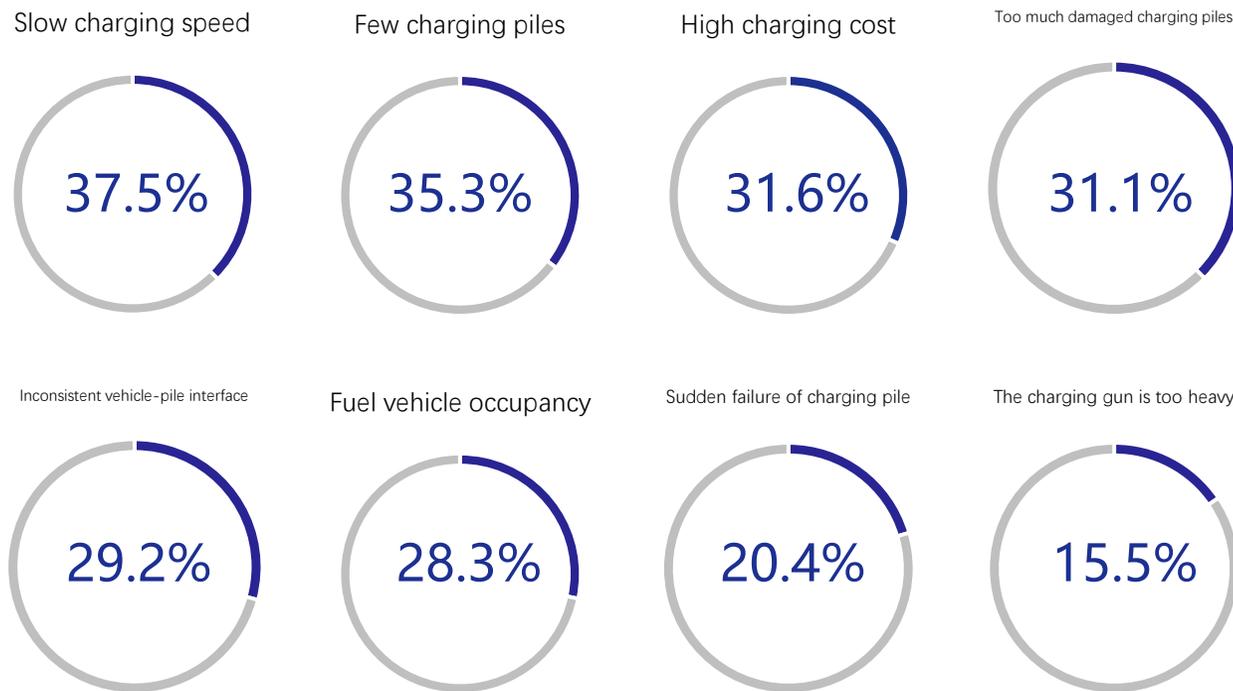
Especially in 2020, the number of public charging piles in China will show a rapid and steady growth trend.

In November 2020, the general office of the State Council issued the EV industry development plan (2021-2035), adhering to the strategic orientation of pure electric drive. It is planned that by 2025, the sales of EV will reach about 20% of the total sales of new vehicles,

According to "Energy Saving and New Energy Vehicle Technology Roadmap 2.0" released by China SAE, it is estimated that by 2035, the sales of EV will account for 50%.

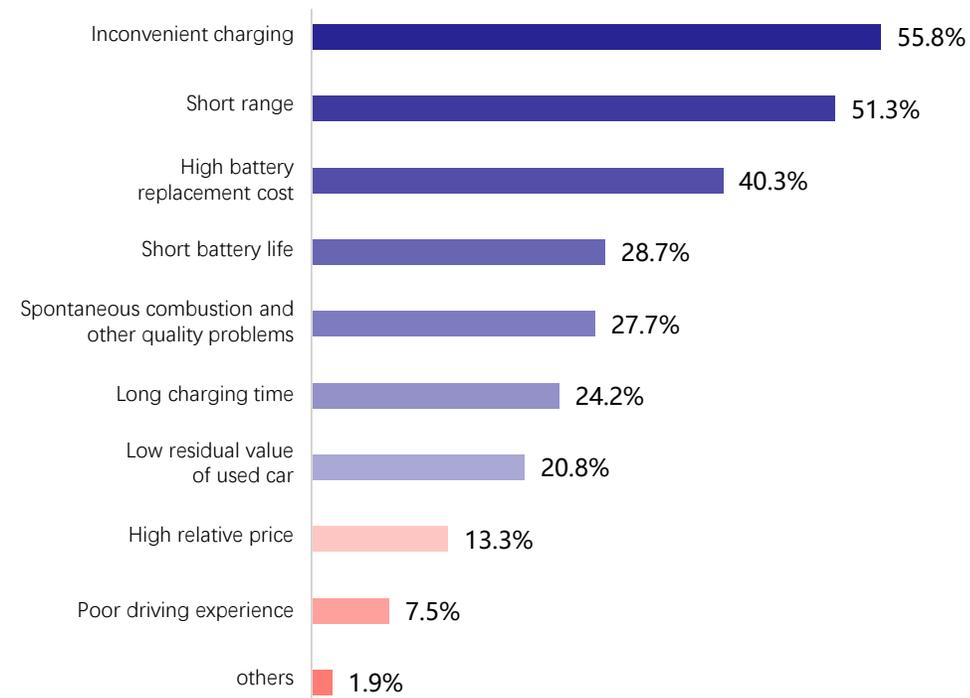


	2025	2030	2035
Passenger vehicle	The fuel consumption of the new car reaches 4.6l/100km (WLTC)	The fuel consumption of the new car reaches 3.2l/100km (WLTC)	The fuel consumption of the new car reaches 2.0l/100km (WLTC)
Commercial vehicle	The number of trucks decreased by more than 8% compared with 2019 Passenger vehicles are reduced by more than 10% compared with 2019	The number of trucks decreased by more than 10% compared with 2019 Passenger vehicles are reduced by more than 15% compared with 2019	The number of trucks decreased by more than 10% compared with 2019 Passenger vehicles are reduced by more than 15% compared with 2019
Energy saving vehicle	Average fuel consumption of traditional energy passenger vehicles is 5.6l/100km (wlct) Hybrid new vehicles account for more than 50% of traditional energy passenger vehicles	Average fuel consumption of traditional energy passenger vehicles is 4.8l/100km (WLTC) Hybrid new vehicles account for more than 75% of traditional energy passenger vehicles	Average fuel consumption of traditional energy passenger vehicles is 4.8l/100km (WLTC) Hybrid new vehicles account for more than 75% of traditional energy passenger vehicles
New energy vehicle	New energy vehicles account for about 20% of the total sales The number of hydrogen fuel cell vehicles has reached about 100, 000	New energy vehicles account for about 40% of the total sales The number of hydrogen fuel cell vehicles has reached about 10, 000, 000	New energy vehicles account for about 50% of the total sales The number of hydrogen fuel cell vehicles has reached about 10, 000, 000
Intelligent networked vehicle	PA / Ca intelligent networked vehicles account for more than 50% of the annual sales of vehicles, HA vehicles begin to enter the market, and the assembly rate of new vehicles of C-V2X terminal reaches 50%	PA / Ca intelligent networked vehicles account for more than 70% of the annual sales of vehicles, HA vehicles account for more than 20% , and the new assembly of C-V2X terminal is basically popularized	All kinds of connected automatic driving vehicles are widely used in China, and Chinese scheme of intelligent connected vehicles is deeply integrated with smart energy, smart transportation and smart city

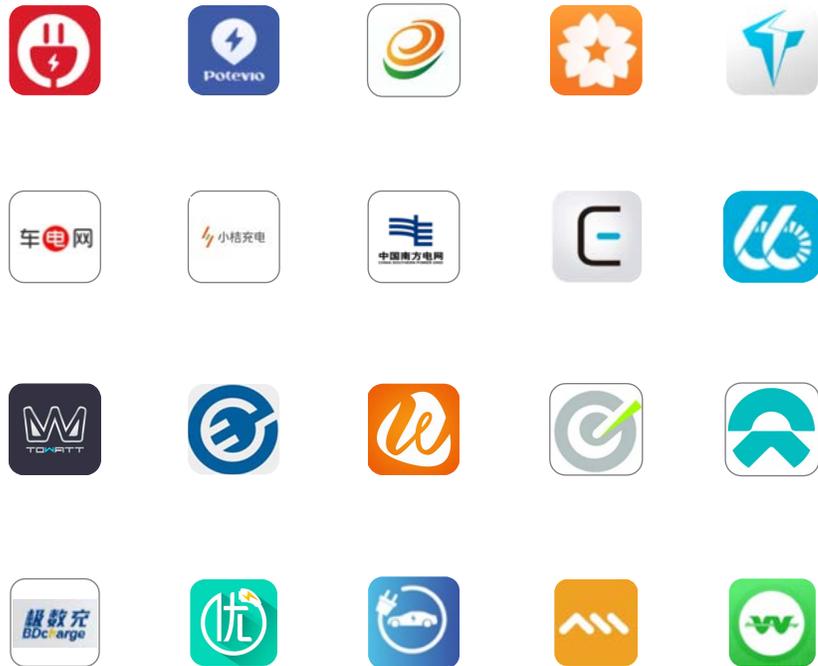


► Investigation on user pain points of public charging pile (iResearch)

### Refuse EV reasons



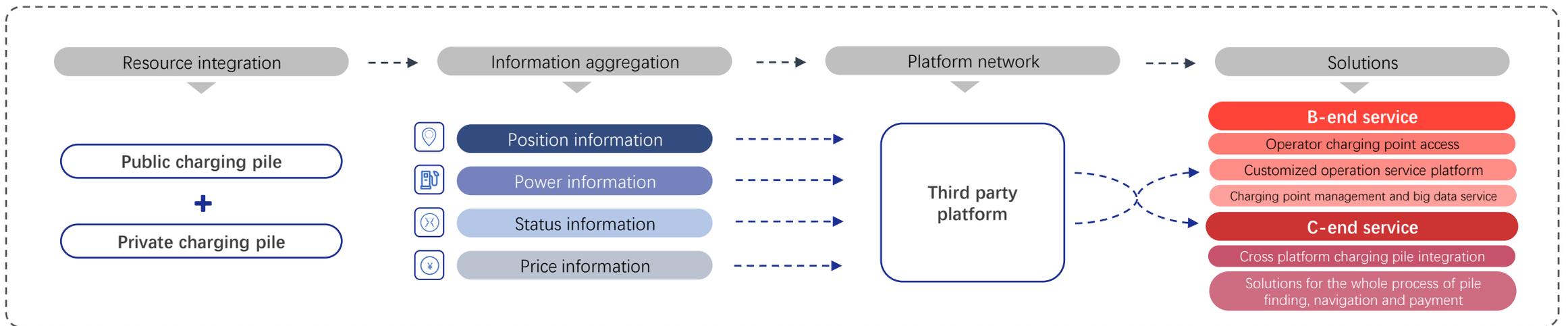
► Research Report on Chinese automotive technology development and consumer insight in 2019



By the beginning of January 2021, there were 28 large-scale charging pile operators in China, and the sum of charging piles of the top nine operators accounted for 91.6% of the total market. Although the head enterprises have significant advantages, the number of charging piles of many small enterprises is also growing steadily. The charging pile industry is in the process of transition from the initial stage to the medium term. The number of charging piles is still far from reaching Chinese national goal, and the industry pattern has not been fully finalized.



The platform led operation mode can open up the interconnection between different operators and provide users with a more convenient one-step charging experience, which will play an important role in the foreseeable time.





H<sub>i</sub>gh power wireless charging technology

Problem: EMC

S<sub>o</sub>lid-state batteries

Welcome head enterprise of korea to cooperate with Chinese company in the above sectors



Ohways, a subsidiary of NavInfo group, was founded in October 2019. Ohways always adheres to the development concept of making EV without worry, focusing on providing one-step "charging and travel" operation service solutions for the field of EV to help green, low-carbon and worry free travel.

## Aggregate Charging

Gather the top charging operation brands in the Chinese market to realize the whole process charging services such as one-step cross brand charging pile dynamic and static information query, charging control and real-time monitoring, cross platform payment and so on. Charging scenarios cover public charging, private pile charging, brand specific charging, mobile charging, valet charging, etc.

## Smart Travel

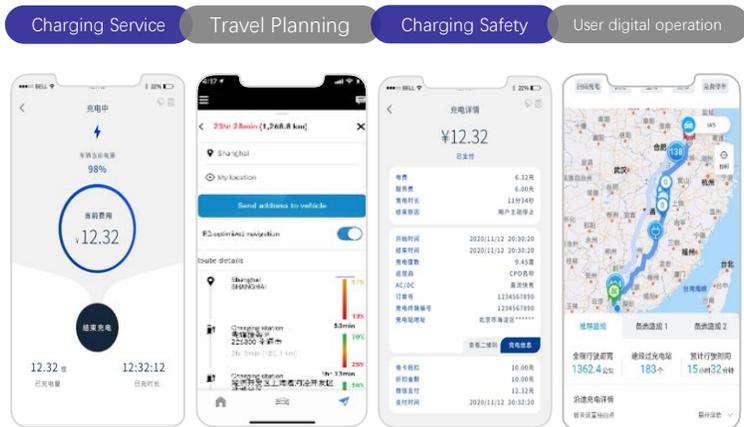
Combined with user travel planning, real-time dynamic data of charging station, vehicle location and other information, and using spatial big data technology, we customize active smart charging services for users, including long-distance intercity high-speed charging planning, power supplement planning, destination charging planning and other service products, so as to optimize the travel experience of new energy users.

## Channel Marketing

Relying on the "big data operation monitoring platform", it provides enterprises with whole process services including customized development and integrated procurement platform, e-package marketing products, customized hardware installation and after-sales service, and helps enterprises create high-quality charging operation services, establish brand reputation, and achieve marketing objectives such as promotion, drainage, customer acquisition and fission.

# O

wn charging travel service platform



# E

V service ecological integration



# Welcome Global New Energy Enterprises to Cooperate Together

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T H A N K S

Let EV travel without worry

