

INTELLIGENT CLOUD PLATFORM FOR CHARGING OPERATION & ENERGY MANAGEMENT



**CAPABLE.
SUSTAINABLE.
ACCOUNTABLE.**

BRANDING STRATEGY

Charging network
Microgrid

Mobile Energy Network Charging Network - Smart Microgrid

Upgrade of the entire industrial chain: from EV charging to electricity *generation, storage, management, consumption and trading*



Electricity generation

Distributed PV station & PV car shed



Electricity storage

Power plant side and user side ESS
Shared EDD EV



Electricity management

Smart energy management system Pilot deck of energy management



Electricity consumption

High efficient charging network Load management
Integrated smart energy network



Electricity trading

User side responding
Green electricity trading

INTELLIGENT CHARGING NETWORK



THE DEVELOPMENT STAGE OF THE CHARGING OPERATION, AND THE PLATFORM CAPABILITIES REQUIRED

The differences in investment models, the evolution of the electricity market, the changes in the competitive situation, and the operation of charging stations have begun to exceed the level that can be controlled and promoted by manual and simple systems.

01.

Basic charging operation

- Station management
- Asset management
- Equipment monitoring
- Scan QR code to charge
- Voucher & Coupon
- Swipe a card to charge
- Settlement and invoice

03.

Smart operation

- Charging safety protection
- Big data product: Construction site selection
- Intelligent operation and maintenance
- User portrait and AI marketing
- Power station operation analysis
- AI diagnosis for power station operation
- Smart pricing
- Userside responding 、 Energy operation

02.

Diversified operation growth

- Enrich operational activities and cooperation in different industries
- Multi type coupon Membership system, points system
- Community operation
- Online customer service
- Charging of fleet and government and enterprise customers
- Interconnection of traffic platform, Oems
- Integrated energy, green electricity incentive, brand image

ONE STOP SOLUTION OF INTELLIGENT OPERATION

Full life cycle asset management solutions based on big data and AI technology

Planning site selection

Charging network planning and analysis platform



Safe operation and efficient operation

Charging safety, Information safety, Data safety
Asset management platform
Enterprise level charging operation platform
One stop marketing platform
Charger owner plan
Integration of business and finance



Intelligent Operation

Intelligent pricing
Intelligent marketing
Intelligent charging station
GTO

Integrated energy

PV, energy storage, charging, discharge
Virtual power plant
Power trading forecast
City level pilot deck of energy management



Intelligent O&M

Digital O&M platform
On site service cloud
Mobile tools for engineers

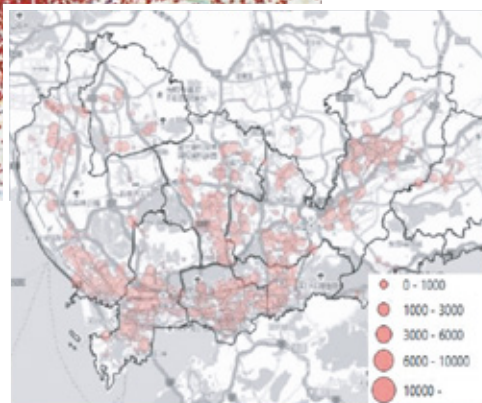


CASE 1: DIGITALIZATION OF LOCATION SELECTION



Potential charging requirement map

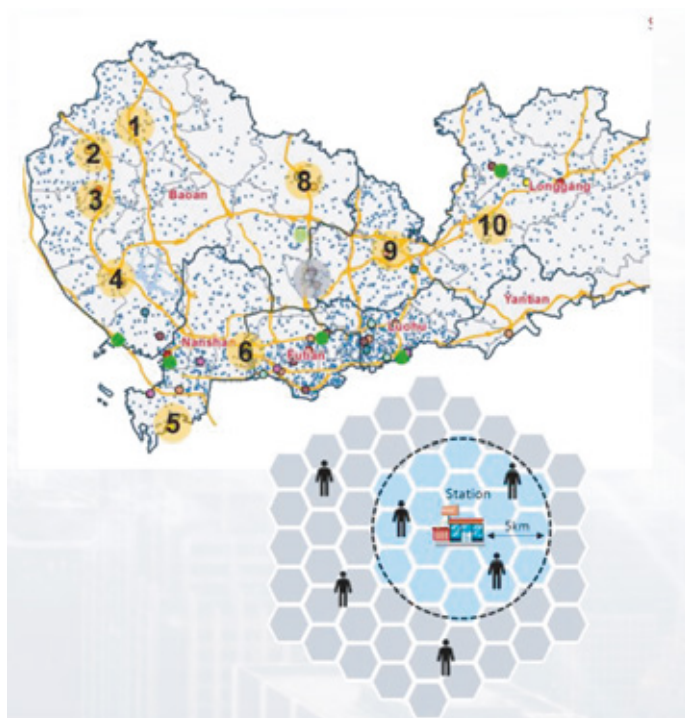
EV charging supply map (based on charging historical data)



Big data platform

Database

- Number of EV and distribution
- Nationwide charger distribution
- High relevant POI of charging
- Uber/fleet drivers' moving track working area
- Comments on APP, location searching history
- EV related facilities (EV retail shop, repairing center, service center, ect.)



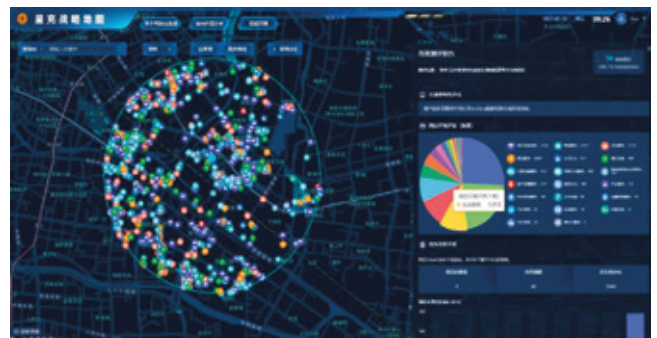
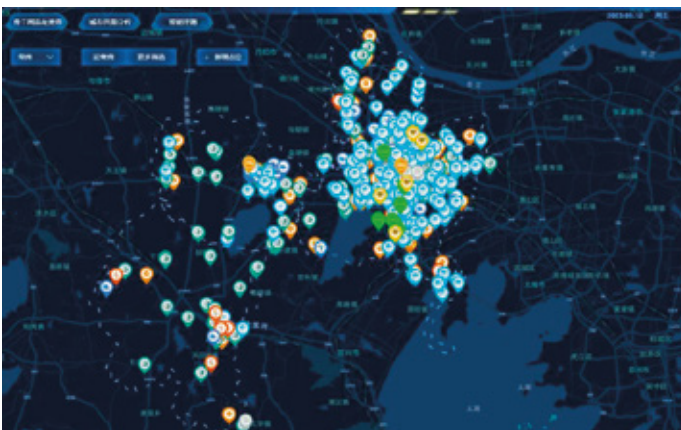
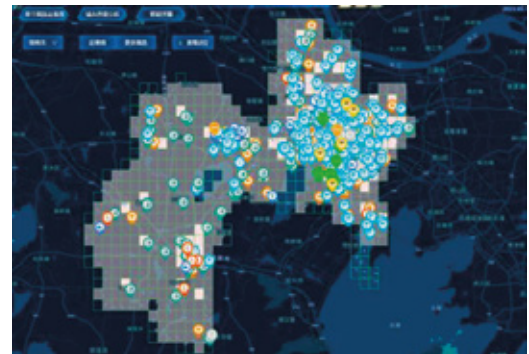
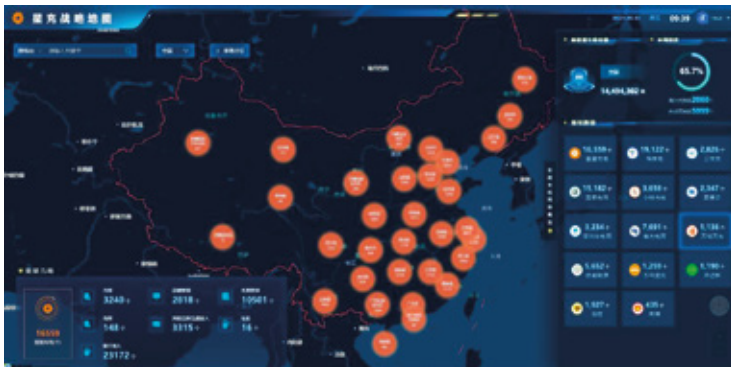
AI Location suggestion

SMART STATION SELECTION SYSTEM

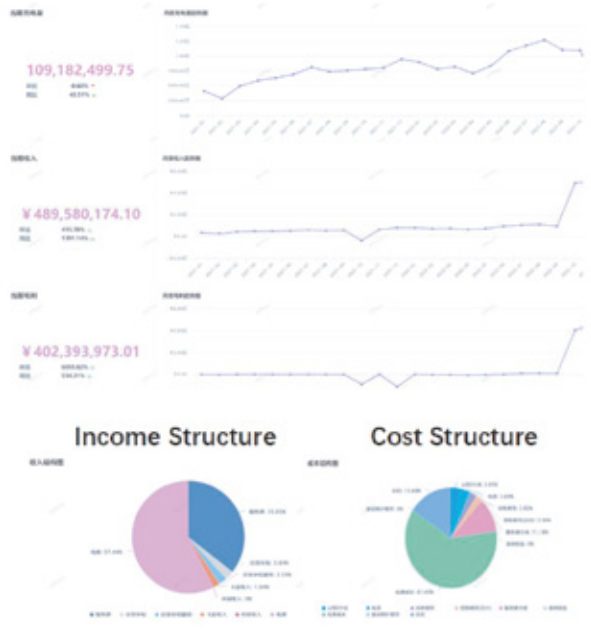
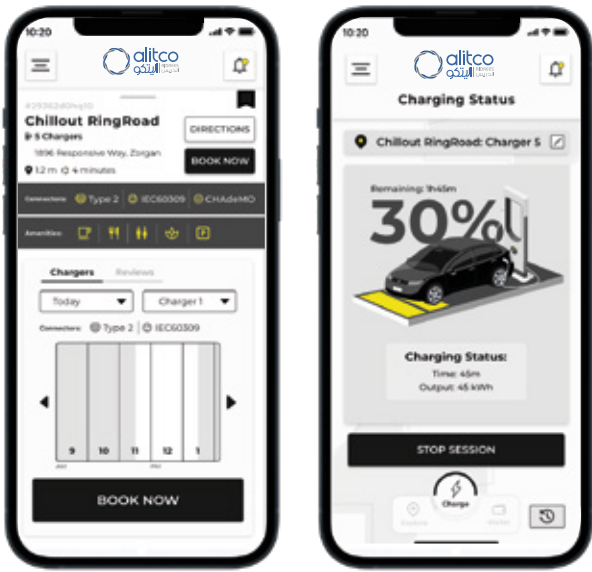
For CPO & Fleet

System function

- Heat map of charging potential of cities
- Station location distribution (continuous update)
- Recommend the best site of urban backbone network power station
- Evaluation of constructing a station in a custom location



CASE 2 : INTELLIGENT OPERATION ALITCO CPO APP



CASE 2 : INTELLIGENT OPERATION ON SITE MONITORING

CORE ABILITY

- Occupation sensor and Reminder
- New user recognition Notice
- Fire/smoke detection
- Crowding level detection
- Rubbish barrier detection
- Abnormal human stay detection

ADVANTAGE

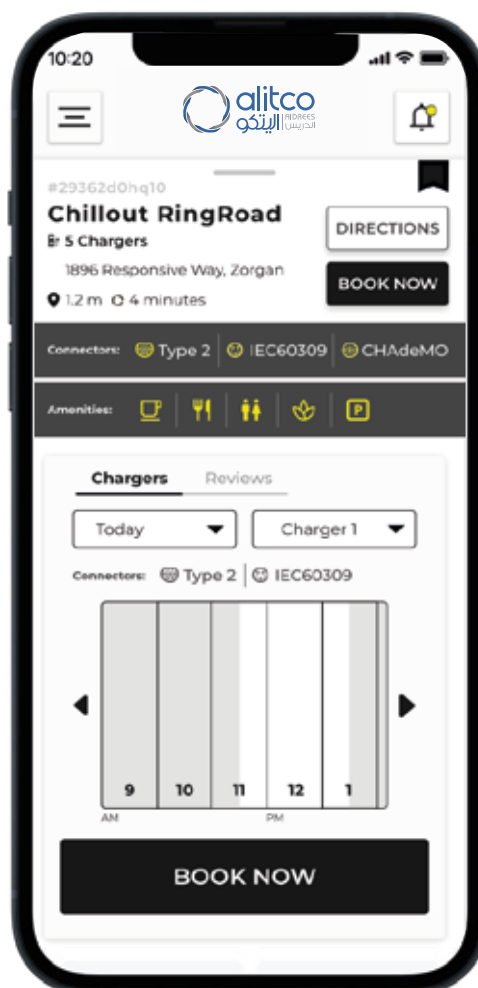
- Low cost one CCTV cover 5 6 parking lots
- Full scale monitoring
- On site voice broadcasting
- Admin message physical barriers, etc.

CASE 2 : INTELLIGENT OPERATION STATION DIAGNOSIS

Digital charging station diagnosis

Mobile version for CPO

The big data model of more than 20,000 charging stations establishes diagnostic models of different insight dimensions for different scenarios and types of charging stations, which not only helps operators see the data results, but also enables them to gain insight into the root causes and find the precise and improved operational growth path



CASE 2 : INTELLIGENT OPERATION AI SUGGEST ON PRICING

Station Profile

Static :Charger number Power support

Dynamic :Fee rate changing

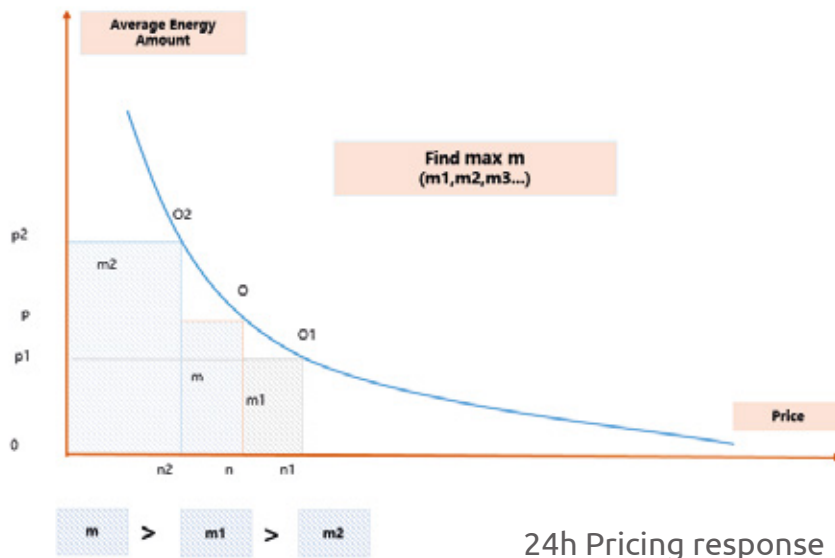
Demand :Station use rate

Environment

Time : day of week , hour of day

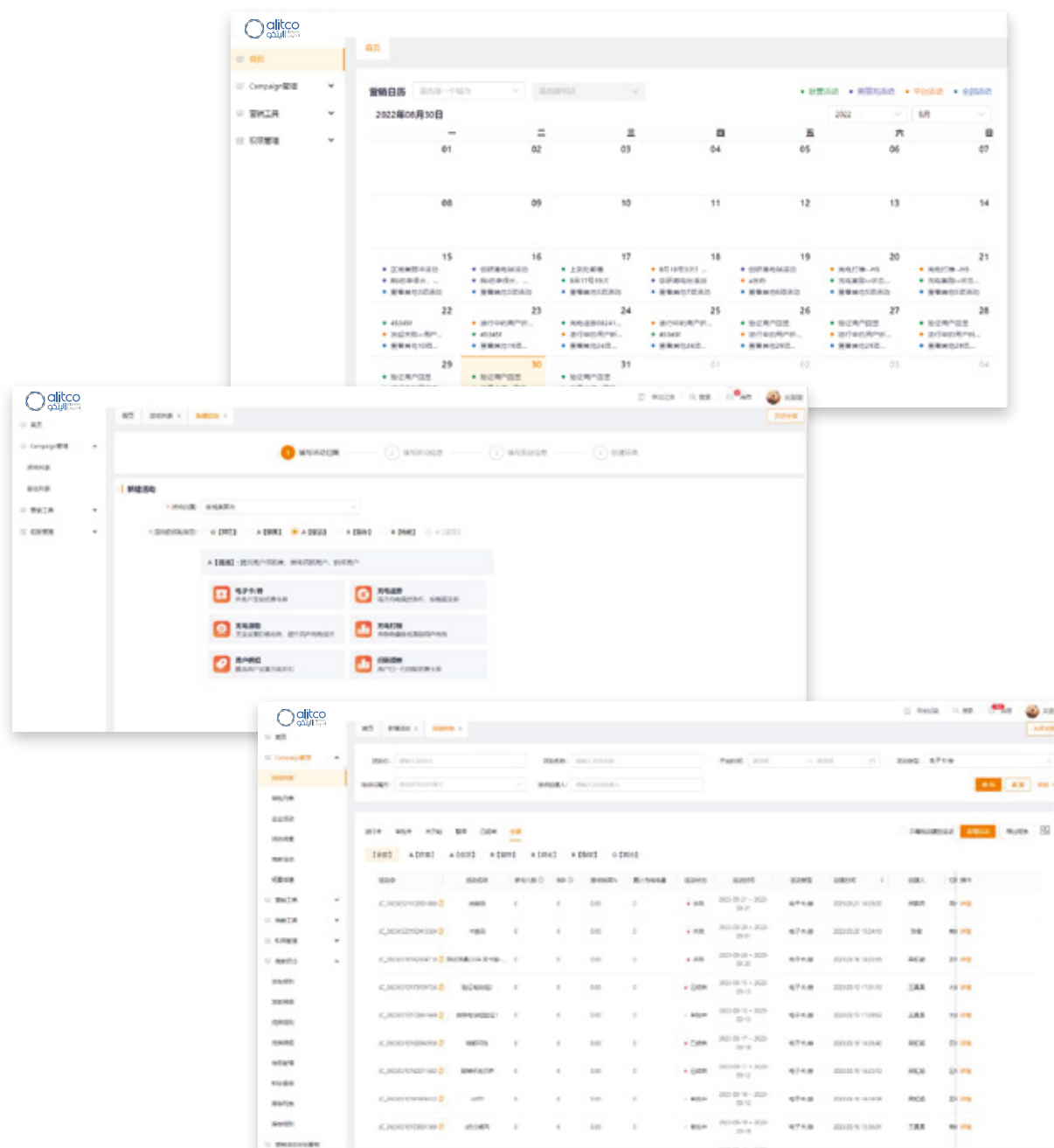
Location : City, area, zone

Real : time Temporary event 、 Weather

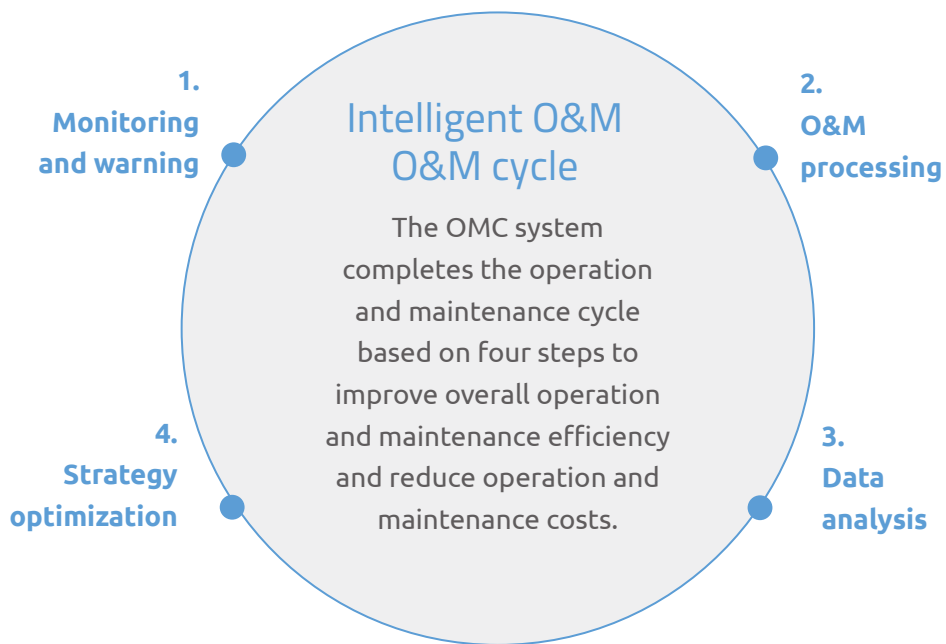


USER PORTRAIT AND AI MARKETING

Use massive data to build user portraits, implement differentiated marketing plans for different types of users through intelligent marketing models and established strategy data intelligent algorithms, and achieve operational activity improvement and GMV growth.



INTELLIGENT O&M SYSTEM FOR CPO & O&M SERVICE PROVIDER



Intelligent O&M management

Platform event monitoring, automatic classification, O&M emergency division, intelligent distribution of work order, O&M life cycle monitoring.

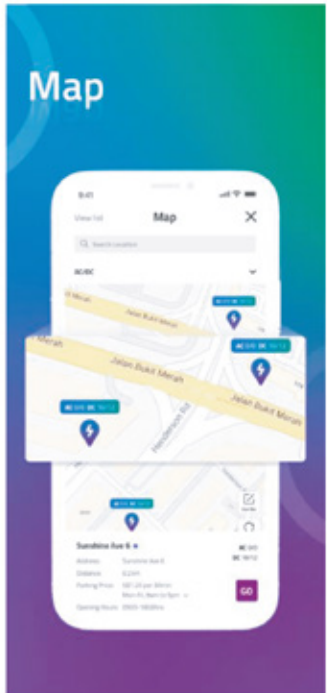
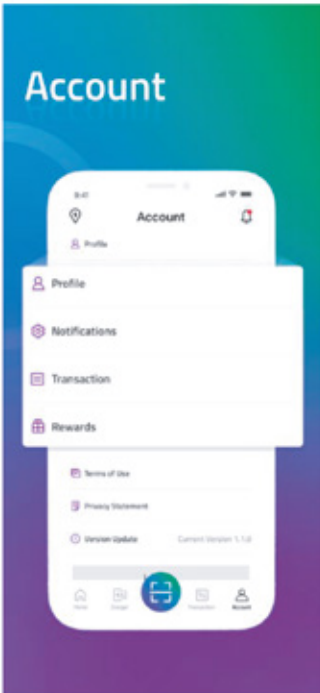
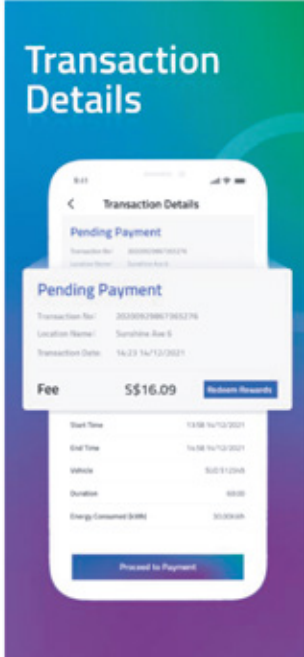
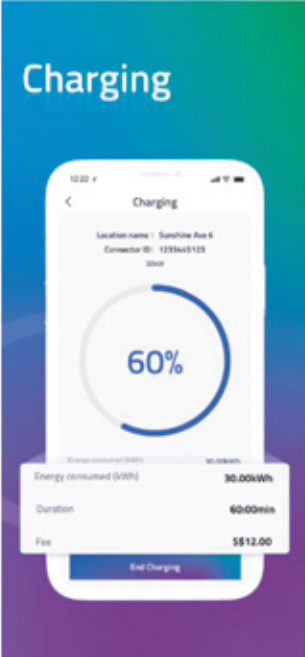
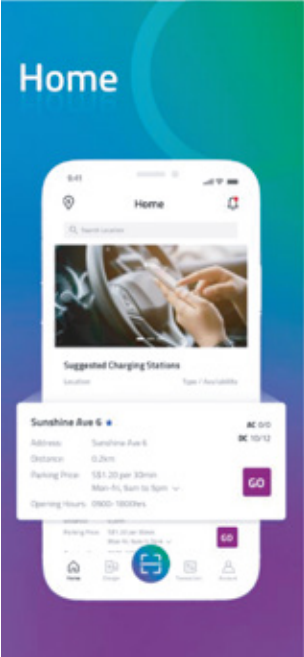
Intelligent monitoring

Platform event monitoring, automatic classification, O&M emergency division, intelligent distribution of work order, O&M life cycle monitoring.

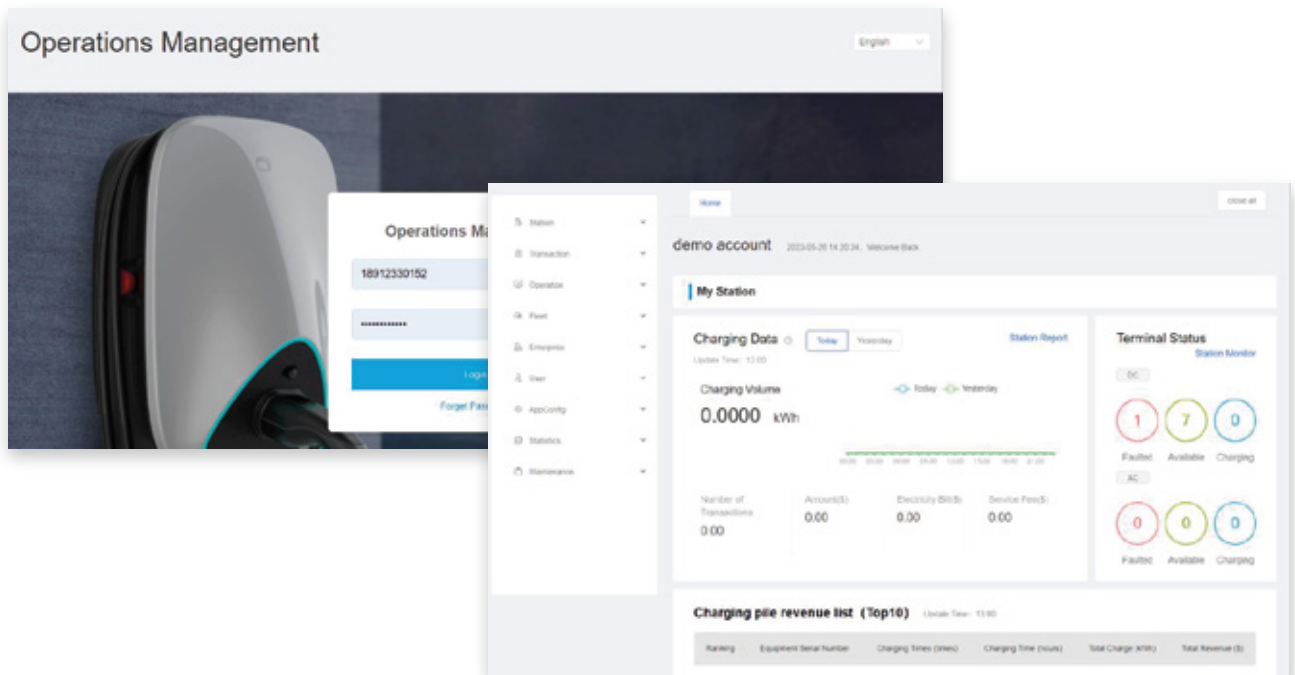


- Module output voltage and current
- Module internal temperature
- Module category and S/N number
- Module failure time and failure code
- Total module running time

CHARGING APP FOR EV USER

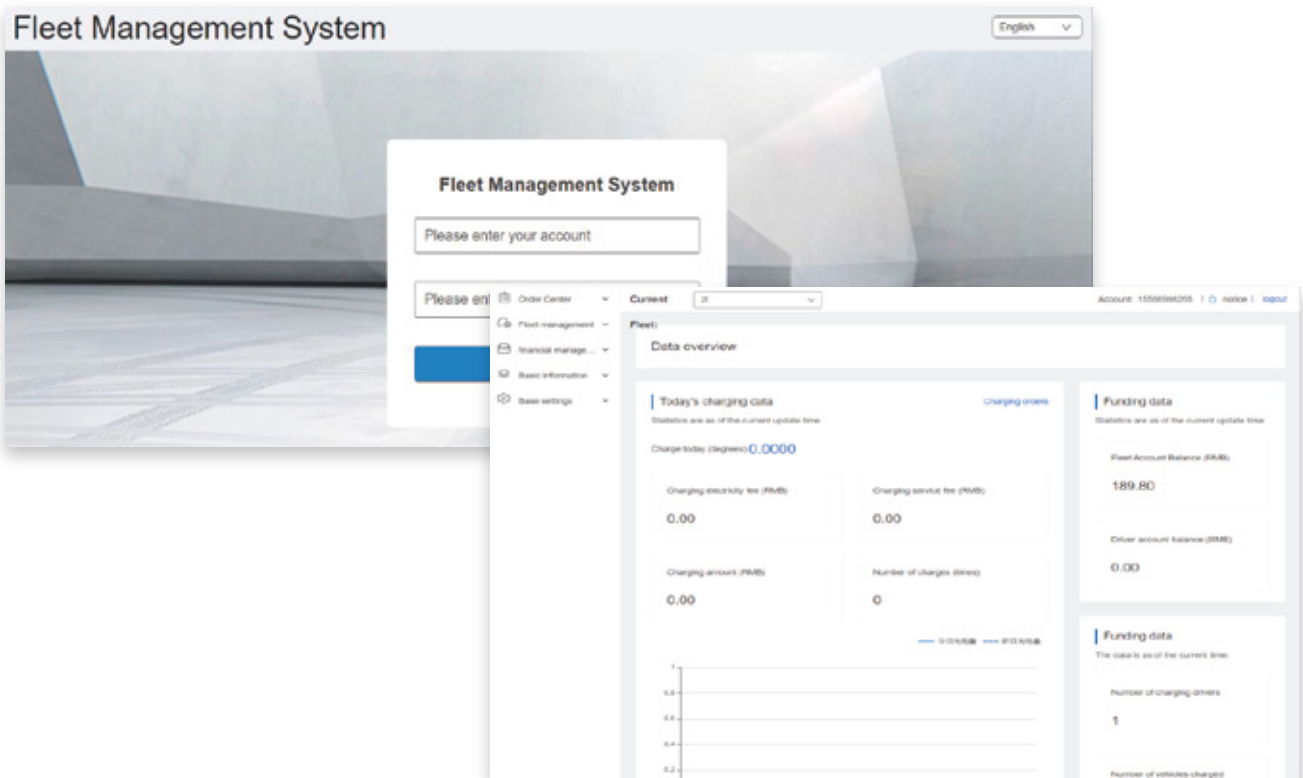


CSMS FOR CPO & FLEET



The screenshot shows the 'Operations Management' dashboard. At the top, there is a header with the title 'Operations Management' and a language dropdown set to 'English'. Below the header is a large image of a charging station. A login modal is open, displaying the account number '18912330152' and a 'Forgot Password' link. The main dashboard area features a sidebar menu with options like Station, Transaction, Operator, Fleet, Emergency, User, AppConfig, Statistics, and Maintenance. The main content area is titled 'demo account' and includes a 'My Station' section with 'Charging Data' (0.0000 kWh), 'Terminal Status' (1 Faulted, 7 Available, 0 Charging), and a 'Charging pile revenue list (Top10)' table.

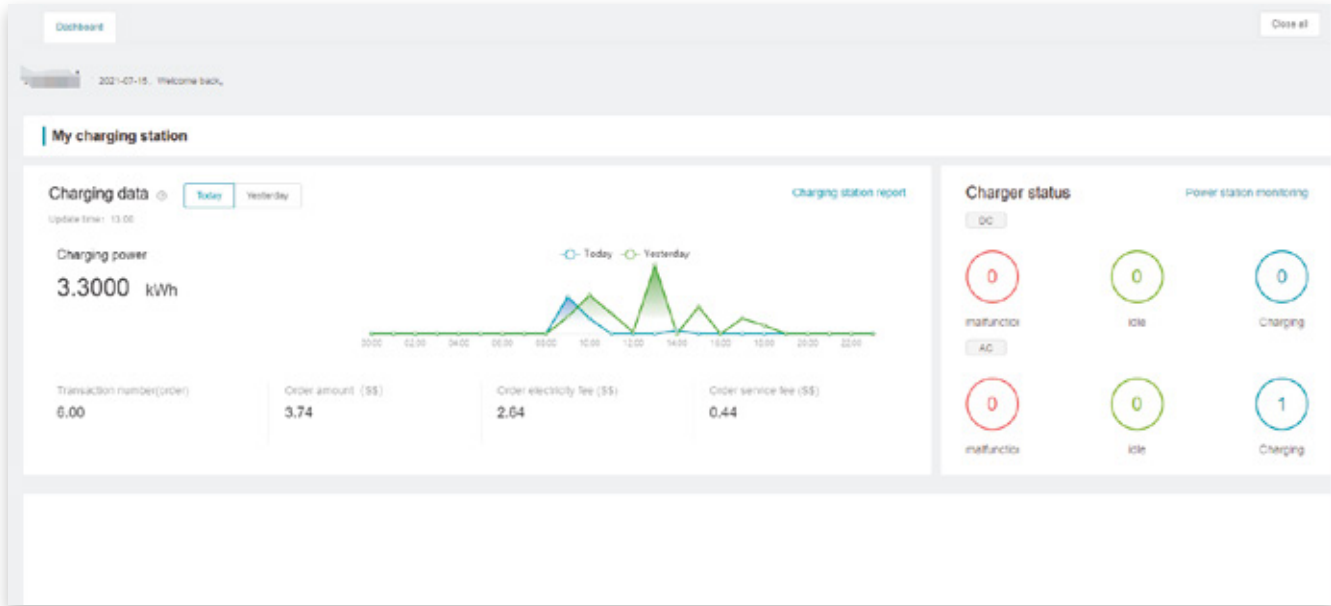
Ranking	Equipment Serial Number	Charging Times (times)	Charging Time (hours)	Total Charge (kWh)	Total Revenue (\$)



The screenshot shows the 'Fleet Management System' dashboard. It features a header with the title 'Fleet Management System' and a language dropdown set to 'English'. A login modal is open, prompting the user to 'Please enter your account'. The main dashboard area includes a sidebar menu with options like Order Center, Fleet management, Financial manage, Basic information, and Basic settings. The main content area is titled 'Fleet' and includes a 'Data overview' section with 'Today's charging data' (0.0000 kWh), 'Funding data' (Fleet Account Balance: 189.80), and a 'Number of charging others' (1). A line chart is also visible at the bottom of the dashboard.

Dashboard

- Collect data and generate a highly integrated dashboard
- Fast operation buttons
- Daily and monthly report



REAL TIME MONITORING

From monitoring interface, operator is available to monitor detailed information of each charging connector, and CSMS support brief & detailed mode for different scenarios.

The screenshot displays a web-based monitoring interface for charging stations. At the top, there are navigation tabs for 'Home' and 'Power station monitoring'. Below this, a search and filter section includes a 'Station' dropdown, a 'Refresh Interval' set to '15s', a 'Connector Type' dropdown, and a 'Sort By' menu with options for 'Default Sort', 'Charge Point Connector ID', and 'Parking Space Number'. A 'Connector' search field is also present.

A summary bar shows the following status counts: Real-time SOC: 0, Offline: 18, Available: 5, Occupancy (Before Charging): 0, Occupancy (After Charging): 0, Charging: 0, Under Maintenance: 0, and Faulty: 0. Below the summary, there are tabs for 'Overview', 'Details', and 'Preferences'.

The main content area displays six columns of detailed data for individual offline charging connectors. Each column includes the following fields: Station, Sub Brand, Sub Model, Connector ID, Connector Type, Real-time SOC, Real-time Power, Parking Lot, Plug Operational Status, and buttons for 'State Log' and 'Charging Transaction'.

Station	Sub Brand	Sub Model	Connector ID	Connector Type	Real-time SOC	Real-time Power	Parking Lot	Plug Operational Status	State Log	Charging Transaction
---	Star Charge	D4C0586045 38	300207 01	OB7 DC (Guh)	---	---	044	Disabled	---	---
---	Star Charge	USK02W	300410 01	OB7 AC (Bluc)	---	---	008	Disabled	---	---
---	Star Charge	USK02W	300411 01	OB7 AC (Bluc)	---	---	008	Disabled	---	---
---	Star Charge	D4C050700004	300497 01	OB7 AC (Bluc)	---	---	10	Disabled	---	---
---	Star Charge	D4C050700004	300497 02	---	---	---	110	---	---	---
---	Star Charge	D4C050700004	300497 03	---	---	---	111	Disabled	---	---

STATION MANAGEMENT

- Station map mode to view the number of sites in the area and their real time status
- Manage station information and status, check the charging orders
- Check the equipment list and real time status
- Set up separate charging rules or tariff strategies for different stations/charger groups



Select All | Select Current Page | A total of 0 pages

Station Name: [redacted] Station ID: 33221406 Copy the ID

DC Charger: 1	Total number of connectors: 4	Under Maintenance: 0	Electricity Price Information
AC Charger: 1	Total number of faults: 0	Enable Status: Normal Use	Base Information
Rated Power: 207 kW	Charging: 0		Connector Management

DATA REPORT

From monitoring interface, operator is available to monitor detailed information of each charging connector, and CSMS support brief & detailed mode for different scenarios.

Tp: The deadline for data statistics is the last hour of today. For example, if you enter the page at 17:39 on July 23, 2021 to query data, the deadline for data statistics is 17:00 on July 23, 2021.

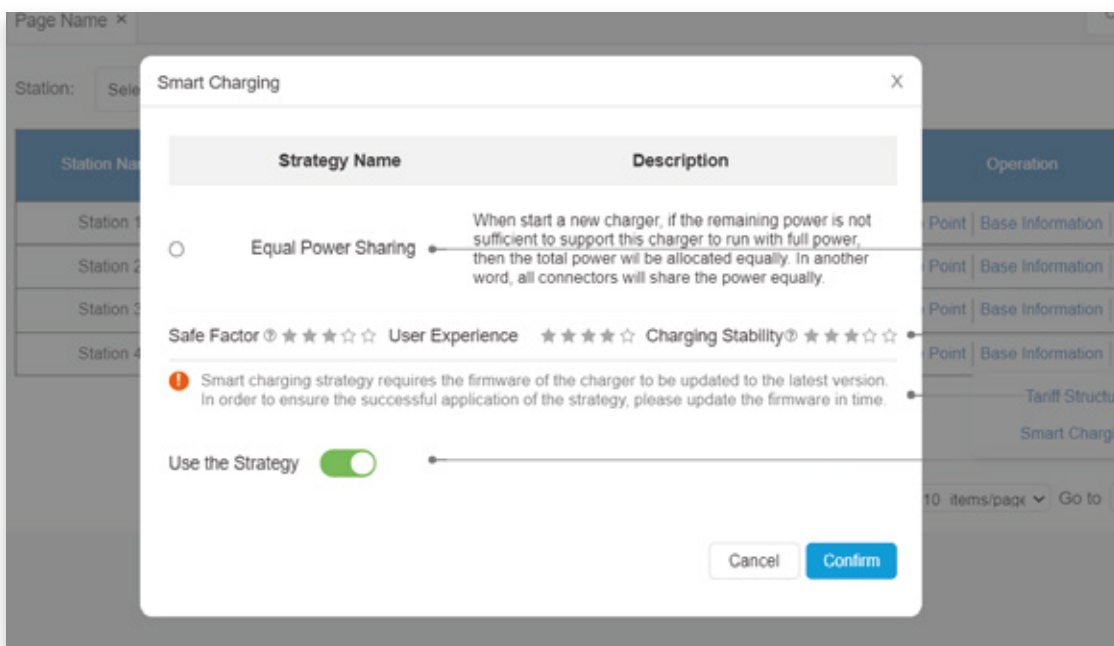
Station: Report Type: Time:

33.3050 Peak Hour Electricity Volume (kWh)	2.3490 Valley Hour Electricity Volume(kWh)	6.1130 Regular Hour Electricity Volume (kWh)	19.6330 Sharp Hour Electricity Volume (kWh)	61.4000 Total Electricity Volume (kWh)
------------------------------------------------------	------------------------------------------------------	--------------------------------------------------------	-------------------------------------------------------	--------------------------------------------------

Station Name	Peak-time Electricity	Off-peak-time Electricity	Shoulder-time Electricity	Sharp-time Electricity	Total
[blurred]	5.4000	0.0000	0.0000	0.0000	5.4000
[blurred]	0.0000	0.0000	0.1000	0.0000	0.1000
[blurred]	0.0000	0.0000	0.7000	0.1000	0.8000
[blurred]	24.0000	0.0000	1.1000	0.0000	25.1000
[blurred]	2.8320	0.0000	2.2180	3.6500	8.6000
[blurred]	1.0730	2.3490	1.9950	15.9830	21.4000

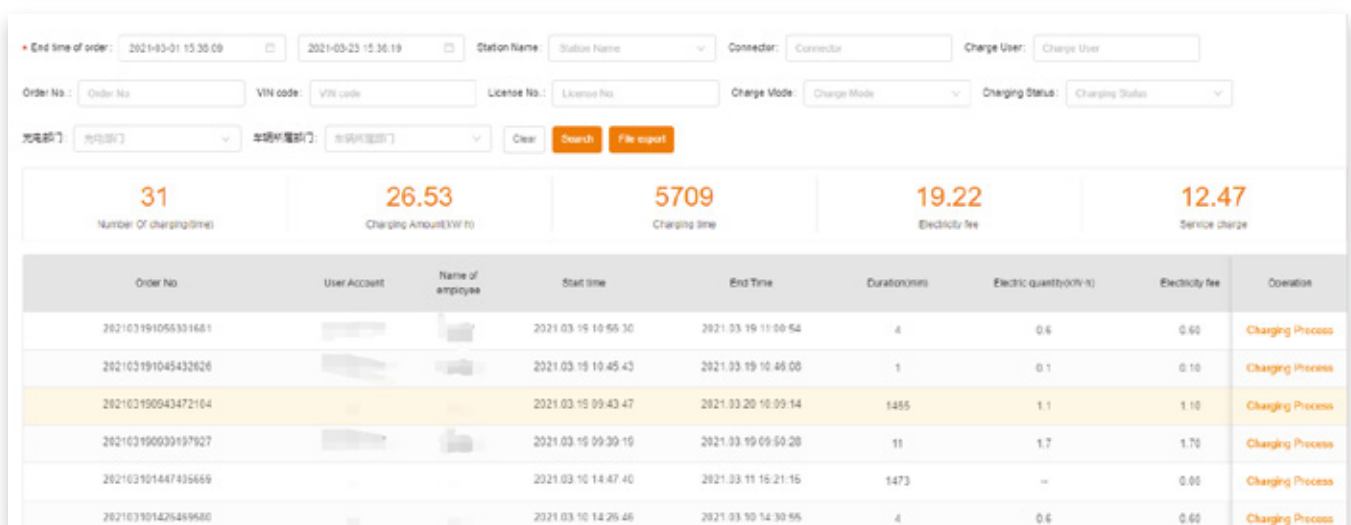
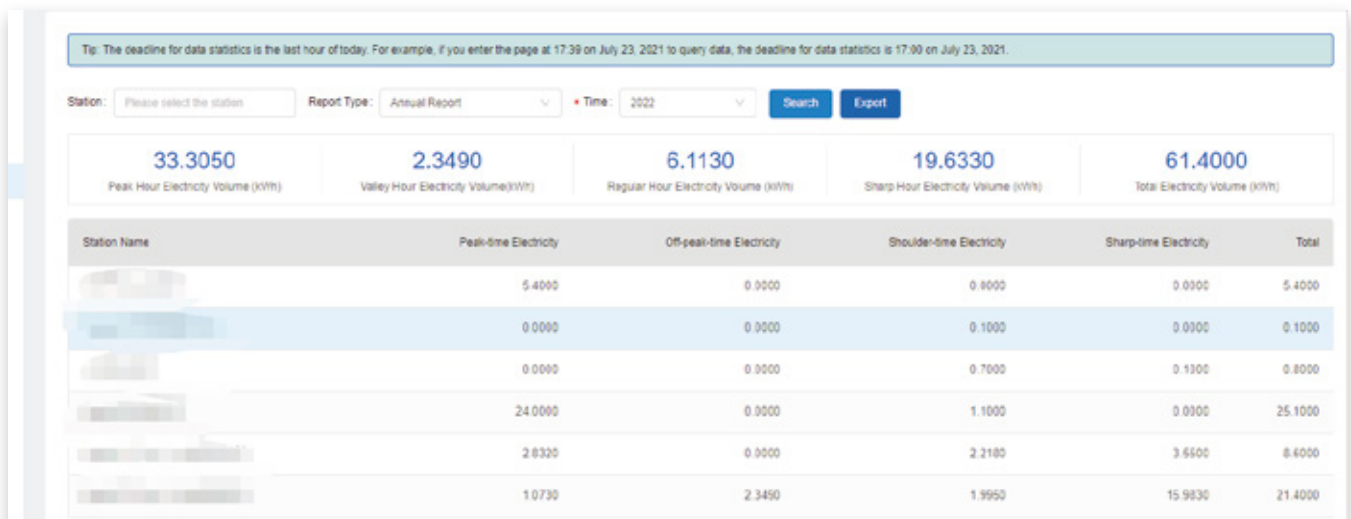
POWER SHAVING (SMART CHARGING)

Multiple dynamic load management strategy helps operator optimize their income and protect the power grid



TRANSACTION MANAGEMENT

- Multiple condition query: Order number, pile group name, date and other conditions
- Check detailed information for each orders
- Query enterprise internal order and public charging order separately



ROLE & ACCESS MANAGEMENT

- Provide different staffs with different menu access or different station management access

The image displays a software interface for role and access management. At the top, there are two tabs: 'Permissions X' and 'Edit X'. Below the tabs is a search box labeled 'role name'. A tree view shows a 'Station' category with several sub-items: 'Staion Map', 'Station Monitor', 'Station', 'Charge Point', 'Price Strategy', and 'Data Report'. The first four items are checked. Below this are three expandable categories: 'Order', 'Charge Manage', and 'Business', each with an unchecked checkbox.

A modal dialog titled 'Select Role Permissions:' is overlaid on the interface. It features a dropdown menu with 'Admin01' selected. Below this is the section 'Station Management privilege:', which includes two radio button options: 'Select According To Charging Station' (selected) and 'All Charging Stations'. A note states: 'When the number of power stations to be configured exceeds 100, please configure permissions by region'. Underneath, there are two columns of checkboxes. The left column is titled '1/11 items Unselected' and contains three items, with the first checked. The right column is titled '1/1 item Selected' and contains one checked item. Navigation arrows are positioned between the two columns. A 'Save' button is located at the bottom of the dialog.

FAULTS MONITORING & EARLY DETECTION

OCPP defined some faults that charger may report relevant fault code positively and CSMS may able to record all fault code history and alarm to relevant department or staff (by SMS,Email, API

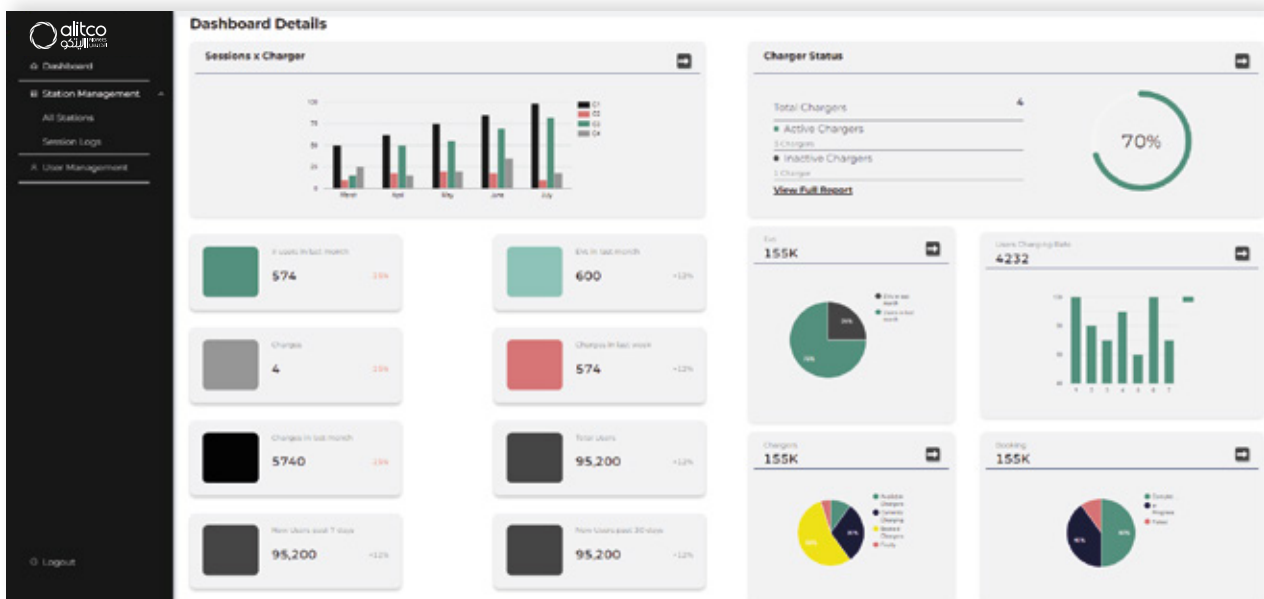
Home | Abnormal equipment X | File platform log X | Early warning configuration X | **Equipment fault monitoring X** | view of

Fault Name: EQ Number: Region:

Operation Level: Date: -

EQ Number	Status Code	Fault Name	Operation Level	Frequency	Latest Report Time	Station Name	Region	EQ Model	Remware Info
105324021	0000	authCharge unit offline for too long	main	1	2023-04-20 04:01:20	CLP Backpoint Depot (Staff Only)	Jiangsu Province-Changzhou Wujin District	DH-AC01100G11	Aurora-V1.2.7.0a107_7_3_033
124617761	0000	authCharge unit offline for too long	main	1	2023-04-20 04:01:20	CLP Backpoint Depot (Staff Only)	Jiangsu Province-Changzhou Wujin District	DH-AC02200G10	-
103980120	0000	authCharge unit offline for too long	main	1	2023-04-20 04:01:19	CLP Ting Yi Depot (CLP Staff Only)	Hong Kong Special Administrative Region-Hong Kong-Kowloon District	Aurora19W	Aurora-V1.0.0.0.B.008
104170401	0000	authCharge unit offline for too long	main	1	2023-04-20 04:01:18	CLP Backpoint Depot (Staff Only)	Jiangsu Province-Changzhou Wujin District	DH-AC06700G11	Aurora-V1.2.7.0a107_7_3_033
124617762	0000	authCharge unit offline for too long	main	1	2023-04-20 04:01:18	CLP Backpoint Depot (Staff Only)	Jiangsu Province-Changzhou Wujin District	DH-AC02200G10	-

Total 5 items



SOFT RESET

CSMS is available to send reset command to lead charger restart without power off, so that may fix some faults remotely

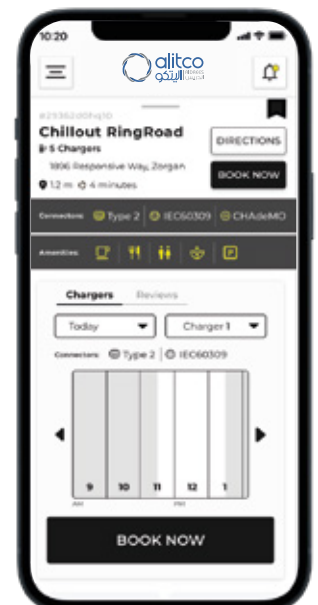
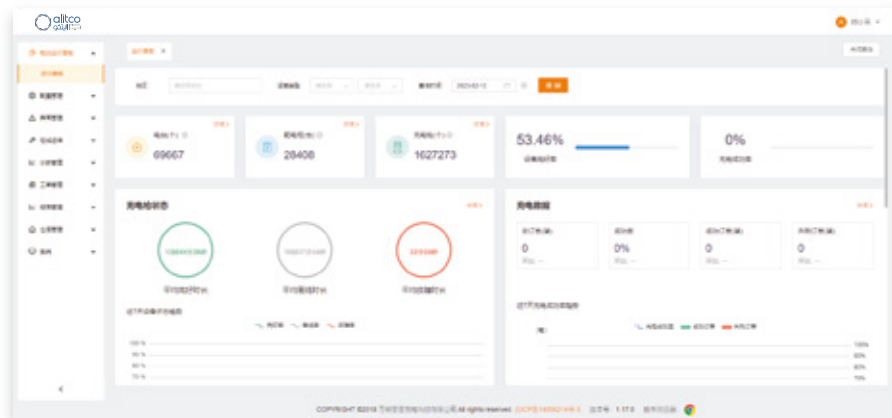
<input type="checkbox"/>	Equipment ID: [redacted]	Belongs to station: --	Operation status of the charging station:	Enable ...	Station Operational Status:	Disa...	Configuration management	Firmware upgrade	
	Charger brand: Star Charge	Stub Model: UNKNOW	Stub status: Unavailable						
	Connector ID: [redacted]	Connector Type: CCS (Medium)	Plug Operational Status: Disabl...	Connector usage heat: -			Charging Transaction	Connector Details	More
	Type: DC	Parking Lot: [redacted]	Connector Status: In Maintenance	Rated Power: 100kW					
<input type="checkbox"/>	Equipment ID: 300011	Belongs to station: --	Operation status of the charging station:	Enable ...	Station Operational Status:	Disa...	Configuration management	Status Modification	
	Charger brand: Star Charge	Stub Model: QC45	Stub status: Unavailable					Remote Reset	
								Status Log	
								Fault log	

INTELLIGENT O&M SYSTEM FOR CPO & O&M SERVICE PROVIDER

27000+ Monthly processing ticket

70% Remote finished ticket

20% Automatic create ticket



CYBERSECURITY CERTIFICATIONS

- ISO27001 Information security system certification
- ISO27701 Privacy Protection System certification
- Charging cloud platform national network security Level protection Level 3 certification
- Energy cloud Platform national network security level protection Level 3 certification
- SaaS platform national network security Level protection Level 3 certification



WHAT ALITCO OFFER



WE OFFER SOFTWARE PACKAGES TO:



Parking



Petrol
Station



OEM



Key
Account



Real
estate



Public
Transportation



Government



Fleet

Refine customer operation, reduce daily management costs, and improve charging service efficiency



Multi Language:

Whether you prefer Arabic, English or any other language, our mobile solution allows you interaction in your preferred language



Static and Dynamic Load Management:

Our load management system is perfect for areas that have difficulty in upgrading their infrastructure to allocate for chargers.



Advanced Filtering:

Through our filtering system you can either manually filter or our system can filter based on your vehicle specs.



Remote Start Stop:

Through chrgd you have the option of remotely starting, stopping or rebooting any charging station from the comfort of your office.



Remote Software Update:

Updating your EV Charge point is now easier and faster than before through over the air updating.



My Vehicle:

Choose your vehicle from our list of EVs available and get access to more data about your car and filter the chargers accordingly.



API Integration:

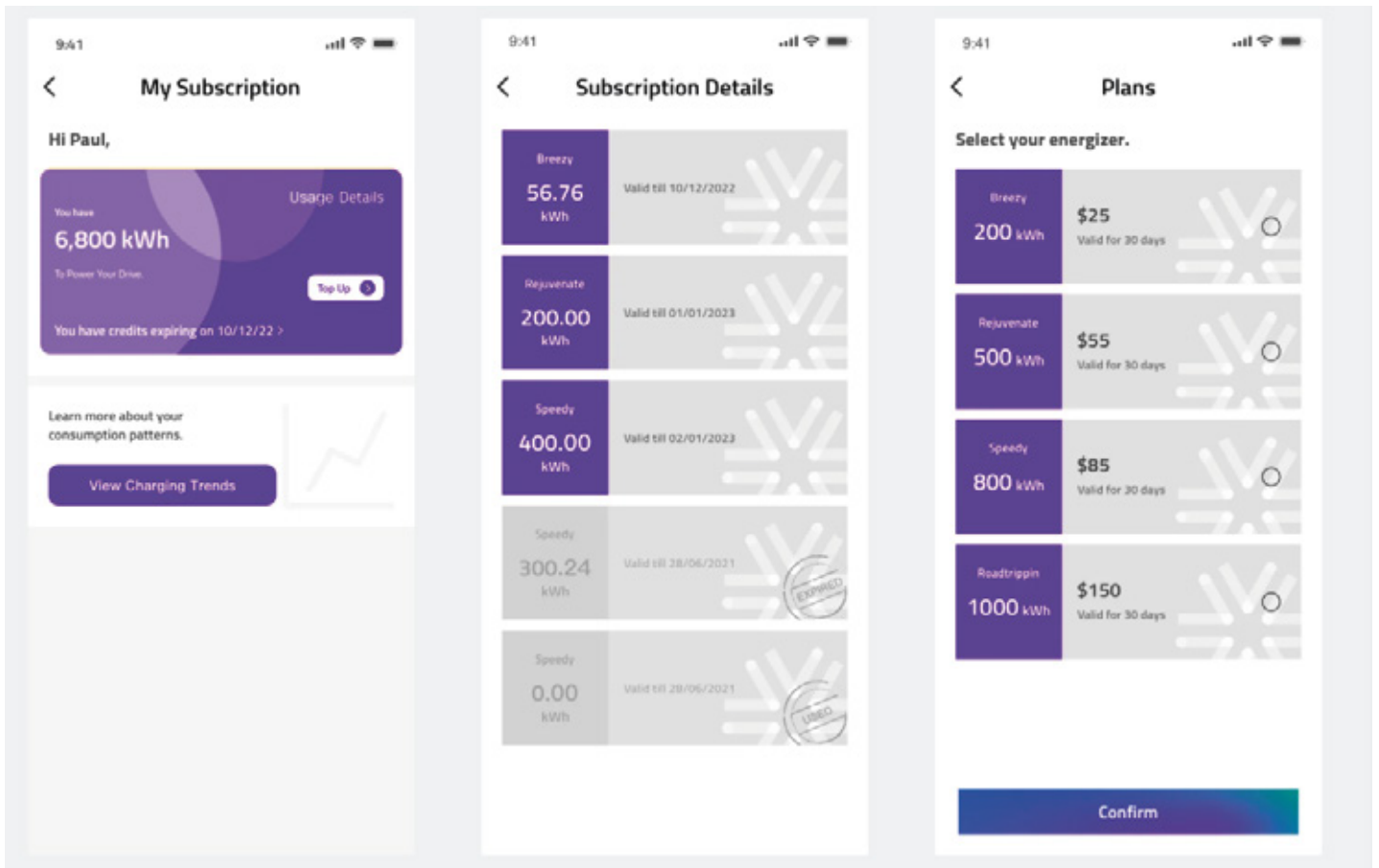
Building an integration layer allows us to easily integrate our system to other or vice versa.



Charger Status:

Through our easy to use UI and UX you can see your entire network and status of each charge point. Whether the CP is available, busy or faulty you see everything right away.

Subscription plan



THANK YOU
