Customs in-transit Asset Supervision and Management Solution

SHENZHEN JOINT TECHNOLOGY CO.,LTD

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Jointech
久通物联

1 Background

2 Application Scenario

3 Solution

4 Cases

1-Background

At present, the customs clearance process between many countries is very cumbersome, and some take up to several months, which not only increases the supervision cost but also increases the consumption cost of the end user.

Through the establishment of a monitoring system on the way, the use of safe smart locks is linked to the customs transportation system, the customs system and the customs manifest and other systems.

Collect and integrate key factor information such as the license plate number of the container vehicle, the container number, the ID number of the security smart lock, the time of entering and exiting the bayonet, the document information, etc., through the strict data comparison and verification of the document flow, the information flow and the cargo flow.

The integrated and coordinated supervision of customs construction and rolling vehicles in logistics transportation realizes the linkage and sharing of data on the checkpoints and supervision sites in the transit logistics chain, and implements electronic sealing, electronic unsealing, and unilateral inspection of the place of departure or arrival A visualized, automated, and intelligent transit supervision mode for real-time monitoring of nuclear and transit transportation throughout the entire process.

1-1Pain in transit monitoring

Truck gets lost

Truck get lost in transit within Territory, can't find the location

Illegally increasing goods

cargo is illegally loaded without notification during transit.

Cargo stolen

Transit within territory, cargo get stolen without notification

Goods smuggling

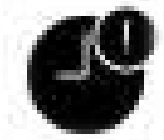
Paperless customs clearance, smart lock recycling

Illegal cargo discharge

In transit, cargo is illegally discharged in territory

Delay on arrive destination

Delay on arriving destination, without notification



1-2 Chanlleges in transit monitoring

Shipment security has emerged as a trending topic during the pandemic, bringing numerous challenges for logistics operators worldwide. Stakeholders involved in operating shipment & logistics businesses have the following difficulties when facing shipment security:

Traffic flow

Monitor the incoming & outgoing traffic of cargo/containers; manage the inventory of containers within an operation site remotely in real-time.

Visibility

Real-time visibility in between transit & during stops; must provide visibility even in no-network areas.

End-to-end workflow automation

End-to-end automation is critical for enterprise clients with multi location branches. Our Shipment Solution is precisely engineered to support these enterprises by automating all types of logistics workflows from start to finish.

Security

Physical security measures (wire lock, e-seals) to protect cargo; security measures must be tamper-proof

Control

Control of the cargo and operations during transit; users must be able to manage and coach field operations for real-time control remotely.

2-1 Application Scenario-1

Out-of-port LCL: The bulk cargo will be shipped to the port terminal after the LCL is completed in the customs-supervised warehouse under the supervision of the customs.

Benefits of in-transit supervision: After the consolidation is completed, the terminal is released directly, reducing the workload of the customs secondary inspection and improving the efficiency of customs clearance

LCL supervision warehouse

Port

2-2 Application Scenario-2

International turnover container transfer terminal: Some container cargo needs to be transferred from one port to another port for transshipment.
It may be transported by ship or automobile, and is generally carried by logistics companies in the port.

Benefits of in-transit supervision: reduce customs inspections and improve the transportation efficiency of logistics enterprises.

Port 1

Port2

2-3 Application Scenario-3

Dangerous goods or special goods inspection outside the port: Some imported dangerous goods or special goods cannot be inspected at the port and docks, and they need to be transported to a specific place under customs supervision for inspection and released.

Benefits of in-transit supervision: prevent smuggling and reduce customs workload.

Port

Customs inspection place for special items

2-4 Application Scenario-4

Transit within the country: container enter the country from customs 1, and exit the country trough customs 2. GPS electronic lock will be sealed during transportation. And it will be unsealed after container exit another customs.

Benefits of in-transit supervision: reduce customs clearance procedures, improve customs clearance efficiency, and improve transportation efficiency of logistics enterprises.

Customs 1

Customs 2

2-5 Application Scenario-5

Customs zone to free trade zone,bonded zone: materials imported to free trade zone and bonded zone which belong to customs supervision places, we will have to monitor the cargo status on the way.

Benefits of in-transit supervision: prevention of smuggling.

Cusotms

Free Trade Zone,Bonded Zone

2-6 Working Process

Input data after customs clearance	Active Journey	Live Tracking (Handle Violation)	Arrive port exit	Deactivate Journey
Input data: BOE number(bill of entry)Container number Goods information Carrier and Consignee,Agency Set dispatch route Create the geo fence	**Port of entry Preparations:** Assign the seal ID with trucks Assign route with trucks Generate trips details Seal the truck	**Transit in Territory** Update real time location, door status. Upload event in transportation Trigger alert for unlocking, tampering, road deviation.	**Arrive port of exit** Trucks enter geo fence of destination. System judge the location true or false.	**End the supervision** system end trip automatically Unseal GPS electronic lock . Generate trip report.

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https://icloud.assetscontrols.com:1443/ yops YOPS2022

3-Solution-Hardware

Master Lock JT701

- Live time locating& lock status
- Global network
- Nearby &Remote unlock
- Remote control Slave unlock

Cable Slave JT709

- Bluetooth/RFID/Remote unlock
- 3~4 months battery life
- Cable length flexible
- ATEX

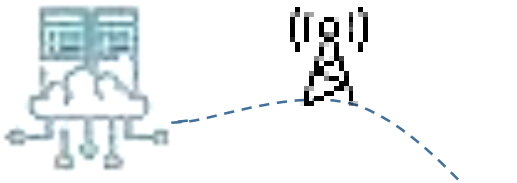
Valve Slave JT802

- Bluetooth/Remote unlock
- Physical emergency unlock
- 2 years battery life
- IEC EX

The master lock can work with up to 10 slave locks

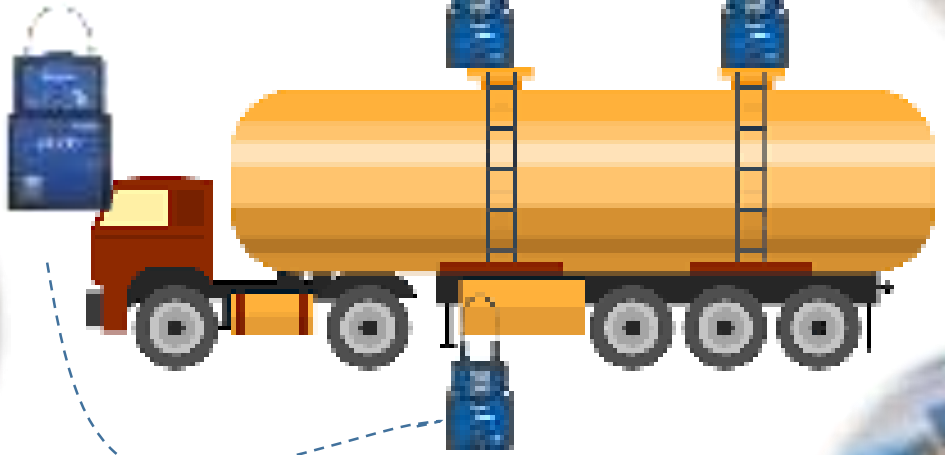
3-1 Solution-Hardware-Dry cargo

3-2 Solution-Hardware-wet cargo



Cable slaves on
Top hatch cover

Master lock in driving room



Cable slave on
bottom valve door

3-3 Solution-Hardware-Bulk nets goods transporation monitoring

Electronic Net for bulk goods transportation

Sealing and Unsealing Processes
Mozambique Customs

3-4 Benefits

Product durability - Jointech intelligent padlocks tracks over 10,0000 containers annually around the world , 90% of devices are used in customs supervision(30+ customs in different countries), except replacing some of the batteries after three years of very frequent operation, they have devises over
six years old working in perfect conditions.

Increased freight in-transit visibility:

o Real-time Information of the entire operation with a single data base information platform.

o Decrease in safety stocks

Increased cargo traceability:

o Integrated statistical data of the entire process

o Ensure that supplies arrive on time and enhance border security when moving assets in and out of conflict zones.

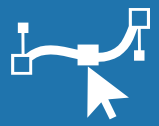
Improved planning and operational efficiency:

o Lower Security Costs (Cargo Escorts)

o Reduction of cargo theft – piracy

o Peace of mind to the end customers

3-5 Solution-Tracking software platform



Real-time monitoring,trace replay, data docking with Customs system

Geo-fencing,
Route Planning

Warning of abnormality in transit

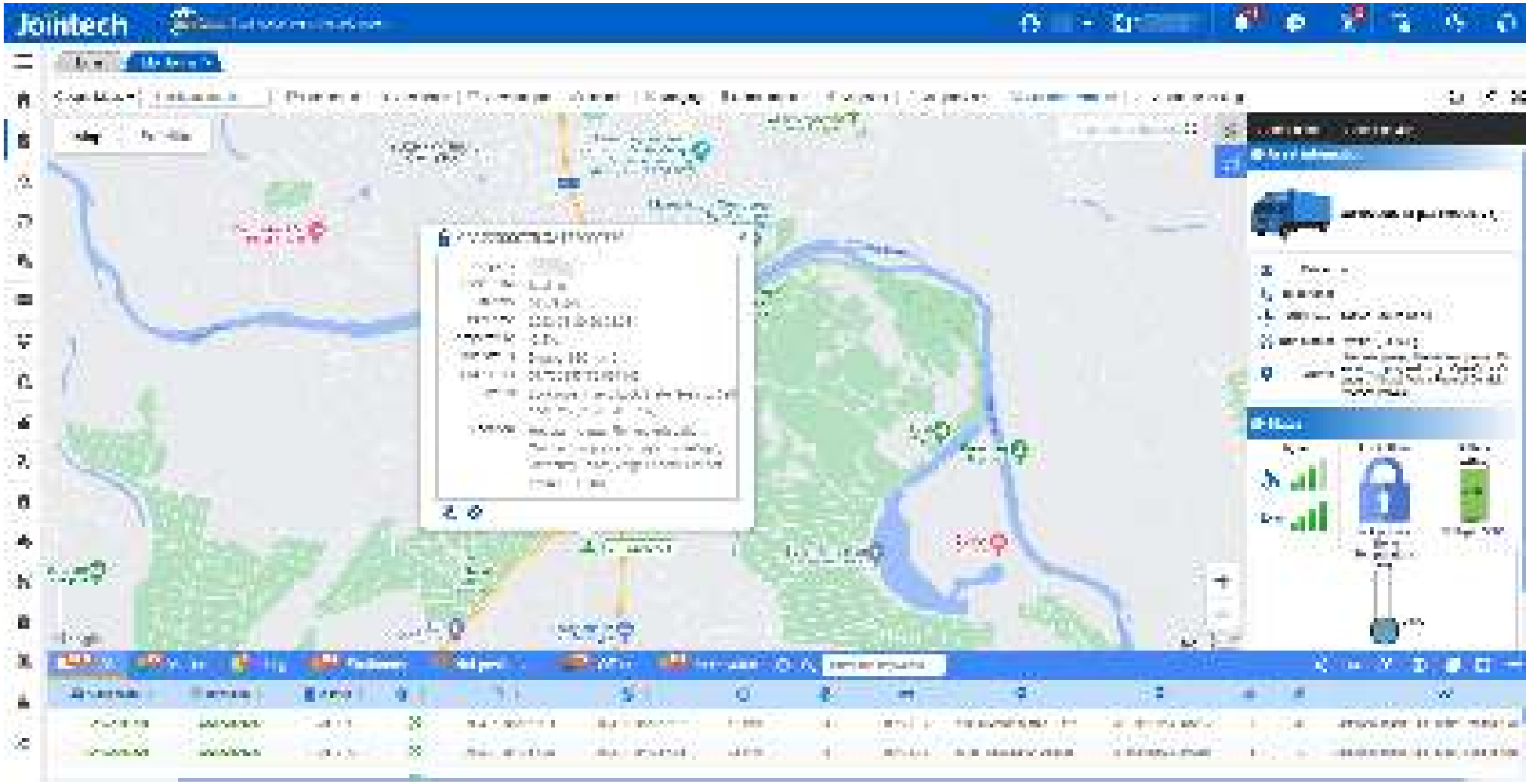
Real-time information, historical stat us, usage record query, business volu me statistics

Apply big data analysis to identify sto p-point portraits

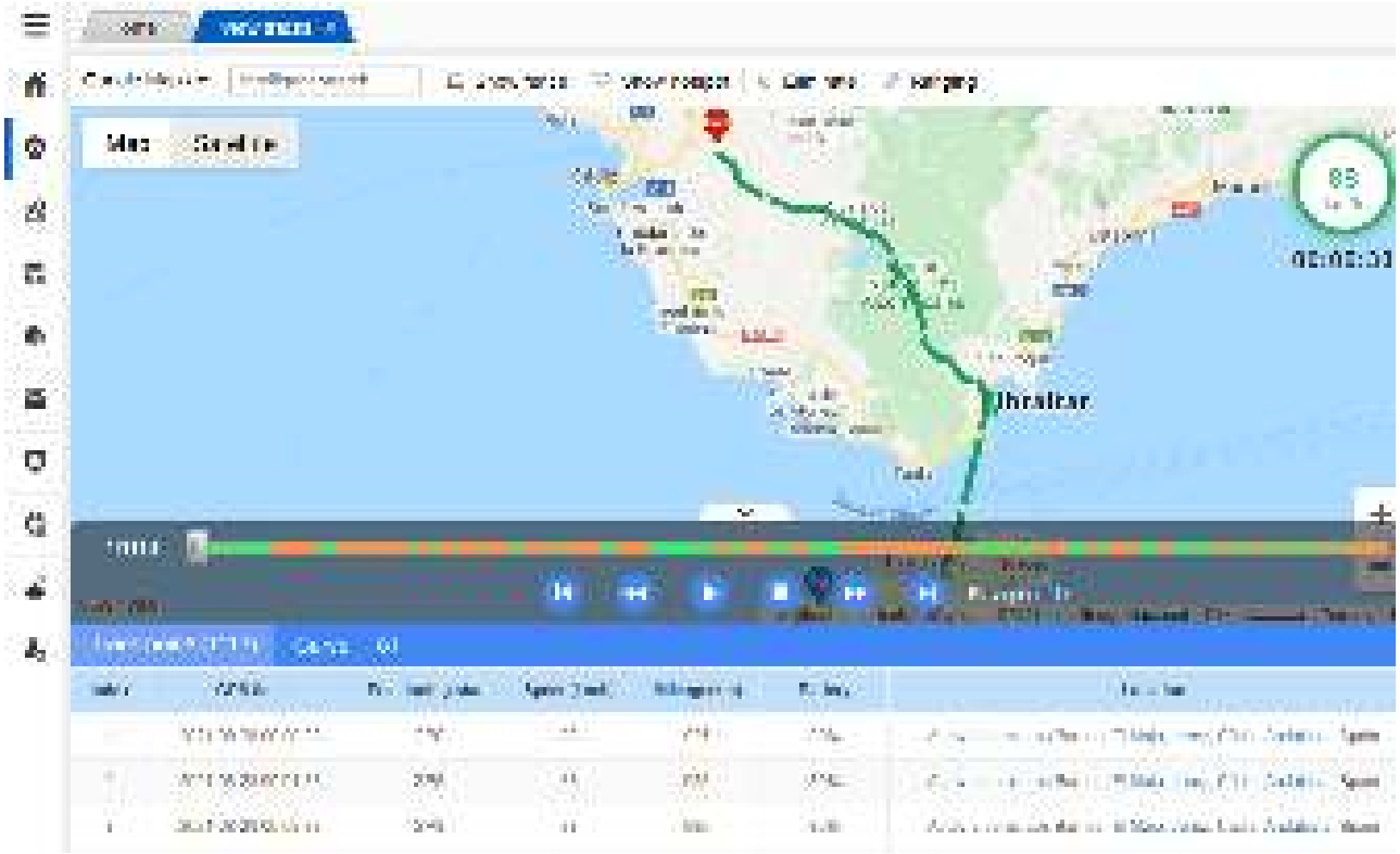
Powerful map engine

3-6 Software-Real-time Tracking

Understand the location and status of assets in real time, and respond to emergencies instantly



3-7 Software-Tracktrace Replay



Enter the container number/equipment number in the search box for quick query

Up to 30 days of historical equipment operation traces can be checked

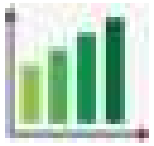
Historical unlock node trajectory mark

3-8 Software-Route Planning

Designate routes for assets, intelligently manage and dispatch to improve the transportation timelines

Real-time progress of transportation tasks

Lock Status

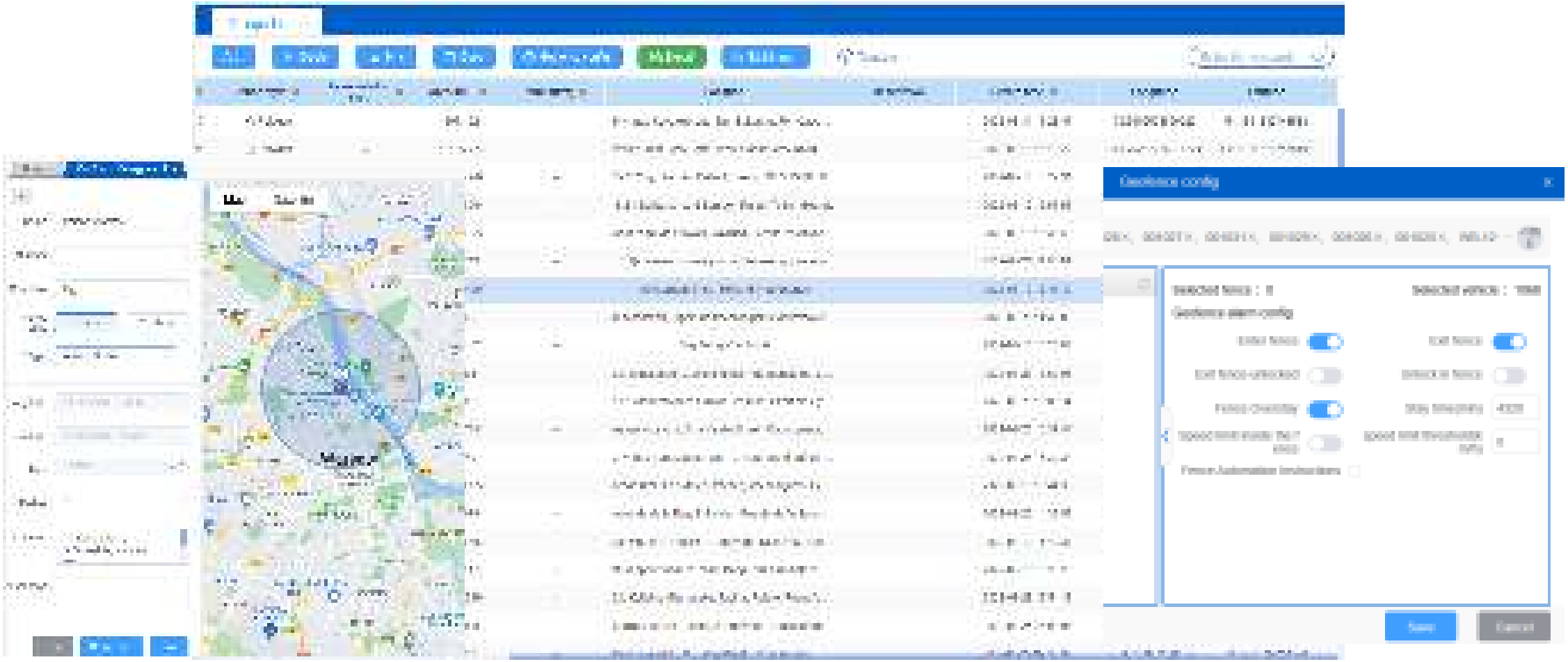


Statistics on completion of transportation tasks

Real-time status of vehicles in transit

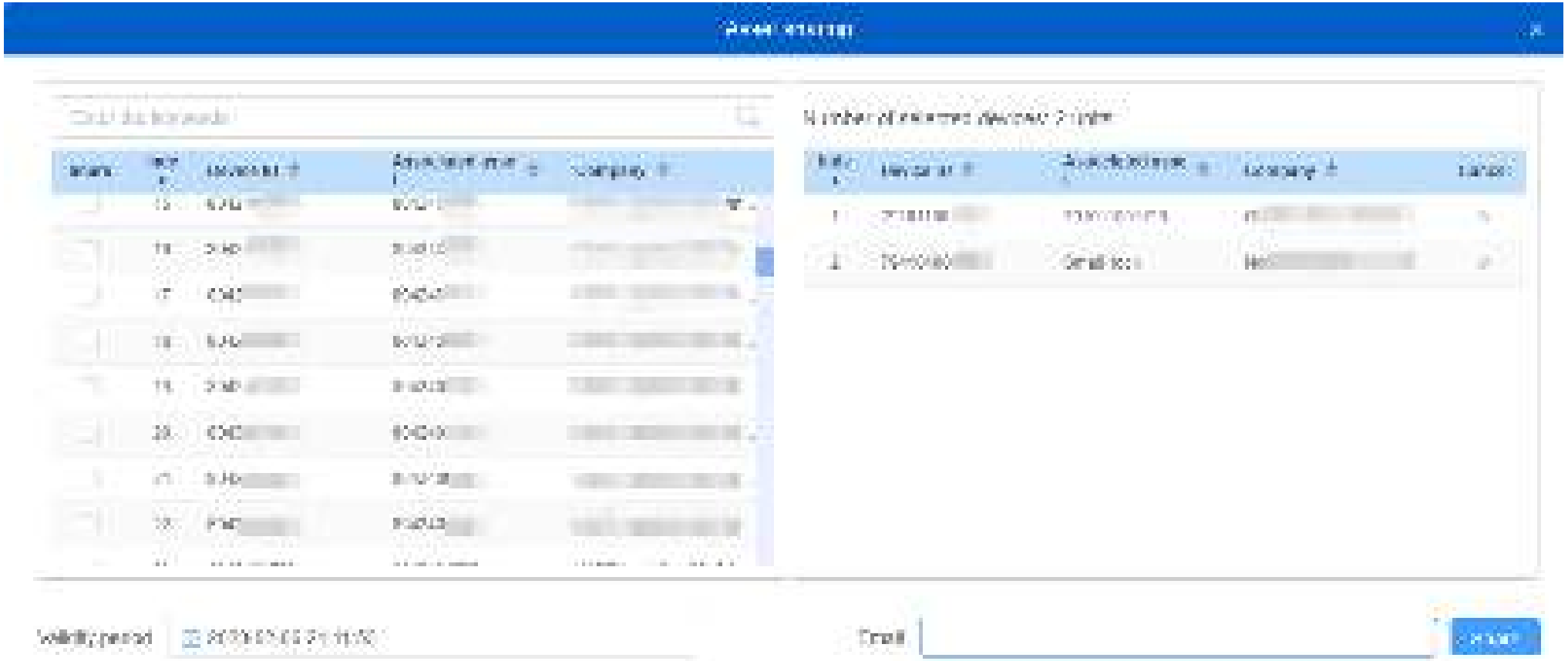
3-9 Software-Geo-fence

Track and manage assets and events within designated areas



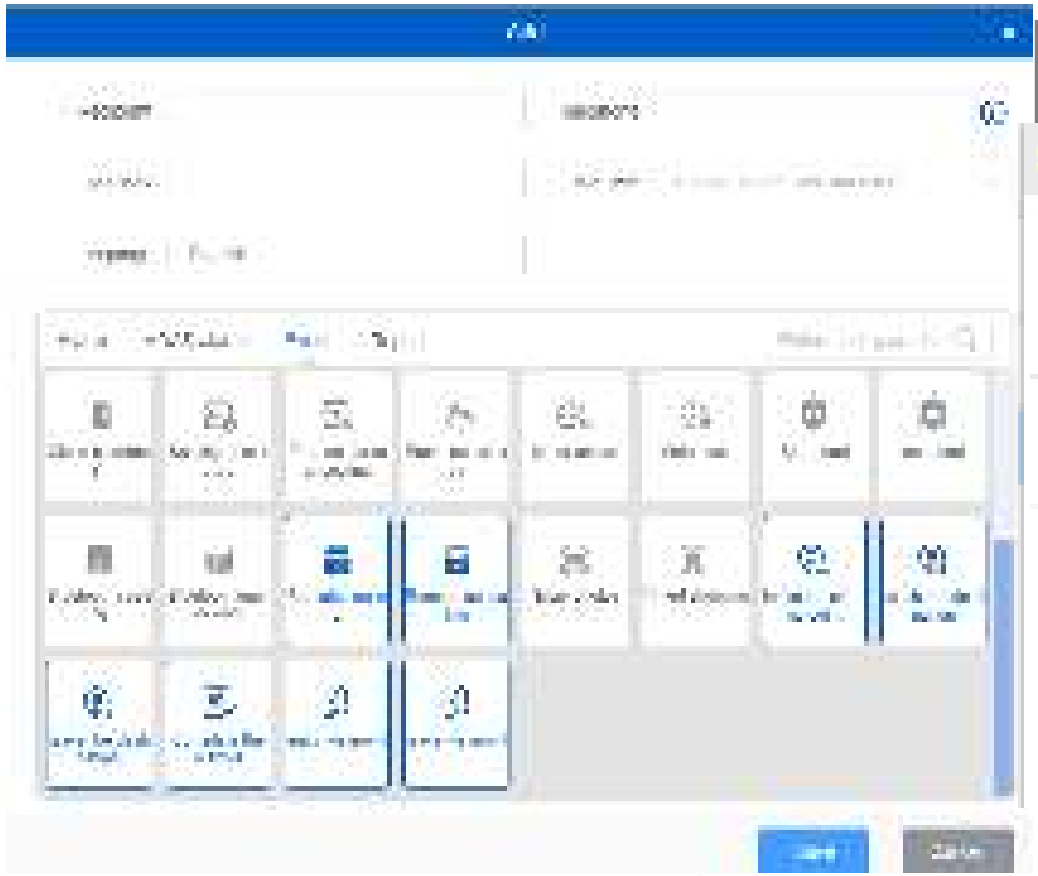
3-10 Software-Asset Sharing

Share asset information to designated personnel within a limited time, authorized management.

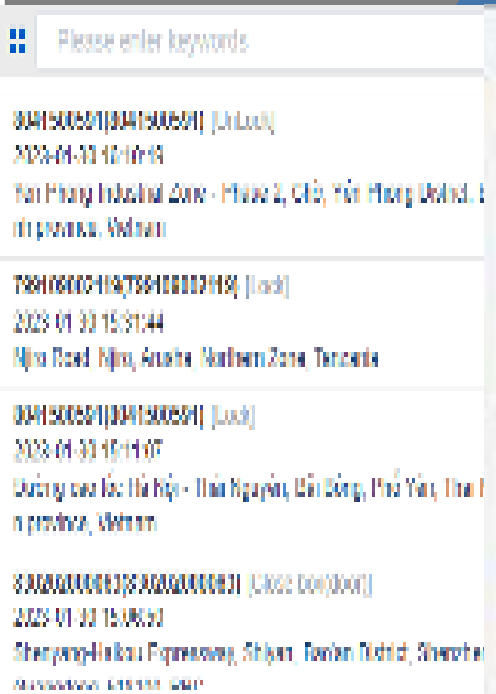


3-11 Software-Alarm Push

Push events and alarm information through multiple channels, and know asset security status timely



APP



SMS

Email

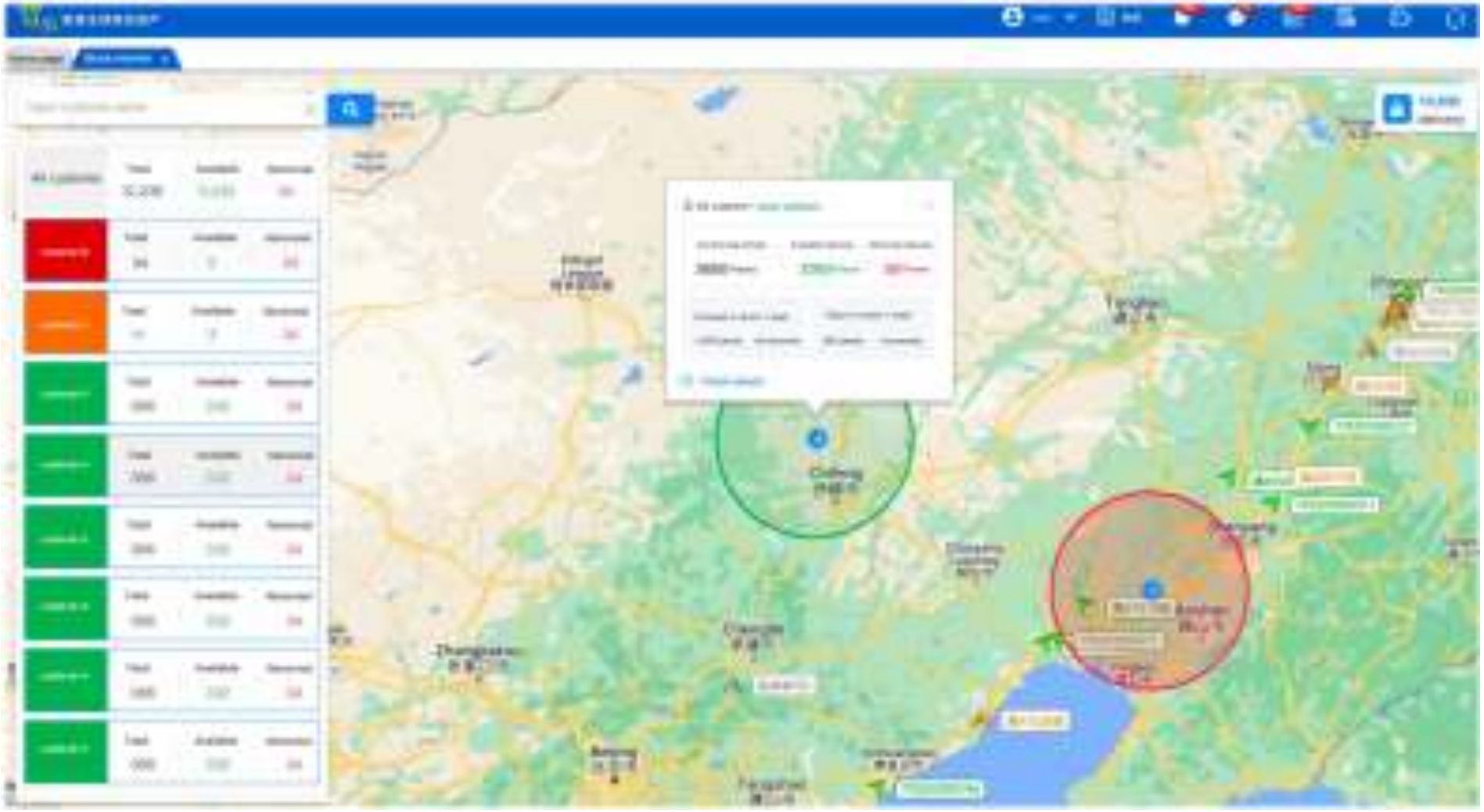
3-12 Software-Charts&Reports

Asset data chart analysis, big data analysis and intelligent management

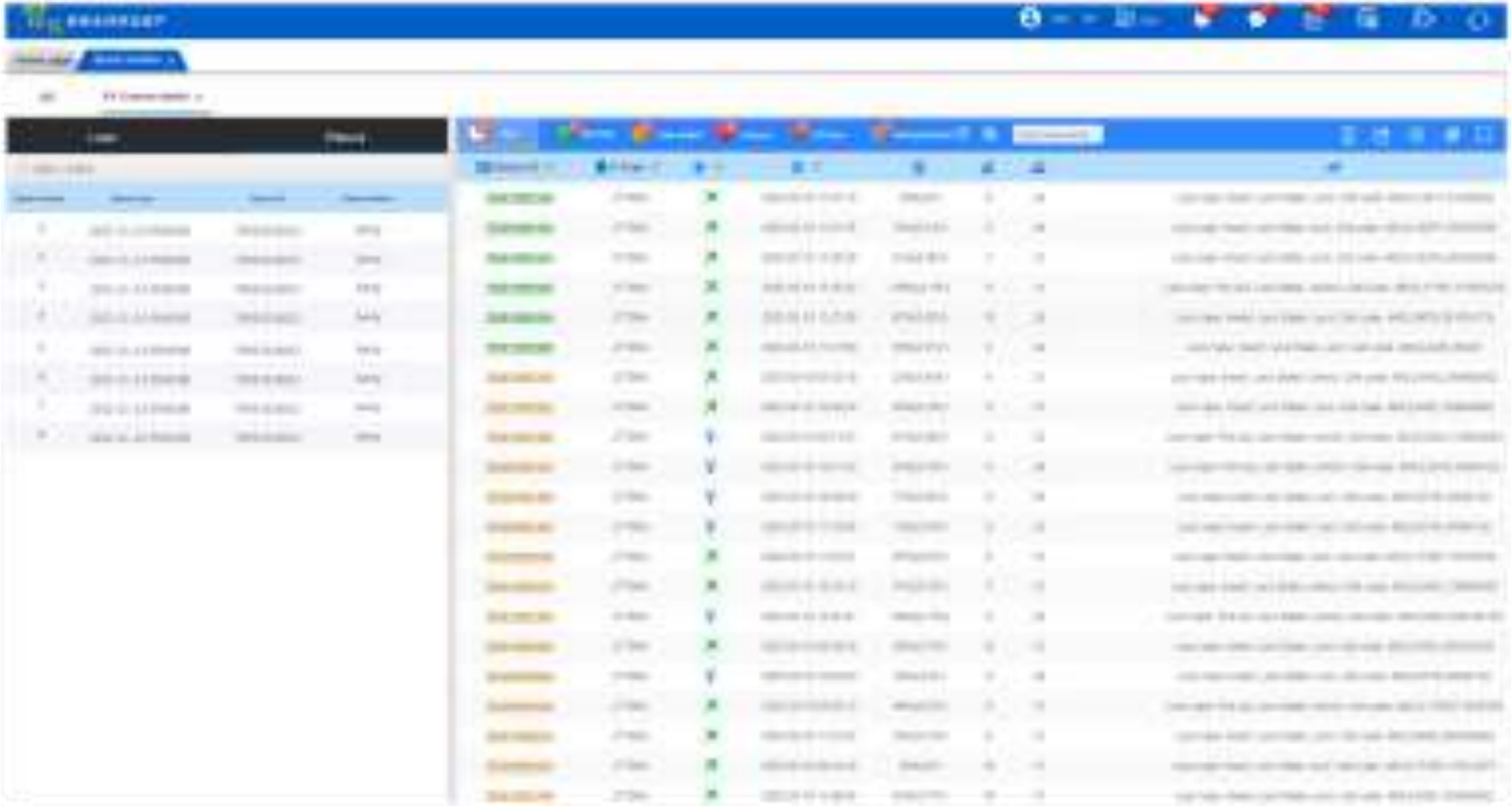
3-13 Software-Charts&Reports

Flexible decentralized management, convenient management of system users and assets

3-14 Software interface of locks management



3-15 Software interface of locks stock management



3-16 Software interface of locks roatation

4-1 Cases-Jordan Custom

Project background:
This project mainly applies customs cargo transportation supervision, replacing the electronic locks purchased by original customers from Europe, monitoring the transportation of container cargo from port to warehouse, ensuring transparent management during transportation, and improving the speed of customs clearance.

By using smart electronic lock devices instead of escorts to reduce management costs and service efficiency, to promote trade at the Jordanian border and increase taxes in a cost-effective manner, and improve trade facilitation processes.

Quantity: 3000pcs Model: JT701

Benefits:
Increased supply chain visibility

Increased cargo traceability

Improved planning and operational efficiency

Reduce customs clerance time

4-2 Cases-COMESA

Quantity： 15594pcs , Model： JT701

Project background： The flow of goods between member countries, the monitoring of cross-border transportation of containers and the convenience of customs clearance, COMESA agencies or authorized agencies will seal and unblock containers/truck and manage them in a unified manner.

the project scale is 15,594 units. Currently, it is mainly implemented in three countries: Congo (10,000 units), Zambia (500 units) and Malawi (5094 units).

The requirements of this project are fully matched with our company's intelligent electronic lock JT701, led by the then Secretary-General Cindiso Ngwenya, and implemented by his assistant and financial adviser Salah and his team.

4-3 Cases-India Customs

Project Background:

Earlier for export of goods to Bangladesh the goosd were first sent to Port from Kanpur and from there the goods
were exported through sea via Sri Lanka to Bangladesh.

This entire process took almost 2 months. if the goods sent via road transport then the containers were stuck up at Petrapole Land Customs Station for 20 days and it took 1 months for the goods to finally arrive at their destination.

Quantity：4000ocs Model：JT701

Decreased Customs Clearance Time- with the implementation of ECTS, the border checks will be avoid, which will reduce the customs clearance and logistics time a lot.

Increased Cargo Traceability -the cargo status can be delivered in real-time, any time, anywhere

4-4 Cases-Ghana Customs

Project background：

On March 29, 2018, the Government of Ghana, through the Ministry of Trade and Industry, signed an agreement with Ghana Link Services to provide a fully integrated trade facilitation and customs management system (UNIPASS) for the Ghana Tax Administration-Customs Department.

The electronic customs system increases government revenue and boosts the domestic economy by facilitating rapid customs clearance at various ports, thereby increasing productivity and optimizing the supply chain to accelerate industrial production.

Quantity：4000pcs Model：JT701

Ghana Customs is currently implementing a new integrated customs management system, requiring integrated supervision of import/export goods in various ports across the country, thereby reducing the management cost of import and export trade.

For containers and goods in the process of cross-border transportation, it is necessary Install intelligent electronic locks to realize the supervision of the cargo transportation process and the status of the container.

4-5 Cases-Tanzania Revenue Authority

Project background: The Electronic Cargo Tracking System (ECTS) launched by the Tanzania Revenue Authority (TRA) Customs is one of TRA's measures to modernize its customs business.

The purpose is to improve the monitoring of transit goods by replacing it with smart electronic lock devices.

Personnel escorted to reduce management costs and service efficiency to promote cross-Tanzania border trade and increase taxes in a cost-effective manner, and improve trade facilitation processes:
Model: JT701 , total order quantity: 10,000pcs

Benefits:
•Real-time identification of the basis for illegally transferred goods/improvement of taxation

• Reduce transportation time/improve transparency

•Reduce the physical inspection of transit goods / increase truck turnaround time and reduce business costs

A total of 9 companies are authorized for this project, and 6 companies cooperate with Jointech.

4-6 Cases-Mozambique Customs

Project background:

Mozambique exports oil. Tank trucks transport the oil from various oil processing plants to the border customs. The tank trucks need to be monitored throughout the process to prevent oil theft. They use Jointech's electronic lock child and mother lock solution, the mother lock JT701D is placed in the cab, and the child lock locks the oil inlet valve and the oil outlet valve. The tanker will be sealed when it departs and unsealed when it arrives at the destination. There are dozens of sites across the country for the sealing and unblocking of electronic locks.

Quantity: 4020pcs Model: JT701D, JT709, JT705A Time: 2021

The story behind:

The successful implementation of this project benefited from the good cooperative relationship between our company and NUCTECH.

We can quickly respond to customer requirements, work in a team, quickly provide solutions, and build trust. For example, our sales team and technical tem held more than 10 video or telephone conferences with customers and the NUCTECH team to discuss issues, introduce solutions, and solve problems.

4-7 Cases-Congo Customs

Quantity :10000pcs Model :JT701

Project background:
The Congo Customs Container Monitoring Project aims to improve the monitoring of transit goods, reduce management costs and service efficiency by replacing personnel escorts with smart electronic lock devices, so as to promote cross-Tanzania border trade and increase in a cost-effective manner Taxation to improve the trade facilitation process:

Benefits:

Monitor and manage the container,

Protect client’ s cargo and avoid cargo theft.

Real time monitoring of location of container

Quick response for tempering of device

4-8 Cases-Belarus Customs

The heads of state of the Eurasian Economic Union member states signed an agreement in Moscow in April 2022 on the use of smart electronic locks in the Eurasian Economic Union to ensure the rapid flow of goods between the Union countries.

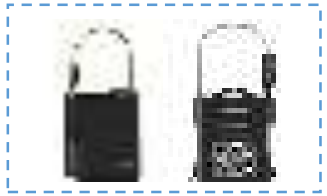
Belarus took the lead in using Jiutong's electronic locks to supervise cross-border cargo transport vehicles, requiring all trucks entering the country from Lithuania, Poland, and Latvia to be equipped with electronic locks, which can only be unlocked when they leave the country. Currently, the system has 4,000 simultaneous monitoring devices every day tower.

Customer Feedback Through the use of smart electronic locks, the risk management system of member states has been greatly optimized, and the inspection of goods transported by transit vehicles has been minimized, customs clearance efficiency has been improved, the cost of the carrier has been reduced, and the transparency of transportation has also been ensured , which eliminates the gray, shadow trade.

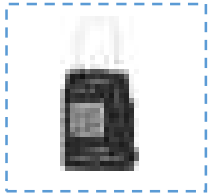
Eurasian Economic Union: 19,000 units

4-9 Hardware

smart sealing device



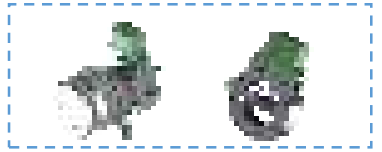
seal lock



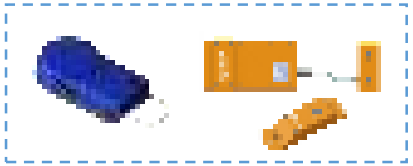
Intelligent electronic padlock

- Dry container

- Tanker type



- Other customization type



Our partners

Belarusian Customs

Poland Customs

UAE Customs

Azerbaijan Customs

Jordan Customs

Vietnam Customs

India Customs

Mozambique Customs

Congo Customs

Mauritius Customs

Ghana Customs

Tanzania Revenue Agency

Ecuador Customs

Guatemala Customs

Colombian Customs

Dominican Customs ……

Installation

Belarus Customs

Poland Customs

Jordan Customs

UAE Police

Installation

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Company Introduction

Shenzhen Joint Technology Co., Ltd. was established in 2006 with registered trademark Jointech, a national high-tech enterprise; a subsidiary company of listed company in China main Board stock.

Our company focuses on the IOT application of smart logistics, especially for the logistics equipment carrying , smart logistics, and the status safety of the assets consigned by these equipment, global solutions are proposed to ensure that customers can reduce costs, ensure safety, information transparency, and scientific decision-making.

At present, Jointech has provided reliable high-performance products and solutions with sustainable advantages for national customs, tax revenue department of 35 countries, and integrated solution providers, etc.

Production Capacity

Jointch has professional standard production line, and have bulk order production capacity. The production capacity can reach 200,000 pcs smart hardware per year.

Jointech

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