

# 2020

## China TransInfo Technology Co., Ltd. Social Responsibility Report

CHINA TRANSINFO SOCIAL RESPONSIBILITY REPORT





## Contents

About the Report	01
Chairman's Message	03

## About China TransInfo

Company Overview	05
Main Business	06
Social Responsibility	09
Awards of the Company	11

## Corporate Governance

Governance Structure	13
Internal Control and Risk Control	14

## Technology: Driving a Intelligent Future

Improving Efficiency	18
Safety Assurance	22
Transportation Revolution	26

## Innovation: Leading the Industry

R&D Innovation	29
External Cooperation	31

## Operation: Supporting High-quality Development

Privacy Security	35
Supply Chain Management	36
Anti-corruption	36

## Environmental Protection: Insisting on Sustainable Development

Green Transportation	41
Green Operation	41
Green Production	44

## Employee: Marching Forward Together

Recruitment and Rights	47
Promotion and Training	47
Safety and Health	51
Care and Communication	52

## Public Welfare: Assuming Social Responsibility

Smart Battle Against COVID-19	55
Public Welfare	61
GRI Index	63





## About the Report

This report, as the first social responsibility report issued by China TransInfo, discloses details of China TransInfo's practice and performance in fulfilling its social responsibility in an objective, standardized, transparent, and comprehensive manner.

### Period

The report covers the period from January 1 to December 31, 2020. Part of the content and data is beyond the year.

### Reporting entity

The main object of this report is China TransInfo Technology Co., Ltd., including its branches, subsidiaries, and direct affiliates.

### Basis for Preparation

The report is prepared according to the *Guidelines of the Shenzhen Stock Exchange for Standardized Operation of Listed Companies and the Guidance on Social Responsibility Reporting (GB/T36001-2015)* national standard.

## References

For ease of presentation and readability, "China TransInfo Technology Co., Ltd." is also referred to as "China TransInfo," "the Company," and "we" in this report.

## Data

All the information and data cited in this report come from the Company's official documents, statistical reports, and financial reports. China TransInfo guarantees that there are no false records, misleading statements, or major omissions in the content of this report.

## Contact

Telephone: 86-10-50822100

Address: Tower B, Transinfo Building, No. 27 Court of Zhongguancun Software Park, No. 8 Dongbeiwang West Road, Haidian District, Beijing

Website: [www.ctfo.com](http://www.ctfo.com)



## Chairman's Message

Dear readers:

As I wrote on the website of China TransInfo, "The ultimate vision in my heart is to make China TransInfo a respected company as well as a great company." It has been two decades since the founding of China TransInfo. At this special moment, we have decided to release our first social responsibility report to assess whether we are becoming a great company, whether we have remained true to our original aspiration, and whether we have fulfilled our social responsibilities as a corporate citizen and are making China TransInfo a respected company.

Focusing on the transportation industry, China TransInfo is dedicated to empowering the intelligent upgrade of the industry, benefiting the community with digital technology, and bringing changes to the society to the better. Transportation is one of the oldest industries. "On paths crisscrossing in the fields, dogs and chickens were running about," as Tao Yuanming (365 – 427, Chinese poet) wrote. Our ancestors paved roads in mountains, built bridges over water, and achieved prosperity using transportation. However, the traditional transportation industry grapples with extensive management and low efficiency. In everyday life, most of us may have complained about traffic jams and difficulties in parking. More broadly speaking, against the backdrop of China's construction of an ecological civilization, the transportation industry is a major carbon emitter and needs urgent improvement. China TransInfo plays a critical role in promoting the transformation and upgrading of the transportation ecosystem and helps to realize the intelligent self-reform of the industry toward green and digital transportation.

In the past two decades, we leveraged our superiority in technology and innovation and achieved breakthroughs

in smart transport, smart traffic management, smart expressways, smart road networks, smart civil aviation, and smart rail transit. In this way, we empowered the industry ecosystem and promoted the transformation and modernization of traditional transportation, moving it toward increased intelligence. We have also explored the Internet of Things (IoT) and extended digital and intelligent services to terminal devices. Nonetheless, this is just the beginning. We believe that a promising future awaits us. The future of intelligence may far exceed our imagination, but we will move toward this goal firmly and unwaveringly.

We aspire to move forward steadily and grow together with partners in the industrial ecosystem in a more sustainable manner. The realization of the vision of intelligent transportation and IoT requires the joint efforts of all participants. China TransInfo looks forward to deepening the open cooperation it engages in with all partners in the industrial ecosystem. In the context of industry changes, we need to build a new type of partnership and even further expand the connotation of "partner" by bringing all of our stakeholders into the ecosystem. In this way, the country, society, industry, enterprises, and individuals can achieve higher and surpass new heights on the great journey of building a safe China that has a robust transportation network.

Keeping the mission of "making the world safer, more convenient, and smarter," we also care for individuals and their wellbeing. In the face of the COVID-19 pandemic, we, as a corporate citizen, immediately began providing assistance to areas hard-hit by the pandemic. We supported pandemic prevention and the resumption of

production through the use of technology so that the people in those areas could return to normal life as soon as possible. We also rapidly developed temperature measurement products to ensure the effective operation of society during the pandemic. Besides safeguarding the health and safety of our employees, we have worked tirelessly to create the best workplace for them so that they can grow and develop together with the Company and lead better lives.

Faith in persistence, a spirit of exploration, and the courage to pioneer are all part of the inner call and pursuit of everyone in China TransInfo. In pursuing industry reform and sustainable development, I believe that everyone at China TransInfo is well prepared to follow the right path. Taking this report as a starting point, we will share with you our thoughts and achievements regarding social responsibilities and sustainable development so that together we can build a better future as we continue forward.

Xia Shudong, Chairman

July, 2021







# About China TransInfo


## Company Overview

China TransInfo is a leading provider of digital solutions for the transportation industry in China, committed to bringing customers in the transportation industry into the digital world. The vision "to make the world safer, more convenient and smarter" drives the Company's continuous efforts to innovate. The Company aims for the digital- and intelligence-based transformation and innovation of the transportation industry. Relying on its advantages in entire-value-chain and full-stack technology, total-factor data, and complete-lifecycle services, it provides digital solutions for global transportation in the era of the Internet of Things (IoT), builds an industrial Internet platform for the transportation industry, and creates value for customers in the industry. The Company's business covers intelligent transportation, intelligent traffic management, intelligent highway, intelligent road network, intelligent civil aviation, intelligent rail transit, intelligent parking, intelligent community, intelligent campus, and other core areas. It has successfully delivered over 6,000 medium and large intelligent transportation projects.

Furthermore, the Company has a profound presence in IoT sector through Uniview, its wholly-owned company. Uniview is the world's fourth largest provider of AIoT (Artificial Intelligence Internet of Things) products, solutions, and full-stack capabilities. With panoramic, digital, intelligent IoT products and technologies as its core, it keeps investing in the research and development of innovative technologies such as AI, enriches its AIoT product line, and extends its global strategic presence. It empowers the digital governance of government customers, the digital transformation of corporate customers, and the intelligent life style of individual consumers. At present, Uniview's industrial camera products and cloud-edge-device integrated solutions have been successfully implemented in many business areas such as smart cities, smart transportation, and safety engineering, providing security services for major State events and important international summits.

After two decades of endeavor, China TransInfo has set business footprint in more than 150 countries and regions. It maintains technology and market leadership in the two major areas, intelligent transportation and IoT.

### Operating performance in 2020

 Operating revenue RMB 9.419 billion	Net profit RMB 1.080 billion	Cash dividend RMB 110 million	Tax payment RMB 436 million
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## Main Business

### Intelligent Transportation


Since its inception, China TransInfo has focused on the intelligent transportation industry. Based on the actual needs of customers and end users in transportation, traffic management, and travel services and the trend of digital and intelligent industry development, China TransInfo has launched smart transportation system products and solutions with the independent and collaborative control of device, edge, network, and cloud technologies, supporting the intelligent transportation industry with full value chain capabilities that comprise industrial Internet technologies and products, solutions, project delivery, and operational services. Its products, solutions, and services have served more than 6,000 intelligent transportation projects in more than 200 cities across China.

In 2019, China TransInfo launched a strategy of transformation and upgrading technology architecture and building a cloud-edge-device full-stack technology system, accelerating the advancement of the omni transportation industry and related industries toward digitalization, connected and intelligent services.

01

China TransInfo  
Transportation  
cloud Technological  
Architecture


- Transportation industry OS
- Competence centers of transportation cloud
- Hundreds of SaaS services for the transportation industry



02

Edge Intelligence


- Intelligent application for edge scenarios
- Intelligent Vehicle-infrastructure cooperation scenarios
- Traffic signal control optimization scenarios
- Camera-solution parking fee collection scenarios



03

Device Intelligence

- Intelligent/non-intelligent control devices
- Intelligent/non-intelligent sensors
- Communication devices





Intelligent hardware products

- Based on the application scenarios of the transportation industry, China TransInfo designs and produces smart transportation hardware products with independent intellectual property rights for end-device intelligence and edge intelligence, covering areas of information perception collection, intelligent processing, and management and control, etc.
- Main products:**  
traffic signal control products, ETC products, traffic flow investigation equipment, intelligent network products, and off-site traffic law enforcement equipment

Transportation industry cloud platform

- China TransInfo has accumulated hundreds of transportation industry applications and empowered thousands of customers, enabling it to build the SaaS platform for the Omni transportation industry. The application modules can be flexibly assembled for multiple scenarios and businesses to help industry customers upgrade applications to cloud based services, featuring container service and micro-service etc. China TransInfo comprehensively supports the implementation of integrated solutions for the comprehensive management and operation of urban traffic, expressways, civil aviation, rail, and intelligent network connectivity, and satisfies customers' Omni transportation needs in the full life cycle.

Industrial solutions

- Intelligent Transportation Operation Solutions**  
China TransInfo undertakes construction or services in scenarios such as the Transportation Operations Coordination Center (TOCC) or smart transportation hubs, and provides functional support for traffic and transportation authorities, including monitoring, evaluating, and assisted decision-making on the operation of the transportation system.
- Intelligent Road Network Solutions**  
China TransInfo undertakes or serves projects of video surveillance cloud service, smart expressways, and Internet of Vehicles (IoV). Based on the traditional highway information system, it promotes the digital upgrade of transportation infrastructure riding the development trend of big data in transportation and V2X.
- Intelligent Traffic Management Solutions**  
China TransInfo undertakes or serves projects of comprehensive improvement of urban traffic and urban transportation brain. With the goal of "alleviating urban congestion, ensuring road traffic safety, and innovating traffic management concepts," it uses traffic big data analysis and prediction to achieve dynamic control and balanced distribution of traffic flow in the road network, reduce traffic congestion risks, and reduce traffic safety hazards.
- Intelligent Civil Aviation Solutions**  
China TransInfo helps airports and airlines to achieve IT-based and refined management. It supports their decision-making for future operations with the efficient integration and utilization of data and promotes the digital transformation and upgrading of the civil aviation industry.
- Intelligent Rail Transit Solutions**  
With intelligent IoT equipment and integrated analysis of smart data, China TransInfo promotes the digitization of rail transit and comprehensively improves the operation capability of smart rail transit.

IoT

With the multipurpose, digital and intelligent, IoT products and technologies as the core, China TransInfo has strengthened resource coordination and increased investment in research and development of core technologies such as AI. The Company has enriched its product line, deepened its global strategic presence, and promotes the rapid application of valuable industries and valuable scenario-based businesses. It has become the world's leading provider of IoT products and solutions centered on industrial camera and applications and set footprints in more than 150 countries and regions.

IoT products

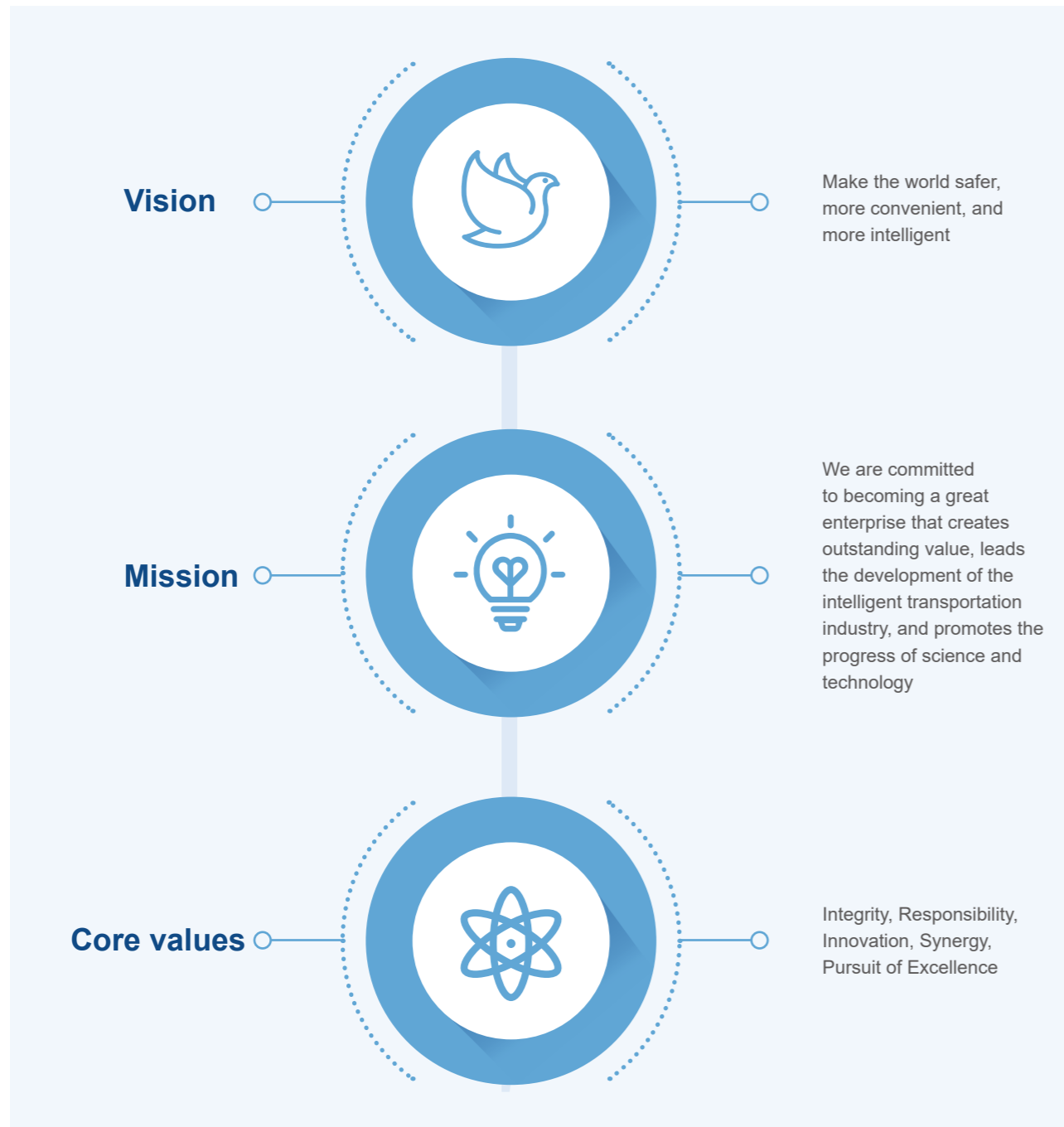
- Full value-chain IoT product line for governments, enterprises, and consumers
- Front-end products:**  
web cameras, thermal imaging cameras, etc., strengthening adaptation to actual scenarios according to the development and upgrade trend of intelligent applications in the industry
- Edge computing products:**  
face recognition gates, etc., satisfying the need for real-time and efficient processing of business data with high-performance computing chips and intelligent algorithms
- Network products:**  
switches, wireless bridges, the Yanshan series of video-based security access gateway, etc., helping to build a safe and reliable IoT network
- Cloud products:**  
focusing on storage and computing; China TransInfo's storage products cover high-end solid-state storage, file and big data storage, and video storage, helping customers in the storage of massive data; its computing products include general-purpose servers and Kunlun series of intelligent analysis servers.

IoT solutions

- Building a dual middle platform for business data that comprises of IoT engine, video cloud engine, visual intelligence engine, and data intelligence engine, to provide industry customers with comprehensive solutions, empower partners, and jointly build an IoT business ecosystem



## Social Responsibility



### Communication with Stakeholders

China TransInfo attaches great importance to the engagement of stakeholders in matters related to corporate governance and social responsibility and actively maintains communication with stakeholders, whose opinions and suggestions are taken as an important basis for the sustainable development of the Company. We have identified six major stakeholder groups, namely, government, shareholders, employees, customers, partners, communities, and the environment. We have dialogues with stakeholders through diversified communication channels to understand and respond to their expectations and requirements for China TransInfo.

Stakeholder	Expectations and Demands	Communication Methods and Response
 Government	<ul style="list-style-type: none"> <li>Compliance operation</li> <li>Paying taxes according to law</li> <li>Technological innovation</li> <li>Supporting the sustainable development of society</li> </ul>	<ul style="list-style-type: none"> <li>Compliance management</li> <li>Paying tax as required</li> <li>Regular disclosure of business information</li> <li>Routine communication and reporting</li> <li>Field inspection and supervision</li> </ul>
 Shareholders	<ul style="list-style-type: none"> <li>Compliance operation</li> <li>Return and growth</li> <li>Risk management</li> <li>Corporate governance</li> </ul>	<ul style="list-style-type: none"> <li>General meeting of shareholders</li> <li>Periodic reports and announcements</li> <li>Diversified channels for investor communication</li> </ul>
 Employees	<ul style="list-style-type: none"> <li>Salary and welfare guarantee</li> <li>Health and safety</li> <li>unimpeded communication</li> <li>Fair promotion and development opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Paying salary and funding social insurance in full on time</li> <li>The management system for occupational health and safety</li> <li>Career promotion channels</li> <li>Employee training</li> <li>Employee representatives' meetings</li> <li>Daily communication exchanges</li> </ul>
 Customers	<ul style="list-style-type: none"> <li>Product quality guarantee</li> <li>Providing high-quality services</li> </ul>	<ul style="list-style-type: none"> <li>The quality monitoring system</li> <li>Supervision and inspection</li> <li>Customer satisfaction surveys</li> </ul>
 Partners	<ul style="list-style-type: none"> <li>Keeping promises</li> <li>Open, impartial, and fair sourcing</li> </ul>	<ul style="list-style-type: none"> <li>Legal performance of contracts</li> <li>Open tendering</li> <li>Project cooperation</li> </ul>
 Community and the Public	<ul style="list-style-type: none"> <li>Supporting social development</li> <li>Caring for vulnerable groups</li> <li>Energy conservation and emission reduction</li> </ul>	<ul style="list-style-type: none"> <li>Targeted poverty alleviation</li> <li>Charity and public welfare</li> <li>Green transportation</li> </ul>

### Identification of Material Issues

To understand the expectations and demands of stakeholders on the Company and to clarify the priorities in social responsibility practice and key information disclosure, China TransInfo identified social responsibility issues of substantial impact and conducted questionnaire surveys of stakeholders. With the results, the Company determined the materiality of the issues and organized them to ensure that the disclosure of the report fully covers stakeholders and their concerns. The process for China TransInfo to determine material issues related to social responsibility was as follows:



## 01 Identifying relevant topics

Issue identification was carried out by an independent third-party consultant. A total of 16 social responsibility issues were assessed and collected, covering five aspects, namely, corporate governance, products and services, employees, the environment, and the community. These topics were collected from a wide range of data sources, including company policies and management strategies, and industry benchmarks.

## 02 Studying stakeholders' concern

The independent third-party consultant conducted a questionnaire survey of stakeholders, including employees, government agencies, investors, customers, community representatives, and suppliers. Stakeholders were invited to evaluate the materiality of each issue from their perspective. A total of 132 valid questionnaires were retrieved.

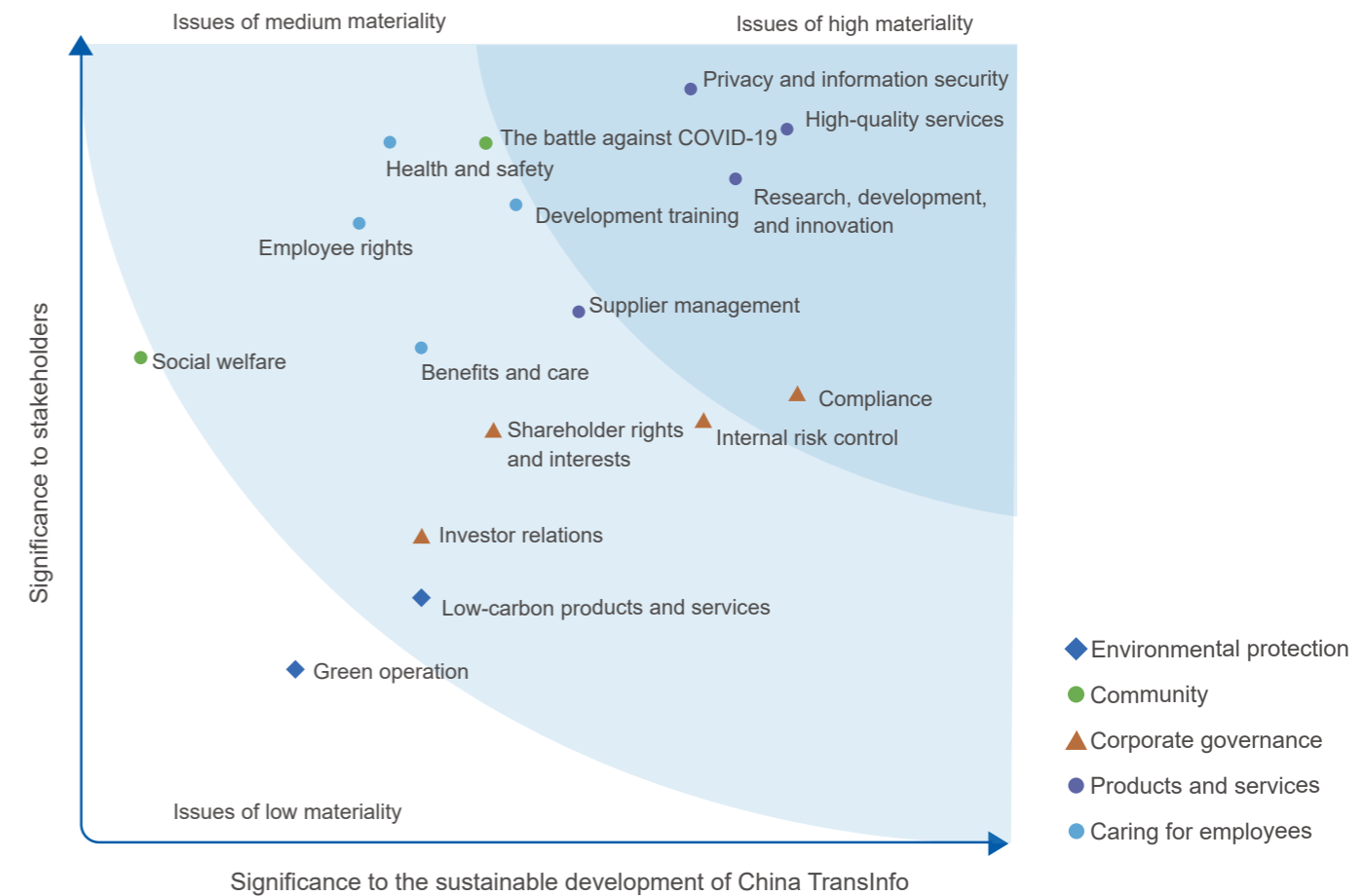
## 03 Analyzing the impact on the operation

The Company's management was asked to evaluate the materiality of the topics for ensuring significance to the corporate strategy and business development.

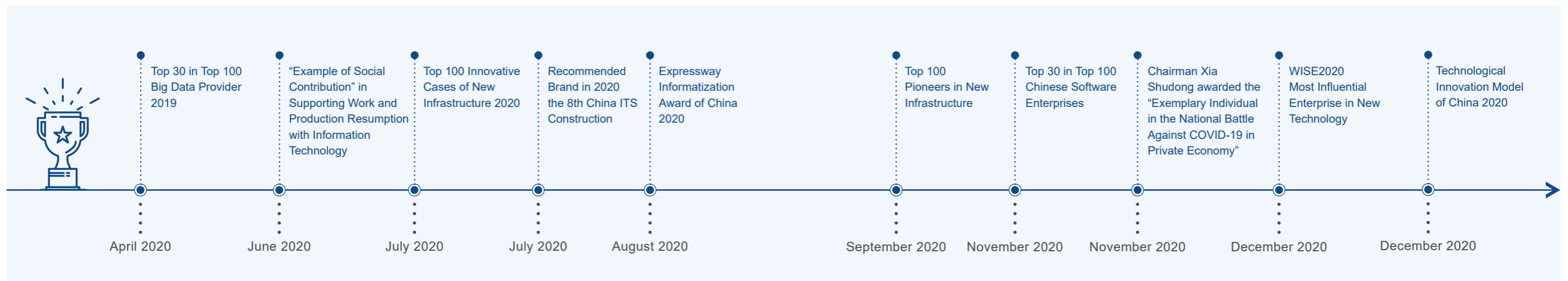
## 04 Prioritizing issues

According to the significance of the topics to stakeholders and to the sustainable development of China TransInfo, the identified issues were organized and disclosed in a matrix structure

The final matrix chart of social responsibility topics of materiality of China TransInfo in 2020 is as follows:



## Awards of the Company



# Corporate Governance

China TransInfo is committed to building a corporate governance system with the highest standards. The Company strictly complies with the *Company Law of the People's Republic of China*, *Securities Law of the People's Republic of China*, *Code of Corporate Governance of Listed Companies*, *Guidelines of the Shenzhen Stock Exchange for the Standard Operation of Listed Companies (2020 Amended)*, *Rules Governing the Listing of Shares on Shenzhen Stock Exchange*, and relevant laws and regulations of the China Securities Regulatory Commission. It has established a sound corporate governance structure for the listed company, optimized the internal management system, and improved the Company's internal control system. For more about the Company's governance systems, please visit the Investor Relations - Management System section on the Company's website.

## Governance Structure

China TransInfo has established a corporate governance, decision-making, and operation management system with the General Meeting of Shareholders, Board of Directors, Board of Supervisors, and senior management as the main body, with clear authority and responsibility of all parties and effective operation.

## General Meeting of Shareholders

The General Meeting of Shareholders is the highest authority of the Company. China TransInfo convenes and organizes shareholders' meetings in accordance with the *Articles of Association and Rules of Procedures for the General Meeting of Shareholders*. The Company hires lawyers to attend these meetings, who issue legal opinions on the results and procedures of the deliberations of the proposals to ensure that all shareholders, especially small and medium shareholders, enjoy equal status and can fully exercise their rights.

During the reporting period, the General Meeting of Shareholders convened **SIX** meetings.

## Board of Directors

The Company elects directors in strict accordance with the selection and appointment procedures stipulated in the *Articles of Association*. The Board of Directors observes the *Rules of Procedure of the Board of Directors*, *Annual Reporting System of Independent Directors*, and *Work System of Independent Directors*. As of December 31, 2020, the Board of Directors consisted of nine directors, including three independent directors. Independent directors learn about the Company's operation, financial status, internal control, and the progress of major issues promptly by attending meetings of the Board of Directors, special committees, field meetings, and inspections, and offer suggestions to safeguard the interests of the Company's shareholders, especially small and medium shareholders.

During the reporting period, the Board of Directors convened **14** meetings.



Four professional committees are set under the Board of Directors, namely, the Strategy Committee, the Audit Committee, the Nomination Committee, and the Remuneration and Appraisal Committee respectively. All members are in position and have started working.

## Board of Supervisors

The Company elects its supervisors in strict accordance with the *Articles of Association*. As of December 31, 2020, the Company's Board of Supervisors was composed of three supervisors, including one female supervisor and one employee supervisor. The Company's supervisors observe the *Rules of Procedure of the Board of Supervisors* and perform their duties conscientiously. Being responsible to shareholders, they supervise and inspect the behavior of directors and all senior managers and the Company's financial status and express independent opinions.

During the reporting period, the Board of Supervisors convened **12** meetings.

## Internal Control and Risk Control

The Company has constantly improved its internal control system in accordance with the *Basic Norms for Enterprise Internal Controls*, *Guidelines for Application of Enterprise Internal Controls*, *Guidelines for Evaluation of Enterprise Internal Controls*, *Guidelines for Auditing of Enterprise Internal Controls*, and *Guidelines of Shenzhen Stock Exchange for the Internal Control of Listed Companies*, to ensure that the Company's normal business and production comply with laws and regulations, safeguard company assets, and prevent operational risks.

### Internal Control

The Company has established an internal control system covering financial control, operational control, compliance control, and information disclosure, and reviewed and evaluated the effective performance of the Company's internal control. It also hires a third-party independent agency to assure the Company's evaluation over internal control.

### Risk Control

The Company has constantly improved its risk management and control system and established a risk prevention mechanism of prevention, control, and remediation. It conducts regular comprehensive risk assessments across the Company, prepares comprehensive risk assessment reports, reviews and evaluates the effectiveness of the Company's risk response measures, and intensifies the implementation of comprehensive risk management.

### Internal Audit

The Company formulated the *Internal Audit System* in accordance with the *Audit Law of the People's Republic of China*, *Provisions of the State Auditing Administration on Internal Auditing*, *Code of Corporate Governance of Listed Companies*, *Rules Governing the Listing of Shares on Shenzhen Stock Exchange*, and *Guidelines of the Shenzhen Stock Exchange for Standardized Operation of Listed Companies*. It has set an Internal Audit Department as the internal audit body to inspect and supervise the establishment and implementation of the Company's internal control system and regularly report to the Audit Committee to ensure the effective operation of the Company's internal control system, timely detection and rectification of problems, and prevention of compliance risks. The Company conducts listing compliance audits on financial reports, external investments, fundraising, external guarantees, related transactions, and information disclosure and internal control over these matters on a quarterly basis. In 2020, the Company instructed relevant departments to formulate, revise, and issue 21 rules and regulations, and completed and issued a collection of rules and regulations of the Company (2020 version).

# 01

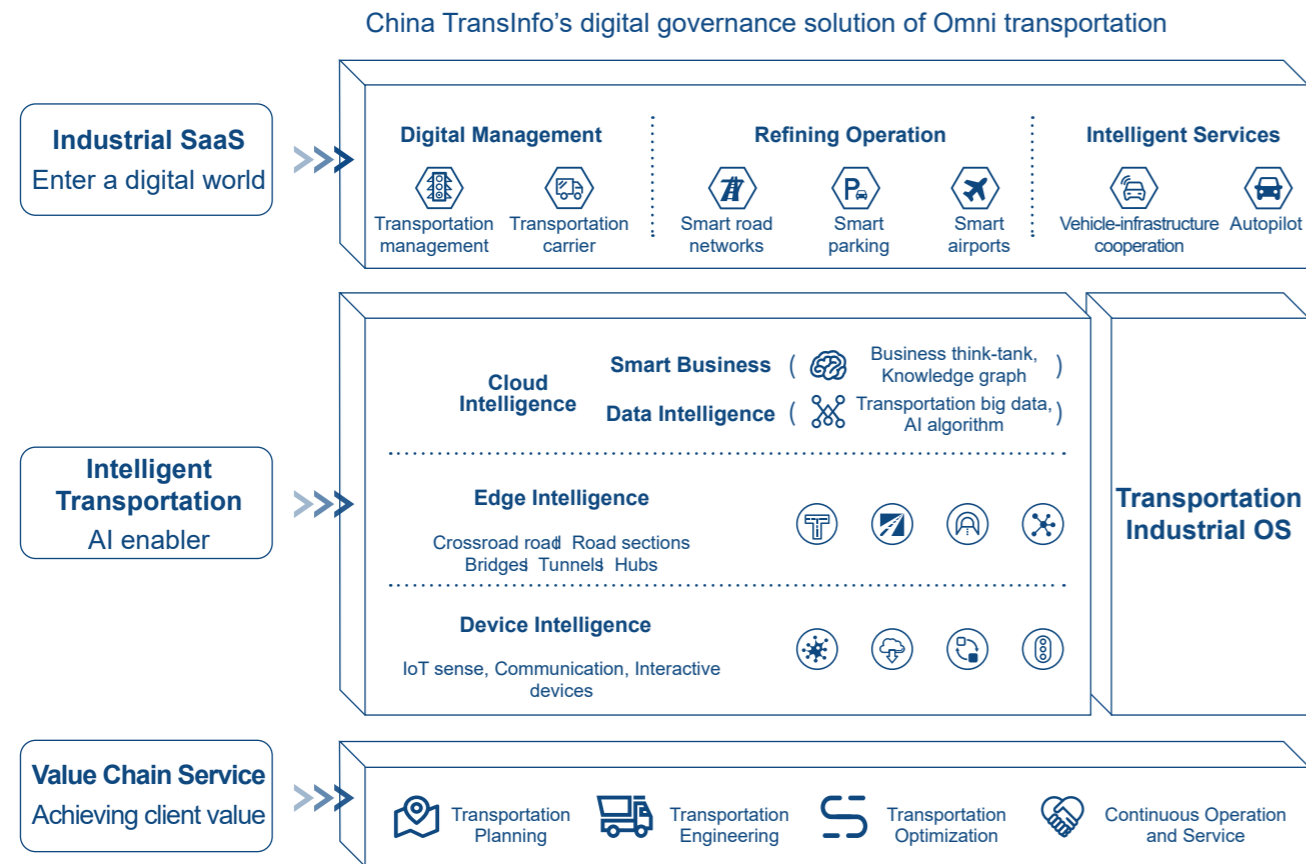
## TECHNOLOGY: DRIVING AN INTEL- LIGENT FUTURE

Today, the digital economy has become the strategic commanding heights of national competition, and the intelligent future is a beautiful vision drawn by many industries. As the undertaker of the first IoV (Internet of Vehicle) research project under the National High-tech R&D Program of China (863 Program) led by the Ministry of Science and Technology, China TransInfo harnesses big data, AI, and cloud computing and adheres to the “dual drives” of technology and customer needs. It deeply integrates transportation scenarios and intelligent technology and provide customers with the omni transportation solution, thereby helping to ensure road safety and improve traffic efficiency.

- Improving Efficiency
- Safety Assurance
- Transportation Revolution

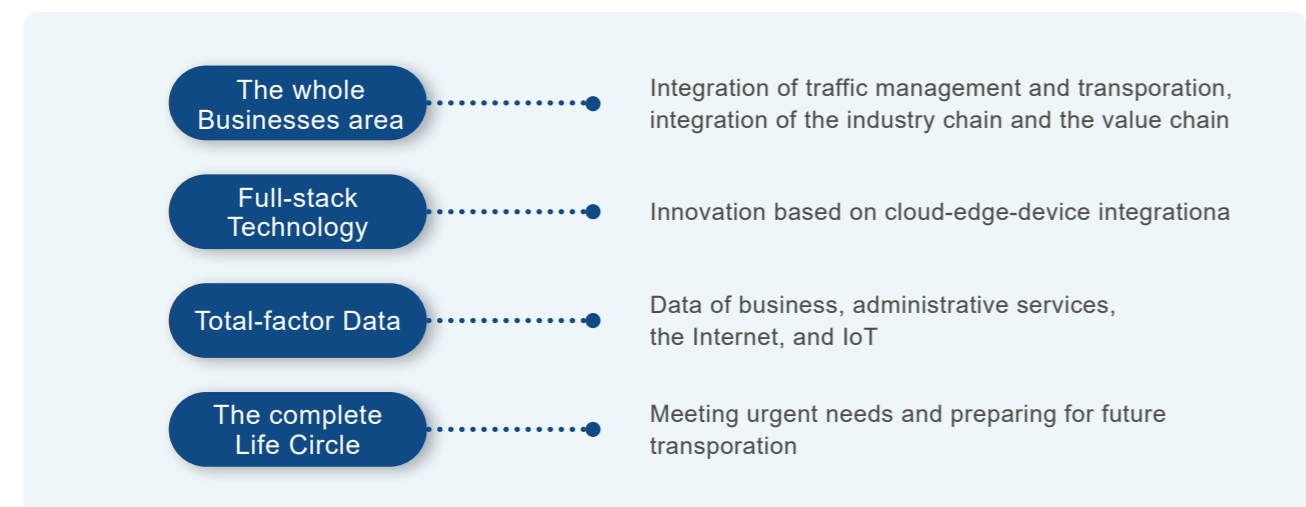






In 2020, we officially released the industry's first Omni-T solution for the era of IoT. We expect to provide industry customers with the omni transportation solution covering all business areas, full-stack technology, total-factor data, and the complete life cycle in the future.

#### Content of Omni transportation digital governance



With the omni transportation solution, we can help customers accelerate the digital transformation of their business. We can also empower the transportation industry with big data, AI, cloud-edge-port collaborative innovation, and other technologies, make breakthroughs in improving efficiency, promoting changes, and environmental protection and safety, then supporting the industry to move further into the era of IoT.

## Improving Efficiency

Intelligent urban transportation can improve the safety of everyday mobility, significantly alleviate the increasingly congested road traffic in urban areas, and improve the efficiency of urban traffic operations.

### What is TOCC?

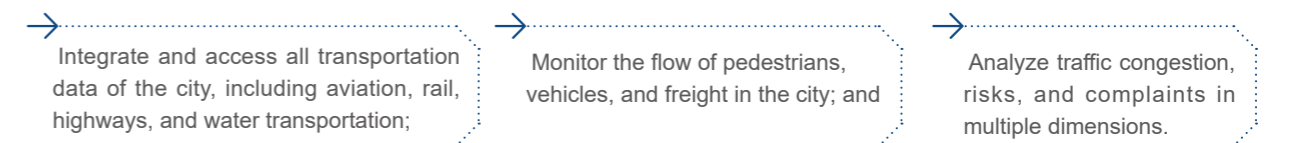
The Transportation Operations Coordination Center (TOCC) is the core of the modern comprehensive transportation coordination system, irreplaceable in urban traffic management. The modern comprehensive transportation coordination system can cover backbone road network systems such as urban roads, expressways, and national and provincial trunk lines. It monitors and coordinates transportation entities such as private cars, buses, taxis, passenger vehicles, freight vehicles, shared bicycles, rail transportation, and civil aviation, and provides system support and information guarantee for modern traffic administration and emergency response.

In 2020, China TransInfo launched the next-generation TOCC 2.0 products, relying on advanced technologies such as agile cloud, microservices, and AI engine. TOCC 2.0 focuses on solving the problems in traditional TOCC projects, such as the small size of industry informatization projects, low delivery efficiency, and ineffectiveness in use. It has improved the delivery efficiency and construction effectiveness of TOCC projects and contributed to the digital transformation of the transportation industry. Through the continuous optimization and reconstruction of products and services, China TransInfo made its intelligent transportation technology and system implementation among the best in China. Its projects involved the Ministry of Transport, provinces, municipalities, districts, and counties. It provided transportation information services for more than 500 customers.

### Case: Chengdu TOCC Project

As a core city in Southwest China, Chengdu puts efforts in promoting the construction of intelligent transportation. TOCC will become the core and top-level platform of Chengdu's intelligent transportation system, functioning for data collection management, traffic operation monitoring, decision-making assistance, emergency coordination, and comprehensive information services in the transportation industry. It has improved the monitoring, management, and services of urban traffic operations, strengthened the coordination of urban traffic and transportation, intensified the scientific control of congestion, and built a green transportation system.

By October 2020, China TransInfo had supported Chengdu TOCC to complete the construction of the data center and support platform and completed the development of all functions of applications for public transportation, taxis, online car-hailing, rail transit, long-distance passenger transportation, shared bicycles, and key transportation vehicle monitoring. It is able to realize:



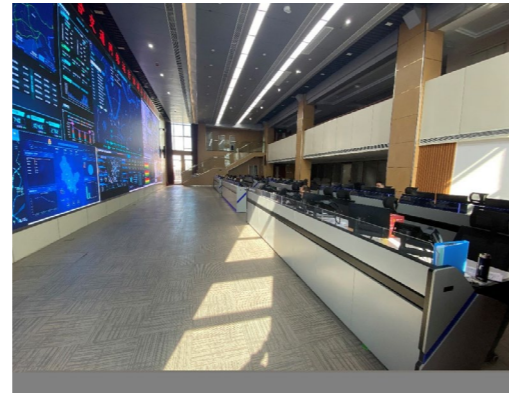
In December 2020, the first phase of Chengdu TOCC was completed. Based on massive data and supported by the AI analysis model for videos, the spatial-temporal fusion analysis model, and the early warning intervention engine, Chengdu TOCC is capable of the comprehensive analysis of the flow of pedestrians and vehicles and incidents, and supports the city's overall traffic operation monitoring, comprehensive resource scheduling, traffic policy modification, and public travel services. Since the TOCC project was put into service, the platform has accumulated more than 80 billion entries of structured data and nearly 100,000 channels of video surveillance images, with an average of over 200 million pieces of GPS data, 12 million orders, and data of over 300 million passing vehicles every day. With this support, rail groups and bus groups can rationally formulate the organization of metro operation and optimize the bus route network and accurately allocate their capacity. Public transportation has become more attractive, reducing both citizens' travel expenses and carbon emissions.



Example of data and information input into Chengdu TOCC project

### Case: Huizhou TOCC Project

Huizhou TOCC integrates real-time monitoring of the city's traffic operation, comprehensive traffic coordination, and dispatch, emergency response, targeted coverage of industry management, active public travel services, and transportation decision-making assistance. A transportation platform that integrates data centers and smart travel services, smart industry management, and smart decision-making analysis has been built. It collects all kinds of traffic data in the city and conducts scientific management and deployment, facilitating citizens' travel and supporting government administration.

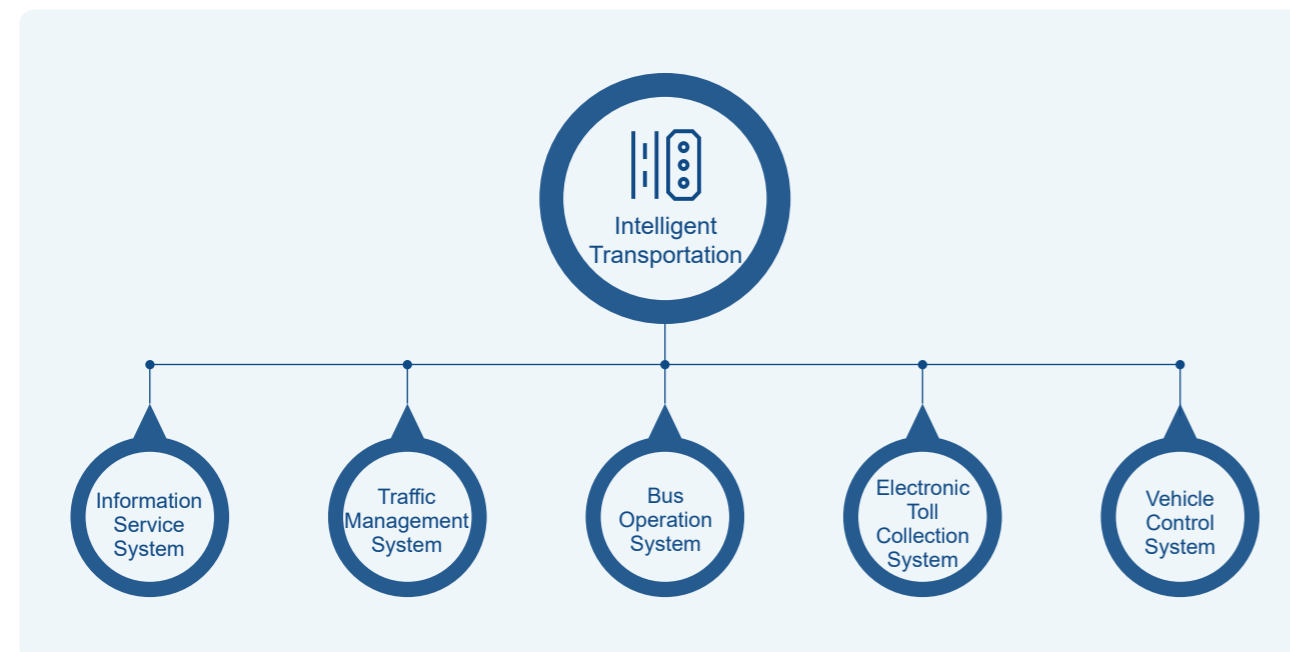


Huizhou TOCC

Huizhou TOCC has a core framework for the data resource center, which integrates and accesses administration information of nine major industry verticals, namely, highway transportation, waterway transportation, road transportation, railway transportation, civil aviation, urban transportation, postal information, integrated management, and other industry management. The daily average new data volume is more than 5G, which can better assist the traffic and transportation authorities in the comprehensive utilization of traffic information and achieve refined management and decision-making.

China TransInfo's big data platform collects massive data of public vehicles and private cars every day and obtains detailed information about road operation, vehicle operation, and vehicle parking in more than 200 cities across China. Relying on big data resources, China TransInfo has built a national smart road network monitoring platform, which comprises eight systems, including "future road network" traffic operation trend prediction, traffic congestion mechanism analysis, and decision-making assistance. It provides information input for real-time monitoring and dynamic deployment of the traffic system and offering a new means to address congestion. In 2020, the Company made breakthroughs in congestion control. The Company's benchmark projects in Beijing, "West Zhongguancun Comprehensive Traffic Management" and "Northwest Chaoyang CBD Comprehensive Traffic Management," have been implemented. They have significantly improved the comprehensive management of urban traffic and become the model of comprehensive traffic management in Beijing.

#### The intelligent transportation system built by China TransInfo



### The Comprehensive Management Project Based on Omni Intelligent Transportation in Hangzhou

Binjiang District, Hangzhou, inhabited by 500,000 permanent residents, has long been plagued by congestion and parking difficulties due to a large flow of people and complex travel conditions. Following the comprehensive management concept of "big data + expert knowledge map + scientific evaluation," China TransInfo carried out the first phase of comprehensive intelligent management based on omni transportation in the district.

With years of accumulated traffic industry big data and local data, and more than 1,500 traffic industry algorithm models, China TransInfo applied digital management of traffic in morning and evening rush hours, urban parking, variable one-way roads, and variable turning lanes. The project maximized the dynamic utilization of digital resources in transportation business domains. Analysis and evaluation showed that in key areas in the district, the peak delay index for workdays has dropped by more than 30%, the average daily congestion duration has dropped by more than 40%, and the number of traffic accidents has dropped by more than 30%.

In addition, China TransInfo also developed the Assisted Decision-Making System for the Planning, Construction, Management of Urban Traffic and the Five-color Traffic Safety Map during project implementation, which classifies the traffic safety situation in the district and conduct safety portraits of roads, vehicles, and drivers, for the purpose to empower long-term traffic management and operation optimization.

As the number of cars in many cities continues to rise, the lack of parking spaces has become a new urban problem. Furthermore, in addition to the imbalance between total supply and demand, backward management and information asymmetry have also caused a large number of idle parking spaces. The problem of resource misallocation has led to the low utilization rate of urban parking spaces, which has further exacerbated the problem of urban parking difficulties. China TransInfo put efforts in addressing the inefficiency of parking lot allocation, by building a smart parking management service system.

Relying on years of experience in overall traffic and the accumulated dynamic and static traffic big data, China TransInfo builds comprehensive management and operation service systems for urban parking resources and has achieved the integration and sharing of on-street and off-street parking data. The Company has built a smart parking management service system for in-depth analysis on the turnover rate and saturation rate of each parking lot and the impact on the surrounding road traffic based on big data. With the "Internet +" approach and under the concept of "sharing in non-rush hours," it shares parking information promptly to road guidance, navigation applications, and WeChat official accounts and mini-programs, effectively mitigating difficulties in parking.



### Haidian Smart Parking System launched

In August 2020, the Haidian Smart Parking System was put into use. The system realized the integration and sharing of on-street and off-street parking data in Beijing for the first time and recorded information on nearly 500 public parking lots, 120,000 parking spaces, and 13,000 on-street parking spaces registered in Haidian District.

Through the big-data-based research and judgment technology, the system conducts in-depth analysis of the turnover rate and saturation rate of each parking lot and its impact on the surrounding road traffic. Following the "Internet +" approach and the concept of "staggering sharing," it shares parking information promptly to road guide and navigation applications and WeChat official accounts and mini-programs, effectively alleviating parking difficulties. The upgraded intelligent parking system has effectively improved the utilization rate of some parking lots. Take Huihuang Times Tower as an example. Its parking space utilization rate in the morning peak hours has been increased from 83% to 95%.

In addition to urban transportation, we also apply intelligent solutions to broader scenarios such as airport management and urban management to fully empower all aspects of society.



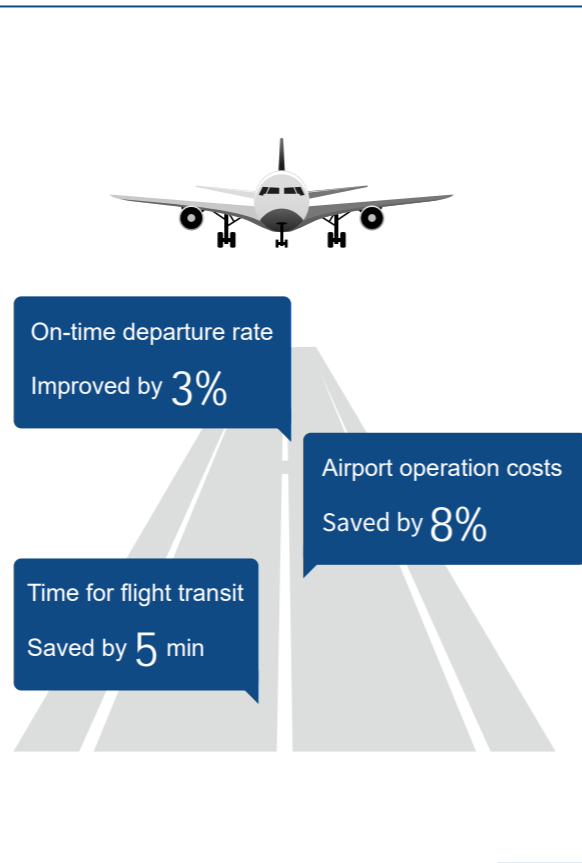
### Intelligent Apron Solution

As the throughput of airports in China continues to rise, the limited airspace resources become more and more tense, which has caused problems such as flight delays, navigation safety, and low airport operation efficiency. Zhejiang Uniview Technologies Co., Ltd., a subsidiary of China TransInfo, launched an intelligent apron solution to help airports carry out refined management.

By using the digital apron technology, it is possible to integrate the apron's GIS (geographic information system) map, flight data, video data, positioning data, and radar data to present the actual apron map, aircraft, and support resources in real time and completely. It provides early warnings and prompts for abnormally operating flights to ensure the safe and smooth operation of the apron and achieve overall efficiency improvement.

The smart apron management system also intelligently manages regular flight operation support and intelligently recognizes nodes in flight support and automatically uploads the records to ensure timely and accurate data collection and improve the efficiency of flight management and transit support.

With the smart airport apron management system, Uniview assists airports in achieving full-dimensional upgrades, cost reduction, and efficiency improvement in the form of "video + data."



### Panoramic AI supporting a Smart Cities

Today, urban jurisdiction is wider and urban management involves more extensive areas. Traditional patrol-styled inspections can no longer meet the needs of urban management. In the *Guidelines for the Construction of Integrated Urban Management Service Platforms (for Trial Implementation)* released in 2020, the Ministry of Housing and Urban-Rural Development required to promote the five-in-one intelligent upgrade of digital urban management, which covers perception, analysis, service, command, and supervision.

Based on the AI panoramic algorithm system, Jinan Bresee Technology Co., Ltd., a subsidiary of China TransInfo, responded to the demand for smart urban management by launching the intelligent urban management solution., for supporting the upgrade toward smart urban management.

The smart urban management solution covers three scenarios of urban management, primary-level governance, and ecological improvement. Relying on the existing urban surveillance data, by using AI algorithms to remove interference and identify violations, which has greatly improved the efficiency of urban management.



Scenarios for intelligent analysis of smart urban management

### Safety Assurance

In 2020, we launched the China TransInfo Cloud-based Intelligent Platform for Comprehensive Law Enforcement, a next-generation comprehensive traffic law enforcement product. The platform integrates more than 6.9 million connected commercial vehicles, more than 8 trillion entries of vehicle track data, and industry transportation and traffic management data. Data processing allows the platform to use clues to track criminal cases in real time as well as to automatically issue warnings, carry out location tracking, and cooperate with the police in filing and handling cases, all of which promote a sounder road traffic safety system.

To protect people's livelihoods, we developed a fire detection solution to help with fire prevention and control in traffic scenarios such as expressway tunnels, which has well-supported traffic safety management.

### The Project of Guizhou Information System for Network-based Management of Vehicle Overloading

In 2020, China TransInfo built the Guizhou Information System for Network-based Management of Vehicle Overloading, which integrated the data resources related to tackling vehicle overloading inside and outside the industry in the province, organized the database in an overall manner, and improved the software and hardware facilities. In this way, it had a comprehensive understanding of the basic situation of the vehicle carrying out-of-gauge goods and overloading in the province, and the operation of vehicle overloading management, and realized the "full-process recording, all-business registration, whole-road-network monitoring, full-chain management, all-round services" for tackling vehicle overloading in the province.



Guizhou Information System for Network-based Management of Vehicle Overloading

### The Intelligent Highway Control and Management (Service) Platform of Heilongjiang Province

China TransInfo, in collaboration with Heilongjiang Transportation Investment Group, has developed the Intelligent Highway Control and Management (Service) Platform of Heilongjiang Province. The platform adhered to the concept of "unified technology and database" and comprehensively applied cutting-edge technologies such as cloud computing, big data, and artificial intelligence to build the next-generation "intelligent expressway" system. It has realized "comprehensive road condition perception, intelligent road network management and control, coordinated emergency command, accurate road toll audit, scientific decision-making on maintenance, and multi-terminal push of information," and comprehensively improved intelligent highway management and control and precise service capabilities.

The platform uses machine vision to identify incidents, which can detect traffic incidents such as littering, congestion, going in the wrong direction, illegal parking, and accidents in the first time. Based on artificial intelligence and quantification based on simulation technology, it can also predict the impact of incidents. It is equipped with an expertise base of emergency response for precise handling of incidents.

The platform has built a road-police information sharing channel, facilitating rapid coordinated emergency response. It has also realized the rapid release of early warning information in multiply channels, which greatly reduces the secondary accident rate and strongly guards the safety of drivers and passengers.



The Intelligent Highway Control and Management (Service) Platform



Relying on the IoT, big data, and cloud services, we build community cloud platforms, comprehensively promote the modernization of social governance capabilities, and help government departments upgrade their administrations. We implemented a number of community safety projects, including Safe City and Smart Communities, which have comprehensively improved comprehensive community governance and maintained community safety.

Safe City

The system construction project of Safe City serves the main strategy of "one outlook and three forging programs", with the vision of creating a safe cloud and enhancing social management capabilities. The project fully promoted the expansion and construction of the Skynet project and effectively harnessed science and technology in preventing, detecting, stopping, and combating criminal activity. It also fostered improved social management, creating a superior public security environment for better and faster economic and social development and a moderately prosperous society.

Smart Community

The company harnessed advanced technologies such as the IoT, cloud computing, 5G communications, and AI. It also leveraged its AI perception equipment and Alibaba Cloud's advantageous resources to build both the China TransInfo Smart Community cloud platform and a smart "community brain." It has improved community governance and strengthened the technical means for COVID-19 prevention and control within communities.

Intelligent Emergency Response

By creating an integrated information system for emergency command, China TransInfo has enhanced urban risk monitoring and early warning capabilities and strengthened "Internet + supervision" and "Internet + law enforcement" capabilities.

Three-dimensional Public Security System

The next-generation prevention and control system for public security applies new technologies such as IoT-based perception and big data. Aiming for services, it builds a prevention and control platform for the collaborative services for public security and a service platform for comprehensive applications of public security that serve the whole society.

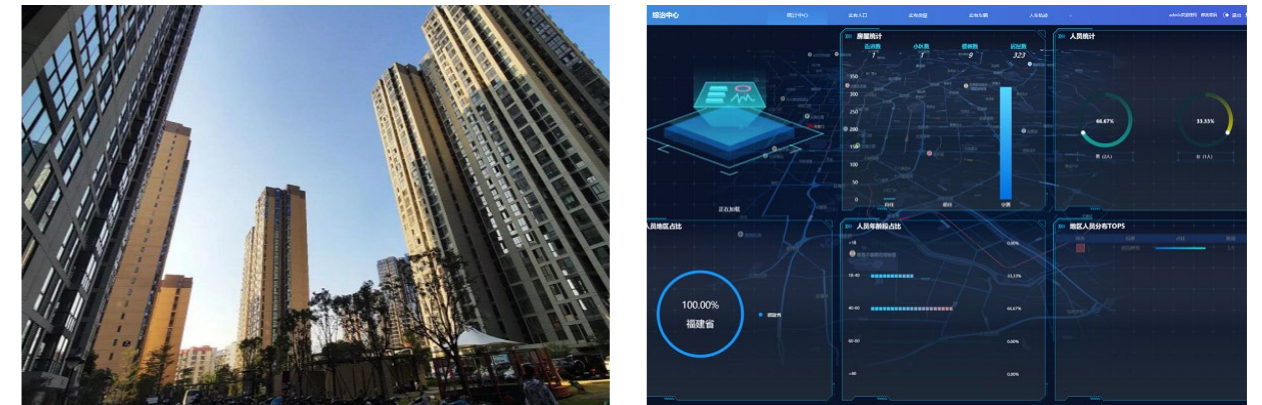
### Building a safe residential block

Uniview implemented an overall smart community solution for the Chayuan Xinyuan residential block in Jin'an District, Fuzhou. It built a community governance model of "a combined prevention by personnel, by physical conditions, and by technologies" and created a model of "safe residential block" in Fuzhou, which won the attention and recognition of the *Legal Daily* and *Chang'an Commentary* under the Central Political and Legal Committee.

The Chayuan Xinyuan residential block has a special geographical location, dense floating population, complex population composition, high mobility, and messy information about residents and households, therefore, putting tremendous pressure on the property management of the block.

Uniview set up fast gates and intelligent vehicle management systems at the entrances and exits of the residential for orderly and efficient management of the entry and exit of people and vehicles, full coverage of public areas, intelligent tracking of people, and refined management of key groups. The system can automatically collect residents' identity information, incorporate all community information into the smart community management platform, present data on an electronic map, and perform community visual management.

The video surveillance network for the residential block and smart community management platform can maintain public security and monitor bad behaviors in the community in real time and automatically issue a warning, such as garbage piles, unregulated parking of vehicles, illegal advertisements, random changes of wires, and illegal peddlers, achieving efficient management of the environment of the block. Also, the smart community management platform pays special attention to people with disabilities, elderly people living alone, key patients, and people under medical observation and tags them. In this way, it extends services for people to every family and every individual.



Uniview's smart community management platform





## The smart local police station system cracking serial burglary cases

In the early morning of March 24, 2020, amid the faint roar of motorcycle engines, several shops in the downtown area of a city in Jiangxi, including supermarkets, non-staple food stores, and mobile phone shops, were stolen one after another. The amount involved in the case exceeded RMB 100,000. The police used the smart local police station system developed by Uniview to quickly retrieve dozens of suspect vehicles and suspect activity routes. In less than 48 hours, the serial theft case was cracked, and all the stolen goods were recovered.

In addition to burglary cases, the smart local police station system also plays a role in major cases. In a major drug trafficking case in Ulan Qab that was cracked in May 2020, the system provided the police with key clues in a timely and comprehensive manner. China TransInfo empowers the local smart police station system with algorithms, middle platforms, and applications.



### Algorithm

The ReID (Person Re-identification) technology is applied, which determines whether there is a specific pedestrian in an image or video sequence with computer vision technology, so as to realize cross-scene face recognition. The ReID technology developed by Bresee supports the fusion of more than 150 facial attributes and performs face recognition based on full data mining of time, space, relationship, and vision, improving the accuracy and performance of cross-camera tracking.



### Middle Platform

Uniview builds middle platforms for video data services to facilitate raw data transmission from front-end equipment to the back end. Compared with traditional data middle platforms, the video data service middle platform can present calculations that take hours or even days to complete in real time, greatly improving the efficiency of the police in handling cases.



### Application

The smart local police station system has launched applications in cities such as Beijing, Shanghai, Shenzhen, Wuhan, and Chongqing.

With the continuous development of AI, IoT, cloud, and big data, public security governance requires smarter and more proactive security systems. China TransInfo will continue to enhance its technological advantages and apply them to launch smarter security systems that are safer and can better serve the public.

## Transportation Revolution

As "new infrastructure" has become a heated topic, the intelligent transportation industry, which is powered by new technologies such as big data, cloud computing, and AI, has become an emerging focus of the market. At present, with many industries accelerating toward industrial digitalization, China TransInfo is committed to building industry SaaS platforms, in the hopes of changing the high costs related to customization and functional product creation that currently exists in traditional industries. It also seeks to provide customers with whole-life-cycle services and value. China TransInfo has invented the Omni-T omni transportation solution, aiming to transform the traditional transportation industry with industrial Internet thinking and practice, and to create a new generation of omni transportation infrastructure while supporting the industry's digital transformation and modernization. China TransInfo's Omni-T omni transportation solution has been applied in many first-tier cities in China. Moreover, it has implemented a special version for overseas transportation systems in order to alleviate the difficulties in local traffic and transportation management.

In terms of providing intelligent transportation solutions, the company collects the data of transportation nodes from the platforms of transportation systems. This includes data from cities, highways, rails, and civil aviation, all of which form comprehensive transportation big data that is unique in the industry. The company also integrates basic transportation data, administrative services, Internet, IoT, and operation, which is used for data analysis, processing, and application. The results are used to comprehensively support the implementation of integrated solutions, such as the comprehensive management and operation of urban traffic, expressways, civil aviation, rail, and intelligent networking.

The company provides smart civil aviation and industry informatization solutions as well as professional technical services. Its comprehensive solution covers project operations, smart airports, and smart airlines. At the same time, the company also actively explores the operation of PPP (public-private partnership) airport construction projects and the export of airport operation management services. In this way, it provides strong support for the creation of a civil aviation information industry that is safe, convenient, green, and efficient. The Company completed a research project titled "Research and Demonstrative Application of the Coordination Between the Identification of Airport Landside Travel Chain and Integrated Monitoring Service." As part of this project, it built a precise perception framework for the airport's travel chain for individuals; prepared key technical solutions for the extraction of the airport's full travel chain for landside passengers as well as for the airport's integrated monitoring services; and developed a demonstrative application system for coordination with the integrated monitoring service. It also launched exhibitions at Beijing Daxing International Airport and Beijing TOCC. In contrast to traditional civil aviation positioning and dispatching, the system can analyze the overall travel characteristics, evolutionary rules, and individual travel behaviors and habits of passengers at the airport. The system can also be connected with the existing Beijing TOCC system and can achieve information sharing and business coordination between the Landside Traffic Operation Control Center of Daxing Airport and Beijing TOCC. Through this coordination, it can improve the integrated monitoring service and coordination of Beijing Daxing International Airport and its surrounding traffic.





# 02

## INNOVATION: LEADING THE INDUSTRY

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Relying on the innovation and transformation of new products, technologies, businesses, and models, China TransInfo carries out the forward-looking expansion of next-generation intelligent transportation and IoT industries. It also works with partners to promote the comprehensive development of innovative smart cities. The company actively engages in the current wave of new infrastructure construction and empowers smart cities with cloud computing in “build new infrastructure together.”



- R&D Innovation
- External Cooperation





## R&D Innovation

In September 2020, at a symposium attended by scientists in Beijing, President Xi Jinping emphasized that China needs scientific and technological solutions, more than ever, to boost economic and social development as well as to improve people's living standards, highlighting innovation as the "primary driving force." For China TransInfo, technological innovation was also an indelible mark in 2020. The company invested a total of RMB 899 million in research and development (R&D) throughout the year, accounting for 9.54% of its operating income.

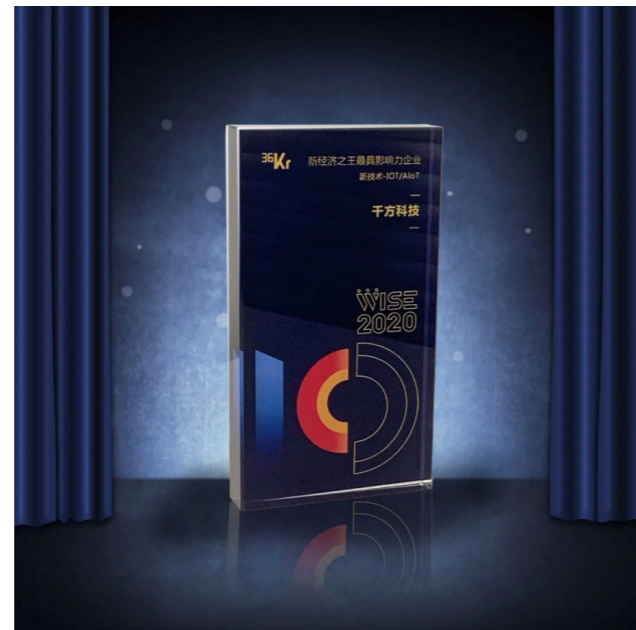
### China TransInfo awarded WISE2020 Most Influential Enterprise in New Technology

In December 2020, the 36Kr Research Institute for Venture Capital launched the selection of the WISE2020 Top 500 companies. China TransInfo was awarded WISE2020 Most Influential Enterprise in New Technology for its innovative integration and demonstrative application of digital technology in the industrial Internet. It marked that China TransInfo's technological innovation and business application capabilities were once again recognized by the industry.

China TransInfo will empower the development of the industry with new ideas, technologies, and applications, and support the digital governance and transformation of the industry in the era of the industrial Internet.

"The next ten years will be the decade of industrial Internet and digital transformation of the industry. We must build organizational capabilities and integrate resources to seize opportunities and provide society with more valuable solutions for industry digitalization."

Pan Fan, President of China TransInfo



## R&D System

To penetrate and grasp the trend of technological development and ensure the necessary engineering and technical capabilities for product R&D, China TransInfo has established a Technical Management Committee and formulated the *Rules for the Operation of the Technical Management Committee*. The committee keeps the company's engineering and technical capabilities ahead of the industry. It also established a meeting mechanism for R&D communication.

We have established the IPD (Integrated Product Development) for software development and standardized the entire process of software development from confirmation requirements to product operations. We have also formulated specifications for product design, UI design, technical architecture, data architecture, code, IT architecture, security, and TR (technical review), and have established a complete management system for software development.

## R&D Team

A quality workforce is the fundamental driver of business development. We have established a high-caliber scientific research team. More than 55% of the company's employees engage in R&D, among which more than 80% have a bachelor's degree or above. Among the over 6,000 employees at China TransInfo, 2,572 are dedicated to technology R&D, among which more than 2,000 focus on high-tech fields such as machine vision and edge computing. More than 200 are industry experts.

Uniview, a wholly-owned subsidiary of China TransInfo, invests about 10% of its operating income in R&D every year. R&D technicians account for 50% of its staff. Uniview has formed a framework of "two academies and six institutes" to ensure the innovative competitiveness of its core products and solutions.

## R&D Achievements

In 2020, China TransInfo made breakthroughs in its technical capabilities, implemented all innovative applications, and supported "new transportation infrastructure" with industry-leading practices. As of December 31, 2020, the Company applied for 3,010 patents. Its AI algorithm set records in the Multiple Object Tracking (MOT) Challenge and other international competitions. The company won the title of National Enterprise Technology Center, and the Intelligent Transportation Technology and Equipment Industry R&D Center conferred by the Ministry of Transport. It was runner-up to the National Science Progress Award and won second prize for the State Technological Invention Award, first prize for the Beijing Municipal Science Progress Award, the Zhejiang Provincial Science Progress Award, and other honors. This year, China TransInfo ranked among the National Technological Innovation Demonstration Enterprises 2020, as announced by the Ministry of Industry and Information Technology of the People's Republic of China, highlighting the Company's industry-leading innovation capabilities.

### Highlights from China TransInfo's Technological Achievements in 2020

- China TransInfo Omni-T omni transportation solution: aimed to transform the traditional transportation industry with industrial Internet thinking and practice, supporting the digital transformation and upgrading of the industry
- Epidemic Prevention and Control Cloud Platform: forming a coordinated system for pandemic prevention and control that integrates perception, transmission, analysis, decision, and action for the risk dynamics of key areas and groups in real time, comprehensively improving prevention and control capabilities
- The edge computing unit: real-time and dynamic adjustment as well as efficient intelligent analysis of traffic signals, hazards, incidents, and conflicts
- Smart expressways: coordinated with the national road network and realizing the overall planning, connection, and coordination of tunnels, service areas, and other nodes. It is based on the actual situation and characteristics of the road network in Jilin as well as the development trends of smart expressways, which reduces operation costs and improves local economic efficiency



In January 2020, Uniview was selected as a National Enterprise Technology Center for its outstanding performance in innovation funding, innovative talents, technology accumulation, innovation platforms, technology outcomes, and economic outcomes brought by innovation.

In terms of AI applications, China TransInfo achieved the large-scale application of AI in multiple scenarios, including its business transformation. It also accelerated the commercialization of AI by deeply integrating big data, AI, and the intelligent transportation industry chain. Bresee's algorithm set records in internationally recognized evaluation for AI data sets, and won prizes in the world's top tests for algorithm data sets, such as the MOT Challenge, ReID cross-camera tracking, and KITTI lane detection. In September 2020, in WIDER FACE, the world's largest and most difficult-to-detect face detection data set (400,000 faces for tagging), Bresee achieved the best test result in the open face detection list of the WIDER Face and Person Challenge 2019.

## External Cooperation

For the next-generation intelligent transportation, China TransInfo put effort in building the next-generation cloud-edge-port transportation system. It made full use of multi-source perception and fusion simulation to realize traffic holographic images of intersections, road sections, and road networks, and recreated digital traffic that matches the actual physical traffic, achieving the digitization and virtualization of all traffic factors and the real-time visualization of all traffic conditions. It also achieved more comprehensive and scientific real-time control, plan deduction, and management services with simulation, monitoring, diagnosis, and control. As a leader in new infrastructure, China TransInfo undertook national research projects, exchanged with peers, engaged in the formulation of industry standards, and carried out in-depth cooperation with leading companies in and outside the industry to lead the industry forward.

### China TransInfo undertaking key projects of the Ministry of Science and Technology

China TransInfo has put effort in intelligent transportation for 20 years. During this period, it undertook major national, provincial, and ministerial projects and won nearly a hundred national, provincial, and ministerial awards; undertook several national science and technology support projects for the 10th, 11th, and 12th Five-Year Plans; hosted and participated in many special projects under the 863 Program.

In April 2020, China TransInfo, the Traffic Management Research Institute of the Ministry of Public Security, and Zhejiang University jointly applied for the "Integrated Application of Smart Urban Travel Service Technologies" project under the key special project of "Integrated Transportation and Intelligent Transportation" of the Ministry of Science and Technology. The project focuses on the research on traffic operation monitoring and coordination technology and will support the implementation of major national development strategies with efficient and consistent comprehensive traffic technology. Among them, China TransInfo, as the leader, was responsible for the research on the "Integration of Smart Urban Travel Service Technologies and a Comprehensive Platform."

### China TransInfo joining Beijing Urban Brain Alliance

In August 2020, China TransInfo, Alibaba Cloud, and other well-known companies jointly established the Beijing Urban Brain Alliance to better serve the construction of Beijing's urban brain. The alliance uses next-generation information technology, including big data, cloud computing, and AI, to promote the modernization of urban governance, and explores and practices in transportation governance, environmental protection, refined urban administration, and regional economy.

### China TransInfo participating in the AI+ Transport Parallel Forum of ZGC Forum

In September 2020, China TransInfo participated in the AI+ Transport Parallel Forum of Zhongguancun (ZGC) Forum 2020. This parallel forum aimed to further promote the in-depth integration and application of new technologies such as big data and AI in the transportation industry. At the forum, China TransInfo released the "edge computing unit." It also discusses the methodology of technology empowerment and the strategies for industrial transformation with experts and scholars from ministries and commissions, universities, research institutions of China; domestic leading companies in intelligent transportation, the Internet, and new businesses; and directors and well-known experts from foreign authoritative organizations in intelligent transportation.

To bridge the gap between practice and theory, provide an important industry platform for the industry-university-research integrated development, and promote the innovative applications and commercialization of scientific and technological results, China TransInfo actively develops cooperation with universities and conducts all-round strategic cooperation.

## China TransInfo and the People's Public Security University of China reaching a strategic cooperation

In January 2020, China TransInfo and the People's Public Security University of China reached a strategic cooperation to jointly build a development platform for industry-university-research integration. The two sides will jointly establish a long-term cooperation mechanism in scientific research, personnel training, laboratory construction, and result application, and build a platform for industry-university-research integration. Under the cooperation, they will further converse education, research, and corporate technical capabilities into social productivity, promoting the development of China's public security industry, and support "building a safer China."



## Uniview and partner institutions carrying out skill training

In 2020, Uniview and partner institutions jointly established laboratories and research centers to provide professional technical training for three-year college and undergraduate students in computer applications, software technology, and network engineering.



Uniview cooperated with the Organizing Committee of the National Security Skills Competition for Higher Vocational Colleges and Zhejiang Police Vocational Academy to hold the "Uniview Cup" Security Skills Competition for National Higher Vocational Colleges. 29 teams with a total of 87 players from 15 colleges and universities of justice across China participated in the competition.

## Bresee and partner institutions jointly building industry-university-research training centers for AI

In June 2020, Bresee and Hangzhou Dianzi University held the opening ceremony of the training center at the Bresee Hangzhou Research Institute. The two sides will see comprehensive cooperation in the exchange and training of AI personnel and student practice and jointly build a benchmark AI training center. This cooperation provides students with more practical and employment opportunities, trains high-caliber personnel in AI technology, and achieves mutual promotion and win-win development among industry players, universities and research institutes.

In August 2020, the signing and releasing ceremony of Bresee and the Industry-University-Research Cooperation Center of Shandong University of Science and Technology (SDUST) was held on the Qingdao campus of SDUST. Bresee will assist SDUST in building a discipline that combines electrical and automation and AI and provide first-class technical expert resources for the university's AI personnel training.



# 03

## OPERATION: SUPPORTING HIGH-QUALITY DEVELOPMENT

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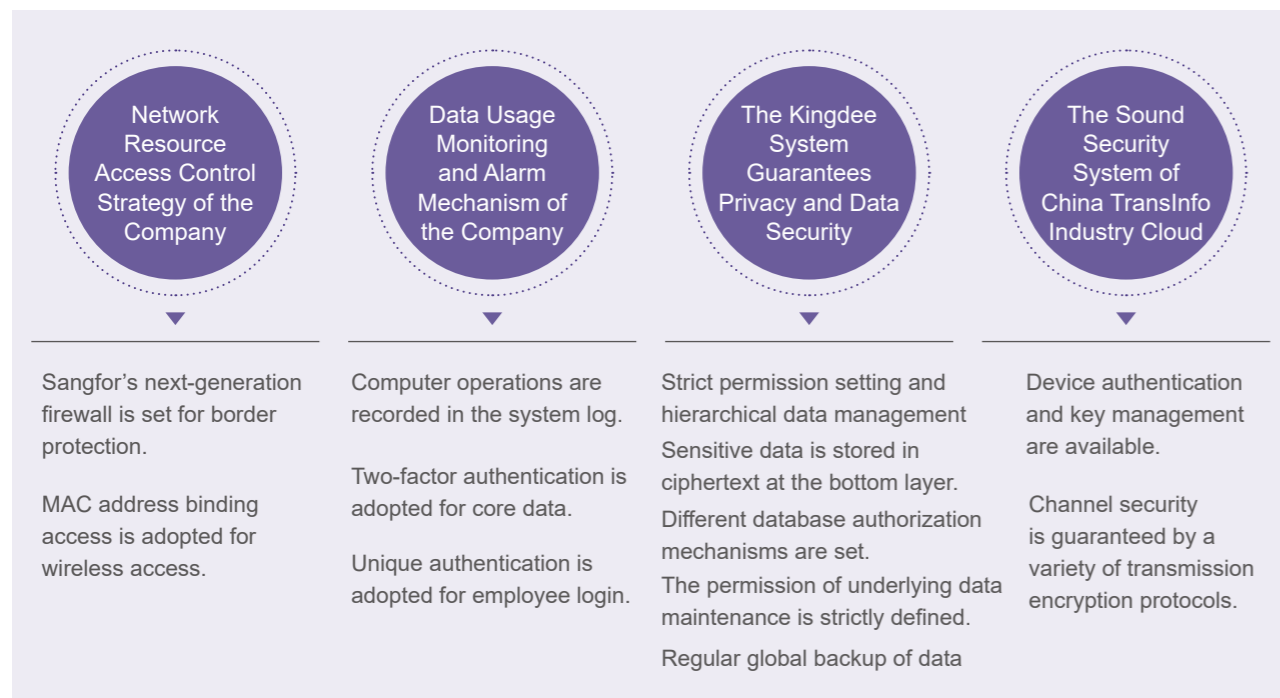


- Privacy Security
- Supply Chain Management
- Anti-corruption

## Privacy Security

Our vision is to “make the world safer, more convenient and more intelligent.” It is vital to our business to protect data security and user privacy. China TransInfo strictly abides by the *Cybersecurity Law of the People’s Republic of China* and other laws and regulations, and has formulated internal regulations such as *System Security Specifications of China TransInfo* and *Information Security Policy of China TransInfo* to regulate information management. Some of the Company’s business units obtained ISO27001 information security management system certification issued by SGS in 2015. Uniview, a subsidiary of the Company, received the industry’s first certificate based on the EU General Data Protection Regulation (GDPR) issued by TÜV Rheinland in 2018.

The information security system of China TransInfo



### Uniview obtaining the industry’s first certification based on the EU GDPR

Uniview was awarded the industry’s first certificate based on the EU GDPR issued by TÜV Rheinland, marking that it reached the world’s leading position in user privacy protection and set an industry benchmark for security.



Uniview obtaining a certificate based on the EU GDPR issued by TÜV Rheinland

### Uniview as a supporter of CNNVD

In August 2020, Uniview was selected as a new technical supporter of China National Vulnerability Database of Information Security (CNNVD) in 2020. It will play a role in collecting information security vulnerabilities, reporting major vulnerabilities, and security elimination and control of high-risk vulnerabilities, to provide technical support and data support for the security of China’s key industries and infrastructure.

## Supply Chain Management

To ensure that all aspects of sourcing are open and transparent, well-documented, and reasonable, China TransInfo has formulated the *Management Measures for the Sourcing System and Process* based on its business characteristics. The sub-systems of *Estimation of Early Project Costs*, *Project Sourcing Schedule*, *Process of Sourcing Negotiation*, *Process of Sourced Product Acceptance*, *New Supplier Management*, and *Supplier Evaluation* control key nodes and form a management standard system that fully covers activities in the entire sourcing process and restrains sourcing behaviors at all stages. The Company controls the sourcing process and provides qualified products and services in accordance with the ISO9001 and ISO14001 quality management systems.

We have a strict supplier access system and continue to establish long-term and stable supplier resources. We set up supplier files to evaluate their quality, delivery price, services, and corporate creditworthiness, and constantly update and optimize the Qualified Supplier Directory. Every year, we conduct regular reviews of suppliers, compile the Annual Supplier Review (Table), and make a comprehensive evaluation based on internal review results and produce the List of Unqualified Suppliers in the Annual Review. We also have value-added business cooperation with key suppliers to strengthen the Company’s tendering and bargaining power.

We uphold the working principle of fair price comparison and independent procurement. It is strictly forbidden for any personnel of the Company to designate suppliers, purchase prices, payment methods, or after-sales service. All procurement shall have a quote and price comparison that involves no less than three bidders. The final supplier shall be the one with the best comprehensive cost performance according to the Supplier Comparative Analysis (Table).

We value the integrity and self-discipline of procurement and strictly prohibit bribery and tunneling. When new suppliers are included in the Supplier List, we require them to sign the Integrity Commitment and abide by the anti-corruption and integrity provisions contained therein. We encourage reports of violations of laws and disciplines in sourcing. The Company has a veto power on the issue of integrity. Once a violation case is verified, the employee concerned will be removed from the project and the supplier involved will be blacklisted.

## Anti-corruption

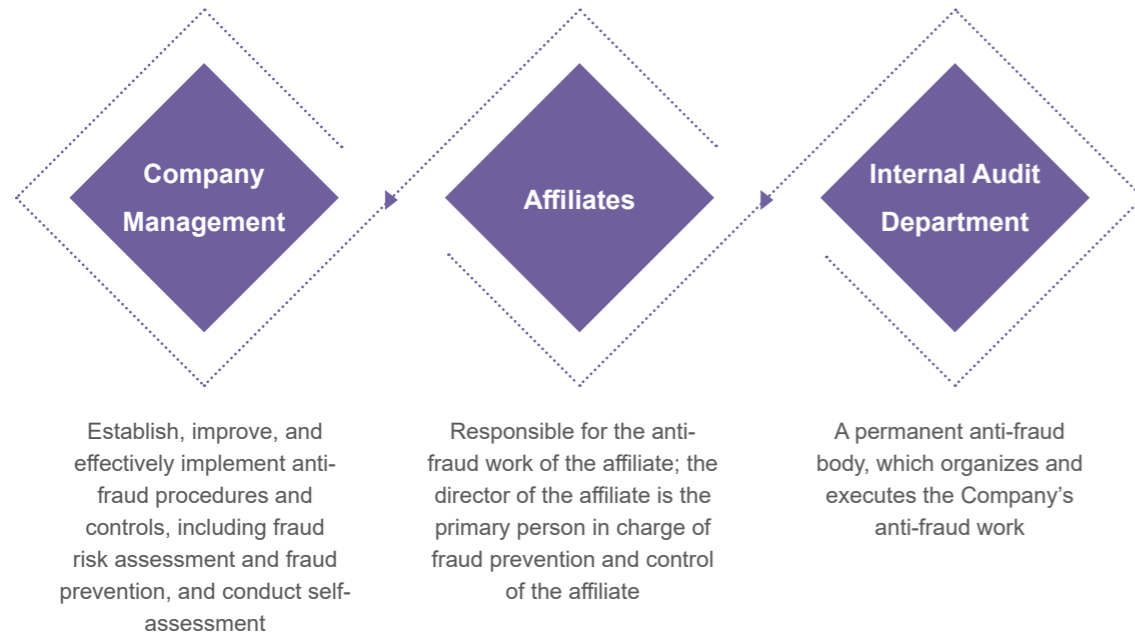
China TransInfo strictly complies with the *Audit Law of the People’s Republic of China*, *Provisions of the State Auditing Administration on Internal Auditing*, *Code of Corporate Governance of Listed Companies*, *Rules Governing the Listing of Shares on Shenzhen Stock Exchange*, and *Guidelines of the Shenzhen Stock Exchange for Standardized Operation of Listed Companies*, as well as the *Foreign Corrupt Practices Act of the United States*. The Company has formulated some internal rules and regulations, including the *Management Measures for Anti-fraud Reporting* and the *Anti-corruption Business Code*, to strengthen the comprehensive supervision system and ensure the integrity and efficiency of the Company’s operations.






## Supervision System


The three-level professional ethics management system of China TransInfo consists of company management, affiliates, and internal audit department.





## Building Integrity

We advocate the professional ethics of honesty and integrity, create an anti-fraud corporate culture, and establish detailed anti-fraud control procedures and mechanisms to reduce the chance of fraud. We conduct effective anti-fraud communication or training with employee handbooks, new employee training, company rules and regulations, publicity, and internal networks.

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All employees are required to receive the policy text of the *Code of Anti-Corruption Business Conduct* and must sign the anti-corruption policy certification, which will be filed in their personnel files;
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All employees must participate in regular anti-corruption policy training; senior managers must participate in the annual anti-corruption compliance training for executives every year;
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The compliance governance of subsidiaries shall be reviewed and evaluated regularly and reported to the Board of Directors; and
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Employees who fail to comply with relevant laws and regulations shall be subject to punishments such as retention and inspection, unpaid suspension, salary reduction, termination of labor relations, and economic compensation, as well as civil liability, criminal fines, and imprisonment.

## Whistleblowing Mechanism

Whistleblowing is an important part of maintaining the Company's business ethics. China TransInfo attaches great importance to the smoothness of whistle blowing channels and the security of reported information. We encourage employees, suppliers, customers, investors, creditors, insurers, competitors, and external auditors to report violations of professional ethics by employees in accordance with the *Management Measures of China TransInfo for Whistle Blowing Against Fraud and Anti-Corruption Code of Conduct of China TransInfo*. Four types of reporting methods have been set up, which are e-mail, face-to-face reporting, telephone, and letter. In addition, the Company strictly protects the safety of whistleblowers. The person in charge of a reported case shall not divulge or spread the content of the report to non-related personnel. The whistleblower shall not be retaliated against for reporting the issue, if so, the retaliator will be punished. In this way, we ensure that employees or outsiders will not suffer losses as a result of reporting through legal means. We have also set up a reward mechanism for reporting to give corresponding material rewards to whistleblowers who have recovered major losses for the Company.





# 04

## ENVIRONMENTAL PROTECTION: INSISTING ON SUSTAINABLE DEVELOPMENT

China TransInfo actively responds to the national call for energy conservation and emission reduction. It implements the green development concept and low-carbon strategy and fully unleashes the innovation potential in technology and industrial models. The Company promotes the green office campaign and advocates a series of green office initiatives within the Company to continuously improve the efficiency of the use of environmental resources and minimize the Company's adverse impact on the environment during its operations. We are committed to building an ecological-friendly enterprise, boosting the development of a green and low-carbon digital economy, and fulfilling corporate responsibility with our practical actions.

- Green Transportation
- Green Operation
- Green Production





## Green Transportation

In September 2020, President Xi Jinping made a solemn commitment to the world on behalf of China at the 75th United Nations (UN) General Assembly. China will strive to peak carbon dioxide emissions by 2030 and achieve carbon neutrality by 2060. Undoubtedly, this grand vision will have a profound impact on all aspects of China's economy and society.

Transportation occupies a large and growing share of greenhouse gas emissions. According to research, the transportation sector accounts for approximately 15% of China's final carbon emissions, of which carbon emissions from road traffic account for up to 84% of the total carbon emissions of the industry. It is the inescapable responsibility of all entities of the transportation industry to peak the carbon emissions of the industry as soon as possible and accelerate the construction of a green and low-carbon transportation system.

We provide services of "innovative products + solutions + project delivery + operation and maintenance" that cover the complete industrial chain for the actual needs in intelligent transportation. A number of our self-developed products, services, and solutions empower the development of "integrated transportation, intelligent transportation, green transportation, and safe transportation" in China's intelligent transportation industry. China TransInfo addresses congestion with digital technology and better solutions. It also continues to form new ideas, new technologies, and new methods to provide more efficient solutions for the reduction of carbon emissions from transportation.

### The Environmental Protection Law Enforcement Platform of the Entry Comprehensive Checkpoint of Yanqing District, Beijing

The Company launched a construction plan for the Yanqing District Environmental Protection Law Enforcement Platform of the Entry Comprehensive Checkpoint, focusing on the construction of some application systems, including a comprehensive application system for environmental protection, a visualization system for comprehensive inspection, and a collaborative law enforcement data center.

The Collaborative Law Enforcement Platform for Environmental Protection can timely compare and screen trucks entering the Yanqing District from other parts of the country. A new "law enforcement inspection station enabled with remote sensing and screening of high-emission diesel vehicles" has been established, which is capable of intelligent exhaust emission detection and comprehensively improves the efficiency of environmental-protection detection. With the help of this platform, the environmental protection authority can achieve precise policy issuance and information guidance and reduce the number of vehicles with excessive emissions entering Beijing from the source.

## Green Operation

China TransInfo insists on reducing energy consumption through "green office" in the operation process. The Company advocates the recycling and reuse of single-sided printed paper when printing and copying; the use of recycled paper, replaceable pens, toner cartridges, rechargeable batteries, and other recyclable items; and the use of e-mail instead of printing. In office, it is advocated to reduce the font size and reduce the margins. An online reimbursement system has been launched to minimize paper waste.

TransInfo Building hires a professional cleaning service center for domestic waste removal. It is stipulated that domestic waste is collected and regular professional disinfection is carried out three times a day. The Company held training sessions on garbage sorting to explain it to employees with simulation games. The entertaining education guided employees to consciously and scientifically carry out garbage sorting, develop the awareness of garbage sorting and environmental protection, and form a lifestyle of cherishing resources and saving energy.

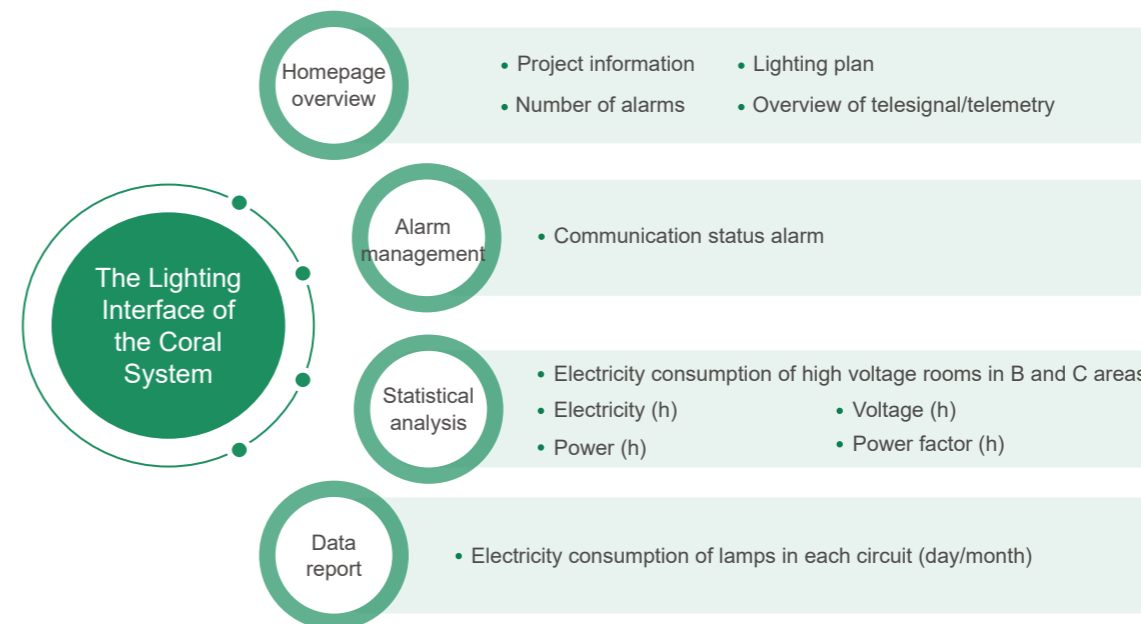
In 2020, the Company issued a management policy for boiler energy saving and consumption reduction. The boiler heating of TransInfo Building was changed from automation to manual operation. The boiler operators rationally discharged the gas boiler and cleaned up the scale in strict accordance with the operating standard in the boiler manual, which effectively improved the heat transfer efficiency of the boiler and reduced the consumption of gas.

### The Company implementing boiler energy saving and consumption reduction measures to reduce gas consumption

In 2020, to effectively reduce gas usage and support reduce carbon emissions, the Company established quota-based gas management for reasonable and balanced gas supply to improve the balance rate of production and gas consumption. The Company also carried out technical training to improve the operation of boiler operators for the purpose to save fuel while ensuring supply. To ensure energy saving and consumption reduction, the Company conducted regular maintenance and inspection of boiler room equipment in accordance with regulations to prevent potential safety hazards and energy waste caused by equipment failures. The Company also arranged monthly inspections by the competent unit to promote the awareness of energy saving and consumption reduction among all employees.

### The Company launching an energy-saving renovation project for the lighting of the underground parking lot for energy saving and emission reduction

In 2020, the Company carried out energy-saving renovations to the general lighting system of the underground parking lot of TransInfo Building. A total of 175 light fixtures were renovated in the project. An intelligent lighting energy collection system was installed to accurately collect energy data, analyze power consumption, and forecast power consumption. An intelligent lighting system was also installed to convert the hand switches of general lighting into intelligent automatic control for the purpose to reduce operation and maintenance costs.



The energy-saving project also replaced all traditional light fixtures in the underground parking lot with LED-radar-sensing integrated lights. With a microwave sensor at the light source, the new lights spread 100% light when a car approaches and dim to 20% when it leaves to save energy. The LED radar-sensor lamp has a long service life and can effectively reduce maintenance.

In 2020, based on 88 lane lights, the basement lighting system of TransInfo Building saved a total of **42,157.5** kWh of electricity. Based on 88 continuous lights, TransInfo Building saved a total of **14,721.18** kWh of electricity throughout the year.

China TransInfo has formulated the Management Measures for Vehicles and improved the Company's vehicle management. The Company stipulates that if a unit needs to use vehicles, they must submit an Application for Official Vehicles in the Company's office system and apply for uniform fuel cards, which restrict fuel products and vehicle models to minimize vehicle use and greenhouse gas emissions and practice the green office concept. The Company has also formulated relevant measures in response to the regulatory measures on corporate vehicles' violations issued by the Beijing Municipal Transportation Commission. The Company fulfills its obligations of publicity, education, and notification among employees with regular safety education for them.

In 2020, China TransInfo incurred no environmental accidents or administrative penalties related to such incidents.

## Green Production

Uniview has formulated and implemented some environmental management policies, including the *Management Manual for Quality, Environment, Health, Safety and Control Regulations for Safety and Wastes, Noise, and Dust*, to ensure that all materials meet the EU RoHs standard (restriction of hazardous substances). It has set up an energy-saving production line and a lead-free wave-soldering production line and adopts lead-free solder wires in the production process. The Company conducts environmental evaluation on construction projects and practices the "simultaneous design, construction and use" for environmental protection of construction projects. Focusing on the ISO14064 greenhouse gas standard, it screens raw materials and ingredients involved in production to avoid and reduce the emissions of greenhouse gases. It regularly monitors waste water, exhaust gas, and noise throughout the year. As of the end of 2020, Uniview's monitoring indicators met the standard. The annual electricity and water consumption per RMB 10,000 turnover of the major resources used in its production dropped by more than 1%.





# 05

## EMPLOYEE: MARCHING FORWARD TOGETHER

Employees are the cornerstone of the Company. China TransInfo attaches great importance to recruitment and employee training and care and is committed to building a spiraling upward employee development plan and a strategic human resource (HR) management system, focusing on promotion channels, development paths, experience and capacity planning. It supports employees by carrying out professional training and activities, improving employee promotion channels, implementing a reasonable performance evaluation mechanism, and providing a competitive incentive mechanism.

- Recruitment and Rights
- Promotion and Training
- Safety and Health
- Care and Communication



## Recruitment and Rights

China TransInfo strictly abides by the *Labor Law of the People's Republic of China*, *Labor Contract Law of the People's Republic of China*, and other relevant laws and regulations. It has formulated several internal management systems, including the *Management Measures of China TransInfo for Professional Qualification and Position Management Measures of China TransInfo*, and established a sound HR system and management system. The Company strictly insists on compliance for the entire process from recruitment interviews to re-employment of retirees and resolutely ensures legal and compliant employment. It eliminates any forms of discrimination against people of different genders, ages, regions, races, religions, physical conditions, and prohibits forced labor and child labor in any units and at any positions.

By the end of 2020, the Company had a total of 6,341 employees, and 100% of them had signed labor contracts. There was no employment discrimination, child labor, or forced labor.

In 2020, Uniview established university-enterprise cooperation with some three-year colleges and universities to jointly build laboratories and research centers, providing a large number of internships and jobs.



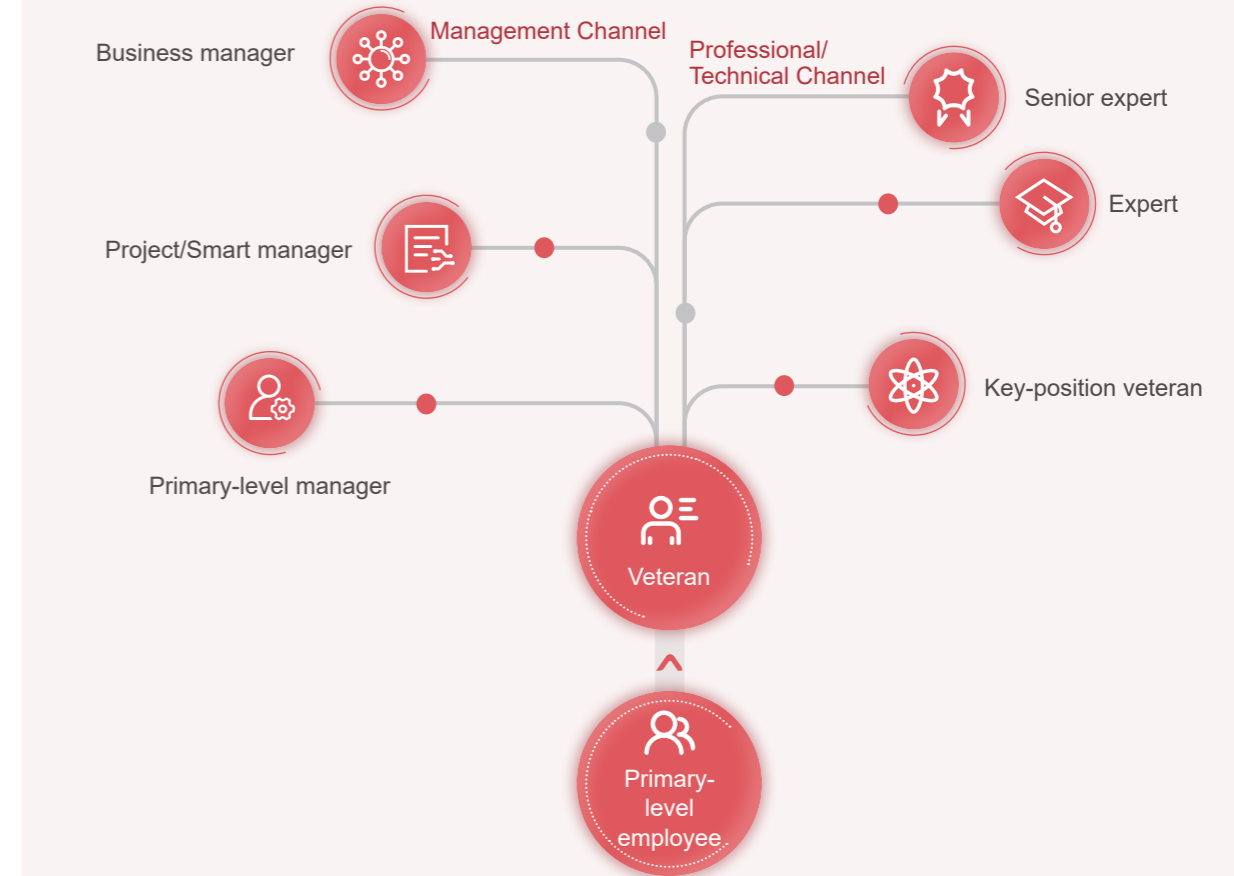
## Promotion and Training

China TransInfo adheres to the philosophy of common development of employees and the Company, constantly improves the training system, and broadens the promotion channels for employees. The Company provides an arena for each employee to give full play to their strengths and supports employee development and building a talent pool.

### Employee Promotion

China TransInfo has created a fair, just, and open competition mechanism within the Company. It has formulated the *Management Measures of China TransInfo for Professional Qualification and Position Management Measures of China TransInfo* to regulate the training and development paths of employees and encourages employees to continuously improve themselves to better match the requirements of their positions. Adhering to the basic principles of "position responsibility as the basis, performance as the guide, ability as the core, objective and fair," the Company has set up dual career development channels for employees. When an employee's position changes, his or her ability will re-certified according to the responsibilities and corresponding qualification standards of the new position. The certification will be preliminarily reviewed by the competent professional committee before being transferred to the AT (Administration Team), the highest decision-making body for the promotion and evaluation of company-level managers, for the final review, to ensure that the process meets the standard and the results are reasonable.

Development paths of China TransInfo employees



China TransInfo has formulated the *Management Measures for Performance Appraisal*. The Company conducts semi-annual and annual comprehensive evaluations of employees based on their job responsibilities and facts and completes the Performance Feedback Record (Form). Based on the result of performance appraisal, it will adjust the salary and incentives of employees, forming a mechanism for employees' self-discipline and self-motivation.

### Employee Training

China TransInfo attaches great importance to employee development. Based on its HR situation and business needs, performance needs, and learning and trainee needs, the Company steadily carries out personnel training in the forms of self-training and commissions to training institutions and ensures the quality and effectiveness of training sessions to promote the all-round improvement of employees. In 2020, the Company built a team of internal trainers according to the training plan of "three soft skills + three hard skills," established a trainer system standard that can be assessed, measurable, and practical, and trained a large number of internal trainers.



## Training Plans

### Three Hard Skills

**01 Seize the opportunity**  
empowering with new business opportunities

- Launching new products and new market business empowerment
- Development of a platform for business empowerment training packages

**02 Problem-solving**  
major business problems need to be sorted out and solved in time; targeted training

- Sales services
- Product issues
- Delivery services
- Customer complaints
- Solutions

**03 Strategy implementation**

- Implementing sales strategies (such as "high," "deep," and "full" sales and sunken areas)
- Making up for the shortcomings of the personnel involved in implementing the strategy; targeted empowerment; internal trainers to give incentives
- Empowering with the Company's internal policies: promoting among and interpreting for different groups

## Training Plans

### Three Soft Skills

**01 Transformation driving force**  
the transformation reserve team

**02 Collaborative efficiency improvement**  
cross-functional teams

**03 Competent for key positions**

- Empowerment for new positions
- Empowerment for positions in need in the future transformation
- Empowerment classes for management positions
- Project training classes for core positions

### The project of "Ability Training for Graduates from Outside Beijing"

In 2020, China TransInfo formulated the *Management System for the Assignment and Training of Graduates from Outside Beijing*. Under the system, newly recruited graduates served temporary positions and participated in positions swaps to continue their studies. The Company organized and selected graduates to other companies for academic exchanges, work collaborations, visits, or further studies. Some outstanding graduates were selected to continue their studies at higher education and scientific research institutions and were trained to become pillar talents of the Company.



### The student assistance program of Uniview

In 2020, Uniview launched the “Uniview Training Class” student assistance program to provide employees with online and offline training. It also set up living allowances and scholarships at some institutions and provided internship positions at each partner institution.



### The 1+X personnel training model of Uniview

As a pilot company of the “1+X” certificate system for vocational education recognized by the Ministry of Education, Uniview insisted on tailoring courses of the implementation, operation, and maintenance of smart network security systems for partner institutions and provided verification services to enhance students' professional competitiveness. Based on the characteristics of the training program and the purpose of the partner institution, the Company engaged in the construction of training and curriculum systems and integrated Uniview's work process, platform, system specifications, and other targeted vocational courses into the training program.

## Safety and Health

China TransInfo creates a caring and equal workplace with employee physical examinations and the employee benefits system and provides employees with a full range of practical support, to enhance their sense of happiness and belonging.

The Company arranges physical examinations for employees every year. It funds supplementary commercial insurance for employees and their children and provides special insurance for high-risk employees. An HRBP team has been set up as the primary handling unit for employees to deal with emergency incidents. At the end of 2020, the Company secured COVID-19 vaccine for employees to fully protect their health and safety.

### Uniview actively fighting COVID-19 and protecting the health of employees

During the COVID-19 pandemic in 2020, to protect the health and safety of employees, Uniview collectively purchased anti-pandemic supplies, including masks, disinfectants, hand sanitizers, and disposable gloves. The office environment was disinfected every day. The Company also distributed 460,000 disposable masks and 34,000 N95 masks to employees free of charge to protect their safety at work. During the period, the Company carried out implementation inspections and notifications to ensure that the protective measures were implemented. Before and after resuming work, the Company ensures that there was no salary cut for primary-level employees and that social insurance was funded normally.

The Company inspects fire-fighting facilities of the company building in accordance with the *Fire Control Law of the People's Republic of China*. Based on the Company's fire emergency response plan, it regularly organizes employees for fire protection knowledge assessment and evacuation drills, to help them better understand and familiarize themselves with the evacuation procedure and improve their self-rescue and escape capabilities.

### A evacuation drill organized by China TransInfo in the second half of 2020

In the second half of 2020, China TransInfo organized 1,453 employees to participate in an evacuation drill under the theme of “Fire Fighting and Life.” The drill included evacuation, introduction to and experience of fire extinguishers, introduction to and visit of fire truck equipment, laying of fire truck hoses and water injection, and demonstration of the use of underground fire hydrants in the mini fire station of China TransInfo's Property Department. The drill was fully equipped, including 2 fire trucks, 32 fire extinguishers, 9 firefighters, and 5 water hoses. All participating employees reached the designated locations safely.



## Care and Communication

China TransInfo attaches great importance to communication with employees. Employees can make requests to the Company through a variety of communication channels. The Company adopts the “first-inquiry accountability system” for HR services to promptly resolve employee questions or service needs and sends service results through satisfaction surveys of business units.

China TransInfo actively prepared and established a labor union. It provides employees with a variety of cultural activities and benefits and cares in different forms, including birthday greetings, the diversified sourcing platform for the Mid-Autumn Festival, customized Spring Festival couplets, and team photos, to convey the Company's care for employees. The Company also assists fresh graduates without Beijing household registrations to settle in Beijing every year according to business development needs.



# 06



## PUBLIC WEL- FARE: ASSUMING SOCIAL RESPON- SIBILITY

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China TransInfo combines corporate responsibility and social responsibility and takes active actions in the battle against COVID-19, poverty alleviation, and education assistance, manifesting the social responsibility of modern enterprises.

- Smart Battle Against COVID-19
- Public Welfare



## Smart Battle Against COVID-19

Since the outbreak of the COVID-19 pandemic, China TransInfo actively responded to and contributed to the main pandemic-hit areas, all sectors of society, upstream and downstream industries, and itself, giving back to the society with practical actions. China TransInfo took on the social and national responsibilities of private enterprises and took the brand to a new height.

### Milestones of China TransInfo's battle against COVID-19

- January 28**
  - Donated RMB 20 million in cash and medical supplies to the affected areas
  - Uniview donated surveillance systems and equipment to Wuhan Leishenshan Hospital under construction, and established a taskforce to ensure the successful installation and debugging of equipment.
- January 28**
  - Established an emergency response team for pandemic prevention and control to cooperate with the transportation authorities in the pandemic-hit areas to control and dispatch private commercial vehicles
  - Set up a mutual assistance section for pandemic prevention in the Chewang Daka APP to provide truck drivers with information on pandemic prevention
  - Collected information on rescue, materials, and mutual assistance, and provided safety reminders, pandemic prevention notices, and other safety assurance services for vehicles to aid the pandemic-hit areas
- February 10 - 13**
  - Donated 10 negative pressure ambulances and a large number of protective supplies, which were immediately sent to the key anti-pandemic front lines such as Wuhan, Huanggang, Huangshi, Shiyan in Hubei Province
- Mid-February**
  - Uniview launched a full-scenario pandemic prevention and control solution for the needs of enterprises to resume work and prevent pandemic.
- Late-February**
  - Uniview released the Yunyibao community pandemic prevention and control solution, which was available for free during the pandemic.
- Early-March**
  - In response to the need for pandemic prevention in school reopening, Uniview released the Fuxuebao school pandemic prevention and control solution and related public welfare plans.



## Joining Hands in the Battle Against COVID-19 and Assisting the Pandemic-hit Areas

Facing the severe situation of the COVID-19 pandemic, China TransInfo saw unity among its staff and active response from its branches and subsidiaries. Since the outbreak of the pandemic, TransInfo Group, parent of China TransInfo, donated more than RMB 21 million in cash and anti-pandemic supplies. We joined hands and rose to the pandemic.



### Taking up the social responsibility of private enterprises by donating money and supplies to the pandemic-hit areas

On January 28, TransInfo Group announced a donation of RMB 20 million in cash and medical supplies to the affected areas. The Group launched a fundraising activity of all employees and raised RMB 856,900, which was donated to the pandemic-hit areas in Hubei through the Overseas Chinese Charity Foundation of China. The Group also called on all employees to jointly seek the sourcing channels and supply sources of medical and anti-pandemic supplies (such as medical alcohol, masks, gloves, goggles, and protective garments) to assist the frontline.

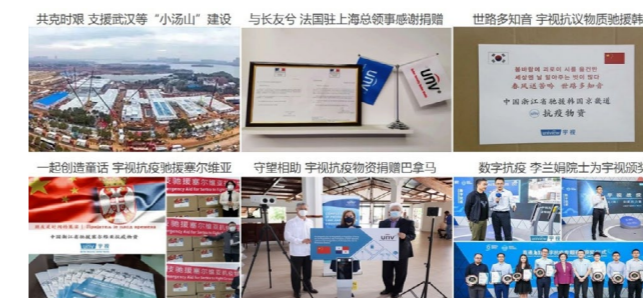
On January 29, the first batch of supplies donated by TransInfo Group was sent to the anti-pandemic front line in Hubei to alleviate the shortage of medical supplies.

In early February, Uniview Russia and many overseas branches began to raise medical supplies from locations around the world and donated them to the affected areas in China.

From February 10 to 13, 10 negative pressure ambulances and other protective supplies donated by TransInfo Group were immediately sent to the key anti-pandemic front lines such as Wuhan, Huanggang, Huangshi, Shiyan in Hubei Province.

### Uniview assisting the pandemic-hit areas around the world and supporting the construction of Wuhan Leishenshan Hospital and Xiaotangshan-style hospitals in other regions

On January 28, Uniview took the initiative to contact Wuhan Command Center for COVID-19 Prevention and Control. It donated surveillance systems and equipment to Wuhan Leishenshan Hospital under construction, and established a task force to ensure the successful installation and debugging of the equipment, to support Wuhan Leishenshan Hospital to be completed and put into use as soon as possible. Also, in response to the frontline of pandemic prevention and control announced by the National Health Commission, Uniview released solutions of non-contact accurate temperature measurement and accurate control of access permissions to fully assist in the battle against the pandemic. During the pandemic, Uniview supported the construction of Xiaotangshan-style hospitals in many places across China.



Uniview assisting pandemic-hit areas around the world

In the most difficult moment of the pandemic in overseas areas, Uniview overcame numerous difficulties and donated more than **12** masks to **23** countries including France, Japan, and Vietnam.





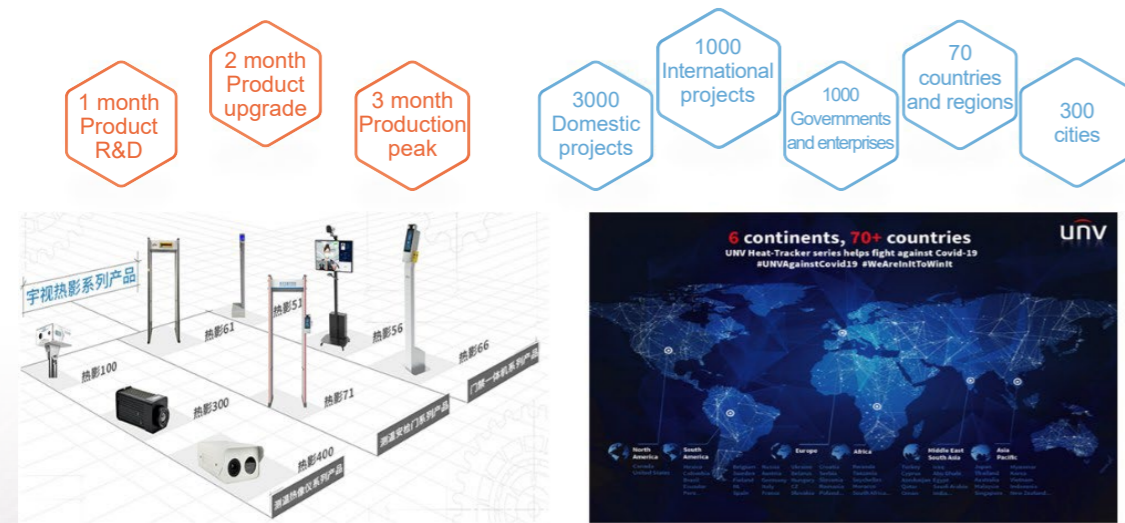
## Hi-Tech Battle: Digitalization Supporting Work and Production Resumption

China TransInfo supported the pandemic frontline with new technologies, products, and services for work and production resumption. We responded quickly to the needs of pandemic prevention and control and released a number of new products, including the TransInfo Infrared Video Monitoring System and TransInfo Cloud Platform for Pandemic Prevention and Control in Key Sites. We innovated our service capabilities, better empowered economic recovery with digitalization, and contributed to the "new infrastructure" and the stable operation of the national economy.

### Uniview wasting no time in developing and producing anti-pandemic equipment with fast iteration

Since the outbreak of the pandemic, Uniview launched eight series of non-contact thermometers and 11 pandemic prevention and control solutions. It teamed up with its mother company China TransInfo to complete product development and application within one month and two product iteration upgrades (forehead temperature → wrist temperature → forehead temperature/wrist temperature + ranging) within two months and reach the peak daily output of 5,500 pieces at smart factories in the third month, meeting the needs of pandemic prevention and temperature measurement in different scenarios.

Among them, the Uniview Integrated Machine of Thermal Imaging Face Recognition and Temperature Measurement was widely applied in enterprises. The integrated model of "face recognition + health code + non-contact temperature measurement + attendance recording" simplified the attendance procedure of employees during the pandemic, avoided cross-infection among employees, and allowed them to pass through in an orderly and fast manner. The equipment can start working once being plugged in, reducing the workload and promoting the efficiency of pandemic prevention in enterprises.



Uniview's hi-tech anti-pandemic equipment

### All-scenario pandemic prevention and control to support enterprises to resume production and work safely

In February 2020, Uniview launched a full-scenario pandemic prevention and control plan for the needs of enterprises pandemic prevention for in resuming work, where it created a well-prepared, informative, and controllable environment for resuming work with three strategies.

#### Preparation: One-second temperature measurement

- The thermal imaging 66 series replacing fingerprint attendance
- The thermal imaging 61 series for rigorous screening around the clock
- The thermal imaging 100/400 series for accurate temperature measurement of crowds



All-scenario pandemic prevention and control

#### Care: Information network for employees

- Voice reminder for not wearing a mask
- Discouraging entry of those not wearing a mask
- Remote care for quarantined people
- Remote collection of pandemic information



#### Information: Pandemic data on one screen

- Customized presentation of pandemic data
- Dynamic adjustment of pandemic prevention and control measures
- Pandemic prevention training for all



The pandemic data board

### A cloud platform for pandemic prevention and control and intelligent management of multi-scenario pandemic prevention

For the intelligent management of multi-scenario pandemic prevention, China TransInfo teamed up with Uniview to urgently develop the TransInfo cloud platform for pandemic prevention, which was quickly launched on February 3.

In response to the problems in pandemic prevention and control, such as the high cost of detection equipment, strong dependence on personnel, lack of information connection and sharing, and poor active early warning capabilities, China TransInfo developed a coordinated system of pandemic prevention and control that integrated perception, transmission, analysis, decision, action under the principles of simplifying front-end, cloud services, intelligent early warning, and networked joint control. The system can grasp the risk dynamics of key areas and key groups in real time and comprehensively improve the active prevention and control capabilities of relevant areas during the pandemic. The TransInfo Cloud Platform for Pandemic Prevention was supported by Uniview 66 Integrated Machine of Thermal Imaging Face Recognition and Temperature Measurement, combined with China TransInfo's big data mining and intelligent AI technology, which featured the integration of port-cloud and instant use once being plugged in.

#### During the pandemic



TransInfo Cloud Platform for Pandemic Prevention and Control covered

12 districts

Beijing and connected to more than

12 Ochain supermarkets

The platform detected more than

20 people every day, making a major contribution to ensuring the safety of urban citizens.



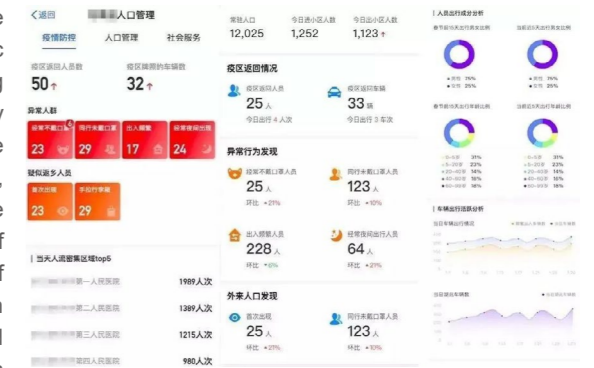
Sample of the TransInfo Cloud Platform for Pandemic Prevention and Control

### Technology helping airlines out of adversity

To strengthen airlines' response capabilities and support the recovery of shipping and transportation, China TransInfo Aero-com and Alibaba Cloud jointly launched the Intelligent Cloud Platform for Optimizing Flight Operation, using big data, cloud, and other technical means to support the evolution of airlines' business and production models. Based on China TransInfo Aero-com's customer cooperation covering 80% of the civil aviation industry and business precipitation, the platform fully integrated flight plans, airborne data, weather announcements, and other operational data, covered application scenarios such as fuel-saving management, operational quality, and risk control, and formed the network-based intelligent analysis services for flight operations. The platform has been available to Chengdu Airlines, Shandong Airlines, and Juneyao Airlines. Its cloud service products and package solutions played an active role in airlines' priorities, such as work safety, cost reduction, and efficiency enhancement.

### Yunyibao solving the "last mile" problem in urban pandemic prevention

In response to the State Council's call anti-pandemic software for communities, Uniview and DingTalk jointly launched public welfare programs such as Yunyibao and Fuxuebao, using technology to solve problems such as insufficient community workers and difficulty in updating information statistics. These programs realized zero-contact pandemic prevention and control, greatly reducing the risk of cross-infection among frontline workers. These systems effectively improved the efficiency of community pandemic prevention work, including examination of floating population and management of close contact through zero-contact access management, prevention, and control and pandemic data analysis, effectively protecting frontline workers and community residents in the battle against COVID-19.



Community workers' access to real-time information on key groups/districts on the Yunyibao APP

By March 5, the Yunyibao public welfare program had been launched in communities in Guangdong, Hebei, Yunnan, Shandong, Jiangxi, Guizhou, Sichuan, and other provinces and municipalities. In Neiqiu County, Hebei, Yunyibao was used in 86 communities and covered in a feature report by Hebei TV.

During the pandemic, employees of China TransInfo actively participated in pandemic prevention and control. As the employer, we did our best to provide employees with a safe and healthy workplace and helped them and the factories resume work and production safely.



Before and after resumption of work, there was no salary cut for primary-level employees, and social security was funded normally.



The Company collectively purchased anti-pandemic supplies such as masks, disinfectants, hand sanitizers, and disposable gloves, and distributed disposable masks and N95 masks to employees for free.



The workplace was disinfected every day; employees were required to wear a mask inside an office.

### Community Recognition for Our Anti-pandemic Work



China TransInfo's Chairman Xia Shudong was awarded the "Exemplary Individual in the National Battle Against COVID-19 in Private Economy."

Uniview was awarded the "Best Private Enterprise Employer in the Battle Against COVID-19 2020" by 51Job and Hurun.

China TransInfo was rated as a "Case of Outstanding Social Contribution" in the "Excellent Cases of Information Technology Supporting Resumption of Work and Production" jointly organized by People's Daily Online and the Cloud Computing and Big Data Research Institute of China Academy of Information and Communications Technology.



## Public Welfare

Since the establishment of the TransInfo Charity Fund under the Overseas Chinese Charity Foundation of China in 2016, we have played an active role in poverty alleviation, education and cultural support, social care, industry leadership, and personnel exchanges and training. We combine corporate responsibility and social responsibility to promote industry progress and benefit society.

### Poverty Alleviation

In 2020, the CPC China TransInfo Committee, Party members, and other employees donated to quinoa plantation in Zhangbei, Hebei.

Uniview launched a skill training model for precision assistance, which included orders, orientation, output, and education, and cooperated with Danzhai County Minzu Vocational College, Guizhou, in skill training under a paired assistance program.

### Education and Cultural Support

Establishing the TransInfo Academic Fund and Shuguang Scholarship at universities

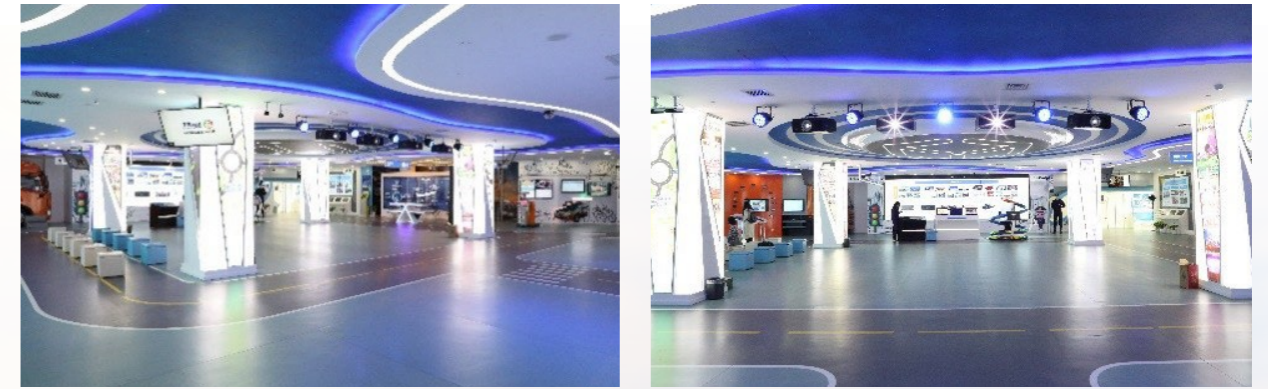
Donations to Beijing Haidian Education Foundation and Haidian District Charity Association

## Public welfare exhibitions at TransInfo Exhibition Center

In 2020, TransInfo Exhibition Center received more than 300 visitors from the Transport Management Institute of the Ministry of Transport, Beijing Jiaotong University, Tsinghua University School of Continuing Education, University of International Business, and Harbin Institute of Technology. Besides presenting China TransInfo's history, business, and strength, we demonstrated our deep understanding of intelligent transportation and IoT. We used hardware, auditions, images, sounds, and on-site introduction to let visitors experience the charm of intelligent transportation and IoT in different scenarios.

In September 2020, China TransInfo participated in the "Beijing Joint Action for Science Popularization: Technology Enterprises' Open Day" jointly organized by Beijing Science and Technology Association, the Administration Committee of Zhongguancun Science Park, and the Administration Committee of Beijing Economic and Technological Development Zone. The event connected the Company to the public.

In October 2020, TransInfo Exhibition Center became the Youth Education and Practice Center for Science and Technology Innovation of Shangdi Education District, Haidian District, Beijing.



TransInfo Exhibition Center



## GRI Index

Index	Disclosure	Chapter
102-1	Name of organization	About this Report
102-2	Events, brands, products and services	About China TransInfo: Company Overview
102-4	Business location	About China TransInfo: Company Overview
102-5	Ownership and legal form	Corporate Governance
102-6	Markets served	About China TransInfo: Company Overview
102-7	Size of organization	About China TransInfo: Company Overview
102-8	Information about employees and other workers	Employee: Marching Forward Together
102-9	Describe the organization's supply chain	Operation: Supporting High-quality Development: Supply Chain Management
102-13	Institutional associations (such as industry associations) and national or international initiatives that the organization has joined	Innovation: Leading the Industry
102-14	Statement from senior decision makers	Chairman's Message
102-16	State the organization's values, principles, standards and codes of conduct, such as codes of conduct and ethics	About China TransInfo: Social Responsibility
102-18	Institutional governance structure, including committees under the highest governance body. Description of committees responsible for decision-making on economic, environmental and social impacts	Corporate Governance-Governance Structure
102-40	List of stakeholder groups	About China TransInfo: Social Responsibility
102-42	Identify and select stakeholders	About China TransInfo: Social Responsibility
102-43	Policy for stakeholder engagement	About China TransInfo: Social Responsibility
102-44	Main issues and concerns raised	About China TransInfo: Social Responsibility
102-46	Define the report content and boundary of issues	About China TransInfo: Social Responsibility

Index	Disclosure	Chapter
102-47	List of material issues	About China TransInfo: Social Responsibility
102-50	Reporting period	About this Report
102-52	Reporting cycle	About this Report
102-53	Contact person for the report or its content	About this Report
102-54	Declaration of compliance with GRI standards	Not applicable
102-55	GRI Index	GRI Index
201-1	Directly generated and distributed economic value	Corporate Governance-Governance Structure
203-2	Significant and indirect economic impact	Public Welfare: Assuming Social Responsibility
205-1	Operational outlets that conduct anti-corruption risk assessments	Operation: Supporting High-quality Development: Anti-corruption
205-2	Communication and training on anti-corruption policies and procedures	Operation: Supporting High-quality Development: Anti-corruption
205-3	Confirmed corruption incidents and actions taken	Operation: Supporting High-quality Development: Anti-corruption
302-4	Reduction of energy consumption	Environmental Protection: Insisting on Sustainable Development: Green Operation
305-4	Intensity of greenhouse gas emission	Environmental Protection: Insisting on Sustainable Development: Green Production
401-2	Benefits for full-time employees (excluding temporary or part-time employees)	Employee: Marching Forward Together: Recruitment and Rights
403-1	Workers' representatives in the Joint Labor and Health Commission	Employee: Marching Forward Together: Recruitment and Rights
404-2	Program for employee skills development and program for transitional assistance	Employee: Marching Forward Together: Promotion and Training
413-1	Operational outlets with local community's involvement, impact assessment and development plans	Public Welfare: Assuming Social Responsibility





Address: Tower B, Transinfo Building, No. 27 Court of Zhongguancun Software Park,  
No. 8 Dongbeiwang West Road, Haidian District, Beijing  
Postcode: 100085  
Telephone: +86-010-5082 2100  
Fax: +86-010-5082 2000