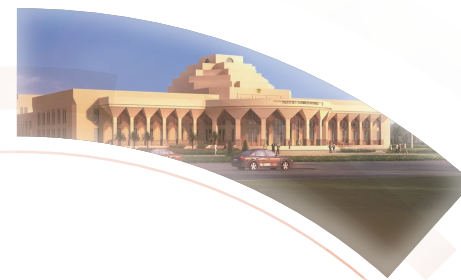
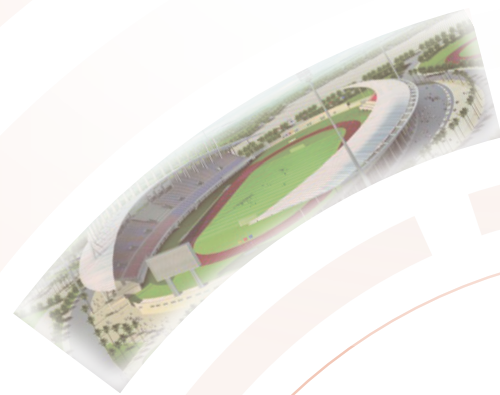




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# 2023

## Environmental, Social and Governance (ESG) Report

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# About this Report

This report is the fourth Environmental, Social and Governance Report (ESG Report) and the thirteenth Social Responsibility Report issued by Shandong Hi-speed Company Limited (hereinafter referred to as "Shandong Hi-speed", "Company" or "We"). Based on the principles of objectivity, standardization, transparency and comprehensiveness, this report discloses in detail the Company's environmental, social and corporate governance practices and performance in 2023.

## Reporting Scope

This report focuses on Shandong Hi-speed Company Limited and its subsidiaries and branches, etc. The scope of this report is consistent with the scope of the Company's annual consolidated financial statements unless otherwise stated.

## Time Range

The reporting period of this report covers from January 1, 2023 to December 31, 2023. For the purpose of making the report more comparable and forward-looking, some of the content appropriately refers back to previous years or has forward-looking descriptions. This report is issued on an annual basis, consistent with the financial year.

## Compilation Basis

- Shanghai Stock Exchange *Self-Regulatory Guidelines for Listed Companies No. 1 - Standardized Operation of Listed Companies (2023)*
- Chinese Academy of Social Sciences (CASS) *Guidelines for Preparing Corporate Social Responsibility Reports in China (CASS-ESG 5.0)*
- Global Reporting Initiative *Sustainability Reporting Standards (GRI Standards) (2021 Edition)*
- UN Sustainable Development Goals (SDGs)
- State-owned Assets Supervision and Administration Commission of the State Council *Guiding Opinions on the Fulfillment of Social Responsibility by Central Enterprises*

## Data Explanation

The data sources used in the report include the original data of the actual operation of the Company, public data of government departments, annual financial data, relevant internal statistical statements, third-party questionnaires, third-party evaluation interviews, etc. The financial data in this report are expressed in RMB, and in case of any inconsistency with the financial report, the financial report shall prevail.

## Explanatory Notes

Terms	Meanings
Shandong Hi-speed, the Company, We	Shandong Hi-speed Company Limited
Shandong Hi-speed Group, the Group	Shandong Hi-speed Group Co., Ltd.
Henan Development Company	Shandong Hi-speed Henan Development Co., Ltd.
Road & Bridge Group	Shandong Hi-speed Road & Bridge Group Co., Ltd.
Qilu Expressway	Qilu Expressway Co., Ltd.
Rail Transportation, Rail Transportation Company	Shandong High-speed Rail Transportation Group Co., Ltd.
ECON Technology	ECON Technology Co., Ltd.
Information Group	Shandong Hi-speed Information Group Co., Ltd.

## Assess to the Report

This report is published in electronic form. You can download the electronic version of this report from the website of Shanghai Stock Exchange ([www.sse.com.cn](http://www.sse.com.cn)) or the official website of the Company ([www.sdecl.com.cn](http://www.sdecl.com.cn)) to obtain more information about the Company. If you have questions and suggestions about this report, you can send an email to [sdhs@sdecl.com.cn](mailto:sdhs@sdecl.com.cn) or call 0531-89260052. This report is released in both Chinese and English versions. In case of any ambiguity or conflict between the two language versions, the Chinese version shall prevail.

## Feedback

If you have any comments or suggestions on the sustainability of our company, please feel free to contact us as follows to help us continuously improve our report.

Securities Service Hotline: 0531-89260052

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## Statement of Chairman

Here is another year and another chapter of our life; we are still in the middle of our journey, also our dream. The year of 2023 was an extraordinary year, which was the first year to fully implement the spirit of the 20th Party Congress. Under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, Shandong Hi-speed adhered to the corporate mission of "making the enterprise stronger with well-off staff and giving back to society", made progress through reform, embraced the future through inheritance and constantly practiced its social responsibility.

We are all the time strengthening governance and moving forward steadily. In 2023, starting from the strategic responsibility of state-owned enterprises, we actively responded to the national "The Belt and Road" initiative and expanded our scope of operation; we always upheld the leading role of Party building, took compliance operation as the cornerstone, comprehensively improved risk control, maintained investor relations, and optimized ESG management system and structure to ensure high-quality governance with sustainable development.

Low-carbon highways represent green development. In 2023, we continued to integrate the concept of developing low-carbon highways into our development strategy, vigorously promoted green technologies in road maintenance and engineering construction, fully deployed the "paper-to-electronic" reform for invoices, continuously explored new energy utilization, promoted the construction of "zero-carbon toll stations", and deepened the concept of energy-saving and low-carbon development in all aspects of highway operation.

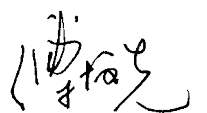
We always stick to the bottom line for work safely. In 2023, we believed that safety was of paramount importance, and it was our responsibility to ensure the quality of highway service. We applied digital management to every part of expressway operation, improving highway service level by digital means, assessing and making plans for various risks, and guaranteeing the safe and smooth operation of highways.

We provide quality service and protect customer rights and interests. In 2023, we put the protection of customers' rights and interests at the top of our service, ensuring the safe travel of customers, comprehensively improving customer complaint response procedures, strictly protecting customers' information security, and making customer travel more convenient. We have been working hard to improve the customer experience.

The Company is employee-oriented, and we grow together with employees. In 2023, we insisted on establishing harmonious and stable labor relations, and provided a mature development system based on a sound remuneration and welfare system, thus ensuring that employees enjoyed a relaxed and open communication environment, an open and transparent development channel, and a warm and harmonious workspace, so as to shape the Company into a warm and happy home.

We devote ourselves to society. In 2023, we actively participated in public welfare activities, invested in the construction of infrastructure and living facilities for rural revitalization, helped the needy people, assisted the planting of agricultural products, organized volunteer service teams, escorted the travel safety of people, contributed to public welfare undertakings, and fully demonstrated the Company's social responsibility.

Going ahead, our heart remains the same. In 2024, under the corporate spirit of "Accountable, Aggressive and Advanced", we will base ourselves on the past, strive to move forward, explore a broader path for future development, build a cornerstone with duties, and create a brighter future with reforms, making every effort to build the top brand in China's expressway industry.

Chairman: 





# Focus

**Empower the brand of "Shangao · Xing" and be a listed company with "sense of responsibility".**

- The ESG Vision of Shandong Hi-speed

## Responding to the "Carbon Peaking and Carbon Neutrality" Goals, and Building Low-Carbon Highways

In 2021, the State Council issued the Action Plan for Carbon Peaking by 2030, proposing that green and low-carbon actions for transportation should be taken from three aspects: promoting low-carbon transformation of transportation equipment, constructing green and efficient transportation system, and speeding up construction of green transportation infrastructure. In the same year, the *14th Five-Year Plan for the Development of Modern Comprehensive Transportation System* further proposed that energy conservation and carbon reduction in the highway field should be pushed from four aspects: structure adjustment, cleanliness, low energy consumption, and green.

Under this background, Shandong Hi-speed has evaluated the current situation of carbon emission in the industry while fully taking into account the actual internal and external conditions of the industry and the Company, made due contribution to the construction of ecological civilization with practical moves, and promoted the harmonious coexistence between man and nature.

### Green Engineering

Shandong Hi-speed integrates the low-carbon concept and environmental protection consciousness into the construction of expressway, rail transit and engineering construction and puts them into practice.

#### Before Road Construction

The Company adheres to the system of "three simultaneous actions" for environmental protection, and prepares environmental impact reports for various projects undertaken for construction. In those reports, we analyze the ecological status of the construction site, evaluate the possible impacts and risks caused by the construction, avoid wetlands, wildlife reserves and other areas to minimize the environmental impact on the local area.

#### During Road Construction

The Company regularly inspects the construction, adopts automatic spraying system and other measures to suppress dust, and properly handles various wastes generated during construction according to relevant regulations, especially hazardous wastes. After construction, we will restore vegetation in time, make full use of earth for subgrade backfilling, and effectively reduce occupation of land resources.

### Case 1

#### Application of Environmental Protection Technology in Engineering Construction

In the construction project of Qihe-Jinan Section of Beijing-Taibei Expressway, we used pile heads to break down waste materials and construction solid wastes, so as to construct access roads and backfill and compact the surface, realizing the reuse of about 110,000 m<sup>3</sup> of waste materials.

In the construction of the steel box girder of the main bridge of the Yellow River Bridge, we adopt the block unit on-site assembly technology to replace the conventional plate unit on-site processing technology, reducing the land acquisition area of 45 mu in the Yellow River beach, and effectively protecting the ecological environment of the Yellow River Basin.



京台高速齐济段黄河特大桥

### Case 2

#### Promotion of Electric Locomotives in Rail Transportation

In 2023, Rail Transportation Company, a subsidiary, completed the construction of the national railway interface and installation and commissioning of supporting equipment and facilities of Dalailong Railway, promoted the smooth direct traffic of the first electric locomotive of Delong-Longkou-Yantai section, and put 6 electric locomotives into normal operation, which can reduce carbon emissions by 6,000 tons per year compared with the traditional rail locomotives.



In terms of green maintenance, the Company issued 5 standardization manuals including the Technical Guide for Expressway Greening Management and Protection, comprehensively promoted new technologies, new processes, new materials and intelligent maintenance equipment for green pavement maintenance, and created a maintenance quality project of "safety, comfort, green harmony and public recognition".

Among the maintenance technologies, the Company treats pavement diseases by super-surface treatment and thermal regeneration, effectively reduces carbon emissions in the whole life cycle of roads, and promotes and applies new green and low-carbon technologies such as SMA-8 high-toughness ultra-thin overlay and function-recovery ultra-thin seal layer.

Function-recovery ultra-thin sealing layer technology normal temperature construction:

No dust pollution, less material consumption, greatly reducing aggregate waste.



SMA-8 High-toughness ultra-thin overlay:

While ensuring the anti-sliding performance of the surface layer, it prevents the water damage of the lower asphalt concrete caused by the underwater seepage of the road surface, and delays the disease development of reflection cracks.



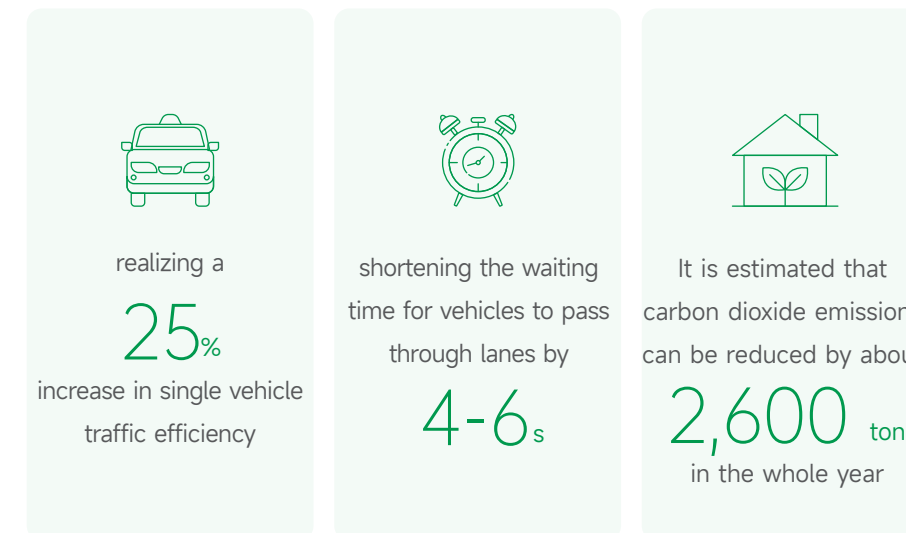
In 2023, the Company achieved 100% of excellent maintenance projects, 100% of recycling rate of asphalt pavement materials for special maintenance projects, 100% of recycling rate of waste pavement materials for expressways, and more than 95% of recycling rate.

## Digital Emission Reduction

Digital transformation is one of the effective ways to reduce carbon emission. Shandong Hi-speed issued *the Implementation Plan for Digital Upgrading* for digital construction, which guided the digital upgrading of monitoring, patrol, ETC and other businesses in expressway operation. During operation, we took a number of digital transformation measures.

- Improve the intelligent infrastructure of "AI+ fixed video" and "AI+ on-board video" to reduce or replace manual and electronic road inspections;
- Improve the construction of intelligent terminal equipment such as intelligent card issuance and intelligent charging;
- Establish a digital office system covering the daily management of toll stations;
- Continuously improve the proportion of ETC users and ETC lane transaction success rate of the Company's expressway toll collection;
- Improve the construction of digital trading platforms such as "Go First, Pay Later" and electronic invoices, and improve the utilization rate of electronic payment;
- Establish and improve the Company's energy measurement system.

Among them, the promotion of toll electronic invoices, i.e. "paper-to-electronic" work, was fully upgraded in 18 expressway operation units in the province on April 19, 2023, realizing a 25% increase in single vehicle traffic efficiency, shortening the waiting time for vehicles to pass through lanes by 4-6s, and greatly reducing paper invoice printing amount and printing consumables. It is estimated that carbon dioxide emissions can be reduced by about 2,600 tons in the whole year, greatly reducing costs and carbon emissions. It does good to the construction of low-carbon highways.



Electronic Upgrading of Toll Invoices



## Exploring Clean Energy

In terms of the utilization of clean energy, Shandong Hi-speed focuses on the direction of photovoltaic energy, and strives to develop a new energy model of "highway + photovoltaic".

### Case Qilu Expressway Landed the Distributed Photovoltaic Project

In November 2023, Qilu Expressway made full use of idle space resources such as ramp circle, slope and toll station of expressway in some highway areas of Liaocheng, arranged distributed photovoltaic projects along Dezhou-Shangrao Expressway and Shenxian-Nanle Expressway, successfully connected to the grid and put into operation, with a total installed capacity of 8.2MW.



In order to reduce the carbon emission of toll station operation, the Company plans to build the first "zero-carbon toll station" in China at Gushan Toll Station (West Side) of G3 Beijing-Taibei Expressway and Zhangqiu West Toll Station of G20 Qingdao-Yinchuan Expressway. It plans to fully deploy new energy solutions. From power generation to electricity consumption to energy storage, photovoltaic green electricity will be used throughout the power cycle to realize "self-generated electricity for self-use, surplus electricity to grid". Combined with the technology of digital emission reduction, the first comprehensive demonstration toll station of "smart cloud control + zero carbon" in China is built by using digital twin and cloud control platform technology.

- New energy solutions:
- Photovoltaic power generation system
  - Energy storage system
  - Integrated energy management systems
  - New energy vehicle charging station project, etc.



Based on the analysis of the current electricity consumption of Gushan Toll Station (West Side) and Zhangqiu West Toll Station respectively, the Company deployed additional photovoltaic equipment, energy storage equipment and charging piles required for photovoltaic transformation at the two toll stations. For the transformation of photovoltaic equipment, the Company entrusted a third party to prepare the Design Scheme for Gushan Toll Station Distributed Photovoltaic Power Generation Project of G3 Beijing-Taibei Expressway according to the actual geographical location and Gushan Toll Station's building conditions, and planned to install photovoltaic shed tiles in the toll station area. It is estimated that in the 25-year economic life period, the annual emission of greenhouse gas CO2 can be reduced by about 193.52t. The specific construction plan of Zhangqiu West Toll Station is still in progress.

◀ Photovoltaic Project of Gushan Toll Station (West Side)



# About Shandong Hi-speed

## Company Profile

Shandong Hi-speed Company Limited ("Shandong Hi-speed", abbreviated as "SDHS", stock code 600350) was established in 1999 and controlled by Shandong Hi-speed Group Co., Ltd.; it was listed on Shanghai Stock Exchange in March 2002, headquartered at No. 5006, Mid Aoti Road, Ji'nan City, Shandong Province. The Company is mainly engaged in investment and operation of transportation infrastructure, as well as equity investment in upstream and downstream related industries of expressway industry chain. In 2023, the Company's operating revenue was RMB 26.546 billion, with 10,805 employees and a total mileage of 2,864 kilometers of roads and bridges under operation and management. It is a first-class road and bridge operation service provider in China.

The Company's revenue was RMB

**265.46**  
billion

employees

**10,805**

Total mileage of road and bridge under operation and management

**2,864**  
kilometers

## Business Areas

The main business scope of Shandong Hi-speed is divided into road and bridge operation segment and Capital Operation Segment.



Company Functional Structure Distribution



Road and bridge operation segment is divided into general traffic and engineering construction.

### Road and Bridge Operation - General Traffic

Toll roads and bridges are the core business of the Company.

In 2023, the Company operated and managed a total road and bridge mileage of 2,864 km, of which 1,555 km was owned by the Company and 1,309 km was entrusted by Shandong Hi-speed Group. The holding company Shandong High-speed Rail Transportation Group Co., Ltd. operated 390 kilometers of local railways and managed 147 kilometers of special railway lines and connecting lines.

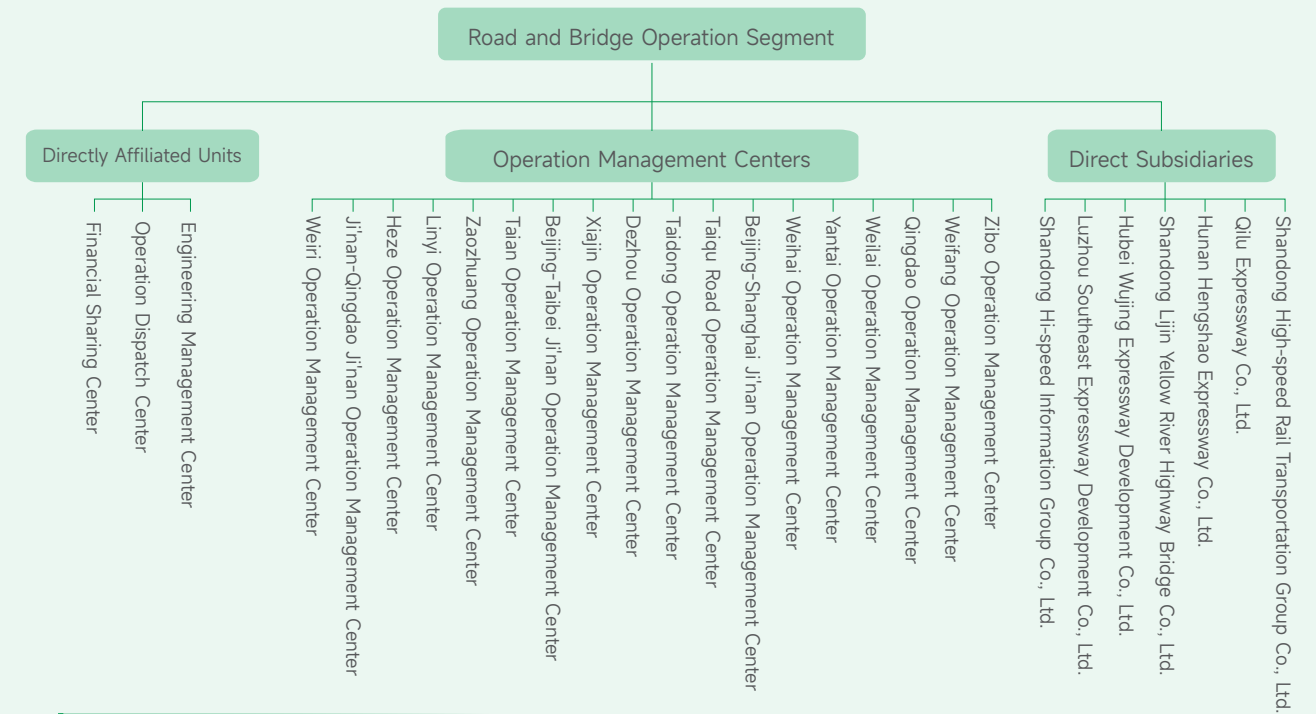
#### Owned Road and Bridge Assets

Ji'nan-Qingdao Expressway (Shandong Section of Qingdao-Yinchuan Expressway)	Dezhou-Qihe Section of Beijing-Taibe Expressway
Qihe-Ji'nan Section of Beijing-Taibe Expressway	Ji'nan-Qingdao Connecting Line of Beijing-Taibe Expressway
Ji'nan-Tai'an Section of Beijing-Taibe Expressway	Beijing-Shanghai Highway (Auxiliary Line) Ji'nan-Laiwu Expressway
Weifang-Laiyang Expressway	Weihai-Rushan Expressway
G104 Taian-Qufu Class I Highway	Henan Xuchang-Yuzhou Expressway
Jiyuan-Jincheng (Provincial Boundary) Section of Erenhot-Guangzhou Expressway	Hunan Hengyang-Shaoyang Expressway
Hubei Wuhan-Jingmen Expressway	Sichuan Chengdu-Chongqing Ring Road Hejiang (Chongqing-Sichuan Boundary) to Naxi Section Expressway
Yinjialin-Wangguantun Section of Ji'nan-Guangzhou Expressway	Liaocheng-Fanxian County (Shandong-Henan Boundary) Section of Dezhou-Shangrao Expressway
Lintun Village-Provincial Boundary Section of Shenxian-Nanle (Shandong-Henan Boundary) Expressway	Ji'nan Second Yellow River Highway Bridge
Lijin Yellow River Highway Bridge	

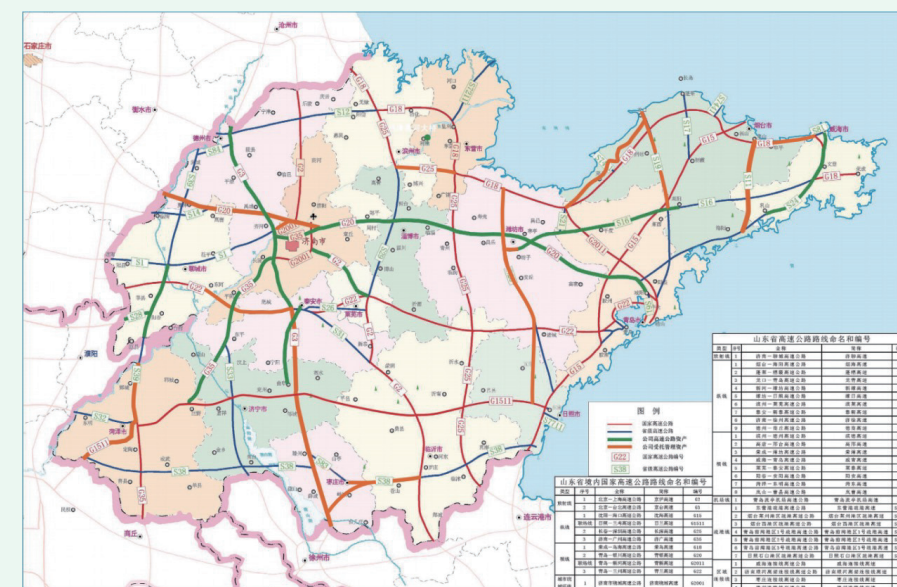
### Road and Bridge Operation-Engineering Construction

Undertaking highway reconstruction and expansion projects is a part of our highway business. The projects undertaken by the Company mainly include: Reconstruction and Expansion Project of Ji'nan-Qingdao Expressway, Reconstruction and Expansion Project of Dezhou-Qihe Section of Beijing-Taibe Expressway, Reconstruction and Expansion Project of Ji'nan-Tai'an Section of Beijing-Taibe Expressway, Reconstruction and Expansion Project of Qihe-Jinan Section of Beijing-Taibe Expressway, Reconstruction and Expansion Project of Ji'nan-Heze Section of Ji'nan-Guangzhou Expressway.

### Road and Bridge Operation Segment Management Chart



### Company Managed Road Network Map (within Shandong Province)



■ Company Owned Highway Assets  
■ Company Entrusted Assets

Case

Regional Collaborative Exchange Meeting of Units Stationed in Henan to Strengthen the Regional Road Network in Henan.

In February 2023, Henan Development Company, a wholly-owned subsidiary of Shandong Hi-speed, held a regional collaborative exchange meeting of units stationed in Henan, attended by 7 brother units stationed in Henan including the Road & Bridge Group, and exchanged views on collaborative sharing of internal resources.



During the meeting, all units conducted in-depth discussions around the regional collaborative development model, and reached important consensus on deepening cooperation and exchange of the Company's business segments, accelerating the construction of the Company's regional road network in Henan, jointly building the "One Network" of Shandong Hi-speed in Henan region, and promoting the long-term interfacing of all units, which played a role in accelerating the construction of the Company's business network.

The Capital Operation Segment is a new path for long-term sustainable development explored by the Company outside its main business of expressway.

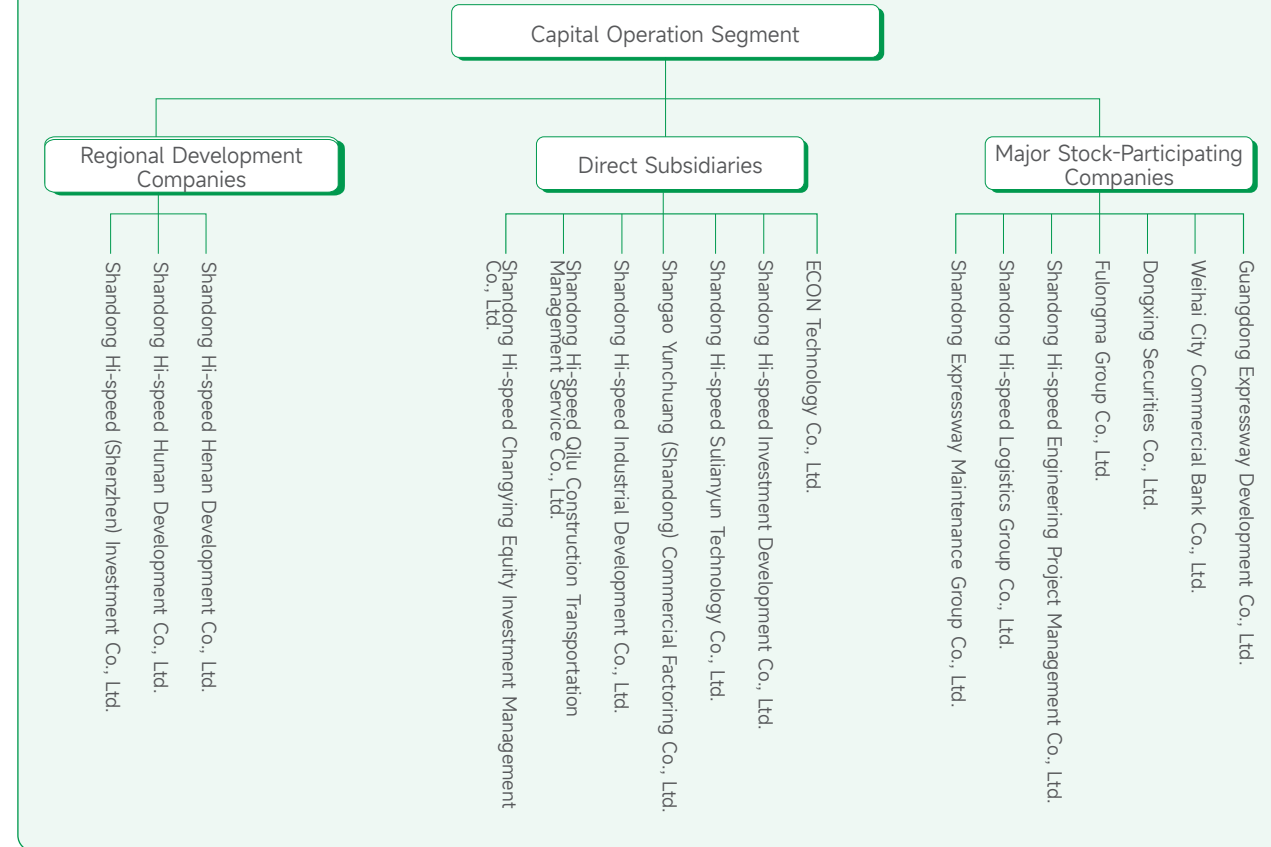
Capital Operation

As the second largest business segment of the Company, the Capital Operation Segment has developed well. In recent years, the profit contribution of the Capital Operation Segment to the profit of the Company has gradually appeared.

In terms of equity investment, firstly, the Company actively expands the scale of expressway-based main business assets through horizontal merger and acquisition of expressway-based main business projects and establishes its own industry position. In 2021, the Company completed the acquisition of 38.93% equity of Qilu Expressway Co., Ltd.; secondly, the Company takes the environmental protection industry and related financial investment in the field as the new profit growth point. In 2022, Yunchuang Commercial Factoring Company was established to develop the supply chain industry; thirdly, it has participated by shareholding in four listed companies: Weihai Commercial Bank, Dongxing Securities, Longma Environmental Sanitation and Guangdong Expressway A, set up Changying Fund Management Company, and built a diversified investment and financing platform integrating securities, banks, funds and factoring companies.

In terms of value investment, the Company actively seeks for "short-term and quick-return" and risk-controllable financial investment projects by leveraging the cash flow advantages of the expressway industry, and achieves the investment goal of "making up for the long-term return with the short-term return" by obtaining short-term financial investment returns, so as to make up for the shortcoming of long investment payback period in the expressway industry.

Capital Operation Segment Management Chart



Case

Sub-Forum of "New Development of Capital Market under the New Situation" to Explore Capital Operation

In March 2023, the sub-forum of "New Development of Capital Market under the New Situation" of China Transportation Industry Economic Annual Conference and 2023 Industrial Innovation and Development Forum was held in Ji'nan, attended by leaders and experts from all walks of life such as the Company and the Vice President of China Association of Listed Companies.

On the forum, the Company leaders showed a prospect on how Shandong Hi-speed would open up a new situation for the Company's development under the background of capital market reform. As a state-owned listed company, the Company will carry the mission and bear the responsibility, strengthen the advantages of the main industry, deeply explore the capital operation, industrial transformation and upgrading, reform and innovation drive, and create a new situation of "innovation, openness, synergism and low carbon" development with all-round power.







## Development Course

In 1999, Shandong Hi-speed Group Co., Ltd. and China Merchants Expressway Network & Technology Holdings Co., Ltd. jointly established Shandong Hi-speed Company Limited. For more than 20 years, Shandong Hi-speed has continuously explored new development paths, devoted itself to innovation, managed the continuous growth of road and bridge mileages, and gradually matured investment mode in capital operation, continuously striding towards a more modern future.

### Revitalizing Shandong, Wonderful Start (1989-1999)

1989 The construction of Jinan-Qingdao Expressway, the first expressway in Shandong Province, began.

### Forging Ahead Towards Blue Chip (1999-2009)

1999 Shandong Hi-speed Company Limited was established and controlled by Shandong Hi-speed Group Co., Ltd.

2002 Shandong Hi-speed was listed on the Shanghai Stock Exchange and issued 505 million A-Shares for the first time.

2008 Road and Bridge Operation  
Acquired Deqi North Section of Beijing-Fuzhou Expressway, 100% equity of Shandong Hi-speed Group Xuyu Highway Co., Ltd. and 49% equity of Shandong Hi-speed Engineering Consulting Co., Ltd.

### Pursuit of Excellence, Far-reaching and Wide Integration (2009-2016)

2010 Initiate major asset reorganization projects.

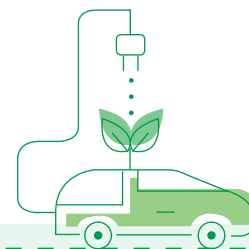
2011 Road and Bridge Operation  
Acquired 7.5 billion high-quality road and bridge assets under the Group; entrusted to manage 500 km of road assets, with a total mileage of 1,452 km of roads under management.

2012 Road and Bridge Operation  
Acquired 70% equity of Hunan Hengshao Expressway; entrusted to manage assets such as S38 Zaolin Expressway and S11 Yanhai Expressway, with a total mileage of 1,628 km of roads under management.

2013 Road and bridge operation  
Entrusted to manage Beilai Highway, Lijin Yellow River Bridge, etc., with a total mileage of 1,875 km of roads under management.

2014 Capital Operation  
Subscribed 317 million additional shares of Weihai Commercial Bank; successfully issued 2 billion corporate bonds.

2015 Road and Bridge Operation  
Acquired 65% equity of Lijin Bridge Company; constructed 233 ETC lanes and automatic card issuing lanes to realize an unattended mode at toll station entrance.



2023 Road and Bridge Operation  
Fully completed the toll invoice "paper-to-electronic" work; intelligent scientific and technological achievements were recognized as international advanced and domestic leading.  
Capital Operation  
Acquired 65% equity of Shandong Hi-Speed Information Group Co., Ltd.

2022 Road and Bridge Operation  
The reconstruction and expansion project of Ji'nan-Tai'an Section of Beijing-Taibei Expressway was completed, and the reconstruction and expansion project of Ji'nan-Heze Section of Ji'nan-Guangzhou Expressway was commenced.  
Capital Operation  
Yantai Hesheng Real Estate Development Co., Ltd. completed equity transfer, symbolizing the successful divesting of real estate business.

2021 Road and Bridge Operation  
The reconstruction and expansion project of Dezhou-Qihe Section of Beijing-Taibei Expressway was completed 18 months ahead of schedule.  
Capital Operation  
Acquired 38.93% controlling stake in Qilu Expressway, realizing the first "A-Shares Company Controlling H-Shares Company" in the industry.

2020 Road and Bridge Operation  
Completed the Reconstruction and Expansion Project of Beijing-Taibei Expressway ahead of schedule; the Reconstruction and Expansion Project of Ji'nan-Qingdao Expressway won many awards such as National Quality Award.  
Capital Operation  
Acquired 51 % equity of Shandong High-speed Rail Transportation Group Co., Ltd. and 9.68% equity of Guangdong Expressway.

2019 Road and Bridge Operation  
The newly expanded two-way eight-lane Jinan-Qingdao Expressway was completed 15 months ahead of schedule; acquired 80% equity of Sichuan Luyu Expressway Company.

2018 Road and Bridge Operation  
Acquired 60% equity of Hubei Wujing Company and 90% equity of Jijin Company, increased operation mileage by 205 km, achieving a total operation mileage of 2,300 km; cancelled the toll station at the provincial boundary between Shandong and Jiangsu, realized non-stop toll collection; officially transferred Ji'nan Yellow River Bridge, Pingyin Yellow River Bridge and Binzhou Yellow River Bridge to the government.

2017 Road and Bridge Operation  
The Headquarters set up an operation division to directly manage 127 grass-roots units; realized the "full payment" lane ahead of schedule.  
Capital Operation  
Invested RMB 400 million to subscribe for additional shares of Longma Environmental Sanitation.

2016 Road and Bridge Operation  
The construction of Jinan-Qingdao Expressway reconstruction and expansion project began.  
Capital Operation  
Promoted the establishment of the first RMB 1 billion Changing Fund as the Company's capital operation platform; bid for 120 million additional shares of Dongxing Securities.

### Working Hard and Never Stop (2016-Present)

## Brand Building

On December 18, 2023, the service brand launch conference of "Shangao·Xing" was held in Ji'nan. Shandong Hi-speed looks back on the past and looks forward to the future, based on past experience and combined with the development blueprint, comprehensively summarized the quality and pursuit of Shandong Hi-speed people and established the service brand "Shangao·Xing".



The service brand "Shangao · Xing" reflects the Company's mission of "creating a road of happiness" with the responsibility of "shan"; practicing the value concept of "far-reaching expressway, smooth and diligent travel" with the ambition of "gao"; and demonstrating the spiritual characteristics of "courage to take responsibility and dare to be the first" with the attitude of "xing". In the future, the Company will continuously meet the public's demand for beautiful travel and green travel, and unswervingly build and share the way of travel, walking with the masses, the world and the beautiful things.



### Act with Original Intention, with Beauty in Heart

"Shangao · Xing" is a mission. We continue to work hard in the field of expressway as our main business. The year-on-year growth in mileage under management, the technological leadership of intelligent high-speed, the rapid improvement in access efficiency, and the continuous exploration of low-carbon highways fully showing our persistence in our initial intention. We contribute to the beautiful travel of the public, and lead the development of the transportation industry.

### Act with Quality, Developing Efficiently

"Shangao · Xing" is a belief. Based on expressway operation as our main business, we explore the long-term sustainable development path of capital operation, expand the scale of main business assets, assist transformation and upgrading, continuously extend the industrial chain, and create a high-quality development pattern in the new era with a multi-field and multi-format development network.

### Act with Elegance, Taking the Lead with Responsibility

"Shangao · Xing" is a spirit. We bear the social responsibility as a state-owned enterprise, explore the "Shandong Path" of energy integration and green development, construct green projects, develop digital carbon reduction technologies, promote the use of clean energy such as photovoltaic power, and make efforts at multiple points to thoroughly implement the concept of low-carbon development.

### Act with Pursuit, Striving for Excellence

"Shangao · Xing" is a pursuit. We have always adhered to the leadership of the Party, never forgotten our original mission, worked hard, forged ahead, started a new journey of high-quality development, and strived to be the "pioneer" in the practice of Chinese-style modernization in Shandong and the construction of a strong socialist province in the new era.

## Corporate Culture

During more than 20 years' operation, Shandong Hi-speed has gradually formed its corporate mission, vision and core values in line with the Company's development laws, and formed a sub-culture of Shandong Hi-speed with unique Shandong cultural characteristics and the company features. Shandong Hi-speed is not only symbolizing the Company's name, but also the Company's pursuit. Based on it, the Company has developed a variety of corporate cultures such as its vision and mission.

<b>Corporate Mission</b>	<b>High Talent</b>
Making the enterprise stronger with well-off staff and giving back to society	Management Concept
	Talent Concept
<b>Corporate Vision</b>	Integrity Concept
Determined to be a century-old enterprise and build the first brand in China's expressway industry	<b>High Performance</b>
	Innovation Concept
<b>Core Values</b>	Cooperation Concept
Far-reaching expressway, smooth and diligent travel	Team Concept
	Learning Concept
<b>Corporate Spirit</b>	<b>High Quality</b>
· Accountable	Quality Concept
· Aggressive	Safety Concept
· Advanced	Service Concept
<b>Shan / Mountain</b>	
<b>Gao / High</b>	
<b>Shandong Hi-speed Culture</b>	Firm and steady as a mountain, tough and responsible as a heaven. High starting point in new stage, high pursuit in new period, high quality in new development.

## Honors and Awards

Since its establishment, Shandong Hi-speed has won continuous reputation in many aspects. In 2023, the Company won many awards in corporate governance, social responsibility, engineering construction, scientific and technological innovation, etc.

### Corporate Governance

Selected into the "2023 Top 100 Listed Companies in China"



New Fortune "Best Public Company"



2022 P5W Investor Relations Gold Award - "Best New Media Operation Award"

公司治理特别贡献奖	
证券代码	证券简称
600350.SH	山东高速

The 18th "Gold Round Table Award" for the Board of Directors of Listed Companies in China - Special Contribution Award for Corporate Governance

### Social Responsibility



2022 Transportation Corporate Social Responsibility (ESG) Report Rating -Excellent Report



2023 ESG Top 100 Award for Listed Companies in China



2022 Shandong Enterprise Social Responsibility List - Most Influential Enterprise

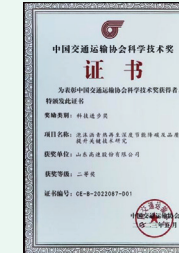
### Engineering Construction

The Reconstruction and Expansion Project of Ji'an-Qingdao Expressway was selected into "Zhan Tianyou Award of the 12th First Batch of China Civil Engineering" and "Luban Award of China Construction Engineering (National High Quality Project) 2022-2023"

The Reconstruction and Expansion Project of Dezhou (Shandong-Hebei Boundary)- Qihe Section of Beijing-Taibei Expressway won the "2022-2023 (Second Batch) Highway Traffic Quality Engineering Award"

### Scientific and Technological Innovation

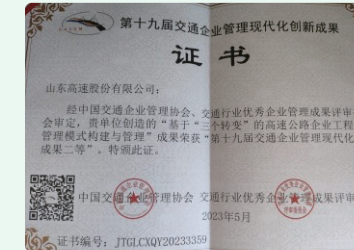
Two second prizes and one third prize of "2023 Science and Technology Award of China Highway and Transportation Society"



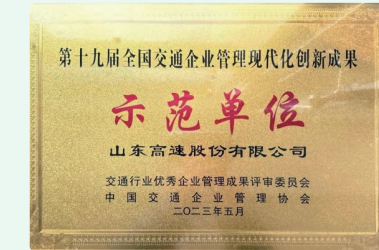
Science and Technology Award of China Communications and Transportation of Association

### Management Innovation

The National Second Prize for "Customer-centric Digital Operation Service Management of Expressway Enterprises"



The second prize of the 19th "Transportation Enterprise Management Modernization Innovation Achievements".



National Transportation Industry Management Innovation Demonstration Unit

### Employee Management



Advanced Unit of Staff and Vocational Education in Shandong Province



Team First Prize, Individual First Prize and Excellent Organization Award in Shandong Expressway Obstacle-clearing & Rescue Skills Competition



# ESG Management

**Becoming an ESG benchmark enterprise in the industry under the leading by sustainable development.**

**- ESG Strategic Goal of Shandong Hi-speed**

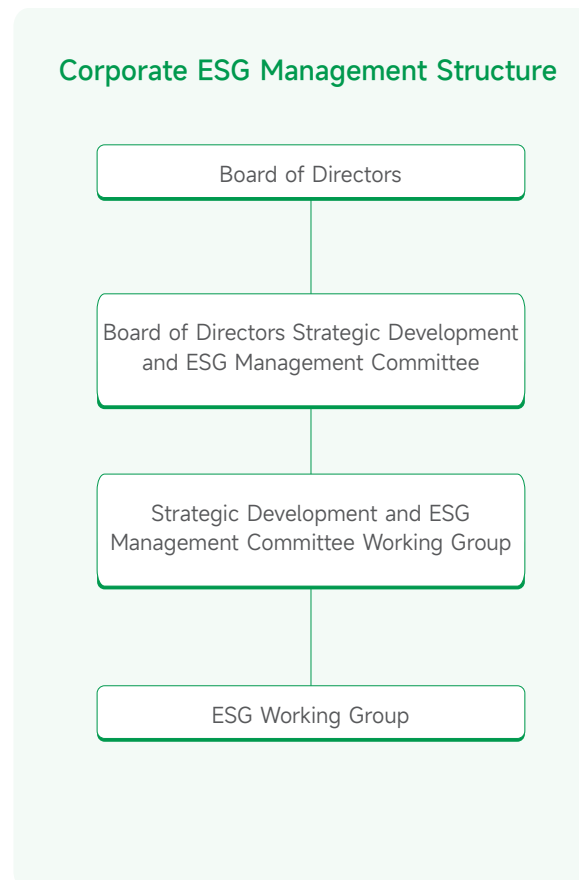
Shandong Hi-speed always puts green, low-carbon and high-quality development in an important position, strives to integrate ESG into enterprise strategy, governance, reform and development and daily operation. We regard ESG as an important content to improve the level of enterprise governance according to law, improve the quality and benefit of development and improve the competitiveness of enterprises, constantly improves the overall responsibility performance ability and awareness of enterprises, and promotes sustainable development.

## ESG Governance System

In order to implement the ESG management concept and integrate it into the operation and management of the Company, Shandong Hi-speed adheres to the ESG goal of "becoming a leader in social responsibility in the industry", establishes the "Strategic Development and ESG Management Committee" under the Board of Directors, and prepares the *Environmental, Social and Governance (ESG) Management Measures and the Working Rules of the Strategic Development and ESG Management Committee of the Board of Directors*, integrating ESG management with the decision-making, operation and development of the Company, and continuously creating comprehensive value.



### Corporate ESG Management Structure

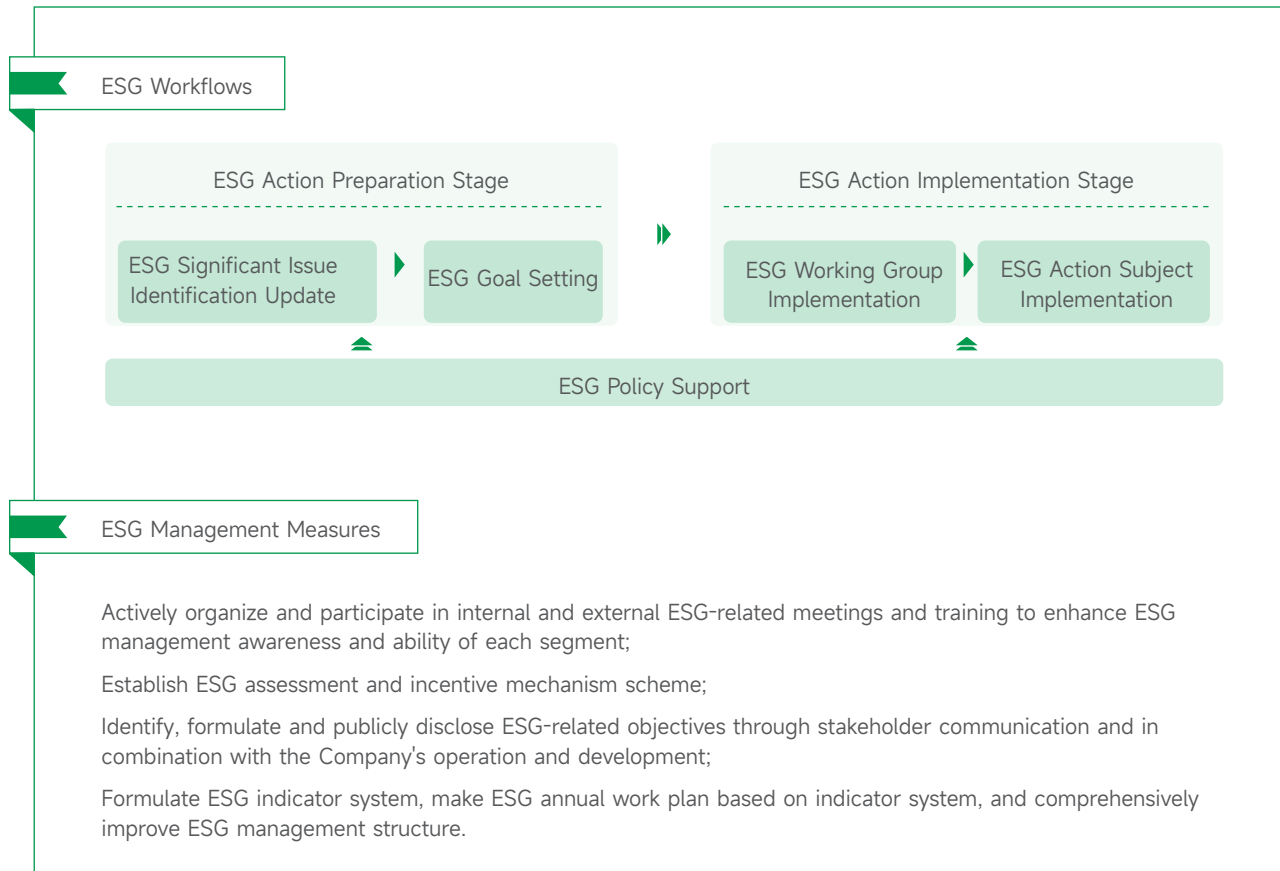


ESG Management Hierarchy	Main Functions
Board of Directors	<ul style="list-style-type: none"> <li>Formulate ESG policies, strategies, systems, indicator systems, etc.</li> <li>Review ESG-related important matters of the Company and determine major ESG risk management plans</li> <li>Review the Company's annual ESG report and confirm ESG work completion</li> <li>Participate in ESG-related training and communication activities</li> </ul>
Board of Directors Strategic Development and ESG Management Committee	<ul style="list-style-type: none"> <li>Study and advise on ESG plans and policies</li> <li>Review ESG reports of the Company and submit them to the Board of Directors for consideration</li> <li>Guide and supervise ESG working group to carry out ESG-related risk study</li> </ul>
Strategic Development and ESG Management Committee Working Group	<ul style="list-style-type: none"> <li>Overall ESG internal work management, including formulating ESG index system, annual work plan, ESG objectives, assessment and incentive scheme, risk management, etc.</li> <li>Overall ESG external work management, including annual ESG report disclosure, related rating questionnaire processing, external training and meetings, etc.</li> </ul>
ESG Working Group	<ul style="list-style-type: none"> <li>Break down ESG objectives and annual work plans into annual ESG work plans of corresponding departments and subsidiaries, carry out ESG special projects, and sort out and report the implementation of ESG objectives</li> <li>Annual ESG information collection, providing basic materials, preparing ESG reports, responding to ESG capital market-related research and rating questionnaires</li> <li>Organize and participate in internal and external ESG related meetings and training.</li> </ul>



## ESG Management Practices

In order to promote the effective implementation of the Company's internal ESG management strategy, Shandong Hi-speed has formulated the *ESG Work Plan*, defined the ESG action process, and actively taken ESG management measures in various dimensions.



In order to effectively prevent and control various potential risks that may hinder the sustainable development of the Company, as led by the Strategic Development and ESG Management Committee of the Board of Directors, we has comprehensively carried out research, analysis, identification, evaluation and response on ESG-related risk matters of the Company, established ESG risk identification and management system, regularly identified ESG-related risks and judged the degree of ESG risks, formulated ESG risk management and control action plans, integrated ESG risk management and control requirements into overall risk management, and ensured the stable development of various businesses of the Company.



On March 9, 2023, Shandong Hi-speed was awarded the honorary title of "Most Influential Enterprise" in the "Evolution 2023" Qilu Evening News - Qilu Yidian Annual Ceremony - Responsibility Shandong · 2022 Shandong Enterprise Social Responsibility List, which injected impetus into the Company's continuous efforts in ESG management.



## Sustainable Development Goals

Shandong Hi-speed has actively responded to the "Carbon Peaking and Carbon Neutrality" development concept, built the ESG brand image of the Company, improved the ESG strategy system. We closely integrated the Company's development with the United Nations 2030 Sustainable Development Goals (SDGs), established the overall ESG management concept, formed the overall ESG governance framework, and formulated ESG development goals for each development level of the Company, so as to comprehensively assisted the ESG development.

Management Dimensions	Management Concept	SDGs
Corporate Governance (G)	Standardized "Three Meetings" Cooperation, Integrity & Business Ethics, Reasonable Information Disclosure, Risk Management, Clean Party Building	16 PEACE, JUSTICE AND STRONG INSTITUTIONS; 17 PARTNERSHIPS FOR THE GOALS
Environmental Protection (E)	Standardize Environmental Management, Respond to Carbon Peaking and Carbon Neutrality Planning, Strengthen Energy Management, Strictly Control Emissions	6 CLEAN WATER AND SANITATION; 7 AFFORDABLE AND CLEAN ENERGY; 13 CLIMATE ACTION
Industrial Value (S)	Enhance Work Safety, Adhere to Innovation Drive, Protect Customer Rights and Interests, Strive for Quality Improvement	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
Employee Benefits (S)	Promote Employee Development, Create Shared Value with Employees	3 GOOD HEALTH AND WELL-BEING; 5 GENDER EQUALITY; 8 DECENT WORK AND ECONOMIC GROWTH; 10 REDUCED INEQUALITIES
Social Responsibility (S)	Emphasize on Creating Social Value, Actively Assume Social Responsibility, Give Back to Society	1 NO POVERTY; 11 SUSTAINABLE CITIES AND COMMUNITIES

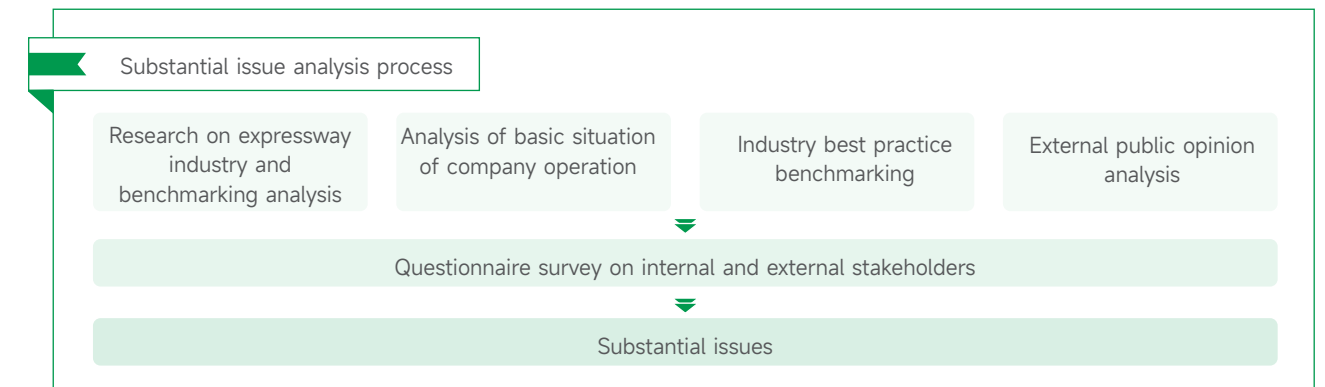
## Communication with Stakeholders

The Company adheres to the concept of environmental protection, undertakes its due social responsibility, continuously improves the comprehensive utilization efficiency of resources, and promotes the sustainable development of enterprises and the environment. We cares for the rights and interests of stakeholders such as investors, customers, employees and partners, and understands and responds to ESG issues of major concern through various communication channels.

Stakeholders	Expectations and Demands	Response
Government	<ul style="list-style-type: none"> <li>Compliance Management</li> <li>Pay Taxes according to Law</li> <li>Environmental Protection</li> <li>Promote Local Development</li> </ul>	<ul style="list-style-type: none"> <li>Abide by Laws and Regulations</li> <li>Pay Taxes on our own Initiative</li> <li>Green Management</li> <li>Localized Employment</li> </ul>
Customers	<ul style="list-style-type: none"> <li>Safe Travel</li> <li>Protect the Rights and Interests of Customers</li> <li>Improve Customer Satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>Implement Work Safety</li> <li>Adhere to Integrity Management</li> <li>User Feedback Management</li> </ul>
Employees	<ul style="list-style-type: none"> <li>Build Career Development paths</li> <li>High Salary and Benefits</li> <li>Safeguard Occupational Health</li> <li>Protect the Rights and Interests of Employees</li> </ul>	<ul style="list-style-type: none"> <li>Improve the Internal Management System</li> <li>Employee Work and Life Security</li> <li>Strengthen Occupational Health</li> <li>Employee Communication Feedback Mechanism</li> </ul>
Community	<ul style="list-style-type: none"> <li>Improve the Community Environment</li> <li>Organize Volunteer Activities</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen Community Interaction</li> <li>Organize Public Welfare Activities</li> </ul>
Environment	<ul style="list-style-type: none"> <li>Energy Conservation and Emission Reduction</li> <li>Protect the Ecology</li> </ul>	<ul style="list-style-type: none"> <li>Energy Conservation</li> <li>Biodiversity Conservation</li> </ul>
Suppliers	<ul style="list-style-type: none"> <li>Supply Chain Management</li> <li>Mutual Benefit and Win-Win</li> <li>Common Development</li> </ul>	<ul style="list-style-type: none"> <li>Create a Responsible Supply Chain</li> <li>Stick to Business Ethics</li> <li>Cooperation and Exchanges</li> </ul>
Investors	<ul style="list-style-type: none"> <li>Improve Corporate Governance</li> <li>Timely Information Disclosure</li> <li>Company's Sustained Profitability</li> </ul>	<ul style="list-style-type: none"> <li>Improve Internal Control Level</li> <li>Regular Information Disclosure</li> <li>Safeguard Shareholders' Interests</li> </ul>

## Analysis of Substantial Issues

The Company always has an eye on ESG rating indicators in the capital market, takes into account national policies, industry trends and corporate strategies, analyzes its own sustainable development challenges, establishes a substantial issue identification mechanism, and determines annual important issues through analysis and research on internal and external stakeholders.



We have conducted questionnaire surveys on stakeholders, identified and assessed the importance of ESG substantial issues, and collected more than 100 valid questionnaires covering investors, employees, communities and other stakeholders.

After analyzing and studying the questionnaire results, we sorted out the ESG important issues, and compared with the issues concerned by the same industry and the Company, we formed a substantial issue matrix from two dimensions, i.e., "importance to the Company" and "importance to stakeholders" according to the importance of the issues.





# Governance First

## Depending on Compliance Operation to Promote Development

Scientific, regulated  
people-oriented, and efficient.

—Management Tenet of Shandong Hi-speed

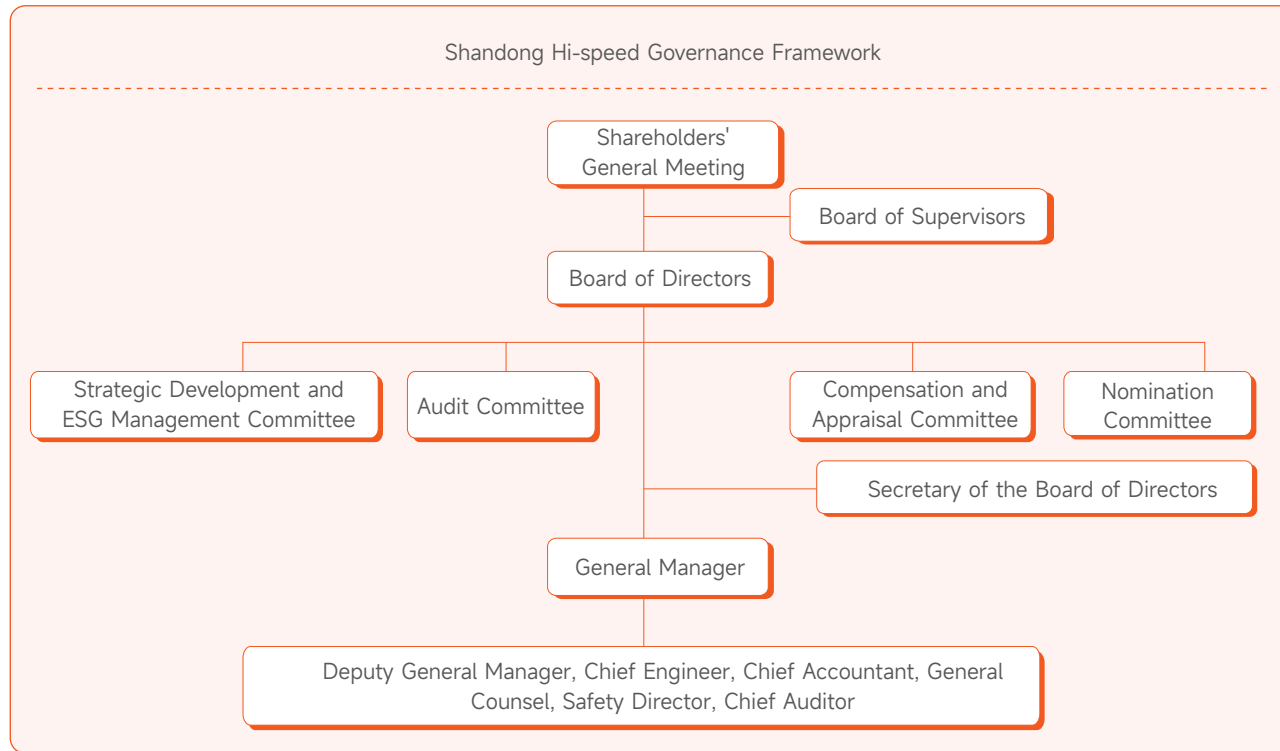




## Corporate Governance

### Governance Framework

Shandong Hi-speed strictly abides by the requirements of relevant laws and regulations such as *the Company Law of the People's Republic of China*, *the Securities Law of the People's Republic of China* and *Governance Code for Listed Companies*, and has established a corporate governance framework composed of Shareholders' General Meeting, Board of Directors and its special committees, Board of Supervisors and the senior officers with complete responsibilities and mutual checks and balances.



In accordance with a series of internal management systems such as the *Articles of Association*, the *Rules of Procedure for the Shareholders' General Meeting*, the *Rules of Procedure for the Board of Directors*, the *Rules of Procedure for the Board of Supervisors* and working rules of various committees, the Company continuously strengthens its corporate governance level and improves its decision-making efficiency. In the corporate governance, in order to ensure efficient cooperation among all parties, the Company has actively satisfied the requirements of the "1+3+X" corporate governance operation system, i.e., taking Party building guidance as the targeted orientation, and making precise efforts through the three working mechanisms, i.e., "two-wheel driven decision-making", "counterpart liaison service", "two communications, two investigations and two reports", with a number of institutional measures as guarantee, thus realizing the efficient and standardized operation of the Shareholders' General Meeting, the Board of Directors, the Board of Supervisors and the managers of the Headquarters and units at all levels.



In the management of the Board of Directors, the Company attaches importance to diversification and adheres to the principle of "appropriate scale, multiple checks and balances, professional complementarity, and two-way access". The Board of Directors includes experts in transportation, finance and law, and provides professional opinions and suggestions for the Company's road and bridge operation, foreign investment and financial management, ensuring the scientific decision-making of the Board of Directors, doing a good job in "six aspects" and improving the scientific and efficient decision-making of the Board of Directors.

In addition, each special committee of the Company includes independent directors and external directors account for the majority, providing more scientific, professional and objective opinions and references for the decision-making of the Board of Directors, ensuring that the management and operation of the Company are more compliant and efficient.

#### The aspect of Admission

Reasonably determine the size of the Board of Directors and the proportion of full-time and part-time external directors; the Nomination and Appraisal Committee shall review the background of directors.

#### The aspect of System

Continuously improve the Articles of Association, the Rules of Procedure for the Board of Directors and other systems to provide institutional basis for directors to perform their duties.

#### The aspect of Research

Combine daily research and collective research to keep in-depth understanding of the operation and major projects of the Company and key subordinate units.

#### The aspect of Communication

Communicate well with directors, especially external directors, during daily work and before Board of Directors meetings, attach importance to suggestions of external directors, and bridge external directors with management and shareholders.

#### The aspect of Training

Organize regular group study and training for directors.

#### The aspect of Coordination

Set up the Secretariat of the Board of Directors, which is responsible for coordinating the work related to corporate governance. The General Manager shall make work reports to the Board of Directors every quarter, and the special committee shall set up corresponding departments and offices to provide assistance for the relevant work of the special committee.

### Key performance

During the reporting period, the Company held general meetings of shareholders for **4** times

Including **3** extraordinary general meetings

Consideration of **14** motions

A total of **9** board meetings

Adoption of **39** resolutions of the Board of Directors

A total of **6** supervisory board meetings

Adoption of **14** resolutions of the Supervisory Board

Total number of board members **9**

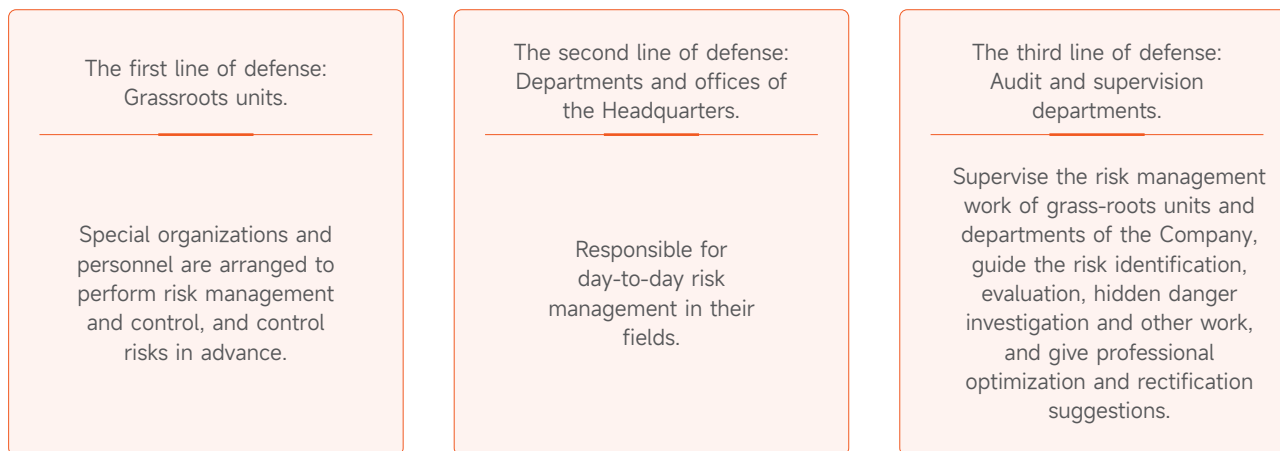
Including **4** independent directors



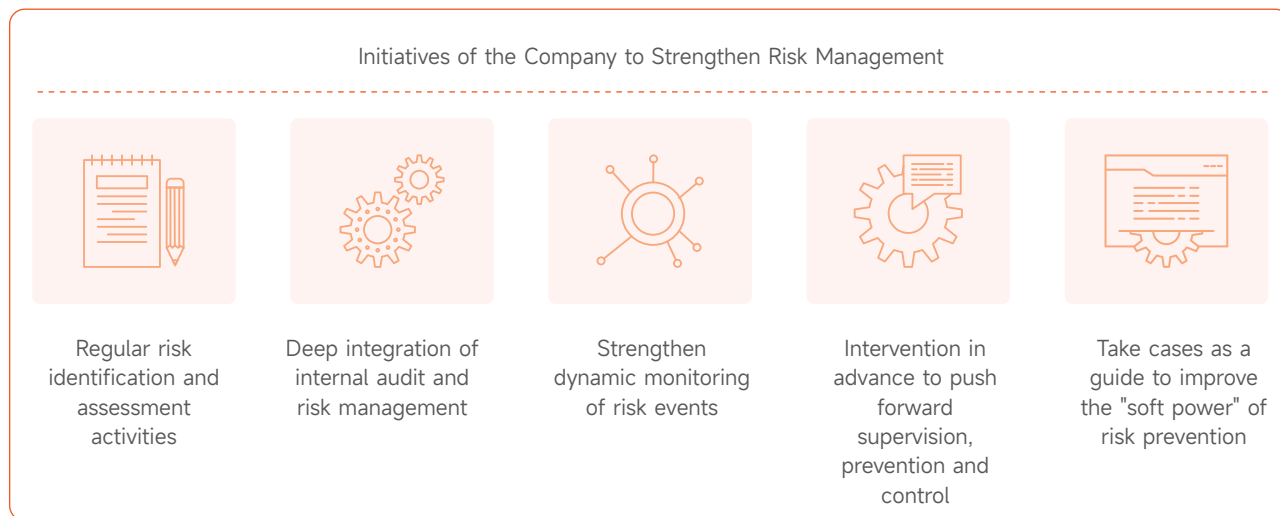
## Risk Management and Control

Shandong Hi-speed highly values the construction of the internal control management system of the Company. Every year, led by the Enterprise Management Department, it organizes top-down system revision, optimization and inspection activities, reshapes and improves various system processes in combination with the changes of national policies and the business conditions of the Company, and forms standardized and standardized work guidelines.

During the reporting period, we continued to optimize and improve the Risk Management Measures, clarified the division of responsibilities, risk identification and assessment standards, monitoring and response mechanisms. We established a risk management working mechanism of "unified leadership, division of responsibilities and full participation", in which the Company's legal representative acted as the first responsible person and the Board of Directors made risk management decisions. And we established "three lines of defense" for risk management composed of grass-roots units, departments and offices of the Headquarters, and audit and supervision departments.



In May 2023, the Company sorted out and formed a risk list consisting of 138 risk points around the five types of first-level risk framework, i.e., strategic risk, financial risk, market risk, operational risk and legal risk, which provided effective reference for subsequent risk identification and assessment.



### Case

## The Company's Risk Management Training

On July 24, 2023, the Company's internal audit personnel gave a lecture. The Company's Chief Auditor, all personnel of the Audit Department and relevant business backbones of each subsidiary attended the lecture. Through the sharing and explanation of typical risk cases in nine aspects, such as fund control, financial management and engineering management, business personnel in all lines were reminded to learn lessons from the cases, so as to enhance the risk prevention awareness of personnel in grass-roots units, and promote the continuous improvement of the management level of grass-roots units, thus empowering and increase efficiency for the Company's high-quality development.



Risk Management Training

### Key performance

During the reporting period,

the Company conducted **3** internal risk trainings with a total of **257** participants a total training duration of **748** hours an average training duration per capita of **2.91** hours

## Compliance Management

During the reporting period, the Company continued to improve the *Compliance Management Measures*, established a Compliance Committee responsible for the organization, leadership and coordination of compliance management. We established a professional legal talent pool, identified possible compliance risks in 23 areas such as corporate governance, information disclosure, anti-corruption and anti-commercial bribery, and avoided compliance risks by establishing a risk case base and sharing classic cases. During the Reporting Period, the Company organized two internal compliance trainings and organized various units to participate in the activities of "Civil Code Publicity Month" and "Legal Publicity Month", so as to strengthen the legal awareness and legal concept of all employees and enhance the sense of compliance management.

### Key performance

During the reporting period,

the Company conducted **34** legal training sessions of which **260** were legal personnel an average of **33.15** hours of training per capita with **2,025** participants with a total training duration of **67,132.50** hours

## Investor Relations Management

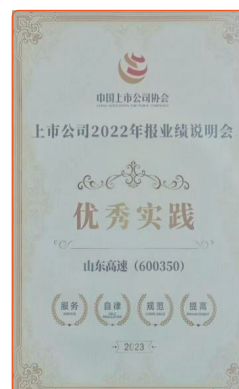
Shandong Hi-speed thinks highly of investor relations management. We formulates internal systems such as Connected Transactions Management System, Information Disclosure Affairs Management System and Information Disclosure System. Based on sufficient information disclosure, we unblocks investor communication channels, listens to investors' voices, maintains investor relations, and gradually forms the investor relations management concept of "excellent performance and sincere return".

In terms of shareholder returns, the Company actively responded to the policy guidance of China Securities Regulatory Commission and Shanghai Stock Exchange advocating cash dividends and dividend distribution continuity and stability. In 2020, the Company made an important decision to increase the dividend ratio in 2019 from 36.12% to 60.07%. In the same year, the Company issued the *Shareholders' Return Plan of Shandong Hi-speed Company Limited for the Next Five Years (2020-2024)*, promising that "in the case of meeting the cash dividend conditions, the profit distributed by the Company in cash form in the next five years (2020-2024) shall not be less than 60% of the net profit attributable to the owners of the Parent Company in the consolidated statement of that year". The stable dividend policy and high proportion of dividends reflect the determination of the Company to highly value shareholder returns and maintain high-quality development.

Year	Cash Divident per Share	Amount of Cash Dividends (tax included)	Percentage of Net Profit Attributable to Owners of Parent Company in the Consolidated Statement
2019	RMB0.38	RMB 1,828 million	60.07%
2020	RMB0.38	RMB 1,828 million	89.66%
2021	RMB0.40	RMB 1,924 million	63.05%
2022	RMB0.40	RMB 1,931 million	67.63%
2023	RMB0.42	RMB2,033 million	61.66%

In terms of investor communication, the Company actively communicates with investors through various channels such as performance briefing meetings, investors' visit, investor hotline, investor relations management column on the Company's website, investor communication group, etc. We responds to investors' concerns, pays attention to protecting investors' legitimate rights and interests such as their right to know and the voting right, and maintains a good trust relationship between the Company and investors.

During the reporting period, the Company was awarded the certificate of "Excellent Practice of 2022 Annual Report Performance Presentation Meeting of Listed Companies" issued by the China Association for Public Companies, and was rated Grade A in information disclosure.



Certificate of Excellent Practice in Performance Presentation Meeting



Shanghai Stock Exchange Information Disclosure "Grade A"

### Key performance

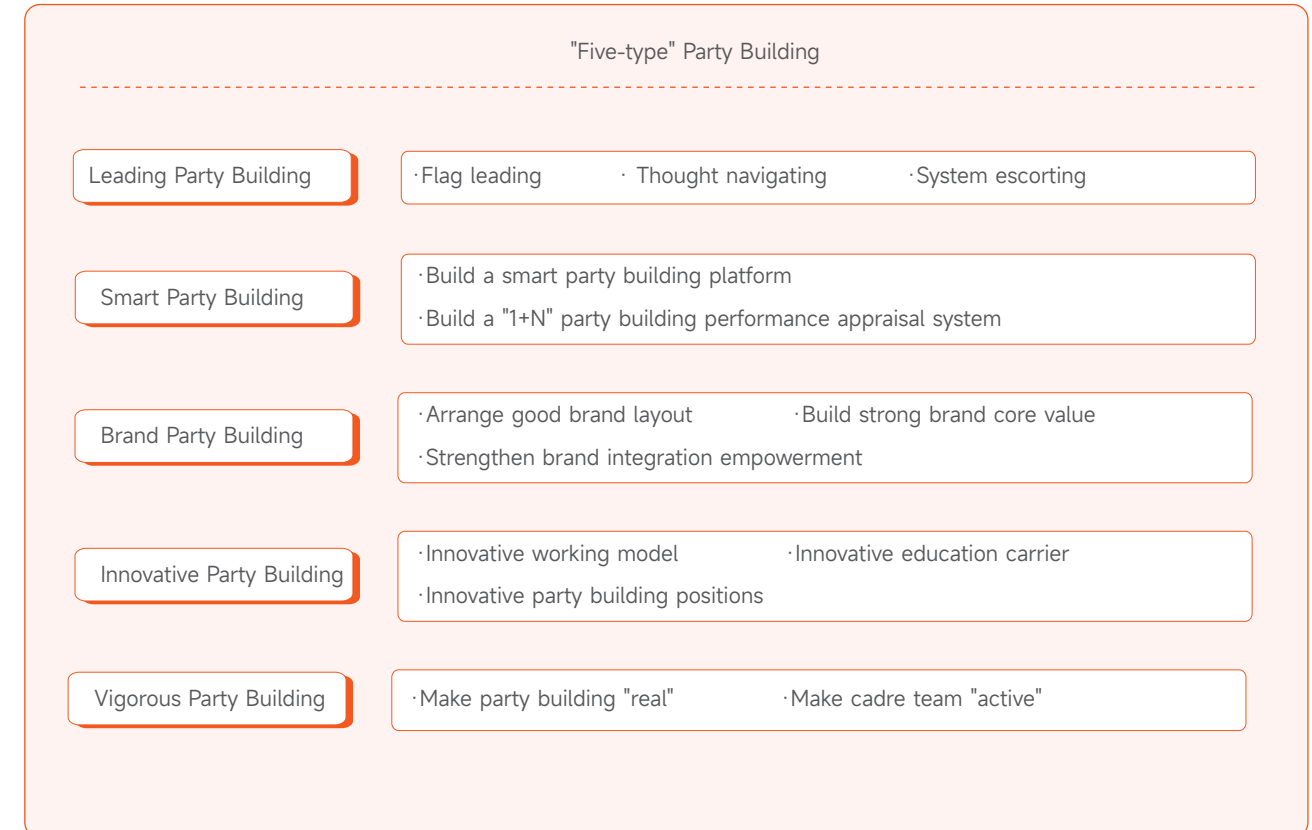
During the reporting period,



## Party Building

### Party Building organization

During the reporting period, the Company concentrated on "Five-type Party Building", namely: leading party building, smart party building, brand party building, innovative party building and vigorous party building, aiming to shape the party building brand. We continued to improve the *Rules of Procedure for the Party Committee* and the *"First Topic" System of Party Organization Meetings*, insisted on integrating Party building work into all aspects of the Company's production and operation. We adhered to Party building guidance, strengthened Party organization construction, and promoted the in-depth integration of various work of the Party organization with the Company's operation and management. During the reporting period, Shandong Hi-speed Party Committee had 326 grass-roots party organizations, including 36 party committees, 10 general party branches, 280 party branches and 3,769 party members.



## Party Building honors

Shandong Hi-speed Company Limited	2022 Enterprise Party Building Brand Demonstration Unit of Shandong Province
Shandong Hi-speed Company Limited	2023 Excellent Brand of Enterprise Party Building in Shandong Province
Shandong Hi-speed Company Limited, Weifang Operation Management Center	"The First Excellent Party Building Brand in Highway Traffic Industry"
Weifang Operation Management Center	Excellent Party Building Brand Case
Xiajin Operation Management Center	2023 Top 20 Excellent Party Building Culture Brands in Highway Traffic Industry
Luzhou Southeast Company	2023 Excellent Party Building Culture Brand in Highway Traffic Industry

## Implementation of Party Building Ideology

In order to thoroughly implement Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, enhance Party members' sense of identity and belonging, strengthen Party building governance, enhance the overall quality of Party members, and promote harmonious relations between the Company and Party members, the Company carried out Party building activities and held 122 Party committees during the reporting period.

### Case 1 Thematic Education with Ideological Guidance

On April 18, 2023, the Party Committee of the Company held an educational work conference on the theme of "Learning and Implementing Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era". The meeting thoroughly implemented the spirit of General Secretary Xi Jinping's important speech and made specific arrangements for the Company to carry out thematic education. The leaders of the Party Committee of the Company presided over the meeting, and more than 210 people from the leading group, middle-level leaders and heads of Party workers and discipline inspection departments of the Company attended the meeting through on-site attendance and video form.



Thematic Education Work Conference

### Case 2 Welcome the CPC Founding Day on July 1 with original intention

On June 26, 2023, soon before the CPC Founding Day on July 1, Beijing-Shanghai Ji'nan Operation Management Center organized and arranged the activities of "Two Excellent and One Advanced" commendation, advanced deeds sharing and special party lessons in 2023, which were hosted by the secretary of advanced grass-roots organizations and the secretary of the Party Committee.

At the meeting, two secretaries guided all staff to further strengthen their ideals and beliefs, adhere to their initial mission and contribute to "creating a road of happiness" through their unique point of view.



The CPC Founding Day on July 1 with original intention

### Case 3 Party Building leads to the "Road of Happiness"

The Company inherits the cultural spirit of Shandong Hi-speed, develops and adheres to the "Roads in Heart" brand culture, i.e., keeping the roads, managing the roads and developing the roads with heart, to form the brand matrix of "Roads in Heart" with the toll station sub-cultures "Colorful Springs", "Colorful Stones" and "Colorful Peaks". We implements the development concept of "Party Building + Culture" which says "party building leads the direction, and culture empowers the enterprise", to build Jinan-Laiwu Expressway into a red demonstration road, a smooth and comfortable road, a scientific and technological road, a green ecological road, and a harmonious model road.



Party Building leads to the "Road of Happiness"



## Business Ethics

### Anti-corruption and Anti-bribery

Shandong Hi-speed has formulated internal systems such as the Guidelines for Political Supervision of the Company's Discipline Inspection Commission and the Detailed Rules for the Implementation of Discipline Inspection Work Assessment of subordinate units. We also has set up an assessment and supervision mechanism to effectively implement anti-corruption work, prevent the breeding of corruption soil, standardize the business ethics behavior of all employees, clarify their responsibilities in anti-corruption, thus creating a working mechanism that "staff dare not be corrupt, cannot be corrupt and does not want to be corrupt".

Shandong Hi-speed regards the Coordination Group on Party Style, Clean Governance and Anti-Corruption Work as the highest governance body of anti-corruption work, and the Secretary of the Discipline Inspection Commission serves as the Group Leader. The work coordination group is responsible for implementing the deployment requirements of anti-corruption work and ensuring that the Company's business practices are legal and compliant. In addition, the work coordination group has a coordination group office, which is responsible for organizing and preparing meetings of the coordination group for party conduct and clean governance building and anti-corruption work, and cooperating with departments and offices to carry out anti-corruption work.

We require our employees to strictly abide by the integrity regulations, restrain their own behavior, and enhance their awareness of discipline and self-discipline, so as to promote a win-win situation of "seeking cooperation with quality, seeking market share with reputation, and promoting development with integrity". In order to totally eliminate corruption, the Company continuously improves the whistleblower protection mechanism. We have set up various reporting channels, such as letters, calls, visits, etc., to encourage all employees and partners to report suspected corruption, bribery and other violations of business ethics. The Company strictly follows the internal rules and procedures to carry out report acceptance, investigation and feedback, and strictly deals with violators for cases once verified, . During the reporting period, the Company did not see any litigation cases related to corruption.

During the reporting period, the Company carried out four sessions of anti-corruption education and anti-corruption knowledge test, which greatly enhanced the integrity awareness of the Company's employees.

### Case 1 The Company's Clean Governance Education for the First Quarter

On February 23, 2023, the Discipline Inspection Commission of the Company held the clean governance education for the first quarter, and organized the cadres and staff of the Headquarters to watch the warning films Strict Political Discipline and Building Strong Integrity Style Dams. The educational film told the stories of 8 criminal Party members and cadres. They lost their beliefs, seriously violated the Party's political discipline and rules, seriously violated the spirit of the Eight Central Regulations, and used their positions to seek personal gains and finally went to crime. These films educated the cadres and workers of the company to take these cases as a mirror, examine their own integrity, constantly improve their political determination, discipline determination, moral determination and anti-corruption determination, and strive to create a good political ecology for the Company.



Integrity Education Conference

### Case 2 The Company's Integrity Knowledge Test

On December 25, 2023, the Company launched the 2023 Integrity Knowledge Test. Participants actively prepared and learnt relevant knowledge on their own initiative. Through this test, the employees of the Company have greatly enhanced their anti-corruption awareness and effectively built up a line of defense against corruption.



Integrity Knowledge Test

#### Key performance

During the reporting period, the Company conducted several anti-corruption trainings,

with a total of  
**3,187**  
employees participating in  
anti-corruption trainings

with a total of  
**39**  
participants

with an average of  
**120.15**  
hours of training per employee

a total training duration of  
**144**  
hours

Directors of Shandong Hi-speed  
participated in anti-corruption  
training for  
**4**  
times in total

an average training duration of  
**4**  
hours per capita.



# Lush Mountains and Lucid waters, Protecting the Ecological Background Color

Building Beautiful China, advancing  
modernization featuring harmony  
between humanity and nature.

—Xi Jinping's Speech at The National  
Conference on Ecological and Environmental Protection

Environmental Protection 43

Utilization of Resources 47

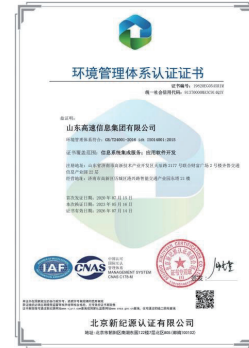
"Three Wastes" Management 50





## Environmental Protection

Shandong Hi-speed integrates the concept of green and low-carbon development all aspects of operation and puts it into practice. In order to strengthen the environmental management of new and reconstruction projects, the Company formulated the *Environmental Protection Management Regulations for New and Reconstruction Projects* and the *Environmental Protection Management System for Maintenance Operations* in accordance with the *Environmental Protection Law* and other relevant laws and regulations, and established an environmental protection leading group in the Engineering Management Center to maintain a good construction environment and prevent pollution sources generated by construction projects. The subsidiary Information Group passed GB/T24001-2016 environmental management system certification in July 2020.



Environmental Management System Certification ▶

## Green Office

Daily office work	<ul style="list-style-type: none"> <li>Improve office supplies account and expense standard, and clarify online approval process.</li> <li>Conserve resources by starting with the conservation of water, electricity, and paper, power off computers, air conditioners and other equipment when leaving the office, avoid using high-energy-consuming office appliances.</li> <li>Consciously develop the habit of frugal in the office, and form a good atmosphere of advocating economy and reducing consumption for all employees.</li> <li>Eradicate problems such as rough management, leakage and venting through strict examination and approval of the intelligent office system.</li> </ul>
Vehicle management	<ul style="list-style-type: none"> <li>Encourage the use of new energy vehicles, as supplementary or alternative for fuel vehicles.</li> <li>Encourage employees to engage in low-carbon travel and reduce carbon emissions by taking shuttle buses at relatively concentrated points in time.</li> <li>Strictly control vehicle maintenance and refueling management, and encourage oil saving, energy saving and consumption reduction through reward and punishment measures.</li> </ul>
Canteen management	<ul style="list-style-type: none"> <li>Pay attention to the thrifty management of canteen, and make the best use of things and materials.</li> <li>Calculate the number of diners through big data to determine the production needs and avoid waste of meals.</li> <li>Strengthen consumption reduction propaganda in restaurants, advocate the "empty plate" and service small-portion meals.</li> </ul>
Property management	<ul style="list-style-type: none"> <li>Strengthen the management of water, electricity, gas and heating in the Headquarters. There are three modes of air conditioning operation: "night, energy saving, and energy consumption".</li> <li>Arrange education for logistics security, housekeepers, cooks and other property personnel to enhance their awareness of saving, service and safety.</li> </ul>
Public opinion propaganda	<ul style="list-style-type: none"> <li>Set up a publicity column for "energy saving and consumption reduction" activities in the Smart Communication, and encourage all units to submit good practices of the theme.</li> <li>Launch special publicity activities of "saving starts from me" and strengthen special training on saving office.</li> </ul>
Assessment, rewards and punishments	<ul style="list-style-type: none"> <li>Take energy saving and consumption reduction as one of the key tasks, decompose tasks and include them in annual assessment.</li> <li>Reward acts of thrift, criticize acts of waste, and hold individuals accountable for serious consequences.</li> </ul>

## Case

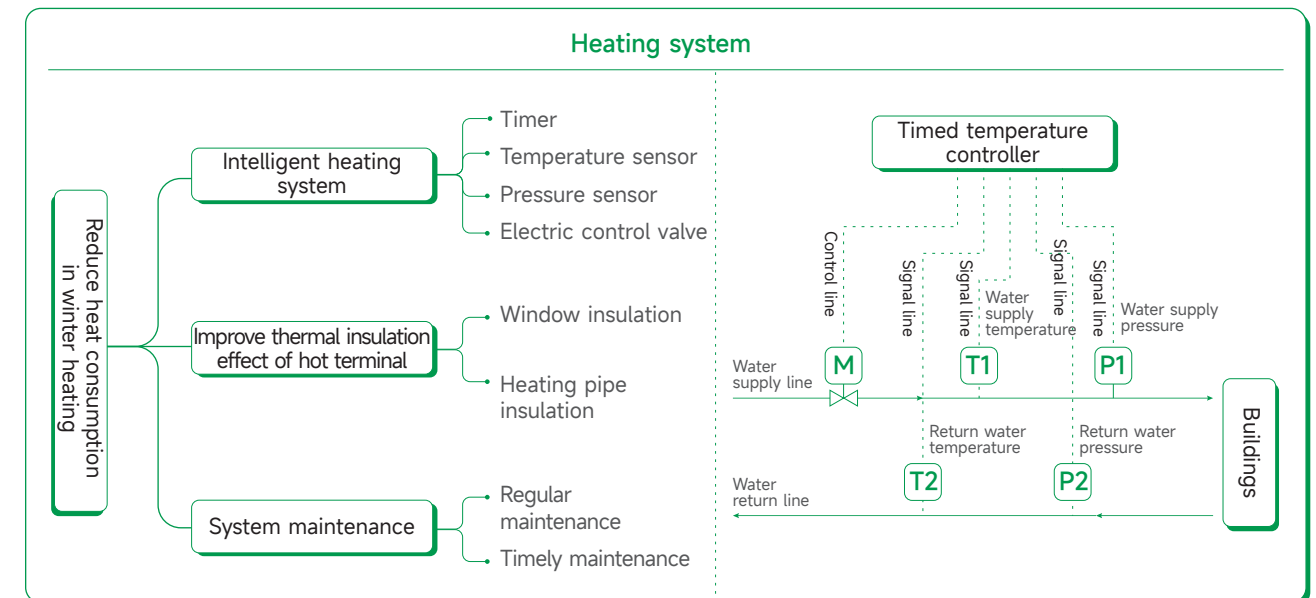
### Information Group's tree planting event

In March 2023, the Information Group organized a tree planting event with the theme of "planting and sowing to witness the growth and glory of the Company" in the Intelligent Transportation Industrial Park. More than 500 people participated in the event, resulting in a greening area approximately 300 square meters.



## Green buildings

During the reporting period, Weilai Operation Management Center of the Company performed energy-saving management of heating system in winter. According to the building heating demand characteristics in different areas, different functions and different periods, the Center comprehensively analyzed parameters such as atmospheric temperature, temperature and time of outlet and return water, adjusted the heating flow by controlling the electric regulating valve on the main heating pipeline, it had achieved optimization of heating system, which not only improved indoor comfort, but also reduced heating heat consumption, thus reducing heating energy consumption and saving operating costs.





Case

Construction of Digital Cloud Cabin

The Information Group implements the four design concepts - intelligence, safety, green and low-carbon, and constructs the Digital Cloud Cabin, integrating command cabin, ticket cabin, information cabin, power cabin and service cabin, with energy supply, engine room, charge audit and special case processing service units. Digital Cloud Cabin gives priority to green industry and renewable materials in material selection, and actively introduces new energy technologies. This not only helps reducing environmental pollution and waste of resources, but also propels the process of green and sustainable development.



After careful R&D and design, the Digital Cloud Cabin has entered the trial operation stage at Gushan Toll Station, Zhangqiu South Toll Station and Heze High-tech Toll Station.

Green expressway

Shandong Hi-speed actively proceeds with the construction of green demonstration road sections, implements "intensive funding, scientific programs, project prioritization, and list responsibility", continuously optimizes the road environment of the sections under its management, maintains a high level of road appearance, and shows the brand image of "Shandong Hi-speed maintenance, precise and long-time lasting". In this year, the Company completed 800.61km demonstration road sections with high quality up to standard, accounting for 30.21%, exceeding the annual target, accounting for 77.54% of the accumulated completion in the 14th Five-Year Plan.

In addition, the Company carefully organized the contest of "up-to-standard section" of the demonstration road, with all units in the province selecting 1-2 kilometers for the contest and implementing the "100-day assault" activities. The "21550" mode for seedling pruning was adopted by Xiajin Operation Management Center, realizing the uniformity of "top, side and bottom". Ji'nan-Qingdao Ji'nan Operation Management Center implemented section management, post and responsibility determination and performance fulfillment, and continuously improved the image of road appearance within the driving vision.

During the reporting period, a total of 8,321,800 square meters of seedlings underwent comprehensive pruning, with an additional 20,200 seedlings being replanted. Furthermore, 8,727,450 square meters of slope interworking and garden greening were pruned and mowed to ensure the sections under control maintain a visually appealing appearance.

**800.61**km  
demonstration road sections with high quality up to standard

**8,321,800**square meters  
of seedlings underwent comprehensive pruning

additional  
**20,200**  
seedlings being replanted

**8,727,450**square meters  
of slope interworking and garden greening were pruned and mowed



Key performance

Total environmental investment (10k RMB )	Duration of environmental training per capita (Hours)	Pass rate of pollutant monitoring
<b>5,011.92</b>	<b>4</b>	<b>100%</b>
Number of environmental trainings (person-times)	Environmental accident (No.)	Synchronous operation rate of environmental protection facilities
<b>386</b>	<b>0</b>	<b>100%</b>
Total duration of environmental trainings (Hours)	Environmental violation (No.)	Implementation rate of "three simultaneous actions" for environmental protection of construction projects
<b>1,544</b>	<b>0</b>	<b>100%</b>

## Utilization of Resources

### Transformation with energy-saving technology

#### Case 1 Air-energy heat-pump heating transformation

In 2018, Shandong Hi-speed Weihai Operation Management Center performed heating transformation on Nanhai Toll Station, Nanhuang Toll Station and Rushan East Toll Station, upgrading from air-conditioning heating to air-energy heat-pump heating. In 2022, Wendeng North Toll Station was also renovated for heating.

After heating transformation, the average electricity consumption per hour of the four toll stations is: 142 kilowatt hours for air conditioning heating, 55 kilowatt hours for air energy heat pump heating, saving electricity consumption totally about 61.3%. Compared with air conditioning heating, air energy heat pump heating lasts for a longer time, with continuous temperature and remarkable energy saving effect.

Air energy heat pump ▶



#### Case 2 Ultra-low temperature air-energy heat pump unit heating transformation

Beijing-Taibei Ji'nan Operation Management Center planned to use ultra-low temperature air energy heat pump units for heating, and arranged special hot water units to provide domestic hot water bath. It is estimated that the annual operation cost can save 20%-30%.



#### Key performance

Energy consumption		
Key indicators	Units	2023
Natural gas	10k cubic meters	174.47
Gasoline	10k litres	245.21
Diesel	10k litres	118.64
Liquefied petroleum gas	Tons	102.06
Fuel oil	Tons	23.23
Liquefied natural gas	Tons	0.48
Total purchased electricity	10k kWh	9,893.64
Total purchased heat	GJ	20,518.55

Greenhouse gas emissions		
Greenhouse gas emissions (Scope I)	Tons of carbon dioxide equivalent	12,633.09
Greenhouse gas emissions (Scope II)	Tons of carbon dioxide equivalent	87,270.55
Total greenhouse gas emissions	Tons of carbon dioxide equivalent	71,313.64
Total greenhouse gas emission intensity	Tons of carbon dioxide equivalent/ one million RMB	2.69
Comprehensive energy consumption*	Tons of standard coal	19,430.76
Comprehensive energy consumption density	Tons of standard coal/ one million RMB	0.73

Note:

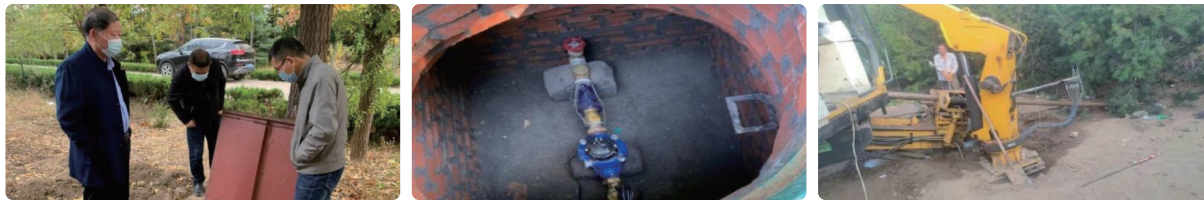
1. The Company acquired Shandong Hi-speed Information Group Co., Ltd. in 2023, which increased the scope of consolidation.
2. In order to further improve the operation and management level, the Company carried out intelligent transformation, resulting in an increase in electricity consumption.
3. In order to further enhance the experience of drivers and passengers, the Company upgraded and remodeled the lighting facilities at toll stations and other places, resulting in an increase in electricity consumption.



## Water-saving transformation

### Case Tap water transformation project

The original office area of Weifang Road Management Sub-center of the Company adopts underground deep well submersible pump and above-ground pressure tank for water supply. In order to respond to national policies and further promote energy conservation and emission reduction targets, Weifang Operation Management Center has organized and implemented municipal tap water transformation project. Through the transformation, the Operation Management Center adopts municipal tap water supply, which can control the water supply quantity more accurately, make full use of the water resources of the urban water supply system, and fully improve the full utilization of water resources, which has positive significance for continuously promoting the Company's energy conservation and emission reduction.



## Digital management

### Case Information Group's Introduction of Integrated Energy Management System

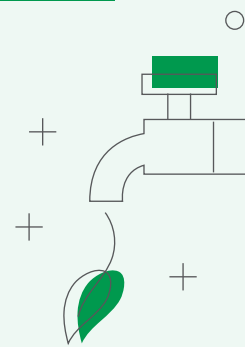
The Information Group introduced HAMDELL, an integrated energy management system that enables detailed and independent measurement of energy consumption at various locations, focusing in particular on the consumption and safety of electricity and water resources. Through this system, the Information Group's electric energy and other energy data can be fully collected, and independent energy consumption accounting can be done according to units and sub-items, so that management personnel can clearly know the usage and consumption status of various types of energy, and then effectively identify excessive energy consumption points and unreasonable energy consumption habits.



Integrated Energy Management Platform Real-time Monitoring

Integrated Energy Management Platform Video Surveillance

#### Key performance



In 2023, the total water consumption of the Company was **814,000 tons.**

## "Three Wastes" Management

### Wastewater Treatment

In order to ensure the normal operation of sewage treatment system, Shandong Hi-speed has formulated Regulations on the Management of Sewage Treatment System and Measures for the Management of Sewage Treatment Equipment, which stipulate in detail the management of sewage treatment system in Operation Management Center and service area under its jurisdiction. The following sewage treatment methods are as follows:

- Electrical and mechanical staff regularly inspect equipment during operation of sewage system. Sewage treatment equipment shall be inspected once a day, and the inspection information shall be recorded in the Inspection Record Form of Sewage Treatment Equipment.
- The sewage of mixing station shall be purified and precipitated first, and the treated clean water shall be used for vehicle cleaning, road surface watering, structure maintenance, etc. Other unusable wastewater shall be discharged into sewage pipeline after treatment and inspection.
- Laboratory wastewater shall be collected by classification according to laboratory management methods and uniformly delivered to qualified wastewater treatment institutions for disposal.

### Waste Residue Disposal

Construction waste residues shall be collected and transported to waste treatment station for disposal as required.

### Noise Treatment

By installing noise barrier facilities, the noise hazard caused by expressway operation to the sensitive points of acoustic environment along the line can be effectively eliminated or mitigated.

### Case Application of new foam aluminum noise barrier

With the continuous expansion of expressways, traffic noise pollution hazards will inevitably occur to environmental sensitive points such as residential areas and schools along the line. Shandong Hi-speed selects a new type of foam aluminum sound barrier, which is an aggregate composed of bubbles and aluminum diaphragms. It has technical characteristics and advantages such as irregularity and three-dimensional of bubbles.



New Type of Foam Aluminum Noise Barrier

#### Amount of Waste Generated

Key Indicators	Units	2023
Waste Lamp Tube	Piece	2,487
Waste Printer Cartridge	No.	4,572
Waste Battery	No.	8,481
Waste Ink Cartridge	No.	2,225
Waste Lamp Cartridge	No.	55
Waste Paper	Bag	10,379
Domestic Waste	Ton	703.96
Kitchen Waste	Ton	196.09



# Innovation-driven, Safe Production for Quality Assurance

Quality in mind and action leads to  
perfection.

A hundred ways and a thousand  
orders for guaranteed safety.

—Safety Concept of Shandong Hi-speed

Innovative R & D 53

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Safe Production 61

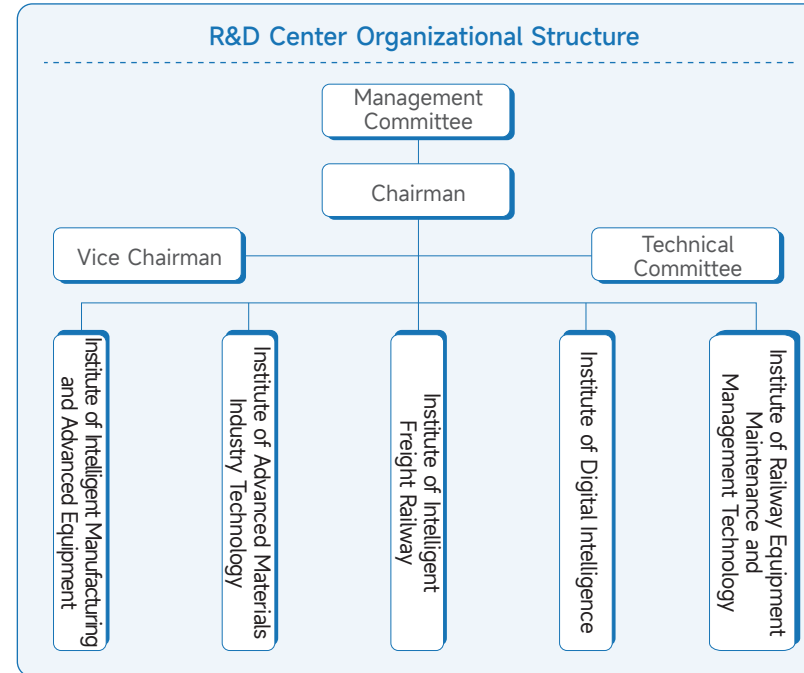




## Innovative R & D

Shandong Hi-speed attaches great importance to innovation and R&D. The Company has formulated the *Measures for the Management of Innovation Work* to promote the smooth realization of the Company's strategic objectives and tasks and promote the systematization, standardization, specialization and institutionalization of innovation work. The Company creates a good innovation environment, speeds up the sharing and transformation of achievements, strengthens the promotion and application of achievements, constantly innovates the system mechanism, increases investment, creates a scientific innovation platform, and strives to solve development problems.

The Rail Transportation Company has set up a Research and Development Center, which is managed by the management committee and consists of five research institutes.



### Research and development platform

Shandong Hi-speed actively cooperates with the government and universities to establish many R&D platforms.

Platform names	Accreditation authorities
Academician Workstation of Shandong Province	Science and Technology Department of Shandong Province
Enterprise Technology Center of Shandong Province	Development and Reform Commission of Shandong Province
Bridge and Tunnel Engineering Maintenance Technology and New Material Industry R&D Center of Shandong Province	Department of Transportation of Shandong Province
Enterprise Technology Center of Yantai City	Department of Industry and Information Technology of Yantai City
Key Laboratory of Water Pollution Prevention and Control of Weifang City	Science and Technology Bureau of Weifang City
Transportation Safety and Simulation Technology R&D Center	Competent Authority of State-owned Assets
R&D Center for Key Technologies of Expressway Intelligent Operation	Competent Authority of State-owned Assets
R&D Center of Construction Quality Improvement and Key Technology for Expressway Reconstruction and Expansion	Competent Authority of State-owned Assets
R&D Center of High-performance Foam Aluminum New Material Technology and Application	Competent Authority of State-owned Assets
Transportation Safety and Simulation Technology R&D Center	Shandong Hi-speed Group
R&D Center for Key Technologies of Expressway Intelligent Operation	Shandong Hi-speed Group
R&D Center of Construction Quality Improvement and Key Technology for Expressway Reconstruction and Expansion	Shandong Hi-speed Group
R&D Center of High-performance Foam Aluminum New Material Technology and Application	Shandong Hi-speed Group

### Key performance

Key indicators	Units	Year 2023	
Total number of R&D team members	Person	1,018	
Proportion of R&D personnel to the total number of employees in the Company	%	9.46	
By education	Doctor	Person	3
	Master	Person	233
	Bachelor	Person	668
	Junior College	Person	93
	High school or below	Person	21
By age	Under 30 (exclusive of 30)	Person	217
	30-40 (inclusive of 30, exclusive of 40)	Person	465
	40-50 (inclusive of 40, exclusive of 50)	Person	273
	50-60 (inclusive of 50, exclusive of 60)	Person	63

### Major innovations

Shandong Hi-speed's science and technology innovation focuses on solving practical problems in expressway construction and operation, taking "improving quality, reducing cost and increasing efficiency" as the goal orientation. First, accelerate the construction of information highway and intelligent highway, and inject continuous power for and high-quality development of highway. Secondly, with the goal of digitalization of facilities, specialization of maintenance, modernization of governance, efficient operation and high quality service, promote the "Four New" technology of maintenance, and comprehensively improve the maintenance ability and road condition level.

Jinan-Qingdao Expressway has made remarkable achievements in scientific and technological innovation and won 40 scientific and technological awards, including 24 provincial and ministerial awards. These achievements fully demonstrate the outstanding contribution of Jinan-Qingdao Expressway in science and technology, intelligence and green environmental protection, and successfully shape the model image of the road of science and technology, intelligence and green environmental protection. During the reconstruction and expansion of Jinan-Qingdao Expressway, the green science and technology demonstration project implemented by us was listed as the Science and Technology Demonstration Project by the Ministry of Transport and the Supporting Project for Shandong Demonstration Zone of "Traffic Makes the Country Stronger". The project focused on 5 special key technologies and covered 30 science and technology demonstration sub-projects.

Technology type	Innovation achievements
Recycling	We adopted in a large scale the pavement milling material recycling technology, waste concrete recycling and waste guardrail recycling for the first time in China, to achieve 100% utilization of old asphalt, old guardrail, realizing not only significant economic benefits, but also green environmental protection.
Road filling with waste	We widely promoted the subgrade filling with industrial waste such as slag, red mud, etc.; we used Bayer process red mud to build an expressway for the first time and reached the international leading level.
Resistance to bad weather	The application of anti-icing technology and fog induction system in the sections of extra-large bridges and large structures can ensure driving safety in bad weather, which has great economic and social benefits.
Intelligence technology	We actively apply intelligent monitoring of expressway traffic information, comprehensive perception of traffic weather and other technologies, promote the construction of "Expressway Cloud", comprehensively build "unmanned toll station with full payment", "ETC non-stop toll collection" and "highway electronic inspection", build "Internet +" intelligent travel service platform for expressways, and create "Highways of Intelligence" efficiently.

### Innovation incentive

Shandong Hi-speed has formulated the Intellectual Property Management System, incorporated the intellectual property management work of each subordinate unit into the comprehensive performance appraisal system, and regularly conducted on-site inspection on the information submission and work development of each subordinate unit. In accordance with relevant national laws and regulations, the Group's *Measures for the Management of Science and Technology Projects*, the Company's *Measures for the Management of Innovation Work* and other relevant regulations, the Company has formulated the *Measures for the Management of Transformation of Scientific and Technological Achievements* to encourage employees to carry out inventions and creations, promote scientific and technological progress, cultivate independent intellectual property rights, push the application and transformation of scientific and technological achievements of the Company, and advocate the use of patent system to protect independent research and development achievements.

The subsidiary Information Group has passed GB/T 29490-2013 Intellectual Property Management System Certification in October 2023.

GB/T 29490-2013 Intellectual Property Management System Certification



### Key performance

Key indicators	Units	2023
R&D investment	Ten thousand RMB	48,427.32
Proportion of R&D investment in main business income	%	1.82
<b>Innovation achievements</b>		
Cumulative number of patents granted	No.	417
Cumulative number of invention patents granted	No.	230
Cumulative number of utility model patents granted	No.	163
Cumulative number of design patents authorized	No.	24
Cumulative number of software copyrights	No.	175
Cumulative number of published papers	No.	124
Total number of trademarks	No.	35
National high-tech enterprise	No.	13
RDI enterprise	No.	9

### Case 1 Participation in Science and Technology Innovation Forum

Shandong Hi-speed displayed the achievements of "Four Themes", i.e., green maintenance in the whole life cycle, research and development of bridge maintenance technology and materials, safety improvement of traffic facilities, and digital improvement of maintenance operation at the forum, reflecting the Company's development achievements in accelerating the transformation from element-driven to innovation-driven, and transformation of maintenance to green, low-carbon, intelligent and efficient. A total of 245 maintenance innovation achievements were collected, and the Company won one first prize, two second prizes, seven third prizes and 13 excellent prizes for scientific and technological innovation achievements in maintenance management. The *Technical Guide for Expressway Barrier Reconstruction* won the Excellent Award for Innovation Achievement Promotion.



### Case 2 Information Group hosted the 25th China Expressway Informatization Conference and Technology Products Expo

From March 30 to 31, 2023, Information Group hosted the 25th China Expressway Informatization Conference and Technology Products Expo with the theme of "Innovation, Integration and High Quality Development". The Expo was the highest annual event in the field, showing the latest achievements in the research and development and application of highway information technology products, including innovative practical achievements such as "Smart Brain", "new generation cloud toll" and "zero carbon" expressway, attracting many industry experts' eyes, and the response was very good.





## Product Quality

### Product quality management

Shandong Hi-speed takes "serving the public and contributing to the society" as its unshirkable responsibility and obligation. Through scientific operation and careful care of roads and bridges, Shandong Hi-speed provides fast, smooth, beautiful and civilized "Safe Roads" for drivers and passengers, building each road and bridge into a thoroughfare for people flow, logistics, information flow and capital flow to create benefits, and also building each road into a fulcrum to extend modern civilization and carry public hopes.

**The Company's quality policy can be summarized as follows:**



Continuously improve the service quality of charging, maintenance, road property, information/electromechanical equipment and travel.



Provide fast, smooth, beautiful and civilized "Safe Road" for drivers and passengers.



Serve the public, contribute to society, repay shareholders and develop employees.

The Company successfully passed the ISO 9001 Quality Management System Certification in December 2001, and was the first road and bridge operation enterprise in China meeting the requirements of ISO 9001-2000. In August 2023, the two systems passed the supervision certification audit again.

### 2023 goals achieved

All units closely centered on the objectives and tasks at the beginning of the year. Combined with the actual situation of the units, they implemented responsibilities, strengthened measures, performed various tasks well, and further improved the quality management ability. All the assessment indicators reached the quality target standards.

Charging service quality management objective	Completion details
Charging speed	Up to standard.
Entry license plate input accuracy	The entry license plate input accuracy rate was 99.97%.
Responsible complaint rate	Effectively improved the quality of fee-based services; received a total of 1,322 complaints, and no complaints were caused by the Company.
Customer service satisfaction	The customer service satisfaction was 98.81%.
Miss rate	The miss rate was 0‰.
Road management service quality management objectives	Completion details
Time of arrival at scene	The compliance rate of "arrival at the scene in 20 minutes for accident-prone sections" was 100%.
Time of obstacle clearing	The compliance rate of "clearing fault vehicles and general accident vehicles in 30 minutes for accident-prone sections" was 100%.
Duration of traffic jam	Achieved "no traffic jam caused by management reasons for more than 1.5 hours" and "no traffic accidents caused by management responsibilities".
Responsible complaint rate	A total of 214 complaints were received, and no accountable complaints were caused by the Company.
Important information reporting	Achieved "no concealment, late reporting, omission and misreporting of information on serious emergencies" and "no adverse consequences caused by inadequate supervision on road-related construction sites".
Quality management objectives for information/electromechanical equipment	Completion details
Electromechanical equipment integrity rate	No major electromechanical equipment failure occurred, and the integrity rate of electromechanical system equipment was 99.99%.
ETC lane transaction pass rate	The ETC lane transaction pass rate was 99.94%.
Travel service quality management objectives	Completion details
Hotline service satisfaction rate	The hotline service satisfaction rate was 99.79%.
Timely accuracy of road condition information release	The timely accuracy of road condition information release was 99.90%.

**Key performance**

During the reporting period, Shandong Hi-speed arranged quality risk assessment for 4 times.

Key indicators	Units	2023
Number of quality culture trainees	Person-time	2,939
Total hours of quality culture training	Hour	184,316.00
Number of quality culture training sessions	No.	11
Hours per capita of quality culture training	Hour	62.71

**Digital management**

Focusing on the operation and management of expressways, the Company has built a digital system for the business management of expressway toll collection, road management, road bridge and tunnel maintenance, and comprehensively strengthened the quality control of expressway road and bridge operation management.

Digitization project	Project content
Construction of charge information management system, charge business inspection and assessment management system	<ul style="list-style-type: none"> <li>The system realizes the functions of highway toll data reporting, toll station flow, toll amount query, account splitting data query and statistics, etc.</li> <li>A scientific charging inspection and evaluation index system with multiple levels and factors realizes the flexible adjustment of the key work of the Company towards the subordinate units, and fully realize the quality control of charging business management.</li> </ul>
Construction of charge information management system	<ul style="list-style-type: none"> <li>Realize the patrol management, office work management, road-related construction management and other business management of expressway management.</li> <li>Connect the case information of the intelligent brain system of the Group, uniformly summarize the road-related compensation, obstacle clearing and rescue data, form a case database, and aggregate GPS, portal, intelligent brain, travel and other data.</li> </ul>
Construction of intelligent inspection robot and analysis decision system	<ul style="list-style-type: none"> <li>The intelligent robot of tunnel vault acquires data such as tunnel structure deformation and crack with 3D scanner, high-definition camera, infrared camera and environmental monitoring sensor, transmits massive high-definition data to the background by 5G communication technology, and automatically identifies diseases by artificial intelligence technology.</li> </ul>

**Occupational health**

Shandong Hi-speed abides by the *Law on Prevention and Control of Occupational Diseases* and other relevant laws and regulations, continuously strengthens occupational health and safety management, eliminates potential occupational health risks and creates a healthy and safe working environment for employees by regularly organizing physical examination for employees, carrying out special occupational health training and distributing relevant health and safety materials to employees on special posts. In addition, we passed GB/T 45001-2020/ISO 45001:2018 Occupational Health and Safety Management System Certification.

In the process of work, we have taken health hazard protection measures.

**Labor protection**

The management of labor protection articles shall follow the principle of "ensuring safety, reliable quality, less waste and equipping as needed", so that labor protection articles can really play a role in protecting the safety and health of workers.

**Protection of workers**

Labor protection articles or appliances for operators mainly include: safety helmet, respiratory protection, eye protection, hearing protection, protective shoes, protective gloves, protective clothing, fall protection, etc.

**Each unit's protection measures**

Each unit shall distribute corresponding operation protective articles or appliances to the operators according to their work nature and working conditions, and establish an account for distribution of labor protective articles and appliances.

Each unit shall strictly supervise the correct wearing and use of labor protection articles by the operators on duty. Those who fail to wear and use labor protection articles according to regulations are prohibited from taking up duty.

**Key performance**

Key indicators	Units	2023
Certificate rate of special-work operators	%	100%
Occupational injury insurance coverage for employees	%	100%
Employee medical examination coverage	%	100%
New occupational diseases	No.	0



## Safe Production

Shandong Hi-speed insists on "people first and life first". During the reporting period, the Safety Management Department revised 6 management systems including the *Measures for the Management of Safe Production*, the *Measures for the Management of Safety Funds* and the *Comprehensive Emergency Plan for Safe Production Accidents*.

### Production safety committee

The Company implements unified leadership and hierarchical management in terms of safe production. The Company establishes the safe production Committee (hereinafter referred to as "Safety Committee"), and the Chairman of the Board serves as the Director of the Safety Committee. The Office of Safety Committee is responsible for organizing safety assessment of all units, and commending and rewarding units, departments and individuals that have made outstanding achievements or made outstanding contributions in safe production. In 2023, the Company set the goal of "no safe production liability accident with serious injury or death of employees throughout the year".

Description of units	Organizations established
High-risk production and operation units with more than 300 employees	Establish the safe production Committee.
Other units	Establish the safe production or safe production Leading Group.

### "126" safety assurance

<b>"1 Core"</b>	Implement the safety responsibilities of all employees, the main responsibilities of high-risk units and key units, and the responsibilities of relevant parties.
<b>"2 Directions"</b>	Toward the directions of innovation-based development and active management-based development.
<b>"6 Key Tasks"</b>	<ul style="list-style-type: none"> <li>· Make the foundation sound.</li> <li>· Set up new industry safety standardization benchmarks.</li> <li>· Focus on prevention first and special rectification.</li> <li>· Optimize the management system.</li> <li>· Improve the safety quality of all staff.</li> <li>· Deepen safety digitalization and standardization upgrading.</li> </ul>

The Company implements the responsibility system for safe production of all employees, and has signed the *safe production Management Responsibility Letter* and the *Post safe production Responsibility Letter* at various levels. At present, we have passed GB/T 45001-2020/ISO 45001:2018 Occupational Health and safe production Certification. The Company successfully passed OHSAS 18001 Occupational Health and Safety Management System Certification in 2006. In August 2023, the two systems passed the supervision certification audit again.

GB/T 45001-2020/ISO 45001:2018 Occupational Health and safe production Certification



### Production safety inspection

The Company actively carries out safe production inspection, which is mainly divided into comprehensive inspection and special inspection.

<b>Comprehensive inspection</b>	Organize and conduct comprehensive safety inspection regularly, considering the actual work conditions, and aiming at the safety foundation and grass-roots management work.	At least once a month; the annual safety inspection scope covers all units at the next lower level; and spot checks are arranged on grass-roots units; comprehensive safety inspection of each grass-roots unit shall not be less than once a month, and the monthly safety inspection scope shall cover all production and operation posts and places.
<b>Special inspection</b>	Targeted safety inspection arranged according to key work such as special safety activities and special period safety guarantee.	The special safety inspection of each unit shall be organized and conducted according to the actual work conditions, and the scope of special safety inspection shall cover all subordinate units participating in special activities.

### Risk identification and assessment

Shandong Hi-speed has conducted accident risk assessment and emergency resource investigation before preparing emergency plan according to the requirements of the *Law on safe production* and the *Management Measures for Safe Production Accident Emergency Plan*, and prepared and finalized the *Safe Production Accident Risk Assessment Report*.

Risk category	Risk description	Risk hazard
Collapse accidents of roads, bridges and tunnels in operation	Serious collapse of subgrade and pavement of high-grade highway, or fracture and collapse of bridge, or collapse of tunnel, resulting in serious traffic accidents or long-term traffic interruption.	The safety of roads, bridges and tunnels is related to the survival and development of the Company, and furthermore, it is related to the operation order of the national economy, the safety of people's lives and property, and the protection of national defense readiness. It has a wide range of influence and poses great harm upon overall assessment.
Explosion accident of parking lot and gas station in expressway service area	A large-scale fire in the parking lot or gas station of the expressway service area, causing serious accidents such as explosion of gas station and chain explosion of parked vehicles (especially dangerous chemicals vehicles).	The service area is a public place with the most dense population along the expressway, threatening public safety and causing serious losses to the country and people's lives and property. It has a wide range of influence and poses great harm upon overall assessment.
Safety accident of construction engineering production	Casualties and property loss accidents suddenly occur in the construction process of buildings, civil engineering, electromechanical and municipal construction.	It not only causes casualties and property losses, but also has a serious impact on the Company's reputation and benefits.
Safety accidents in metal rolling works	Safety accidents in the foam aluminum production, processing, handling and other production and operation process.	The high temperature of the production workshop, the poor working environment, and the dangerous operations involving high-altitude operations and lifting operations will have a serious impact on the reputation and benefits of the Company once safety accidents occur.
Fire accident in high-rise building	Fire accidents in the high-rise buildings and other places used by the production and operation office of the Company and all subordinate units.	There is a high possibility of reaching a large fire. Once a large fire accident occurs, it is easy to cause casualties and property losses, and the impact range is wide and the harm is huge.
Safety accident in operation and production of environmental protection project	Production safety accidents in the production and operation process such as water operation, solid waste disposal, hazardous waste disposal, food waste and kitchen waste disposal.	The use of hazardous chemicals and dangerous operations such as high-altitude operation and confined space will have a serious impact on the reputation and benefits of the Company once a safety accident occurs.

## Hidden danger investigation

All staff who find potential accidents in the workplace shall immediately report to the responsible person of the unit, the department or the relevant safety competent department and production department, or report them through the "Shoot Now" APP. The Company implements the reward and punishment system for safe production reporting.

### The Company formulates the following procedures for hidden danger investigation:

The problems and accident hidden dangers found in the safety inspection shall be fed back to the inspected unit or department in the form of *Potential Safety Hazards Rectification Notice* or inspection notification or on-site inspection form.

All units and departments shall complete the rectification of the problems and hidden dangers found in the safety inspection within the specified time limit, and report to the inspection unit or department in the form of the *Report on the Rectification of Potential Safety Hazards*.

The problems and hidden dangers discovered in the safety inspection shall be rectified by the main responsible persons of the units and departments to which they belong.

After the rectification of the problems and hidden dangers found in the safety inspection is completed, the inspection unit or department shall recheck the rectified situation, confirm that the rectification is qualified, and make a record accordingly.

### Key performance

During the reporting period, the overall hidden danger investigation and rectification rate of Shandong Hi-speed and its subsidiaries was

100%

2,379

safety emergency drills were carried out

and the investment amount of safe production was

RMB 68.9 million



## Emergency plan and drill

Shandong Hi-speed has formulated the *Comprehensive Emergency Plan for Safe Production Accidents*, and set up the emergency rescue headquarters for safe production accidents, with Chairman or General Manager as the general commander.

Type	Drills	Number of assessments	Emergency measures
Companies and units (operating units in non-high-risk and non-densely populated places)	At least one comprehensive emergency plan drill or special emergency plan drill shall be organized every year, at least one drill shall be organized for all special emergency plans every 3 years, and at least one drill shall be organized for all on-site disposal plans every year.	Emergency preparedness assessment at least once every 3 years	Emergency rescue teams may not be established, but part-time emergency rescue personnel shall be designated, and emergency rescue agreements may be signed with adjacent emergency rescue teams.
High-risk production and business units and business units in densely populated places	At least one comprehensive or special emergency plan drill shall be organized every six months, at least one drill shall be organized for all special emergency plans every two years, and at least one drill shall be organized for all on-site disposal plans every six months.	Emergency plan assessment at least once every 2 years	Establish an emergency rescue team and file them according to regulations.

### Case Tunnel safety emergency work site meeting

On June 20, 2023, the Company organized the tunnel safety emergency work site meeting to watch the fire disposal video of Panlongshan Tunnel in Tai'an Section of Qingdao-Lanzhou Expressway, conduct warning education and study, arrange tunnel fire accident simulation responsibility check, organize tunnel emergency response drills, and further strengthen tunnel emergency response capability.



Shandong Hi-speed strengthens the safety management of dangerous operations of contracting, leasing and other units and foreign operation teams, and undertakes the obligation of reporting dangerous operations. For construction projects under general contracting, the general contractor shall arrange unified coordination and management of dangerous operations on the construction site. In addition, the Company has actively promoted the informatization construction, equipped itself with safe production informatization related equipment, and standardized the use of safe production management information system.

## Safety education and training

Shandong Hi-speed implements classified and graded safety training. Each unit shall formulate safety training plan every year and organize safety training for all employees. Employees who have not passed safety training shall not work on duty.

Level	Personnel type	Training method
Management	Main responsible persons and safe production management personnel of high-risk production and operation units	The initial safety training time shall not be less than 32 hours, and the annual retraining time shall not be less than 12 hours.
	Main responsible persons and safe production management personnel of units involved in hazardous chemicals and construction	The initial safety training time shall not be less than 48 hours, and the annual retraining time shall not be less than 16 hours.
New employees	All units' new employees, employees who have left their posts for more than 6 months or transferred to other posts, as well as relevant employees who adopt new processes, new technologies, new materials or use new equipment.	Pre-job safety education and training shall be conducted in a timely manner. The pre-job safety training time shall not be less than 24 class hours, and the annual retraining time for all employees shall not be less than 12 class hours.
	New employees of hazardous chemicals and other units	Not less than 72 class hours
	New employees of construction enterprises	No less than 32 class hours, and no less than 20 class hours for retraining every employee every year
Special operation personnel	Special operation personnel	It must be carried out by a safety training institution with corresponding qualifications, and personnel must obtain the special operation license issued by the safe production supervision and management department or other relevant industry competent departments before they can take up its post.

The Company has built its own safety trainer team, and encourages other units to actively select and train internal safety lecturers from excellent backbones in their respective business fields. Each unit shall sign safety agreement with external operation unit, specify safety education and training requirements, and supervise safety education; educate and inform external visitors, study personnel, etc. about safety regulations, risks and emergency knowledge.

The Company requires each unit to hold a "morning meeting" presided over by the shift leader or team leader according to the characteristics of production and operation, taking the first-line production and operation units such as teams or workshops as a unit.

### Case 1 Mobilization and deployment meeting for the "Safe Production Month" activity

On June 5, 2023, the Company held a mobilization and deployment meeting for the "Safe Production Month" activity, which involved overall requirements and arrangements for various safe production of the Company around 14 activities of four major topics. Deputy General Manager gave a lecture under the theme "Everyone cares for safety, and everyone knows how to response to emergency".



### Case 2 Safety management training

On June 14, 2023, the Company organized and carried out safety management training in combination with the fourth reading class of thematic education, invited external experts to give lectures on the topic of "How to effectively implement the responsibilities of safe production subjects", interpreted the requirements of laws and regulations, learned the spirit of documents and exchanged accident cases.



#### Key performance

During the Reporting Period, Shandong Hi-speed and its subsidiaries invested a total of **RMB 3,970,900** in safety education and training

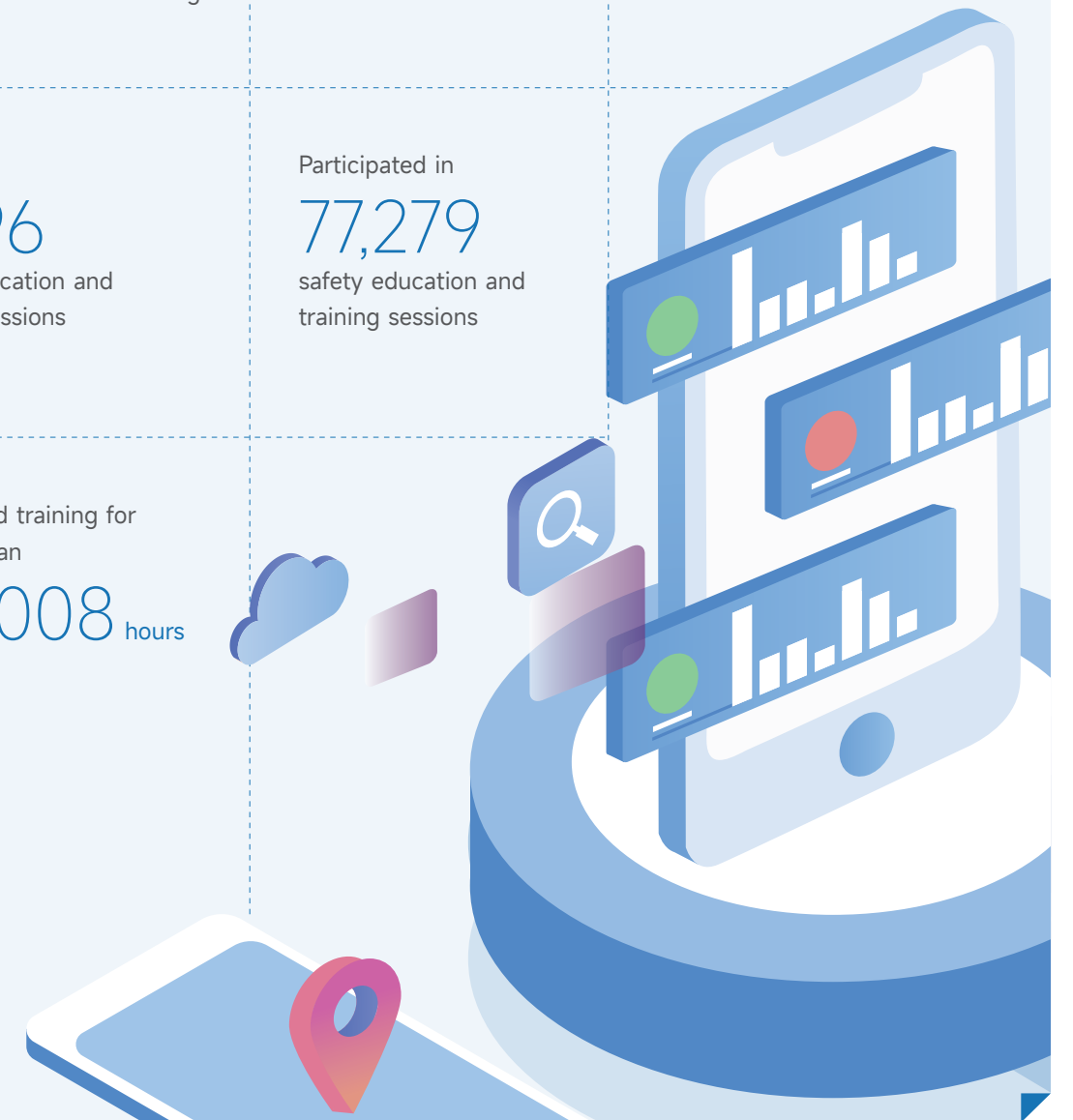
The safety education and training coverage rate of **100%**

the safety risk protection training coverage rate of **100%**

Arranged **1,696** safety education and training sessions

Participated in **77,279** safety education and training sessions

Conducted training for no less than **127,008** hours





# Serving Customers for Mutual Benefit and Common Progress

Smile service, beyond expectations,  
sincere and far-reaching.

—Service Concept of Shandong Hi-speed

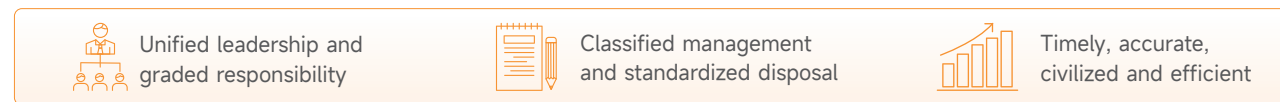
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## Customer Rights

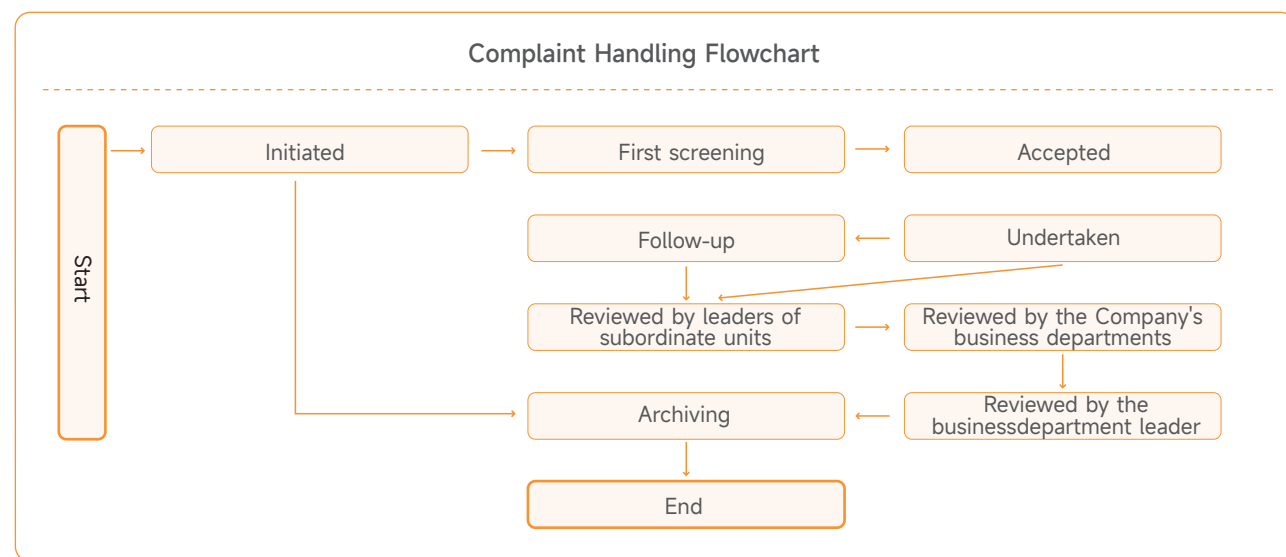
Shandong Hi-speed attaches great importance to customer service and is committed to improving the modern management level of expressways to ensure the safety and smoothness of road operations. On June 30, 2023, Shandong Hi-speed issued the *Management Measures for Road Operation Information Release* and other systems. The expressway travel information service shall follow the following principles:



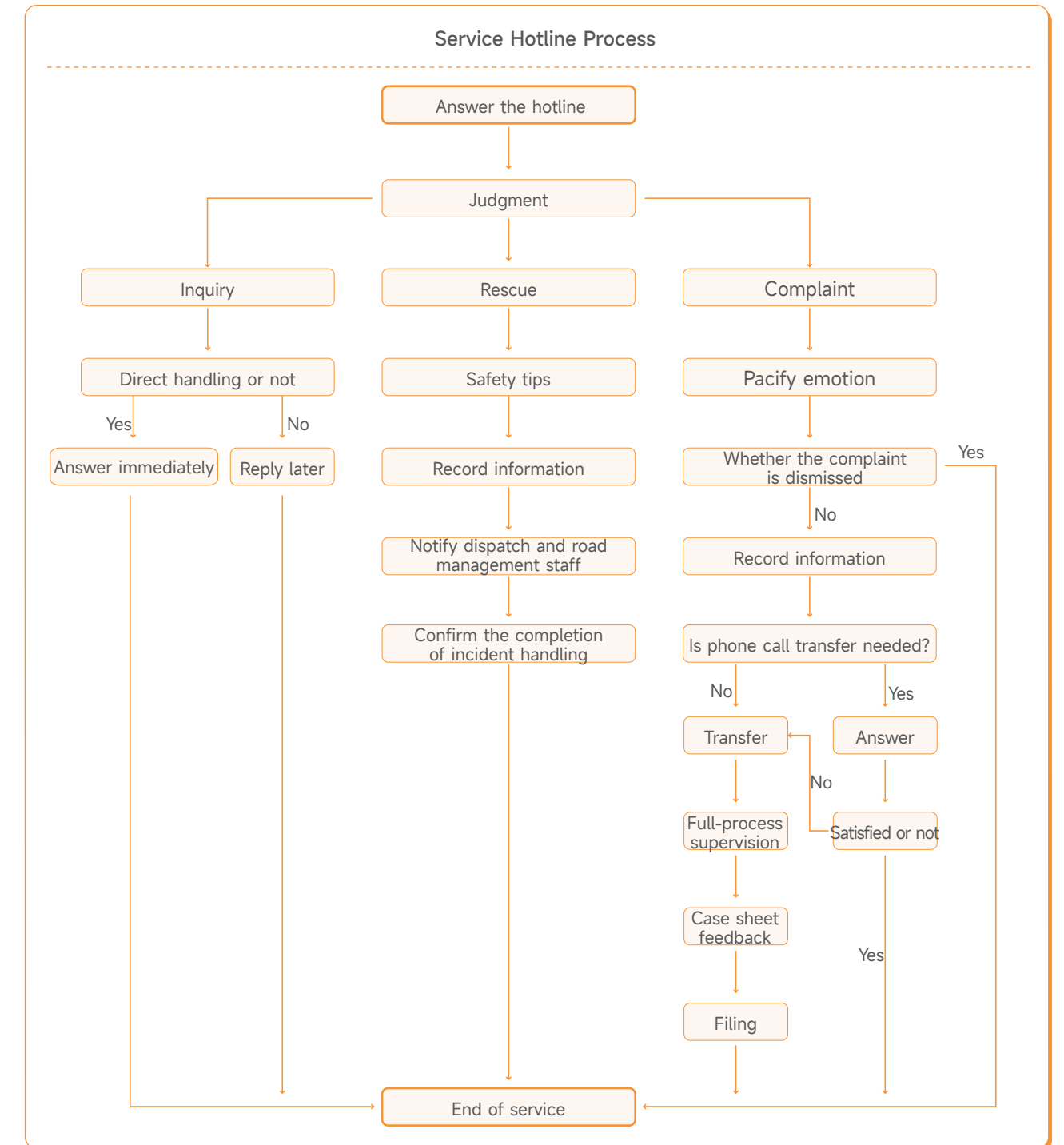
## Customer complaint process

According to the principle of "Unified management, classification and categorization, graded treatment, and return-visit evaluation", Shandong Hi-speed has formulated *96659 Service Hotline Management Measures* and *Complaint Handling Management Measures* in combination with actual work. According to the categories of information, information is divided into:

<b>Complaint information</b>	When the information service staff receives the complaint information, he will ask the complainant's name, contact information, complaint content and other relevant information in detail.
<b>Report and requesting information</b>	When the information service staff receives the alarm information, he will ask the alarm person's position, direction, alarm reason and other relevant information in detail, and notifies the road management or other relevant departments in time.
<b>Inquiry information</b>	When the information service staff receives the inquiry information, he will answer it according to the inquiry content, and note the name and contact information of the inquirer whose inquiry cannot be answered immediately, and reply it after investigation.



In order to give full play to the consultation, rescue and complaint functions of the travel service hotline, improve the service quality of the hotline, establish a standardized hotline service quality inspection mechanism, provide high-quality travel information services, and strengthen the management of information service staff, the Company strictly implements work discipline and dressing standards, ensures good working conditions and establishes a favorable social image of the Company.

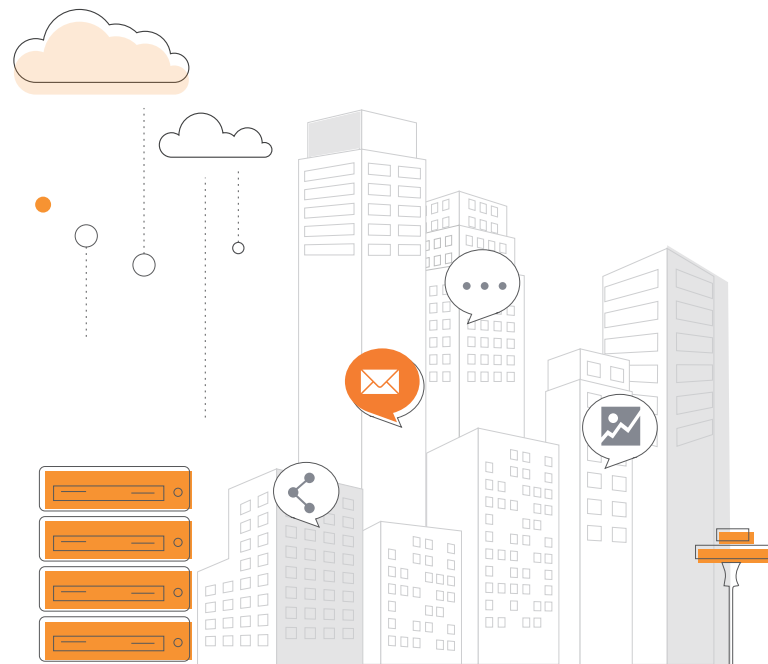




## Digital upgrading

According to the overall work deployment of the Company's digital transformation, with the overall goal of achieving "Digital Shandong Hi-speed", provide digital support for building "a domestic first-class infrastructure investment, construction and operation service provider".

Reinforce the digital "New Infrastructure" base	"Cloud-network-edge-end" integrated "New Infrastructure" base
Improve the "Three Capabilities"	Digital operation capability, data service capability, digital output capability
Build "Four Highlands"	Key core technology innovation highland, enterprise digital intelligence sharing demonstration highland, digital ecological cultivation highland, and digital economic industry development highland
Build "One Demonstration Project"	Jinan-Qingdao Expressway Digital Upgrading Demonstration Project



### Case 1 Work deployment of "paper-to-electronic" invoices

According to the national expressway manual toll lane "paper-to-electronic" work deployment since February 20, 2023, Shandong Province expressway toll station manual toll lane (including self-service payment lane) will use toll electronic invoice from then on. For toll stations that have enabled electronic invoices, manual toll lanes (including self-service payment lanes) will no longer provide paper invoices, and drivers and passengers can get electronic invoices through "Manual Toll Electronic Invoice Mini Program of Shandong Province", "Ticket Stub Mini Program" or "Changhetong APP".



### Case 2 CRM Management System of the Information Group

In order to realize the digitalization of business opportunity and customer management, the Information Group has introduced CRM management system. The system covers basic data of business opportunities and customers, as well as work plans, collaborative tasks, leader comments, operation logs and other data of business opportunities, forming a data support for scientific decision-making of business opportunities and featuring the traceability of the whole process. With the application of this system, the Company has realized the intelligentization of business opportunities and customer analysis, and greatly improved work efficiency and decision-making level.

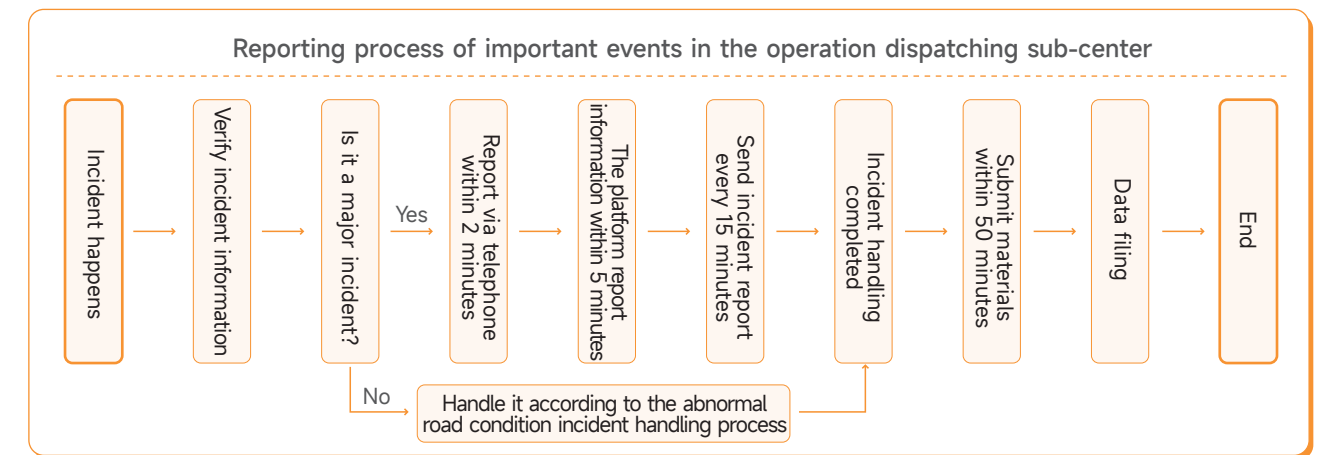


CRM Management System

## Travel service emergency management

Shandong Hi-speed ensures that road operation information will be released to the outside and inside in a timely and accurate manner in the case of abnormal emergencies and major traffic accidents, and that important events will be reported in time. In June 2023, Shandong Hi-speed issued *Emergency Plan for Public Travel Information Service Guarantee*.

The Company established an emergency response management leading group composed of the leaders in charge of road and bridge operation of the Company as the group leader, the main responsible persons of the Operation Division and each road and bridge operation management unit and the responsible persons in charge, and established an emergency coordination and guarantee group for public travel information service and an emergency response group for public travel information service to undertake specific emergency response work under the leadership of the emergency response management leading group.



## Customer service training

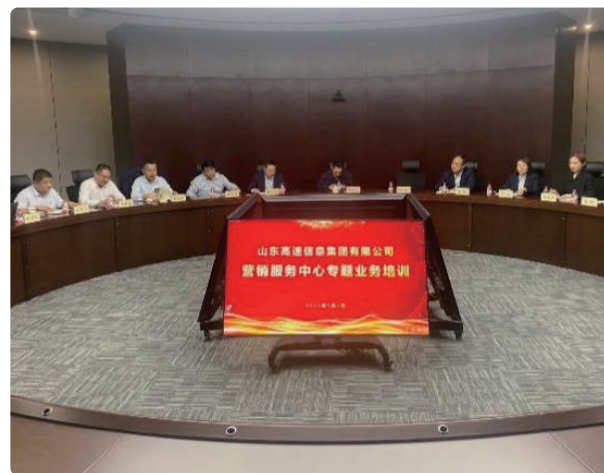
Every year, the Company conducts satisfaction surveys on all subordinate units and service areas of expressway transportation management through internal surveys and external third-party surveys to achieve full coverage.

According to the annual work plan of the Operation Division, each road and bridge operation unit formulates an annual training plan for its travel service business, and organizes at least one business training activity every six months:

<b>Special training</b>	The training includes information collection, submission and review, system platform operation, 96659 hotline training, etc. After the training, the business examination is conducted, and the training plan, training courseware, sign-in form, training plan, training photos, examination questions, transcripts, training summary and other materials are summarized.
<b>Simulation drill</b>	Through desktop deduction, online drill, on-site drill, joint drill and other ways, the ability to deal with road congestion, traffic accidents, severe weather and other coping capabilities will be specially improved, and the drill scheme, drill plan, drill topic, sign-in sheet, drill photos, drill summary and other materials will be summarized.
<b>Skill competition</b>	Organize information disposal, 96659 answering, complaint handling and other special or comprehensive skills competitions, summarize implementation plans, schedules, personnel lists, competition photos, competition summaries and other materials.

### Case 1 The first business training of the Information Group Marketing Service Center

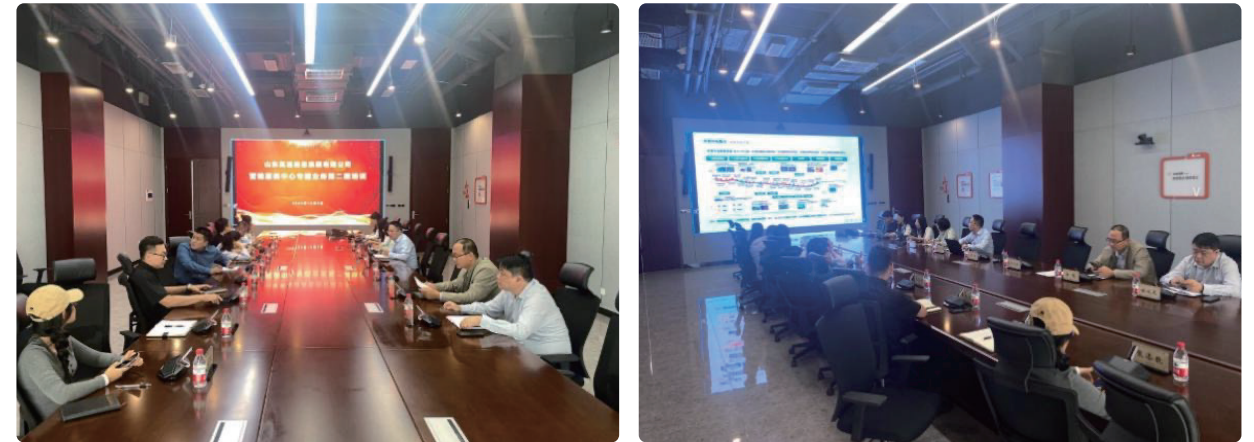
On May 4, 2023, Information Group launched the first business training for marketing service center centering with two themes: new energy technology, smart tunnel and intelligent video analysis, aiming to improve the business ability of all employees and promote market development.



The First Business Training of the Marketing Service Center

### Case 2 The second business training of the Information Group Marketing Service Center

On October 8, 2023, Information Group launched the second business training for marketing service center with the theme of zero carbon intelligent expressway technology of Jinan-Qingdao Middle Line. Through this training, all employees have deepened their understanding of the business, which is conducive to promoting the smooth development of the business.



The Second Business Training of the Marketing Service Center

#### Key performance

Customer complaints

3,655

Customer complaints resolved

3,655

Customer service hotline responses

550,263

Customer service hotline satisfaction

99.77%

Customer complaints response assessments

4

Pass rate of customer complaint response assessment

91.28%

Disclosure of customer information

0



## Information Security

### Information security systems and regulations

Shandong Hi-speed actively adheres to the policy of "active utilization, legal management, scientific development and safety assurance". The Company formulated the *Measures for the Management of Network and Information System Security* in accordance with the *Internet Security Law*, *Data Security Law* and other laws and regulations. Information Group passed ISO 27001 Information Security Management System Certification, and passed the data management capability maturity assessment in May 2023, reaching the Robust Level (level 3); in November, it passed the data security capability maturity assessment, reaching the Level 2.



ISO 27001 Certification



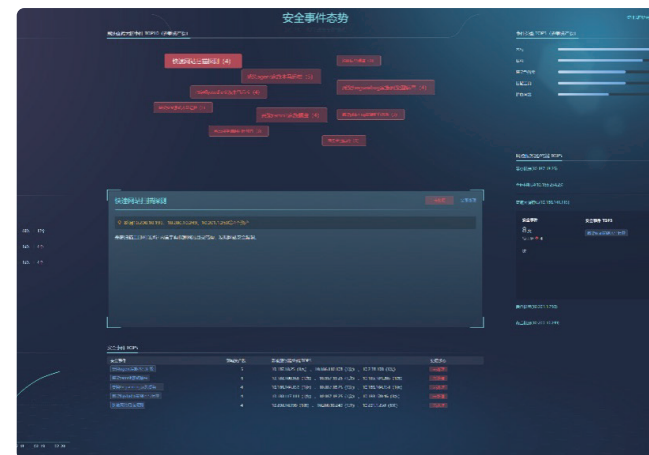
Data Management Capability Maturity Robust Level (Level 3)



Data Security Capability Maturity Level Certificate

### Information security construction

In order to consolidate the foundation of digital transformation and meet the development needs of intelligent high-speed construction, Shandong Hi-speed has built a high-speed cloud data center and timely expanded according to business needs. The construction of high-speed cloud data center provides sufficient computing resources for key construction projects such as "Digital Penetration Project", "Smart Brain", "Smart Expressway" and "Highway No.1", meets the innovative application needs of mobile Internet, cloud computing, big data, Internet of Things and other fields, and opens up the "information tunnel" of the transportation industry. After expansion, the high-speed cloud data center has 103 cabinets, which can provide 19,018 CPU cores, 51,104 G memory, 1,396 T efficient cloud disk, 389T object storage, and 116T SSD efficient cloud disk. At present, the CPU allocation rate of high-speed cloud data center is 53.71%, the memory allocation rate is 67.95%, the actual utilization rate of Cloud Block Storage is 40.04%, and the actual utilization rate of SSD is 4.9%.



High-speed Cloud Data Center Security Incident Situation Large Screen

In 2023, the Information Group cooperated with Shandong Weiping Information Security Evaluation Technology Co., Ltd. (Weiping Company), which provided equal protection evaluation services according to business needs, and provided network security-related services such as emergency duty, vulnerability scanning, penetration testing and website security monitoring.

### Information security team

The Company established a network security and informatization leading group, with the Chairman and General Manager serving as the leader of the leading group.

<p><b>Firstly</b></p> <p>Establish a safety management system and operating procedures covering all aspects of network and information system operation, maintenance and use, and implement network security protection responsibilities</p>	<p><b>Secondly</b></p> <p>Arrange regular grade assessment in strict accordance with grade requirements, and perform safety rectification for systems that fail to meet safety protection grade requirements</p>	<p><b>Thirdly</b></p> <p>Conduct vulnerability scanning and security hardening of information systems on a regular basis, update malicious code libraries and system patches in a timely manner, and conduct penetration tests on important information systems at least once a year</p>	<p><b>Finally</b></p> <p>Strengthen the security management of authority, account and password, and avoid system security problems such as weak password, clear password and unauthorized access through technical and management measures</p>
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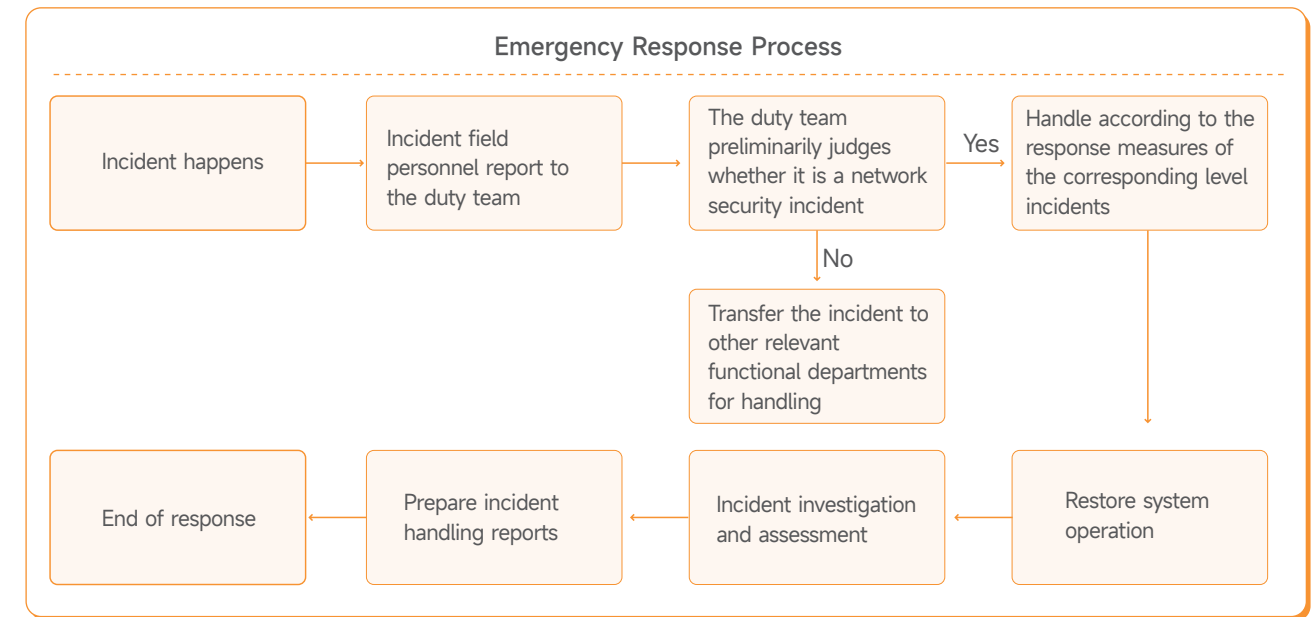
### Safety emergency plan

In 2023, the Information Group formulated the Cyber Security Emergency Plan, which divided cyber security incidents into eight categories and four levels, and established a leading group for cyber security work to coordinate the emergency response work of cyber security incidents, with an office in charge of daily affairs. This is to strengthen information security management, prevent and resolve all kinds of information security risks, and ensure the normal operation of business and data security.

**Cyber Security Incident Classification**

Harmful program incident	Network attack incident	Information destruction incident	Information content security incident
Equipment and facility failure	Catastrophic incident	Internal potential threat incident	Other information security incident

Level	Severity	Color	Judgment criteria
Level I	Especially serious	Red	<p>New network and information security threats are discovered, which may affect all networks and critical information systems within the global scope and have the possibility of spreading to the global.</p> <p>The loss or theft, tampering and counterfeiting of state secret information, important sensitive information and key data pose a particularly serious threat to national security and social stability.</p>
Level II	Major	Orange	<p>New network and information security threats are discovered, which may affect all services of the basic network or more than two important information systems in the global scope, and may continue to spread.</p> <p>The loss or theft, tampering and counterfeiting of state secret information, important sensitive information and key data pose a serious threat to national security and social stability.</p>
Level III	Larger	Yellow	<p>New network and information security threats are discovered, which may affect all services of 1-2 basic networks or 1-2 important information systems in the global scope, without proliferation.</p> <p>The loss or theft, tampering and counterfeiting of state secret information, important sensitive information and key data pose a serious threat to national security and social stability.</p>
Level IV	General	Blue	<p>New network and information security threats are discovered, which may affect part of the network of a certain basic operator or part of the business of 1-2 important information systems in the global scope, without proliferation.</p> <p>The loss or theft, tampering and counterfeiting of state secret information, important sensitive information and key data pose a certain threat to national security and social stability.</p>



During the reporting period, the Company continued to improve its information security protection capability and strengthen information security control through training and publicity activities, daily network security inspection and hardware security inspection, network security assurance during the Spring Festival and network security re-protection during the 20th National People's Congress, so as to lay a solid foundation for the safe operation of information systems.

### Case 1 High-speed Cloud Data Center fire emergency drill

On May 9, 2023, Information Group organized and carried out fire safety emergency drills. Through this activity, the ability of employees to deal with emergency emergencies and the actual operation ability of fire fighting equipment were improved, laying a solid foundation for further data security.



Fire emergency drill



## Case 2 Information Group's Network Security Publicity Week

In order to promote the concept of network security, popularize network security knowledge and promote network security skills, from September 11 to 17, 2023, the Information Group launched various network security publicity week activities and invited a number of senior experts for training. Through this activity, all employees enhanced their awareness of network security and prevention, and improved their network protection skills.



Brochure Promotional Video in Elevators Information Security Awareness Training

## User data protection

Shandong Hi-speed follows the principle of "Whoever collects information is responsible for protection", strengthens user information security, establishes "Shandong Hi-speed Operation Data Classification Management Platform", adopts different data protection strategies for data with different importance and sensitivity, meets data risk management, compliance and security requirements, and improves the security level of operation data.

When collecting and using personal information, each unit and department shall take the following measures:

The rules of collection and use shall be made public, and the purpose, method and scope of information collection and use shall be clearly stated, and the consent of the collected person shall be obtained.

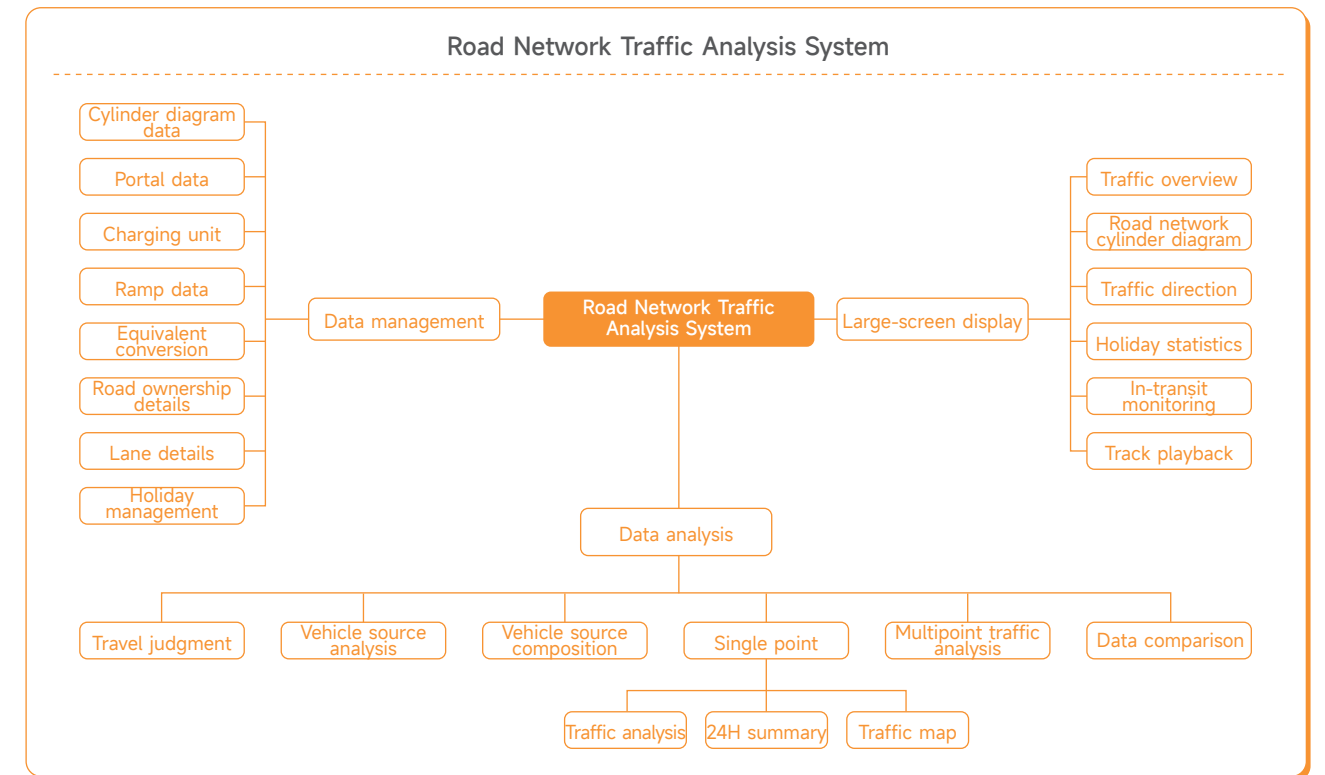
Do not collect personal information unrelated to the services provided, and do not collect, use or process the stored personal information in violation of laws, administrative regulations and agreements between the parties.

Necessary measures should be taken to prevent information leakage, damage and loss. In the event of information leakage, damage or loss, remedial measures shall be taken immediately, and users shall be informed and reported to the Company in a timely manner in accordance with regulations.

## Road network traffic

In order to obtain the data of motor vehicle flow, vehicle type and vehicle speed of expressway, Shandong Hi-speed realizes in-depth mining, aggregation and visualization of historical data and real-time data based on distributed multi-node database, deeply detects the traffic flow and flow direction of road network, accurately locates abnormal data of equipment, comprehensively monitors the road network status from link and business levels, finds abnormal traffic flow and ensures the operation safety of road network.

The Company's traffic analysis system is mainly divided into three parts: basic data management module, data visualization module, data analysis module.



### Key performance

Information security and privacy training(No.)	Number of participants in training(Person)	Total investment in data security(Ten thousand RMB)	Information security and privacy violations(No.)
6	3,485	186.14	0

## Supply Chain Management

Shandong Hi-speed follows the principles of openness, fairness, justice and honesty and credit in supply chain management, and has formulated supplier management systems such as *Bidding Procurement Management Measures* and *Non-bidding Procurement Management Measures*. The Company's bidding procurement leading group (sunshine procurement leading group) is the highest leader and decision-making body of the Company's bidding work, and the Chairman of the Company is the group leader.

### Supplier audit

After project approval, the Company shall issue procurement announcement to publicize supplier qualification requirements (including qualification requirements, performance requirements, reputation requirements, personnel requirements, etc.). The evaluation team shall conduct preliminary evaluation on response documents, and reject the quotation qualification of suppliers who do not meet the requirements.

### Supplier evaluation

The Company carries out graded assessment on suppliers by means of daily assessment and annual assessment, and the assessment results are incorporated into the annual assessment system. The purchaser shall be responsible for organizing the project review. The assessment work shall be implemented at different levels, and daily assessment and annual assessment shall be adopted, and the assessment results shall be incorporated into the annual assessment system.

### Supplier ESG management

For the bidding and procurement process of engineering construction projects, the Company puts forward specific requirements in the bidding documents to ensure the performance of suppliers in safety, quality and environmental protection. These requirements include daily supervision of migrant workers' wages (labor costs), rules and regulations on safe production management, safety inspection procedures and construction safety management requirements, and instructions from the Supervisor on safe production. In terms of environmental protection, the contractor must strictly abide by relevant national environmental protection laws and regulations and relevant industry standards, and make clear regulations on reducing construction noise, suppressing dust and avoiding pollution of water bodies.

### Responsible procurement

Shandong Hi-speed stipulates that the units and personnel engaged in procurement activities shall abide by relevant laws and regulations and the rules and regulations of the company and their own units, abide by discipline, be honest and self-disciplined, earnestly perform their duties, and shall not neglect their duties, abuse their powers or engage in malpractices for personal gain, and shall not illegally interfere in procurement activities in any way. The supplier shall sign an integrity agreement and require the supplier to provide in the response document a letter of commitment that the supplier unit, legal representative and key management personnel to be appointed in the response document have not committed bribery crimes in the past three years, and the evaluation team shall sign a letter of avoidance confirmation.

## Case Information Group's integrity procurement training

The Information Group insists on integrity in procurement, requires suppliers to sign integrity contracts, strengthens the supervision and inspection of procurement activities throughout the process, ensures the compliance and transparency of procurement activities, and improves the integrity awareness and professional ethics of all employees through measures such as integrity education and training activities, laying a solid foundation for the steady development of the Company.



### Key performance

2022		
Total number of suppliers	Suppliers in Shandong Province	Suppliers in the mainland of China except Shandong Province
619	434	185
2023		
Total number of suppliers	Suppliers in Shandong Province	Suppliers in the mainland of China except Shandong Province
3,636	2,947	689



# Caring for Employees and Making Together for the Future

Making use of every man's talent  
according to his actual conditions.

—Talent Concept of Shandong Hi-speed

Labor Relations	87
Career Development	92
Welfare and Care	95





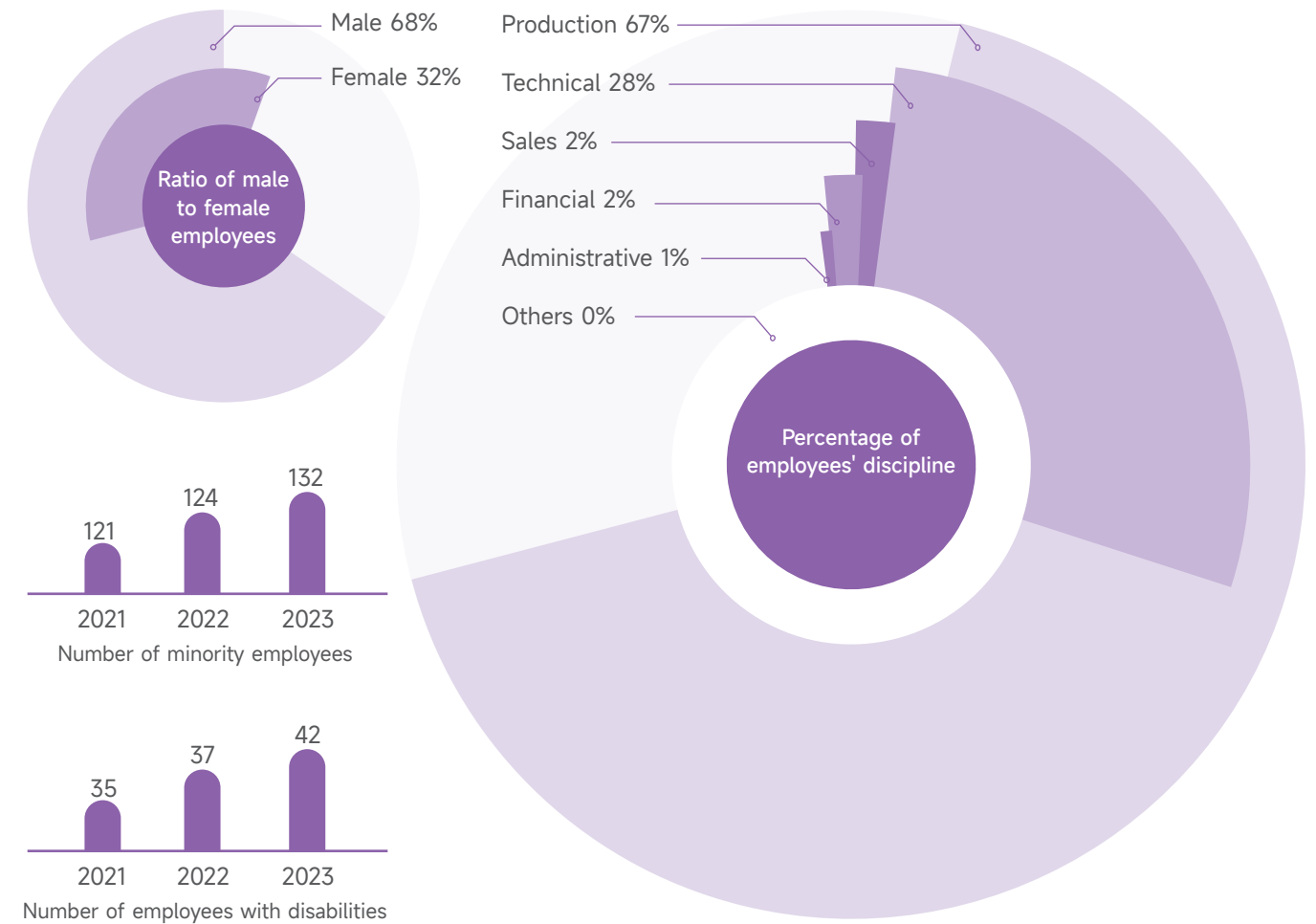
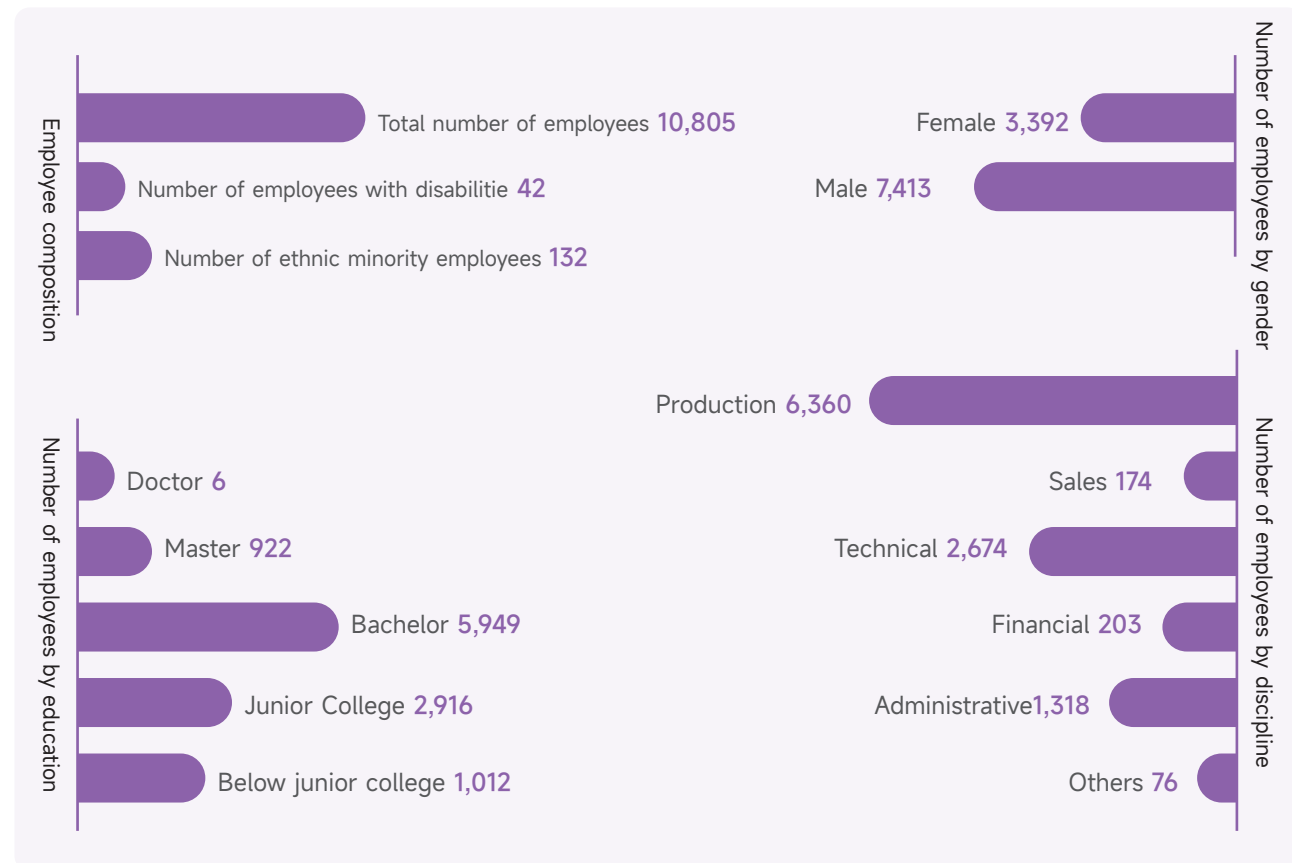
## Labor Relations

### Employee recruitment and employment

Shandong Hi-speed strictly abides by the *Labor Law*, *Labor Contract Law* and other laws and regulations, safeguards the legitimate rights and interests of laborers, formulates internal systems such as the *Measures for the Management of Employee Recruitment* and the *Regulations on the Management of Labor Relations*, adheres to the labor employment standards of equality between men and women, equal pay for equal work and non-discrimination, constructs the employee rights and interests guarantee system, and builds a solid talent foundation for the sustainable development of the enterprise.

The Company follows the rules of fixed posts and fixed staffing, and adopts the forms of campus recruitment and social recruitment in accordance with the principle of "openness, equality, competition, and merit". In the process of recruitment and employment, the Company strictly screens employees' personal identity information, implements the management requirements of full-time labor contract system, and eliminates illegal employment behaviors such as child labor and forced labor from the source.

In 2023, the signing rate of labor contracts of the Company was 100%, and the social insurance coverage rate was 100%.



### Employee compensation and benefits

In order to standardize the Company's salary management, improve the Company's internal incentive and restraint mechanism, improve the Company's core competitiveness, comprehensively and truly evaluate employees' job performance, ensure that the Company's development strategic objectives are effectively decomposed and fully implemented in specific work, and achieve the goal of fully integrating the work process and performance management throughout the cycle, and continuously improving work efficiency and effectiveness, the Company has formulated the *Employee Compensation Management System* and the *Employee Assessment Method*, which linked the benefits of employees and the Company and may increase and decrease the same, and followed the principle saying "Pay by post, salary change by post, equal pay for the same post, priority for efficiency, consideration for fairness, implementation of assessment results, and more pay for more work."

The employee performance appraisal index system consists of KPI and CPI, which is based on quantitative analysis and supplemented by qualitative analysis to form a comprehensive conclusion of employee performance appraisal, where quantitative analysis and qualitative analysis complement each other.



### Employee assessment

Daily assessment	Quarterly assessment is the main method, which can be refined into monthly assessment, focusing on the performance of post responsibilities and completion of work tasks.
Annual assessment	The comprehensive reflection of each quarterly (monthly) assessment can be taken as the annual assessment score based on the average score of daily assessment, or linked with the annual key tasks and department achievements as the annual assessment score based on the daily assessment score.

The assessment results are divided into four grades A, B, C and D according to the results. According to the *Employee Compensation Management System* formulated by the Company, they are applied to the payment of performance salary, adjustment of rank (grade), selection of excellent talents and renewal, termination and cancellation of labor contract. They are also used as the condition for evaluation of employees' performance.

### Equity incentive

August 10, 2020	The first grant registration of stock options was completed, with 43.2 million shares granted for the first time and 206 people granted for registration.
May 31, 2021	The registration of reserved shares of stock options was completed, with 4,663,700 reserved shares registered and 34 people registered for reserved shares.
August 2, 2022	Completed the first exercise by the first granted persons, with a total of 16,046,600 shares listed and circulating, and a total of 195 exercising persons.
July 12, 2023	Completed the exercise of the second exercise period granted for the first time and reserved for the first exercise period, with a total of 13,185,200 shares listed and circulating (11,399,800 shares granted for the first time and 1,785,400 shares reserved for grant), and a total of 222 exercising persons (189 granted for the first time and 33 reserved).

On the basis of strict implementation of national statutory benefits, the Company effectively promoted independent welfare policies, including enterprise annuity, supplementary medical insurance, on-the-job training, health examination, food subsidies, heating fees, childcare fees, etc., further enriching the employee welfare system.

The Company has formulated and implemented the *Regulations on Attendance and Leave Management*. For overtime work due to work needs, we will arrange equal time off in the year to ensure the balance between work and life of employees. In addition, besides national statutory holidays, we also provide marriage leave, funeral leave, annual leave, Spring Festival home leave and other paid holidays, so that employees can better handle personal affairs and enjoy their life.

### Employee Compensation Composition

Fixed salary	It is linked to the position, position value, ability, working years and service contribution to the country and the enterprise of employees.
Floating wage	It is linked to the Company's operation and the performance appraisal of individual employees.



### Employee satisfaction survey

Shandong Hi-speed conducts employee satisfaction surveys through various channels every year to fully understand employees' demands and actively respond to employees' opinions and suggestions. The Company conducts interviews with employees through inspection and special inspection to understand their job satisfaction, record their problems in detail, form a list of problems and propose solutions. Moreover, we will also hold seminars such as youth employee seminars to listen to the opinions and suggestions put forward by employees and deal with them.

#### Key performance

In 2023, the Company's employee satisfaction rate was 100%, and the survey participation rate was 100%.

## Democratic management

Shandong Hi-speed has always been committed to creating an open and transparent working environment, providing smooth, effective and reasonable communication channels for employees, and ensuring employees' right to know and participate in the Company's operation and management. We have established a Labor Union to safeguard the legitimate rights and interests of the broad masses of employees, regularly convene employee representative conferences, listen to the opinions and suggestions of employee representatives on the development of the Company, and actively promote democratic management. Our goal is to enable each employee to maximize their personal value by giving full play to their abilities in a fair and just environment.

The Company attaches importance to opinions and feedback from employees, unblocks employee complaints and feedback channels, actively listens to employees' voices, and safeguards employees' legitimate rights and interests. Employees who have objections to the salary and performance appraisal results may appeal to the HR department of the unit within the publicity period. The relevant departments of the company will investigate the employee complaints and put forward investigation opinions to form an investigation report. If the complaint is true, the employee can be re-assessed or re-revised assessment results, and relevant responsible person put forward handling opinions. If the employee is still dissatisfied with the handling result, he/she may lodge a complaint again, and the Company will ensure that the employee's claim is resolved.



### Case

#### The Company held the sixth session of the third employee (Labor Union member) congress

On January 30, 2023, the Company held the sixth session of the third employee (trade union member) congress, 2023 Working Meeting and Safe Production Conference to review and summarize the work in 2022 and arrange and deploy the tasks in 2023. At the meeting, the Chairman summarized and reviewed the remarkable achievements made by the Company in the past year and made arrangements for the Company's work in 2023. The General Manager made the 2022 annual work report on behalf of the management team. The Deputy Secretary of the Party Committee conveyed the spirit of the fourth employee (trade union member) congress and 2023 annual work conference of the Group. The Secretary of Discipline Inspection Commission read out the resolutions of the employee (Labor Union member) congress, and the Deputy General Manager read out relevant commendation decisions.



Employee (Labor Union Member) Congress

## Career Development

Shandong Hi-speed fully considers the individual career development aspirations and wishes of employees, provides rich and diverse training resources and job opportunities, continuously improves the overall quality of employees, fully releases the development vitality of the Company, and lays a solid talent foundation for the long-term development of the Company.

### Employee training management system

Shandong Hi-speed adheres to the talent concept of "Making use of every man's talent according to his actual conditions", attaches great importance to employee training, continuously activates employee vitality, and provides all-round vocational training and guidance for employees at different positions and levels. The Company formulated and improved the Staff Training Management Measures to help employees keep learning and making progress and realize the unity of individual and Company development.

The Human Resources Department of the Company is the centralized management department of employee training, responsible for establishing the Company's training system, covering four basic categories: internal training, external training, induction training for new employees and training for personnel of special types of work. The training content involves corporate culture, company management rules and regulations, work specification requirements, job responsibilities, professional technical knowledge, etc. The Company training takes "Business training, knowledge learning, ability improvement" as the carrier, and guides and helps employees to enrich professional knowledge, improve professional ability, develop professional style and cultivate professional spirit through centralized training, business competition, online learning, examination and other diversified forms under the principle of "Precisely-targeted training and exercise". In practice, the Company has developed and discovered a number of "business backbones" and "post experts" and expanded the professional talent team. During the year, the Company's employee training coverage reached 100%.

### Key performance

In 2023, the Company held  
**2,633**  
employee training sessions

With a total number of  
**10,805**  
persons trained

A total training duration of  
**822,436** hours

An average of  
**76.12** hours  
of training per capita

A total training investment of  
**RMB 10,000,300**



## Case 1 Induction training for new employees

In order to help the new campus recruits in 2023 to clarify the company strategy, integrate into the corporate culture and accelerate the completion of role transformation, from August 9 to 11, the Company organized the induction training for new employees, and a total of 32 new employees from each subsidiary and the operation management center participated in the training activities. During the training period, the Company invited experts from relevant industries to teach a series of courses such as "happy entry password", "don't let communication become your barrier", and "innovative thinking and innovative management" for new employees; the Board Secretary Office, Investment Management Department and Human Resources Department of the Company taught on the Company's corporate culture, "14th Five-Year Plan" development plan, human resources system, etc.



Induction Training for New Employees

## Case 2 Logistics training

In order to further improve the work style of the organs and improve the quality of administrative and logistic services, in September 2023, the Company held large-scale training and competition event for administrative and logistic works. The Secretary of the Board of Directors of the Company, the Office, and the heads of the comprehensive management departments of 32 subordinate units, the vehicle staff, the drivers and the cook representatives participated in the event. The event arranged theoretical examination and two practice contests for drivers and cooks. Senior experts were invited to conduct training on vehicle safety, food safety and gas safety. Through this training, the professional ability level and work enthusiasm of the participants were further improved.



Administrative and Logistic Work Training

## Talent development goals and planning

Shandong Hi-speed systematically analyzes and grasps the current situation of human resources in combination with business needs to determine talent needs and gradually establish a long-term mechanism for talent supply and demand evaluation.

## Talent development goals and planning

Establish talent big data system	Integrate the talent data of each unit, establish a unified and complete personnel information database and convenient and efficient classified query channels, improve the informatization, refinement and efficiency of talent management, and ensure the scientific and accurate talent decision-making of the company.
Dynamic analysis of talent demand	Each unit shall regularly put forward the demand plan and specific requirements for relevant talents to the Company in combination with the actual business development and medium and long-term planning.
Talent classification and assessment	For talents of different levels and categories, we should classify and assess the talent needs and make reasonable responses.
Strengthen the construction of reserve talent team	Establish a regular reserve talent selection mechanism and always have a certain number of reserve personnel.

## Training evaluation and assessment mechanism

In order to ensure the training effect, Shandong Hi-speed has established and improved the training evaluation and assessment mechanism. On the one hand, the Human Resources Department of the Company will consider the annual training items as the assessment contents in the annual operation performance appraisal; on the other hand, the Company requires all units and departments to review the overall implementation of the activities after the training activities, comprehensively summarize the practices, experiences and achievements of the activities, carefully sort out and analyze the deficiencies and problems existing in the implementation of the activities, and form a summary of the training activities. The Human Resources Department of the Company will propose improvement suggestions according to the summary of activities.

In addition, the Company will select internal trainers at all levels based on the principles of fairness, impartiality, openness and objectivity to provide excellent lecture resources for the Company's training activities and empower employees' career development.

## Career advancement and development

In order to further strengthen the standardized management of the Company's positions, establish a scientific and unified position management system, and provide employees with multi-channel career development paths, the Company has formulated internal systems such as the *Position Management Measures, Employee Development Channels and Internal Position Adjustment*, and established three job categories, i.e., management, technology and skills, to provide equal promotion opportunities for employees of different types and specialties.

The Company's rank system consists of 18 ranks, 26 grades, with clear qualification standards and promotion paths, forming a systematic framework with clear and standardized operation. In addition, the Company has continued to deepen the construction of dual career development channels to ensure that employees have sufficient development space and opportunities, and maximize the professional expertise of various talents. Furthermore, the Company has further optimized the career promotion channels of employees by organizing and carrying out independent evaluation of skilled talents in various road and bridge operation units in the province.

## Key performance

In 2023,  
**14.68%**  
of positions were filled through  
internal transfer or internal recruitment

**234**  
employees were  
transferred internally

**2.17%**  
of employees  
transferred internally

## Welfare and Care

### Worker's Home

In order to enhance the sense of identity, belonging and happiness of grass-roots employees, truly feel the warmth of "home" and create a harmonious and positive atmosphere, the Labor Union of Shandong Hi-speed actively organizes all units to launch a "Worker's Home" campaign. This campaign played the role of Labor Union's organization in concentrating and serving employees, and built a warm home for the majority of employees. In such a campaign, employees not only felt the warmth of home, but also enhanced their cohesion and sense of belonging.



Worker's Home of Dezhou Toll Station

Laixi Toll Station's "Small Home" for Employees

### Care for employees

The Company attaches great importance to the protection of the rights and interests of female employees, strictly abides by the Law on the Protection of Women's Rights and Interests and other laws and regulations, strengthens the protection and leave of female employees during pregnancy, childbirth and lactation, etc. In addition to statutory benefits, the Company also provides benefits for female employees in childbirth and leave, and organizes activities with the theme of Women's Day at least once a year to facilitate the life and work of female employees. At the same time, the Company also attaches importance to the balance between work and life of employees, actively organizes various cultural activities and sports events, enriches the spare time life of employees, promotes the physical and mental health of employees, and enhances the cohesion and team identity of employees. We have enhanced employees' sense of belonging by creating a united and harmonious working atmosphere.

#### Protection of Women's Rights and Interests

Percentage of women among management staff

17.62%

Number of employees taking parental leave

503

Return rate after maternity leave

100%

Proportion of women among technical staff

29.15%

Return rate after parental leave

100%

Number of employees taking maternity leave

227

### Case 1 "Unity Cup" Basketball Game

During the reporting period, the "Unity Cup" employee basketball competition hosted by Shandong Hi-speed Group was successfully ended. During the competition, the volunteer service team composed of the Beijing-Shanghai Ji'an Operation Management Center of the Company provided all-round game services for each participating unit, and made every effort to ensure the competition, winning unanimous praise from the referee group and each participating unit. This basketball game not only enriched the sports life of employees, but also promoted the spirit of unity and cooperation among employees, showing the Company's positive, united and cooperative enterprise spirit.



### Case 2 Fun Sports Game

On August 4, 2023, the Labor Union of Beijing-Shanghai Ji'an Operation Management Center held the fun sports game of "Passion · Burning Jilai". This fun sports game set up five competitions: "rope skipping", "shuttlecock kicking", "running with ball", "hula hoop" and "plank", which not only test individual sports competition level, but also test team cooperation ability. At the game, everyone followed the principle of "Friendship first, competition second", demonstrating the spirit of unity and cooperation and "bravely climbing the peak" among employees. This game not only enriched the spare time life of the staff, but also inspired the tenacity of the staff to face difficulties, laying a good spiritual foundation for their work in the future.



### Case 3 "Warm Winter" Activity

In order to actively practice the spirit of the 20th National Congress and give full play to the bridge role of Labor Union, on the occasion of the Spring Festival, various forms of "Warm Winter · Warm Expressway" consolation activities were arranged to reach all front-line employees and employees in difficulty of the Company, letting the Company act as employees' "family members" and do "warm things" for the grassroots staff. This condolence activity reflected the humanistic care of the Company for employees, made employees feel the love of the Company, and strengthened the cohesion and sense of collective of employees.

Weilai Operation Management Center distributed milk, eight-treasure porridge, insulated lunchboxes and other consolation products to each grass-roots station, sent Spring Festival blessings to the staff, and paid special visits to 4 hospitalized and needy-family workers.



### Case 4 Spring Festival Activities

In order to fully show the new life, new fashion, new look of the times, and form a healthy, progressive, civilized and harmonious festival atmosphere, the Company organized civilized Spring Festival activities through the Labor Union, encouraged employees to participate voluntarily, refine their personal quality in the activities, feel happy in the games, and also develop team spirit and cooperation ability in the activities.





# Giving Back to Society and Practicing Public Welfare

Happy Travel Together,  
Working Hard Together.

——Team Concept of Shandong Hi-speed





## Local Development

### Supporting local development

Shandong Hi-speed has been continuously strengthening its investment in rural revitalization. During the reporting period, the company actively participated in rural infrastructure construction, helped rural areas improve their living facilities and industrial facilities, and effectively promoted rural economic growth and income increase through various ways such as poverty alleviation through industrial development, employment, and education.

#### Case 1 Construction of steel structure workshop

In 2023, the Company, together with other first secretaries, and through local government's active communicate and coordination, invested RMB 1.65 million in the steel structure workshop of Heze Zhongding Renewable Resources Recycling Co., Ltd. The workshop covers an area of 2,600 square meters and aims to help enterprises increase production and expand capacity. This move will bring stable village collective income of RMB 132,000 per year, further promoting the development of poverty alleviation work.



#### Case 2 Investment in infrastructure

In order to promote rural revitalization and rural economic development, the Company invested RMB 250,000 to built 10 new motor-driven wells in the basic farmland of Jiazhai Village, erected 24 poles and laid 4,000 meters of cables. We also provided 10 sets of power distribution cabinets and submersible pumps that can pump water by swiping cards, solving the irrigation problem of more than 700 acres of basic farmland. These measures have laid a good water conservancy infrastructure to ensure a bumper harvest of grain and made positive contributions to rural revitalization and rural economic development.



## Public Welfare Undertakings

As a responsible corporate citizen, Shandong Hi-speed pays close attention to the well-being of people's livelihood. During the reporting period, the Company actively acts in social welfare. The Company encourages employees to participate in activities such as volunteer service and sympathy for villagers during holidays, develops employees' awareness of social welfare, and demonstrates the Company's sense of social responsibility.

### Key performance

In 2023, the Company's social contribution value per share is RMB **1.84**

#### Case 1 Voluntary activities on expressway

During the reporting period, in response to the sharp increase in traffic volume during the Labor Day period, Jinan-Laiwu Expressway organized a youth volunteer service team at stations along the route. In order to improve the holiday travel experience of drivers and passengers, the toll station youth volunteer service team set up "convenience service" post station in the toll square, with "three boxes and one bucket" (medicine box, toolbox, suggestion box, insulation bucket), providing mineral water, hot water, medicine, car repair tools, wet tissue and other supplies 24 hours a day, and installing ETC equipment free of charge. We set up a "paper-to-electronic" invoice consulting service point to guide drivers and passengers to quickly draw electronic invoices one by one; promoted the "Changhetong" APP to drivers and passengers, popularized the functions of the "Changhetong" APP, such as travel navigation, release of goods source info, one-click rescue, pass code (even if the road is closed), and publicized the May Day Holiday travel strategy through information boards, WeChat official account, etc., so as to provide quick help for the public to drive on the expressway safely and show the image of a promising youth enterprise in the new era.



During the festival, a total of 126 road inspections were carried out, with a patrol mileage of 6,080 kilometers and 48 obstacle-clearing rescues, so as to ensure the safe travel of the public.



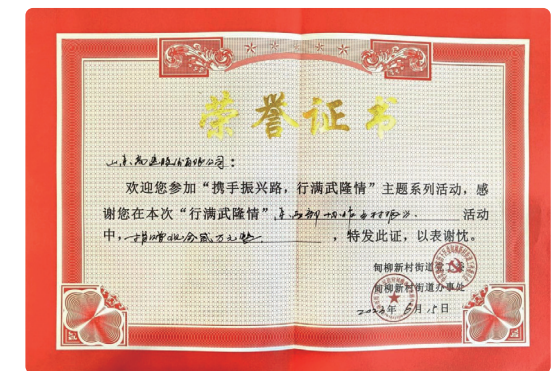
### Case 2 Visit and assistance activities

Before the Spring Festival, the Company visited all Party members and needy people in Jiazhai Village, distributed consolation articles and epidemic prevention materials to children and needy people, discussed vegetable pest control with villagers in Jiazhai, and visited villagers' homes to understand village conditions and public opinions.



### Case 3 "Joining Hands to Revitalize the Roads, with Full Love for Wulong" Activity

The Company actively responded to the theme series activities of "Joining Hands to Revitalize the Roads, with Full Love for Wulong" and donated RMB 20,000 to the Rural Revitalization Foundation of Wulong District in Chongqing City. This move aimed to support Wulong difficult areas and people in difficulty to improve production, living and health conditions, improve their quality and ability, achieve common prosperity, achieve a well-off life and achieve sustainable development. Besides, we were also honored to receive the Certificate of Honor for the East-West Collaborative Rural Revitalization Activities in recognition of our contribution to rural revitalization.



### Case 4 "Warm Sunset" Project helping the elderly

In order to further improve the old-age service system and strengthen the rescue and assistance for the elderly in urban and rural areas, the Company actively responded to the Charity Federation of Shandong Province, launching the "Warm Sunset" project to help the elderly since 2022, donating RMB 1 million every year for 4 consecutive years, with a total donation of RMB 4 million. The project will provide assistance to disabled elderly people with economic difficulties in 39 counties/districts/cities in the Yellow River Basin and 20 key counties for rural revitalization, with about 47,000 recipients. Donated funds will be used to provide care services for disabled elderly people, subsidize disabled elderly people in difficult circumstances to afford nursing institution for the aged and provide other aspects of relief and assistance.

### Case 5 "Charity Day Donation"

In 2023, Shandong Province Charity Federation organized the activity of "Charity Day Donation" to raise funds for charity projects such as helping the poor, helping doctors, helping students, helping the elderly, and helping the disabled. Shandong Hi-speed actively responded to the call and mobilized employees to make donations. The employees actively participated in it and carried forward the traditional virtue of helping others with practical actions, with a total donation of RMB 416,400.

# Appendixes

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## Feedback Form

Dear readers,

Thank you very much for reading this report. We appreciate and look forward to hearing your feedback on this report. Your comments and suggestions are an important basis for us to continuously improve the disclosure of ESG information and promote our ESG management and practice. We welcome and sincerely thank you for your valuable comments!

- Your overall assessment of our ESG performance is:  
 Very good  Good  Fair  Relatively Poor  Poor
- Your overall assessment of this report is:  
 Very good  Good  Fair  Relatively Poor  Poor
- How do you think we are doing in terms of communication with stakeholders?  
 Very good  Good  Fair  Relatively Poor  Poor
- How do you think we are doing in terms of product responsibility?  
 Very good  Good  Fair  Relatively Poor  Poor
- How do you think we are doing in terms of environment, safety and occupational health?  
 Very good  Good  Fair  Relatively Poor  Poor
- How do you think we are doing in terms of employee responsibility?  
 Very good  Good  Fair  Relatively Poor  Poor
- How do you think we are doing in terms of ESG?  
 Very good  Good  Fair  Relatively Poor  Poor
- Do you have any comments and suggestions on our ESG performance and this report?