

SANY[®]
三一重工

2021

SANY Heavy Industry Co., Ltd.
Corporate Social Responsibility Report



CONTENTS



QUALITY / CHANGES / THE / WORLD

三一重工

About this Report	01
Message from the Chairman	03
About SANY Heavy Industry	05
Stakeholder Engagement	15
Feature: "Digitalization, Electrification and Internationalization" Corporate Strategy	17
Key Quantitative Performance Indicators	85
GRI Index	89

01.

Governance and Compliance

Effective Governance	29
Risk Management	31
Corporate Compliance	34

02.

R&D and Product Quality

R&D and Innovation	41
Manufacturing Leadership	43
Quality Management	47
Responsible Supply Chain	50

03.

Sustainable Development

HSE Management System	55
Environmental Protection	57
Low-Carbon Development	59
Intelligent Industrial Parks	62
Health and Safety	64

04.

Workplace and Employees

Fair Recruitment and Labor Compliance	69
Training and Career Growth	70
Employee Satisfaction and Engagement	74

05.

Giving Back to Society

Corporate Citizenship in Action	79
Participation in Rural Revitalization	81



About this Report

This is the 2021 Corporate Social Responsibility Report (hereinafter referred to as “this report”) released by SANY Heavy Industry Co., Ltd. This report is a genuine description of SANY Heavy Industry’s efforts to fulfill its economic, social and environmental responsibilities and strive for sustainable development, and contains its response to major issues that stakeholders focus on. This report has been reviewed by the Board of Directors of the Company and is responsible for the authenticity and effectiveness of the information herein.

Reporting Period

This report covers a reporting period from January 1, 2021 to December 31, 2021. To ensure consistent information this report may extend beyond this period, either backward or forward.

Reporting Scope

This report covers SANY Heavy Industry Co., Ltd. and its subsidiaries.

Data Sources

All the information and data are from the Company’s official documents, statistical reports and financial reports, as well as the information and data collected, summarized and reviewed by the Company. This report is published in Chinese and English. In case of any inconsistency, the Chinese version shall prevail. Unless otherwise specified, the currency unit is RMB *yuan*.

Basis of Preparation

This report is prepared according to the *Rules Governing the Listing of Stocks on Shanghai Stock Exchange (January 2022 Revision)*, the *Guidelines No.1 for Self-discipline Regulation of Listed Companies on Shanghai Stock Exchange -Standard Operations* and refers to the *Global Reporting Initiative’s Global Standards for Sustainability Reporting (GRI Standards)* and *A Guide to Formulating Corporate Social Responsibility Reports for Enterprises in China* by the Chinese Academy of Social Sciences.



Note on Appellation

For a smooth expression and reading experience, SANY Heavy Industry Co., Ltd. is replaced by “SANY Heavy Industry”, “The Company”, and “We” in this report.

Access to this Report

This report is available for browse and download on the Shanghai Stock Exchange website: www.sse.com.cn and the Company’s website: www.SANYhi.com. If you want a paper copy of this report, please contact the Securities Affairs Department of the Company.

Tel: 0731-84031555

Fax: 0731-84031555

Email: zhouk@sany.com.cn

Address: New R&D Building 4th Storey, SANY Industrial City, Liangtang Road, Changsha County, Changsha City, Hunan Province

Postal Code: 410100

Message from the Chairman

The year 2021 marks the 100th anniversary of the Communist Party of China (CPC), the start of the 14th Five-Year Plan period, and the beginning of a new journey to build a modern socialist country in an all-round way. Since its inception, SANY Heavy Industry has always followed its founding aspiration of "Serving the Country through Industry" and its mission of "Quality Changes the World". The Company has made steady progress toward its vision of "building a first-class enterprise, fostering first-class employees, and making first-class contributions to society."

In the past year, the world is caught between momentous changes never seen in the last one hundred years and a pandemic of the century. The external environment has been extremely complex. Environmental problems are posing an existential threat. As a result, national governments have proposed solutions to deal with the situation. For its part, China has put forward the "3060" strategy, which calls for the country to reach peak emissions by 2030 and carbon neutrality by 2060. It will develop evaluation standards and introduce measures to meet the dual goals. As a result, environmental protection, social responsibility, and corporate governance will be more than just metrics for corporate investment decisions; they will gradually become the key to the Company's sustainable operation.

Faced with the two historic opportunities presented by the Great Rejuvenation of the Chinese Nation and the Fourth Industrial Revolution, SANY Heavy Industry has been responsive to the carbon peak and carbon neutrality goals and unswervingly implemented the strategies of "digitization, electrification and internationalization". We have aided digital transformation by constructing smart manufacturing Lighthouse Factories, deploying the Industrial Internet of Things, promoting smart, automatic, digitized, and IT-enabled processes, and leveraging industrial software and data management applications. Our goal is to set an example for smart manufacturers around the world. To reduce energy consumption, carbon emissions, and poisonous gas, we advance smart operations, build smart supply chains, use digital marketing, and engage in digitalized R&D. We want to make sure that our employees are safe and comfortable and that they follow the rules in the workplace. We have gone all out to implement our electrification strategy and entered the emerging EV market. Our strategic layout of "Three Categories of Machinery and Two Types of Vehicles" has taken shape. These proactive

efforts will aid in the achievement of the "Dual Carbon" goals. In 2021, we achieved breakthroughs in the sale of our proprietary electric mixer trucks and dumper trucks. We have steadfastly pursued our internationalization strategy to establish a world-class brand. Today our global strategic layout places equal emphasis on developed countries and emerging economies. It comprises the Global Headquarters, Overseas Big Areas, Overseas Direct Areas under the Business Division, and four major business divisions in Europe, India, America, and PM. Furthermore, we support China's Belt and Road Initiative and other national strategic plans, aid developing countries in building infrastructure projects, and create win-win scenarios.

Operational compliance is the cornerstone of corporate social responsibility. We have increasingly based our internal operations on better norms and standards, improved the institutional building mechanism, and ensured that the Board of Directors makes sound decisions, executives effectively implement them, and the Board of Supervisors oversees the results. We have also perfected the risk management system and steadily improved our governance capability to assist the Company in avoiding risks and ensuring its healthy operation. We have followed the business ethics, established a complete management system for anti-corruption and clean governance, improved the auditing and supervision system, and carried out anti-corruption work efficiently. We have also implemented a compliance system and instilled a culture of integrity into our employees' daily work through regular training.

SANY Heavy Industry's core competitiveness and primary driving force are R&D, innovation, and product quality. Based on market demands, we conduct R&D and innovation campaigns. Guided by innovation, we keep developing new technologies and launching new products. We encourage innovation by introducing R&D incentives, managing intellectual property rights, and fostering exchanges and cooperation between industry, university, and research institute. We put in place a comprehensive quality management system that encompasses R&D, manufacturing, after-sales service, and suppliers. The system can ensure that quality management measures are implemented effectively in all links. We have also incorporated the ESG concept into the assessment of suppliers and worked with them to maintain a responsible supply chain to ensure sustainable supply.

We pursue sustainable development and value such critical issues as climate change, the environment, and occupational health and safety. We also hold the belief that development should be innovative, coordinated, green, open, and inclusive, and stick to the idea of "Life and Safety Come First." We have created a flawless management system in terms of safety, the environment, and occupational health. In 2021, we focused on achieving the "dual carbon" goals, optimized the management of environmental protection efforts, and promoted lean management of energy. We managed to improve the economic, ecological, and social benefits of corporate growth by increasing the uptake of renewables and reducing energy consumption and carbon emissions. To improve workplace safety and health management, we have provided formal guidelines on safety and health for all of our employees and stakeholders, resulting in safe operations.

We regard hardworking employees as the foundation and help them succeed. We respect our employees and protect their legitimate rights and interests. We implemented a career management system for employees at organizational and individual levels, improved performance appraisal and incentive mechanisms, and delivered diversified training activities. While providing our employees with a broad development platform, we've also worked to ensure that they have equitable and predictable career prospects. Additionally, we have improved the welfare system to reward the employees who contribute to corporate growth, provided smooth communication channels, and taken steps to help employees in need. Our staff now feel more fulfilled and valued, and we will continue to guide them to a brighter future.

We are committed to corporate citizenship and constantly generate positive value and impact in our society. We take an active part in social assistance programs. In 2021, we conducted activities to distribute supplies for pandemic relief and supported the disaster relief effort when Henan Province suffered torrential rain on July 20. We rushed there in no time to aid the local people and their post-disaster reconstruction effort. We also donated money and other essential supplies. We have implemented China's Rural Revitalization Strategy and adopted diversified revitalization models. For instance, in 2021, we delivered comprehensive aid to Daotong Village, Lianyuan City, Hunan Province, focusing on infrastructure projects, medical care and

elderly care, education revitalization, villagers' joint building campaign, and industrial revitalization, among other areas. The goal was to revive the village from the four pillars of economic growth, medical care, education, and industry.

We should live in the moment while planning for the future. Faced with the unprecedented changes unseen in a century, we have steadfastly followed the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era. We will continue to implement the strategies of "digitization, electrification, and internationalization" in line with the 14th Five-Year Plan and the need to meet China's "dual carbon" goals. We are dedicated to establishing a world-class brand for the Chinese nation. We have fostered a corporate culture, with its core being "Social responsibility is greater than corporate profits." Going forward, we will always bear social responsibility and strive to promote the joint, harmonious development of the Company, shareholders, customers, employees, society, and the environment.

Xiang Wenbo
Chairman of SANY Heavy Industry
21 April, 2022



About SANY Heavy Industry

Company Profile

Since its inception, SANY Heavy Industry Co., Ltd. has sustained rapid growth. It is now one of the world's leading manufacturers of equipment and machinery. The Company received the National Scientific and Technological Progress Award three times and the National Technology Invention Award twice. The two awards represent the highest national honor in the engineering and machinery industry after the founding of the People's Republic of China. SANY Heavy Industry Co., Ltd. is primarily engaged in equipment manufacturing, and its product portfolio included concrete machinery, excavator, crane, road construction machinery and piling machinery. SANY concrete machinery firmly established as the world's No. 1 brand. Our excavator sales ranked first globally for the first time in 2020. And our sales of large tonnage crane, crawler crane and piling machinery ranked first in China.



Concrete Machinery	Our main products include concrete pump trucks, truck-mounted concrete pumps, concrete mixer trucks and concrete mixing stations. Concrete machinery is mainly used in infrastructure construction such as railway, highway, subway, hydroelectric power plant, metallurgical engineering and the real estate industry.
Excavator	Our excavators include large, medium, small, and mini excavators. They are mainly used in the farmland, water conservancy, railway, highway, construction, real estate, and mining industries.
Crane	The main products are truck cranes and crawler cranes. Cranes are widely used in the electric power, steel, bridge, shipbuilding, and petrochemical industries. Small truck cranes are mostly used in bulk cargo business such as municipal works, while large truck cranes and crawler cranes are used in the power, steel, shipbuilding, and petrochemical industries.
Piling Machinery	The main products are rotary drilling rigs. Our piling machinery is mainly used in municipal works, highway and bridge construction, industrial and civil buildings, underground diaphragm wall, water conservancy, anti-seepage slope protection and other infrastructure construction projects.
Road Construction Machinery	The main products include roller, paver, grader, and asphalt mixer. Road construction machinery is mainly used for the construction of highway, urban road and airport runway.
Financial Services	We offer the vehicle financing service to provide buyers of engineering machinery with mortgage and other financial services.

SANY Heavy Industry (SH: 600031) was listed on July 3, 2003. It is the first enterprise in China to succeed in the split-share structure reform and achieve full circulation of shares. In July 2011, SANY Heavy Industry was shortlisted in the Financial Times (FT) Global 500 list for the first time, and it was the only Chinese construction machinery enterprise on the list. In 2012, SANY Heavy Industry acquired German manufacturer Putzmeister, renowned as the "Global No. 1 Brand of Concrete Machinery". In May 2021, SANY Heavy Industry made the list of Forbes Global 2000 and ranked 468th. That was the first time we ranked among top 500. Moreover, as an engineering manufacturer, we ranked first among Chinese companies and second among global competitors.

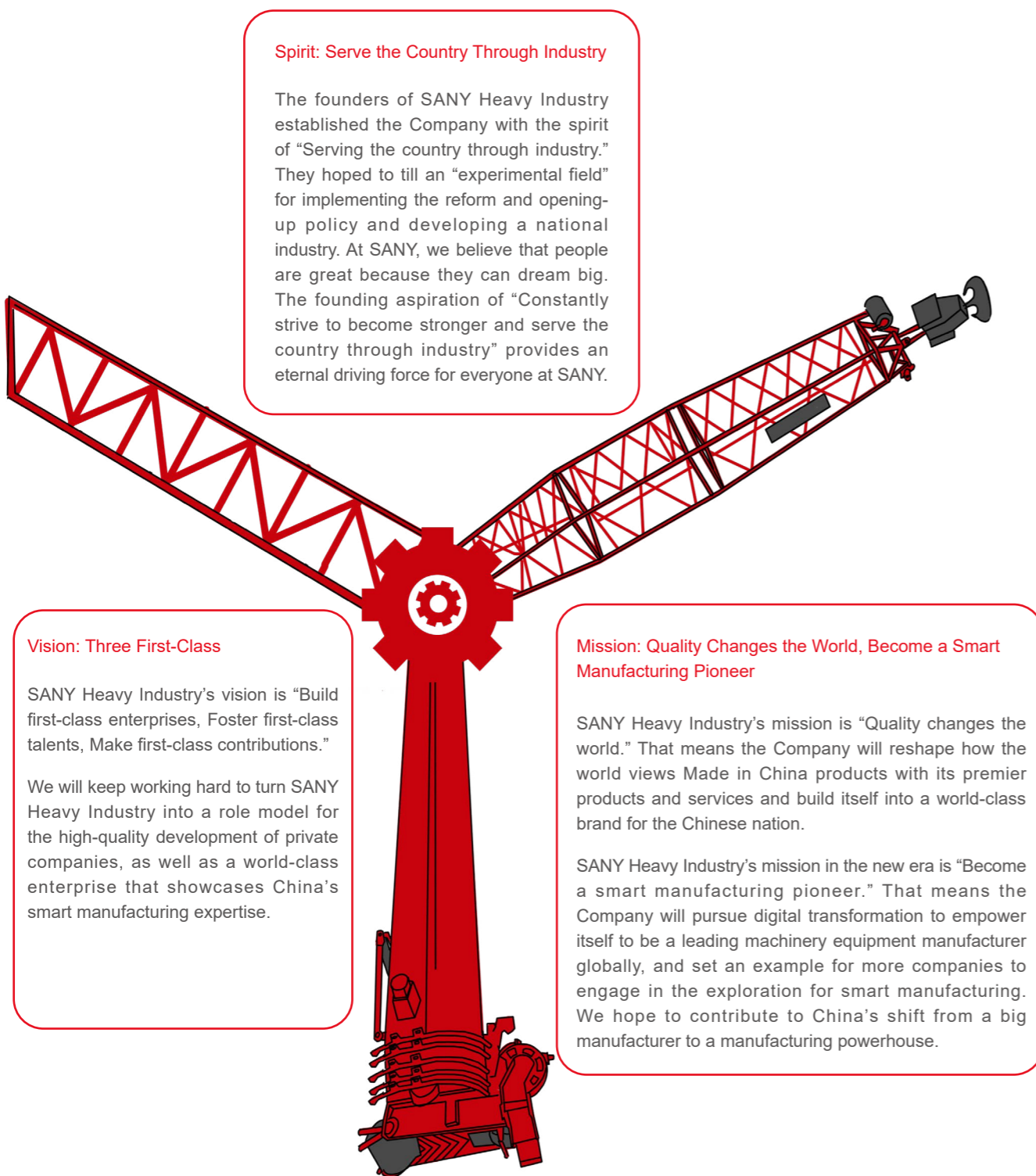
SANY Heavy Industry has business divisions and industrial centers all over the world. It has built industrial parks in Beijing, Changsha, Shanghai, Kunshan and other places in China, and global R&D and manufacturing centers in India, the United States and Germany.

Adhering to the mission of "Quality changes the world", SANY Heavy Industry spends more than 5% of its sales revenue on R&D every year and is dedicated to manufacturing world-class products. Building on the strength of technological innovation, SANY Heavy Industry received the National Scientific and Technological Progress Award three times and the National Technological Invention Award twice. These two awards represent the highest honor in the engineering machinery industry in the PRC. In terms of patent application, the Company ranked first in the total number of patents applied and granted in the domestic engineering industry.

With the premier product quality, SANY Heavy Industry has undertaken a great number of significant projects worldwide, including Burj Khalifa, Beijing Olympic venues, London Olympic venues, Brazil World Cup Stadium, Shanghai Tower, Hong Kong International Finance Center, Hong Kong-Zhuhai-Macau Bridge, Beijing Daxing International Airport, and Xiong'an New Area.

Corporate Culture

Achieving ambitious goals requires a strong team. To build a strong team, the members must reach a consensus from the bottom of their heart. In 2021, the Company continued to uphold the SANY Culture Consensus and make steady progress towards the Three First-Class Vision, which is "Build first-class enterprises, Foster first-class talents and Make first-class contributions."



Essence of Operation: Create Value for Customers Through Advanced Industrial Technology and Data Insights

In the digital era, the essence of SANY's operations is to create value for customers through advanced industrial technology and data insights. While constantly enhancing its R&D and manufacturing capability and pursuing perfection in industrial technology, SANY Heavy Industry should apply more digital technologies. The combination of industrial technology and industrial technology will enable us to evolve and grow into a brand-new enterprise.

All for the Customers

Customers mark the starting point for business activities. What we do here at SANY aims to approach, understand, and serve our customers. SANY Heavy Industry has gained recognition in the fiercely competitive market because of its accurate understanding of the customers' urgent demands. All our R&D activities should be based on an in-depth understanding of our customers' obvious and potential needs.

All Comes from Innovation

R&D and innovation are always the primary driving force behind SANY Heavy Industry's growth. Every breakthrough we've made comes from a leap forward in R&D and innovation. Weaker R&D capability means compromised long-term competitiveness. We always encourage our researchers to overcome fear and innovate boldly. As long as he is responsible, a researcher will not be criticized or punished because of failure to make innovation.

Quality: Prerequisite for Value and Respect

At SANY Heavy Industry, under no circumstances will we sacrifice product quality for an improvement in performance indicators. We are dedicated to implementing advanced quality management systems and rigorous quality control measures to ensure our products are above the average industry standard.

Build a Strong Supply Chain

Supply chains are the cornerstone of quality and efficiency. SANY Heavy Industry always the best spare parts to produce the highest quality products. We seek to build long-lasting strategic partnerships with excellent suppliers and create value and common growth opportunity for end users based on our premium products and reasonable profit margins.

Talent and Hardworking Employees Oriented

At SANY Heavy Industry, the most important human resources concept we hold is that talent and hardworking employees form the foundation of our Company. We believe that input in human capital is a type of investment, rather than cost. We will continue to invest to cultivate more bright minds and work with them to achieve our ambition and mission.

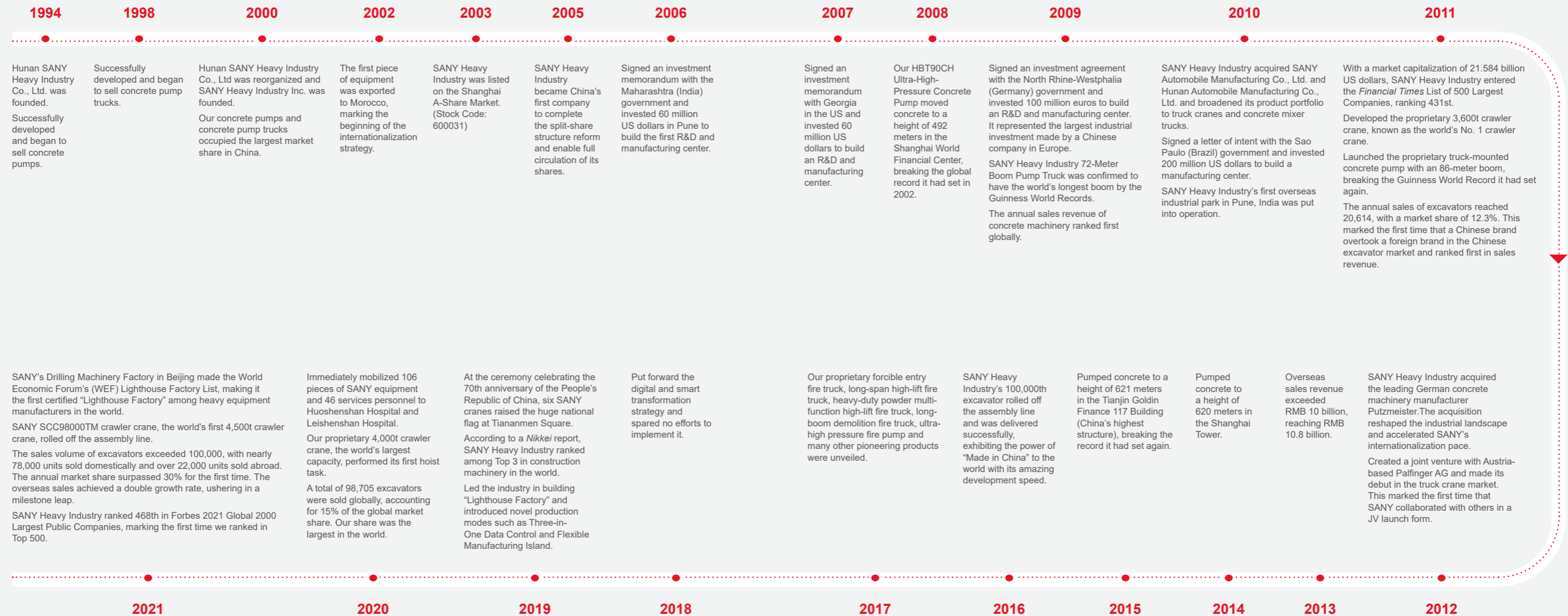
"Double Beyond" Services

Developing the best services-oriented brand is the key to our success in earning the recognition from customers. We have always held the concept that our services should go beyond the average industry standard and beyond our customers' expectations. We always work to improve customer experiences across all business operations.

Reject Slackness

Efficiency is an eternal topic in business operations. We advocate a working environment that rejects slackness and even treats it as an enemy. We must quickly respond to the market and customer demands and act fast to apply new technology or launch new product. Moreover, we require our employees to finish their daily routines before they get off work and set a clear deadline for important tasks.

Historical Timeline



Awards and Recognition 2021

2021.4

- China Brand Festival 2021: Huapu Award Brand Union
- National May Day Labor Certificate All-China Federation of Trade Unions
- The 5th Golden Tangerine Awards of Time Finance-Award for High-quality Development of Listed Companies Guangdong Times Media; The Time Weekly; Time Finance



2021.5

- National "Best Practice" Award for Party Organizations in Non-public Enterprises National Party Building Research Institute; Professional Committee for Party Building Research of Non-public Economic Organizations
- World's Leading Seller of Excavators Off-Highway Research
- Global 500 Companies-468th Forbes
- Brand Value List of Chinese Listed Companies 2021-59th National Business Daily; School of Economics and Management of Tsinghua University
- Brand Value List of Chinese Listed Companies 2021: Overseas List-34th National Business Daily; School of Economics and Management of Tsinghua University
- Brand Value List of Chinese Listed Companies 2021: Vitality List-2nd National Business Daily; School of Economics and Management of Tsinghua University

2021.6

- Hunan Advanced Community-level Party Organization Hunan Provincial CPC Committee
- National Industry-Education Interactive Company National Development and Reform Commission

2021.7

- Fortune Top 500 Chinese Companies-182th Fortune
- Top 100 Machinery Industry Company China Machinery Industry Federation; China Association of Automobile Manufacturers

2021.9

- Top 500 Manufacturing Companies in China-79th China Enterprise Confederation/China Enterprise Directors Association
- Lighthouse Factory World Economic Forum (WEF)

2021.10

- Forbes World's Best Employers List Forbes
- World's Most Admired Chinese Companies List Fortune



2021.11

- 2001-2021 Twentieth Anniversary of China's Entry into WTO Top 20 China Companies for Overseas Publicity Sino-International Entrepreneurs Federation

2021.12

- Advanced Group for Contributing to the Building of a Moderately Prosperous Society in all Respects The CPC Central Committee United Front Work Department; The Central Committees of Democratic Parties; All-China Federation of Industry and Commerce
- Advanced Group of the First New Hunan Contribution Award Hunan Provincial People's Government



Performance Highlights in 2021



"Digitalization, Electrification and Internationalization" Corporate Strategy

14 lighthouse factories were put into operation

Boosting the average capacity by **72%**



Reducing the production cycle by **50%**



Developed **24** technical projects on electrification



International sales revenue reached RMB **24.8** billion



Governance and Compliance

Organized **6** risk management training sessions

Trained **1,876** participants



100% of our suppliers signed a cooperation agreement or commitment letter on integrity

The integrity, honesty and compliance test covered about **14,000** staff members

Organized **5** categories of anti-corruption training sessions



Covering over **18,000** staff members



R&D and Product Quality



Applied for **2,862** patents



1,511 patents were granted

Developed and published **18** standards

12 were national standards

1 was industry standard

5 were organizational standards

19 of the Company's 21 subsidiary manufacturers of main engine and spare part passed the ISO 9001 or IATF 16949 Certification, while the other **2** newly established subsidiaries were awaiting certification

Exercised online and consistent management of **2,388** suppliers worldwide



Sustainable Development

6 of the 21 subsidiary manufacturers of main engine and spare part passed the ISO 14001 environmental management certification and **7** passed the ISO 45001 occupational health and safety management certification



90.5% of the 21 subsidiary manufacturers were covered by the external HSE audit

The energy-saving and consumption reduction projects saved RMB **72.08** million in energy costs

Reported **0** occupation health and safety accident

The coverage of occupational health checkup for those on professional posts reached **100%**

Clean energy usage (photovoltaic power generation) reached **5.099** million kWh



Workplace and Employees



Offered share incentives to **4,205** staff members

Vocational training covers **13,690** people

Amounting to **56.5** hours for each employee

65% of the surveyed employees were more satisfied with the Company compared with 2020

Delivered assistance to **6** employees in financial difficulty

Organized **789** employees to participate in mutual aid medical programs



Giving Back to Society

Invested RMB **18.203** million in disaster relief, COVID-19 pandemic response, rural revitalization, public welfare and education programs

Donated **100,000** N95 respirators to Haizhu District in Guangzhou City



Sent **50** excavators, **22** cranes, **18** mechanical loaders, **10** graders and **10** slag trucks to the disaster-stricken area to aid the rescue and relief efforts due to Henan Torrential Rain on July 20

Stakeholder Engagement

SANY Heavy Industry respects the demands of stakeholders, establishes a sound stakeholder communication mechanism, and actively communicates with stakeholders. We identify the key components of this report by integrating the issues of interest to stakeholders and conducting a materiality assessment based on the Company's businesses.

Stakeholder Communication Strategy

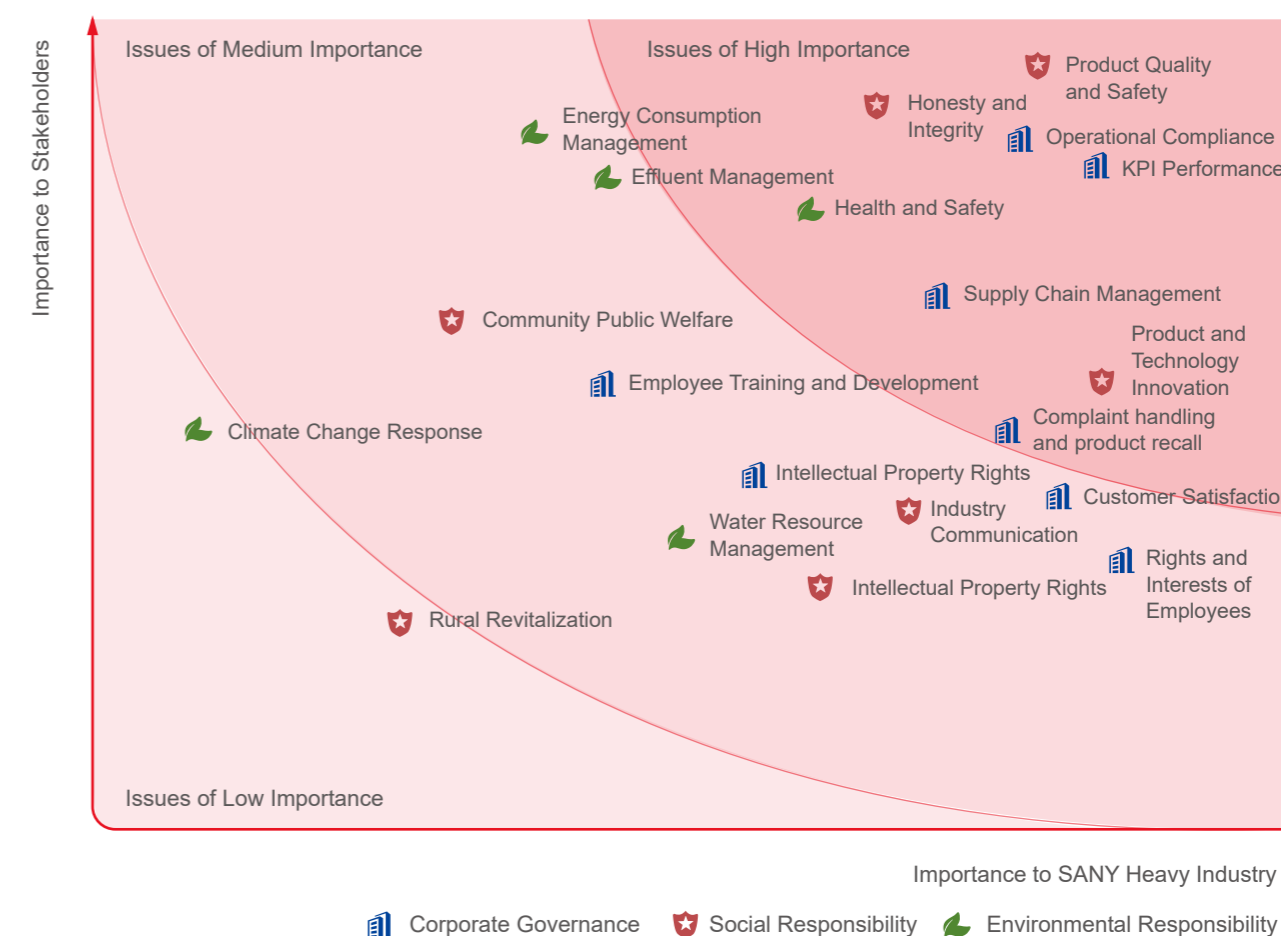
The Company puts a high value on stakeholder engagement and is committed to building a fair, just, open, and win-win partnership with stakeholders. To better identify ESG risks and opportunities and formulate reasonable, sustainable goals, we have established multiple channels to communicate with stakeholders and exchange opinions on issues of common concern. In this way, we have collected effective feedback from different stakeholders to better carry out timely rectification. The following table lists different categories of stakeholders, issues in focus and communication channels.

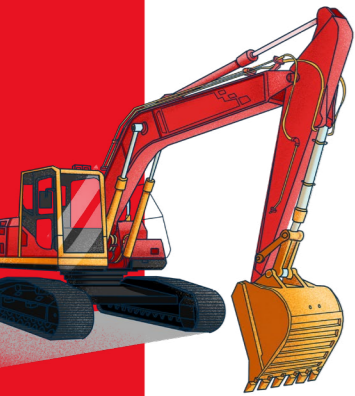
Stakeholders	Issues in Focus	Communication and Feedback Channels
 Government Departments/Regulators	<ul style="list-style-type: none"> Operational Compliance Effluent Treatment Honesty and Integrity Climate Change Response 	<ul style="list-style-type: none"> On-site Spot Checks Dialogue and Meeting On-site Investigation
 Shareholders	<ul style="list-style-type: none"> KPI Performance ESG Management Operational Compliance 	<ul style="list-style-type: none"> Shareholders' Meeting On-site Investigation Roadshow
 Investors	<ul style="list-style-type: none"> Corporate Governance Product Quality and Safety Industry Communication Technology and Innovation 	<ul style="list-style-type: none"> Company Announcement Investment Conference Roadshow Telephone Conference
 Employees	<ul style="list-style-type: none"> Rights and Interests of Employees Health and Safety Remuneration and Benefits 	<ul style="list-style-type: none"> Employee Training Labor Union Activities Customer Satisfaction Survey
 Suppliers	<ul style="list-style-type: none"> Supply Chain Management Product Quality and Safety Honesty and Integrity 	<ul style="list-style-type: none"> On-site Assessment Quality Communication Supplier Training and Assistance Supplier Conference
 Customers	<ul style="list-style-type: none"> Product Quality and Safety Climate Change Response Industry Communication Technology and Innovation 	<ul style="list-style-type: none"> Market Research Customer Satisfaction Survey Media Conference Online and Offline Promotion
 Community, the Public and NGO	<ul style="list-style-type: none"> Community Culture Public Welfare Poverty Alleviation Community Environment 	<ul style="list-style-type: none"> Community Symposium Community Publicity Online Promotion
 Partners	<ul style="list-style-type: none"> Industry Communication Stable Partnership Honesty and Integrity 	<ul style="list-style-type: none"> Strategic Cooperation High-level Exchanges
 Industry Peers	<ul style="list-style-type: none"> Fair Competition Industry Communication 	<ul style="list-style-type: none"> Industry Forum and Meeting Cooperation Agreement Inspection and Exchange of Opinions

Materiality Analysis

During the reporting period, SANY Heavy Industry conducted in-depth interviews with internal and external stakeholders, covering such topics as corporate growth, industry policy trends, media reports and industry benchmarking, compiled a list of material issues, and ranked them in terms of their relative importance. Eight issues are of high importance, ten issues are of medium importance, and two issues are of low importance. This report will disclose and respond to these issues, with a special focus on those of high importance.

SANY Heavy Industry's Materiality Matrix in 2021





Feature

"Digitalization, Electrification and Internationalization" Corporate Strategy

The Fourth Industrial Revolution occurs at the same time as the Third Energy Revolution, and the global development paradigm presents us with an unprecedented window of opportunity to develop cutting-edge technologies. SANY Heavy Industry has grasped these opportunities and defined the three strategies of "digitization, electrification, and Internationalization". We promote digital transformation, enhance the production efficiency across the board, and strive to be a global manufacturing leader. We implement the electrification strategy across our Company and advocate the use of clean energy in engineering machinery through R&D and innovation. We steadfastly implement the internationalization strategy and intend to build a world-class Chinese brand.

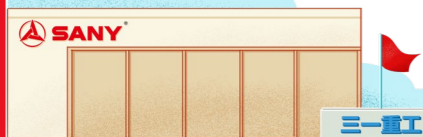
Driving Business Digitalization

China's economy is transitioning from high-speed growth to high-quality development. The old development model of China's manufacturing industry is faced with huge pressure from industrial upgrading. Therefore, the digital transformation of manufacturing companies is imperative. SANY Heavy Industry clearly understands the importance of digital transformation and has steadfastly implemented the digitization strategy. We have made extensive efforts to construct Lighthouse Factories, deploy the Industrial Internet of Things, promoted standardized, online, automatic, and intelligent processes, leveraged industrial software, and facilitated data management and application. We have enhanced the production efficiency to further conserve energy and reduce material consumption. Moreover, we accelerate research into digital product and technology, and drive R&D digitalization, smart supply chain, smart manufacturing, and smart operation in an attempt to pioneer technological progress in the industry.

Achievements in Building the Lighthouse Factory

The Lighthouse Factory brings together a wide range of cutting-edge industrial technologies and digital technologies like 5G, visual recognition, process simulation, industrial AI, and heavy-duty robotics. We have developed eight core technologies including unmanned cutting, upgraded the highly flexible production model, greatly enhanced the human-machine interaction efficiency, and lowered the manufacturing costs. We have also integrated the Manufacturing and Operation Management System (MOM), Internet of Things Management Platform (IOT), Warehouse Logistics Management System (WMS), Remote Control System (RCS), and Automatic Guided Vehicle Network (AGV) into a seamless smart manufacturing and management platform. The platform guides our industrial production and enables us to become an industry-leader.

The Company has continuously improved its **22** factories based on the Lighthouse Factory standards. By the end of 2021, **14** factories had been put into operation, achieving an average capacity increase of **72%**, a manufacturing cycle reduction of **50%** and a significant increase in automation.



SANY Heavy Industry's Beijing Piling Machinery Factory Was Selected as the First Lighthouse Factory in the Global Heavy Equipment Industry

On September 27, 2021, the World Economic Forum (WEF) officially released the latest list of Lighthouse Factories among global manufacturers. SANY Heavy Industry's Beijing Piling Machinery Factory (hereinafter referred to as "Beijing Piling Machinery Factory") made it to the list and became the first certified Lighthouse Factory in the global heavy equipment industry.

When we started to upgrade Beijing Piling Machinery Factory, there were no precedent in the industry, mature technology or suitable suppliers. Therefore, the success story was made possible by our dedicated team members. They leveraged the latest technologies such as automation, human-machine interaction, artificial intelligence and the Internet of Things to upgrade the factory. After completion, the factory recorded an improvement in its overall operational efficiency of production equipment from 60% to 90%. The manufacturing cycle time was slashed by almost 80% from 30 days to seven days. In addition to increased efficiency, product quality was also increased to a great extent.

The incorporation into the WEF's Global Lighthouse Network has embodied SANY Heavy Industry's excellence in advanced manufacturing and digital transformation and solidified our status as a pioneer in the heavy equipment industry.



SANY Heavy Industry's piling machinery lighthouse factory

Achievements in Building the Industrial Internet of Things

The Company has facilitated 3R (Real Site, Real Object, and Reality) management, equipment inter-connectivity, managed the consumption of water, electricity, oil and natural gas, and applied the relevant data in an integrated manner. It has also conducted R&D in data mining, 5G network, energy management, efficiency improvement, cost savings, and downtime prediction, and explored deeper 5G applications. The 5G Fully Connected Beijing Drilling Machinery Factory was included as a representative case of the key industry into the *5G+Industrial Internet of Things: Ten Representative Application Scenarios and Five Key Industry Practices* issued by China's Ministry of Industry and Information Technology.

We have carried out cross-sectoral cooperation. As of the end of the reporting period, we had signed cooperation agreements with China Mobile and ZTE and launched the industry's first Cube3x3 Cloud-Network Integrated Solution to provide domestic industrial enterprises with well-proven digital upgrading experience. Our relentless innovations have enabled SANY Heavy Industry to overcome the many obstacles hindering its digital transformation. The Company has also achieved fruitful results in a number of collaborative digital transformation projects.

Structure of the NodeEngine Solution

NodeEngine

5G+Data Mining

This function enables us to transmit massive amounts of data generated in the process to the local data center in real time, and develop maintenance and control strategies after analysis and diagnosis. In this way, we can improve the production processes and enable predictive maintenance to reduce the idle time and downtime of our equipment.

5G+Wireless Surveillance

This function enables enterprises to improve management and production efficiency in intelligent identification, personnel scheduling, materials and equipment, and can set off alarm in the case of an accident to ensure the safety of staff.

5G+Machine Vision

This function enables intelligent cutting, multi-machine collaboration, unmanned operation of dangerous production links, automatic assembly and smart quality inspection. The labor cost is slashed by 64% and the incidence of quality defects is reduced by 14%.

5G+Smart Warehousing

This function improves the connection of the AGV, restricts the latency time within 10ms, and realizes fast and stable AGV transportation, dispatching and control. The warehouse management efficiency increases by 50% and the overall cost is reduced by 20% to 30%.



SANY Heavy Industry, China Telecom and ZTE Built a 5G Fully Connected Factory in Changshu

In March 2021, SANY Heavy Industry, China Telecom and ZTE jointly built a 5G Fully Connected Factory in Changshu SANY Industrial Park. The new factory enabled inter-connectivity of internal equipment, rapid networking and accurate data mining, and greatly improved the production efficiency of other enterprises in the Industrial Park such as Huawei Lv dai.

SANY Heavy Industry's 5G private network in Changshu Plant was based on China Telecom's Bilin Model and adopted ZTE's NodeEngine mobile edge computing power solution. With NodeEngine, SANY Heavy Industry Changshu Plant enabled 5G+Data Mining, 5G+Wireless Surveillance, 5G+Machine Vision and 5G+Smart Warehousing and applied these functions to the production processes, including product machining, coating and assembly.

It was calculated that after digital upgrading of the equipment, the downtime was slashed by half, the operating efficiency increased from 35% to 75%, and the production capacity doubled without buying new equipment. This partnership has helped SANY Heavy Industry and its partners accumulate experience in 5G+Technology delivery and promoted the Company's digital transformation.



Launching ceremony of SANY Heavy Industry's 5G fully connected factory



Automatic Guided Vehicle (AGV) with smart control systems

Standardized, Online, Automatic, and Intelligent Processes & Industrial Software Application

We promote standardized, online, automatic and intelligent processes across our R&D, supply chain, procurement, production, sales and operation. As a result, the Company enhances product quality and improves the transparency in production process.

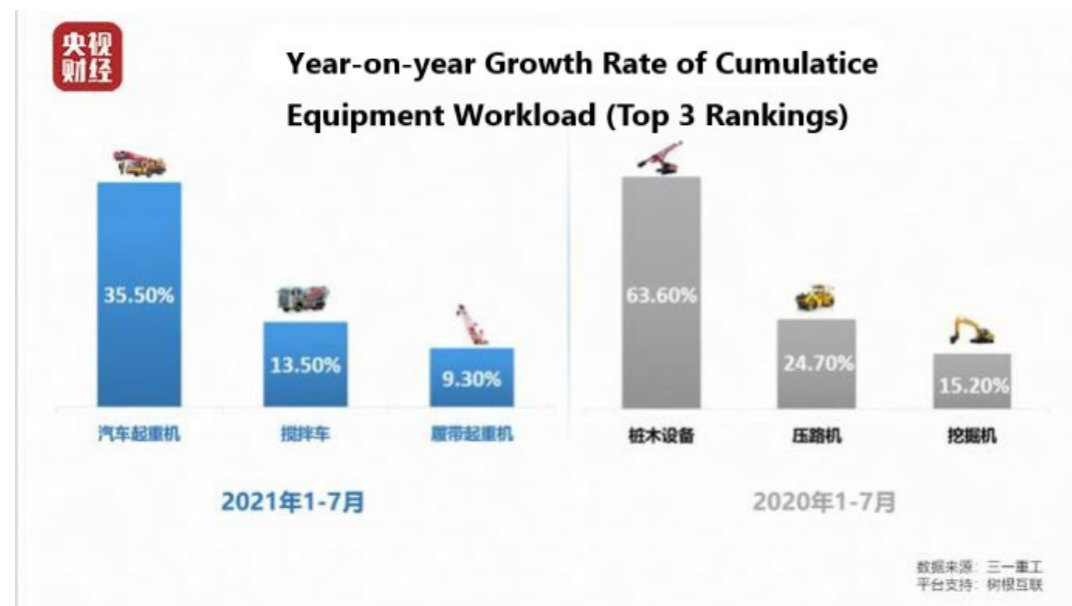
SANY Heavy Industry leverages industrial software in R&D, manufacturing, supply chain, procurement and marketing, establishes business rules and best practices, forms software mindset in using software products, and strengthens the R&D capabilities of proprietary industrial software. In 2021, we developed a number of software products in R&D, planning, commerce, manufacturing and logistics, which enabled us to meet the goals of R&D digitization, smart supply chain, smart manufacturing and smart operation.



SANY Heavy Industry Released the CCTV Finance Excavator Index

In July 2021, the CCTV Financial Excavator Index was officially released. The Index was created by SANY Heavy Industry, CCTV Finance, and Root Cloud, and hopes to aid financial experts in analyzing investment in infrastructure construction.

SANY Heavy Industry installed vehicle-borne controllers, sensors, and wireless communication devices on more than 700,000 pieces of construction equipment. With the help of big data and the Internet of Things, the data of each working equipment can be recorded and uploaded in real time to the Industrial Internet Platform. By analyzing the data trends, we can get an accurate understanding of the construction status quo and time limit of a project and thus grasp the underlying trend of China's infrastructure construction.



Report of the CCTV finance excavator index

Intelligent Product and Technology

SANY Heavy industry promotes the R&D and application of digital technology to create best-in-class intelligent products and technologies. We use unmanned driving, remote control, intelligent operation, big data analysis and 5G network to develop a variety of intelligent products. We also deploy intelligent operation to reduce the workload of our staff and carry out auxiliary work with the aid of intelligent technologies. As of the end of the reporting period, we had deployed unmanned operation in some of our sites.

In 2021, the Company focused on developing intelligent operations, assisted driving and intelligent operator cabin solutions, and engaged in predictive maintenance, C-terminal inter-connectivity and unmanned driving areas. We enabled unmanned driving in closed scenarios, rolled out the assistance kit for smart driving, deployed the AI+5G Internet of Vehicles Cloud Platform, installed the intelligent voice assistance system and added a 360°visual field function. These intelligent products and technologies resulted in our intelligent interaction and safe driving system. Additionally, we launched our latest generation of intelligent excavator 375IDS, which enables remote, unmanned operation using 5G network. The excavator is also equipped with our industry-leading and proprietary intelligent drive system (IDS) as part of its standard configuration.



SANY Heavy Industry Organized the Construction Observation Activity of SANY's Unmanned Paving and Compacting Equipment Fleet

On December 20, 2021, SANY Heavy Industry, as an organizer, held the Construction Observation Activity of SANY's Unmanned Paving and Compacting Equipment Fleet on Changbao Expressway in Baoshan City, Yunnan Province. The activity verified the feasibility of long-distance unmanned operation of the paving and compacting equipment on a new expressway and demonstrated the reliability and stability of SANY Heavy Industry's equipment.

The unmanned equipment fleet combined the unmanned driving technology, 3D automatic paving technology, intelligent compaction technology and visualization technology, and enabled the digital and collaborative construction management throughout a project. Experts at the activity commended the fleet for high efficiency and project quality.

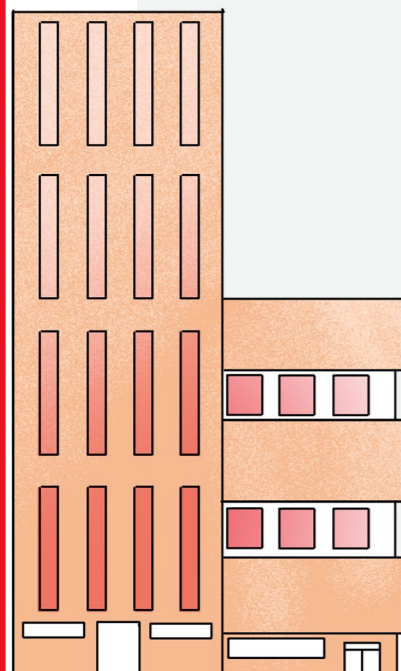


The unmanned fleet at a construction site

Leading Electrification in the Industry

In the face of accelerating climate change and the pressing need to meet China's "dual carbon" goals, the engineering machinery industry must rise up to the challenges of electrification and renewable energy transition while also benefiting from growth opportunities. SANY Heavy Industry has taken aggressive reform measures to power its machinery and equipment with renewable energy sources and put forward the strategy of "electrification" to accelerate the market layout of electric machines. These policies have unleashed huge potential for further growth and contributed to the development of renewable energy machinery and environmental improvement in China.

The Company promotes the electrification of its main-engine products such as engineering vehicles, excavation machinery, loading machinery and cranes, follows the three technical routes of pure electricity, hybrid and hydrogen fuel, and strives to pioneer electrification in the industry. To enhance its core competitiveness, the Company has relied on R&D initiatives and external strategic partnerships to develop core technologies and produce key spare parts in the electrification supply chain. These include electric control technology, battery, electric drive system and hydrogen fuel. Our R&D Management Headquarters has formed a Renewable Energy Technical Committee to oversee renewable energy technology planning, patent applications, forward-thinking technology research, and industrial incubation of new technology, ensuring the Company's competitive advantage in electrification. In addition, each subordinate business division has established dedicated electrification research teams. They either engage in strategic partnership with the Company or rely on themselves to conduct R&D in the five areas of a battery cell, electric All-Wheel Drive (eAWD) system, VCU platform, EV charging and swapping station, and fuel cell system and control technology. These have offered the Company a first-mover advantage in electrification conversion.



In 2021, we initiated **24** electrification projects, including the development of an All-in-One Integrated Controller for electric excavators, an electric drive control strategy, battery cell technology, high-voltage safety research, multi-motor collaborative control, mixer truck loading electrification, integrated eAWD research, and a smart charging and dispatching system.

In 2021, the Company brought **20** categories of electric products to market, including eight electric engineering vehicles (four fully electric mixer trucks and four fully electric dumper trucks), and four electric excavators. In 2021, the Company set new sales records for electric mixer trucks and electric dumpers, and generated nearly RMB **1** billion in sales revenue. The market share of our products ranked **No. 1** in the industry.

SANY Heavy Industry Delivered Hydrogen Fuel Cell Engineering Vehicles to Yueyang City

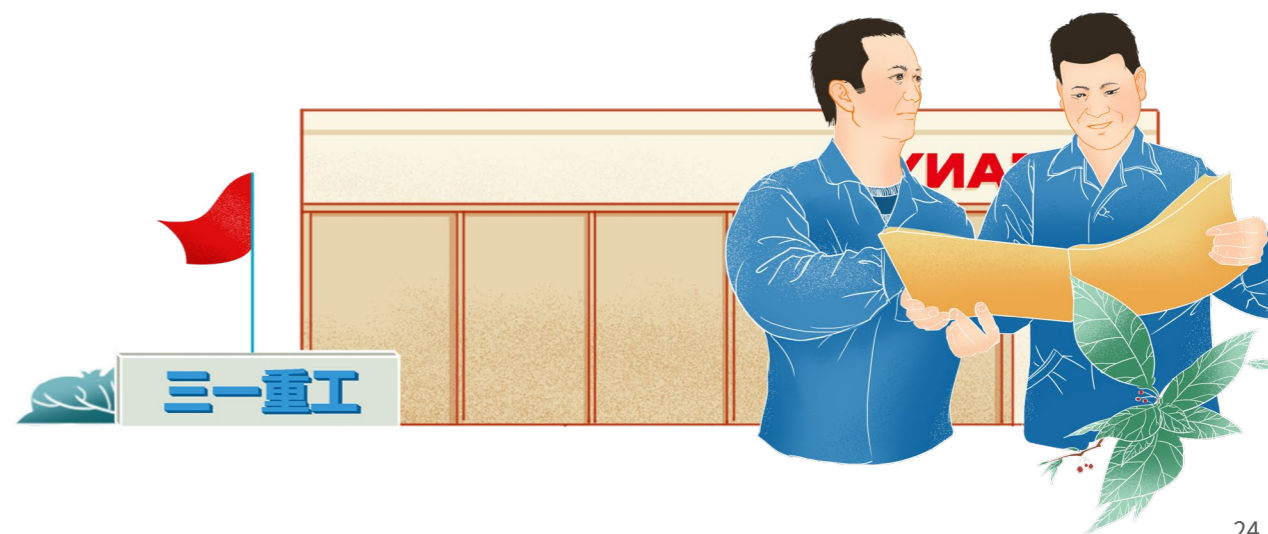
The sales volume of our electric engineering machinery has increased steadily. The hydrogen fuel cell vehicles developed by SANY Heavy Industry have also received widespread acclaim in the market. According to the Hydrogen Energy Industry Strategic Cooperation Agreement entered with the Yueyang Municipal Government in May 2021, SANY Heavy Industry have already delivered 100 hydrogen fuel cell engineering vehicles to Yueyang City before 2022, including slag trucks and mixer trucks. Such cooperation projects can be regarded as great contributions to the development of hydrogen fuel cell engineering machinery in China.

SANY Heavy Industry Delivered the First Batch of 200 Electric Mixer Trucks to Zhengzhou Ruizhitong Transportation Co., Ltd.

In August 2021, SANY Heavy Industry and Zhengzhou Ruizhitong Transportation Co., Ltd. signed a procurement agreement on 1,000 electric mixer trucks, representing a record-breaking purchase number in one single order for electric mixer trucks in China. In November 2021, the two Companies organized a Delivery Ceremony for the First Batch of 200 Electric Mixer Trucks. More than 500 experts and entrepreneurs in the concrete industry as well as leaders from the organizers participated in the Delivery Ceremony. These mixer trucks would enter the market in Henan and facilitate green and low-carbon development in central China.



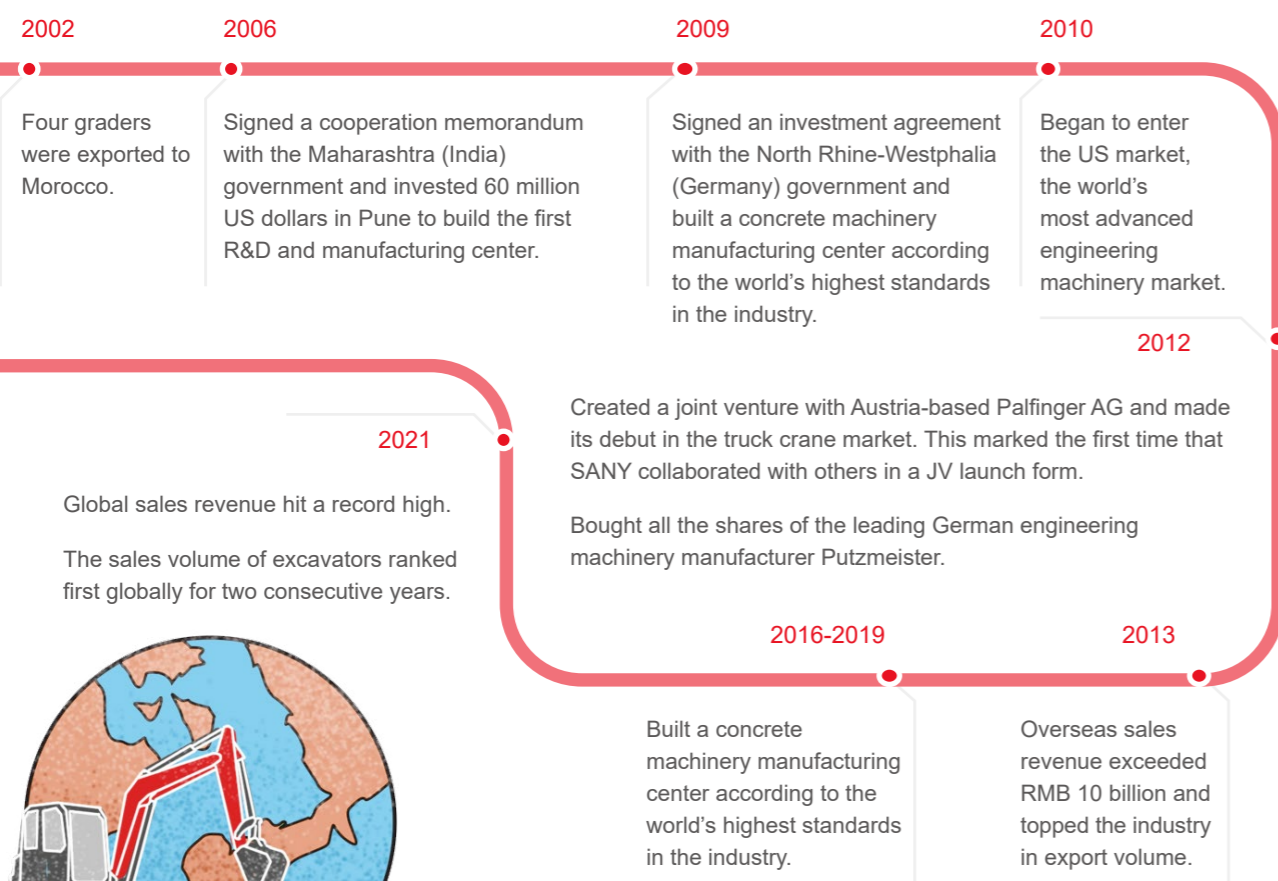
Electric mixer trucks to be delivered



Accelerating Internationalization

Amid faster global economic integration and globalization, SANY Heavy Industry put forward the strategy of "internationalization" at the early stage of its expansion. The Company's motto is to "Build a World-Class Enterprise for the Chinese Nation." While making its products more competitive in the international market, the Company is dedicated to projecting a positive Chinese brand image. In 2002, the Company exported four graders to Morocco in North Africa, marking the start of its journey of internationalization.

SANY Heavy Industry's Journey of Internationalization



Due to the Company's decades of continuous operations, it has successfully entered highly promising engineering machinery markets in other countries through plant construction, subsidiaries and branch offices, mergers and acquisitions, and shareholding partnerships. Now, our global strategic layout has taken shape, which is comprised of the International Headquarters, overseas greater areas, overseas areas directly under the control of the Business Division, and four Business Divisions in Europe, South Asia, North America and Putzmeister. It lays equal emphasis on both developed nations and emerging markets. As the demand for infrastructure booms in emerging markets, SANY Heavy Industry has actively responded to China's Belt and Road Initiative and other national strategic plans and helped developing countries with their infrastructure construction. Our proactive efforts demonstrate SANY Heavy Industry's commitment to social responsibility and result in win-win scenarios.

We encountered challenges and opportunities in our internationalization journey. The obstacles enhance the capability of our global teams and teach us the value of product localization in ensuring corporate sustainability. After summarizing what we've learned from internationalization, SANY Heavy Industry has established an overall internal guideline of "Establish a Strong Foothold, Operate Locally, Prioritize Services" to facilitate our internationalization journey. Although black swan events like the COVID-19 pandemic have taken a heavy toll in recent years, SANY Heavy Industry has been resilient in its internationalization efforts and made remarkable progress in global marketing channels, capacity building in brand and services, international R&D, human resources, and localization. In 2021, we generated RMB 24.8 billion in global sales revenue. The sale of excavator and concrete machinery ranked 1st globally, the sale of truck crane ranked 1st in 15 countries, and the sale of crawler crane ranked 1st in 12 countries.

The Company has increased its investment in overseas resources and marketing channels, made breakthroughs in overseas markets, especially in Europe and the US, improved its competitiveness among overseas key clients, and increased the market share of heavy equipment. We have also increased the number of service personnel, service vehicles and service outlets, worked hard to create a widely recognized brand of service, constructed better spare parts centers in regions outside of China, and built a global capacity to supply parts. We have continued to promote the digitization strategy globally, established intelligent Lighthouse Factories, built localized advanced manufacturing capacity, and facilitated digitalized online marketing, digital service and digital operation. Additionally, we built a stronger pipeline of overseas talents, offered appealing incentives, gathered an excellent localization team, and immersed ourselves into the localization market. We have accelerated international product development, enhanced international R&D strength, significantly increased the number of R&D personnel, and focused on global mainstream markets such as Europe and the US.

In 2021, we generated RMB **24.8** billion in global sales revenue

- The sale of excavator and concrete machinery ranked **1st** globally
- The sale of truck crane ranked **1st** in 15 countries
- The sale of crawler crane ranked **1st** in 12 countries

SANY Heavy Industry Made its Debut at the China-Africa Economic and Trade Expo

On September 26, 2021, the second China-Africa Economic and Trade Expo was inaugurated in Changsha, Hunan Province. As the chief strategic partner of the Expo, SANY Heavy Industry showed a positive image of how "Made in China" products promote the development of Africa and facilitate shared progress for both sides. Posters telling SANY's impressive stories of helping build a new beautiful Africa were lined up. The vivid descriptions reflect the strong relationship between China and Africa though we are tens of thousands miles apart.



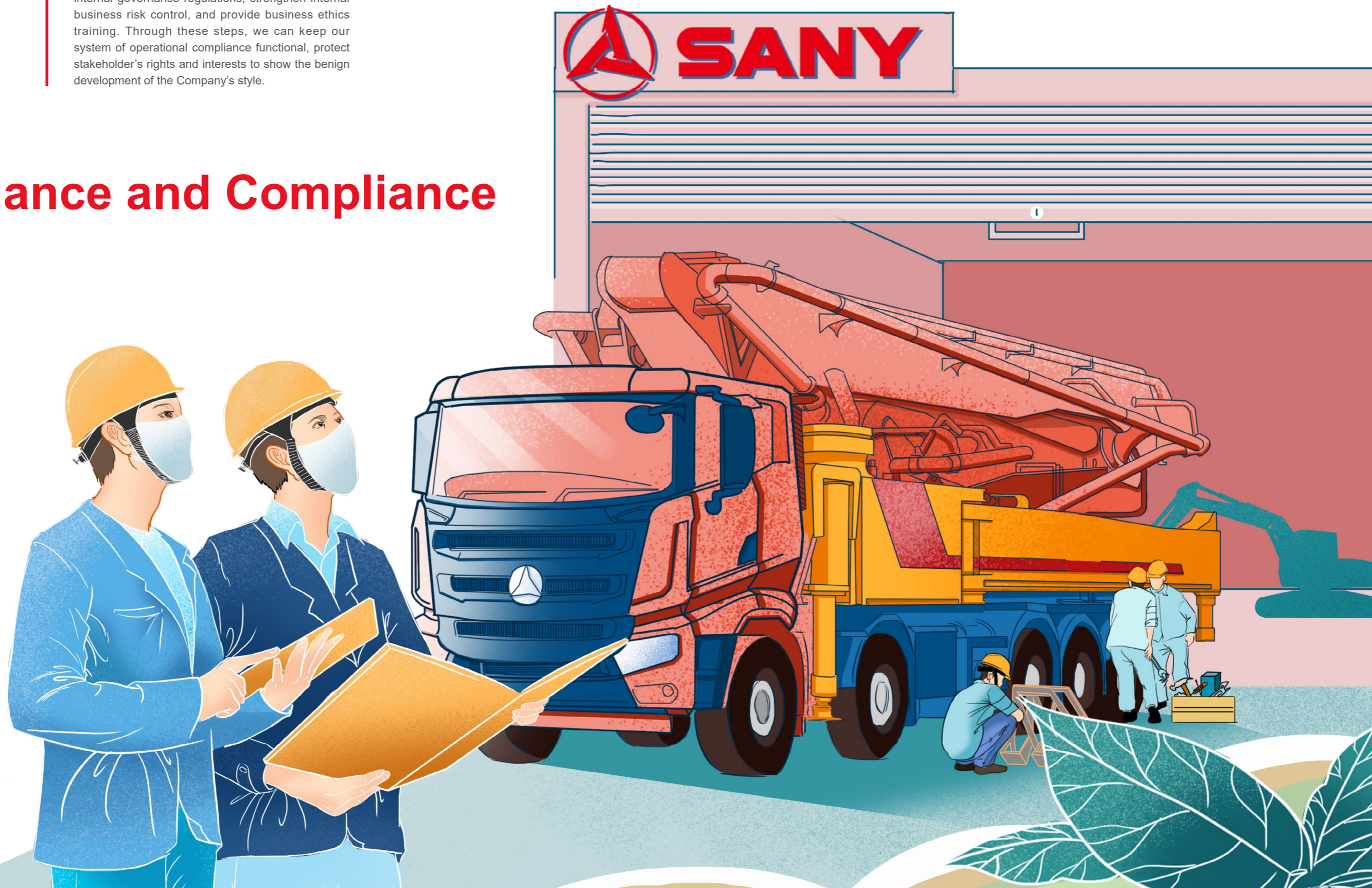
SANY Heavy Industry's poster at the Expo

Additionally, we exhibited 15 categories of heavy machinery specially designed for Africa. The machines were better adapted to the high temperatures and bad road conditions in Africa and were therefore well received by the participants.

01

SANY Heavy Industry always adheres to the business ethics of compliance, honesty and transparency. We improve our governance framework, refine internal governance regulations, strengthen internal business risk control, and provide business ethics training. Through these steps, we can keep our system of operational compliance functional, protect stakeholder's rights and interests to show the benign development of the Company's style.

Governance and Compliance



Effective Governance

The Company abides by the *Company Law of the People's Republic of China*, the *Securities Law of the People's Republic of China*, the *Code of Corporate Governance for Listed Companies*, the *Rules Governing the Listing of Stocks on Shanghai Stock Exchange* and the *Articles of Association*. We constantly improve our governance framework, establish a sound and standardized operating mechanism, and effectively ensure the health of the Company.

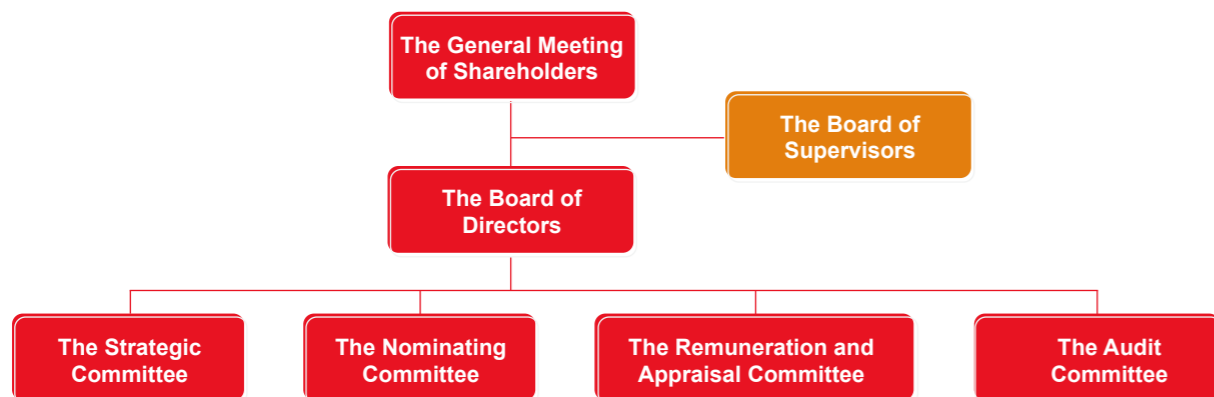
Corporate Governance Framework

The Company's governance framework is comprised of the General Meeting of Shareholders, the Board of Directors and Special Committees, the Board of Supervisors and senior executives. The framework ensures the orderly functioning of the General Meeting of Shareholders, the Board of Directors and the Board of Supervisors, and clarifies the rights and responsibilities of different parties. The sound and coordinated framework can steadily improve the Company's governance capability.

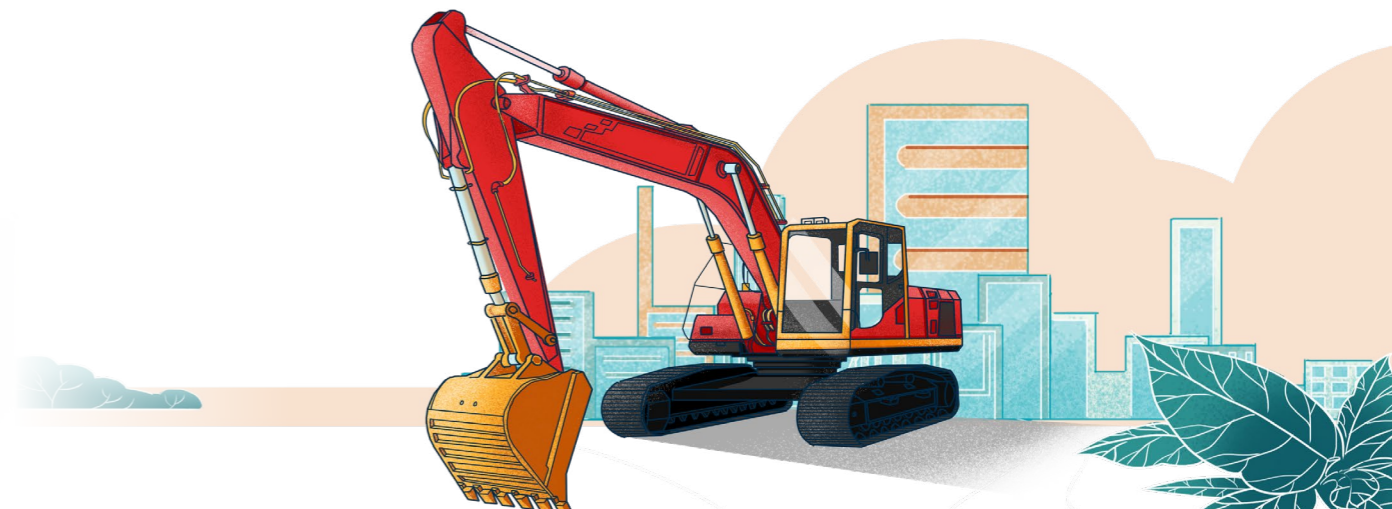
The Board of Directors establishes the Strategic Committee, the Audit Committee, the Nominating Committee, and the Remuneration and Appraisal Committee. The Audit Committee, the Nominating Committee and the Remuneration and Appraisal Committee are chaired by independent directors. At least one independent director at the Audit Committee, the Nominating Committee and the Remuneration and Evaluation Committee should be a professional accountant.

The Company puts a high value on corporate board diversity as a guarantee of scientific and effective decision-making. The Board of Directors is made up of 10 directors and includes one Chairman and one Vice-Chairman. There are four independent directors and one female director, accounting for 2/5 and 1/10 of the total respectively.

SANY Heavy Industry's Management Level and Major Responsibilities



Management Hierarchy	Major Responsibilities
The Board of Directors	The Board is responsible for the General Meeting of Shareholders. It examines important matters regarding the Company's operating activities and submits its decisions to the General Meeting of Shareholders for review.
The Board of Supervisors	The Board of Supervisors oversees the Board members and senior executives, as well as the Company's finances.
Senior Executives	Senior executives are guided by the Board of Directors and take charge of the Company's daily operations and management.



Convening of General Meetings of Shareholders

The Company organizes the General Meeting of Shareholders in accordance with applicable laws, regulations and the *Articles of Association*. During the reporting period, the Company held one General Meeting of Shareholders and four ad-hoc General Meetings and provided on-site and online voting options to safeguard all the shareholders, especially minority shareholders' rights to vote. The convening, deliberation and voting procedures complied with the legal requirements. Lawyers attended all the General Meetings of Shareholders and issued legal opinions to ensure their legitimacy and effectiveness.

Regulation of Controlling Shareholders

The Company is completely separated from its controlling shareholders when it comes to business, personnel, assets, institutions and finances. The pricing of related-party transactions between the Company and its controlling shareholders or its subsidiaries follows the market principles of openness, fairness and justice. The controlling shareholders have complied with the *Code of Corporate Governance for Listed Companies* and other applicable laws and regulations and have not interfered with, directly or indirectly, the Company's decision-making and business activities beyond the General Meeting of Shareholders.

Convening of Board of Directors Meetings

The Company convenes Board of Directors Meetings in accordance with the *Articles of Association* and other applicable laws and regulations. The convening, deliberation, authorization and voting procedures of Board Meetings complied with the legal requirements. The directors are dedicated and diligent. They carefully review proposals and thoroughly discuss important matters before offering scientific and reasonable decision-making. Independent directors are impartial. They provide independent opinions on important matters, make professional judgment, and put forward reasonable suggestions on major matters of the Company. During the reporting period, the Company held ten Board of Directors Meetings.

Convening of Board of Supervisors Meetings

The Company convenes Board of Supervisors Meetings in accordance with the *Articles of Association* and other applicable laws and regulations. The supervisors are responsible for the shareholders. They regularly check the Company's finances and internal control process and attend the General Meeting of Shareholders and the Board of Directors Meeting to oversee how well the Board has implemented the resolutions made at the General Meeting of Shareholders and whether the directors and senior executives have fulfilled their responsibilities. The supervisors also safeguard the Company's interests and the shareholders' legitimate rights and interests. During the reporting period, the Company held seven Board of Supervisors Meetings.

Risk Management

SANY Heavy Industry prioritizes corporate risk management. The Company has improved its risk management and internal control procedures, thoroughly combed and perfected the existing structure, system, process, specification and authority, and increased its oversight of systems implementation. Relevant departments have implemented the risk control system and carried out routine risk control tasks to ensure that the Company has a solid foundation of safety.

The risk control & management is a system in which all departments of the Company participate together and each department assumes different roles. The Auditing and Supervision Headquarters assumes the responsibility of independent oversight and evaluation. In 2021, the Company strengthened its operating mechanism and established a three-pronged auditing and supervision system that combines a top-down and bottom-up approach.

First Defense (Business Divisions)

- Operational and Management Measures
- Internal Control Measures

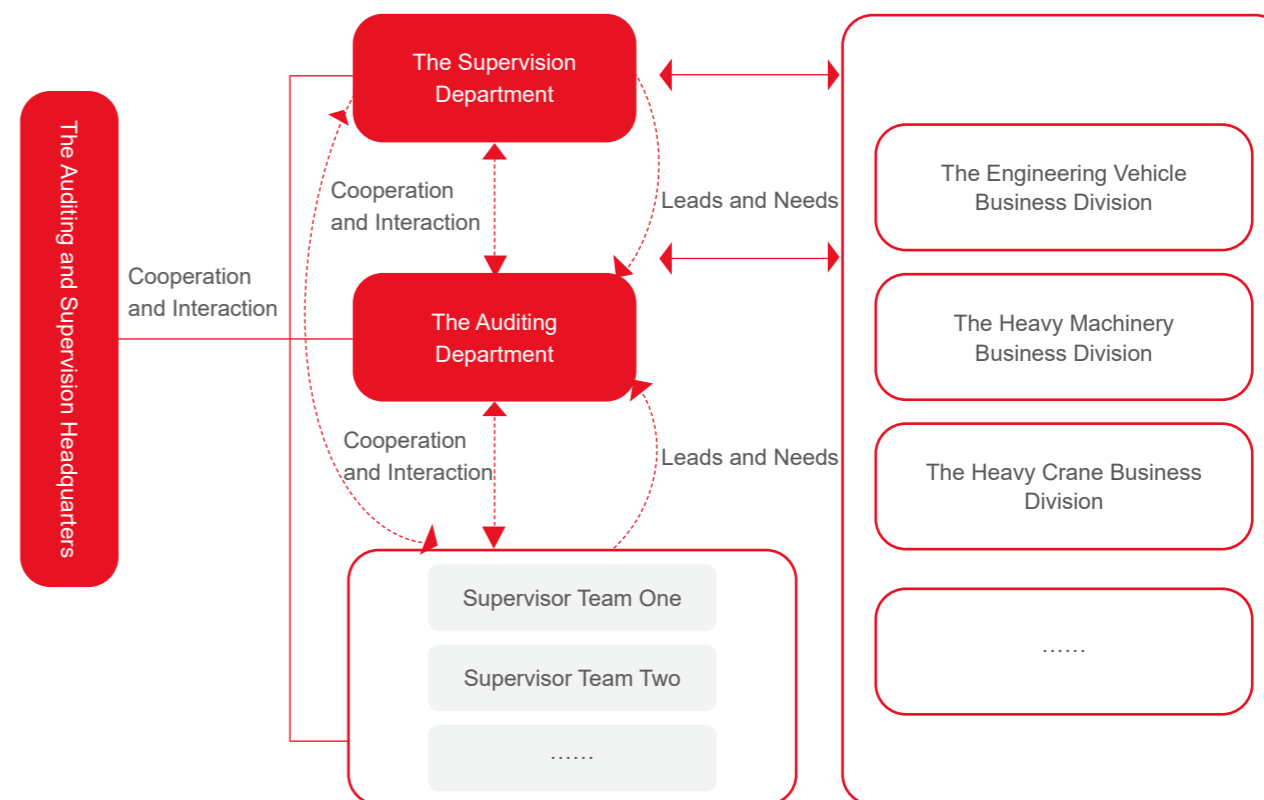
Second Defense (Functional Headquarters)

- The Business Affairs Headquarters
- The Process and IT Department
- The Smart Manufacturing Headquarters
- SANY Legal Affairs Department
- The Marketing and Risk Control Department
- The Financial Affairs Headquarters
- The Securities and Investment Office
-

Third Defense (Auditing and Supervision Headquarters)

- Internal Control and Audit

Three Defenses of Risk Management System



Auditing and Supervision System

Department	Duties
The Auditing and Supervision Headquarters	Developing supervision and evaluation systems for internal control and risk management procedures. Inspecting and assessing the completeness, suitability and effectiveness of internal control and risk management procedures of different departments.
The Supervision Department	Investigating major fraud cases and developing the anti-fraud system.
The Auditing Department	Encouraging departments to build and maintain a risk database. Promoting self-evaluation of different systems and organizing risk re-assessment activities.
Supervisor Teams	Independently examining, verifying, assessing and reporting on the effectiveness and suitability of internal control and risk management procedures of the operators within our scope of supervision.



The Company insists on problem orientation and goal orientation. It has developed a graded system featuring “1+7+N”, aiming to make the system more standardized. “1” refers to the core *Auditing and Supervision Management System*, which includes “7” secondary systems ranging from auditing and supervision demands to IT system authorization and management. Among them, the implementation and management processes of the auditing and supervision project define the specific operational guidelines for the work flow and the project’s risk management. Based on the auditing and supervision system, the Company has harnessed big data to develop digital models, monitored the fundamental business processes of its subsidiaries, and audited major problems and leads. In 2021, the Company conducted 275 projects. We went over the risk database thoroughly, updated 683 risk items, and abolished 105 risk items. Currently, there are 698 effective risk items in the database. In 2021, the Company performed six risk management training sessions, attracting a total of 1,876 participants.



Corporate Compliance

SANY Heavy Industry abides by applicable laws and administrative regulations. The Company attaches great importance to anti-corruption and continues to monitor efforts in this field. It adopts a “zero-tolerance” approach towards infractions and accepts supervision from the public. Meanwhile, the Company develops specific requirements for anti-corruption and introduces incentives and punishment to outline a practical anti-corruption roadmap. Every year the Company delivers anti-corruption education and training to foster a corporate culture that prohibits corruption.

Honest Practices

The Company abides by the *Criminal Law of the People’s Republic of China*, the *Anti-Unfair Competition Law of the People’s Republic of China*, the *Interim Provisions on the Prohibition of Commercial Bribery* and other applicable laws and regulations. We formulate and implement the internal anti-money laundering system and integrity management system, offer operational guidelines for critical matters related to business ethics, and establish a whole-process anti-corruption and integrity management system.

Anti-Money Laundering

The Company has established an anti-money laundering internal control system from the aspects of financial management and financial monitoring, regulated the detection and evaluation of anti-money laundering risks, and put an end to illegal operations.

Financial Management

- Designate the Legal Compliance Department as the leading unit to take charge of the Company’s anti-money laundering effort and appoint one dedicated officer in charge of anti-money laundering in each department.
- Develop and revise internal regulations and processes including the Anti-Money Laundering Internal Control System, the Trade-based Money Laundering Risk Assessment Management Measures, the Anti-Money Laundering Self-Evaluation Implementation Rules and the Management Measures for Reporting Large Transactions and Suspicious Transactions, clarify the anti-money laundering obligations and each department’s anti-money laundering responsibilities, and regulate the reporting mechanism for suspicious transactions and money laundering risk assessment process.
- Operate the Anti-Money Laundering Information System to automatically identify and evaluate the customer’s money laundering risk based on the anti-money laundering monitoring list, customer identity, financial product category and transaction amount, and communicate the money laundering investigation findings to the business segment.

Financial Monitoring

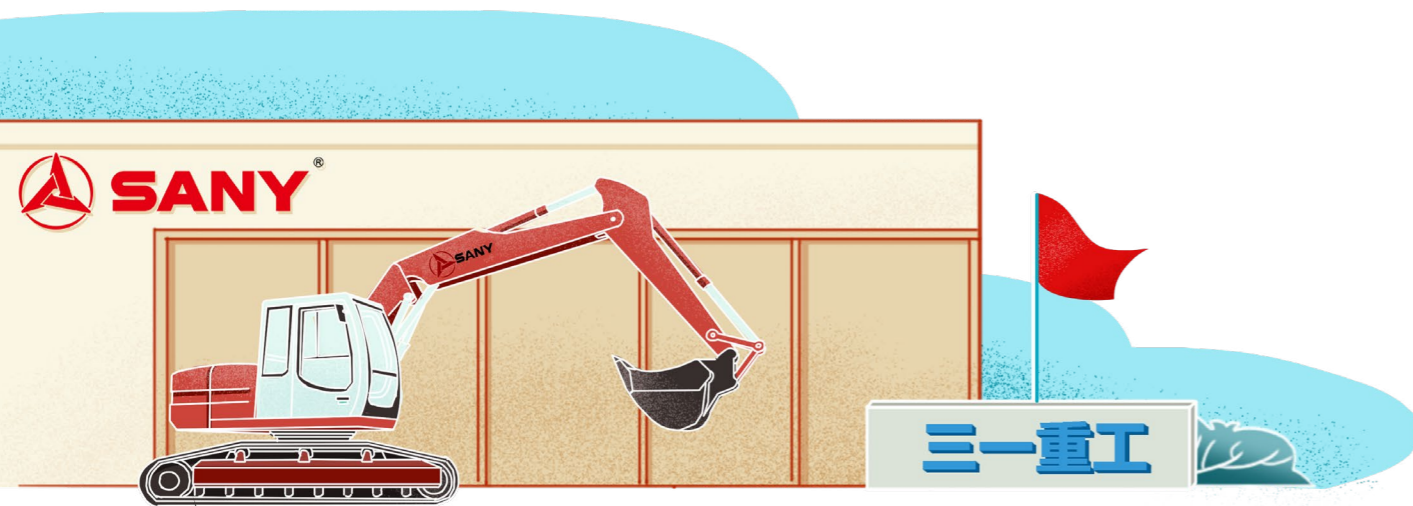
- Review the source and flow of specific cash transactions to ensure the compliance and legitimacy of capital flow and eliminate illicit operations.
- Establish the CRM system and GSP system to manage customers and supplier files, carry out credit evaluation and review of customers and suppliers, and strictly control cooperative transactions and supplier access.

Integrity Management

The Board of Directors directly supervises, guides, and evaluates the Auditing and Supervision Headquarters' work outcomes and guides, supports, helps and makes decisions on anti-corruption management. The Company's *Conflict of Interest and Integrity Management System* defines the roles of departments responsible for integrity and self-discipline, clarifies what constitutes a violation of integrity standards, and incorporates declaration of conflict of interest and accountability steps. It boosts the Company's efforts to strengthen integrity and self-discipline, creates an honest and efficient working environment, and prevents actions that compromise the Company's interests while protecting the legitimate interests of employees and suppliers.

Responsible Departments for Integrity Management and Their Duties

- The principal in charge at each department fulfills main responsibilities for managing conflict of interest and integrity and self-discipline work and report the conflict of interest according to the rules and regulations. He may also authorize or appoint another colleague to accept and investigate the department's issues concerning conflict of interest and integrity.
- The Auditing and Supervision Headquarters is responsible for the publicity, implementation and declaration of the Conflict of Interest and Integrity System; the interpretation, acceptance & investigation and punishment of infractions of the System as well as the implementation of accountability results; and the reception, registration and disposal of the cash and gifts returned by employees.
- The Business Affairs Headquarters and the Business Affairs Department of each business division are responsible for the declaration, implementation, investigation and auditing of the supplier's conflict of interest as well as implementation of the results, and accept the supervision from the Auditing and Supervision Headquarters.
- The Office of the Chairman supervises the Auditing and Supervision Headquarters' work on managing conflict of interest, cash received as bonus and gifts.
- The Human Resources Headquarters and the Human Resources Department of each business division are responsible for collaborating with the Office of the Chairman and the Auditing and Supervision Headquarters on the declaration and publicity of conflict of interest issues.



To regulate and enhance internal and external integrity management, we prioritize the three aspects of "punishment, governance and prevention" to construct the anti-corruption and integrity management system.

Anti-Corruption and Integrity Management System

- **Advance Publicity and Prevention:** We conduct honesty and integrity training, stage honesty and integrity educational exhibition, organize honesty, integrity & compliance test, and offer integrity notifications at festivals for staff in different divisions and departments. We also require staff at key positions to sign an Honesty and Integrity Letter of Responsibility and offer them preventative education and training to ensure that our staff and cadres are clean and honest.
- **Ongoing Supervision and Governance:** We improve the processes by utilizing the digital model supervision, reporting and complaint mechanism, senior management supervision and evaluation mechanism, business compliance check, "Ten Rules" supervision of business decision-making, supplier contact and visit mechanism, gift and cash declaration mechanism, and conflict of interest and external investment declaration to ensure that risks are controllable.
- **Punishment and Accountability:** We focus on investigating and handling major cases, announcing typical cases, and building the blacklist sharing mechanism, tracking mechanism of resigned personnel, and reporting ranking and investigation mechanism. By diversifying accountability measures, we have made them act as a deterrent.

When it comes to supplier integrity management, we established the *Supplier Management System*, the *Procurement Framework Agreement* and the *Supplier Contact/Visit Management Plan*, which includes provisions on supplier integrity. These regulations have promoted our work on supplier integrity and anti-corruption. In 2021, 100% of our suppliers signed the Integrity Cooperation Agreement or Letter of Commitment.

Supplier Management System

- Stipulates access requirements of dishonest operations for suppliers

Procurement Framework Agreement

- Requires suppliers and franchisees to sign the Integrity Cooperation Agreement
- Fills in the *Conflict of Interest and External Investment Declaration Form* on the procurement website

Supplier Contact/Visit Management Plan

- Builds a real-time feedback mechanism through the reporting hotline, WeChat platform and follow-up visit.
- Announces infractions of rules and regulations in real time.
- Publicizes the Company's policy on honesty and integrity.
- Investigates and confirms a supplier's suspected breach of a contract.



Culture of Integrity

The Company establishes a sound integrity education system and constantly improves it. The education system covers a wide range of areas, including employee enrollment, promotion, evaluation, publicity and supplier signing to improve the coverage and compatibility of integrity education, and promote the construction of an integrity culture in the Company. In 2021, the Company's integrity and compliance test covered about 14,000 people. We also carried out five categories of anti-corruption training, covering over 18,000 people.

Different stages in integrity education	Education forms
Employee enrollment and promotion	Declaration of conflict of interest and external investment; Training on honesty and confidentiality.
Evaluation	Evaluation of integrity and honesty performance; Integrity and compliance test.
Publicity	Integrity sunlight week; Integrity and honesty education exhibition; Integrity knowledge competition; Thematic lecture on the criminal justice system; Short videos on integrity and honesty; Greetings on integrity at Festivals.
Supplier signing	Supplier signing ceremony on integrity and compliance

SANY Heavy Industry's Anti-Corruption Training in 2021

OA Online Publicity and Test on Negative List and Accountability Provisions of Fraud Evaluation Prevention
Covered **14,000** people

Training on Honesty and Confidentiality for New Staff
Organized **29** training sessions and covered **4,000** people. Each of the sessions lasted **3** hours on average

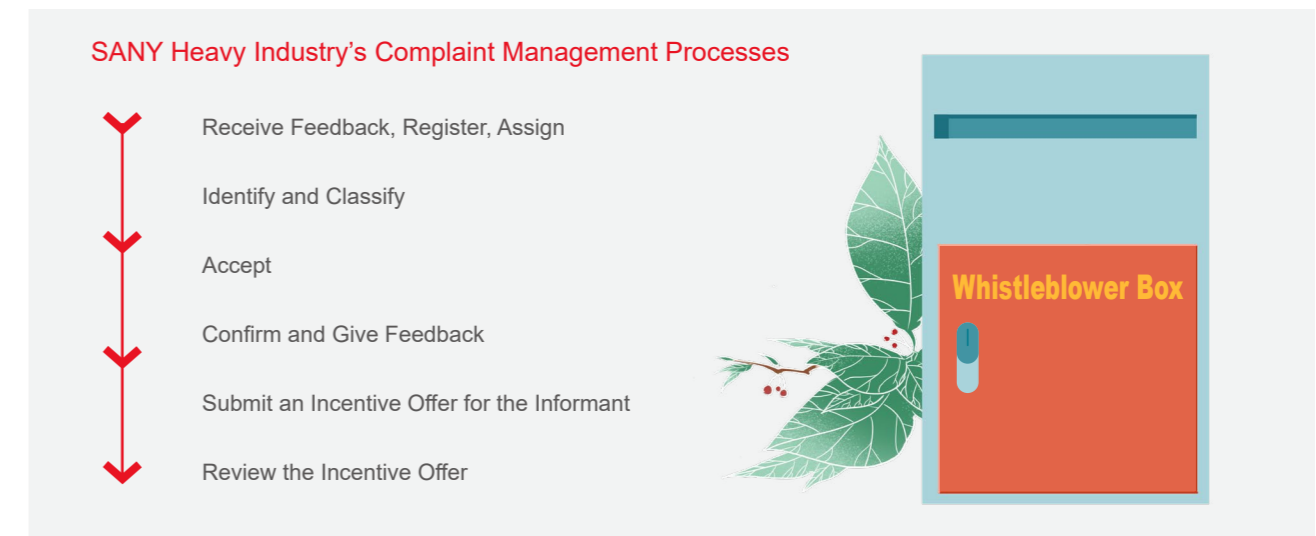
Training for All R&D Staff
Organized **1** eight-hour training session and covered **45** people

Thematic Training for All Business Staff
Organized **2** one-hour training sessions and covered **600** people

Integrity Training for Core Suppliers in East China
Organized **1** one-hour training sessions and covered **30** suppliers

Supervision and Reporting

Following the requirements of China's discipline inspection and supervision authority, the Company has developed the *Reporting Management Procedures* to clarify ways to report violations of integrity policies. We have set up a dedicated E-mail account, employed Feishu (SANY's real-time office software), WeChat, Cloud-Hub (mobile office software) and QQ, launched a hotline and created a reception room to receive internal and external reports to ensure the smooth operation of all channels. We have also created a Smart Supervision Platform to manage incoming messages and complaints, kept the informants' identity a secret and implemented the withdrawal system while passing the case information and investigating it. If the identity of a whistleblower or informant were stolen or leaked, the competent department would be held accountable according to the *Accountability Management System*. If the informant were intimidated or retaliated, the Company would assign dedicated personnel to protect them from harm. If necessary, the Company would report the retaliatory conduct to the judicial authorities and hold anyone who took revenge responsible.



Reporting Channels of SANY Heavy Industry

E-mail	jiancha@sany.com.cn
Feishu	Workbench; SANY Integrity
WeChat	SANY Integrity Public Account; Chairman's Letter Box
Cloud-Hub	Chairman's Letter Box; SANY Integrity
QQ	2592689550
Tel	0731-84031222; 85835000
Reception Room	Room 306, Complex Building of Changsha Industrial Park; Office of the Supervisory Head in All Industrial Parks

02

As a National Innovative Enterprise and a significant National High-tech Enterprise appointed by the Ministry of Science and Technology, SANY Heavy Industry has devoted itself to the belief that "All Comes From Innovation." Hence, the Company has constantly enhanced its R&D structure, reformed its sci-tech system, and strengthened its innovation capabilities. Additionally, the Company has placed its focus on producing premium products, delivering better customer services, and establishing sustainable supply chains to empower high-quality development.

R&D and Product Quality



R&D and Innovation

SANY Heavy Industry regards R&D input as the most valuable investment for its future growth. We advocate the concept of “One Generation of Marketing, One Generation of R&D, One Generation of Reserve”. Every year we spend approximately five percent of sales revenue on R&D. To strengthen foundational R&D capability and improve R&D efficiency, we have established a sound R&D structure and set up a clear R&D incentive mechanism to provide guarantee and unleash the vitality of innovation.

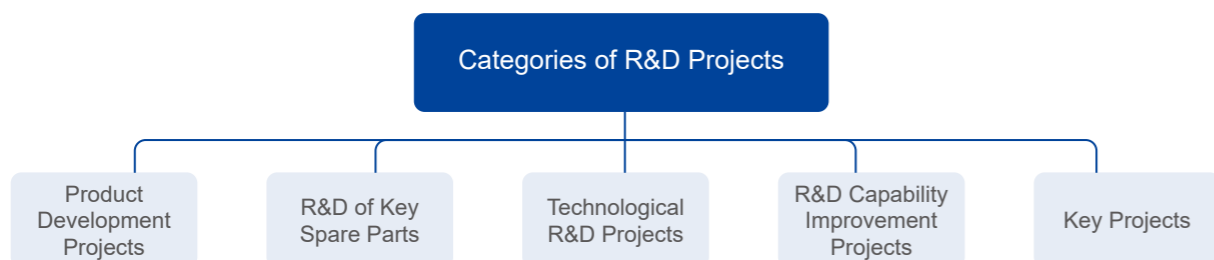
Developing a Strong R&D Structure

The Company has established the R&D Management Headquarters to build and manage the R&D structure and develop generic technologies. In creating the R&D organization, we perform demand management, product planning & development and technology platform building as the major activities and leverage software, industrial design and process technology development as the underpinning forces. To move from “customer demand” to “customer satisfaction”, we enhance our R&D processes. In 2021, we added or revised 78 R&D processes. We also developed a demand-oriented positive R&D support system by leveraging digital means to boost R&D productivity and actualize software-enabled R&D business processes.

In 2021, the Company developed the *Research and Development Project Management System* to regulate the management process throughout a project’s entire life cycle, including its scope, progress, risk, quality, change, human resources, finances, procurement and acceptance check. The goal was to ensure the realization of the project’s objectives by strengthening the requirements of the project management process.

The Company has established an R&D project classification system to classify R&D projects according to their content and purpose. The projects are classified into five categories, i.e., product development, R&D of key parts, technological R&D projects, R&D capability improvement projects and key projects. Furthermore, our R&D Department has classified the projects into four levels based on their significance and the *R&D Projects Classification Standards*: L, A, B and C. Different levels have different evaluation criteria and management processes.

SANY Heavy Industry’s Classification System for R&D Projects



SANY Heavy Industry Initiated R&D Work on Universality and Standardization Structures

In 2021, SANY Heavy Industry developed the mechanism, standardized process and evaluation system for spare parts universality. It delivered 1,538 company-wide universality projects, resulting in cost savings of RMB 112 million. The Company led the effort to draw up the universality plan of top ten materials, completed the integration of locks, hinges and reflectors, and compiled the universality plan of 50 essential materials. We also played a leading role in revising the material spectrum (118 types of materials), thereby achieving an integration rate of 56%. Additionally, we exchanged opinions with 22 domestic and one international technical committees of standardization on the standardization and universality of parts.

Incentivising Innovation and Fostering Talents

The Company improves the *Innovation Incentive System* to stimulate the innovation enthusiasm of the R&D team and promote R&D work. The *System* clarifies the criteria for rewarding R&D projects and encourages R&D teams to set targets at different stages and receive the corresponding bonus. Rewarding R&D outcomes is a defining feature that runs across a project’s entire life cycle and helps achieve the objective of “Improving the R&D Outcome throughout the Life Cycle of a Project”. In 2021, SANY Heavy Industry invested RMB 7.697 billion in R&D, registering an increase of RMB 1.438 billion or a year-on-year increase of 22.97%. Our R&D focuses on new products, new technology, electrification, intelligent applications and internationalization.

Additionally, we also place a high value on developing a stronger pipeline of scientists and researchers. The Company has developed the *Talent Training Policy* for our research personnel and conducted colorful training activities for researchers with different levels of expertise. These include training sessions on necessary knowledge and skills, lectures on the new learning and courses on improving capabilities.

In 2021, the Company held

84 R&D training activities

Covering a total of

29,089 people.

SANY Heavy Industry’s List of R&D Training Courses in 2021

Training subject	Sessions	Turnout
Special training on product planning and definition	6	994
Special training for dean of R&D institute	7	481
Special training for and certification of R&D project managers	15	8,044
Mock capability test and special training on professional skills	11	2,751
Training on digital practical skills	5	2,628
Special training on R&D patents	6	2,767
Special training on standardization	11	1,308
R&D lecture hall	14	8,603
R&D technology forum	4	909
The eagle program and training of internal R&D lecturers	2	76

Manufacturing Leadership

To enhance the manufacturing capability in an all-round way, SANY Heavy Industry powers its efforts in research platform construction, intellectual property protection and peer collaboration, and dedicates itself to deepening sci-tech reforms.

Building Scientific Research Platforms

SANY Heavy Industry has invested heavily in building scientific research platforms, shaped a clustered R&D innovation platform system, and promoted the commercialization of research findings. As of the end of the reporting period, the Company had two National Enterprise Technology Centers, one National Enterprise Technology Sub-center, three National Postdoctoral Research Stations, three Academician and Expert Stations, four Provincial Enterprise Technology Centers, one National Recognized Trial and Testing Center, two Provincial Key Laboratories, four Provincial Engineering Technology Centers, one Engineering Technology Research Center of the Machinery Industry and one Provincial Industrial Design Center.

In 2021, SANY Heavy Industry, as a joint unit, invited Academician Wang Yaonan of the Chinese Academy of Engineering to build the Academicians and Experts Workstation of Hunan Province to strengthen the Company's R&D capabilities in artificial intelligence, robotics and control.

Table of Commercialization of Scientific Research Findings in 2021

Unmanned Operation/Operation Needing Few Operators



The standard cycle time of our new generation of large smart excavators is only 12 seconds, which is 33% more efficient than manned operation. The slope leveling error is only 0.5°, an improvement of 280%.

Smart Operation



Our Coordinated Control Technology of Unmanned Paving Fleet enables the world's first commercial operation of unmanned asphalt paving, with various performance indicators far exceeding the industry average.

Smart Operation and Maintenance



More than 50,000 excavators receive predictive maintenance and real-time monitoring of anomaly, improving maintenance efficiency and timeliness to a large extent.

C-Terminal Universal Connectivity



We have developed big data management platforms such as WitSight and connected more than one million of our heavy machines and pumps to enable universal connectivity.

Smart Driving



Our unmanned dumpers have been deployed for a trial run at Lianyuan Steel, and the operational efficiency reached 70% of the labor efficiency.

Protecting Intellectual Property Rights

SANY Heavy Industry abides by the *Patent Law of the People's Republic of China*, the *Trademark Law of the People's Republic of China*, the *Enterprise Intellectual Property Management* and other applicable national laws and standards. The Company has revised a number of internal regulations, such as the *Management Rules of R&D and Patent Work* and the *Trademark Management System*, and established a series of processes such as application, analysis, invalidation, operation, purchase and asset evaluation of patents. These methods have helped regulate our intellectual property operations comprehensively and manage them throughout their life cycle.

To promote the building of a digital intellectual property management system, we have developed a Patent Navigation System, which allows for patent management, patent information retrieval and patent shelf. R&D personnel can use this system to search for categories of our main products and patents of the spare parts, significantly improving the efficiency of conducting thematic analysis and industrial competition analysis as well as patent mining and application.

The Company has conducted a wide variety of professional development courses and special publicity activities for employees, effectively enhanced its intellectual property protection capability, standardized the work processes and ensured that our employees are cognizant of protecting intellectual property. In 2021, we initiated a publicity campaign called the Intellectual Property Week, and held six patent knowledge training sessions. *Intellectual property strategy and planning*, *high-value patent layout*, *enterprise patent protection strategy*, *patent reexamination and invalidation*, and *safeguard of patent rights* were among the topics covered in the training. Additionally, the Company included the intellectual property training into the standard protocol for patent management, and its subsidiary business units and research institutes conducted categorized patent-related training sessions for different levels. The training received favorable employee feedback, improving the overall intellectual property protection environment.

Our active patent application efforts have facilitated major innovations in product and technology.

In 2021, the Company applied for **2,862** patents

1,511 patents were granted.

Additionally, the Company developed created and issued

18 technical standards

Including

12 national standards **1** industry standard **5** organizational standards

List of Technical Standards in 2021

Number	Serial number/plan number of technical standards	Name of technical standards
1	GB/T 25684.1-2021	Earth-moving Machinery Safety Part One: General Requirements
2	GB/T 25684.13-2021	Earth-moving Machinery Safety Part Thirteen: Requirements for Rollers
3	GB/T 25684.4-2021	Earth-moving Machinery Safety Part Four: Requirements for Loader-excavators
4	GB/T 25684.5-2021	Earth-moving Machinery Safety Part Five: Requirements for Hydraulic Excavators
5	GB/T 25684.8-2021	Earth-moving Machinery Safety Part Eight: Requirements for Graders
6	GB/T 39757-2021	Construction Machinery and Equipment Safety Rules for the Use of Concrete Pumps and Pump Trucks
7	GB/T 9142-2021	Construction Machinery and Equipment Concrete Mixers
8	GB/T 17808-2021	Construction Machinery and Equipment Mixing Equipment for Bituminous Mixture
9	GB/T 41098-2021	Cranes Safety Lifting Slings
10	GB/T 16277-2021	Road Construction and Maintenance Machinery and Equipment Asphalt and Concrete Paving Machines
11	GB/T 14782-2021	Earth-moving Machinery Technical Conditions for Graders
12	GB/T 10170-2021	Earth-moving Machinery Technical Conditions for Loader-excavators
13	JB/T 14203-2021	Earth-moving Machinery Remanufacturing Vibratory Rollers
14	T/HATSI 0015-2021	Technical Specifications for Evaluation of Green Design Products Rotary Drilling Rigs
15	T/CMIF 150-2021	Construction Machinery and Equipment Power Head of Rotary Drilling Rigs
16	T/CMIF 151-2022	Remanufacturing Rotary Drilling Rigs General Technical Requirements
17	T/CSTE 0030-2021	Technical Specifications for Evaluation of Green Design Products Truck-mounted Concrete Pumps
18	T/CSTE 0030-2022	Technical Specifications for Evaluation of Green Design Products New Energy Concrete Mixer Trucks

We recognize that protecting intellectual property means protecting innovation, so at SANY Heavy Industry, we prioritize our intellectual property assets. If a tort was committed, we would file an appeal or pursue other legal options to safeguard our interests and protect our intellectual property and patents. In 2021, SANY Heavy Industry sued a machinery company in Qingdao for patent infringement. The final ruling from the court found that the machinery company had infringed three patents of SANY Heavy Industry, and we were awarded RMB 6.858 million in compensation.



Exchanges and Cooperation

The Company actively engages in industry-university-research partnerships. We have collaborated with Central South University, Lanzhou University of Technology, Hunan University and other famous colleges and universities at home and abroad as well as Volvo Trucks and ZTE to conduct research projects, establish industry associations and carry out strategic cooperation. We seek to facilitate R&D of new technology in the field of engineering machinery and connect the innovation links of basic research, application development and demonstration projects to promote the commercialization of research findings.

SANY Heavy Industry's Participation into Industry Associations in 2021

December 2021

the Director of SANY Heavy Industry's R&D Management Headquarters participated in the Twelfth National Member Representative Conference of the Chinese Mechanical Engineering Society as a senior member.

December 2021

SANY Heavy Industry, as one of the shareholders, incorporated the Hunan Guozhong Zhilian Engineering Machinery Research Institute Co., Ltd..

October 2021

SANY Heavy Industry's Director of the R&D Management Headquarters and Deputy-manager of the Engineering Vehicle Business Division became the Executive Member and Member of the Tenth Member Representative Conference of the Hunan Society of Theoretical and Applied Mechanics.

December 2021

SANY Heavy Industry collaborated with China EV 100. The Chairman of SANY Heavy Industry became a member of the China EV 100 Council after passing the approval. SANY Heavy Industry signed cooperation agreements with China EV 100 in the areas of research topic, seminar, China EV 100 Annual Conference and introduction of research project.

SANY Heavy Industry has also leveraged its expertise in lighthouse factory, smart manufacturing and digitization to help other manufacturers. By offering technological support and upgraded plans, we intend to empower the business community and promote the upgrading of the manufacturing industry in China.



SANY Heavy Industry Signed Strategic Cooperation Agreement with Henan Zhonglian Tongli

On July 14, 2021, SANY Heavy Industry and Henan Zhonglian Tongli Materials Co., Ltd. (hereinafter referred to as Zhonglian Tongli) held the *Strategic Cooperation Agreement* Signing Ceremony in Zhengzhou.

According to the Strategic Cooperation Agreement, SANY Heavy Industry and Zhonglian Tongli shall collaborate in green logistics and lighthouse concrete and build template smart enterprises together by focusing on business opportunities in Zhengzhou where Zhonglian Tongli is based and gradually expanding the network to cover the whole Henan Province. SANY Heavy Industry has promised to provide support in technology, human resources and solutions to help Zhonglian Tongli build itself into a smart, IT-powered and green enterprise. Going forward, both sides shall leverage their respective strengths and seek closer cooperation to promote long-term development.



The signing ceremony

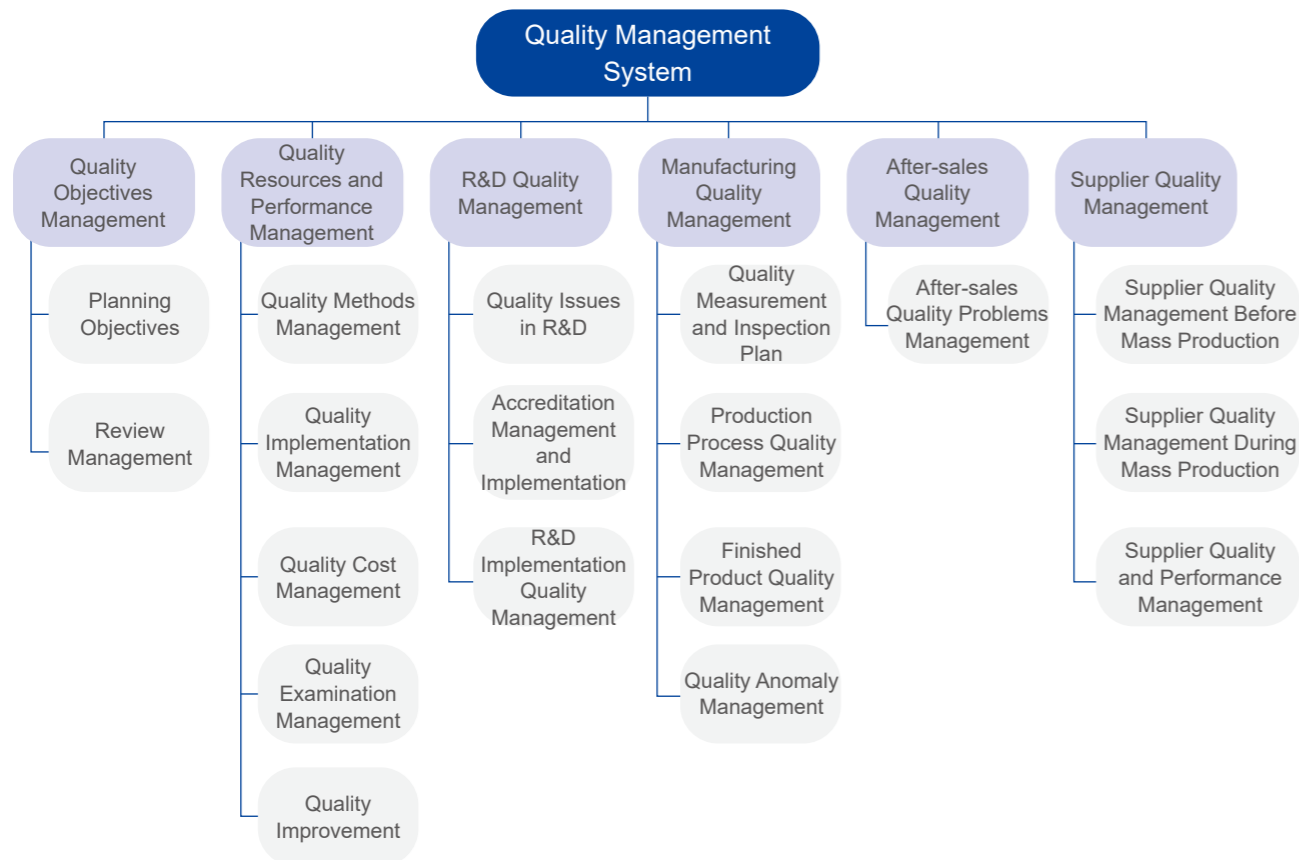
Quality Management

We are well aware that only with high-quality products can we build a time-honored brand. SANY Heavy Industry regards product quality as its core competitiveness, follows the corporate mission of “Quality Changes the World”, and prioritizes product quality management at all times.

Quality Management System

Guided by the philosophy of high-quality development, the Company has established a perfect quality management system, developed quality management rules, and adopted internal auditing, supervision and review measures to guarantee the effective implementation of quality management measures in all production links and provide our customers with high-quality products. Since we passed the quality management system certification, the Company has always regarded the building of a better product quality management system as the top priority, requiring all of its subsidiaries to meet the requirements defined in its quality management system. In addition, the Company has built a rigorous formalized system to guarantee the validity of the certification. As of the end of the reporting period, 19 of the Company’s 21 subsidiary manufacturers of main engine and spare part passed the ISO 9001 or IATF 16949 certification, while the other two newly established subsidiaries were awaiting certification.

The Company abides by the *Product Quality Law of the People’s Republic of China* and other applicable laws and regulations and has developed internal regulations, including the *Importance Rating and Requirements of Product Quality Properties*, which defines the purpose of quality management and outlines detailed management procedures and measures.



Testing Product Quality

To assure high-quality products, the Company has taken into account the key processes of a product’s entire life cycle and developed a Quality Information System (QIS), which divides the quality business processes into six L2 processes, 18 L3 processes, and 34 L4 processes. Product testing has also been integrated into the manufacturing quality management of the QIS, which includes eight L4 processes such as regular inspection management, patrol inspection management, measurement management and product quality audit. To summarize, product testing enables a comprehensive examination of manufacturing quality.

To improve product testing efficiency, the Company has implemented a variety of new technologies, including machine vision and promoted the delivery of the intelligent vision quality inspection system, which utilizes the camera and other hardware equipment to enable the automatic testing and can operate continuously without interruption. The smart system resolves inconsistency in inspection standards, which was unavoidable among quality inspectors. Furthermore, the images captured by the camera are centrally stored, making subsequent rechecking and tracing more convenient.

We have also taken into consideration standard processes and special processes and developed many machine vision quality inspection solutions in response to different testing scenarios. These include quality inspections of blade, welding line, paint, machine, and rubber coating, detection of wrong and neglected loading, and dimension measurement. In 2021, SANY Heavy Industry implemented 31 visual quality inspection programs, which helped avoid flawed products.

Product Quality Response Mechanism

To deal with emergencies like a product safety incident, SANY Heavy Industry has developed internal regulations such as the *Accountability Management System for Major Quality Defects*. If there were major quality incidents inside or outside our plants, the responsible subsidiaries or departments would be expected to report the problem to the Quality Headquarters within 24 hours and properly handle the situation according to the procedures stipulated in the *Accountability Management System*. In 2021, the Company reported zero major product safety incident.



Customer Service Management

We have always done our best to provide customers with high-quality and safe services and abide by the *Law of the People's Republic of China on the Protection of the Rights and Interests of Consumers*, the *Advertising Law of the People's Republic of China*, the *Anti-Unfair Competition Law of the People's Republic of China* and other applicable laws and regulations. We have put in place solid mechanisms to respond to customer complaints and protect their privacy, listened to their opinions and put forward solutions to keep their information and trade secrets safe.

• Responding to Customer Complaints

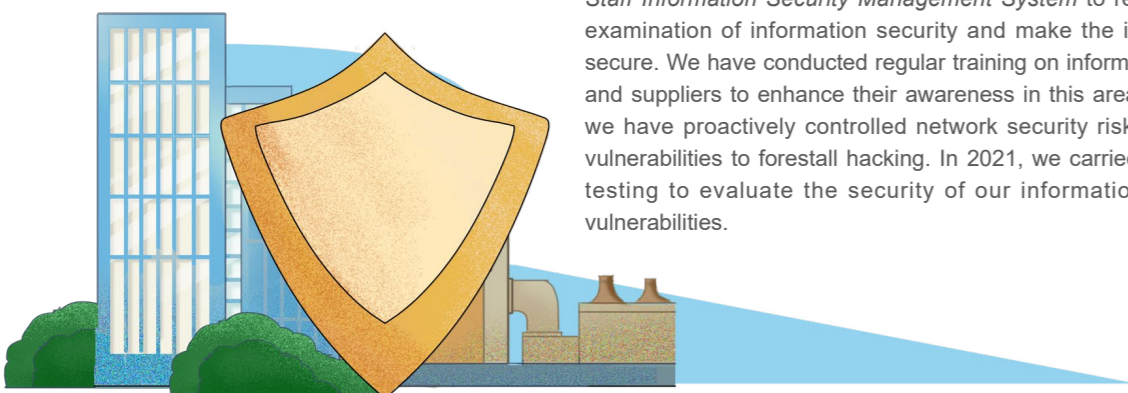
SANY Heavy Industry puts a high value on the opinions and suggestions of customers, and has issued internal documents like the *Customer Complaint Procedures*, the *Service Management System* and the *Customer Complaint Management Process: From Filing to Settlement*. We seek to improve the customer complaint handling mechanism on an ongoing basis. We have classified the complaints into different levels and proactively handled them. We have made our complaint-receiving channels public, including the 24-hour hotline 4008-87-9318, online support personnel on our official website and complaint filing via DM on social media. These have allowed us to collect feedback from our customers promptly. In 2021, we handled 2,089 complaints regarding substandard products.



• Prioritizing Privacy Protection

We are dedicated to protecting our customers' privacy. The Company has developed regulations to protect customer privacy and trade secrets and signed confidentiality agreements with customers to keep their information safe. It has also followed the requirements of the *Cybersecurity Law of the People's Republic of China*, *MLPS 3.0* and the *Personal Information Protection Law of the People's Republic of China* and set up a sound network information security management system. Additionally, our Level Three Customer Relationship Management (CRM) System has obtained the Filing Certificate from the Multi-Level Protection Scheme.

We always seek to build a better information security system from the angles of management and technology, and have created an effective mechanism to identify and prevent information security risks. In terms of management, we have developed internal policies such as the *Information Security Auditing and Management System*, the *Information Security Auditing Regulations* and the *Staff Information Security Management System* to regulate auditing and self-examination of information security and make the information system more secure. We have conducted regular training on information security for our staff and suppliers to enhance their awareness in this area. In terms of technology, we have proactively controlled network security risks and repaired high-risk vulnerabilities to forestall hacking. In 2021, we carried out Internet penetration testing to evaluate the security of our information systems and remove vulnerabilities.



Responsible Supply Chain

SANY Heavy Industry recognizes the importance of a supply chain to product quality. As a result, we view our suppliers as important partners, share development opportunities with them, and collaborate on responsible supply chain management. Our goal is to ensure high-quality products and to establish a stable, high-quality, efficient, and mutually beneficial supplier ecosystem.

Supply Chain Quality Management

Supplier management is an essential component for the Company to improve quality management and sustain its operations. We have developed the *Supplier Management System* to regulate supplier quality management, and remain committed to fostering sustainable partnerships and fair business practices.

When selecting new suppliers, the Company would use its Supplier Access and Certification System to generate an evaluation model that covers a variety of factors based on the conditions of suppliers. In addition to checking the suppliers' quality certificate, environmental certificate, franchise certificate, establishment duration, and taxpayer certification, it has also set a threshold for the score of the Supplier Access Questionnaire. After a supplier has met all of the requirements, the Company outlines detailed approval processes based on real-world business scenarios to ensure a fair and rigorous selection process.

The Company has implemented dynamic management of the *List of Eligible Suppliers* and regularly evaluated major suppliers. If suppliers triggered exit scenarios or failed to meet our requirements, the Company would use the *Supplier Exit Processes According to Product Categories* to remove them from our supply chain and announce the results at the monthly supplier management meeting. In 2021, we eliminated 985 abnormal suppliers and blacklisted 210 dishonest suppliers.



Number of SANY Heavy Industry's Suppliers According to Regions and Product Categories in 2021

	Indicator	Number
Number of suppliers according to regions	Chinese mainland	2,334
	HK, Macau and Taiwan, China	9
	Overseas	45
Number of suppliers according to product categories ¹	Number of production suppliers (Procurement of raw and auxiliary materials)	2,089
	Number of non-production suppliers (Project procurement)	789
	Number of suppliers of general products	1,275
	Number of suppliers of specialized products	1,474

¹ There are 2,388 suppliers, and one supplier may supply more than one single category of product.

The Company has included environmental stewardship, labor management, anti-corruption, and other dimensions of corporate social responsibility into the assessment considerations of supplier access and performance and has established a perfect ESG Management Strategy for suppliers.

- 1 We include the requirements of energy and resource conservation and environmental protection into our supplier evaluation system to green supply chains.
- 2 We conduct a thorough review of the environmental certificate provided by the supplier during the access approval process, take a "zero-tolerance" approach to the fake or expired certificates, and terminate dishonest suppliers.
- 3 We designate fuel consumption as a critical metric and factor it into our product procurement assessment in order to practice green procurement.
- 4 We require suppliers to submit information about their social responsibility and environmental certification. They should also disclose such information as operational compliance, tax payment, social security contributions, environmental protection certificate, quality certificate, debt, the relationship between shareholders and senior executives, and corporate governance capability.
- 5 We verify the information submitted by suppliers through on-site inspections. We have added corporate social responsibility terms and a sustainable development section to our Performance Evaluation Form. Additionally, we have worked to double-check the suppliers' performance in terms of employment, human rights, corporate culture, and employee satisfaction.

The Company classifies its suppliers into five categories based on their product category and development strategies. These suppliers are classified as strategic, premium, backup, active exiting, and negative exiting suppliers. Through hierarchical precision management of suppliers, we have improved our relationship with premium suppliers and optimized supply chains' environmental and social responsibility performance through continuous monitoring, tracking, and supervision.



Supply Chain Digital Management

To enhance the management efficiency of its supply chains, the Company has built a digital supply chain system. In 2021, we updated the GSP Digital Supply Chain Platform to enable consistent online management of our 2,388 suppliers around the world. Our digital system has an integrated data collection feature, which greatly improves the efficiency of managing suppliers, maintaining consistent standards in purchasing raw materials and spare parts, and keeping prices stable. Moreover, the system offers strong data visualization and analytics, making it more convenient to implement precision management of suppliers.



Supplier Communication and Training

SANY Heavy Industry actively communicates with its suppliers and partners. The Company has implemented a supplier assistance mechanism, offered supplier training courses, and surveyed supplier satisfaction to seek shared progress with suppliers, establish long-lasting strategic alliances, and meet the goal of building a stable, high-quality, efficient, and win-win supplier ecosystem.

In 2021, SANY Heavy Industry organized four training camps on "necessary knowledge and skills" in Changsha, Kunshan and Beijing, launched 13 courses, and invited leaders and experts from the subordinate departments to deliver lectures, covering a wide range of topics including the Company's values, procurement, new products, quality, logistics and finances. 532 certified production suppliers signed up for the courses. Altogether 1,002 participants took part in the training camps. Additionally, we initiated a supplier assistance program called "Excellent Peers", and boosted suppliers' performance in costs, efficiency, quality, delivery, IT, service, and management. In 2021, the Company addressed 1,249 weak spots for 15 suppliers.



SANY 品质改变世界 商务总部&工程车辆、重起事业部 2021年11月

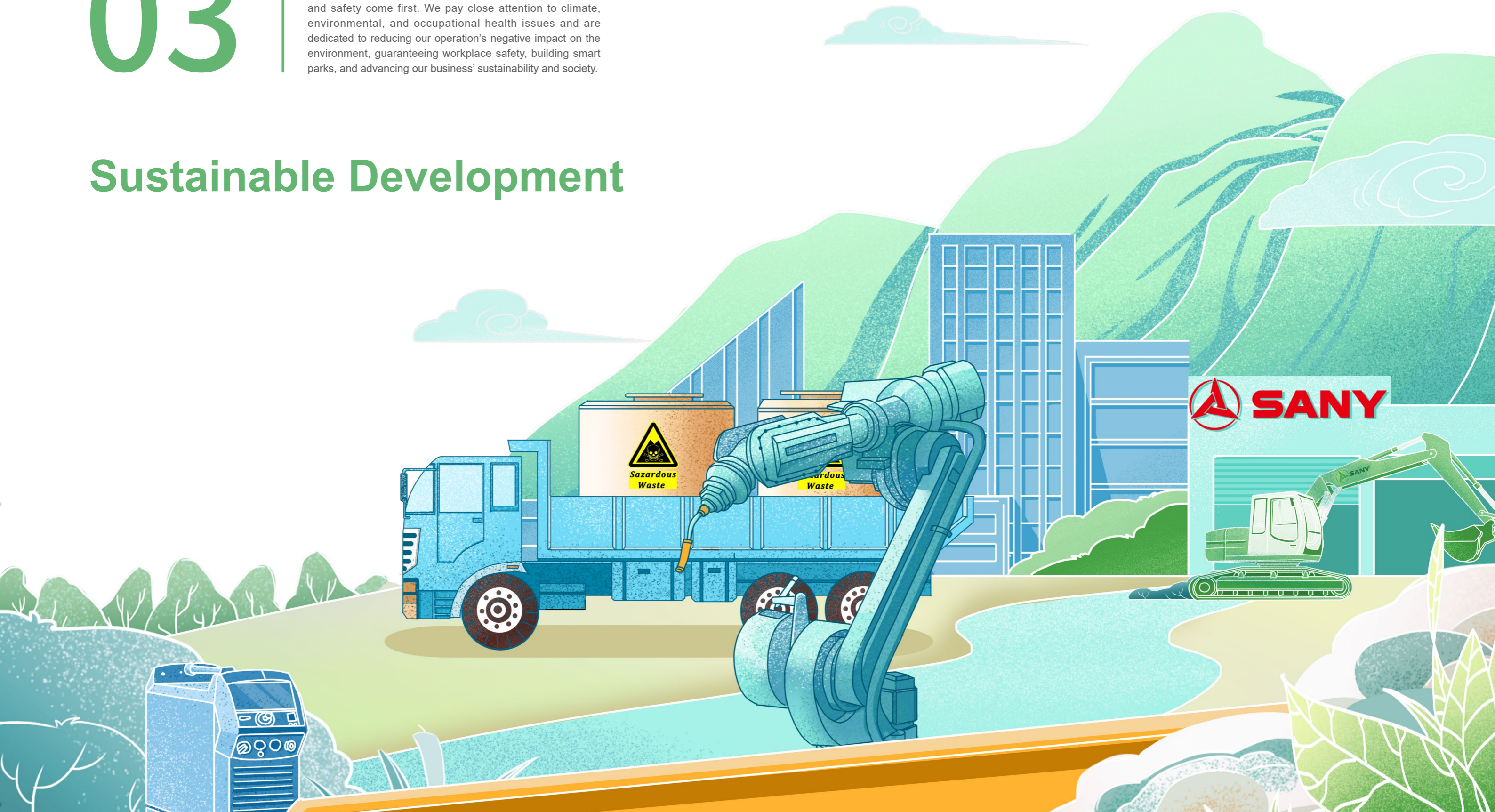
Training materials provided by SANY Heavy Industry to its suppliers

In 2021, SANY Heavy Industry organized **4** training camps on "necessary knowledge and skills" in Changsha, Kunshan and Beijing

03

With a high level of concern about climate change, the environment, and occupational health and safety issues, and adhering to the concept of innovative, coordinated, green, open, and shared development, the Company has implemented a comprehensive safety, environmental, and occupational health system, never forgetting that life and safety come first. We pay close attention to climate, environmental, and occupational health issues and are dedicated to reducing our operation's negative impact on the environment, guaranteeing workplace safety, building smart parks, and advancing our business' sustainability and society.

Sustainable Development



HSE Management System

The Company strictly adheres to local environmental and safety laws and regulations as well as industry emission standards in its business activities and strives to strengthen its internal management system. Following the guideline of "putting people first, putting prevention first, conserving resources, and protecting the environment," we have established a comprehensive safety, environmental, and occupational health management system. We have also worked hard to achieve the ISO 14001 environmental management system and ISO 45001 occupational health and safety management system certifications for all our operations and conducted external HSE audits of our subsidiaries annually. At the end of the reporting period, six of the Company's 21 subsidiaries of main engine and spare part passed the ISO 14001 environmental management certification, and seven passed the ISO 14001 occupational health and safety certification and the HSE system achieved an external audit coverage rate of 90.5%. We had not received any significant complaints or penalties relating to the environment.

The Company's Smart Manufacturing Division is responsible for its HSE management system and reports to the Board of Directors members on the HSE work. Each branch/subsidiary company has a safety and health committee which is led by the company's principal in carrying out HSE activities. The principals of the Company's various departments and the principals of its branch/subsidiary companies are responsible for ensuring that the goals of each HSE management system are integrated into the annual performance goals for employees of relevant functions and ranks according to the goal setting and performance review requirements. We continue to improve our internal HSE management system and strengthen the system to ensure that the Company achieves its HSE management system goals.



HSE management structure	Responsibilities
Smart manufacturing division	Establish the Company's annual occupational health, safety and environmental system goals; Monitor the progress of the Company's occupational health, safety and environmental system goals.
Head of subsidiary	Establish the safety and health committee and provide the leadership and resources needed to establish, implement, maintain and continually improve the HSE management system and enhance its performance in accordance with the HSE management goals.
HSE personnel at subsidiaries	Assist in implementing the requirements and improvements of the HSE management system and ensure the implementation, maintenance and compliance with all requirements of the HSE management system related to the ISO 14001 and ISO 45001 standards.

We have formulated and strictly implemented various policies within the HSE management system and implement integrated management of projects that encompasses pre-construction assessment, project operations and other aspects.

Environmental impact assessment



- Before the construction of the project, we carry out environmental impact assessment in accordance with the laws and regulations in the area where the project is located, investigate and assess the adverse effects and risks on the surrounding environment during the life cycle of the project, and formulate appropriate measures to mitigate and eliminate the adverse effects.

Occupational health and safety and environmental management for the introduction of new equipment, new materials, new technologies, and new processes



- Identify and assess the hazards and environmental impact of new equipment, new materials, new technologies, and new processes before they are introduced;
- Conduct HSE education before adopting new equipment, new materials, new technologies, and new processes before they are introduced;
- Conduct normative acceptance inspection of projects that involve the introduction of new equipment, new materials, new technologies, and new processes before they are introduced.

Pollution management



- Eight subsidiaries are designated as units for prioritized sewerage management, all of which hold emissions permits and emit pollutants as permitted, and there has been no case of emissions exceeding standards;
- Establish an environment self-monitoring program to monitor pollutants through automated monitoring, manual monitoring, commissioned testing, etc.

Emergency management



- Identify and control situations that may lead to environmental/safety incidents/events or emergencies at the Company;
- Emergency plans are formulated and emergency drills are conducted regularly.

Safety, fire, public security and environmental management for stakeholders



- Carry out necessary safety, environmental protection, fire protection and other reviews of project contractors and suppliers;
- Sign safety, environmental protection, fire protection, occupational health, public security management and other agreements with stakeholders.

Environmental Protection

The Company strictly follows the laws, regulations, rules, and local environmental protection standards concerning environmental protection. It has developed the *Environmental Management Policy*, the *Responsibility System for the Prevention and Control of Hazardous Waste Pollution*, and other internal ecological protection policies to standardize wastewater management, exhaust gas, solid waste, noise, and other pollutants from production. We emphasize on the prevention and control of pollutants such as waste gas, wastewater, solid waste, and noise. We strive to reduce the negative impact on the environment, protect biodiversity, and build an environmentally friendly enterprise.

We continually improve pollution control and waste treatment, disposal, and recycling. The Company has received emissions permits (including registration management) for each pollution-producing operation and emits pollutants as permitted. In 2021, the Company attained a 100% compliance ratio for wastewater, waste gas discharge, and noise control based on testing results; solid waste was disposed of in a properly-sorted manner with 100% compliance for hazardous solid waste treatment.

Exhaust Gas Pollutant Emission Control

Coating lines and welding workshops are the primary sources of exhaust gas emissions. Exhaust gas pollutants mainly include non-methane total hydrocarbons, SO₂, and NO_x. The exhaust gas treatment system treats these pollutant gases before being discharged, and the exhaust gas emission concentrations all meet the requirements of relevant standards. The Company continuously optimizes its production processes to reduce pollutant emissions, including by using digital welding machines and removing dust from and purifying the air in the welding workshops to reduce welding fume emissions. The Company has upgraded its coating process to water-based paint electrostatic spraying. It is gradually moving towards robotic, automatic spraying with significantly reduced energy consumption and impact on the environment. The Company used 2,801.01 tonnes of water-based paint in 2021, lowering VOC emissions.

Wastewater Discharge Control

Production wastewater and domestic wastewater are the main sources of wastewater discharge. Wastewater pollutants primarily include COD and ammonia nitrogen. The Company has set up a sewage treatment system strictly following the requirements of the sewage discharge permit. The wastewater is treated and discharged in compliance with the standards through the discharge port.

Solid Waste Management

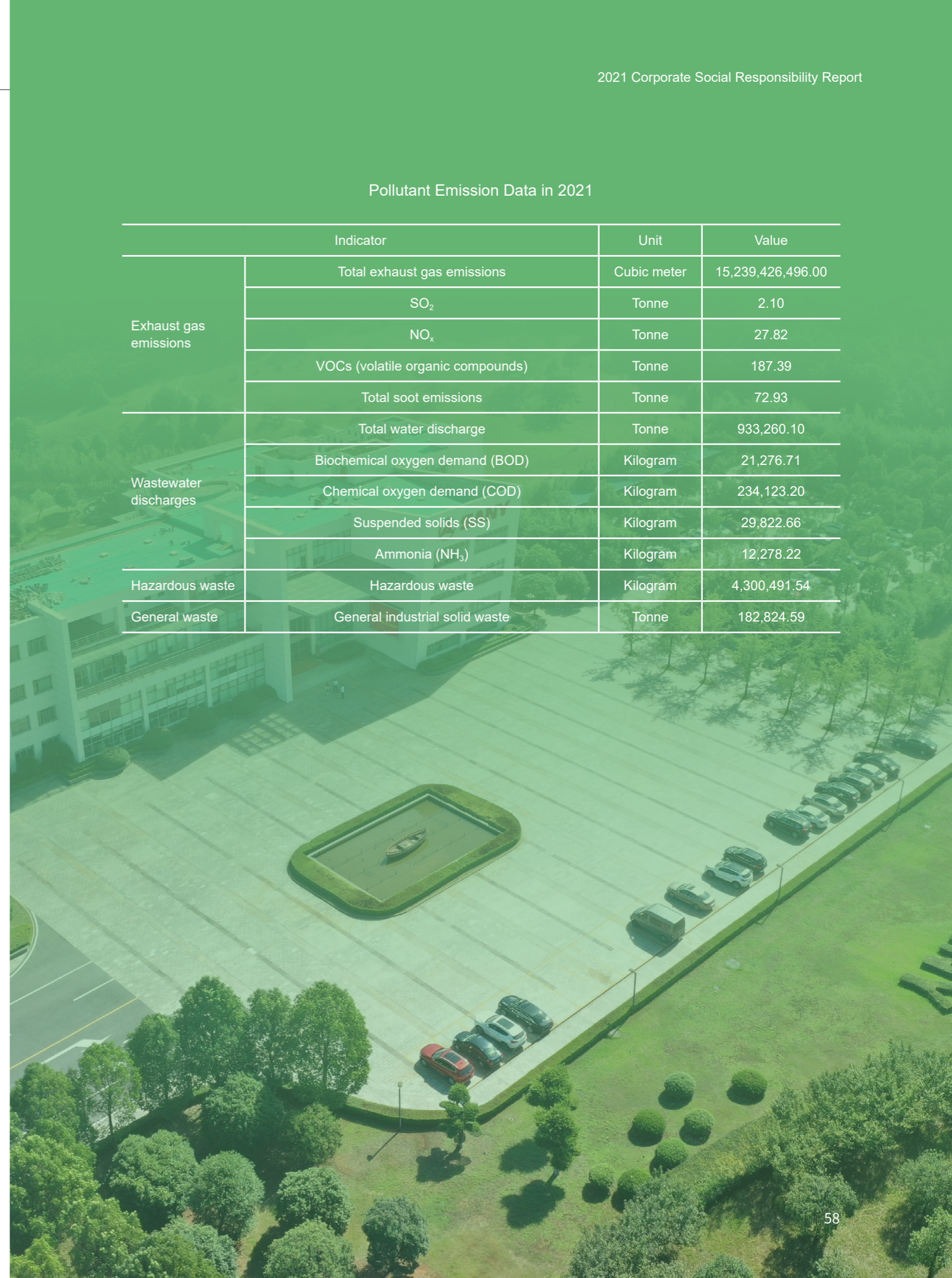
The Company collects reliable waste disposal data and completes the *Solid Waste Disposal Statistical Form* every month under the *Waste Management Guideline*. It oversees, inspects, and tracks solid waste transportation and handling and keeps note of the results in the *Safety and Environmental Inspection Record Form*. Hazardous waste is stored in a closed container to prevent recontamination before being handed over to a certified third party for disposal. The Company logically prepares the reuse of residual materials, recycles iron filings formed during cutting to reduce industrial solid waste, and continuously promotes the switch from oil paint to water-based paint to minimize hazardous waste. In 2021, we used 2,801.01 tonnes of water-based paint, successfully lowering the use and waste of toxic and harmful substances.

Biodiversity Conservation

In addition to environmental protection and waste management, we consider the conservation of biodiversity when we build or upgrade projects. Prior to implementing a project, we normally classify and evaluate potential sensitive targets, with a particular emphasis on nature reserves, critical wetlands, natural concentrations of endangered wildlife, spawning and feeding grounds for important aquatic organisms, wintering passages for important aquatic organisms, coastal wetland ecosystems such as coral reefs, and other critical conservation areas. We only move on with the project if we get confirmation that it will have no relevant impacts.

Pollutant Emission Data in 2021

	Indicator	Unit	Value
Exhaust gas emissions	Total exhaust gas emissions	Cubic meter	15,239,426,496.00
	SO ₂	Tonne	2.10
	NO _x	Tonne	27.82
	VOCs (volatile organic compounds)	Tonne	187.39
	Total soot emissions	Tonne	72.93
Wastewater discharges	Total water discharge	Tonne	933,260.10
	Biochemical oxygen demand (BOD)	Kilogram	21,276.71
	Chemical oxygen demand (COD)	Kilogram	234,123.20
	Suspended solids (SS)	Kilogram	29,822.66
	Ammonia (NH ₃)	Kilogram	12,278.22
Hazardous waste	Hazardous waste	Kilogram	4,300,491.54
General waste	General industrial solid waste	Tonne	182,824.59



Low-Carbon Development

We consistently optimize production processes, conserve energy and minimize emissions with a rigorous energy management system and control energy consumption based on the equipment inter-connectivity system. We strive to increase the uptake of renewables and play a more significant part in advancing green development. We actively embrace energy conservation and sustainability by making production more efficient through management, technology, and equipment improvements.

To reduce carbon from the source, we continuously improve the utilization rate of renewable energy, optimize the Company's energy mix and reduce carbon emissions. Eleven of our subsidiaries including SANY Automobile Manufacturing, Changde SANY, Huzhou Foundry, Huzhou Equipment and Ningxiang Heavy-duty Crane have installed photovoltaic equipment, increasing the proportion of renewable energy and reducing overall energy consumption. In 2021, the company's utilization of renewable energy (mostly solar power generation) reached 5.099 million kWh.

Zhongxing Hydraulic Components Company under the Engineering Vehicle Business Division

The Company has installed PV systems on the rooftops of our factories to reduce the power consumption and refrigerant consumption of central air conditioning.

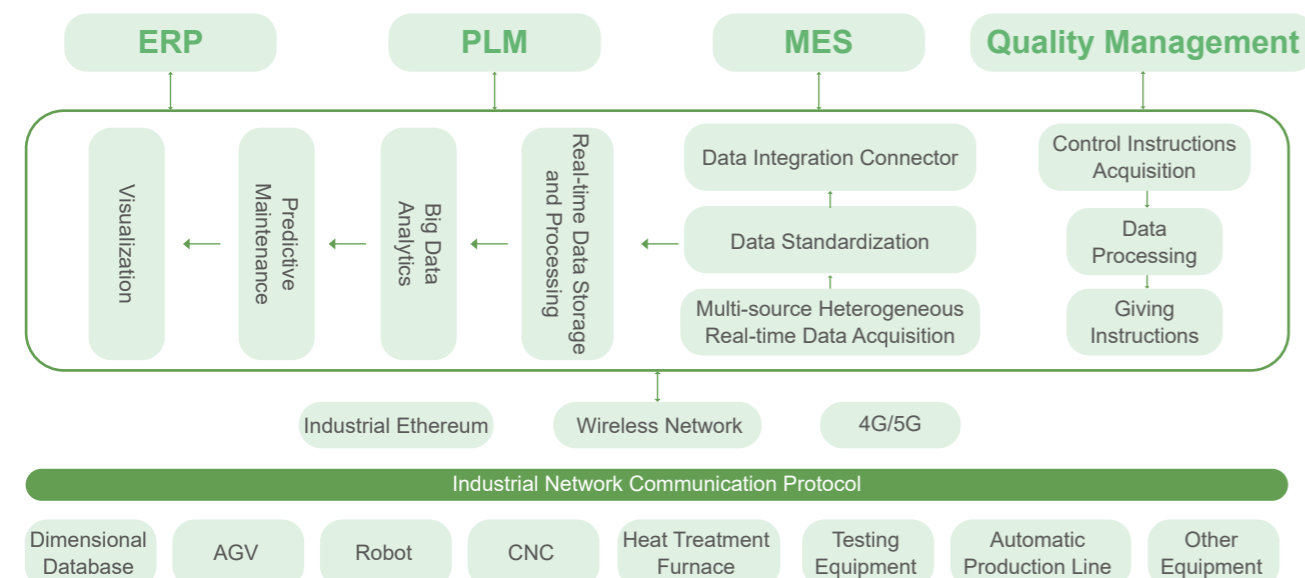
Special Purpose Vehicle Company under the Engineering Vehicle Business Division

The Company has signed an agreement with a solar power plant and obtained a power factor incentive.

Zhongyang Machinery Company under the Engineering Vehicle Business Division

The Company has signed a tripartite power trading agreement with a power plant and a power distribution company.

To promote intelligent manufacturing processes, make reasonable and more efficient use of resources for production and save energy, we follow the guidelines of *Made in China 2025*, and refer to the *Basic Requirements for Network Security Level Protection of Information Security Technology*, the *Operation and Maintenance Standard of Data Center Infrastructure*, the *Code for Construction and Acceptance of Industrial Automated Meter Engineering*, the *General Rules for Allocation and Management of Energy Measuring Device at Energy Using Units*, the *Technical Requirements for Natural Gas Measuring System*, the *Technical Specifications for Energy Measuring and Data Collection System of Industrial Enterprises*, and the *Engineering Technical Specifications for Energy Consumption Measuring System of Large Public Buildings* to establish our SANY equipment inter-connectivity system according to a series of standards. In 2021, the Company saw an extra 7,212 energy measuring devices connected to our system, achieving a cumulative connection of 21,041 devices. The compliance rate was 95.16%.



Structure of SANY's Equipment Inter-connectivity System

We design production processes with energy conservation in mind, such as using digital welding machines in the welding process, which save 20% more energy than traditional analog welding machines and using high-efficiency digital equipment for automatic control and management, which improves the operational efficiency of machining equipment dramatically. In 2021, we established an optimization model for energy use in production, conducted energy efficiency identification of production processes and energy-saving management, and reduced energy consumption and energy costs through equipment optimization and process improvement, achieving significant results. In 2021, the energy conservation and emissions reduction projects saved the Company RMB 72.32 million, a year-on-year improvement of 11.35%.

Energy Conservation Cases	Achievements
<div style="border: 1px dashed green; border-radius: 50%; padding: 10px; text-align: center; width: 60px; margin: 0 auto;">Energy conservation of air compressors</div>	<p>Based on the frequency conversion energy-saving technology combined with the pressure requirements of production, the output pressure of the air compressor is rationally optimized to achieve the optimal matching of electricity consumption and gas production and reduce the electricity consumption per cubic meter of gas production. Compared with 2020, this brought a 21.53% reduction in electricity costs with RMB 8.97 million in savings in 2021.</p>
<div style="border: 1px dashed green; border-radius: 50%; padding: 10px; text-align: center; width: 60px; margin: 0 auto;">Fan energy conservation</div>	<p>Through frequency conversion energy-saving technology combined with the wind requirements of production, the output air volume and operating time of the fan are rationally optimized, and the power consumption of the fan is reduced. Compared with 2020, this brought a 15.4% reduction in electricity costs with RMB 4.8 million in savings in 2021.</p>
<div style="border: 1px dashed green; border-radius: 50%; padding: 10px; text-align: center; width: 60px; margin: 0 auto;">Energy conservation of heat treatment process</div>	<p>The warming and insulation time is optimized to reduce the power consumption per kilogram of product. Compared with 2020, this brought a 24.71% reduction in electricity costs with RMB 16.38 million in savings in 2021.</p>
<div style="border: 1px dashed green; border-radius: 50%; padding: 10px; text-align: center; width: 60px; margin: 0 auto;">Energy conservation of coating process</div>	<p>By optimizing drying time, increasing drying weight per session and improving insulation efficiency, among other energy conservation means, electricity costs were reduced by 12.49% with RMB 6.43 million in savings compared with 2020.</p>
<div style="border: 1px dashed green; border-radius: 50%; padding: 10px; text-align: center; width: 60px; margin: 0 auto;">Energy conservation of welding process</div>	<p>By optimizing the gas supply pressure and reducing leakage, among other energy conservation means, energy costs were reduced by 25.01% with RMB 18.98 million in savings in 2021 compared with 2020.</p>
<div style="border: 1px dashed green; border-radius: 50%; padding: 10px; text-align: center; width: 60px; margin: 0 auto;">Peak, off-peak and shoulder electricity usage management</div>	<p>By introducing a system that connects equipment for centralized analysis of energy use and load data and is capable of predicting energy use, assessing energy conservation potential, and optimizing electricity use, which enables the accurate measurement and analysis of the energy consumption of more than 7,000 devices, we achieved a 4.73% reduction in electricity costs with RMB 15.34 million in savings in 2021 compared with 2020.</p>
<div style="border: 1px dashed green; border-radius: 50%; padding: 10px; text-align: center; width: 60px; margin: 0 auto;">Load forecasting management</div>	<p>By introducing a load management app that enables electricity load and cost analysis of 22 subsidiaries of the Group based on historical data and formulating a cost reduction plan, we saved RMB 1.18 million in electricity costs in 2021 compared with 2020.</p>

The Company's Energy Resource Usage and Carbon Emissions in 2021

	Indicator	Unit	Value
Energy use	Purchased electricity	kWh	608,375,200.97
	Gas	Cubic meter	21,608,880.28
	Gasoline	Liter	9,642.11
	Clean energy	kWh	5,098,969.59
	Diesel	Liter	19,277,657.61
	Combined energy consumption ²	tce	127,114.64
Water use	Municipal water supply	Tonne	2,860,584.19
Packaging material use	Packaging material	Tonne	1,725.70
Carbon emissions	Scope 1 ³	tCO ₂ e	96,875.85
	Scope 2 ⁴	tCO ₂ e	353,465.99
	Total of Scope 1 and Scope 2	tCO ₂ e	450,341.84

2. Combined consumption: The sum of all kinds of energy actually consumed in the production of a product or provision of a service during the statistical reporting period, as converted according to the corresponding prescribed calculation methods and units. Calculation basis: *General Principles for Calculation of Combined Energy Consumption* (GB/T 2589-2020).

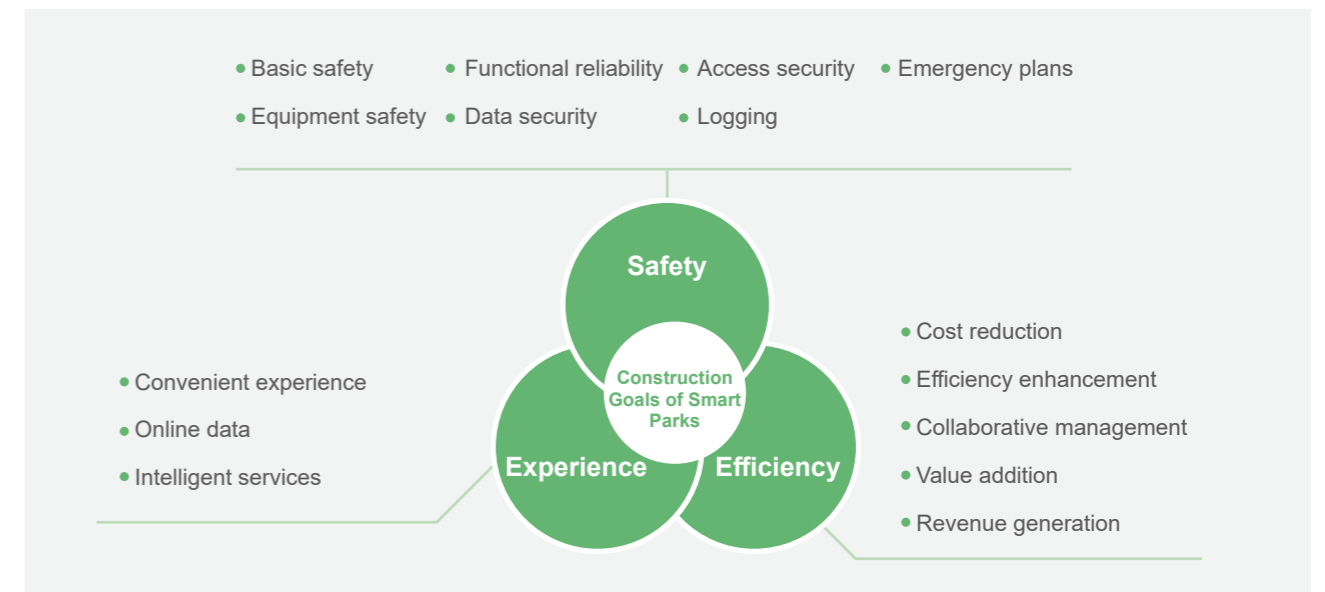
3. Direct GHG emissions (Scope 1) mainly include emissions from the combustion of gasoline and diesel fuel in administrative vehicles and transportation vehicles, and emissions from the use of natural gas. Calculations are as per the *Greenhouse Gas Emissions Accounting Methodology and Reporting Guidelines for Machinery and Equipment Manufacturers (Trial Implementation)*. Fuel intensity is based on the *Energy Statistics Workbook* (Energy Division, National Bureau of Statistics, 2010).

4. Indirect GHG emissions (Scope 2) mainly include emissions from purchased electricity and purchased heating. The national grid emission factors are based on the *Notice on the Key Work Related to the Management of Corporate Greenhouse Gas Emissions Reporting in 2022*.



Intelligent Industrial Parks

SANY Heavy Industry is committed to building smart industrial parks that are "Safety, Experience, and Efficiency." It has devised a construction strategy that specifies the construction goals and paths. We constantly promote the digitalization and intelligent applications at SANY Heavy Industry, accelerate the transformation and upgrading of industrial parks, improve production and services efficiency, and build "production + life collaborative smart parks." Our smart parks bring together smart equipment, buildings, transportation, and other high-precision technologies to upgrade industrial parks from management to service orientation and achieve comprehensive energy efficiency and intelligent services.

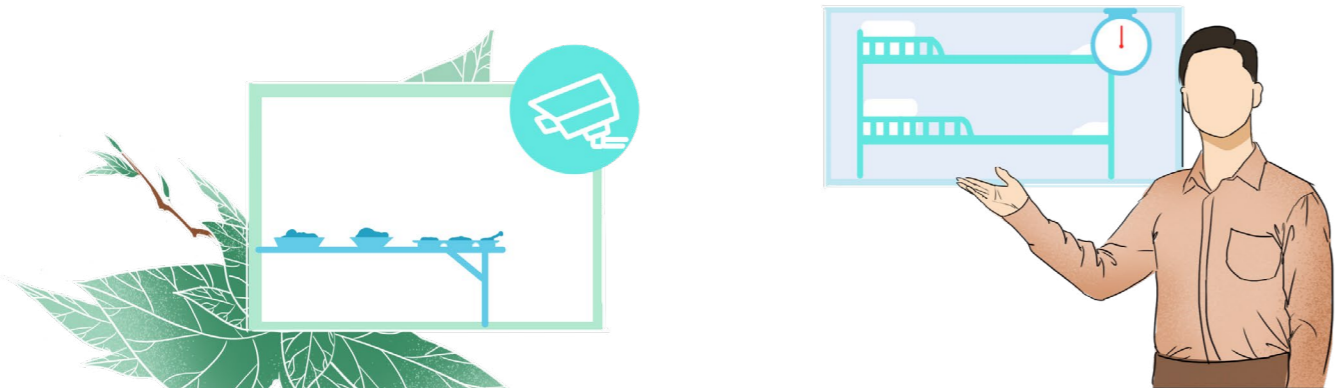


In 2021, the Company carried out the construction of Smart Park 2.0, with the focus on unified portal and data integration. The Company made comprehensive deployments that covered 18 industrial parks and set 85 scoring points for 25 key outcomes of five modules in accordance with internal smart park standards.

The Company made comprehensive deployments that covered

18 industrial parks
and set
85 scoring points.





Smart Dormitory

Transparent dormitory resources, accurate occupancy data, online e-contracts, and full online processing;

Smart door locks and smart water and electricity meters capable of analysis of abnormal data for timely response and reduced consumption.

Smart Office and Smart Property Management

2.5D visualization of workstation resources with significantly improved resource utilization in the office area;

SANY+ and Lark Suite online services that collect and process repair requests in a closed loop.

Achievements of Smart Park Development in 2021

Smart Canteen

Real-time comprehensive monitoring of food procurement, preparation and delivery based on 912 smart cameras with 5-second snapshots of kitchen, queue, entry and exit and automated reporting;

A white list mechanism for suppliers based on submission of qualification and health certificates and online monitoring of purchase, sales, inventory, pesticide residue detection results, food sample retention, and operating data;

Synchronization of sHR (system of Human Resource) data for cross-park dining for employees;

An online approval OA process for visitor-diners, with comprehensive functions such as QR code payment, online top-up and real-time notification of payment information.

Access Control

Upgraded "No Entry Unless Authorized" control: 3,450 smart cameras with thermal imaging-based intrusion detection;

Complete fence and 100% monitoring coverage for assured security;

Face recognition access control for employees across parks and smart NFC (near-field communication) based patrol to ensure security;

A self-service visitor system that significantly reduces visitor passage time and increases the sense of belonging and identity of the parties involved;

Customized "red, yellow and green zones and strategies" for the parks, and formulation of the *Security Access Strategy Manual* and the *Camera Location Atlas*;

Comprehensive measures against violations such as non-compliant identification in parking lots, tailgating, fence jumping, leaving the post at work without authorization and sleeping while on duty.

Health and Safety

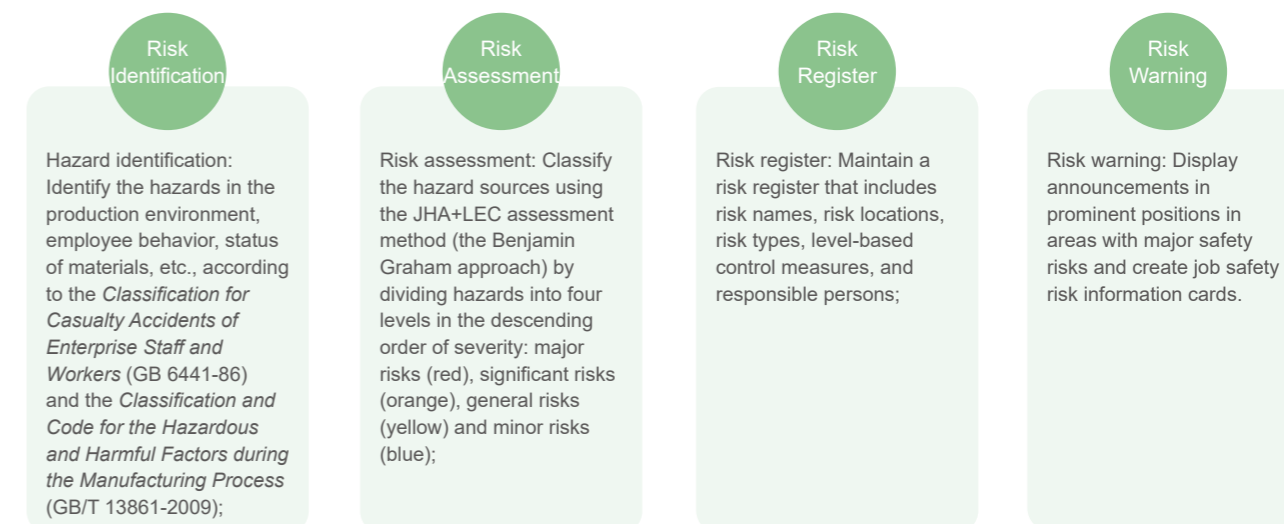
SANY Heavy Industry strictly complies with the *Law of the People's Republic of China on Work Safety*, the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases*, the *Provisions on Safety Training of Production and Operation Entities*, the *Guideline of China Occupational Safety and Health Management System* and other laws and regulations. It continuously enhances work safety and health management and has formulated certain safety and health guidelines for partners and stakeholders to guarantee that operations are safe.

Work Safety and Training

SANY Heavy Industry strictly follows the *Law of the People's Republic of China on Work Safety*. To ensure that employees have the necessary knowledge about workplace safety, applicable safety standards, emergency response procedures in the event of an accident, and their rights and responsibilities regarding workplace safety, occupational health, and the environment, we have implemented an employee HSE education and training system, as well as a variety of safety emergency plans. We are committed to preventing and eliminating injuries and accidents and controlling occupational dangers and have established the internal goal of maintaining the work-related injury rate within 0.3%.

In terms of 6S management including workplace safety, the Company adopts feasible solutions to a problem according to the reality at the production site. Guided by the 3R (Real Site, Real Object, Reality) principle, the Company requires the managers to regularly inspect the site to understand what is going on, so that he is not distracted or biased by subjective factors in addressing an issue. To this end, we have formulated the *3R Management System* and established a three-level management system featuring "Company-Business Division/Subsidiary/Industrial Park Administration-Operation Site". To standardize the five quality management elements of personnel, machine, material, method and the environment, and improve the 3R management and 6S management levels, the Company has constantly improved the *3R Data and 6S Management Measures*, installed surveillance cameras at all sites including production material warehouses, and monitored in real time the status quo of 3R management. We implemented a grid-based management model for each area, selected a responsible person, and carried out self-inspection activities every month to ensure safety. In 2021, thanks to the 3R data management, we carried out 132 cost reduction and efficiency improvement projects in heavy machinery, engineering vehicle, heavy loading and other units, achieving cost savings of RMB 85 million and a 6S violation rate of 6 ‰, a year-on-year decrease of 85.3%.

To enhance the Company's safety hazard management and control and to promote scientific accident prevention through the use of information technology and standard operating procedures, we established a safety hazard management mechanism and emergency preparedness and response management mechanism in accordance with the *Guideline of China Occupational Safety and Health Management System (GB/T 33000-2016)*, under which we allocate emergency response supplies in accordance with applicable laws and regulations. We also regularly organize emergency plan drills to ensure the effectiveness of emergency plans, striving to eliminate safety hazards before they are created and before accidents occur.



The Company, in light of the actual conditions, carries out a series of work safety trainings, including three-level work safety training, thematic HSE training, pre-shift work safety meeting, safety training on “new equipment, new materials, new technologies, and new processes,” work safety training upon production resumption, and work safety training for job transfers. There is a scoring system for safety training in place which rewards those with excellent scores and bans front-line operators without a passing score from continued operations in order to effectively improve the work safety awareness and competence of the relevant employees.

 Thematic Training on Machinery Safety, Special Equipment Safety, and Fire Safety

From September to November 2021, the Company conducted thematic trainings on fire safety, machinery safety protection and special equipment safety to enhance the safety awareness of all employees. The trainings were attended by approximately 20,000 persons with an overall passing rate of 87%.



Training site

Occupational Health and Safety

SANY Heavy Industry regards employees as its greatest asset and is committed to ensuring the safety and health of all employees. We have made significant efforts to improve processes and reduce emissions and pollution to lessen the impact of the working environment on employees. We have adopted several occupational health and safety protection initiatives to continuously improve health and safety management effectiveness and conduct monthly HSE performance assessments on accident incident rates, incidence rates of occupational diseases, and hazards. The *HSE Management Manual* states that the HSE management system goals must be incorporated in the annual performance evaluation of employees of relevant functions and levels. In 2021, the Company had zero occupational health and safety accidents. It provided occupational health examinations for all employees as well as 418,920.5 hours of health and safety training, with total attendance reaching 268,190.

Occupational Health and Safety Initiatives



Stakeholders Health and Safety

SANY Heavy Industry regards stakeholders as important partners and is committed to protecting the safety and health of stakeholders.

System Support

The Company has formulated the *Safety, Fire Protection, Public Security and Environmental Management Policy for Stakeholders* in accordance with the *Law of the People's Republic of China on Work Safety*, the *Law of the People's Republic of China on Fire Protection*, the *Law of the People's Republic of China on Environmental Protection* and the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases*.

Multi-dimensional Implementation

- **Employees:** Employment contracts are signed with all short-term contract workers/temporary workers/interns, three-level safety training is provided for them, and all posts are held by persons with the required qualifications.
- **Suppliers:** All suppliers are subject to qualification review in terms of business license, corporate certification, professional certification, transportation certification, and business permits; their operators are provided with safety training and personal protective equipment; and they are required to sign the *Safety, Fire Protection, Public Security and Environmental Management Policy for Stakeholders*.
- **Project Contractors:** All contractors are subject to review in terms of required certifications and credentials and required to strictly comply with the Company's safety, environmental protection, fire control, occupational hazard and public security rules.
- **Lessees:** All lessees are subject to review in terms of required certifications and informed of the safety hazards present in the leased premises and the Company's safety, environmental, fire control and other systems.
- **Resident Stakeholders:** All resident stakeholders are included in safety management, receive regular safety training, and are subject to regular safety inspections.
- **Public Service/Government Personnel:** They are subject to safety training and informed of safety protocols by the respective competent government departments.



04

SANY Heavy Industry is dedicated to adhering to the people-oriented concept, improving its talent strategy, safeguarding employees' fundamental rights and interests, fostering a well-structured talent, enhancing employees' professional skills, constructing a comprehensive compensation and benefit system, caring for employees' physical and mental health, and putting humanistic care into practice, with the goal of providing employees with an engaging career platform that is enabling and rich in opportunity.

Workplace and Employees



Fair Recruitment and Labor Compliance



The Company has arranged relevant recruitment and employment policies according to the actual conditions rigorously following the *Labor Law of the People's Republic of China*, the *Labor Contract Law of the People's Republic of China*, the *Regulation on the Implementation of the Employment Contract Law of the People's Republic of China* and other national laws and regulations to comprehensively safeguard the legitimate rights and interests of employees in recruitment, promotion, remuneration, and benefits.

We always adhere to fair and open talent recruitment, uphold the recruitment principles of fair competition based on ability, and formulate sound recruitment plans according to business development requirements. We provide both campus recruitment and social recruitment channels for job seekers through a variety of ways, like online seminars, public information platforms, and job fairs, to broadly attract talents with relevant professional knowledge, abilities, and experience.

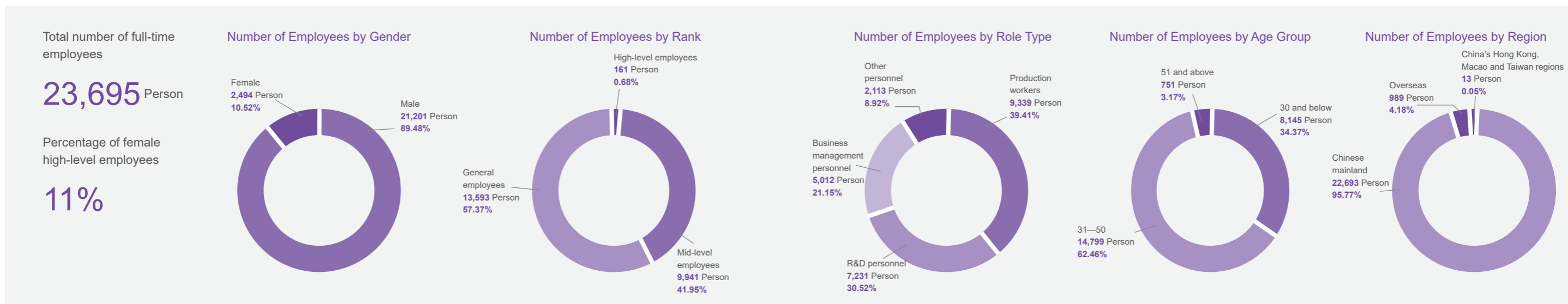
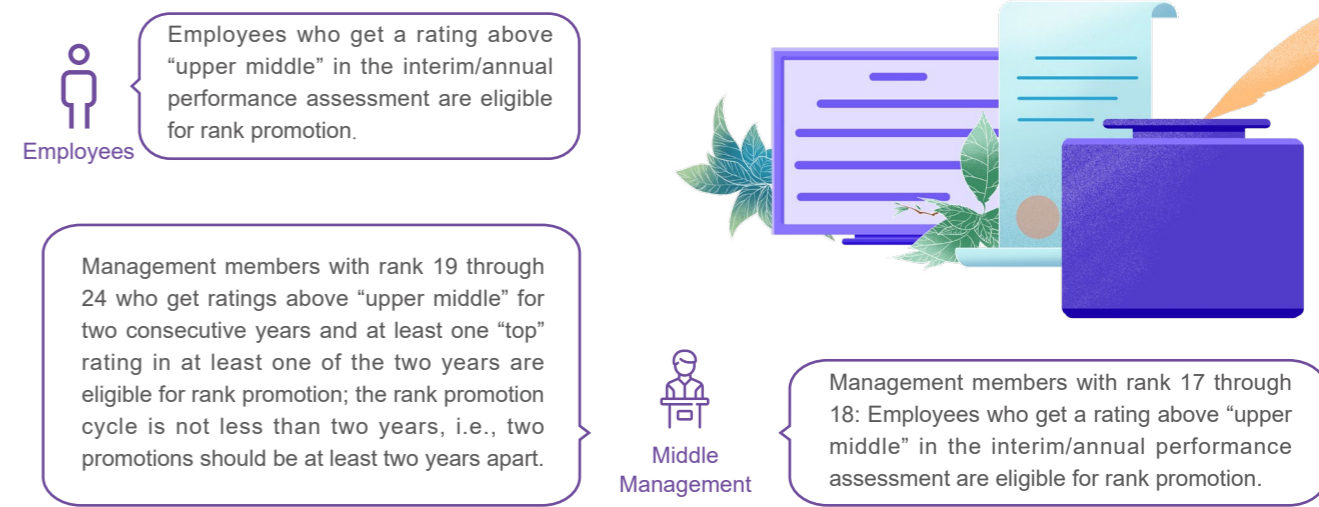
We strongly prohibit child labor and any form of forced labor, eliminate employee discrimination and unequal competition, and are committed to building a fair and inclusive workplace that completely respects variations in gender, age, race, and cultural background. We verify the identity of new employees before they join the Company and ensure that they comply with the law regarding labor management.

Training and Career Growth

We are always committed to providing good career path opportunities for all employees, and we have implemented a career management system at both the organizational and individual levels, as well as an optimized performance evaluation and incentive system, and organize various training activities, striving to create a high-level and high-quality workforce in order to ensure the Company's sustainable development.

Promotion Assessment

In order to ensure fair and just promotion, we have established performance evaluation standards and incentive and restraint mechanisms for senior management, and the appointment of senior management of the Company is open and transparent and in compliance with relevant laws and regulations. And we have established a performance management system for all regular employees and implement work reporting and performance evaluation hierarchically. The Company conducts performance assessment for promotion in January and July in accordance with the *Employee Promotion Policy* and announce promotions based on professional ability and personal inclinations.



Incentive Mechanisms

SANY Heavy Industry follows incentive concept based on post value and oriented to contribution of performance and raises wage in a frequent, gradual manner on the basis of labor cost efficiency. Besides providing employees with competitive basic wages, the Company has multiple incentive schemes, such as annual performance bonus, medium- and long-term equity incentive plans, profit-sharing plan, outperformance bonus, special bonuses and interim (annual) salary raise. According to different business positions, the Company offers three classes of annual performance bonuses, i.e., a maximum of 50% of annual salary for key positions and R&D positions, a maximum of 33% of annual salary for other core positions, and generally one month's salary for support positions.

The Company offers diversified incentive mechanisms that substantially increase the income of employees to further enhance their initiative at work and further strengthen their confidence in the Company's future development. In 2021, SANY Heavy Industry granted shares to a total of 4,205 employees under its employee stock ownership plan.

The Company offers **3** classes of annual performance bonuses, i.e., a maximum of **50%** of annual salary for key positions and R&D positions, a maximum of **33%** of annual salary for other core positions, and generally one month's salary for support positions.

In 2021, SANY Heavy Industry granted shares to a total of **4,205** employees under its employee stock ownership plan

Employee Training


With the clear understanding that the Company's long-term development cannot be achieved without a high-level and high-quality workforce, we have been committed to building a strong employee training system and carrying out comprehensive employee training activities so that employees can progress with the Company. In 2021, we provided a full range of professional training for employees at various levels according to their stages of career development, including onboarding, pre-entry training, on-the-job training (professional skills), leadership training, potential talent training, and senior management lectures, covering 13,690 employees with a total of 1,339,693 training hours.

Covering **13,690** employees

A total of **1,339,693** training hours



Training program name	Course module
 Subsidiary general manager strategic reserve	<ul style="list-style-type: none"> Leadership module R&D module Manufacturing module Marketing module Digitalization module
 Marketing strategic reserve training	<ul style="list-style-type: none"> Marketing strategy Marketing management and practice Risk management Digital marketing Leadership
 Center director youth training camp	<ul style="list-style-type: none"> SANY project management Quality management Cost management Integrated management
 Domestic marketing system training	<ul style="list-style-type: none"> Marketing theory SANY marketing Business negotiations and risks Marketing strategy and techniques
 International marketing system training	<ul style="list-style-type: none"> Marketing theory SANY marketing Business negotiations and risks Marketing strategy and techniques Regional marketing
 R&D project manager youth training camp	<ul style="list-style-type: none"> R&D and innovation Product management Marketing

 Phase-1 Pre-Entry Training of the Marketers Program in 2021

In 2021, the Company launched a training campaign for newly recruited marketing representative to assemble a top marketing force based on rounds of training, performance evaluation and elimination with the principle of wide access and strict exit.

The campaign, organized according to a marketing representative competence model and based on opinions from distributors and the R&D department, involved extensive training activities, including SANY corporate culture, marketing skills, and product knowledge, as well as seminars where invited regional managers of distributors shared their experience, and various activities such as military outbound training and speech competitions.

The nearly one month of pre-entry training strengthened the trainees' physical capabilities and sense of team honor and time, enhanced their presentation skills to some extent, equipped them with comprehensive professional capabilities required in their future work on the front line, and greatly boosted their confidence.



Military outbound training



Corporate culture and on-the-job training

The Company's Staff Training in 2021

Indicator	Unit	Data for 2021
Number of employees trained	Person	13,690
Number of employees trained by gender	Male employees	11,595
	Female employees	2,095
Number of employees trained by rank	High-level employees	137
	Mid-level employees	3,764
	General employees	9,789
Average number of hours of training for employees	Hour	56.54
Average number of hours of training for employees by gender	Male employees	55.65
	Female employees	64.11
Average number of hours of training for employees by rank	High-level employees	69.45
	Mid-level employees	41.07
	General employees	67.70

Employee Satisfaction and Engagement

SANY Heavy Industry constantly improves the Company's welfare system, implements several employee welfare policies, shares the Company's development dividends with employees. At the same time, we focus on creating an efficient, relaxed, and warm team environment for employees, as well as providing smooth communication channels and implementing employee care programs, performing diverse cultural, sports, and care activities, improving employees' living environment, and continuously enhancing their sense of well-being in order to achieve the vision of common growth of employees and the Company.

Compensation and Benefits

The Company actively builds a compliant, fair, reasonable and competitive salary and employee welfare system, improves the income of employees, and boosts employee engagement and team morale. Besides providing employees with competitive basic wages, we have established and improved our *Employee Welfare Management System* that further clarifies the benefits available to employees. In addition to statutory benefits, the Company provides extensive supplemental benefits, including supplemental insurance, holiday supplies, meal subsidies, paid annual leave, family open days, dating activities, and schooling for employees' children. Moreover, the Company continues its sponsored education program for outperforming employees by sending them to various study and training programs in cooperation with leading domestic and overseas universities.

Statutory Benefits and Supplementary Benefits

Statutory benefits

The Company takes out and maintains various social security insurances for employees such as pension insurance, medical insurance, work injury insurance, maternity insurance and unemployment insurance and pays housing fund contributions in accordance with national regulations.

Housing benefits

The Company provides accommodation for all employees in accordance with the *Staff Accommodation Management Measures*.

Holiday gift benefits

The Company distributes supplies to all employees on the occasion of traditional holidays such as the Spring Festival, Dragon Boat Festival and Mid-Autumn Festival.

Clothing benefits

The Company provides free working clothes for all employees.

Hot weather benefits

Every summer from June to August, the Human Resources Department counts the number of employees and the Administrative Department purchases and distributes heat protection items. The standard of heat protection budget is RMB 100 per person for production workers and RMB 15 per person for other employees.

Catering benefits

Contract employees are entitled to a monthly allowance for working meals, with rice, porridge, soup, etc., provided free of charge by the Company.

Transportation benefits

There are employee shuttle transportation services between the industrial parks and chartered bus services transferring employees to and from home on weekends and holidays.

Life event benefits

The Company provides congratulations and condolences allowances for employees at prescribed rates for major life events such as wedding, bereavement, birth, and serious disease.

Employee Communication

We value the role of democratic management, democratic participation, and democratic oversight, and maintain transparent two-way communication with employees. We have an HR service platform to engage employees and help strengthen their sense of belonging. In addition, the Company has established a trade union and provides various employee engagement channels such as staff congress, employee interview and seminar. We extensively collect employee questions and suggestions before analyzing and assessing them to identify key factors that affect employee interests, satisfaction, and motivation. Employees can also report complaints or give feedback through direct communication with the HR department, the Company's mailbox, and other channels.

The Company attaches great importance to the satisfaction of employees in life and work, and fully meet the needs of employees with regard to both life and work. We conduct annual surveys of employees about their opinions on security surveillance and access management, catering, dormitory and office, property management, and birth and work anniversary benefits, and we analyze the surveyed results in a timely manner and take adequate enhancement initiatives. Through our efforts to foster a harmonious and caring corporate atmosphere, we have achieved steady improvements in our staff stability and satisfaction. In 2021, 65% of employees reported increased satisfaction about security surveillance and access management, catering, dormitory and office, and property management.

The Company also conducts annual employee satisfaction surveys of functional departments on the organizational climate from the four dimensions of work, team, supervisor and development for its divisions and subsidiaries. In 2021, the divisions achieved an average annual employee satisfaction score of 87.8, an increase of 3.4% from half a year ago, and that of the subsidiaries increased by more than 5% from half a year ago.

Employee Care

To strengthen team cohesion and enrich the life of employees outside work, the Company has planned a number of employee activities, including *Basketball Competitions*, *Spring Festival Celebrations*, and *Tea Parties*. Furthermore, it offers a day every week for telecommuting.

The Company has standardized the procedure of assisting the families of employees in difficult situations to provide help to them in a timely way so they may experience the family-like warmth from the Company and devote themselves to working with a positive mindset. In 2021, the Company provided financial aid to six employees who were facing hardships in their personal lives and organized 789 employees to engage in mutual medical assistance programs.



Employee Care Activities During the Spring Festival

Around the Spring Festival, the Company organized a series of care initiatives for employees stationed overseas as well as domestic employees.

For employees stationed overseas, we organized home visits to the families of some of them with Spring Festival gifts; in addition, we sent Spring Festival gift packages specially prepared in cooperation with SANY Culture Company to the families of 664 employees stationed overseas.

For domestic employees, the divisions arranged Spring Festival employee care activities in five categories, including home visits to employees, on-site visits to employees on duty, Spring Festival gifts, incentives for early return to work, and care for key employees. The chairmen/general managers of the heavy machinery, heavy-duty lift, engineering vehicle, all participated in the relevant Spring Festival employee care activities by giving greetings, presenting red packets, seeing employees off on their journey home, and conferring awards to high-performing employees.



Company leaders visit the family of an employee stationed overseas



Spring Festival celebration



Employee Assistance Program (EAP)



Instructions on the use of EAP services

In December 2021, the Company launched its Employee Assistance Program (EAP) that provides free professional psychological counseling services for the majority of employees in need. Employees communicate with EAP counselors through individual counseling, and the counselors help them put their problems in the proper perspective, thereby better coping with negative emotions and stresses and getting more fulfillment and satisfaction from work and life.

05

The development of society is the cornerstone of SANY's advancement, and social responsibility is also SANY's mission. SANY Heavy Industry upholds the corporate tenet of "serving the country through industrial development" and is committed to repaying the society. The Company focuses on community and livelihood development. It stands prepared to support epidemic prevention and disaster relief and reconstruction efforts, rural revitalization, and other charitable actions to fulfill its corporate social responsibility for furthering economic and social development.

Giving Back to Society



Safe First

*SANY Heavy Industry Engineering Machinery
Emergency Rescue Team*

Corporate Citizenship in Action

The Company, with a strong sense of social responsibility, made a series of efforts to support epidemic prevention and control and flood relief in 2021 by distributing anti-epidemic supplies in epidemic-hit areas and making donations of cash and equipment for the areas affected by the "July 20" Henan floods at the first opportunity.



Flood Relief

The "July 20" massive floods that devastated communities across Henan gripped the hearts and minds of people across China. SANY Heavy Industry responded immediately by rushing to the assistance of the disaster-stricken people, helping them overcome the difficulties together.

Upon the occurrence of the disaster in July 2021, the Company immediately assembled several teams including the "SANY Heavy Industry Engineering Machinery Emergency Rescue Team" to join the rescue efforts and provide the affected areas with professional technical support, volunteer services such as equipment operation and maintenance, and basic goods.



SANY Heavy Industry Engineering Machinery Emergency Rescue Team on the rescue frontline

Rush to Support Flood Relief in Henan

Within 24 hours after the disaster, we together with our business divisions and distributors worked out an emergency response collaboration mechanism focused on four aspects including "on-site rescue," "post-disaster reconstruction," "technical support," and "supply of emergency supplies". We mobilized resources and sent a total of 50 excavators, 22 cranes, 18 loaders, 10 graders, and 10 dump trucks to the rescue frontline. In addition to sending rescue teams of seven business divisions from Hebei, Shanxi, Jiangsu, Anhui, Jiangxi, and Hebei to Henan, the Company's Henan branch deployed technicians and equipment such as cranes and tower cranes in more than 20 prefecture-level cities in Henan to support on-site rescue and post-disaster reconstruction. The SANY Emergency Response Platform was on duty round the clock to send machinery equipment in Henan to local areas where they were needed to respond to emergencies resulting from continuous rains such as geological disaster, urban flooding, and reservoir and river flooding.



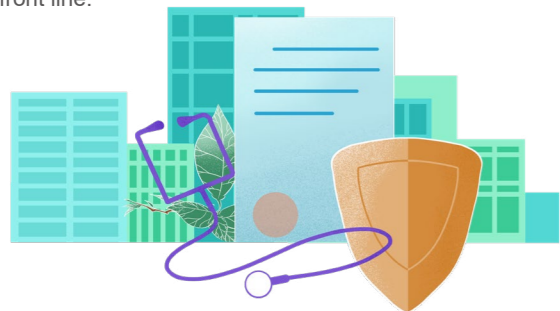
SANY Machinery in flood relief action

Post-disaster Reconstruction for Long-Term Protection

We responded to the floods in Henan by launching the "Armor Action" non-governmental emergency response support project with an RMB 500,000 post-disaster reconstruction fund set up to provide accident coverage for non-governmental rescue personnel and distributors/customers and employees of SANY machinery equipment on the rescue frontline and, in addition, establishing a long-term disaster response mechanism with local NGOs and governmental departments of emergency management to improve local emergency response capabilities and accelerate the establishment of a scientific and effective disaster mitigation and prevention management system. With the major floods in Henan as a starting point, we have explored the development of a long-term disaster response and relief mechanism from the corporate, social and individual perspectives with a view to scientifically integrating resources of stakeholders to deliver sustainable value to society.

Epidemic Prevention and Control

We mobilized resources to join the fight against the Covid-19 pandemic. In May 2021 when a cluster broke out in Guangzhou, we immediately donated and sent 100,000 N95 masks from Hunan to Haizhu District in Guangzhou to support the local Covid-19 response efforts and protect the medical workers fighting on the front line.



Anti-pandemic donation in Haizhu District, Guangzhou

Disability Access Services

We attach importance to promoting social welfare and giving back to society and strive to benefit more groups through our CSR programs. We donated RMB 400,000 in strategic cooperation with "Journey of Dream Come True" to facilitate access for people with disabilities and enable them to explore the world with greater freedom. In addition to promoting accessible tourism for people with disabilities by helping establish standards of disability access services and providing technical support in terms of services and hardware, we have explored supporting people with disabilities in employment and social inclusion towards systematic changes in industry practices and policy initiatives.

Participation in Rural Revitalization

Rural revitalization is the inherent requirement of the overall layout for "economic, political, cultural, social, and ecological progress" and the coordinated advancement of the Four-Pronged Comprehensive Strategy for the work related to agriculture, rural areas, and rural residents and consists of revitalization on a full range of dimensions, including industrial revitalization, talent revitalization, cultural revitalization, ecological revitalization, and organizational revitalization. It requires developing a new type of collective economy, pursuing the road of common prosperity, stimulating the vitality of rural talents, and channeling more urban talents to rural innovation and entrepreneurship.

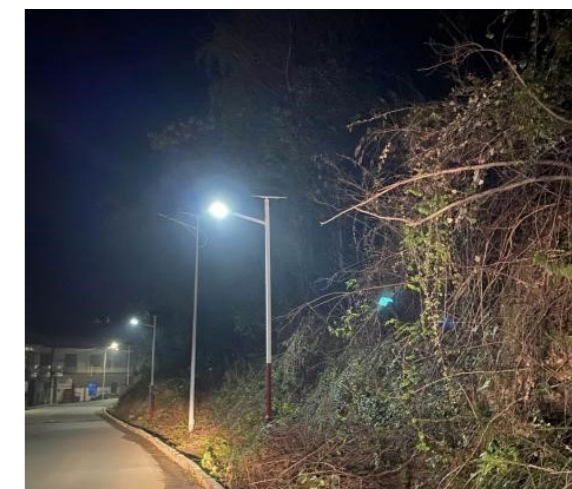
The Company, in cooperation with SANY Foundation, has carried out multiple rural revitalization projects that have industrial development as the core, community engagement as the foundation, and elderly care as the support. The projects have provided comprehensive assistances to the Daotong Village in Lianyuan City, Hunan Province, helping the village to move towards all-round revitalization of economy, healthcare, education, and industries.



Infrastructure Revitalization

Infrastructure development holds the key to all-round rural revitalization. For a long time, rural infrastructure development has had a huge direct and indirect effect on rural economic and social Upgrading the infrastructure in Daotong Village, as an important part of the village's revitalization, not only enhances the living standards of the villagers but also promotes the development of the village.

We comprehensively upgraded the infrastructure of village by implementing a series of projects, including water network renovation, installation of streetlights, medical and health care center, and rural lodging service studies learning center. The upgraded water network was put into use in 2021, which has ensured clean drinking water supply for the 2,100 villagers. Other projects are under construction and will create a more comfortable rural living environment for the villagers after completion.



Newly installed street lights in Daotong Village

Elderly Care

We have explored a model of diversified medical care-based elderly care services through an innovative healthcare support model that has lifecycle services as the core and integrates medical health management, medical insurance, rehabilitation and physiotherapy intervention, home care, and commercial insurance on the three service platforms of home care, smart elderly care, and internet hospital services, making the countryside an agreeable place for elders to spend their later years.

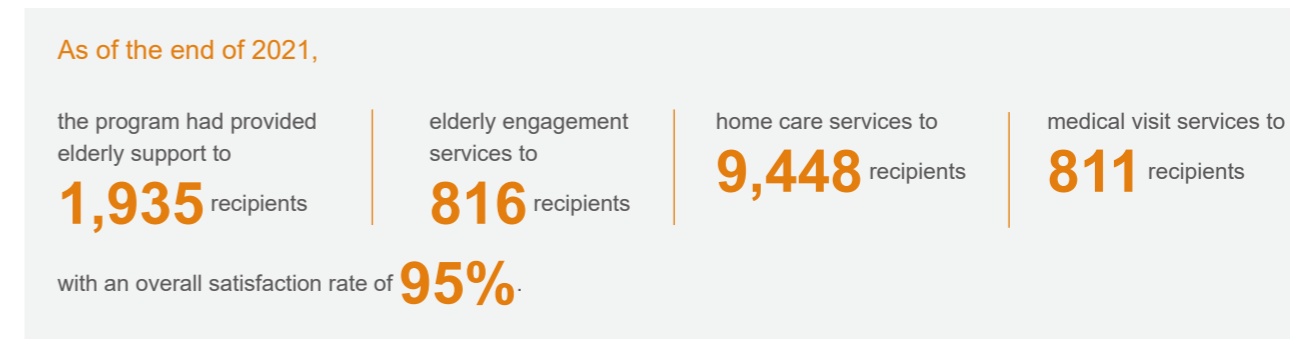
We have trained an elderly care workforce that is comprised of five social workers, eight nurses and 20 volunteers and provides diversified home care services for all elders in Daotong Village and medical care services for prioritized elders of 30 households. The home care services cover eight categories, such as medical visits, home care, health education, and mental support. The program won the first prize of public service cases in Hunan and has been designated as a pilot mutual elderly care service station in the province.



Door-to-door medical diagnosis service



Daotong Village is a participant in Hunan's mutual elderly care service pilot program



Community Engagement

The community development concept of “putting people first” is the basic principle that guides our rural revitalization work in Daotong Village, with our every action meant to benefit the people in the village. We have emphasized fully mobilizing the initiative of the villagers, engaging them in the village’s environmental management, public affairs and cultural activities, and stimulating their internal motivations.

We formed a villager volunteer team dedicated to improving the village’s environment and public health and provided them with training. In 2021, we organized 6 training sessions for volunteers with total attendance of 206 and achieved a volunteer satisfaction rate of more than 90%.

We have been committed to fostering and supporting local social workers who are willing to return and work in the village by leveraging our professional experience, thus putting the revitalization of Daotong Village on a solid foundation. In 2021, we organized 2 visits for local social workers to learn advanced experience and engaged external experts to conduct 4 offline instructive workshops, in addition to 11 self-study sessions organized by the social workers themselves.



Group photo of villagers



Public health awareness activity



An instructor giving instructions to three social workers

Industrial Revitalization

The key to rural development is industrial revitalization. Rural industries should develop according to the laws of industrial advancement by promoting integrated industrial development in light of current conditions and local resources and exploring a sustainable path of industrial development for the benefit of farmers.

To assist the villagers of Daotong Village in achieving common prosperity, we have established a 100-mu demonstrative modern agricultural base with “reduced labor,” “reduced pollution,” and “reduced cost,” and used the base as a platform to train the villagers in modern farming techniques to assist them in transitioning from traditional farming to ecological farming, maximizing their income, and promoting agricultural revitalization. In 2021, the base finished rice, melon, pumpkin, and cabbage trial farming.



Rice-duck symbiosis

Education Revitalization

Education is the foundation for building the country and making it strong. It is an essential locus of the rural revitalization strategy by providing it with intellectual support. We are committed to investing in improving the rural education environment to provide solid human resource support for agricultural modernization and rural economic and social development. In 2021, we offered RMB 6.075 million to support education charity projects and digital transformation of charity organizations in several provinces and municipalities.

Promote Education Equity

We have made active efforts to promote education equity and education charities. In 2021, we provided a total of RMB 2.674 million in support of multiple rural education programs in Yunnan, Sichuan and Shaanxi, including the Mountain Village Kindergarten Program in Wenshan Prefecture in Hainan Province, the “County for Village” Online Teaching Charity Assessment Project, the Infants & Children Development Instructors Professional Standards Project, and the Tongmeng Sustainable Early Education Model for County and Rural Communities.

We together with the China Development Research Foundation and local education departments provided funding and training support for various rural middle and primary school, pre-school education and child care projects to strengthen rural basic education infrastructure. The kindergarten support and teacher training program in Wenshan Prefecture in Hainan has cumulatively benefited a total of 5,725 persons, with the local pre-school education enrollment rate increased to 91% in 2021, and promoted the local pre-school education development.

In order to provide rural children with better reading and learning resources, we have partnered with Yidi Hub to jointly optimize the Yidi Cloud Library System to provide data analysis services for rural libraries and child development, strengthen the tracking of the use of donated library materials, and inform donation allocations with big data insights, so that donations can be more fully and effectively used.

Promote Education Innovation

We have made continuous efforts to advance education model innovation and expand the scope of early childhood education. We provided RMB 1.2 million for the Baohudoudou program that promotes sex education for children in home, school and social scenarios. We have been committed to improving the public understanding and awareness of sex education for children to provide a better environment for children’s growth and increase their ability to protect themselves.

In order to foster rural children’s scientific thinking and engineering thinking, we have established the Walawala Tinkering Education program that provided 12 weeks of tinkering courses for 220 students in Lianyuan SANY School Affiliated to the Hunan Normal University in 2021. The program fosters students’ engineering thinking and enhances their comprehensive quality by encouraging them to solve problems in everyday scenarios in their own creative ways. In addition, the program encourages rural teachers to offer interdisciplinary courses integrating multiple subjects in a way that puts the learner at the center and accommodates different forms of learning. In 2021, the school’s eight teachers designed and gave at total of 16 interdisciplinary lessons that covered more than 500 students. In addition, multiple project-based learning (PBL) lessons were given based on real-world problems or points of interest. As at the end of 2021, the school had offered 3 PBL courses that covered about 100 students.



Creative life class



Project-based learning class on DIY musical instruments

Key Quantitative Performance Indicators

Environmental

Indicator	Unit or description	2021
ISO 14001 certification coverage	%	28.57
Significant environmental incident	Number	0
Atmospheric pollutants		
Exhaust gas	m ³	15,239,426,496.00
SO ₂	Tonne	2.10
NO _x	Tonne	27.82
VOCs	Tonne	187.39
Soot	Tonne	72.93
Water contaminants		
Total water discharge	Tonne	933,260.10
Biochemical oxygen demand (BOD)	Kilogram	21,276.71
Chemical oxygen demand (COD)	Kilogram	234,123.20
Suspended solids (SS)	Kilogram	29,822.66
Ammonia (NH ₃)	Kilogram	12,278.22
Solid waste		
Hazardous waste	Kilogram	4,300,491.54
General industrial solid waste	Tonne	182,824.59
Energy/resource consumption		
Purchased electricity	kWh	608,375,200.97
Gas	m ³	21,608,880.28
Gasoline	Liter	9,642.11
Clean energy (solar electricity)	kWh	5,098,969.59
Diesel	Liter	19,277,657.61
Combined energy consumption	tce	127,114.64
Tap water	Tonne	2,860,584.19
GHG emissions		
Scope 1: Direct GHG emissions	tCO ₂ e	96,875.85
Scope 2: Indirect GHG emissions	tCO ₂ e	353,465.99
Total GHG emissions	tCO ₂ e	450,341.84
Packaging material consumption		
Packaging material used	Tonne	1,725.70

Social

Indicator	Unit or description	2021
Employees		
Employees	Number	23,695
Number of employees, by gender		
Male	Number	21,201
Female	Number	2,494
Number of employees, by rank		
High-level employees	Number	161
Mid-level employees	Number	9,941
General employees	Number	13,593
Number of employees, by role type		
Production workers	Number	9,339
R&D personnel	Number	7,231
Business management personnel	Number	5,012
Other personnel	Number	2,113
Number of employees, by age group		
30 and below	Number	8,145
31–50	Number	14,799
51 and above	Number	751
Number of employees, by region		
Chinese mainland	Number	22,693
China's Hong Kong, Macao and Taiwan regions	Number	13
Overseas	Number	989
Percentage of female senior management	%	11
Development and training		
Employees trained	Number	13,690
Number of employees trained, by gender		
Male employees	Number	11,595
Female employees	Number	2,095
Number of employees trained, by rank		
High-level employees	Number	137
Mid-level employees	Number	3,764
General employees	Number	9,789

Indicator	Unit or description	2021
Development and training		
Average number of hours of training for employees	Hour	56.54
Average number of hours of training for employees, by gender		
Male employees	Hour	55.65
Female employees	Hour	64.11
Average number of hours of training for employees, by rank		
High-level employees	Hour	69.45
Mid-level employees	Hour	41.07
General employees	Hour	67.70
Health and safety		
ISO 45001 certification coverage	%	33.33
Occupational accidents	Number	0
Coverage of occupational health checkup for those on professional posts	%	100
Attendance of health and safety training	Number	268,190
Total health and safety training hours	Hour	418,920.50
Supply chain management		
Suppliers	Number	2,388
Suppliers, by region		
Chinese mainland	Number	2,334
China's Hong Kong, Macao and Taiwan regions	Number	9
Overseas	Number	45
Suppliers, by product category		
Production (procurement of raw and auxiliary materials) suppliers	Number	2,089
Non-production (project procurement) suppliers	Number	789
General suppliers	Number	1,275
Specialized suppliers	Number	1,474
Quality management		
ISO 9001 or IATF 16949 certification coverage	%	90.48
R&D and innovation		
R&D and innovation investment	RMB 100 million	76.97
Patent applications	Number	2,862
Patents granted	Number	1,511
Cumulative patents granted (as of the end of 2021)	Number	9,124
Computer software copyrights granted	Number	277

Indicator	Unit or description	2021
Customer services		
Customer complaints	Number	2,089
Community		
Community investment	RMB 10,000	1,820.30

Governance

Indicator	Unit or description	2021
Risk management training sessions	Number	6
Employees covered by risk management training	Number	1,876
Employees covered by integrity and compliance examination	1,000 persons	14
Employees covered by anti-corruption training	1,000 persons	18
Percentage of suppliers signing supplier integrity agreement/statement	%	100

GRI Index

Indicator		Page
GRI 102		
102-1	Name of the Organization	1
102-2	Major Brands, Products and Services	5-6
102-3	Location of Headquarters	6
102-4	Countries to Operate in, Countries with Major business, or Countries Particularly Relevant to the Themes Described in the Report	25
102-5	Nature of Ownership and Legal Form	9
102-6	Market to Serve (Including Regions, Industries, Types of Customers / Beneficiaries)	6
102-7	Scale of the Organization	69
102-8	Employee Classification Statistics	69-70
102-9	Situation of Supply Chain	50
102-10	Significant Changes in Size, Structure, Ownership or Supply Chain During the Reporting Period	69-70
102-11	Whether and How to Act in Accordance with the Early Warning Policies and Principles	31
102-12	Economic, Environmental and Social Conventions, principles or Other Initiatives from the Outside	/
102-13	Membership of Associations (e.g. Industry Associations) and National or International Initiative Organizations	46
102-14	Statement from Senior Decision-Makers (e.g. CEO, Chairman or Equivalent Senior Position) on the Relevance of Sustainable Development to the Organization and Relevant Strategy	3-4
102-16	Values, Principles, Standards and Norms (e.g. Codes of Conduct, Business Ethics)	30
102-18	Governance Structure, Including the Committees under the Highest Governance Body and the Committee Responsible for Economic, Environmental and Social Impact Decision-Making	29
102-40	Types of Stakeholders	15
102-41	Percentage of Total Employees Covered by Collective Bargaining Agreements	/
102-42	Basis for Identification and Selection of the Selected Stakeholders	15
102-43	Approach of Stakeholders Engagement, Including the Participation Frequency According to Different Types and Groups of Stakeholders. Whether Any Participation is Specially Conducted for the Preparation of the Report	15
102-44	Key Topics and Concern Raised, and the Approach to Respond (Including by Reporting). Stakeholder Groups that Raise Each Key Theme and Concern	16
102-45	Entities Included in the Consolidated Financial Statements and Entities Not Included in This Report	1
102-46	Define Report Content and Topic Boundaries	1
102-47	List of All Substantive Aspects Identified in the Process of Defining Report Content	16
102-48	Impact of the Information Contained in the Previous Reports and the Reasons for Reissue	/
102-49	Scope, Boundaries and Significant Changes in the Previous Reporting Period	1-2
102-50	Reporting Period of the Information Provided (e.g. Financial Year, Calendar Year)	1
102-51	Date of the Most Recent Report (if any)	1
102-52	Reporting Cycle (e.g. Annual, Biennial)	1
102-53	Contact Details for Questions Regarding the Report	2
102-54	Claims of Reporting in Accordance with GRI Standards and the GRI Content Index for the Selected Scheme	1
102-55	GRI Content Index	89-91
102-56	External Assurance	/

Indicator		Page
GRI 201 Economic Performance		
	Management approach	5-6
201-1	Direct economic value generated and distributed	23, 26
201-2	Financial implications and other risks and opportunities due to climate change	56
GRI 203 Indirect Economic Impacts		
	Management approach	5-6, 41
203-1	Infrastructure investments and services supported	42
203-2	Significant indirect economic impacts	42
GRI 204 Procurement Practices		
	Management approach	50-52
204-1	Proportion of spending on local suppliers	50
GRI 205 Anti-corruption		
205-1	Operations assessed for risks related to corruption	34-35
205-2	Communication and training about anti-corruption policies and procedures	37
205-3	Confirmed incidents of corruption and actions taken	/
GRI 302 Energy		
	Management approach	59
302-1	Energy consumption within the organization	61
302-2	Energy consumption outside of the organization	61
302-3	Energy intensity	/
302-4	Reduction of energy consumption	60
302-5	Reductions in energy requirements of products and services	23
GRI 305 Emissions		
	Management approach	57
305-1	Direct (Scope 1) GHG emissions	61
305-2	Energy indirect (Scope 2) GHG emissions	61
305-4	GHG emissions intensity	/
305-6	Emissions of ozone-depleting substances (ODS)	/
305-7	Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	58
GRI 306 Effluents and Waste		
	Management approach	57
306-1	Water discharge by quality and destination	58
306-2	Waste by type and disposal method	58
306-3	Significant spills	57
306-4	Transport of hazardous waste	57
306-5	Water bodies affected by water discharges and/or runoff	57
GRI 307 Environmental Compliance		
	Management approach disclosures	57
307-1	Non-compliance with environmental laws and regulations	57
GRI 401 Employment		
	Management approach	69-70
401-1	Total numbers and rates of new employee hires and employee turnover, by age group, gender and region	69-70

Indicator		Page
GRI 403 Occupational Health and Safety		
	Management approach	64-66
403-1	Percentage of workers whose work, or workplace, is controlled by the organization, that are represented by formal joint management-worker health and safety committees	55
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and gender	/
403-3	Workers with high incidence or high risk of diseases related to their occupation	64-65
403-4	Worker participation, consultation, and communication on occupational health and safety	/
GRI 404 Training and Education		
	Management approach	72
404-1	Average hours of training per year per employee, by gender and employee type	73
404-2	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	72
GRI 405 Diversity and Equal Opportunity		
	Management approach	69-70
405-1	Diversity of governance bodies and employees	69-70
GRI 413 Local Communities		
	Management approach	56-57
413-2	Operations with significant actual and potential negative impacts on local communities	56-57
GRI 416 Customer Health and Safety		
	Management approach disclosures	48
416-1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	48
416-2	Total number of incidents of non-compliance with regulations and/or voluntary codes concerning the health and safety impacts of products and services (during their life cycle), by type of outcomes	48

SANY[®]
三一重工