

長城汽車股份有限公司 **GREAT WALL MOTOR COMPANY LIMITED***

(a joint stock company Incorporated in the People's Republic of China with limited liability) H Share Stock Code: 2333 A Share Stock Code: 601633

Corporate, Social and Responsibility Report 2022

* For identification purpose only

About This Report

I. REPORTING PERIOD

This report is the 12th annual corporate social responsibility report issued by Great Wall Motor Company Limited since 2011. This report covers the period from 1 January 2022 to 31 December 2022, with certain information extending to the previous or subsequent years where appropriate.

II. SCOPE OF REPORT

The Company and its subsidiaries, including some contents involving Baoding Great Wall Holdings Co., Ltd and its subsidiaries. Considering the continuity and comparability of the contents involved, certain information and contents will be appropriately extended as needed. Please refer to the annual report of Great Wall Motor Company Limited for detailed corporate information. There is no significant change in the scope of this report as compared to that set out in 2021 Corporate Social Responsibility Report published by the Company on 29 March 2022.

III. CONTENTS OF REPORT

This report discloses the Company's information on economic, social and environmental performance indicators, social responsibility and sustainable development in 2022.

IV. BASIS FOR REPORT

This report is prepared in accordance with the Notice of the Shanghai Stock Exchange on Strengthening Social Responsibility of Listed Companies and Issuing the "Guide on Environmental Information Disclosure of Listed Companies on the Shanghai Stock Exchange" and the Environmental, Social and Governance Reporting Guide of the Stock Exchange of Hong Kong Limited.

V. REPORTING PRINCIPLES

This report has been prepared in accordance with the following reporting principles set out in the Environmental, Social and Governance Reporting Guide of the Hong Kong Stock Exchange:

(1) Materiality: The Group communicates with its major stakeholders on a regular basis to identify and assess environmental, social and governance-related issues that matter most from stakeholders' perspectives. Key environmental, social and governance issues identified through stakeholder engagement and materiality assessment; (2) Quantitative: Quantitative information/key performance indicators (KPIs) presented in this report are accompanied by narrative, explanation and comparison wherever applicable; (3) Balance: This report aims to disclose data in an objective way, which aims to provide stakeholders with a balance overview of the Group's overall environmental, social and governance performance; and (4) Consistency: Unless otherwise stated, the Group adopts consistent methodologies and retrieves social and environmental KPIs from the Group's internal record system. The scope of report and KPIs are consistent with those of the previous report to allow meaningful comparison.

VI. DEFINITIONS IN THE REPORT

"Great Wall Motor" or the "Company" or "we"

Great Wall Motor Company Limited

the "Group"

the Company and its subsidiaries

"Great Wall Holdings"

Baoding Great Wall Holdings Company Limited (the indirect controlling shareholder of the Company) and its subsidiaries

VII. NOTE TO THE REPORT

Data in this report are sourced from the Company's audit report, annual report or other statistical documents. This report contains uncertainties about future plan or forecast. This report has not been reviewed by any independent source and investors are advised to be aware of the risks involved. The preparation of this report is in compliance with all mandatory disclosure requirements set out in the Environmental, Social and Governance Reporting Guide of the Hong Kong Stock Exchange and the "comply or explain" provisions.

VIII. AVAILABILITY OF REPORT

This report is published on websites of The Stock Exchange of Hong Kong Limited (www.hkexnews.hk), the Shanghai Stock Exchange (www.sse.com.cn) and the Company (www.gwm.com.cn)

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In 2023, driven by the strategy of transformation towards a global intelligent technology company, Great Wall Motor will rely on its efficient and sound forestlike ecosystem to continuously promote harmonious and win-win relations between the Company and the society, the economy and the environment. – WEI JIAN JUN 2022 is an extraordinary year in which the shift in the global geopolitical landscape has affected the pattern of energy supply and demand; against the backdrop of many countries in the world entering a recessionary period, China's economy still maintained strong growth with a 3.0% year-on-year increase in GDP in 2022.

Despite the adverse factors such as chip shortage and high price of raw materials for power batteries, the automobile market in China is still growing against the trend.

2022 is also a year of strengthening transformation and upgrading for Great Wall Motor. In this year, the Company made more thorough changes and innovations with further focusing its corporate strategies on the four main routes of "pricing", "level", "style" and "product categories", thereby accelerating the Company's pace towards a global intelligent technology-driven mobility company.

Environment : Going forward, a new generation of intelligent vehicles based on clean energy will set a new pattern for the future development of the automobile industry. Faced with the new responsibilities and requirements brought by the development of the times and the change of energy structure, Great Wall Motor has deepened its efforts in the core technologies and industry chains of new energy with focus on the goal of "carbon peak and carbon neutrality", establishing a comprehensive development strategy of simultaneously promoting the technology of battery electric power, hybrid power and hydrogen energy. In addition, the Company will continuously implement the prevalence and application of new technologies, new processes, new materials, new equipment and renewable clean energy to comprehensively facilitate carbon reduction throughout the entire industry chain, thus effectively reducing the carbon emissions of enterprises.

In terms of the route planning for battery electric power, several major brands under Great Wall Motor will form a joint force to promote the rapid and steady transformation of Great Wall Motor towards electrification.

In the field of hybrid power, Great Wall Motor took the lead in the world in launching Lemon Hybrid DHT, featuring a twogear, dual-motor hybrid system that was fully self-developed. Such technology not only became the first highly integrated petrolelectric hybrid technology among China automobile brands to break the technical barriers set by joint ventures in the hybrid field, but also represented the world's leading, high-efficiency and high-performance hybrid power solution. Great Wall Motor has launched a new Hi4 technology, which is its globally-pioneered intelligent four-wheel drive hybrid technology and a top-level hybrid technology created with innovative configuration. This technology will be first used in a Haval's upcoming new energy vehicle model, and Great Wall Motor will also apply four-wheel drive technology in its full range of new energy products by 2024. In the future, the technology will be fully open-source, ushering in the era of electric four-wheel drive for everyone. In the future, Great Wall Motor will persist in user-centered principle, addressing the pain points in consumers' driving experiences and further upgrading and iterating its three major hybrid platforms.

In terms of hydrogen energy, Great Wall Motor has built an internationally advanced integrated supply chain ecosystem of "manufacturing-storage-transportation-refueling-application". This system not only broke the barriers to core technologies dominated by foreign companies, but also connected the upstream and downstream of the industry chain, accelerating the commercialization of hydrogen energy.

On 22 August 2022, GMW Haval grandly held its new energy strategy conference at the Water Cube, at which GMW Haval set its strategic goal that the proportion of new energy vehicles would reach 80% in 2025 and ICE vehicles would no longer be sold in 2030. This is a milestone for GMW Haval, and also the most determined step taken by Great Wall Motor on the road of comprehensive transformation to new energy company.

Society : Safety is paramount to the automobile industry. Great Wall Motor has always made user safety the core of its operations for ages, and it has always adhered to the principle of "safety-first" in car manufacturing and has been dedicated to serving global users when looking back to its development stage from passive safety to active safety or from ICE vehicles to new energy and intelligent vehicles.

On the Latest Safety Ratings of Euro NCAP (European New Car Assessment Program), WEY Coffee 01, ORA Funky Cat and WEY Coffee 02 successively received the certificate of "five-star safety rating".

Furthermore, Great Wall POER and Haval H6 have passed the five-star safety rating under the new A-NCAP standards in the Australian New Car Assessment Program (A-NCAP) crash test, demonstrating their strength in expanding overseas markets.

At the China Automotive Safety Conference 2022, one of China's cutting-edge automobile safety technology exhibition platform, ORA Lightning Cat successfully completed the high-speed spiral roll and fall challenge of electric vehicles, and was awarded the "successful model in the annual TOP Safety challenge", which fully demonstrated Great Wall Motor's strength in safety technology.



In the development process of new energy and intelligent technologies, user safety has always been the top priority for Great Wall Motor. In the future, empowered by its forest-like ecosystem, Great Wall Motor will continue to make breakthroughs in various vehicle safety technologies with full coverage of all models, to accelerate the implementation of new energy and intelligent strategies, and build intelligent new energy vehicles that make consumer feel "more economical", "farther", and "safer", bringing users a secure and green driving experience and setting a new example for the industry in automobile safety.

Governance: Great Wall Motor continues to deepen its 3.0 organizational reform. It has built a brand-new management system of president + chief officer in each business segment at the strategic management level, which makes the management mode flatter and the senior management team more professional and steadier, laying a solid foundation for the Company's implementation of its medium- to long-term strategy and long-term sustainable and stable development.

With respect to comprehensive TOC and efficient operations, the Company will focus on building its capabilities in middle-end platforms, and through its five middle-end platforms of brand, channel, user, digitalization and end-terminal operations, the business lines are strongly empowered. In particular, the brand platform achieves large-scale marketing and branding through extensive communication, public relations, and word-of-mouth; the end-terminal operation platform reshapes the frontline combat mode with strong expertise, empowerment, and penetration; and the user operation platform, channel platform, and digitalization platform coordinate standardization, resource allocation, and capability enhancement. On such basis, the five middle-end platforms work together to strongly empower the business lines.

The year 2023 has begun, with its days and nights passing by and its light and shadow shifting, like the movement of wheels. Driven by the strategy of transformation towards a global intelligent technology company, Great Wall Motor will rely on its efficient and sound forest-like ecosystem to continuously promote harmonious and win-win relations between the Company and the society, the economy and the environment.



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COMPANY OVERVIEW

Targeting global users, Great Wall Motor dovotes itself to providing intelligent and green travel services, and accelerating its advancement to a global intelligent technology company, and makes its commitment to intelligent new energy vehicles: more economical, farther and other

Great Wall Motor's business includes design, research and development, production, sales and services relating to automobiles and parts. Great Wall Motor has laid out its operations along the entire industry chain, covering battery electric power, hybrid power, hydrogen energy, solar energy and other clean energy fields, with focus on the research and development as well as application of pioneer technologies such as smart networking, smart driving and chip, and owns five automobile brands, namely Haval, WEY, ORA, TANK and Great Wall Pick-up.

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With the mission and vision to Rock the World with Our GIFT (Green Intelligent Future Technology), Great Wall Motor has built a new travel ecosystem that integrates green features and carbon neutrality, cognitive intelligence, global trendy products as well as mutual enjoyment, intelligence and innovation: adhering to the concept of lowcarbon environmental protection throughout the industry chain and investing heavily in the research and development of green and clean energy; providing users with a new driving experience by integrating highly intelligent elements into every vehicle to cater for all scenarios; riding on trends and offering bespoke and innovative products and services; reshaping and redefining products to initiate social interaction with travel and allow users worldwide to enjoy the fun of new travel experience by leveraging the power of science and technology.



In terms of technical research and development, Great Wall Motor has mastered a large number of core technologies with proprietary intellectual property rights. According to the data released by the global automobile patent big data platform in 2022, Great Wall Holdings ranked No. 1 in terms of its annual patent applications among Chinese private automobile enterprises, the number of patents granted to automobile enterprises in China and the number of patent applications and patents granted on new energy vehicles. This provides a solid foundation for Great Wall Motor's transformation towards a global intelligent technology company. Furthermore, Great Wall Motor has created a value innovation technology system for the entire industry chain of automobile research and development, design, production and automobile life based on its three major technology brands of "LEMON, TANK and COFFEE Intelligence", which represents the brand new "carmaking concept" of Great Wall Motor.



Great Wall Motor is accelerating its technical layout in new energy fields such as hybrid power, battery electric power and hydrogen energy. In the field of battery electric power, Great Wall Motor is one of two automobile companies in the automobile industry possessing the ability of self-research and self-production of power batteries. In the field of hybrid power, Great Wall Motor's intelligent hybrid DHT technology is one of the world's leading, efficient and high-performance hybrid solution. In the field of hydrogen energy, Great Wall Motor is building an integrated supply chain ecosystem of "manufacturing-storage-transportation-refueling-application" in hydrogen energy industry. In addition, Great Wall Motor is focusing on key core technologies of the third generation of semiconductors such as low-power and high-performance computing chips and silicon carbide, as well as artificial intelligence and other industrial technologies.





Great Wall Motor always regards promoting the growth of employees and improving their quality of life as its responsibility: providing global job opportunities for employees and activating their potential to make extraordinary achievements. At the same time, it increases investment in medical care, housing, education and other sectors so that the fruits of development will benefit its employees, and actively participates in global social welfare undertakings.

To cater for future trends, Great Wall Motor will continue to collaborate with its upstream and downstream partners in the industry chain to create a multi-party win-win forest-like ecosystem. The Company will continue to invest in research and development to produce greener, smarter and safer products for users worldwide. It will strengthen its C2B user operation model relying on IIoT, and establish a new "product + software + service" business model to facilitate shifting the value chain towards the back end, link up the value chain in the full life cycle of automobile consumption, and truly make achievements in intelligent and green travel benefit the whole world and achieve sustainable development through co-creation, sharing and achieving win-win results with users. Great Wall Motor has established its global sales network, with exports to more than 170 countries and regions, and more than 700 overseas distribution channels. It has sold more than 1,000,000 vehicles overseas, and established research and development centers and technology innovation hubs in countries and regions including China, the United States, Canada, Germany, Austria, Japan, South Korea and India. Great Wall Motor has 10 full-process vehicle production bases in China. It has also established full-process vehicle production bases in abroad such as Eurasia, Southeast Asia and South America and owns a number of KD plants in Ecuador, Pakistan, etc. 07

Great Wall Motor has released its global brand strategy and the "ONE GWM" global brand action plan targeting the global market. Based on such new strategy, Great Wall Motor will focus on the GWM brand, and comprehensively go global with different development paths based on the characteristics of its brand categories. It will differentially lay out new energy products according to different market and industry policies in different countries and regions, and thereby build a localized ecosystem.





CORPORATE CULTURE

In 2022, Great Wall Motor observed its corporate culture to Rock the World with Our GIFT (Green Intelligent Future Technology), the core values of Anti-corruption, Honesty, Innovation, Changes, Sharing and the enterprise spirit of Improving Little by Little Every Day, in a drive to further focus on user-oriented development and fully implement the strategy of going global. This move was aimed at pushing Great Wall Motor forward to achieve the objective of becoming a global intelligent technology company.



Mission and vision:

Rock the World with Our GIFT (Green Intelligent Future Technology)



Core Values:

Anti-corruption, Honesty, Innovation, Changes, Sharing



Enterprise Spirit:

Improving Little by Little Every Day

Green:

adhere to the concept of low-carbon environmental protection throughout the industry chain and invest heavily in the development of green and clean energy, so as to become a leading player in the green energy revolution and continuously contribute to the protection of the Earth

Intelligent:

embrace the era of technological innovation and focus on intelligent products to create a full scenario intelligent ecosystem integrating intelligent manufacturing, intelligent operations, intelligent services and intelligent management; provide users with a more convenient, more enjoyable and richer smart travel experience

Fashionable future:

gain insights into the industry trends, engage in the energy revolution, capture the trends of the times, and provide more bespoke, intelligent, creative and valuable products and services to surprise users

Cool technology:

make more enjoyable and cool cars using smart technology; give each product cultural connotation and gather users with common interests to play together and create an exclusive social life

Rock the world:

enable users all over the world to enjoy the surprise and ultimate experience of driving cars featuring

Anti-corruption:

fair, just, simple and transparent; clean and self-disciplined with zero tolerance for corruption

Honesty:

adhere to the user-oriented principle, uphold the spirit of contract, be honest and trustworthy, and ensure operations compliance

Innovation:

insist on accurate R&D investment, create a dynamic and open atmosphere, and cultivate the soil of innovation to drive the Company's development with innovation

Changes:

change is the only constant. Be bold to break the rules and proactively seek changes; keep an empty cup of mind, start over again with awe, and move forward with a being-towards-death attitude and a solid belief

Sharing:

uphold the spirit of altruism, and create value and share benefits with employees and partners to build an ecosystem with mutual benefits

Sound and pragmatic:

be prepared for danger in times of peace, and be down-to-earth to have a persistent focus and seek sustainable development

Industrious and aggressive:

be responsible, persevering, enterprising, and innovative

RECOGNITIONS AND PUBLIC COMMENTARIES

I. GREAT WALL HOLDINGS WON FOUR CHAMPIONS OF THE YEAR IN TERMS OF THE NUMBER OF PATENTS PUBLISHED BY CHINESE PRIVATE AUTO COMPANIES DURING THE YEAR, THE NUMBER OF PATENTS GRANTED TO AUTO COMPANIES IN CHINA, THE NUMBER OF PATENTS PUBLISHED AND GRANTED IN THE FIELD OF NEW ENERGY VEHICLES

According to the information released by the global automotive patent big data platform in 2022, Great Wall Holdings continued to rank first among Chinese private auto companies in terms of the number of patents published, and ranked first among auto companies in China in terms of the number of patents being granted in 2022. In the field of new energy vehicles, Great Wall Holdings continued to rank first among auto companies in China in terms of patents being granted in 2022. In the field of new energy patents published and the number of patents being granted.

II. WITH THE DIGITAL TRANSFORMATION BEING RECOGNIZED, GREAT WALL MOTOR WAS SELECTED AS ONE OF THE FIRST 30 "DIGITAL PILOT" ENTERPRISES IN CHINA

According to the list of pilot demonstration projects for the integrated development of new-generation information technology and manufacturing industry in 2022 announced by the MIIT, Great Wall Motor's "Digital and Intelligent Vehicle R&D and Manufacturing" project was successfully selected as one of the pilot demonstration projects of 30 "Digital Pilot" enterprises proposed for the first time, signifying that Great Wall Motor has taken a leading position in the transformation of digital and intelligent vehicle R&D and manufacturing, and will rapidly lead the development of the industry to the comprehensive upgrading of intelligent manufacturing.

III. GREAT WALL MOTOR WON THE "NATIONAL MAY DAY LABOR CERTIFICATE" IN 2022

On 28 April 2022, the celebration of "May 1" International Labor Day and Commendation Conference of "National May Day Labor Medal" and "National Workers Pioneer Title" was held, at which Great Wall Motor was awarded the "National May Day Labor Certificate" in 2022.



IV. ISO21448 CERTIFICATION OF EXPECTED FUNCTIONAL SAFETY PROCESS OF GREAT WALL MOTOR WAS FORMALLY PASSED

On 18 August, Great Wall Motor officially passed the ISO21448 SOTIF (Safety of The Intended Functionality) process certification and obtained the first ISO21448 SOTIF Certificate for Road Vehicles worldwide issued by UL Solutions, adding leverage to the safety assurance of intelligent driving of vehicles.

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V. GREAT WALL MOTOR WAS AWARDED THE FIRST UN R155 CYBER SECURITY MANAGEMENT SYSTEM (CSMS) COMPLIANCE CERTIFICATE IN CHINA BY KRAFTFAHRT-BUNDESAMT (KBA)

On 12 October, Great Wall Motor was awarded the first UN R155 Cyber Security Management System (CSMS) compliance certificate in China by Kraftfahrt-Bundesamt (KBA), which means an important step towards compliance in overseas markets.

VI. GREAT WALL MOTOR BECAME A MOBILITY AND LOGISTICS PARTNER DURING APEC 2022

From 18 November to 19 November, the 29th Asia-Pacific Economic Cooperation (APEC) Economic Leaders' Meeting in 2022 was held in Bangkok, Thailand. As a mobility and logistics partner during APEC 2022, Great Wall Motor's 3rd Gen HAVAL H6 DHT HEV became the official designated vehicle to provide mobility services for representatives.



VII. GREAT WALL MOTOR'S 3.0T V6 ENGINE SELECTED AS TOP TEN ENGINES OF "CHINA'S HEART" IN 2022

On 16 November, Great Wall Motor's 3.0T V6 engine was selected as top ten engines of "China's Heart" in 2022, which is the ninth time for Great Wall Motor being honored.



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VIII. GREAT WALL MOTOR WAS SELECTED IN THE PEKING UNIVERSITY INNOVATION REVIEW INDUSTRY RESEARCH CASE LIBRARY IN RECOGNITION OF ITS INNOVATION VALUE

The collection of "Thinking of Evolution and Innovation, Peking University Innovation Review Industry Research Case Library (2022)" compiled by the Peking University Innovation Review Academic Committee was published, in which Great Wall Motor was selected in the section headed "Building the most dynamic intelligent connected vehicle society", becoming the only one auto company selected. The social value and innovation value of Great Wall Motor received authoritative recognitions again.

IX. GREAT WALL MOTOR WON MULTIPLE AWARDS OVERSEAS

The WEY Coffee 01, ORA FUNKY CAT and WEY Coffee 02 successively passed the crash test for vehicle safety of Euro NCAP, and obtained the Euro NCAP five-star rating certification. Besides, the WEY Coffee 01 and ORA FUNKY CAT won the "Best in Class" award of Euro NCAP in 2022, which is the first time for a Chinese brand to win the award.

The Tank 300 was awarded the five-star safety rating by A-NCAP.

GWM ORA European Experience Center Design won the Silver of the "2022 German Brand Award", which is the first Chinese automobile brand to win the award.

In the NAAMSA Accelerator Awards the Year held by the National Association of Automobile Manufacturers of South Africa (NAAMSA) in October, Great Wall P-Series was awarded the winner for light commercial newcomer vehicle of the year, and HAVAL JOLION was awarded the passenger newcomer of the year.

The 3rd Gen Haval H6 was selected as the Best Value Medium SUV in 2022 by Drive, an Australian media, with the highest overall ratings. The GWM ORA FUNKY CAT won the "Most Anticipated Newcomer of the Year" award at the Car of the Year 2022 Awards Ceremony in Malaysia organized by Carlist, an authoritative media in the automotive industry of Malaysia.



X. THE SUB-FORUM "CHINA-ASEAN AUTO INDUSTRY DEVELOPMENT FORUM" OF THE "2022 CHINA AUTO FORUM" WAS HELD SUCCESSFULLY, AT WHICH THE DEVELOPMENT OF GREAT WALL MOTOR IN THE ASEAN MARKET GAINED RECOGNITION

On November 10, the sub-forum "China-ASEAN Auto Industry Development Forum" of the "2022 China Auto Forum", jointly organized by China Association of Automobile Manufacturers and Great Wall Motor, was held successfully, at which the development of GWM in the ASEAN market gained recognition from the industry. Great Wall Motor's success in Thailand provides an example for overseas expansion of China's auto companies and the development of the whole industry.



XI. GREAT WALL MOTOR BECAME THE OFFICIAL PARTNER OF THE HSBC BWF WORLD TOUR FINALS 2022

On December 7, Great Wall Motor became the official partner of the HSBC BWF World Tour Finals 2022, and its popular new energy products, HAVAL H6 PHEV and the HAVAL JOLION HEV, provided commuting services for the event.



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SIGNIFICANT CORPORATE EVENTS IN 2022

I. GREAT WALL MOTOR ANNOUNCED ITS GLOBAL BRAND STRATEGY, AND ADHERED TO FOCUSING ON "ONE GWM"

Embracing the global market, Great Wall Motor announced its global brand strategy and the global brand action principle of "ONE GWM". Great Wall Motor will adhere to focusing on "ONE GWM" to create integrated channels and star single product, and increase R&D investment to make R&D presence worldwide based on the forest-like ecosystem.



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II. WITH THE DEBUT OF NEW MANAGEMENT TEAM, GREAT WALL MOTOR IS FULLY COMMITTED TO NEW ENERGY SECTOR

On August 22, GWM Haval announced that it has started an allround transformation to the new energy track, and released the 3rd Gen Haval H6 DHT-PHEV, the SUV king, entering the new energy sector. Great Wall Motor has also comprehensively ushered in a new era of new energy. At the same time, with the debut of Great Wall Motor's new session of management team, the rapid development of Great Wall Motor in new energy and intelligence will be promoted from brand marketing, technological R&D, supply chain integration, production and manufacturing, talent security and other aspects.



III. EXPEDITING GLOBAL LAYOUT: UPON THE HANDOVER OF THE PLANT IN BRAZIL, GREAT WALL MOTOR INVESTED RMB11.5 BILLION TO UPGRADE THE PLANT

Great Wall Motor officially acquired the Iracemápolis plant in Brazil. After intelligent and digital transformation and upgrading, the factory is expected to be put into operation in the second half of 2023, with an annual capacity of 100,000 units, which will radiate the whole Latin American region in the future. Meanwhile, Great Wall Motor released Brazil's core market strategy: over the next 10 years, it will invest RMB11.5 billion to deepen the layout of the local industry chain, focus on electrification and intelligence, and strive to become a leading brand of new energy vehicles in the Brazilian market.



IV. EXPEDITING GLOBAL LAYOUT: WITH THE DEBUTE OF TANK BRAND, GREAT WALL MOTOR RECORDED AN ACCUMULATIVE OVERSEAS SALES OF ONE MILLION VEHICLES

On July 3, Tank 300 was officially launched and Tank 500 debuted in Saudi Arabia. The launch of Tank 300 in Saudi Arabia marks the official overseas sales of Tank brand as a pioneering and high-end SUV brand, and Saudi Arabia is the first stop of its overseas sales. During the same period, Great Wall Motor recorded an overseas sales of one million vehicles, which is the new starting point of Great Wall Motor's upward and global development.



V. EXPEDITING GLOBAL LAYOUT: GREAT WALL MOTOR EXPANDED ITS OVERSEAS CHANNELS AGAIN, MOCHA AND FUNKY CAT WERE LAUNCHED IN EUROPE

On October 17, Great Wall Motor unveiled its NEVs at the Paris Motor Show 2022, including the WEY Coffee 01, WEY Coffee 02, ORA FUNKY CAT, Funky Cat GT and The Next Ora Cat. The WEY Coffee 01 and ORA FUNKY CAT were launched in Europe. On November 21, The WEY Coffee 01 vehicles were ready for the journey to Europe at Port of Shanghai and commenced the shipment to Europe, and those new vehicles have been successively delivered to customers.





VI. THE NEW ENERGY AND INTELLIGENT PROJECT OF GREAT WALL HOLDINGS SETTLED IN CHANGSHU, WITH AN INVESTMENT OF RMB7 BILLION

On September 7, Great Wall Holdings entered into an official strategic cooperation with the Administration Committee of Changshu Economic and Technological Development Zone in relation to intelligent cockpit, core components of hydrogen fuel cell and intelligent connection industrial bases, including the intelligent cockpit project of Nobo Automotive Systems Co., Ltd., the hydrogen fuel cell base project of FTXT Energy Technology Co., Ltd., the new energy and intelligent connection industrial base project of Great Wall Intelligent Technology Co., Ltd., with a total investment of RMB7 billion, which is another initiative Great Wall Motor has taken to establish its forest-like ecosystem and will provide strong support for Great Wall Motor's development in new energy and intelligence technology.



VII. EXPEDITING GLOBAL LAYOUT: GREAT WALL MOTOR EXPANDS TO GUATEMALAN MARKET

On November 8, Great Wall Motor officially launched the GWM brand in Guatemala and announced its entry into the market. GWM's global models, such as the 3rd Gen HAVAL H6, HAVAL JOLION and GWM POER, were first launched in Guatemala.

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VIII. EXPEDITING GLOBAL LAYOUT: GREAT WALL MOTOR MALAYSIA SUBSIDIARY OFFICIALLY ESTABLISHED

On July 5, Great Wall Motor Malaysian subsidiary was officially established in Kuala Lumpur, the capital of Malaysia, marking Great Wall Motor's official entry into the Malaysia market.



IX. THE 300,000TH COMPLETE VEHICLE OF GWM POER OFFICIALLY CAME OFF THE PRODUCTION LINE, WITH THE PRODUCTION VOLUME EXCEEDING 300,000 VEHICLES IN 2 YEARS

On May 8, the 300,000th complete vehicle of GWM POER officially came off the production line in GWM Chongqing Smart Factory. From zero to 300,000, it took only 2 years and 8 months.



X. PERFORMING CORPORATE SOCIAL RESPONSIBILITY AND UNDERTAKING OBLIGATIONS AS A DOMESTIC ENTERPRISE

In 2022, a magnitude-6.8 earthquake hit Luding County in Ganzi Tibetan Autonomous Prefecture, Sichuan province, which deeply touched people's hearts. Great Wall Motor immediately donated money and supplies with a total value of RMB2 million to provide help and support in Luding County of Ganzi Tibetan autonomous prefecture, Shimian County of Ya'an City and surrounding affected areas in Sichuan province.

In overseas, Great Wall Motor and Sazgar, a dealer in Pakistan, jointly donated necessities of life in total weight of nearly 20 tonnes, including noodles, cooking oil, and seasonings, for people in the affected areas through the MTJ Foundation, a local charity organization. Great Wall Motor donated food supplies with a value of ZAR100,000 to people in slum areas in Johannesburg, South Africa, to help millions of poor families. During the COVID-19 pandemic, Great Wall Motor worked together with charity organizations in Thailand, and provided anti-epidemic supplies such as necessities of life and facial masks to poverty-stricken families and medical institutions; it also visited slum areas in Bangkok to donate food and gifts to local children and care about their education and living. () 长城 浸车

众志成城 共渡**难**关

长城汽车<mark>捐赠总价值200万元</mark>款项及物资 星火驰援四川地震灾区

9月5日,四川甘孜州泸定县发生6.8级地震。灾情 牵动人心,长城汽车紧急捐赠总价值200万元款项及物 资驰援四川甘孜州泸定县、雅安市石棉县及周边灾区。 其中,向中国红十字基金会捐赠总价值150万元的长城 皮卡,用于赈灾物资运输、灾区紧急救援以及支持后续 重建等;向中国妇女发展基金会捐赠50万元,用于妇女 儿童急需的物资和医疗防护用品购买、灾区妇女儿童心 理援助等工作。

长城汽车将密切关注灾后救援进展,与灾区人民共 渡难关。

愿山河无恙,四川安好!

长城汽车股份有限公司 2022年9月7日

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CORPORATE GOVERNANCE

CORPORATE GOVERNANCE STRUCTURE



I. GOVERNANCE STRUCTURE AND MANAGEMENT OF THE BOARD, THE SUPERVISORY COMMITTEE, AND SHAREHOLDERS' GENERAL MEETING

The Company strictly complies with the requirements of the Company Law of the People's Republic of China, the Securities Law of the People's Republic of China and other relevant laws and regulations to continuously improves its modern corporate governance structure, and has established a system comprising the Shareholders' general meeting, the Board, the Supervisory Committee, the senior management team, and employees. At present, the Board of the Company has four special committees: the Strategy and Sustainable Development Committee, the Audit Committee, the Nomination Committee, and the Remuneration Committee, which help improve the efficiency and quality of the Board of the Company.

In 2022, the Company completed the change of directors. The Board of the Company currently comprises 7 directors, including 3 executive directors, 1 non-executive director and 3 independent non-executive directors. With different experiences and backgrounds, the directors have rich experience in corporate management, product innovation and capital operation. They play an important role in improving our corporate governance capabilities and continuously achieving our strategic goals. For details about directors, please refer to the 2022 Annual Report of Great Wall Motor Company Limited. In 2022, the Company convened 8 Shareholders' general meetings, 25 Board meetings, and 19 meetings of the Supervisory Committee.

In 2022, Great Wall Motor amended the Working System of Remuneration Committee under the Board in accordance with the new Securities Law and relevant laws and regulations after taking into account of the actual circumstances of the Company. The information disclosure work of the Company received a rating of A from Shanghai Stock Exchange in information disclosure assessment.

II. PARTY BUILDING

In 2022, with the consummation of the 20th National Congress of the CPC, the Party committee of Great Wall Motor continued with its Party building initiatives by intensively learning and putting into practice the spirit of the 20th National Congress the CPC, further advancing the integration of Party building with the operations and development of the Company, and serving as an exemplar and assuming a leading role in Party building on an ongoing basis.

In 2022, with the completion of the Party Branch Activity Room of the Great Wall Motor Technical Center, the Company's party building work has stepped into a new level. This room is another activity space built by the Company's Party committee for its Party members, which will fully play the role as bridge and belts to further strengthen the relationship between the Party members and employees, enhancing the cohesion of the Party organization and further conducting its Party building work. At the core area of the room, there displays the bright red Party flag, the Party's century-old history, the prominent oath of joining the Party and the magnificent Great Wall. At this room, new Party members read the oath firmly, and old Party members recited the oath. With their voices echoing at the room, the Party members felt the greatness of the history, and swore an oath of practicing their commitment for a lifetime.





In recent years, the duties and functions of the Party committee of the Company has been increasingly improved. It, in coordination with the labor union, the Communist Youth League, the Women's Federation, and the Company's administration department, has carried out a series of party-building activities in which all Party members participated, including learning the history of the Party, reciting the oath, singing revolutionary songs, visiting revolutionary bases, holding the sodalities for single workers and organizing online sports games. The committee also produced several short propaganda films for party-building such as "Riding the Waves at the Forefront of the Tide", "New Year's Greetings" and "Celebrating the 20th National Congress of the CPC", to continuously strengthen and give full play to the role of Party organization of non-public enterprises.

Hardships will arouse our morale; and our mission will inspire us to forge forward. We will gather powerful strength to continuously write a brilliant chapter of success!

Guided by a series of major policies of the Party and the central government, the scientific development of Great Wall Motor is a concrete practice of the theory of socialism with Chinese characteristics, and a true testament to China's confidence in its road, theory, system, and culture during the 40 years of reform and opening up. In the future, Great Wall Motor will continue to improve its own capabilities, firmly pursue the development strategy of globalization, and strive to build a valuable and globally influential Chinese brand, contributing to the economic and social development of China.

III. RISK CONTROL AND COMPLIANCE MANAGEMENT

To achieve the strategic goal of going global, Great Wall Motor examines the internal and external landscape through an international perspective, proactively prevents, controls and resolves major risks. By using the theory of three lines of defense as the foundation; the management mentality of risk awareness as the guidance, compliance as the bottom line and internal control as the starting point, it has established a complete risk management system, primarily by improving its institutional structure, rules and system and assurance mechanism.



Improving mechanisms for senior management attention, risk assessment, risk event response, culture building, performance appraisal and accountability, training and communication and inspection and investigation, etc.

- 1. With respect to establishment of organs, the Company has established a risk control and compliance management mechanism steered by the Compliance Management Committee, led by the Compliance Management Office, and assisted and supported by relevant departments responsible for compliance, so as to give full play to the role of the Compliance Management Office in coordination, arrangement, promotion, supervision and implementation, and stress the primary responsibilities of the departments responsible for risk control and compliance to ensure the effective operation of the system.
- 2. With respect to establishment of a system, the Company has formed a management system with the Universal Global Compliance Manual of Great Wall Motor as the framework, Risk Management System and Global Compliance Management System as the core, supporting operation and assurance mechanisms as the foundation and special guidelines for numerous key compliance areas (such as data compliance, export controls and sanction regulations and anti-monopoly) as supplements, and it has implemented risk management at each organization, department and position by combining risk management with internal control, compliance and legal affairs, thus improving the risk prevention and control capabilities of the Company.
- 3. With respect to risk and crisis management, the Company conducted two thorough self-inspection and self-correction works at the request of the senior management by virtue of internal and external risk events. Senior management regularly held risk control and compliance meetings, at which they analysed global risk cases and law enforcement trends, reported global key business risks from self-inspection, and discussed how to respond to risk events and prepare for crisis management with the assistance of external consulting institution to improve risk management awareness from senior management to the employees and ensure the continuity of the business.
- 4. With respect to intelligent construction, to effectively prevent and control global risks, Great Wall Motor has established a global legal affairs, risk control and compliance platform through information and intelligent means, fully covering its legal, risk control and compliance business (Phase I of the project involves 19 areas), to conduct its work on legal affairs, risk control and compliance in an more efficient and professional way and build a more comprehensive and effective risk prevention and control system.
- 5. With respect to risk control and compliance culture and empowerment, to enhance employees' awareness of compliance and prevent compliance risks, Great Wall Motor has published its compliance statements on its official global website, and provided trainings by internal and external instructors, drills on special issues and joint conferences to enhance professional and compliance awareness of all employees, forming a sound risk control and compliance culture.

In preventing bribery, extortion, fraud and money laundering, the Company strictly complies with the Criminal Law of the People's Republic of China, the Anti-Unfair Competition Law of the People's Republic of China, the Anti-Money Laundering Law of the People's Republic of China and other laws and regulations, as well as the Interpretations of the Supreme People's Court and the Supreme People's Procuratorate on Several Issues Concerning the Application of Law in Handling Criminal Cases Involving Commercial Bribery and other normative documents, and formulates relevant regulations on the management of violations and misconduct covering all employees (including but not limited to the Global General Compliance Code of Great Wall Motor). In 2022, Great Wall Motor did not experience any incident involving extortion, fraud or money laundering.

IV. CORPORATE INTEGRITY BUILDING

The Company operates in compliance with relevant national laws and regulations by observing them, upholds the basic principles of integrity and honesty, resolutely prevent corrupt acts, and strives to create a fair, impartial, simple and transparent workplace and cooperative environment. It also continues to strengthen risk management, enhance integrity awareness of all employees in their work, build a corporate brand image of integrity and honesty, promotes excellent corporate culture and spreads a positive attitude in our society, assisting the implementation of global strategy and contributing to social development and progress.

(I) Improving the working organ for combating corruption and promoting integrity with strengthened leadership

The Company has set up an independent Anti-corruption Committee, with the Chairman serving as the director of the committee which is mainly responsible for setting targets for integrity building of the Company, assigning relevant tasks and steering integrity building in the right direction. A disciplinary panel was set up under the committee to mainly take charge of the Group's construction of an integrity system, including formulating, maintaining and improving relevant measures, receiving whistle-blowing information from employees/related parties, conducting investigations and imposing penalties, as well as supervising key integrity-based positions and conducting integrity education at various levels. Meanwhile, given the Company's strategy of developing globally, supervision and audit organs have continuously evolved and networked supervision and audit systems have been set up at home and abroad in various countries and regions featuring mutual collaboration, assistance and check and balance.

(II) Laying emphasis on integrity education and creating a culture of anti-corruption and integrity

Competition among enterprises also amounts to competition for talents. Employees are required to sign the Integrity Commitment when they enter or renew their contracts and continuously improve their professional ethics. The Company advocates that all employees work with integrity. To cultivate quality talents, we have courses on orientation education, promotion education and special education for different stages of employees' careers, mainly carried out through various means including training, prejob testing, video teaching and outreach activities. In 2022, we conducted over 40 sessions of integrity education courses with a total duration of more than 100 learning hours. There were over 5,300 participations by relevant personnel in online and offline integrity education, including 2 lectures on integrity culture for senior staff (including Directors) with over 180 participations. We arranged special education testing and assessment with more than 46,000 participations in total during the year. We also encouraged employees to learn and conduct self-testing independently online, and there were over 193,000 participations by employees of various levels in conducting self-testing through the information technology platform in 2022. Different types of integrity courses for all stages of careers were made available to all employees. The Company encouraged all employees to participate in anti-corruption and integrity training. At the same time, we continue to share internal cases and related training content through various channels such as the Group portal and supervision notices to timely communicate to all employees the Company's anti-corruption stance and related requirements and encourage all employees to join the construction of corporate anti-bribery management system.

Innovative model for spreading integrity culture by opening self-media account, the Group has been operating the Great Wall Integrity WeChat public account, which has attracted more than 190,000 supporters up to December 2022, covering groups such as employees, related parties, business partners and family members. It uses pictures, videos, text, cartoons and other means to achieve barrier-free communication with employees and related parties. In 2022, it pushed over 49 original articles in total, and continued to operate the account of "honest and clean Great Wall" (廉潔長城) on Douyin platform, with 96 original videos published through the collective creation of all employees, to make honesty and clean rooted into all employees. All these efforts helped promote the Company's reputation as an honest and clean brand.

(III) Improving polices and measures to regulate anti-bribery management

Under the current backdrop of constant evolvement and change in various types of risks, Great Wall Motor continues to strengthen risk management and control in a drive to make anti-corruption and integrity management more regulated, systematic and scientific. It incessantly explored, fine-tuned, and set up a whole set of anti-corruption policies, which were promulgated in 2008. The content of the policies is adjusted in a timely manner based on aspects such as the Company's strategic development and business philosophy. As of 2019, 5 revisions have been made. Upon the implementation of the Company's international strategy and with a view to boosting international influence and competitiveness and continue to vigorously develop an antibribery management system and on the basis of its anti-corruption policies, Great Wall Motor carried out comprehensive upgrade, and completed the formulation of anti-bribery management system documents, which passed third-party certification and obtained the ISO 37001 Anti-bribery management systems certificate, providing strong support and assurance for strategy of going global of Great Wall Motor. The Group continuously advanced the construction of an anti-bribery management system in its each domestic organization, and meanwhile, to satisfy compliance requirements in the international market, it has developed tailored anti-corruption policies applicable to overseas organizations in combination with actual situation and its global business development and in accordance with the Group's anti-bribery management system standards, with the view to building a diverse and inclusive anti-bribery management system to assure its smooth business operations.

In terms of corruption prevention, based on the strategic background of globalization and digital transformation, the Company has built a procurement audit model using relevant information from the Group's various information systems, which enables the Company to identify suspected major risks and improve audit targeting. In addition, the Company also conducts regular bribery risk assessments to identify areas and positions with corruption risks based on the situation of existing business, and then it will classify the identified risk and formulate management measures. By continuously improving the system processes, the Company ensures the effective operation of the system. For specific transactions, projects and business partners exposed to bribery risks, we conduct anti-bribery investigations before formally entering into cooperation and detect internal and external business risk exposures through internal audit to provide a basis for management decision-making and reduce bribery risks. For those in key positions subject to supervision, such as procurement and tendering personnel, we implement regular job rotation to prevent corruption arising from long tenure. In business dealings and business reception, we stipulate the number of persons received and the reception locations, upholding the principles of openness and transparency to avoid improper acts. According to statistics, 489 bribes were denied in 2022. Since 2008, the Company has refused a total of 2,148 offers of bribe, with a maximum of RMB350,000 refused in a single incident. Employees at all levels handed in approximately 145,000 gifts in total, and 93 employees were named Models of Integrity and Self-discipline.

As for the protection of the rights and interests of business partners, the Company signs a Sunshine Agreement with each supplier as a precondition for cooperation and continues to update and improve the contents of the agreement based on compliance requirements to regulate the integrity of both sides in their conduct, safeguard the interests of business partners and maintain a fair, impartial, simple and transparent cooperation platform to build a symbiotic ecosystem offering mutual benefits.

Great Wall Motor undertakes its social responsibility as an industry player and spreads a positive attitude. It has established the Sunshine Integrity Self-Service System to provide the public with information for enquiring about untrustworthy and rule-breaking persons and enterprises to safeguard the interests of stakeholders and enhance the professionalism of practitioners through supervision by members of the public. A total of 605 collaborators have been listed on the Untrustworthy List due to corruption and dishonesty by December 2022. It joined the Enterprise Anti-Fraud Alliance in September 2018 and its status was advanced to a council member in 2020. It also actively commits itself to anti-fraud initiatives of the Enterprise Anti-Fraud Alliance and makes every effort to join hands with all members to build a corruption-free business environment by sharing lists of dishonest and untrustworthy persons and anti-fraud experience and providing effective information and technology input to help create a green, healthy and cooperative business environment.

(IV) Strengthening anti-corruption discipline to guard against and punish corruption

Great Wall Motor implements a zero-tolerance policy towards outright corrupt acts such as offering and taking bribe, and cracks down on soft corrupt acts such as breach of duty, dereliction of duty, buck-passing, forming cliques and acting fraudulently. Once found, these corrupt acts will be investigated and penalties will be imposed by the Share Disciplinary Panel. To enable early identification and handling of corrupt acts with supervision by all employees and related parties, a variety of whistle-blowing channels have been established, including QQ, hotline, email, and WeChat.

Mailbox for Reporting: gwlianjie@163.com

Correspondence Address: Share Disciplinary Panel, No.2266 Chaoyang Road South, Baoding, Hebei Province Postal Code:071000

In 2012, the Group developed the first whistle-blowing information management platform using digital platform, and appointed a dedicated person to be responsible for the operation and maintenance of the platform, so as to achieve closed-loop supervision of whistle-blowing information and keep strictly confidential relevant information such as the content of the whistle-blowing and the identity of the whistle-blower. The Group continues to develop a faster and safer whistle-blowing information management platform to facilitate all employees and related parties achieving fast whistle-blowing. In May 2022, the Group launched Great Wall Integrity WeChat mini programs for online reporting, to jointly fight corruption through the joint efforts of all employees and supervision by multi-parties. At the same time, by giving full play to the strength of all employees and related parties, corrupt acts have been fully exposed, investigated and dealt with as early as possible. Violations of the Company's regulatory requirements will be handled in accordance with such requirements; and acts involving violations of the law will be referred to the judicial authorities. In 2022, 3 persons were referred due to commitment of suspected illegal acts and crimes, and judgments were handed down in accordance with the law. At the same time, to protect the rights and interests of whistle-blowers from being infringed, the Company has formulated strict management requirements. For example, no one may investigate or disclose the information of the whistle-blower, or retaliate or instigate others to retaliate against the whistle-blowers and their relatives. If there is a direct termination of the labor contract in violation of the law, legal responsibility shall be pursued in accordance with the law.

Anti-corruption will never end. On anti-corruption, Great Wall Motor will advance a "not daring to corrupt, not able to corrupt and not wanting to corrupt" atmosphere, adhere to corruption-free and self-disciplined practices, honest, trustworthy and compliant operations, work with a wide variety of outstanding enterprises and users under the theme of win-win benefits to resolutely undertake its social responsibility with integrity in mind and spread a positive attitude in our society.



I. OUR ESG GOVERNANCE PHILOSOPHY

Great Wall Motor is consciously aware of its social responsibility. Regarding safety as the core value of its brand, the Company upholds the car-making principle of safety first. It attaches equal importance to green, innovative and sustainable development to enable more quality, safer and more sustainable growth. Also, the Company pays close attention to the expectations and demands of all stakeholders, such as the governments, shareholders, customers, employees, suppliers, partners and others, and undertakes its social responsibility in employee training, social welfare and environmental protection, aiming to be a reliable and respectable enterprise for all stakeholders.

ESG Governance:

Great Wall Motor establishes a top-down ESG management architecture, under which the Sustainable Development Committee is responsible for supervising ESG related matters as authorized by the Board, and responsibilities of various departments are further specified to improve corporate governance level.



Statement of the Board of Directors

On 31 December 2021, the Board approved the establishment of the Strategy and Sustainable Development Committee. The Company attaches great importance to ESG-related matters. During the reporting period, the Company made the following progress in ESG:

To discuss with senior management of various institutions with rich ESG experience how to refine our sustainable development, aiming to build a quality company with greener and more sustainable development

In March 2022, two new independent executive directors were appointed to enhance the independence of the Board



External ESG experts were invited to provide in-depth training for ESG managers and team members, and several on-site or online ESG training sessions on global ESG trend, ESG's value to enterprise development, domestic and international ESG regulatory policies were organized.

The Board of Directors (the "Board") of Great Wall Motor is the highest authority and decision-making body for ESG matters. It is responsible for reviewing the Company's sustainable development and ESG related reports, monitoring the progress of sustainable development. The Strategy and Sustainable Development Committee under the Board is responsible for studying ESG matters and providing opinions and suggestions for the Board's decision-making reference.

The main responsibilities of the Strategy and Sustainable Development Committee are: to carry out research, analysis and risk assessment on the Company's sustainability, environment, society and governance (ESG) and other related issues, and propose sustainability measures, strategies and goals; to organize or coordinate the supervision and inspection of the Company's sustainability and ESG policies, management and performance and the progress of related goals, and give advice accordingly; and to review the Company's reports on sustainability and ESG issues, and report to the Board. For details, please refer to the Management Measures of the Strategy and Sustainable Development Committee of Great Wall Motor Company Limited released on 31 December 2021.

Based on the analysis of industry dynamics and competitive landscape and its sustainability strategy, the Company identified material ESG issues and future opportunities and challenges of the industry with reference to the disclosure requirements of regulators, international reporting standards, industry policies and development trends, and key rating concerns of capital market, and took the improvement of the Company's ESG management as the annual priority for sustainable development.

The Company sets ESG key performance targets based on its actual situation. The Board regularly tracks, reviews and takes follow-up actions on the fulfillment of targets related to important ESG issues, so as to response to the gaps and opportunities between current progress and expected targets and ensure the precise and continuous implementation of the Company's policies.

This report discloses in detail the progress and results of Great Wall Motor's ESG efforts in 2022, and was considered and approved at the 61st meeting of the seventh session of the Board on 30 March 2023.

II. MANAGEMENT OF MATERIAL ISSUES

1. Identification of stakeholders

The Company identifies stakeholders who have the power of decision and influence on the Company according to its business scope and nature of production and operation.

2. Identification of issues

Based on the analysis of industry dynamics, competitive landscape and corporate sustainable development strategy, the Company has gained an understanding of stakeholders' demands after interviews and investigations and identified 27 material issues that may directly or indirectly affect its business with reference to the disclosure requirements of regulators, international standards for reporting and disclosure, industry policies and development trends, important factors of capital market rating, etc.

When identifying material issues, we focus on the following factors:

- Internationally accepted standards, rules and guidelines: including the standards for material issues of the automotive industry in the Materiality Map of SASB, the GRI Standards and the Environmental, Social and Governance Reporting Guide of the Hong Kong Stock Exchange, for preliminary screening of material issues;
- (2) Interests and expectations of stakeholders: we will be able to understand the interests and expectations of internal and external stakeholders of the Company through interviews with and survey on stakeholders such as shareholders, employees, suppliers, local communities and social institutions;
- (3) Peer benchmarking: we benchmark against peers and conduct analysis on the major issues identified by peers and competitors as well as opportunities and challenges in the industry in the future;
- (4) Corporate strategy and development: we select material issues in line with the Company's development in accordance with its own strategy, business, operation and management system, and values;
- (5) Important factors of capital market rating: we conduct analysis on the material issues MSCI ESG is concerned about on the automotive industry and supplement the key issues.

3. Assessment of issues

The Sustainable Development Working Group of the Company has gained an understanding of the materiality of issues concerned by stakeholders through interviews and questionnaires on the relevance and importance of sustainability issues, and arrived at a matrix of material issues by ranking and preliminary assessment.

4. Analysis and verification of issues

The Company has established a panel of experts from each department of the Group to make a final decision on the assessed and ranked material issues and arrived at the matrix of material issues which serves as an important basis for improving operation and management and for preparing this report.



Materiality Matrix of Core Material Issues in 2022

III. COMMUNICATIONS WITH STAKEHOLDERS

Stakeholders	Issues of Concern	Ways of Communication and Feedback	Chapter of the Report the Responses Included in
	7. Strategies to reduce carbon emissions	Social media, press conference, information disclosure	Working on Carbon Neutrality
	8. Economic growth	Daily management, supervision and inspection, communication between government and enterprise, meeting communication, project cooperation	Company Overview
Government and regulators	12. Reducing pollutant emissions from production	Questionnaire survey	Emissions Management
	14. Clean technology development strategy	Project cooperation	Product Technology, Carbon Emission Reduction on Products
	17. Integrity	Daily management	Corporate Integrity Building
	18. Business compliance		Risk Control and Compliance Management
	21. Strategies to reduce energy use		Energy Management
	23. Addressing climate change	Information disclosure, questionnaire survey	Addressing Climate Change
	25. Water resources management		Water Resources Management
	8. Economic growth	General meeting	Company Overview
	14. Clean technology development strategy	Results presentation	Product Technology, Carbon Emission Reduction on Products
	16. Corporate governance and risk management	Regular information disclosure	Corporate Governance
A	17. Integrity	Roadshow	Corporate Integrity Building
Shareholders and investors	18. Business compliance	Daily emails and phone calls	Risk Control and Compliance Management
	 Managing environmental and social risks in the supply chain 		Supply Chain Management
	1. Product quality and safety performance		Product Technology, Product Quality Management
	23. Addressing climate change	Instant messaging, email feedback	Coping with Environmental Changes

Stakeholders	Issues of Concern	Ways of Communication and Feedback	Chapter of the Report the Responses Included in
	1. Product quality and safety performance	Company website	Product Technology, Product Quality Management
	4. Customer service quality	Offline activities	Dealer Management and Services
ፍረታን	5. Protection of customers' rights	Official WeChat and Weibo accounts and telephone	Protecting the Rights and Interests of Customers
Customers	9. Product innovation and R&D	Market surveys	Product Technology
	11. Energy saving products and environmental protection		Working on Carbon Neutrality
	20. Customer privacy and information security		Protecting the Rights and Interests of Customers
NZ	13. Managing environmental and social risks in the supply chain	Site surveys	Supply Chain Management
	19. Identifying key suppliers	Quality communication meeting, supplier training, supplier review	Supply Chain Management
Suppliers/partners	21. Strategies to reduce energy use		Energy Management
	29. Managing pollution and waste		Working on Carbon Neutrality, Emissions Management
	22. Green procurement		Supply Chain Management
Industry/associations	9. Product innovation and R&D	Online and offline activities	Product Technology
	10. Protecting intellectual property rights	Forum exchanges	Intellectual Property Protection
	14. Clean technology development strategy		Product Technology, Carbon Emission Reduction on Products
	26. Promoting industry development	Online and offline activities, forum exchanges	Investor Relations Management

		Ways of	Chapter of the Report the	
Stakeholders	Issues of Concern	Communication and Feedback	Responses Included in	
	2. Safe production	Trade union activities	Health and Safety	
	3. Attracting and retaining talents	Employee	Attraction of Talents	
	6. Protection of employees' rights	Instant messaging, online platform, labor union activities	Employee Welfare and Care	
Employees	28. Occupational health and safety	Instant messaging, online platform, labor union activities	Health and Safety	
	15. Staff training and development	 Questionnaire survey on annual training 	Talent Development	
		 Staff training (including online learning platforms) 		
		③ Survey on the satisfaction of training		
	24. Staff benefits	Instant messaging, online platform	Employee Welfare and Care	
	11. Energy saving products and environmental protection		Product Technology, Carbon Emission Reduction on Products	
Long Long	12. Reducing pollutant emissions from production	Phone calls, face-to-face Q&A, co-creation business	Emissions Management	
Public/community	23. Addressing climate change	Social media, official website	Coping with Environmental Changes	
	27. Hosting activities for public causes	Instant messaging, online platform	Social Causes	

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ENVIRONMENTAL RESPONSIBILITY

COPING WITH ENVIRONMENTAL CHANGES

Climate change is a major global issue of common concern to the international community. Climate change is not only an environmental issue but also a development issue. China, as a responsible developing country, attaches great importance to addressing climate change, implements a series of strategies, measures and actions to address climate change, and participates in global climate governance. Great Wall Motor upholds the philosophy of harmonious coexistence of people, vehicles and the environment, pays close attention to the expectations and demands of all stakeholders, quickly responds to and actively assumes responsibility to cope with climate change, and facilitates emission reduction across the society with the assistance of industry chain. In 2021, Great Wall Motor announced its 2025 strategy at the 8th Technology Festival, and undertook to achieve carbon neutrality in 2045 in all respects. In 2022, the Company established a carbon neutrality management system, with the "Carbon Neutrality Management Regulations" as the guiding document, to promote the construction of the carbon neutrality system throughout the company, and to support the orderly implementation of carbon emission reduction work in an all-round way. We make further disclosures in four aspects – governance, risk management, strategies, and indicators and goals in accordance with the TCFD-recommended framework.

Governance

The role of the Company's Board of Directors in the oversight of climate-related risks and opportunities and the role of the management in the assessment and management of climate-related issues.

a. Committee's oversight of climate-related risks and opportunities

To cater for the sustainable development of the Company, the Company passed the Administrative Rules for Strategy and Sustainable Development Committee upon the approval of the Board meeting, which formed the top-down PDCA strategic management model, providing the basis for the Company's strategic planning;

The Strategy and Sustainable Development Committee is a special committee under the Board and the deliberative body for the Company's strategy and sustainability. The Committee is responsible for carrying out research, analysis and risk assessment on the Company's sustainability, ESG and other related issues, and proposing sustainability measures, strategies and goals; organizing and coordinating the supervision and inspection of the Company's sustainability and ESG policies, management and performance and the progress of related goals, and giving advice accordingly; reviewing the reports on the Company's sustainable development and ESG issues and reporting the same to the Board.

b. Management's role in assessing and managing climate-related risks and opportunities

- ① The information centre, marketing company and product planning department are responsible for the analysis of external macro environment, industry, competitors and customer needs, and functional departments are responsible for the analysis of internal resources and capabilities;
- ② The Strategy and Sustainable Development Committee preliminarily makes advice on the Company's development strategy based on the analysis of external environment and internal resources and capabilities;
- ③ The Operation Supervision Department monitors the implementation of the strategy, regularly collects and analyses relevant information, and reports any deviation from the strategy to the Strategy and Sustainable Development Committee in a timely manner;
- The Operation Management Department organises a performance analysis meeting every quarter and a strategic inquiry meeting every year to conduct phased strategic evaluation and review.

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Risk Management

We identify climate risks and potential opportunities, integrate climate risks into the Company's risk management, and gradually promote climate risk assessment.

Assessment process



Climate change risks that have a material impact on the Company

Policy and regulatory risk – impact of new energy polices, pollutants discharge, carbon quota, export polices Technical risk – low-carbon technology and green industry chain Market risk – low-carbon products and non-renewable energy

a. Risks and Strategies

Risk Category		Risk Description	Countermeasures	
Transition risks	Policy and regulatory risk	 With the consecutive release of documents regarding dual-carbon "1+N" policy, the market share of electric vehicles will gradually increase, which may affect the sales of traditional ICE vehicles; With increasingly stringent environmental policies, if the emission indicators of pollutants fail to meet or are above the required standard, the Company will be adversely affected or exposed to suspend production or other risks; As Tianjin Haval Branch was included in the regional carbon trade pilots of Tianjin, the Company will incur additional performance costs if its emissions exceed the quota in the future; During the reporting period, the EU's Regulation on Batteries and Waste Batteries, the Carbon Border Adjustment Mechanism and other regulations were adopted, with more stringent regulations on the export of goods, higher requirements will be imposed on the export products in the future, and the compliance costs of vehicle products will also rise gradually. 	 Timely and intensive study of domestic and foreign policy development trends, do well in the dual-carbon planning and product planning, and subdivide the planning into the various work of the Company; Regularly analyze the organized pollutants, pollutants from products and others, carbon emissions, and make good response plans, such as improving the enterprise environment management system, deepening the iterative updating of environmental protection equipment and technology; Gradually take measures to reduce the carbon footprint of products and carbon emissions of factories; Strengthen the disclosure of carbon footprint information of products, strive to get awards for low-carbon products, and facilitate the export of products. 	
Transition risks	Technical risk	 Currently, as the new energy industry is at a stage of vigorous development, and technological R&D, upgrading and iteration of new energy products are accelerating, if the Company falls behind in pace, the competitiveness of its products will be affected; As the automobile manufacturing industry chain is complicated, advance arrangement for the development of low-carbon products and resources is required, and the launch of low-carbon vehicles needs the synergy of the supply chain. 	 Accelerate the R&D and utilization of new energy products, and gradually increase the proportion of new energy products in products; Deepen the development and use of green parts with the characteristics of low carbon, lightweight and remanufacturing; Rely on the clean development of the upstream basic industry and the low- carbon transformation of the supply chain, reduce the carbon footprint of the automobile and develop a new generation of automobile products with ecological and low-carbon attributes. 	

Transition risks	Market risk	•	With the guidance of the government's "dual-carbon" policy, customers are increasingly inclined to new energy vehicle models, and they also have higher requirements for new energy vehicles, so technological innovation, iteration and upgrading of products are very important;	Increase investment in research and development of new energy technology to expand the market share of new energy vehicles and continuously improve the competitiveness of the Company's products.
		•	With the continuous rise in the price of non-renewable resources, customers' choice for vehicles will change, and the sales of traditional ICE vehicles may be affected.	
	Reputational risk	•	As the continuous implementation of the national "dual- carbon" strategy will attract the public's attention to low- carbon development, the Company shall actively respond, undergo low-carbon transformation and assume social responsibilities. Otherwise, it will have adverse effects on the Company's reputation.	Actively respond to policies, integrate the concept of sustainable development into each dimension of the operation and technological R&D of the Company to realise low-carbon transition.
Physical risks	Acute risk	•	Worsening climate change may lead to extreme weather and other major events. Extreme weather will affect the production and operation of the Company and the stability of supply chain.	Invest more resources in identifying, preventing and addressing risks.
	Chronic risk	•	The Company's production is compromised and punctual order delivery cannot be guaranteed, which has a negative impact on the Company's reputation.	

b. Opportunities

The release of the national dual-carbon strategy brings new opportunities to new energy industry and stimulates technological innovation in the industry and its rapid growth. Factors such as the development/expansion of low-emission products and services, the use of renewable energy, and energy conservation to reduce production costs bring development opportunities to the Company. We will continue to study and analyse customer needs, and strive to reduce the impact of climate risks, create opportunities and adapt to the market.

Indicators and Targets

Great Wall Motor puts strong emphasis on and actively follows China's long-term strategic goals in "3060" carbon peaking and carbon neutrality. In 2021, Great Wall Motor issued its "2025 Strategy" goal, in an aim to accelerate its low-carbon and intelligent upgrade. The Company has set its goals in water consumption, energy consumption, waste reduction and carbon emissions.

- ① Optimising the water usage structure and enhancing the comprehensive utilisation efficiency through the tiered utilisation and repeated use of water resources.
- 2 Continuously advancing the application of renewable clean energy and increasing the installed capacity of photovoltaics.
- ③ The Company controls the emission of pollutants from the source, process, and end, and promises that it will only discharge pollutants when meeting the standard, and the total discharge of various key pollutants will not exceed the national or local total control requirements. By 2025, the VOCs emissions per unit area of the coating process will be controlled within 35g/m², reaching the advanced level of international clean production.
- ④ It is planned to fully achieve carbon neutrality by 2045.

To achieve its comprehensive sustainable development, Great Wall Motor adheres to the concept of full lifecycle management and carries out its efforts on energy-saving and carbon reduction in various fields.

At the stage of product development, Great Wall Motor incorporates its control over vehicle carbon emission during the entire lifecycle into the research and development performance indicators of vehicles, sets carbon emission targets for vehicle models, and reduces the carbon emissions in the entire product lifecycle by applying technical and management methods such as product structure optimization, power technology iteration and upgrading, application of recycled materials, production of clean energy, and lightweight design. At the same time, Great Wall Motor insists on the research and development of clean energy technologies, accelerates the presence of new energy products, and promotes the Company's advanced development.

At the manufacturing stage, the factory reduces carbon emissions in the production process through process innovation, improving production efficiency, applying energy-saving equipment, energy-saving management, and increasing the proportion of renewable energy applications.

At the scrapping and recycling stage, Great Wall Motor is committed to maximising the value of recycled materials, building a sound resource recycling system, establishing a circular regeneration system for the automotive industry chain, fully tapping the value of the circular economy, promoting the healthy development of the remanufacturing industry, and maximising resource utilisation.

CARBON NEUTRALITY PROGRESS

Carbon Emission Reduction on Research and Development of Products

The China VI regulation added the requirements on RDE emissions, requiring that all light-duty vehicles sold and registered shall meet the requirements on China 6b+RDE limits. The so-called RDE (Real Drive Emission) is real driving emissions of pollutants, referring to the emissions of pollutants by vehicles on road. In the face of the upgrading of regulations, Great Wall Motor prepared in advance and carried out planning and responded on various aspects, details of which are as follows:

- ①. Purchase of PEMS equipment: Great Wall Motor initiated the inspections and benchmarking on PEMS equipment and conducted in-depth communications and on-site exchanges with three major equipment manufacturers in the industry to ensure the precision and accuracy of equipment.
- ②. Upgrading of engines: Great Wall Motor conducted technological upgrading on the software and hardware of engines, such as the adoption of low-ash engine oil, the 350bar fuel injection system, the heat management system and the dual-fuel injection system, to reduce the emission of particulate matters, speed up in heating engines and improve emissions and energy consumption. In terms of software strategies, the application of multiple injections, transient fuel control and self-learning on components played an active role in controlling emissions and the consistency.
- ③. Upgrading of subsequent processing technologies: In addition to measures on reducing emissions from the source within the engine, the emission control out of the engine also played a key role. In particular, the gasoline particulate filters (GPF) can reduce the emission of particulate matters by 60% to 90%. The improvement of GPF technology is attributed to the design of porthole and thick walls of carriers on the one hand and the improvement of coating process and materials on the other hand.
- ④. Equipping planning on automobiles: Based on powertrains, Great Wall Motor carried out researches and evaluations in advance on RDE regulations, eliminated old power and planned on new power. It prepared plans on models at the same time and simultaneously achieved RDE development and model planning.
- ⑤. Establishment of test specifications: The complexity and uncontrollability of various factors on real roads will affect the results of experiments and tests. To ensure the coverage and consistency of automobile development, Great Wall Motor carried out field inspections and tests in Tianjin, Chongqing, Xiamen, Shanghai, Qinghai and other regions, covering high-temperature and alpine areas, plateaus, urban traffic congestion, expressway and other extreme environment and conditions.



Great Wall Motor adheres to the purposes of regulations and makes one-off and high investments in the full life cycle of automobiles to deliver high-quality and high-standard products to users. Meanwhile, based on its responsibilities on environmental protection, Great Wall Motor planned the RDE model in advance and launched them in the end of 2022.

Energy-saving and carbon reduction benefits in the R&D or adoption of latest automobile energy-saving results

1.1 Average carbon emission reduction per automobile of the Company in 2022:

Thanks to the higher proportion of production and sales of new energy vehicles in passenger vehicles in 2022 (with an outstanding sales of plug-in hybrid electric and battery electric models) and the application of certain low-carbon technologies, the average lifecycle carbon emission per automobile in 2022 decreased by 3.5% as compared with the average carbon emission per automobile in the base year of 2020. Based on the production volume of passenger vehicles in 2022, the total annual carbon reduction reached 95,378t. (Annual carbon reduction = Average carbon reduction per automobile each kilometer * Annual total production volume * Annual average mileage)

1.2 Stage of raw materials for automobiles in 2022:

In 2022, the Company integrated low-carbon materials (secondary aluminium and aluminium made with green power) into the R&D and design of automobiles during the R&D process of automobiles. It reduced carbon emissions by an average of 5.35%, 5.17% and 5.25% in the stage of raw materials for each plug-in hybrid automobile, fuel automobile (including HEV) and battery electric automobile, respectively.



Carbon Emissions in Stage of Raw

PROPORTION OF CARBON EMISSION REDUCTION IN STAGE OF RAW MATERIALS


1.3 Stage of automobile manufacturing in 2022:

To fully reduce the lifecycle carbon emissions of products, the automobile manufacturing end reduces carbon emissions in the production process through technological innovation, energy efficiency improvement, replacement with clean energy and other measures. Through continuously advancing photovoltaic projects, the Company achieved a reduction of carbon emissions by 47,130t CO_2 e in 2022. The carbon emissions per automobile in the manufacturing process reduced 12.48% compared with that before energy replacement.

1.4 Stage of automobile use in 2022:

It intelligently plans on battery energy management, adjustments of working points of engines and predictive heat management based on navigation information. It achieves the best oil/power consumption management based on the current conditions, SOC, oil mass and load conditions of automobiles in combination with the information on weather, current location, traffic conditions, average speed, pathways, distance, slope, charging stations and arrival time from the navigation system as well as the optimization algorithm on minimum oil consumption. It improved the efficiency of systems and reduced energy consumption by 5%-8%.



Carbon Reduction in Manufacturing Stage

Great Wall Motor has always adhered to the concept of sustainable development and attached great importance to low-carbon management of production and operation. The Company actively explores various innovative technologies to broaden the scope of carbon reduction. During the reporting period, the Company continued to promote the use of clean energy to replace traditional energy and improve energy efficiency throughout the entire production process. The Company adopted advanced production processes and efficient equipment to continuously reduce carbon emissions of every vehicle at new factories. Meanwhile, the Company updated and transformed its old factories to comprehensively improve its technical level. The Company insistsed on promoting green transformation on the manufacturing side, and its production bases in Chongqing and Tianjin were awarded the "National Green Factories".

A: Use of renewable energy

By 2022, the installed capacity of distributed photovoltaics reached 217MW. By increasing energy storage facilities, the consumption rate of photovoltaic power generation was improved. The Company also expanded its green energy procurement methods and participated in the green power market trading for the first time in 2022, purchasing 10.25 million kWh of green power. By the end of 2022, as compared with 2021, the installed capacity of photovoltaics increased by 38.7%, photovoltaic power generation increased by 75.5%, and the green power use increased by 77%.

B: Adoption of efficient equipment

Through intelligent manufacturing upgrades and the transformation and application of energy-efficient equipment, the precise supply and effective use of energy in the manufacturing process are improved, and energy consumption is reduced by 5%.

Stages	New process and new equipment	Energy conservation and carbon reduction	
Equipment retrofit	Stamping dry cleaning machine retrofit	Energy savings by 79% as compared to previous wet cleaning	
	The instrument sub-assembly line adopts a ground friction plus AGV conveying mode	1.7% lower energy consumption than conventional aerial conveyor lines	
Process optimization	Welding layout/program optimization, use of medium frequency welder	Savings by 65% in equipment energy consumption and increase by 15% in production efficiency	
New process applications	Low-temperature curing electrocoat	Energy consumption reduced by 2%	
	Coating low temperature glue	Energy consumption reduced by 10%	
Recycling of residual energy	Dry carton paint booth	30% reduction in paint residue discharge per vehicle; No industrial water consumption (annual savings of more than 10,000 tons/workshop); No industrial wastewater (annual reduction of more than 5,000 tons/workshop);	
	Circulating air conditioning	87% reduction in exhaust emissions; 70% reduction in energy consumption;	
	Adjustment of energy structure	78% reduction in hot water consumption of air conditioners (1,975kw/year/workshop);	
		No gas consumption for flashing drying (annual reduction of more than 88,000 cubic meters/ workshop);	
	Waste heat recovery from drying furnace and waste gas incineration	More than 1,600kw heat recovery per workshop per hour;	

C: Application of advanced manufacturing process

The manufacturing process is continuously optimized in terms of low-carbon materials and advanced processes. The silane process is used to replace the traditional phosphating process in the pre-coating treatment of materials, and low-temperature curing electrocoat, low-temperature glue, high-solids compact coating and other materials are introduced to reduce the energy consumption during the manufacturing process and ensure the quality of the whole vehicle in an eco-friendlier way. B1B2 process, painting line dry carton and full circulating air, flash dry direct expansion heat pump dehumidification and other technologies are applied in the coating in process design stage to reduce the carbon emissions of coating.

D: Waste heat and energy utilization

The Company attaches importance on energy conservation and utilization, conducts energy assessment on operation side, and excavates every recoverable energy resource. In 2022, it applied technologies such as waste heat recovery of coating drying furnace, waste heat recovery of RTO, full circulation air technology of the coating and painting line, and residual pressure utilization of cooling tower. In terms of water resources conservation, reclaimed water has been fully reused to reduce water consumption, and the reuse rate of water resources was more than 95%.

E: Integrated digital management

A dual-carbon management platform is established with digital tools to connect the carbon emission data in supply chains, OEMs, products and other links, thus realizing traceable carbon footprints, systematic and efficient management, and promoting the low-carbon transition of the Company.

The emission intensity of scopes 1 and 2 of greenhouse gas at the Group's vehicle plants reduced by 4% compared to 2021 through these measures.



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Carbon Reduction in Recycling Stage

Based on the national "3060" carbon peaking and neutrality targets, Great Wall Motor actively acted and continuously enhanced efforts in the recycling and disassembly of retired vehicles and the remanufacturing of vehicle parts and components. In March 2022, Baoding Great Wall Resource Recycling Co., Ltd., a subsidiary of the Company, was awarded the first authentication certificate on the remanufacturing of vehicle parts and components in the world by TÜV Rheinland for its remanufacturing of transmissions and headlamp businesses. Great Wall Motor became the first automobile enterprise passed the certification on the remanufacturing quality management system in the PRC.

Great Wall Motor earnestly implemented the Circular of the General Office of the State Council on Issuing the Plan on Promoting the Systems on Extended Producer Responsibility. Through local recommendations, expert reviews and online publicity, it passed the review of four ministries and commissions, including the MIIT, in October 2022 and was published to the public.

1. Recycling and disassembly of retired vehicles

Committed to applying advanced technology to standard and low-carbon disassembly of retired vehicles, Great Wall Automobile Recycling and Dismantling Company (長城汽車報廢汽車回收拆解公司) is equipped with advanced and highly efficient dismantling equipment. The company's retired vehicle green precision dismantling technology has achieved a ≥95% recycling rate of retired car materials and 5,969 vehicles were recycled and disassembled in 2022.

2. Remanufacturing of automotive parts and components

In order to enhance the brand influence of the remanufactured products, Great Wall Motor held the "Fulfilling Carbon Peaking and Neutrality Missions and Developing Recycling Value-Launching of "Haixinggang" Remanufacturing Brand & Authorization/Signing Ceremony" in Chengdu in July 2022, making it the first remanufacturing brand launched by domestic automobile manufacturers.





With the elements of "Gear - Attribute of the Manufacturing Industry" and "Starfish - A Creature with Ultras-strong Regeneration Capacity in Nature" as the subject, the LOGO of Haixinggang brand embodies the infinite recycling of resources and the blue green gradient ramp highlights the concept of regeneration and environmental protection. It has completed the launch of remanufactured engines, transmissions, auto lamps and turbochargers under the brand with the sales and service systems covering various regions nationwide.

Carbon Reduction in Transportation and Logistics

Logistics is a key link in the carbon footprint of automobile products. Great Wall Motor has been adopting improvement measures to reduce the corresponding carbon emissions:

For the packaging link in logistics, it systematically promoted four kinds of packaging (namely, universal, recycling, sharing and intelligent packaging) in supply chains mainly through the establishment of a sharing operation and service network on recycling packaging under full scenarios and connected the packaging sharing business of automobile manufacturers and their supporting parts and components manufacturers in different areas to achieve the recycling of packages. The sharing packing project in Chongqing, a benchmark project developed by the Company, reduced one-off carton packing and one-off wood consumption by 2,676 tonnes and 13,514 cubic meters in the 12-month operation cycle, facilitating the reduction of carbon emission by 162 tonnes.



In the processes of logistics and transportation, Great Wall Motor actively promoted multimodal transport and highway to train and water transportation through layout adjustments to logistics and transportation networks. Based on its business development, the Company increased train and water transportation resources and gradually expanded the train and water transportation volume. In 2022, the Company added 30 train and water transportation lines and achieved a proportion of 29.4% for train and water transportation, reducing carbon emissions by 12,000 tonnes in total compared with traditional highway transportation.



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In the processes of logistics and warehousing, the Company achieved self-driving of logistics vehicles in plants in 2022 through the application of self-driving, AGV and other technologies as well as ancillary intelligent application systems. For its Xushui intelligent logistics project, the Company replaced 22 driverless electric tractors, 85 AGVs and intelligent systems and platforms, achieving "unmanned operation" from the admission of parts and components to automobile assembly. While improving the operation efficiency, it reduced carbon emissions by 186 tonnes in the process of warehousing operation.



In the future, Great Wall Motor will horizontally expand its successful operation models and promote recycling packaging to achieve packaging recycling and sharing in various regions in the PRC. It will optimize transportation models and continuously expand the proportion of train and water transportation; apply automatic equipment and information technologies to achieve high-efficient and automatic operation of warehousing, thereby achieving green and low-carbon operation of all links in the logistics of Great Wall Motor.

Green Office

The Company advocates green and low-carbon office and fully integrates the concept of energy conservation, emission reduction and green development into routine office process through lean management.

The Company emphasizes saving electricity and water in routine office, requires to "turning off lights when leaving the office" and "turning off display screens when leaving computers" and controls the temperature of indoor air-conditioners to reduce power consumption.

The Company actively promotes paperless office and establishes the OA digitalized office systems to improve the operation efficiency of organizations and reduce the use of paper.

The Company commends new energy transportation means. It advocates clean and green travelling models and actively integrates green and environmental-friendly travelling habits into routine office to achieve normalized and continuous green travelling.



Environmental-friendly and Public Benefit Activities

The Company advocates green and low-carbon lifestyles, practice the environmental protection concept that "lucid waters and lush mountains are just as valuable as gold and silver" and vigorously carry out diversified environmental-friendly and public benefit activities.

In April 2022, Mind Electronics and Electric Systems, a subsidiary of Great Wall Motor, organized the activity of "Protecting the Mother Earth" with its employees and carried out clothing donation, low-carbon travelling, environmental and interactive booths to practice the concept of environmental protection with actions.

In September 2022, Nuobo Automotive, a subsidiary of Great Wall Motor, organized the "Activities for a Green Earth" in Dalad Banner, Erdos, Inner Mongolia. It has carried out forest planting for four consecutive years and planted four pinus sylvestris forests in Kubuqi Desert. In the flat desert, thousands of pinus sylvestris withstand wind and sand with strong vitality, turning the desert green and improving the oasis ecosystem in the desert.



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EMISSIONS MANAGEMENT

Upholding the philosophy of harmonious coexistence of people, vehicles and the environment, Great Wall Motor strictly implements the Environmental Protection Law of the People's Republic of China, the Law on Prevention and Control of Air Pollution, the Law on Prevention and Control of Water Pollution, the Law on Prevention and Control of Water Pollution, the Law on Prevention and Control of Solid Waste Pollution as well as other laws and regulations. We actively develop and improve environmental management systems and passed the certification and review under the environmental management systems (ISO14001:2004) for the first time in 2008. In 2022, we completed the supervisory audit under the ISO14001:2015, guaranteeing the appropriateness, adequacy and effectiveness of the environmental management systems in the Company. We disclose the environmental information of enterprises in accordance with laws. We faithfully publish the category, discharging method and emission concentration of major pollutants and the construction and operation of pollution treatment facilities to the society through national pollutant discharge permit platforms and pollution source monitoring platforms and accept social supervision. We conduct monitoring on pollution sources in accordance with regulations and all testing indicators are below national and local emission standards.

1. Treatment of "Three Wastes"

In 2022, the Company continuously boosted efforts in the treatment of VOCs, particle matters and other key pollutants, upgraded and transformed pollution treatment facilities, strengthened equipment maintenance and practically fulfilled social responsibilities on ecological conservation. We followed the "Three Simultaneities" system on pollution treatment facilities and carried out simultaneous design, simultaneous construction and simultaneous putting into operation with the main structure. All pollution treatment facilities meet the feasible technologies recommended under the "Technical Specification for Pollutant Discharge Permit Application and Issuance". In routine management, the Company conducts daily tour inspections and records the operation conditions of equipment to identify, report and handle abnormal conditions as soon as possible.

Waste gas

The waste gas we emit mainly consists of NOx produced by natural gas combustion, particulate matter produced in the process of welding, and VOCs produced in the process of painting. We used low-NOx staged combustion technology to reduce NOx generation by controlling the air ratio, enabling the emission concentration meet national and local standards for hazardous air pollutant emissions. We collected particulate matter in a closed manner, and introduced high-efficiency dust removal technology to achieve a treatment efficiency of 95%, significantly reducing particulate matter emissions. In the painting workshops, we used automatic spraying robots and automatic supply painting system, which saved paint and reduced exhaust volume through circulating air. The waste gas generated from painting was treated using the mainstream technology of zeolite concentration + regenerative thermal oxidation (RTO), which has the characteristics of stable outlet concentration and high purification efficiency. We made full use of the industrial cluster effect of the park by comprehensively using centralized heating and gas supply facilities to help save energy and reduce emissions.

Wastewater

We follow the basic principles of classified collection and quality-based treatment, and adopt a three-level wastewater treatment process of "pretreatment unit + comprehensive wastewater treatment unit + biochemical treatment unit", with discharge concentration far lower than the urban sewage treatment plants' discharge standards. We used an environmentally friendly membrane pretreatment process to replace traditional phosphating process, reducing the discharge of phosphorus and nickel metal ions. We carried out technological transformation of the painting production lines, replaced the original wet spray booths with dry spray booths and used paper box filters for paint mist in the paint spray booths, which reduced wastewater generated from spray painting. We have set up a reclaimed water reuse system to reuse the wastewater after biochemical treatment, effectively improving the reuse rate of water resources.

Hazardous waste

We have been attaching great importance to the prevention and control of hazardous waste pollution, and carried out hazardous waste reduction and resource utilization for the hazardous waste we generated, including sludge, paint residue, and waste organic solvents. We used a compact B1B2-free intermediate coating process, and the coating raw materials for finish paint and colored paint are water-based paint materials with low solvent, reducing the generation of paint residue from the source. We have implemented concentration and drying technology transformation for the generated sludge and paint residue, reducing the volume and weight of hazardous waste. We have fulfilled our responsibility for hazardous waste prevention and control in accordance with law, formulated emergency plans for sudden environmental incidents and hazardous waste management plans, ensuring the compliance in the entire process of hazardous waste storage, transfer, and disposal.

2. Emission Reduction Measures

In 2022, Changzheng Automobile, a subsidiary of Great Wall Motor, conducted the upgrading and transformation of its painting workshops. It upgraded the original "UV photo-oxidative + activated carbon adsorption box" process in paint spray booths into the high-efficient VOCs exhaust processing system consisting of "zeolite concentration + regenerative thermal oxidizers (RTOs)" and significantly improved the removal rate of VOCs from the original 50% to 95%.

In 2022, Xushui Branch of Great Wall Motor improved the traditional flocculation residue disposal process, which reduced the generation of paint residue and enhanced the utilization efficiency of recycling water from painting. The generation of paint residue reduced by 50% and the discharging of sewage reduced by 80% during the year.





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3. Non-hazardous Waste Management

Non-hazardous waste refers to the waste from the routine office and operation and cannot be comprehensively recycled. In accordance with the Environmental Protection Law of the People's Republic of China and the Law of the People's Republic of China on Prevention and Control of Solid Waste Pollution as well as the requirements of relevant departmental regulations and ordinances of the government of the place where non-hazardous waste is generated, it appoints qualified waste disposal organizations and third-party recycling institutes to carry out disposal, standardizes the management and control of waste treatment agreements, desensitization agreements and other environmental protection information. Meanwhile, it tracks the process of waste treatment and specifies the place where the household waste belongs to. It ensures that the non-hazardous waste of the Company meets the disposal requirements of the state or local government, forbids dumping, throwing or piling at random and strictly prohibits impacts on the environment and the society.

Volume of non-hazardous waste and measures for waste reduction

In 2022, the total volume of non-hazardous waste of the Company was 13,660 tonnes, representing a decrease of 2,696 tonnes compared with that of 2021. During the generation process of non-hazardous waste, we adopt various measures to reduce the generation of waste, such as vigorously boosting R&D to improve the manufacturing process and organizing various refined improvement activities.

Publicity on classification of non-hazardous waste:

We widely publicize knowledge on environmental protection and waste sorting through the WeChat official account and pasting publicity slogans to create a cultural atmosphere with everyone responsible for environmental protection and display the spirit of promoting actions with culture and displaying culture with actions, thereby bringing the concept of sustainable development deep into the heart of people.



Publicity of Knowledge on Waste Sorting through WeChat Official Account



Pasting publicity slogans to create a cultural atmosphere of environmental protection

ENERGY MANAGEMENT

Great Wall Motor has been adhering to high sense of social responsibility and committed to building energy-saving and green manufacturing factories. The Company established professional energy management team, specified management responsibility and the energy-saving management concept, formulated the Energy Supply Management Procedures and the Energy Management Regulations and actively facilitated the establishment of the ISO5001:2018 energy management system.

Great Wall Motor conducts energy-saving transformation through the introduction of new technology, new process and new equipment, pools internal resources to carry out energy-saving improvement and continuously promotes the energy management system, expands the installed photovoltaic capacity and implements the replacement with renewable energy with information technology, thereby continuously improving the energy utilization efficiency and optimizing the energy structure.

1. Promoting the Energy Management System

In order to improve the refined energy management, the Company continuously promotes the energy management system and achieves comprehensive monitoring and analysis on energy consumption. Meanwhile, it conducts centralized management and control on public and key equipment, achieving the starting of equipment based on needs and the supply of energy at fixed time with fixed quantity. As of the end of 2022, all production bases have applied the energy management system



2. Theme Activities on Energy-saving Improvement

Based on key energy-consuming equipment/lines on site, the Company identifies the improvement potential, formulates plans on theme activities, carries out special energy-saving improvement activities, summarizes typical methods and develops cases for horizontal promotion. It has completed theme activities on the compressed air system, the refrigerating system, the thermal system, the pretreatment electrophoresis and the drying system and implemented 190 improvements, which can achieve energy-saving revenue of RMB14.98 million

3. Saving Energy through Introduction of Technology

Recycling of waste heat:

Great Wall Motor recycles waste heat resources from key equipment/lines in plants to replace the consumption of steam and gas. In 2022, it introduced double-effect water source heat pumps, which recycle waste heat from air compressor units in the heating season, supply heat to replace the consumption of certain steam and supply process chilled water under the refrigerating model in summer. It can achieve energy-saving revenue of RMB600,000 each year



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Cloud intelligent control energy-saving technology:

The Company achieves full-process inspections and intelligent control on the operation conditions of equipment at the air compressor plant on a time-of-day basis through the introduction of the cloud intelligent control energy-saving management system. Through intelligence algorithm, it appropriately adjusts and controls the status of equipment and achieves the supply of compressed air based on needs and the efficient operation of air compressor units and systems. It can achieve energy-saving revenue of RMB490,000 each year



Intelligent control system on the refrigerating system:

The Company achieves the overall efficient operation of the refrigerating system through the introduction of the intelligent control system. Based on the outdoor temperature and the load of equipment, the refrigerating units appropriately identifies the best efficiency point in the operation of the system with the checked system model, achieves the whole-domain optimal control at the level of systems and improves the energy utilization efficiency of the refrigerating units. It can achieve energy-saving revenue of RMB989,700 each year



WATER RESOURCES MANAGEMENT

Attaching great importance to the management of water resources conservation, Great Wall Motor has adhered to the principle of "water conservation, planned water use and high-efficiency water use", formulated strict water saving plans, strengthened water use management and devoted to resources saving and pollution treatment. Through implementing water conservation measures including the recycling of water resources and water reuse in sewage treatment, Great Wall Motor has achieved the reuse of more than one million tonnes of water resources.

Source control: It installs water saving appliances/equipment in the planning and design stage of plants and adopts anti-splash counter-current cooling tower, auto-induction, automatic flushing valves and other water saving technology to reduce water consumption, water evaporation and fugitive waste

Process recycling: It recycles equipment cooling water and hot water in boilers. Recycled water exchanges heat through heat exchangers or direct contact and is cooled in the cooling tower. It is used repeatedly in closed pipelines and can save water resources

Terminal reusing: Reclaimed water is used in park greening, on-site cleaning/washing and pure water preparing. Condensate water from heat exchangers is reused in water supplementing in painting tanks and connecting to the pure water plant to replace tap water. Concentrated water from pure water equipment is recycled to reduce the consumption of tap water

Great Wall Motor has comprehensively stepped up its effort to become a water-saving enterprise. The Company has achieved certain results in terms of water conservation. Hebei production base was awarded the title of Water-saving Enterprise in Industrial Sector in Hebei Province. Chongqing production base was acclaimed as the Leader in Water Efficiency among Key Water Consumption Enterprises in Chongqing. Jiangsu-Zhejiang production base was rated as the Water-saving Enterprise in Taizhou.

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DEVELOPMENT OF RENEWABLE RESOURCES

Great Wall Motor has vigorously promoted green new energy and actively facilitates the application of renewable and clean energy. By the end of 2022, Great Wall Motor had completed the grid-connected power generation of a 217MW photovoltaic power station and achieved a total photovoltaic power consumption of 140 million kWh during the year. The installed capacity is expected to reach 419MW in 2023.

In 2022, the Company introduced cleaning robots for photovoltaic components and cleaned photovoltaic components every week to enhance the photovoltaic power generation and increase the power generation by 5%-13%.





I. PRODUCTS AND QUALITY SAFETY

Products

Great Wall Motor has developed a brand portfolio consisting of Haval, WEY, ORA, TANK and Great Wall Pick-up. Facing the global market and upholding the mission and vision of "Eco-friendly and Smart Exploration of the World", the brands keep focusing on "ONE GWM" and develop signature products with the integration of channels and stars. They make all-out efforts in intelligent new energy with focus on energy conservation & environmental protection, leading the trends, intelligent technology, classic advance and retro concept, so as to develop key models meeting the diversified demands of users and achieve creation, sharing and win-win results with users.

KEY NEW MODELS LAUNCHED IN 2022

Third-generation H6 DHT-PHEV

The third-generation H6 DHT-PHEV is the first new energy SUV model of Haval based on the "GWM Lemon" of the Group. With "turbo and plug-in hybrid" and V2L power supply for external use in standard configurations for the whole series, the third-generation H6 DHT-PHEV breaks the ceiling of the new energy plug-in hybrid SUV market. The "core-guard" power battery can eliminate potential safety hazards. It is also equipped with the exclusive 1.5T four cylinder hybrid engine and the two-speed gearbox for Lemon hybrid. The maximum power of the system is 240kW and the maximum torque is 530N·m, making it comparable to 3.0T medium-to-large SUVs of JV brands.





WEY

Mocha DHT-PHEV

As an integrator of intelligent DHT and coffee intelligence, Mocha DHT-PHEV focuses on the high-end new energy vehicle market at RMB300,000. With the leading NOH advanced intelligent driving and the unique 204km WLTC ultra-long battery range in the industry, Mocha DHT-PHEV developed the new category of "anxiety-free intelligent electric vehicles" and redefined "new energy, new luxury and new intelligence" with strong cores and batteries, ultra-long range and cutting-edge intelligence. It seamlessly connects various travelling scenarios and establishes new standards on luxury new energy SUV at RMB300,000.



Equipped with two core technologies, namely intelligent DHT and coffee intelligence, Latte DHT-PHEV has a 184km battery range, HWA and other core competitiveness under WLTC conditions. Focusing on family users, it develops anxiety-free intelligent travelling and life and establishes new standards on "family vehicles" in the industry, providing users with a driving experience with pleasure and high intelligence and power. Leveraging on the intelligent DHT series-parallel technology, a better new energy technology in the world, Latte DHT-PHEV breaks the technical barriers of Japanese series of hybrids. It offers a "rapid, smooth, quiet, saving and intelligent" driving experience for all scenarios and speed ranges and achieves "anxiety-free performance" and "anxiety-free range", facilitating the continuous advancing of WEY on the new energy track.



TOTA





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ORA

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Ballet Cat



As the first exclusive car for women of ORA, Ballet Cat focuses on the demand of female users and solved pain points in vehicles for women. With over 50 design patents for women covering all vehicle use scenarios, Ballet Cat offers an all-dimensional surprising driving experience for female users from functional satisfaction to emotional recognition and spiritual resonance. In addition, Ballet Cat opened the patented technology of the "caring model" to the world. In case of emergencies, female drivers can touch the key and send the in-vehicle image and location information to the mobile phone of the pre-set contact under the silent model. Such move of ORA leads a new female friendly standard in the automobile industry, reflecting the safety awareness and social undertakings of an automobile manufacturer and displaying the warmth and feelings of Chinese new energy brands.



Lightning Cat

ORA Lightning Cat is positioned as a super-streamline battery electric coupe and interprets the beauty of dynamic with aesthetics of nature inspired designs. Through the super-streamline aesthetic appearance design, the leading ORA-Pilot 3.0 intelligent driver-assistance system in the industry and the "worry-free battery" prioritizing safety as well as the high-strength steel-cage car body, ORA Lightning Cat boasts a beautiful appearance and excellent product power with "internal and external excellence" and "selection at first sight", offering "breathtaking" driving experience to young drivers in the new era.



TANK

TANK 500

As the first model among medium-to-large luxury off-road SUVs under the TANK brand, Tank 500 delivers a supreme driving experience of the kind seen in a RMB1 million car and meets the high-quality travelling demands under business, family, travelling, off-road and a full range of scenarios with the strong powertrain of 3.0T V6 + 9AT and the luxury space, intelligent technology and core off-road strength. It initiated the market for a new category with a brand proposition that combines toughness and soft-riding features and established new standards for global medium-to-large luxury off-road SUVs.



Great Wall Pick-up

Shanhai Cannon

As the first large high-performance luxury pick-up in China, Shanhai Cannon is an innovative masterpiece of the category under the brand of Great Wall POER 2.0. With the integration of "high performance, super luxury and super fun", Shanhai Cannon is the real outdoor king. Leveraging on its exceptional running ability, diverse modification ability, outstanding trailing ability and full-scene leisure adaptability, it meets the aspirations of users for outdoor life, mountains and seas. Meanwhile, as the first model of high-end pick-up in China, Shanhai Cannon achieves excellence in luxury. It redefines luxury pick-up with outstanding NVH performance, luxury rear experience and super luxury configurations, offering super luxury experience surpassing comparable SUVs.



NEW MODELS TO BE LAUNCHED IN 2023

Haval

Haval H-DOG

As the first key model in 2023, Haval H-DOG will inherit the three-quarter family gene, balance the skills of the DHT new energy categories and become a benchmark model in the new energy + light off-road sector with the positioning as a "new energy and light off-road pioneer". At the same time, as the third model in the DOG family, Haval H-DOG is developed for target users to fulfill family responsibilities and achieve self-pleasing and freedom. With an extraordinary strength in product advancing, it can truly meet the aspirations of users for the use of vehicles in full scenarios covering "urban and off-road conditions and under the electric model".



WEY

Blue Mountain

Wey's new flagship large six-seat intelligent SUV was debuted at the Auto Guangzhou on 30 December 2022. Named as "Blue Mountain", one of the popular high-end coffee varieties in the world, it not only continues the vision of the "coffee intelligence series" on building anxiety-free and enjoyable travelling experience but also fully reflects the high-end positioning and extraordinary quality of its flagship products. The size of Blue Mountain DHT-PHEV is 5,156mm, 1,980mm and 1,805mm in length, width and height and the wheelbase is 3,050mm. The leading body size and the 2+2+2 seat layout bring the experience on the third row surpassing comparable models. The large space carries large ideals, allowing all family members to travel joyfully. The new model is scheduled to be launched in the first guarter of 2023.



TANK

TANK 700

TANK 700 is positioned as the best off-road SUV priced within RMB1 million. It balances excellent performance and luxury driving experience and focuses on the luxury off-road market. It is planned to be launched in 2023 and satisfy the demand of consumers for using vehicles in all scenarios with high performance and luxury. It will be developed as a globally leading flagship product and boost the influence of the TANK brand. TANK 700 is equipped with a large-displacement hybrid system and is comparable to globally leading levels on power and fuel economy. With the integration of leading new energy technology, the 9HAT transmission can coordinate the engine speed and the actual running speed of wheels to display the best performance of the engine, effectively improve the efficiency and reduce oil consumption and emissions.



Intellectual Property Protection

Number of patents:

Up to 31 December 2022, Great Wall Motor Company Limited had been granted a total of 12,675 patents, including: 2,166 invention patents, 7,207 utility model patents and 3,302 industrial design patents.

In 2022, Great Wall Motor Company Limited applied for 4,463 patents and was granted 2,263 patents, including 339 invention patents, 1,565 utility model patents and 359 industrial design patents.

Awards obtained:

In 2022, Great Wall Motor Company Limited won the Chinese Patent Awards – 1 Excellent Award. Up to 31 December 2022, Great Wall Motor has won a total of 7 Chinese Patent Awards, including 3 Gold Awards and 4 Excellent Awards. It won a total of 1 National Science and Technology Progress Award and 18 Hebei Province Science and Technology Progress Awards.

Intellectual property management:

The Company has set up a three-level patent management system with reasonable levels, scientific management and smooth operation: The first level is a company-level patent steering group composed of senior executives and technical experts in various fields; the second level is a patent department set up in the R&D division closely correlated to R&D. The department is responsible for global patent strategic planning, patent expansion, risk prevention and control, licensing operations and overall management of litigations, so that intellectual property can empower products and brands. The third level refers to the heads of patents in subsidiaries, who are mainly responsible for patent management in their respective entities. This management pattern makes the Company's patent strategic objectives clearer and its management methods more scientific and reasonable.

Construction of intellectual property management systems:

Great Wall Motor attaches great importance to technological innovation. Based on the compliant management of global intellectual property and relying on the Enterprise Intellectual Property Management Standards (GBT29490-2013), the Company established the systematic intellectual property management systems, including the Rules on Patent Management, the Rules on Patent Warning Management, the Rules on Patent Application Management, the Rules on Patent Incentives Management and the Rules on Patent Abandonment Management, covering the creation, protection and application of intellectual property. This ultimately enables the Company to carry out intellectual property work smoothly and effectively.

Intellectual property information and guarantee of incentives:

Great Wall Motor continued to strengthen the information construction of intellectual property, improve the efficiency and quality of intellectual property management, and successively introduced a variety of patent retrieval databases and patent management systems. Currently, it has attained group-wide digital management of patent application and approval process. According to the Rules on Patent Incentives Management, Great Wall Motor implements a monthly reward system which offers incentives throughout the life cycle of patents covering proposal making, application submission, authority granting and commercial application, and integrates the patent protection awareness of R&D personnel into day-to-day R&D activities, thus greatly stimulating the innovation and work enthusiasm of employees.

R&D cooperation:

In 2022, Great Wall Motor, Huizhou Desay SV Automotive Co., Ltd., Black Sesame Technologies Co., Ltd., Tsinghua University and other institutes jointly carried out the R&D on the "design and development of embedded automotive grading automatic driving domain controllers", a project of the MIIT. Great Wall Motor, Tsinghua University and other institutes jointly conducted the R&D on the "intelligent wire-controlled chassis platform and redundancy control technology", a national key R&D program.

Key technological awards:

Great Wall Motor Company Limited was successfully accredited as a national high-tech enterprise. Great Wall Pick-up was awarded the second prize for technology progress in Hebei Province in 2022. The program of the Lemon Hybrid DHT Hybrid System with High Integration was included in the list of the "Innovation China" pilot urban construction projects of Baoding City in 2022. Great Wall Motor passed the review on national model enterprises of technological innovation.

Product Technology

New-generation 1.5T high-efficiency hybrid engine-GW4B15E

To respond to the "carbon neutrality" trend, meet the increasingly strict regulations on oil consumption and improve the product competitiveness, the 4B15E engine is developed with the targets of low emissions, low oil consumption, light weight and hybrid. Meanwhile, the engine also balances the SUV platform and is installed in upgraded models of WEY and Haval. It matches power batteries perfectly and finally achieves low carbon emissions, oil conservation, strong power and anxiety-free range. Models equipped with the engine will be exported to North America and Europe and expand to the global market.

Core technologies of GW4B15E engine:

- High-efficiency combustion system: With miller cycle, high compression ratio, direct injection in cylinders, 350bar injection pressure + 110mJ high-energy ignition as cores, it achieves the targets of rapid combustion, low emissions and low oil consumption;
- ✓ **Cylinder head integrated exhaust manifold:** It achieves fast engine warm-up, reduces emissions from cold start, narrows air-fuel ratio concentrated areas and reduces 7 components at the same time;
- ✓ VGT supercharger: It adopts 980 ℃ high-temperature supercharger with new and efficient turbo design, significantly improving the circulation capability and achieving rapid motor responsiveness;
- Low-pressure EGR: It improves the mixed gas and heat capacity in cylinders, expands the equivalent air-fuel ratio areas and reduces the emissions of NOx and CO;
- Electronic water pump + electronic thermostat: It achieves cooling based on needs and accurately controls water temperature with rapid response;
- ✓ **Lubricating oil pump with variable displacement:** It adjusts and controls oil pressure based on needs to reduce power consumption.



New heat pump air conditioning system

Range shrinkage under low temperatures has been a pain point of electric automobiles, which is mainly due to the following two reasons: 1. The cell activity of EV battery is relatively low under low temperatures with a poor storage capability. 2. The power consumption is huge when using PTC electric heaters for heating in vehicles. To improve the range, reducing the power consumption in heating with low-temperature air-conditioners is the primary task for the air-conditioning system. Based on national requirements on "carbon peaking and carbon neutrality", reducing energy consumption has become the theme in the current development of air-conditioners. To enhance the product competitiveness and follow the trend and guidance of regulations, Great Wall Motor installed the heat pump system, which reduces energy consumption through heating with heat pump and improves the range by over 15% under low temperatures. ES11 and EC24 models equipped with the system have been launched and ES11 has been exported to the EU market.

Technology for heat pump air conditioning system:

- Independent and autonomous development: It is the first domestic automobile manufacturer with the autonomous development of the heat pump air conditioning system with fully proprietary intellectual property rights, which can reduces the reliance on suppliers;
- ✓ **Full-scenario use:** It supports 212 usage scenarios and covers all-weather working conditions with a lower working limit of an environment temperature of -20 °C. It can achieve cooling, heating and dehumidification in passenger compartments, battery cooling and heating as well as recycling of waste heat from motors and batteries and can meet the automobile heat management demand in subsequent 10 years;
- Various models of dehumidification: The system not only supports cooling dehumidification but also conducts heating dehumidification. It can achieve the purpose of heating during dehumidification and reduces energy consumption to the maximum extent. Based on the heating demand, it further divides dehumidification into parallel dehumidification and series dehumidification;
- Application of spherical throttle valves: It adopts globally leading throttling and connection technologies and reduces the number of parts and components as well as pipeline interfaces, achieving two uses with one valve;



Future plans

Great Wall Motor always adheres to the route of refrigerant replacement under requirements on environmental protection and energy conservation:

Energy conservation and environmental protection represent key development trends of new energy vehicles. It is widely known that automotive refrigerant R134a has a high Global Warming Index and it will be prohibited gradually in the future. Great Wall Motor attaches great importance to the route of replacement with green and environmental-friendly refrigerants. The vice president signed and approved the initiation of the advance research on the CO_2 heat pump air conditioning technology in the end of 2021. It has invested over RMB5 million and conducted in-depth cooperation with Xi'an Jiaotong University. It plans to complete the advance research in the end of 2023 and will be applied in all battery electric platforms and models of the Company.

 CO_2 heat pump air conditioners perfectly accorded with the theme of energy conservation and environmental protection. Under the low-temperature environment, the energy consumption of the air-conditioning system of traditional electric automobiles has greater impacts on the range of electric vehicles. The use of CO_2 as an environmental refrigerant and the integration of CO_2 with heat pump represent one of the key orientations for the development of automobile air-conditioning technologies in the future. Great Wall Motor has conducted in-depth research on the features of CO_2 , the recycling principle, the system control, the safety of leakage and the demand and reliability of parts, components and systems.

 CO_2 is a non-toxic and non-flammable natural working medium with stable chemical properties. Meanwhile, it also has outstanding thermophysical properties. CO_2 heat pump has a lower limit of environment temperature for working, which can reach -30°C. Compared with the high-voltage electric heater, it can significantly reduce the energy consumption and plays a key role in improving the energy utilization efficiency. Based on the planning of the Ministry of Ecology and Environment, CO_2 heat pump air conditioners will receive subsidies on low-carbon technologies after 2023, which can reduce the carbon emission per automobile by approximately 3.4%. Its energy efficiency at -20°C can reach 3.0 and the range attenuation rate of EV-TEST under low-temperature working conditions is expected to be \leq 30%.

Battery Electric Vehicle Sector

In the battery electric vehicle sector, Great Wall Motor conducts the autonomous R&D of battery, electric drive and other core parts and components. Meanwhile, it deploys on upstream and downstream industries of energy and develops a complete layout on industry chains.

- In terms of battery, Great Wall Motor adheres to the diversified technology roadmap and deployed on lithium iron phosphate battery, ternary battery, cobalt-free battery, sodium-ion battery and other chemical systems of power system. It planned economical, long-range and high-performance solutions. Lithium iron phosphate battery is mainly for entrylevel and operation models. Medium-to-long range models mainly adopt ternary batteries with high energy density. Highperformance models adopt ternary batteries balancing high power to achieve long range and rapid charging above 4C;
 - For safety, Great Wall Motor released and applied the "Dayu Battery" safety technology, which incorporates 8
 new design concepts, namely "heat source partition, two-way flow commutation, heat flow distribution, targeted
 explosive clearing, high-temperature insulation, self-extinguishing, positive-pressure antioxidation and intelligent
 cooling". It integrates cell safety and full-scenario coverage of alarming platforms and prevents fire and explosion
 after triggering the heat beyond control by large-capacity high-nickel cells, needling/heating;
 - For fast charging, it developed 800V platforms, 4C fast charging cells and multi-dimensional cooling technologies. It can achieve charging at 80% SOC in 15 minutes through the 480kW super flash charging, bringing premier charging experience in the industry;
 - Through structural innovation, it customized and developed short knife cells and LCTP high integration technology to improve the module efficiency of battery systems and achieve long range.

- 2. In terms of electric drive technology, Great Wall Motor develops world-class electric drive products with the focus on four dimensions, namely "integration, high voltage, high speed and high efficiency". Currently, it has developed 35kW-400kW series of products, covering A00-D models. The 200kw high-power oil-cooling bridge developed recently has adopted the innovative dry sump technology with the design compatible with 400V & 800V. The maximum efficiency of the system can reach 95%. Besides, it can be expanded into the dual-motor vector control module and the tri-motor can achieve 0-100km/h acceleration in 3 seconds, bringing an excellent driving experience.
- 3. In terms of core materials, Great Wall Motor has expanded to carborundum, the semiconductor with the third-generation power. The closed testing project on the third-generation semiconductor module of Great Wall Motor is located in Wuxi, Jiangsu with a total investment of approximately RMB800 million. It has a planned annual capacity of 1.20 million sets of automotive grading modules, which are mainly applied in main inverters and the charging sector.

In addition, in terms of the development of exclusive platforms for battery electric vehicles, it is equipped with the nextgeneration chassis technology, the next-generation battery, motor and electric control technologies. It innovated the integration of the lower body platform and developed exclusive platforms for two battery electric models, namely Ax and electric TANK, guaranteeing the leading competitiveness of automobiles.

Hybrid Sector

Application of the predictive energy management function of the power system

It intelligently plans on battery energy management, adjustments of working points of engines and predictive heat management based on navigation information. It achieves the best oil/power consumption management based on the current conditions, SOC, oil mass and load conditions of automobiles in combination with the information on weather, current location, traffic conditions, average speed, pathways, distance, slope, charging stations and arrival time from the navigation system as well as the optimization algorithm on minimum oil consumption. It improved the efficiency of systems and reduced energy consumption by 5%-8%.

Navigation map information	Information processing	Function development	Automobile & customer benefits
Weather Traffic conditions	Information processing and eshaping: Transforming navigation information into signals available on vehicles; available on vehicles; availab	Predictive energy management Planning on how to use SOC and future working points of engines based on reshaped information	 Improve the efficiency of systems and reducing energy consumption by 5-8% Shortening travelling time and reducing charging anxiety of users
Average speed		© Intelligent route planning: Recommending the best charging place based on routes, guaranteeng more power use in whole process and improving charging experience;	
Distance	Parameter information of charging piles	Predictive heat management Predictive heat management on battery:	③ Improving charging efficiency and reducing charging time by 20%
Charging stations	Current information processing and calculation on vehicles: Uurrent power and oil information Map of energy consumption on vehicles Battery temperature and charging map Air-conditioning conditions and temperature of driving cab	 relative heat inallagement on to attery: Calculating based on avagation information and controlling the temperature of battery package at the efficient charging temperature before charging to improve charging speed. 	
	Am-conditioning conditions and temperature of driving cab	 Predictive load control: Reducing or turning off load when it is on based on the estimated time for arriving at the destination. 	

Hydrogen Energy Sector

Hydrogen fuel cell vehicles use hydrogen as fuel and directly convert the chemical energy in fuels into power through electrochemical reaction with high energy conversion efficiency, zero emission and other advantages. Fuel cell vehicles also enjoy rapid energy replenishing, no range reduction in winter and other advantages. With hydrogen charging taking only 3 minutes, it enjoys convenience comparable to fuel vehicles. The range is stable in winter and is generally not affected by the heating conditions.

Great Wall Motor's hydrogen fuel cell vehicles adopt the self-developed high-efficiency fuel cell system and the type-IV hydrogen storage tank, developing a dual-functional hydrogen and power platform. The pure hydrogen range is more than 650km and the comprehensive range is no less than 800km.



The fuel cell system independently developed by Great Wall Motor is based on the EIS/THDA technology and dynamically monitors the health function of electric piles to improve the reliability of systems. The multivariable decoupling closed-loop control technology adapting to different environment with high altitude, high temperature and alpine conditions improved the environmental suitability of the system. The modularized and integrated design improved the power density of the system. The all-in-one power control unit integrated the DC converter, insulation monitoring, AC impedance, HV power transmission functions of fuel batteries.



The type-IV hydrogen storage tank is independently developed by Great Wall Motor. The sealed liner-valve carrier structure is designed independently. The innovative plastic liner molding process can effectively prevent folds, air bells and other defects of the liner. The process design for the advanced carbon fiber layer and the optimized winding angle and winding process reduced the use of carbon fiber and improved the quality and density of hydrogen storage.



Heat Management Sector

In the sector of heat management technology, Great Wall Motor upholds the philosophy of "harmonious coexistence of people, vehicles and the environment", adheres to a sustainable development approach featuring "low pollution and low energy consumption" and develops heat management technology with the focus on energy consumption management and the cost-optimal route. The heat pump air conditioning technology independently developed by Great Wall Motor achieved mass production and has been applied in upstream and downstream industries of energy, developing a complete layout on industry chains. In the future, Great Wall Heat Management will continuously carry out technological optimization to reduce the energy consumption and cost of automobiles.

In terms of the heat management technology roadmap for battery electric vehicles, Great Wall Motor planned the advance research on the heat management technology of the next-generation battery electric vehicle platform. Focusing on the development of ultra-low-temperature high-efficiency heat pump and in combination with the active heat generation of motors, heat creation of compressors, battery impulse heating and other new technologies, it improved the energy consumption of automobiles and reduced energy consumption in heat management. Meanwhile, based on the development of the battery heat management technology, it expanded the R&D of the direct-cooling and direct-heating technology for batteries and achieved all-dimensional improvement in heat management technology. Besides, Great Wall Motor conducted the high integration of heat management parts and components, developed the new-generation heat management products and achieved the aggregation of the most cutting-edge technologies. It will facilitate the achievement of new energy strategies in 2025, fully display the leadership of Great Wall Motor in the innovation of new technology and promote the sustainable development of Great Wall Motor towards "low pollution and low energy consumption".

In terms of the heat management technology roadmap for hybrid vehicles, Great Wall Motor planned the advance research on the heat management technology of the next-generation hybrid vehicle platform. Focusing on the vehicle characteristics of hybrid models, it developed the long-range heat management function with the thinking on battery electric vehicles and built the advantage in range under ultra-low temperatures (below -18°C) compared with battery electric vehicles by leveraging on the technology on the recycling of waste heat from engines. It guaranteed that battery electric driving can meet the demands for routine means of transportation, travelling on weekends and other scenarios with high frequency of vehicle use, improved the driving experience and the energy efficiency of automobiles and reduced energy consumption in heat management. Meanwhile, based on the development of the battery heat management technology, it expanded the R&D of the direct-cooling and direct-heating technology for batteries, oscillatory heating for batteries and other technologies and achieved all-dimensional improvement in heat management technology. It facilitated the sustainable development of Great Wall Motor towards "low pollution and low energy consumption".

In terms of the heat management technology roadmap for hydrogen energy, Great Wall Motor planned the advance research on the heat management technology of the new-generation hydrogen energy 800V voltage platform. Based on the characteristics of the fuel power system, it fully uses the power released from the starting of fuel batteries to heat passenger compartments. In combination with new technologies on waste heat from the fuel power system, waste heat from high-voltage components and heat actively generated by motors, it improved the energy efficiency of automobiles, reduced energy consumption in heat management and reduced range shrinkage under low temperatures.

Product Quality Management

Great Wall Motor integrated the advanced quality management methods and its own actual conditions and explored a distinctive quality management model, namely the "overall quality management system" with product development as the main line and the integration of research, supply, production, sales and services. Under the quality operation model under continuous improvement with users as the center, the system relies on three bases, namely the IATF 16949 standard, the corporate culture of improving little by little every day and the digital and intelligent AI technology. Through the building of four pillars, namely quality systems, product improvement, institutional construction and digital construction, Great Wall Motor earned customers' trust with compliance, environmental protection, safety and reliability, and surprised them with intelligent, trendy and co-created experience, developing a globally leading brand trusted by users.

In terms of R&D and in order to ensure the high quality and reliability of products, the Company integrates global resources and has in place world-class R&D facilities and systems. It has set up overseas R&D centres in Japan, the United States, Germany, India, Austria and South Korea to build a global R&D network with Baoding headquarters as the core and covering Europe, Asia, North America, etc. Moreover, it has established a design quality assurance system with recurrence prevention and contingency prevention systems as the core and supplemented by reliability design, software quality, engineer education system and improvement of user experience and satisfaction, and has an interlocking assurance mechanism to ensure that design is done well in one go.

In the process of product manufacturing, first-class manufacturing equipment and strict process control are in place to ensure the high quality of each finished vehicle. By establishing a series of mechanisms such as quality meeting, standard operation procedure and own process completion to build a solid foundation and ensure execution, the Company has developed a quality culture at production sites where there are rules to abide by, rules must be observed and everyone is responsible, so as to continuously improve product quality and ensure that all products and processes meet the requirements of customers and all applicable laws and regulations.

The Company designs and manufactures products in accordance with international, national and industry standards to meet all kinds of customer needs to the greatest extent. On the basis of ensuring product quality, the Company also launched a service quality improvement scheme, established a marketing strategy to primarily pursue customer satisfaction and market leadership, implemented a series of measures through the innovation and reform of marketing services to improve product image and service quality, create surprises for customers with value-added services and constantly improve customer satisfaction.

Health and product safety

(I) Health and comfort

Great Wall Motor adopted multi-dimensional measures to create a clean and healthy in-vehicle environment. It established leading frames in the industry with low-VOC and healthy materials, including water-based leather, ultra-clean sponge, water-based adhesives and antibacterial and antiviral interior materials, and guaranteed a clean and comfortable in-vehicle environment from the source in combination with green manufacturing process. On such basis, we established the functional platform for healthy cabins with cleaning systems, ion purification technologies, in-vehicle antibacterial and disinfection systems, air-conditioning system purification, high-efficiency and low-resistance filtering and other technologies for smart cabins to provide comprehensive protection for users under different driving scenarios.



Great Wall Motor always gives priority to health and safety and maintains excessive input to continuously improve users' experience. In recent years, the Company's models have achieved various outstanding results in authoritative evaluations led by China Automotive Engineering Research Institute, China Automotive Technology and Research Center and China Quality Certification Centre.

"Innovation is the foremost driving force in leading development". Great Wall Motor always adheres to the concept of innovation and development, continuously promotes technological innovation and iteration and provides customers with healthier and more comfortable automobiles.

(II) Active and passive safety

1. Safety vision

Great Wall Motor always adheres to the core concept of safety first. All development activities aim at zero traffic accident casualties in an ongoing effort to attain maximum driving safety and minimum accident injuries.

2. Safety development concept

Upholding the overall safety concept of T-Safety, Great Wall Motor not only seeks to protect the safety of drivers and passengers, but also fully considers the safety of all traffic participants including automobiles, motorcycles, bicycles and pedestrians.



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3. Technology system for safety development

Based on real road traffic environment and the characteristics of real-life traffic accidents, we focus on the "wholeprocess safety" of driving. Based on the development process of safety functions, we employ a combination of virtual analysis, experiments, tests and subjective evaluation to promote the establishment and upgrading of the product platform and technology platform, continuously improve the safety of our vehicles and ensure the overall safety of occupants, pedestrians and vehicles.



The development of intelligent driving systems of Great Wall Motor focuses on two dimensions of "safety" and "experience" to create the driving experience of "Chinese veteran drivers" based on the strategies and capabilities on vertical control of acceleration and deceleration, lane changes and turning. It develops leading intelligent safety systems to make intelligent driving safer. Currently, 90% models of Great Wall Motor have equipped with L2 intelligent driving assistance functions. Meanwhile, Great Wall Motor has completed the installation of NOH (Navigation On Highway pilot), memory parking, autonomous route exploring on narrow paths and other functions under various scenarios in mass-manufactured vehicles. It is scheduled that Great Wall Motor's pre-installation penetration rate of advanced automatic driving will reach over 40% by 2025;

Great Wall Motor established a R&D team with nearly 1,000 members for the development of intelligent driving. For the lean R&D in pursuit of the maximum safety experience for users, Great Wall Motor has independent R&D capabilities in full sectors from sensor hardware to computing platforms as well as "Snow Lake" (雪湖), the first data intelligence system in China, and "Snow Lake • Oasis" (雪湖•綠洲), the biggest intelligent computing center in the automatic driving industry in China. Currently, the assisted driving mileage of users of Great Wall Motor has exceeded 36 million kilometers; the learning time of the automatic driving data intelligence system has exceeded 500,000 hours and the virtual driving hours are equivalent to 62,000 years of human driving, promoting the rapid iteration of intelligent driving products and advancing towards full scenarios.

- 1. Leveraging on its own capabilities, the 2022 urban model of Great Wall Motor won two key prizes, namely, the special prize for the AEB program and the first prize for the APS program, at the 2022 IVISTA Intelligent Collected Vehicle ADAS Challenge in September 2022;
- 2. In September 2022, Great Wall Motor's WEY released the urban NOH intelligent assisted driving system. It is the first assisted driving system equipped with Qualcomm's Snapdragon Ride platform in China as well as 5nm Qualcomm Snapdragon 8540 and 7nm Qualcomm Snapdragon 9000 chips and based on the automatic driving data intelligence system MANA of HAOMO.AI, and integrated visual and laser radar in the underlying algorithm. Under the scenario of urban driving, the WEY urban NOH can achieve automatic lane changes and overtaking, identification of traffic lights and automobile control, passing complex intersections, turning left and right without protection and other core functions. Meanwhile, it can respond to close cut-in, traffic jams, intersections, tunnels, overpasses and other complicated urban transportation scenarios, covering more than 90% of core urban scenarios.

4. Achieving product safety

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Based on the development concept of "overall safety" and the complete development system of safety functions, Great Wall Motor has obtained overseas and domestic NCAP five-star rating for dozens of its models. Six models have obtained the five-star safety rating in 2022 only, covering four major brands, namely Haval, TANK, ORA and WEY.



1. WEY Coffee 01 won the Best in Class of the year from the Euro NCAP

As the first strategic model of WEY towards the European market, Mocha PHEV (Coffee 01) passed alldimensional stringent tests in four aspects of adult occupant protection, child occupant protection, vulnerable road user protection and safety assistance in the collision testing by the Euro NCAP. It finally won the certification of "**European five-star safety**" and was awarded the "**model with top safety**" in the class for the year.

WEY always pursues ultimate safety. The results under stringent test standards of Euro NCAP vividly demonstrated WEY's long-term adherence to safety first and showed the strength of Chinese quality in edging into world-leading safety level. Michiel van Ratingen, Secretary-General of Euro NCAP, said that Euro NCAP will test more Chinese brand vehicles in 2022 and WEY set standards for other brands.

2. ORA Good Cat won the Best in Class of the year from the Euro NCAP

With a high-strength body structure (with high-strength materials accounting for approximately 78%) and abundant safety devices, ORA Good Cat ensured safety in all details of design. Meanwhile, leveraging on the seamless layout with "6+1 safety airbags" and combining hardness with softness, ORA Good Cat won the five-star rating under the tests by Euro NCAP and was awarded the "**model with top safety**" in the class for the year.

3. ORA Lightning Cat was awarded the successful model in the annual TOP Safety challenge

On 20 October 2022, ORA Lightning Cat participated in the first high-speed spiraling, rolling and dropping challenge for electric vehicles in China hosted by TOP Safety in the field authorized by China Automotive Technology and Research Center. It is a new extreme challenge from scratch and the first test on the corresponding working conditions in the industry. To make it close to road conditions in routine scenarios, the challenge conducts comprehensive tests on the body structure, power safety performance, driver and passenger injuries and other aspects through simulating scenarios where vehicles lose control and rush out of the guardrails on expressways or urban fast viaducts, fall from viaducts and hit the ground, resulting in rolling of vehicles with great shock. ORA Lightning Cat performed well in the test and **was awarded the successful model in the annual TOP Safety challenge**.



(III) Functional safety

The Company closely followed the latest international and domestic standards on functional safety of road vehicles (ISO26262), set up a functional safety team to develop in-house procedures for functional safety design and development, and our functional safety procedures have passed the TUV Rheinland functional safety procedures certification at present, fully covering OEM-wide vehicle, concept, system development, production, operation, service and decommissioning, and support processes. We organized company-wide training to foster a safety culture and atmosphere, and promote the application of safety standards in projects. Currently, such procedures have been applied to nearly 100 models on multiple platforms. The safety targets of our key parts including ESP (electronic stability programming), EPS (electric power steering) and ABM (air bag module) have reached ASIL (Automotive Safety Integrity Level) D, the highest functional safety level.

(IV) Network security

While keeping abreast of the latest regulations and standards of the industry, the Company has set up a dedicated network security team and established the complete vehicle network security management system, which has passed the UN ECE R155 CSMS certification and was implemented in vehicle models. The Company conducted holistic security design for the cloud, network and terminals, and established a professional cybersecurity laboratory with leading cyber security companies in China. It worked with authoritative penetration testing companies to conduct automobile penetration testing, and actively participated in attack and defense exercises conducted by the state and industrial organizations. It also collaborated with globally leading security service providers to protect the cloud, network and terminals using encryption, signature, certificate and other technologies, thus reducing the risk of remote malicious control.

Responsible Product Recall:

For automobile quality control and recall of defective products, the Company has conducted comprehensive study and implementation on automotive recall activities since the implementation of the Administrative Provisions on the Recall of Defective Automotive Products in 2004 and formulated complete implementation processes. It established the Management Measures for Product Recall of Great Wall Motor and formulated the Administrative Provisions on the Recall of Defective Automotive Products in International Markets in combination with overseas laws and regulations. From problem reporting to correction and prevention and to product recall, there are rigorous procedures in each step to ensure quick and effective product recall. During the reporting period, the Company had no recall of automobiles.

II. PROTECTING THE RIGHTS AND INTERESTS OF CUSTOMERS

Consumer Data and Personal Information Protection

Great Wall Motor strictly abides by the Cybersecurity Law of the People's Republic of China, Data Security Law of the People's Republic of China, Personal Information Protection Law of the People's Republic of China and other relevant national regulations, and fully performs its data protection obligations as a network operator to ensure the full protection of consumers' personal information and privacy and users' legitimate rights and interests.

1. Global data security and compliance organs

The Company has established data security and compliance organs covering the whole world, so that all business units can assume responsibility for data security and the legal use of personal information. The Company has set up a data compliance officer to coordinate and manage data security and compliance, and has the data compliance office to promote the establishment of the Company's data compliance system and supervises its implementation. The person in charge of each business unit is directly responsible for the data compliance of the unit, and a dedicated compliance department is established to ensure the implementation of compliance assurance work. Data security and compliance organs from top to bottom can ensure that there is a good governance structure to perform obligations for consumer data and personal information protection and implement all management requirements.

2. Performance of hierarchical protection obligation

According to the requirements of the Cybersecurity Law for hierarchical protection of network security, the Company determines the levels of important business systems for hierarchical protection, and applies Level 3 protection standards for all business systems dealing with a large amount of customer information. After being reviewed by industry experts for level determination, the relevant business systems have been filed with the national cyber security authority and received the evaluation and inspection of hierarchical protection by an evaluation agency approved by the state. According to the evaluation results of the professional agency, the evaluation pass rate of the Company's systems under Level 3 protection is 100%, which proves that the relevant systems have mature network security protection capabilities.

The hierarchical protection system refers to that through the formulation of unified management regulations and technical standards on information safety hierarchical protection, the state arranges citizens, legal persons and other organizations to implement hierarchical safety protection on information systems and carry out supervision and administration on the implementation of hierarchical protection. Through such system, the Company shall report and file information systems requiring key guarantees to national regulatory authorities and accept regular safety evaluation, supervision and administration.

3. Comprehensive security protection technology

On the basis of building a defence-in-depth system for data security protection, the Company has developed multi-level, multidimensional data security protection capabilities to resist all kinds of external attacks and unsanctioned access by internal staff. With monitoring equipment all over the Company's network, abnormal activities can be identified promptly to reduce the potential safety hazards to consumers' data to the maximum extent. Any business system provided by the Company is subject to strict security review and testing, including compliance review on the protection of consumers' personal information rights and interests, so as to ensure the safe and legal use of data in the business system. Meanwhile, big data association analysis technology is applied to monitor data security dynamics around the clock, and professional operators are put in place. We monitored and responded quickly to abnormal events, in order to protect the Company's data security.

4. IoV product development security

For the privacy compliance of Internet of Vehicles (IoV), the Company, based on ISO 27701, GDPR and CSMS certification standards and with the support of external professional agencies such as PWC, Vecentek, DNV, PCCW, DLA and TÜV Rheinland, has established an information security and privacy data protection system for the IoV of Great Wall Motor to implement compliance management measures and employ compliance technologies in a standard and procedural way. In October 2021, the Company passed the ISO 27701 Privacy Information Management System certification. In September 2022, the Company passed the CSMS certification.

According to the classification of data sensitivity under relevant laws and regulations and the relevance of data to individuals, personal data is classified into multiple levels (S1-S5). Based on the characteristics of the six different stages of data life cycle (collection, transmission, storage, processing, sharing and destruction), the Company formulates corresponding technical schemes for compliance, develops measures for project privacy compliance management, and implements privacy compliance procedures and standards from the perspectives of product execution and project execution based on the characteristics of the project life cycle, thus ensuring the implementation of security measures by responsible persons.

5. Data security and compliance training

To enhance employees' awareness of data security and compliance, we organise trainings regularly for designated personnel to acquire relevant knowledge and skills. We provide information security awareness trainings for newly-hired college graduates to enable them have information security awareness at the early stage of their careers. The Company holds the event of "Information Security Awareness Month" every year, to carry out information security publicity by organizing information security awareness publicity and trainings, posting information security posters and other means. We organise trainings on basic knowledge of data compliance, and provide trainings for designated personnel to improve their data compliance skills, with targeted training for different groups of employees.

Customer Complaint Management:

Great Wall Motor upholds the customer-oriented service philosophy, and strives to deliver an exceptional service experience to users. In addition, the Company has set up nationwide customer service hotlines (Haval: 400-666-1990; WEY: 400-666-6616; ORA: 400-666-5969; Pickup: 400-666-9820; TANK: 400-666-6688) to provide 7*24 service for users throughout the year.

To ensure that customers' complaints are handled promptly and effectively, Great Wall Motor formulated the Management Standards on Handling of Customers' Problems, the Management Standards on Improvement of Complaints and other management measures on customer complaints. At the dealer level, we formulated the Business Management Standards of Great Wall Motor to achieve synergy between manufacturers and dealers and pay particular attention to the standardised, humane and differentiated management of service procedures, maintenance capabilities, personnel quality and hardware strength, and deliver an exceptional service experience throughout the useful life from purchase to use, so as to enhance the service reputation of our brands. In 2022, the Company received a total of 184,023 complaints from users, and guided dealers to handle 100% of the complaints through the customer service system.

Emergency Service Guarantee:

The Company carried out work on emergency service guarantee in the principle of "respecting facts and putting the life and property safety of customers first". Great Wall Motor has established emergency response and handling teams with quality and sales heads as team leaders. It has planned emergency response proposals in advance based on traffic accidents, fire disasters, extreme weather and natural disasters and other emergency accidents of different models under different scenarios. It coordinates with manufacturers and dealers, carries out on-site surveys, rescue and handling with quick response and actions and assists customers in properly solving the problems to improve customer satisfaction. Based on the technical features of new energy models and in combination with procedures and systems of emergency services, Great Wall Motor developed training courses and regularly organizes relevant trainings on emergency response and services for providers of sales services to guarantee that providers of sales services master professional knowledge on urgent and emergency handling and meet the required capability on the implementation of emergency response and handling plans.

III. PARTNER MANAGEMENT

Responsible Marketing

Great Wall Motor has long adhered to the user-centered principle and paid attention to the protection of consumers' rights and interests, especially those in weak markets.

In order to provide accurate and impartial product information for consumers, in 2022, Great Wall Motor continued to strengthen its management of advertising compliance, standardised the process for reviewing advertising compliance, and constantly promoted the implementation and adoption of the Management Measures for Legal Compliance of Advertising Campaigns and the Guidelines for the Compliance of Advertising Campaigns. Through interpreting key compliance management measures and key compliance guidelines, demonstrating cases, and answering questions on compliance, the Company continued to promote the level of advertising compliance of all employees, effectively ensuring consumers receive true and reliable information.

In addition, based on the understanding of sustainable marketing and brand awareness in the industry, Great Wall Motor not only meets the needs of consumers in production and operation, but also strives towards the sustainable development of ecology, economy and society. It devotes itself to the sustainable development of energy while establishing long-term relations with consumers. To this end, Great Wall Motor announced as early as 2021 its goal of achieving "carbon neutrality" by 2045, and takes it as its own responsibility to promote energy transformation. With persisting in long-termism, energy reformation, scientific and technological innovation and user experience revolution, Great Wall Motor continued to intensify its efforts on the promotion and launch of new energy vehicle products while promoting the development of energy conservation and carbon reduction in enterprise supply chain, production and management.

Dealer Management and Services

Dealer training

Under the guidance of the core values of "Anti-corruption, Honesty, Innovation, Changes, Sharing" and adhering to the usercentric approach, Great Wall Motor actively promoted the innovation and reform of the empowerment model of dealer training. With the focus on product, technology, new staff in new dealer stores, competence and business improvement, it continuously carried out trainings and tutoring, assisted dealers in developing the users' thinking and enhancing professional service capabilities to create users' satisfaction and build users' trust.

To enhance the product experience and service awareness of users, Great Wall Motor comprehensively reformed training models on products in 2022. During the launch of new and modified products such as Haval Cool Dog, ORA Lightning Cat, WEY Mocha and Haval New Energy and through guiding dealers to visit vehicle and core components plants, test drive under urban/off-road and other various scenarios, simulated exercises under racing scenarios, joint creation of sales pitches as well as short videos on product highlights, pitches cards and other useful sales means, it helped sales staff strengthen the knowledge on the highlights and technical strength of Great Wall Motor as well as the understanding of the driving and life scenarios and personalized demand of users, allowing them to recommend the most needed and suitable products to customers with professional service capabilities to win customers' recognition.



It carried out trainings on the launch of Haval Cool Dog and organized test drive on roads for trainees to comprehensively experience the product performance and guarantee more professional interpretations to customers.

Meanwhile, Great Wall Motor comprehensively upgraded the course system on competence for positions and rapid training of new staff in new dealer stores, covering a total of 19 core and key positions from the general manager to frontline personnel from the perspectives of brand, products, procedures and management. The competence training covered from Haval and WEY to Pickup, ORA and TANK in 2022. Over 30,000 participants from nearly 3,000 dealers passed the training, promoting the general improvement in the fundamental capabilities of dealers and meeting the lifecycle demand of users from vehicle purchase and repair to replacement. Over 5,000 staff of over 500 new stores participated in online trainings, ensuring that new staff in new dealer stores rapidly understand and master brand service concepts and professional skills and knowledge. It also initiated the planning on the special training of the offline special training camp for new stores to further consolidate the concept of customer service and provide customers with higher-quality services.

In addition, to assist dealers in improving the customer services capabilities, Great Wall Motor carried out in-store tutoring on an one-store-onepolicy basis. After 5 days of diagnosis, analysis and the implementation of targeted measures, the Company introduced a set of high-end sales service procedures for a total of over 200 dealers of Haval, ORA, WEY and TANK and conducted full-process upgrading from customer reception, test drive experience, delivery service and other dimensions. It transformed the inherent sales thinking of dealers, enhanced customer experience and perception and allowed them to win more customers with more professional service capabilities and better service attitudes.

To bring customers with better after-sales service experience, Great Wall Motor improved technical training systems, upgraded technical training courses, innovated online + offline technical training models and achieved full coverage of new products, new stores, competence and special technical trainings in 2022. It comprehensively improved the repair and maintenance skills and services of terminal after-sales staff, developed professional technical teams on after-sales services and rapidly solved vehicle problems for customers, so that customers no longer have to worry about the purchase and use of vehicles.

Innovation and changes are core values of Great Wall Motor as well as the firm responsibility to users. Through comprehensively promoting the reform of the empowerment model of dealers training and improving the training empowerment system, Great Wall Motor assisted dealers in developing the users' thinking with the orientation of customer demand and won the recognition and trust of more customers with its professional service capabilities.



Special training camp for new stores conveys the brand history, core technologies and service concepts, builds confidence for terminals and guides them to improve services.



In-store tutoring on an one-store-one-policy basis assisted dealers to transform the thinking and enhance customer experience and perception.



ORA special training camp on competence of technical elites to improve standard repair and maintenance by technical staff.
Services

By focusing on continuously developing into a customer-oriented enterprise in 2022, Great Wall Motor met the needs of customers in the new era by improving its product production lines incessantly and expanded to the new energy vehicle business actively to press ahead the upgrading of its shop image and services, and provide customers with better service experience. In the era of diverse competitions, Great Wall Motor satisfied the needs of users for fuel and new energy vehicles in terms of "shopping around, test drive and purchase" by continuing its "user-oriented" practice, as well as its standards in loyal services with the service concept of "proceeding from users" as the focus.

In terms of promoting the digital transformation of dealers: Great Wall Motor built a social customer communication and service system. By promoting the SCRM system in refined manners, the Company continuously upgraded the brand APP and created an online, digital and one-stop service experience across the customer life cycle. It launched the marketing data platform, provided visual representation of marketing management data and statements to improve the efficiency of automobile manufactures in data management. It improved customers' digital car viewing and selection experience, instantly learned about user needs, and promoted dealers to continuously provide premium sales services for customers. The Company launched transparent post-sales previewing services and achieved digital and transparent display in the full process of repairing and maintenance with digital examination and repairing reports, enhancing customers' trust in services. It introduced door-to-door delivery service through APP to solve the problems in the last kilometer and provide convenient repairing and maintenance for users without leaving their home. It also launched anxiety-free rescue service through APP to respond to customers' rescue demand in a timely manner. The whole rescue process is displayed transparently, solving the anxiety of customers in waiting. Leveraging on the upgrading of series of digital services, the Company provided customers with vehicle purchase and use experience through "seamless online and offline connection" on the whole.

In terms of customer care: The Company practices the service concept of "proceeding from users", adopts a customer-oriented approach, thinks about and solves issues from the customers' perspective to continuously create value for users. To solve the travelling difficulties of customers, the Company initiated door-to-door test drive around the clock and achieved "4S stores at their doorstep". Great Wall Motor worked with over 500 dealers across the country to carry out the Four-season Service Festival and continuously conducted "Spring Festival + Four-season" Service Festival. Through diverse and systematic user care activities such as Spring Festival Care Station, spring outing, star gazing in summer, door-to-door service in autumn and safety and health examination in winter, the Company gathered and interacted closely with many customers and friends, timely met the needs of customers for car maintenance, car use and car entertainment, offered surprising privileges and timely and professional post-sales service, and promoted the continuous improvement of customer service experience, enabling customers to feel the warm, tangible and considerate services of Great Wall Motor after their car purchases.



In terms of building service brands: The Company listed honest services as the fundamental red line, focused on the management of honest services and developed the honesty culture of Haval to ensure that users' rights and interests are not compromised, which is an eternal pursuit of Great Wall Motor. Through the continuous implementation of "Nine Commitments for Sales" and "Eight Commitments for Post-sales Service", it allowed customers to feel the confident and honest services of Haval and facilitated the continuous improvement and upgrading of the service quality of dealers, preliminarily developed a service label of "excellent and honest services". To further boost the customer experience in sales services, it launched sales service processes for new energy vehicles, new uniforms and standards on service and etiquette in 2022 to build a brand new first image of Haval. With the focus on three key processes, namely reception, test drive and delivery, it improved and upgraded the standards to create differentiated service experience in the industry. In the process of sales reception, it promoted fast reception within 30 seconds to ensure the timeliness in customer reception. It implemented self-service menu test drive to meet personalized demand of customers. It upgraded surprising delivery standards. Through advance delivery preparation, ritualized delivery scenarios, exclusive delivery gifts and professional delivery materials, it built car delivery into surprises and facilitated publicity at the last process.

It continued to advance the service experience officer and recruited customer representatives to display their roles in supervision. The two upgrades of the sales service process is a result of the co-creation of services through the linkage of manufacturers and customers as well as the continuous improvement of service quality.



Based on the post-sales experience and the demand for vehicle maintenance services of customers, Great Wall Motor laid emphasis on developing the service experience in four key processes covering "convenient appointment, VIP reception, comfortable lounge and surprising delivery" in the post-sales service sector, providing convenient appointment, VIP reception services, comfortable lounge for customers and satisfactory delivery with surprises. Meanwhile, to enhance the transparent and intelligent experience in the whole process of users' services, it launched transparent inspection in advance, star gazing, doorto-door delivery, service butler group and other diverse featured services. On the basis of services at key processes and diverse featured services, the Company provided customers with excellent service experience beyond their expectations, effectively enhanced users' trust in services and built an excellent service reputation.

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With a customer-oriented approach, Great Wall Motor continuously upheld the service mentality of "gaining insights into customer needs and creating affections for customers at all times", the service concept of "proceeding from users" and the service creed of "being well-prepared, meticulous and sincere" in 2022. In 2022 China Automobile Customer Satisfaction Index (CACSI) Assessment, the Haval, ORA and TANK brands of Great Wall Motor won the first place (tied) in Sales Service Satisfaction among domestic brands; Haval ranked first among domestic brands in post-sales service for three consecutive years.

Manufacturer brand	Туре	Rank
Haval	Post-sales service (local brand)	1 (tied)
Haval	Sales service (local brand)	1 (tied)
ORA	Sales service (local brand)	1 (tied)
TANK	Sales service (local brand)	1 (tied)

Model	Market segment	Rank
Haval H6	Compact SUVs at RMB100,000-150,000	1 (tied)
Haval Dargo	Compact SUVs at RMB100,000-150,000	1 (tied)
Haval Beast	2022 new model of market attention (SUV)	1
TANK 300	Hard-core SUV	1 (tied)





Supply Chain Management

Supply chain management:

Supply chain management is an important part in the sustainable development of the Group. We continuously improve the lifecycle management of suppliers and integrate ESG into the risk identification and routine management of supply chains. With insisting on the user-centered principle, we have built a global, agile and robust supply chain system with high quality-price ratio.

In May 2022, we released the Letter of Notification on Carrying out Sustainable Development by Suppliers of Great Wall Motor to standardize the requirements on working environment and human rights, health and safety, business ethics and environmental protection. We also released the Notification on Carbon Neutrality and Green Development of Suppliers of Great Wall Motor, explained our requirements on sustainable development to suppliers and required them to implement carefully.

Based on needs in business development, we formulated the Control Procedures on Suppliers and other management documents to select and evaluate suppliers in multi-dimensions. We carried out management activities on supply chains to develop stable and reliable supply chain systems:



1. Supply chain platform

To achieve end-to-end interactions of suppliers and in the principle of being fair, equitable, simple and transparent, Great Wall Motor built a unified supplier interaction platform-the Digital Procurement System (the DPS) and achieved online cooperation on all businesses. The DPS achieved high-efficiency synergy in the whole business chains covering new supplier access, quotation and nomination of new projects, quality data, delivery and settlement and enhanced the synergetic efficiency and the organization and integration capabilities of supply chains. The system is divided into five segments. The source searching in wide areas supports new supplier access. Online quotation guarantees fair and equitable nomination process. The quality segment can obtain the quality performance in a timely manner and boost product improvement. The delivery synergy builds a one-stop platform from demand to delivery. The reconciliation and settlement can achieve visual presentation of the accounts of both parties. It will become a unified platform of Great Wall Motor for supplier interactions and synergy.

2. Introduction of suppliers

During the introduction of suppliers and based on the requirements of the Standards on Potential Supplier Access Management, the Checklist of Suppliers and other systems, the Company forms a multi-dimensional evaluation model on the operation and management capabilities, the technological R&D capabilities as well as quality control and manufacturing capabilities. It requires suppliers to enter into the Sunshine Agreement, the Confidentiality Agreement, the Procurement Contract, the Quality Agreement and other documents after introduction and conducts evaluation in accordance with the Control Procedures on Suppliers and other management systems. Meanwhile, it evaluates and updates various standards and system documents from time to time to ensure the consistency of the management of suppliers with the development of the Group, leading standards in the industry and changes in domestic and overseas policies.

Based on the Company's strategy and stakeholders' needs, we have built a supply chain system that is highly aligned with the Company's strategy. In 2022, we strengthened supplier access management and evaluated the social responsibility management of suppliers and their subordinate supply chains from multiple dimensions including humanity, environment, safety, control of hazardous substance, law and regulation compliance and trade security and enhanced environmental and social responsibility impact assessment. After the approval, SQE, technical, business and other professionals will be arranged to carry out on-site audit on suppliers and their subordinate supply chains to ensure that the development, production, quality control, delivery capacity and sustainable development of the products of suppliers meet the requirements, so as to better assure the delivery of quality products to end-users. By strictly controlling the access threshold of suppliers, the Company introduced more than 80 suppliers in 2022.

In respect of number of suppliers, the Company has more than 1,200 key suppliers, all of which are excellent ones in the industry, with globally-renowned suppliers accounting for more than 30%, and the geographical breakdown is as below:



Suppliers by Geographical Region in the PRC

3. Supplier management

① Supplier assessment management

Suppliers are subject to regular performance assessments covering the dimensions of technical capabilities, quality, cost, delivery and environmental governance. The assessment results are classified into four grades, i.e. I, II, III and IV, representing good to bad performance respectively, which are taken as a reference for rewarding and punishing suppliers. Suppliers failing to meet requirements consistently will be eliminated. The Company pays close attention to the quality, safety, humanity, environment, management and control of hazardous substance, compliance with laws and regulations as well as other elements of subordinate suppliers, and confirms these elements with the relevant primary suppliers.

2 Risk assessment

Great Wall Motor collects risk management information on supply chains and conducts risk assessment to determine the alarming lines of risks and adopt the corresponding measures. It has transformed offline manual control into online risk management and achieved management and control through information systems to ensure closed-loop risk management.

Great Wall Motor conducts regular assessment and investigation on social responsibilities of suppliers. In accordance with the terms of the Checklist of Suppliers on reviewing the social responsibilities of enterprises, it conducts on-site review on the suppliers and their subordinate supply chains and inspects on whether the suppliers have complied with policies and requirements on social responsibilities. If they fail to pass the review, Great Wall Motor issues the list of issues for rectification to suppliers based on the non-compliant items in the review and promotes suppliers to continuously improve them. For suppliers fail to meet the requirements within the prescribed limit for rectifications, Great Wall Motor will terminate the cooperation with them based on actual conditions.

③ Sunshine procurement

Through establishing mechanisms, putting emphasis on integrity building, and improving digital and intelligent services, the Company empowers its organizational transformation and capability enhancement. The Company standardizes the integrity management of both parties in the cooperation and prevents and eradicates corruption from the source. It protects the rights and interests of both parties not to be compromised and builds a fair, equitable, simple and transparent cooperation environment as well as a professional partnership with mutual benefits and win-win results. To facilitate business partners to understand the integrity requirements of Great Wall Motor, the Company formulated the Integrity Standards on Business Partners and notified its partners.

The Company continuously boosts efforts in promoting sunshine procurement. It formulated the Anti-Corruption Policies to regulate the behaviors of employees and suppliers, established integrity management processes and required the filing of internal/external sensitive matters as well as filing before and after travelling to create a "fair, equitable, open and transparent" cooperation environment. As a precondition for cooperation, suppliers shall sign the Sunshine Agreement. The Company has joined the Anti-Fraud Alliance. For suppliers in violation of the Anti-Corruption Policies of the Company, they will be included the blacklist of partner suppliers of Great Wall Motor and their information will be uploaded to the Sunshine Honesty System. They will receive corresponding punishments and be published to other members of the Anti-Fraud Alliance based on the seriousness of the conditions. For employees in violation of the Anti-Corruption Policies, the Company will impose warnings, fines, dismissal and other punishment measures based on the seriousness of the conditions. Those with serious conditions will be transferred to public security or juridical authorities for handling. The Company achieved systematic operation in main links of the procurement process with traceable, efficient and transparent operations.

4. Sustainable development of suppliers

Despite variables and challenges in the automotive market, Great Wall Motor adheres to the concept of coordinated development and works with its supplier partners to build a full industry chain cooperative ecosystem. We attach great importance to the capability building of suppliers. We organize lectures, communications and trainings on professional technology, quality management and control and anti-corruption for suppliers of different nature. In addition, we hold regularly the meetings of suppliers, "tech day" events and other activities to communicate with suppliers on internal demands and the latest standards on the industry, specifying the targets and development orientations of both parties, with the view of building a sustainable supply chain to achieve win-win results through cooperation with sincere partners.

We also actively integrate the concept of sustainable development into the routine management on suppliers. We integrate the resources along the entire supply chain, and build a new green ecosystem by promoting the use of recyclable and renewable materials, and manufacturing with green energy, to establish a green supply chain. We actively choose environmental- and social-friendly suppliers and achieved 100% coverage in the review on environmental standards of new suppliers in 2022. Meanwhile, we continuously promoted the transformation of supplier partners towards sustainable development and worked together on various aspects such as business ethics, labors' rights and interests, health and safety, environmental protection and climate change to achieve the goal of sustainable development together.

Under the background of the national "3060" carbon targets and international carbon neutrality policies, energy conservation and emissions reduction in the automobile industry has become a general trend. We identify factors affecting carbon emissions from four links of supply chains, namely raw materials for components, components design, components manufacturing and scrap components, and formulated management and control measures to build sustainable and green supply chain management systems.



COMMUNICATION BETWEEN SHAREHOLDERS AND INVESTORS

Protecting the rights and interests of shareholders

Since its listing of H shares in 2003 and A shares in 2011, the Company has been always attaching great importance to protecting the rights and interests of investors by positively establishing a sound investor protection system.

During the reporting period, the Company strictly adhered to the requirements of regulatory authorities for information disclosure, and accurately and effectively disclosed four periodic reports and 186 interim announcements through the websites of the relevant stock exchanges and designated newspapers. The Company's timely, adequate, and complete information disclosure enabled shareholders to obtain its latest development of business operations in a timely and complete manner. Meanwhile, the Company responded to investors' inquiries in a timely manner through the investor hotline, SSE E-interactive platform, the mini program "Building GWM (築長城)", an investor communication platform, and other means, effectively safeguarding the rights and interests of investors. The Company's efforts on information disclosure was rated as Grade A by the Shanghai Stock Exchange in its information disclosure evaluation.

IV. INVESTOR RELATIONS MANAGEMENT

The Company has been promoting the continuous and steady production and operation in the principle of building vehicles with good faith since its listing. It was successively included in SSE50 Index, FTSE China A50 Index and other key indexes as sample shares and has been continuously concerned by domestic and overseas institutional, medium and small investors for a long time. In the principles of legality, compliance and timeliness, the Securities Investment Department of the Company formulated the Administrative Rules on Information Disclosure of Great Wall Motor Company Limited and the Administrative Rules on Investor Relations of Great Wall Motor Company Limited.

During the reporting period, the Company actively carried out investor relations management through diverse forms such as live broadcasting, online teleconferences, special communications at auto shows and investors' field research. The results presentation meetings after releasing the annual report and the interim report attracted a total of over 1,000 participants.

With the continuous achievement of the operating results of the Company in recent years, the concerns of medium and small investors have been increasing. To enhance the communications with medium and small investors, the Company replied a total of 248 questions raised by investors through the SSE E-interactive platform and interpreted 508 investor information through the special line for investors during the reporting period. In addition, the Company actively responded to the requirements of the China Association for Public Companies and organized 16 investor education activities so as to ensure that concerns of medium and small investors treated equally.

Investor Relations Management Core data

Reception of a total of 8 investor visits 199 teleconferences with investors

Reception of a total of more than 10,000 investors

Shareholders Return

The Company adhered to the principle of creating value for our society, generating returns for shareholders and improving the well-being of staff in 2022. The Company has maintained a stable cash dividend ratio since its listing.

During the reporting period, according to the profit distribution plan of 2021, the Company distributed the final cash dividend of RMB0.07 (tax inclusive) per share, amounting to RMB647,608,521.56 in total, based on a total of 9,251,550,308 shares as at the equity registration date when the profit distribution was implemented. The Company was selected in the lists of the Listed Company with Generous Returns and the Listed Company with Sincere Returns under the 2021 A-share Listed Companies Cash Dividend Return List by China Association for Public Companies.





Repurchase of Shares

As affected by the surging inflation in overseas markets, the resurgence of the pandemic, geopolitical conflicts as well as the shortage of components in the automobile industry, insufficient transport capacity, the lower-than-expected consumption and other factors, the stock price of the Company fluctuated significantly in 2022. Based on its responsibility on the shareholding stability of shareholders and the confidence in its long-term healthy and sustainable development, the Company carried out the repurchase of shares on the A-share and the H-share markets simultaneously. It even unprecedentedly conducted two repurchases on the H-share market. During the reporting period, the Company repurchased 40 million A shares and 588 million H shares at a consideration of RMB6,772 million, effectively safeguarding the legitimate interests of investors, enhancing their confidence in the Company's future development prospects, and improving their recognition of the Company's value.

Employee Care and Growth

ATTRACTION OF TALENTS

Great Wall Motor maintains its global positions and builds the diversified and integrated corporate culture. It continuously improves the open and fair talent introduction policies and attracts various talents in the world. It safeguards the legitimate interests of employees, responds to the calls of the government and actively undertakes the social responsibility on maintaining stable employment and securing employment.

I. Pooling outstanding global talents

The Company adheres to the global development strategy and implements the talent structure and model with "one expert in one sector" for all core businesses. It actively recruits domestic and overseas leading technological and operation talents, continuously shores up weak links and enhances the organizational capability to maintain the business leadership. To attract domestic and overseas experts and talents and based on building an "open and forest-like" ecological system, we have deployed on various talent gathering places since 2022. We displayed the attraction of places in attracting talents, set up R&D centers and technological innovation centers, automobile production bases and KD plants in China as well as overseas countries and regions and established various high-efficient and synergetic teams with experts leading professionalism, the medium level guaranteeing implementation and the grass-roots level reserving capabilities. Meanwhile, to guarantee the diversified industrial development of the Company, we innovatively recruited multi-disciplinary talents. We vigorously promoted the flowing plan on internal talents and facilitated more outstanding employees to work in different and overseas areas and flow to key business segments horizontally. While allowing employees to display their potential in their specialized sectors, it sped up in advancing the global talent layout and the upgrading of the talent structure. Up to the end of 2022, the Company had 87,367 employees in total, with 4,945 overseas staff members.

II. Safeguarding the legitimate interests of employees

The Company fully observes laws and regulations including the Labour Law of the People's Republic of China and the Labour Contract Law of the People's Republic of China. We firmly prevent discrimination based on aspects including gender, ethnicity, race, religion, and physiological conditions in the recruitment process and uphold equal and standard employment. We establish a fair, democratic and competitive employment mechanism with the selection of outstanding talents and publish the candidates to be employed to ensure open information, open process and open results. At the same time, the Company has formulated strict requirements in avoiding forced labour and realizing the diversity and equality of employees, to clarify the rights and interests of employees in equal opportunities, health and safety, and protect against harassment and discrimination in the workplace.

The Company strictly abides by the Provisions on the Prohibition of Child Labour and other laws and regulations and prevents the use of child labour.

The Company resolutely safeguards the rights and interests of female employees, establishes and improves systems on leaves and holidays and guarantees that female employees enjoy paid leaves, maternity leaves and other statutory holidays according to laws.

The Company strictly implements the requirements relating to working hours, workload and workplace and dismissal policies and safeguards the legitimate rights and interests of employees in accordance with laws.

The Company strictly prohibits the employment of child labour. It sets a minimum age limit, launches data review procedures for candidates, and requires each candidate to provide valid identity documents to verify his/her identity background and age, so as to prevent the misuse of child labour. If forced labour or child labour is found, the Group will terminate relevant employment contract, conduct due diligence investigation, and hold the relevant personnel accountable according to law. During the reporting period, the Company did not involve any child labour or forced labour.

III. Actively undertaking the social responsibility on maintaining stable employment and securing employment

The Company always considers talent reserve and cultivation as key support to the steady development of enterprises. In the face of the challenges on the employment of college graduates in 2022, we actively responded to and implemented the program of the Ministry of Education to dovetail supply with demand and employment with education. We constantly explored and created more attractive new models for cooperation between higher education institutions and enterprises together with universities and established a more open and diversified talent cultivation programs with resources sharing to build a shared and win-win ecological alliance of higher education institutions and enterprises.

In 2022, we entered into cooperation agreements with over 150 higher education institutions and scientific research institutions to jointly build teaching, internship and practice bases. It opened more than 15,000 internship and employment positions in R&D, marketing, intelligent manufacturing and other sectors to higher education institutions and actively undertook the social responsibility on maintaining stable employment and securing employment, cultivating professional talents with high skills and innovative thinking for the society and constantly facilitating the transformation and upgrading of the automobile industry.

EMPLOYEE WELFARE AND CARE

Great Wall Motor always upholds its philosophy to put people first and continuously improves the remuneration and incentive systems to motivate employees. Meanwhile, based on the core values of "Anti-corruption, Honesty, Innovation, Changes and Sharing", Great Wall Motor formulates and implements diversified welfare and care policies to practically care for employees and continuously improve their sense of happiness.

I. Motivating employees

To effectively attract and retain key and core talents, invigorate the workforce and provide driving force for the sustainable development of the Company, we have established an incentive system oriented towards accountable results and value creation. Based on market and industrial practice, we have designed a remuneration structure comprising position salary and performance-based salary and complemented by an incentive mechanism combining long-term and short-term incentives, ensuring that employees at high-value positions, possessing excellent capabilities and with great contribution to business performance can enjoy better remuneration and incentives, as well as boosting institutional invigoration and driving the achievement of operating goals.

Based on the long-term incentive implementation plan, we completed two rounds of the grant of the reserved part of share incentives with over 6,800 participants in 2022. Meanwhile, based on the achievement of the results of the Company and personal performance, the share options/restrictive shares granted firstly in the first and second rounds were allowed to exercise/ unlock and the long-term incentive income of core backbone staff continued to increase. So far, we have implemented two consecutive rounds of the share incentive scheme and granted approximately 620 million shares to over 12,000 participants. In the future, it will cover 100% of high-value employees through the implementation of the share incentive plan in innovative models on a rolling basis to achieve development of the enterprise and talents with mutual benefits.

II. Multi-dimensional care

- 1. Housing: By adhering to a cultural concept of caring for employees from the bottom of our heart, the Company provides an agreeable environment for employees to live and work in, as well as hassle-free amenities for employees in terms of food, clothing, housing, supplies and transportation to improve their experience of happiness;
- 2. Education: By introducing Singapore's advanced teaching methods and management model, Great Wall Holdings is committed to building a top-grade, high-quality and high-level educational system. Through education initiatives covering nursery, early education, kindergarten, primary school, junior high school and senior high school to serve school-age children of employees;
- 3. Health: With recreational facilities including stadiums, badminton halls, table tennis halls, swimming pools and gymnasiums in place, various fitness activities such as sports meetings and basket competitions were hosted. Free annual health checkups are offered to employees. We also provide psychological health consultation services to employees with a view to creating a workplace for happy work and healthy life;
- 4. Transportation: In addition to special offers for car purchases and commuting allowance for employees, the Company works with the government to build bus stops at convenient locations to facilitate transportation for employees' work and life to the maximum extent.
- 5. Welfare:

The Company attaches great importance to food safety and guarantees employees' healthy diet – We offer employees a variety of nutritious and healthy free meals during working days to provide employees with timely energy suppliers.

The Company offers welfare on festivals and holidays and refined care – We provide special benefits for the Mid-autumn Festival and the Spring Festival and spend each special day with employees. High temperature leaves and Spring Festival holidays longer than statutory requirements, are provided to allow employees to have sufficient time for friends and family reunion.

The Company formulates special care policies and builds all-dimensional employee care systems – Welfare benefits specific to selected employees and their families are introduced, covering weddings, birthdays of the elderly and childbirths, to extend warmth and care to families of employees. It organized caring activities for female employees and pay attention to the demands of female employees. It offers special welfare for the Women's Day on 8 March and introduces external resources to organize regular lectures on female diseases. Pregnant and lactating female employees are provided with prenatal examination leaves, breastfeeding leaves, nursing room and other guarantees.

The Company cares about employee development and listens to their voices – We provide welfare guarantees to employees dispatched to different areas and facilitate the occupational development of employees. We establish multidimensional communication bridges between employees and senior management and enhance communications with employees through meetings of democratic life, internal online forums, emails of senior management and complaint boxes. Meanwhile, we arrange meetings of communications at all development stages of employees, such as communications on joining the Company, becoming a full employee and changing of positions. We listen to employees' voices and pay attention to their development in the enterprise.

Upholding its philosophy to put people first and care for employees, the Company provides assurance and personal support for the lives of employees in many aspects so that they can work at ease and live in peace with greater happiness and sense of belonging.



TALENT DEVELOPMENT

Great Wall Motor attaches great importance to human capital value and believes that talents are the primary driving force for its development, and it has long maintained the employment strategy of not being bound by restraints, making the best use of skills and using the capable to replace the mediocre and continuously innovating the talent development mechanism. Focusing on talent supply and development, value creation and incentive of employees and other dimensions, the Company creates a more open, efficient and attractive career platform. It unites and builds a cadre and talent team with common career goals and passion for striving and creativity through high-quality and competitive mechanisms, allowing the organization to be full of vitality and creativity and driving the long-term sustainable development of the enterprise.

I. Innovative cadre management mechanism

The Company upgrades and continuously iterates its cadre selection and use mechanism and achieves the labeling of archives of cadres and talents by establishing a cadre appraisal system. Through the review on the health of the cadre team, the visual talent echelon and the capability preparation, it consolidates the cadre echelon, vigorously promotes the cadre rotation management system, increases the practical experience of cadres and builds a global cadre talent echelon braving difficulties and attaining success to help achieve the Company's strategy fruitfully.

II. Strengthening professional talent management

Through the construction of the qualification system, the Company continues to optimize the professional development path of talents, facilitates the assessment of professional capabilities and targeted empowerment and cultivation on professional talents and promote in-depth professional development of talents with profound expertise and all-round development of talents with versatile skills, so that employees can have diverse growth opportunities to foster a more energetic and powerful enterprise, as well as individuals.

III. Building a platform for co-creation and practice

The Company deeply explores the talent cultivation model featured "co-creations, sharing and the combination of training and practice", formulates global talent cultivation systems and implements targeted and differentiated talent empowerment to train and deliver qualified talents at all levels. We build an empowerment platform to gather, share and inherit Great Wall Motor's knowledge and experience in undertaking challenges to achieve efficient and convenient business empowerment with scale replication and quick access features.





We identified key groups and cultivated them through the model with the combination of training and practice. With trainees as the center and practice as the foundation, we insist on the integration of theory and practice, focus on business practice and strengthen the transformation from learning to application. We developed the "Valiant General Program" on the cultivation of battle commanders, the "Steed Program" on the cultivation of employees with high potential, the "Future Star Program" on the cultivation of college graduates and other cultivation programs on key groups. Over 5,000 participants in total were nurtured in 2022.

Through regular skill contests, staff skill competitions and the selection of all-round talents, skilled models and other honors, the Company establishes outstanding skill benchmarks and builds the craftsmanship of Great Wall Motor, thereby continuously meeting the requirements on skills for key positions and guaranteeing the stability of product process and features. In 2022, the Company has nurtured over 7,000 highly skilled talents.

To achieve the digital nurturing of talents with diversified practice of Great Wall Motor, we introduced the digital learning platform-Happy Study Class, covering 59,000 employees up to now, achieving online management of 16,000 courses with 11,000 training programs and online testing marks and 822,000 interactions and sharing.

HEALTH AND SAFETY

Adhering to the safety policy of "putting people first and achieving sustainable development", Great Wall Motor is devoted to creating a safe, healthy and comfortable working environment. Through promoting system construction, improving the working environment, strengthening emergency capabilities and enhancing the safety awareness, the Company established a long-term mechanism on safeguarding the occupational health and safety of employees.

I. Advancing occupational health management system in full swing

Adhering to the principle of "safety first, prevention-focused and comprehensive governance", the Company establishes a dualprevention mechanism comprising grade-based control of production safety risks and identification and elimination of hazards, and constantly improves its occupational health and safety management system, in strict compliance with laws and regulations including the Production Safety Law of the People's Republic of China, the Law of the People's Republic of China. To ensure the suitability, adequacy and effectiveness of the occupational health and safety management system, the Company has set up a Safety Production Management Committee comprising three-level management organizations at the Group level, branch and subsidiary level, and workshop level. It is staffed with full-time safety management personnel who assume responsibilities at different levels and coordinate safety management work. We have formulated and implemented 54 occupational health and safety management regulations, and Workers' Occupational Health Monitoring and File Management Regulations, and promoted the unification and standardization of safety management standards. The Company clarified the responsibility on safety production at various levels through management measures such as safety information platform, safety assessment and safety accountability. During the reporting period, we passed the third-party supervision and review on the ISO45001 occupational health and safety management system with all elements of the system meeting the requirements on operation.

II. Improving the workplace continuously

The Company has been devoted to improving and boosting the workplace of employees to safeguard the occupational health of employees. It always adheres to the concept on the integration of prevention and control measures and strictly implements the "Three Simultaneities" requirements on occupational health. The Company improves automatic production, installed dust removal, noise reduction and other facilities on the prevention of occupational diseases and improves raw materials and processes to prevent occupational hazards at source. The Company systematically identifies occupational hazards through workplace observation, workplace hazards analysis and equipment testing while determining items, measurement methods and indicators for monitoring of occupational health hazards in key places. The Company engages professional testing agencies to regularly conduct annual on-site inspection on occupational hazards and supervises the exposure to occupational hazards at the workplace. We distribute protective supplies to individual employees according to safety standards and reduce their exposure to the hazardous environment. We arrange staff to take occupational health examination, establish staff health records, record the exposure of employees to occupational hazards, the results of the occupational health examination and other information and implement comprehensive traceability management.

III. Strengthening emergency response capacity on fire prevention constantly

The Company attaches great importance to the construction of fire safety, always adhere to the concept of "focusing on prevention with the combination of prevention and extinguishment' and focuses on strengthening the emergency response capacity. We establish an on-site safety management mechanism, improve emergency facilities in areas such as oil depots and coating areas and have a professional firefighting team to supervise the firefighting equipment and the effectiveness of fire safety measures at the workplace, providing solid guarantees to fire emergency. We improve the contingency plan system, revise comprehensive plans, special plans and on-site emergency plans. We conducted 1,962 emergency drills in 2022 to continuously assess, improve and perfect emergency procedures and enhance the Company's ability to control major risks.



IV. Focusing on enhancing the building of safety culture among all employees

The Company enhances the capability and awareness of employees on safety production and creates a sound safety culture and atmosphere through systematic safety education trainings and cultural cultivation activities. We formulated detailed safety empowerment plans, organize safety education and training for 9 groups, including major responsible persons, safety management staff and special operation staff through the "online" and "offline" integrated model. We provide three-level safety education to new employees and establish staff education archives to guarantee a coverage of 100% for safety trainings. In 2022, we continuously carried out series of safety month activities. With the theme of "Abiding by the Safety Production Law and Acting as the First Responsible Person", we arranged all employees to practice safety through atmosphere creation, safety empowerment, hazards elimination and emergency exercises. We carried out safety essay competitions, safety knowledge contests, safety improvement case competitions and other diversified featured publicity activities on safety production, creating a sound safety atmosphere and enhancing the safety quality of all employees.



Great Wall Motor considers the fulfillment of social responsibilities as an integral part in the development of the enterprise and promotes harmonious development of enterprise and society in line with our mission and vision to Rock the World with Our Gift (Green Intelligent Future Technology). We give back to society with gratitude, fully leverage on resources of the enterprise, display its own advantages, actively encourage our employees to participate in social cause undertakings and promote consumers to jointly undertake social responsibilities to facilitate social equity and common prosperity.

In 2022, based on its development strategy of going global, industry characteristics and geographical factors, Great Wall Motor took an active part in social cause undertakings to promote social progress and economic growth in harmony.

1. PARTICIPATING IN EARTHQUAKE RELIEF AND SPREADING LOVE ACROSS BORDERS

A 6.8-magnitude earthquake hit Luding county in Ganzi prefecture in Sichuan province in September 2022, which touched people's hearts. Great Wall Motor immediately donated money and materials with a total value of RMB2 million to assist Luding county in Ganzi prefecture and Shimian county in Ya'an City in Sichuan Province and surrounding quake-hit areas. Among which, it donated Great Wall pick-ups with a total value of RMB1.50 million to the Chinese Red Cross Foundation for the transportation of quake relief materials, emergency rescue in quake-hit areas and subsequent reconstruction after the disaster. It donated RMB500,000 to China Women's Development Foundation for purchase of urgent materials and medical and protective items for women and children and psychological assistance to women and children in quake-hit areas to tide over the difficulties with quake-hit people.



Disasters are merciless but people are emotional; countries have boundaries but love has no borders. In addition to fulfilling its undertakings in domestic earthquake relief, Great Wall Motor also provided assistance to overseas flood relief. Pakistan had been hit by rounds of rainstorms since mid-June 2022 and many provinces suffered serious flood disasters. In the crucial stage for reconstruction after the disaster, Great Wall Motor responded quickly and deployed actively. It joined Sazgar Company, its dealer in Pakistan, donated flour, oil, ingredients and other daily necessities with a total weight of nearly 20 tonnes to people in the affected areas for reconstruction after the disaster through the MTJ foundation, a local charitable organization, bringing hope to the life of 530 families. Great Wall Motor fulfilled social responsibilities with practical actions and joined hands with Pakistan in overcoming the difficulties.



2. CHARITY SUPPORT TO SAFEGUARD THE FUTURE

Charity creates beauty and boosts development. Great Wall Motor performs social responsibilities with love, displays its own advantages and undertakes the mission of joint building of communities, contributing its strength in designing the blueprint on harmonious life.

In April 2022, the TANK brand of Great Wall Motor developed the Together with Charity, a theme activity under the charity IP of the "Light of TANK". It joined hands with Wavelib in caring about the healthy growth of migrant children to enhance their pursuit and love for knowledge and literature;

In June 2022, the Haval brand of Great Wall Motor initiated the large charitable activity themed "1,000 Haval owners in 100 cities picking up candidates for college entrance examinations" with users and provided the candidates with free services. Meanwhile, they offered stationery gift packages and facilitated them to realize dreams through the examinations;

In October 2022, the Great Wall Pick-up brand of Great Wall Motor and the Blue Sky Rescue Team offered trainings on rescue knowledge to students at Shihuiyao Primary School in Qujing City, Yunnan Province, which improved the quality and capability of students on emergency response. At the same time, they donated stationery and sporting goods and encouraged students to study hard and make progresses.

Great Wall Motor Company Limited has sponsored the national automobile skills contest for secondary school students hosted by the China Automotive Maintenance and Repair Trade Association for three consecutive years since 2020 and provided automobiles, parts and components as well as special equipment and technical support services during the whole process, facilitating the success of the contest and injecting energy and resources into the vocational education sector.



As a global intelligent technology company striving for sustainable development, Great Wall Motor vigorously supports the development of overseas communities. It actively carries out CSR charitable activities, cares about the improvement of community life and poverty alleviation and encourages innovation by young people, fulfilling its corporate social responsibility with practical actions.



On 8-9 January 2022, Great Wall Motor, together with the Tourism Authority of Thailand and branches of the tourism authority in central Thailand, carried out the Road Trip charity in communities, which cares about communities and children and concerns about the development of tourism;

In the end of March 2022, Great Wall Motor joined hands with the Tourism Authority of Thailand again and held the longdistance test drive to care about and support the recovery of tourism and the development of environmental protection causes in Thailand;

In April 2022, Great Wall Motor and Thammasat University signed an MOU. They will conduct continuous and in-depth cooperation on innovation by young people and other aspects to support the innovation and development of education;

In early June 2022, Great Wall Motor visited the slum in Bangkok. It provided free food and gifts to local children and cared about their education and life, offering warmth and care to children in the slum.





Love fills the air when we help and support one another. In 2022, under the guidance of the Manifesto of Great Wall Motor on Social Causes and the Plan of Great Wall Motor in Support of Social Causes, the Company called on all employees and global industry chain partners to jointly inherit and innovate in China's charity culture. In an ongoing effort to explore and put into practice new social cause models, the Company has built up a social cause support system under which the Company takes the lead in shouldering social cause undertakings, with sales and services units following suit and extensive engagement of automobile buffs.

3. UPHOLDING THE POVERTY ALLEVIATION MISSION TO FACILITATE REVITALIZATION

During its development, Great Wall Motor continuously participated in poverty alleviation. Leveraging on the platform advantages of the enterprise, it provided employment platforms to disabled staff and targeted assistance to employees with difficulties by offering employment opportunities to alleviate poverty and offering health subsidies to employees in poverty, so as to enhance the sense of happiness in communities and promote the harmonious and steady social progress.

After considering its own circumstances, the Company provides an employment platform for 481 physically challenged people in the impoverished areas during the year to help them overcome financial and employment difficulties.

The Company offers one-off poverty alleviation funding to employees who are in severe poverty due to natural and manmade disasters, serious illness and other special reasons. We assessed and investigated the conditions of employees reported to be in poverty to get a clear picture of the reasons for and extent of their poverty as well as their living conditions. Based on that, we visited employees in poverty during its annual anniversary and the Chinese New Year to make them feel the warmth of the Company as a big family.

Poverty alleviation is not only an act of kindness but also a manifestation of enterprise value. Great Wall Motor will adhere to the principle of fundamental and long-term poverty alleviation instead of taking it as short-term conduct, and to the business philosophy of improving little by little every day to build up a responsible Chinese brand and set an example as Chinese auto companies go global.

QUANTITATIVE PERFORMANCE INDICATORS

Indicator	Unit	2021	2022
Emissions Note 1			
Types of emissions and respective emissions data			
Total discharge of wastewater	tonnes	2,880,458.71	3,410,007.02
Total COD emissions	tonnes	144.00	332.99
Total ammonia nitrogen emissions	tonnes	37.45	26.52
Total VOC emissions	tonnes	124.74	111.88
Total NOx emissions	tonnes	46.97	61.76
Total SO2 emissions	tonnes	5.63	5.36
Total hazardous waste produced			
Amount of waste organic solvent HW06	tonnes	1,763.40	2,426.27
Amount of waste mineral oil/oily waste HW08	tonnes	806.43	961.54
Amount of waste emulsion HW09	tonnes	1,291.10	1,338.03
Amount of dye and coating waste HW12	tonnes	3,901.94	3,797.76
Total amount of organic resin waste HW13	tonnes	517.18	883.45
Total amount of surface treatment waste HW17	tonnes	3,720.48	3,404.23
Total amount of lead-containing waste HW31	tonnes	122.41	205.11
Total amount of other hazardous wastes HW49	tonnes	3,016.46	3,318.61
Total amount of hazardous waste	tonnes	15,139.40	16,335.01
Hazardous waste density	tonnes per	0.01	0.01
	vehicle		
Total non-hazardous waste produced			
Types and total amount of non-hazardous waste	tonnes	16,356	13,660
Non-hazardous waste density	tonnes per	0.01	0.01
	vehicle		
Greenhouse gas emissions in total			
Scope 1: Direct greenhouse gas emissions	tCO ₂ e	157,815.95	140,976.54
Scope 2: Indirect greenhouse gas emissions	tCO ₂ e	1,104,773.82	917,443.51
Greenhouse gas emissions in total	tCO ₂ e	1,262,589.77	1,058,420.05
Greenhouse gas emission intensity of OEM	tCO ₂ e per vehicle	0.34	0.36

Indicator	Unit	2021	2022
Direct and/or indirect energy consumption by type (e.g. electricity,			
gas or oil) in total			
Total electricity consumption	kWh	1,299,703,838	1,115,175,289
Electricity consumption intensity	kWh per vehicle	1,056.78	1,060.46
Petrol consumption	tonnes	6,795	6,386
Petrol consumption intensity	tonnes per vehicle	0.005525	0.006072
Total diesel consumption	tonnes	2,162	1,752
Diesel consumption intensity	tonnes per vehicle	0.001758	0.001666
Natural gas consumption	000 m ³	57,788	51,753
Natural gas consumption intensity	m³ per vehicle	46.9869	49.2141
Total steam consumption	tonnes	538,636	501,569
Steam consumption intensity	tonnes per vehicle	0.4380	0.4770
Total amount of purchased heat	million KJ	0	0
Total comprehensive energy consumption	tonnes of standard coal	328,710.16	283,082.89
Comprehensive energy consumption per vehicle	tonnes of standard coal per	0.2673	0.2692
	vehicle		
Proportion of total renewable energy in energy consumption Water consumption in total and intensity (e.g. per unit of	%	2.72	6.09
production volume, per facility)			
Total water consumption	tonnes	5,750,345	5,836,938
Water consumption intensity	tonnes per vehicle	4.68	5.55
Total packaging material used for finished products (in tonnes) and			
Total packaging material	tonnes	9,811	9,840
Packaging material density	tonnes per vehicle	0.01	0.01
Environment and Natural Resources			
Environmental training and investment			
Number of environmental training sessions	sessions	90	133
Total attendance of environmental training	person-times	18,542	26,558
Investment in environmental training	RMB'0,000	19.33	28.76
Investment in environmental technology improvement projects	RMB'0,000	2,500.29	3,605.70
Social			
Employment			
Total number of employees	persons	77,934	87,367
Number of employees by gender, age group and region Number of employees by gender			
Male	persons	61,427	67,015
Female	persons	16,507	20,352
Number of employees by employment type			
Full time	persons	77,934	87,367
Part time	persons	0	0
Number of employees by age			
Age < 30	persons	35,857	38,912
$30 \leq age < 40$	persons	35,780	42,337
$40 \leq age < 50$	persons	5,396	5,340
Age ≥ 50	persons	901	778
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Indicator	Unit	2021	2022
Number of employees by region	_		
North China	persons	64,873	68,994
Northeast China	persons	185	493
Southwest China	persons	2,209	3,339
East China	persons	6,619	10,822
Central China	persons	1,414	2,903
South China	persons	, 6	395
Northwest China	persons	0	20
Number of employees by ethnicity			
Han nationality	persons	72,011	83,346
Ethnic minorities	persons	5,923	4,021
Number of employees by country of origin			
China	persons	74,771	86,724
Foreign	persons	3,163	643
Number of employees by education level			
Doctorate degree	persons	62	70
Master degree	persons	3,011	3,301
Bachelor degree	persons	29,146	36,708
Junior college degree	persons	18,807	20,715
High school and below	persons	26,908	26,573
Percentage of senior managers by gender			
Male	%	93	93
Female	%	7	7
Employee turnover rate by gender, age group and geographical region:			
Employee turnover rate by gender	o.(
Male	%	16.14	18.94
Female	%	3.20	4.61
Employee turnover rate by age	0/	10.75	42.22
Age < 30	%	12.75	13.33
30 ≤ age < 40	%	5.81	8.99
$40 \leq age < 50$	%	0.63	1.13
Age ≥ 50	%	0.15	0.10
Employee turnover rate by region	24	44.50	46.50
North China	%	14.58	16.50
Northeast China	%	0.01	0.05
Southwest China	%	0.55	0.89
East China	%	3.59	4.57
Central China	%	0.32	1.28
South China	%	0.00	0.04
Northwest China	%	0.00	0.00

Indicator	Unit	2020	2021	2022
Number of work-related fatalities occurred in each of the	e			
past three years (2019-2021)	persons	0	0	0
Rate of work-related fatalities occurred in each of the pa		0	0	•
three years (2019-2021) Lost days due to work injury	%	0 261	0 339	0 362
Number of employee health and safety litigation cases	days cases	201	339 0	302 0
Safety production investment	RMB'0,000	5,110.84	5,435.52	14,082.52
Number of safety education and training sessions	sessions	728	1,844	4,417
Attendance of safety education and training	person-times	116,077	193,409	416,167
			2024	2022
Indicator		Unit	2021	2022
Development and Training				
Total training hours of employees		hours	354,697.10	719,116.35
Average training hours per employee		hours/person	11.37	20.08
Training expenditure		RMB'00 million	0.14	0.10
Percentage of employees trained by gender				
Male		%	76.35	75.61
Female		%	23.65	24.39
Percentage of employees trained by employee cate	gory			
Senior management		%	0.36	0.22
Middle management		%	6.48	5.29
General staff		%	93.15	94.49
Average training hours of employees by gender				
Male		hours	11.78	20.39
Female		hours	10.03	19.13
Average training hours of employees by employee	category			
Senior management		hours	11.94	25.15
Middle management		hours	19.48	27.14
General staff		hours	10.8	19.67
Labour Standards				
Number of labour grievances filed, addressed, and resolv	ed through formal			
grievance mechanisms		cases	16	14
Product Responsibility				
Number of vehicles or parts recalled		units	17,867	0
Total number of customer complaints during the reporting	ng period	cases	168,214	184,023
Customer complaint reduction rate	%	38.86	9.40	
Sales satisfaction rate		%	94.00	94.90
After-sales service satisfaction rate		%	92.30	93.50
R&D investment		RMB'0,000	906,693.89	1,218,070.47
Proportion of R&D expenses in operating revenue		%	6.65	8.87
Number of patent applications		applications	3,091	4,463
Number of patents granted		patents	2,176	2,263
Number of invention patents granted		patents	332	339
Number of national innovation projects undertaken		projects	0	1

Indicator	Unit	2021	2022
Anti-corruption Number of corruption lawsuits filed and concluded against the Company o	r		
its employees	cases	2	3
Number of anti-corruption training sessions by rank			
Directors and management	sessions	4	5
Employees	sessions	30	47
Attendance of anti-corruption training by rank			
Directors and management	person-times	487	338
Employees	person-times	4,837	5,372
Pass rate of anti-corruption training by rank			
Directors and management	%	82	80.5
Employees	%	100	100
Community Investment			
Number of volunteer activities	activities	25	129
Number of participations in volunteer activities during the reporting period	person-times	867	2,884
Volunteer hours during the reporting period	hours	92.75	3,838.50
Amount invested in volunteer activities during the reporting period	RMB'0,000	15.02	47.26
Amount donated by the Company	RMB'0,000	2,540.46	447.89
Investment in employment and poverty alleviation	RMB'0,000	3,326.58	2,516.43

Note 1: Certain figures are higher than that in 2021 due to several new factories' commencing production in China, and technological transformation and process improvement in existing factories.

ESG REPORTING GUIDE

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE CONTENT INDEX

	Environmental				
Aspect	Indicator No.	Indicator content	Chapter reference		
A1 A1: Emissions A1 A1 A1 A1	General Disclosure	 Information on: (I) the policies; and (II) compliance with relevant laws and regulations that have a significant impact on the issuer relating to exhaust gas and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste. 	Environmental Responsibility		
	A1.1	The types of emissions and respective emissions data.	Environmental Responsibility/ Performance Indicators		
	A1.2	Total greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Environmental Responsibility/ Performance Indicators		
	A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Environmental Responsibility/ Performance Indicators		
	A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Environmental Responsibility/ Performance Indicators		
	A1.5	Description of emissions target(s) set and steps taken to achieve them.	Environmental Responsibility		
	A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	Environmental Responsibility		

	Environmental				
Aspect	Indicator No.	Indicator content	Chapter reference		
A2: Use of Resources	General Disclosure	Policies on the effective use of resources (including energy, water and other raw materials).	Environmental Responsibility		
	A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	Environmental Responsibility/ Performance Indicators		
	A2.2	Total water consumption and intensity (e.g. per unit of production volume, per facility).	Environmental Responsibility/ Performance Indicators		
	A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	Environmental Responsibility		
	A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	Environmental Responsibility		
	A2.5	Total packaging material used for finished products (in tonnes), if applicable, with reference to per unit produced.	Environmental Responsibility		
A3: Environment	General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources.	Environmental Responsibility		
and Natural Resources	A3.1	Description of the significant impacts of business activities on the environment and natural resources and the actions taken to manage them.	Environmental Responsibility		
A4: Climate Change	General Disclosure	Policies on identifying and addressing significant climate related issues that have already had and may have an impact on the issuer and relevant mitigation measures.	Environmental Responsibility		
	A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	Environmental Responsibility		

Social				
Aspect	Indicator No.	Indicator content	Chapter reference	
B1: Employment	General Disclosure	 Information on: (I) the policies; and (II) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare. 	Responsibility for Employees/ Performance Indicators	
	B1.1	Total workforce by gender, employment type (e.g. full-time or part-time), age group and geographical region.	Responsibility for Employees/ Performance Indicators	
	B1.2	Employee turnover rate by gender, age group and geographical region.	Responsibility for Employees/ Performance Indicators	
B2: Health and Safety	General Disclosure	 Information on: (I) the policies; and (II) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazard. 	Responsibility for Employees	
	B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	Responsibility for Employees/ Performance Indicators	
	B2.2	Lost days due to work-related injury.	Responsibility for Employees/ Performance Indicators	
	B2.3	Description of occupational health and safety measures adopted, and relevant implementation and monitoring initiatives.	Responsibility for Employees	

	Social				
Aspect	Indicator No.	Indicator content	Chapter reference		
B3: Development and Training	General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	Responsibility for Employees		
	B3.1	The percentage of employees trained by gender and employee category (e.g. senior management and middle management).	Responsibility for Employees/ Performance Indicators		
	B3.2	The average training hours completed per employee by gender and employee category.	Responsibility for Employees/ Performance Indicators		
B4: Labour Standards	General Disclosure	 Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour. 	Responsibility for Employees		
	B4.1	Description of measures to review employment practices to avoid child and forced labour.	Responsibility for Employees		
	B4.2	Description of steps taken to eliminate violations when discovered.	Responsibility for Employees		
	General Disclosure	Policies on managing environmental and social risks of the supply chain.	Social Responsibility		
	B5.1	Number of suppliers by geographical region.	Social Responsibility		
B5: Supply Chain Management	B5.2	Description of practices relating to engaging suppliers, number of suppliers to which the practices are being implemented, and relevant implementation and monitoring initiatives for relevant practices.	Social Responsibility		
	B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	Social Responsibility		
	B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Social Responsibility		

	Social				
Aspect	Indicator No.	Indicator content	Chapter reference		
	General Disclosure	 Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress. 	Social Responsibility		
B6: Product	B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Social Responsibility		
Responsibility	B6.2	Number of products and service related complaints received and how they are dealt with.	Social Responsibility/ Performance Indicators		
	B6.3	Description of practices relating to preserving and protecting intellectual property rights.	Social Responsibility		
	B6.4	Description of quality assurance process and product recall procedures.	Social Responsibility		
	B6.5	Description of consumer data protection and privacy policies, and relevant implementation and monitoring initiatives.	Social Responsibility		
	General Disclosure	 Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering. 	Corporate Governance		
B7: Anti Corruption	B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	Corporate Governance/ Performance Indicators		
	B7.2	Description of preventive measures and whistle-blowing procedures, and relevant implementation and monitoring initiatives.	Corporate Governance		
	B7.3	Description of anti-corruption training provided to directors and staff.	Corporate Governance/ Performance Indicators		
B8: Community Investment	General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take communities' interests into consideration.	Social Responsibility		
	B8.1	Focus areas (e.g. education, environmental matters, labour demand, health, culture and sports) of contribution.	Social Responsibility		
	B8.2	Resources (e.g. money or time) contributed to the focus areas.	Social Responsibility/ Performance Indicators		



Thank you for reading the Annual Social Responsibility Report of Great Wall Motor Company Limited. We highly value and look forward to receiving your feedback on our social responsibility performance and this report. Your suggestions and recommendations are valuable basis for us to continue to improve our quality of information disclosure on corporate social responsibility management and practices. Please complete the form below and send it to us via mail or e-mail. We wholeheartedly appreciate your valuable suggestions.

What is your overall evaluati	on of this report?	□ Average	□ Rather poor	Poor
How is the structure of this Very reasonable	report?	□ Average	□ Rather unreasonable	Unreasonable
How about the readability o	f this report? □ Readable	□ Average	□ Rather unreadable	🗆 Unreadable
How about the disclosure of		□ Partially covered	□ Scarcely covered	□ Not covered
What other concerns of yours are not reflected in the report?				
Is there any suggestion on our CSR performance or this report?				

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