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Baidu 2023

Environmental, Social and Governance Report

Make the complicated world simpler through technology

Contact us

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Contents

01 Enhancing Corporate Governance

02 Building Trust

03 Nurturing Talent

04 Promoting Green Ideas

05 Improving Services

06 Contributing to Society

About This Report

This Report is the fifth Environmental, Social and Governance (ESG) Report released by Baidu with a comprehensive reflection of its ESG performance.

Report Period

This Report is an annual report covering work of the financial year from January 1, 2023 to December 31, 2023 ("reporting period"). Part of information is beyond the reporting period. The data and information disclosed in this Report are sourced from official documents and statistical reports of Baidu, covering all relevant key information of Baidu Core (excluding companies held by Baidu).

Basis of Preparation

This Report is compiled in accordance with the *ESG Reporting Guide 2.0* issued by the Nasdaq Stock Market, the *Environmental, Social and Governance Reporting Guide* and the relevant consultation papers of the *Listing Rules* issued by the Hong Kong Exchanges and Clearing Limited (HKEX), with reference to the "Ten Principles" of the United Nations Global Compact (UNGC), the *GRI Sustainability Reporting Standards* issued by the Global Sustainability Standard Board (GSSB), the *SASB Standards* issued by the Sustainability Accounting Standards Board (SASB), and the United Nations Sustainable Development Goals (UN SDGs).

Report Access

This Report is available on our official ESG website (esg.baidu.com) in simplified Chinese, traditional Chinese and English. For further details regarding our business ethics, privacy protection and data security, human capital, and low-carbon operations, please visit the Baidu ESG website.

Your feedback is always welcomed and appreciated. Please email us at esg@baidu.com.

Forward-looking Statement

Part of this Report is forward-looking, subject to uncertainties, which could cause the actual results to differ materially from those presented. Baidu undertakes no obligation to update any forward-looking statements provided in this Report.

Message from the CEO

2023 was undeniably an exciting year, as the rise of large language models (LLMs) revealed a clear path to achieving Artificial General Intelligence (AGI). At Baidu, 2023 saw us on the cutting edge of technological innovation, witnessing the emergence of new technologies and surrounded by boundless opportunities.

Artificial intelligence, with its immense power, is already demonstrating its profound and extensive impact on the economy, society and beyond. Facing such an era brimming with potential, it is more crucial than ever to strengthen our confidence, focus on innovation, and grasp every opportunity for development. The empowering role of AI should be fully leveraged in cooperation with industries to enhance workers' technical skills, increase work efficiency and improve product quality, promoting new quality productive forces, stimulating economic growth and spreading our confidence to everyone touched by the effects of AI.

For the past 16 years, Baidu has been committed to fulfilling the "Ten Principles" of the UN Global Compact. Throughout this time, we have never ceased our work in promoting technology to more effectively serve social development. Our focus in operating and innovating our business has been grounded in sustainable development, striving to bridge the technology gap, protecting the rights of vulnerable groups, engaging global issues such as climate change and joining with stakeholders to ensure the secure and ethical development of AI development, aiming to "make the complicated world simpler through technology" and create a sustainable future.

We know that actions speak louder than words. Baidu's actions demonstrate our continued adherence to ESG governance and commitment to sustainable development. Each year, we publish this report not only with the goal of making our ESG efforts visible, but also with the goal of allowing these efforts to spark further progress, bringing us closer to the realization of long-term sustainable development and the well-being of everyone. We firmly believe that only through concrete actions can we promote social progress and achieve a better future.

Co-founder, Chairman,
and Chief Executive Officer

About Baidu

Baidu is a leading AI company with a strong internet foundation. Baidu is one of the few AI companies in the world to have a full–stack layout, with key self–research technologies and products at all levels, including AI chips, software architecture, and applications. With the mission to "make the complicated world simpler through technology", we uphold technological innovation and stay committed to the vision to "be a top global technology company to understand users best and enable their growth."

Baidu processes billions of search requests from more than 100 countries and regions, making our platform an important portal for access to Chinese information, serving 1 billion Internet users.

Based on the search engine, Baidu has developed an array of AI technologies such as intelligent voice, intelligent image, knowledge graph, and natural language processing. Over the past decade, Baidu has invested heavily in frontier fields ranging from deep learning and conversational AI operating systems to autonomous driving and AI chips, propelling us to the forefront of the AI landscape.
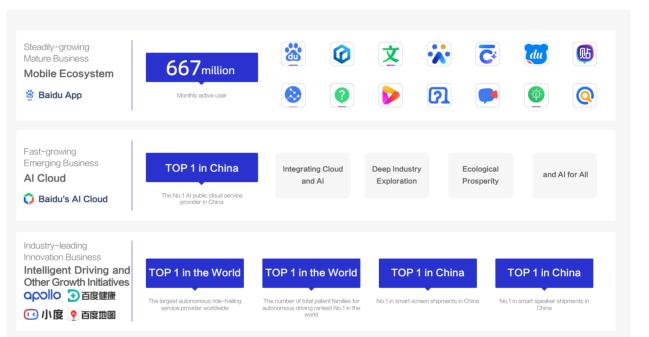
Baidu responds to
billions
of search requests from more than 100 countries and regions

Serves
1 billion
Internet users

Strategic Business Landscape of Baidu

Amid the major trend of integrated development of cloud technology, AI, and the Internet, Baidu has formed a new multi–engine growth paradigm with leading deployments in mobile ecology, Baidu AI Cloud, intelligent transportation, intelligent driving, and other AI fields, accumulating strong potential to support future development.

Strategic Business: Three Growth Curves and Multi–Engine Growth

Steadily-growing Mature Business **Mobile Ecosystem** Baidu App	**667** million Monthly active user				
Fast-growing Emerging Business **AI Cloud** Baidu's AI Cloud	**TOP 1 in China** The No.1 AI public cloud service provider in China	Integrating Cloud and AI	Deep Industry Exploration	Ecological Prosperity	and AI for All
Industry-leading Innovation Business **Intelligent Driving and Other Growth Initiatives** apollo 百度健康 小度 百度地图	**TOP 1 in the World** The largest autonomous ride-hailing service provider worldwide	**TOP 1 in the World** The number of total patent families for autonomous driving ranked No.1 in the world	**TOP 1 in China** No.1 in smart screen shipments in China	**TOP 1 in China** No.1 in smart speaker shipments in China	

Independent Full–Stack Layout, Leading at Every Level, End-to-End Optimization

Application Layer	Search	Intelligent Transportation	Finance	Water	Electric Power	...
Model Layer	文心大模型	Information Distribution Large Language Model	Transportation Large Language Model	Energy Large Language Model	...	
Framework layer	飞桨					
Chip Layer	昆仑芯 KUNLUNXIN					

Enhancing Corporate Governance

Baidu places high importance on its commitments and responsibilities in the fields of environment, social, and governance (ESG), integrating ESG concepts into business management. The Company continuously enhances governance, controls operational risks, establishes a strong foundation in business ethics, builds a sustainable supply chain, and maintains ongoing communication with all stakeholders and create long term value for all.

Certified to **ISO 37001**

Anti-Bribery Management System

The number of business ethics training sessions held totalling

38

Hosted the "2023 Baidu Professional Ethics Awareness Week" event, with

34,000participants

Appointed new female director

1

The signing rate for the *Business Ethics and Code of Conduct Commitment Letter* reached

100%

Set up the Technology Ethics Committee

The Transparency and Integrity Mechanism project in the workplace was awarded the **Special Innovative Projects in the "China Integrity Innovation Award"**

08 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 09

ESG Management

Baidu integrates ESG concepts with the daily management and business operations, continuously improves the ESG management system and enhances the sustainable development management capabilities, committed to creating sustainable corporate value.

ESG Concepts
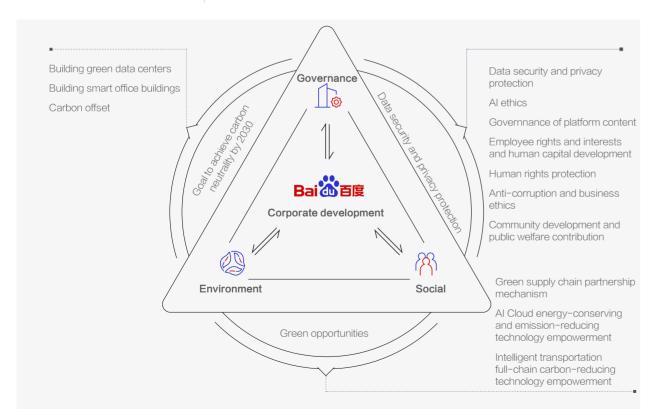
Baidu, adhering to the core value of being simple and reliable, is committed to the vision of "To be a Top Global Technology Company to Understand Users Best and Enable Their Growth". The Company integrates the core concepts of ESG into daily operations, and sets the sustainability of technology, business operations and employees as long-term ESG management goals, thereby strengthening the ESG governance capabilities.

Baidu has established cross-business ESG issues working groups that spans its business systems, focusing on key ESG issues such as data security and privacy protection, product quality, green opportunities, carbon neutrality, human rights protection, and community development. The Company actively explores and plans the implementation of ESG goals. Moreover, the Company regularly communicates with all stakeholders, responding to their expectations and suggestions regarding the Company's ESG performance from multiple perspectives. While achieving the sustainability of company operations, we promote social sustainable development.

Building green data centers
Building smart office buildings
Carbon offset

Goal to achieve carbon neutrality by 2030

Data security and privacy protection

Governance

Corporate development

Environment

Social

Green opportunities

Data security and privacy protection
AI ethics
Governnance of platform content
Employee rights and interests and human capital development
Human rights protection
Anti-corruption and business ethics
Community development and public welfare contribution

Green supply chain partnership mechanism
AI Cloud energy-conserving and emission-reducing technology empowerment
Intelligent transportation full-chain carbon-reducing technology empowerment

Baidu's ESG Management Concepts

ESG Management System

The *Baidu Environmental, Social and Governance (ESG) Policy*[1] serves as the basis for the Company's ESG management practices. In recent years, the Company has developed corresponding management policies for key issues such as data security and privacy protection, carbon neutrality, health and safety, product quality, and business ethics, continuously improving the ESG policy safeguard system.

To better deploy and implement ESG-related work, Baidu has established a three-tier ESG management structure composed of the "Board of Directors - ESG Committee - ESG Working Group".

Board of Directors

· Holding the highest authority and ultimate responsibility for Baidu's ESG-related matters;

· Responsible for ESG governance objectives and strategies, guiding and approving Baidu's ESG implementation plan, and overseeing ESG risk assessment and response.

Approval and supervision | Decision-making recommendations

ESG Committee

· Comprised of related executives from areas such as legal, finance, HR, and other departments, coordinating and managing ESG-related matters;

· Developing an ESG indicator system that fits the Company and industry characteristics, presenting the Company's ESG performance comprehensively and systematically;

· Establishing an ESG performance assessment mechanism, linking ESG performance to executive compensation;

· Formulating ESG goals and action paths based on ESG issues of concern to various stakeholders;

· Regularly offering suggestions on sustainable development to the Board of Directors.

Guidance and supervision | Reporting achievements

ESG Working Group

· Establishing professional groups responsible for carbon neutrality management, data security, and privacy protection;

· Working together with relevant business lines and functional departments at Baidu to ensure the implementation and execution of ESG-related work;

· Regularly reporting to the ESG Committee.

[1] The Baidu Environmental, Social and Governance (ESG) Policy

10 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 11

Board Governance

Baidu strictly adheres to the relevant laws and regulations of the listing location and operating regions, formulates company governance operation norms, and establishes a scientific and efficient governance structure with clearly-defined responsibility. Under the Board of Directors, the Audit Committee, Remuneration Committee, and Corporate Governance and Nomination Committee have been established, clarifying the responsibilities of the Board and each committee, fully protecting the interests of shareholders and the sustainable development of the Company. The scope of authority of the Board and each committee, along with information about each director, can be accessed on the Company's investor relations website[2].

Independence of the Board of Directors

· The Board of Directors is composed of six directors, five of whom are independent directors having no converged interests with the controlling shareholder;

· Independent directors hold complete, equal, and independent voting rights in matters such as the Company's business strategy, performance, financial, risk prevention and control, and conflicts of interest;

· The appointment and performance of the duties of the members of each committee meet the requirements on independence.

Diversity of the Board of Directors

· Directors are appointed based on merit to ensure they possess a balanced mix of skills, experience, and diverse perspectives necessary to effectively fulfill their job responsibilities;

· In nominating and appointing Board members, thorough consideration is given to factors such as gender, age, knowledge, skills, experience, and background of the director members, with regular reviews and supervision of the Board's diversity implementation;

· In 2023, Baidu appointed Ms. Sandy Ran Xu as an independent director, an important measure to strengthen the leadership of female managers and enhance the diversity of the Board.

Performance of the Board of Directors

In 2023

Total number of Board of Directors meetings held was

4

Director attendance rate was

100%

[2] https://ir.baidu.com/

Risk Governance

Baidu places great importance on risk management and internal control, considering it a core aspect of the operational management. To this end, Baidu has introduced the "three lines" risk management model[3]. Moreover, in line with the Company's actual situation, Baidu has established a sound risk management system to effectively ensure the implementation of various risk management efforts.

We regularly identify and assess internal risks, and after effective communication with internal management and external regulatory bodies, we formulate targeted risk response measures. Additionally, we have formulated the *Baidu Internal Audit Charter* and conducted special audits related to risk management, and the "three lines" in combination could enable improved identification and management of risks to ensure the effectiveness of the implementation of risk management system.

Traditional Risks

Conduct audit tests on related businesses in accordance with regulatory compliance requirements of the listing location and operation locations, identify issues, and promote rectification;

Regularly carry out special audits and verification work on the business operation data disclosed in financial reports, to check the accuracy and rationality of the data;

Regularly assess and inspect the effectiveness of process control design and execution in key areas, identify significant process mechanism defects and issues, and rectify them in a timely manner.

Emerging Risks

Pay attention to long-term emerging risks, conduct compliance audits in areas related to data security and personal information protection, and support the Company's compliance defenses.

✎ Baidu's Audit Digital Transformation

Baidu was invited to participate in the "4th IT New Governance Leadership Forum" in 2023 hosted by the China Academy of Information and Communications Technology. Based on current explorations and practices in digital audit governance, Baidu shared the audit case study of the digital transformation of the audit team at the forum, which was recognized as the "Annual Influential Team".

Baidu's Internal Audit Department was awarded the title of

"Annual Influential Team"

[3] Baidu Risk Management Measures

12 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 13

Transparent Tax Affairs

Baidu has always adhered to the principles of honesty and tax compliance, ensuring that tax payments are consistent with revenue-generating activities. We formulate corresponding tax management systems in accordance with tax policies and relevant laws and regulations, conducts tax planning in line with commercial rationality and business arrangements, and regularly discloses relevant tax information.

Business Ethics

Business Ethics Management System

In compliance with advanced laws, regulations, and standards from around the world and international initiatives such as the *United Nations Convention Against Corruption* and the *Business Principles for Countering Bribery*, Baidu has formulated a set of internal management measures to manage all employees (including full-time employees, part-time employees, contractors and interns), institutional contractors, suppliers, subsidiaries as well as type A and B1 ecological companies. They encompass multiple areas such as anti-bribery, anti-fraud and anti-corruption, anti-discrimination, anti-monopoly and anti-unfair competition, avoiding conflicts of interest, anti-insider trading, and reporting management. These policies clarify the responsibilities and obligations of employees in upholding business ethics at the systemic level.

Internal management measures for business ethics

Brief Introduction of Baidu Management Regulation of Construction of Professional Ethics

Baidu Professional Ethics and Code of Conduct

Brief Introduction to the Baidu Management Measures for Rewards and Punishments

Brief Introduction to the Baidu Professional Ethics Reporting Management Regulations

Brief Introduction to the Baidu Avoiding Conflicts of Interest Policy

Honesty and Integrity Agreement

Baidu Code of Business Conduct and Ethics

Brief Introduction of Baidu Red Line of Professional Ethics Regulations
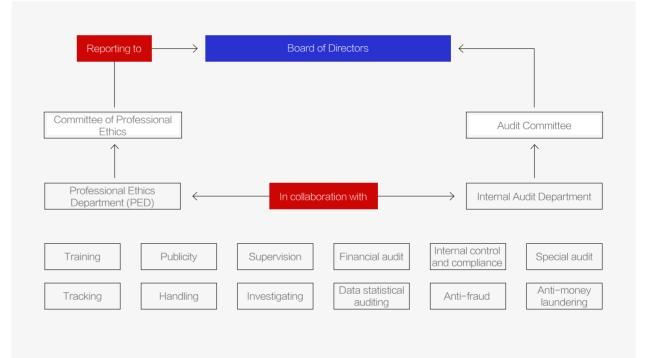
Baidu has established a three-level business ethics governance system consisting of the Board of Directors, the Committee of Professional Ethics, and the Professional Ethics Department, which oversees and implements matters related to business ethics. The Board of Directors is ultimately responsible for business ethics, in charge of decision-making, guidance, supervision, and approval of matters related to the Company's compliance development in business ethics. At the executive level, the Committee of Professional Ethics, as the highest decision-making body, is responsible for guiding, decision-making, supervising, and inspecting the implementation of the Company's business ethics and behavioral norms, and reporting to the Board of Directors. The Professional Ethics Department, under the guidance and supervision of the Committee of Professional Ethics, is tasked with implementing specific actions, including revising systems related to business ethics, conducting publicity and training related to business ethics, and investigating and dealing with employees' illegal and non-compliant practices.

Business ethics governance framework and reporting mechanism

Baidu adopts a "zero tolerance" approach towards any malpractice that violates business ethics. We clearly define all acts and potential acts that breach business ethics and stipulate related management measures. Every year, during the internal audit, we inspect business ethics across all major business operations of the Company.

Since obtaining the ISO 37001 Anti-Bribery Management System Certification in 2021, Baidu annually invites external certification bodies to supervise and review Baidu's business ethics management system and standards, providing compliance assurance for Baidu.

14 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 15

Business Ethics Management Initiatives

Anti-Bribery

- Baidu adheres to the principle of "fair trade", and prohibits the sale of products through bribery.

- Bribes that are secretly collected or kickbacks that are given to the other companies or individuals will be classified as bribery.

Anti-Fraud and Anti-Corruption

- Baidu investigates and handles violations of business ethics and disciplines with a "zero tolerance" attitude in order to safeguard the Company's interests, and create a clean workplace environment built on integrity.

Anti-Monopoly and Anti-Unfair Competition

- Baidu emphasizes battles against monopoly and unfair competition and has established a special compliance system targeted against major monopolistic behaviors such as monopoly agreements, abuse of market dominance, and illegal implementation of concentration of business operators;

- Baidu does not use any improper means to illegally exclude competitors' fair competition and legitimate business activities, nor deliberately fabricate and disseminate false facts;

- Taking business operations into account, Baidu has issued compliance guidelines, conducted special compliance assessments, and carried out internal and external compliance training and publicity activities to facilitate fair competition.

Avoiding Conflicts of Interests

- Baidu prohibits any conflicts of interests between individuals and the Company, which applies to all employees;

- If unnecessary conflicts of interest arise between the Company and the employees during daily operations, they should be truthfully reported to the Company.

Experience Exchanges in the Industry

- As a member of the "Enterprise Anti-Fraud Alliance" and the "Trust and Integrity Enterprise Alliance", Baidu proactively pursues industrial exchanges and cooperation, to build a culture of business ethics and compliance. This effort aims to promote the continuous improvement of business ethics standards in the Internet industry and enhance awareness of business ethics and compliance.

Business Ethics Culture Development

Baidu and all employees of its branches, subsidiaries, and type A and B1 ecological companies sign the *Business Ethics and Code of Conduct Commitment Letter* to urge employees to comply with business ethics-related systems. Moreover, we promote a culture of professional ethics, regularly conducting professional ethics dissemination and education to enhance compliance awareness among all employees.

In 2023, Baidu carried out a series of business ethics training, assessments, and promotional projects, holding a total of 38 business ethics training sessions.

Special Training Programs	• New employee business ethics training • Annual business ethics training and regular business ethics training for all employees • Temporary (targeted) business ethics training
Online Assessment	• Conduct business ethics and conduct standard exams for all employees (full-time employees, interns, contractors, etc.), with a pass rate of 99.9% for full-time employees and an overall pass rate of 98.74% for all employees.

Business Ethics Awareness Week	In November 2023, Baidu hosted the "2023 Baidu Business Ethics Awareness Week" event, aimed at promoting Baidu's workplace ethos of "being honest, doing things right, and doing the right things". The event included a mix of online and offline activities such as a charity auction, a workplace survey on workplace integrity, and the signing of the business ethics commitment letter, with 34,000 participants.
	• Charity Auction:
	  · Employees are required to report gifts received from partners to the Baidu Professional Ethics Committee according to the gift reporting system, and then donate them to the Baidu Foundation.
	  · Baidu Foundation auctions all the gifts collected from all employees, with all the proceeds going to charity donations. 11,699 people participated in the auction in 2023, raising a total of RMB 420,000.
	• Clean Workplace Survey: According to the survey results, employees' recognition and awareness of the Company's business ethics work have both increased compared to last year.
	• Business Ethics Commitment Letter Signing: The signing rate reached 100%, including full-time employees, interns, contractors, and labor dispatch.

External Publicity	• Through external publicity channels such as the "Clean Workplace" Baijia account, the Trust and Integrity Enterprise Alliance, and the Enterprise Anti-Fraud Alliance, we continue to publicize externally, having published a total of 22 articles related to professional ethics.

In 2023, Baidu's transparency and integrity mechanism project in the workplace "Gift Reporting for Public Welfare" was awarded the Special Innovative Projects in the "China Integrity Innovation Award".

Reporting and Whistleblower Protection

To improve the management of reporting and supervision of business ethics, Baidu has formulated the *Baidu Professional Ethics Reporting Management Regulations*, standardizing the reporting channels and processes to ensure complaints and reports are effectively handled. We have made public a variety of reporting channels, including email, in-person reports, business ethics suggestion boxes, and letters, encouraging employees and external individuals to report any suspected illegal, non-compliant, disciplinary, or professional ethics and labor discipline violations. Moreover, we protect the safety of whistleblowers in accordance with law, keeps the information and content of reports strictly confidential, and strictly prohibit any form of retaliation.

No incident of employee whistleblowers experiencing unfair treatment such as dismissal, demotion, suspension, intimidation, and harassment occurred in 2023, nor did any incident of employees retaliating in any form against external whistleblowers.

16 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 17

Supply Chain Management

Supplier Management

Baidu has established a series of internal documents such as the *Supplier Management Standards* and the *Baidu Supplier Daily Management and Complaint Procedures*, setting up a comprehensive process control mechanism that includes supplier screening and entry, evaluation and assessment, communication and cooperation, and removal and exit. Moreover, Baidu launched a procurement platform supplier management system that covers the entire lifecycle of procurement, allowing for comprehensive online management of suppliers. This includes basic information inquiries, categorization, performance assessment, etc., enabling real-time understanding of supplier situations and continuously enhancing the transparency of supplier management.

Screen and Entry

- Screen candidates;
- Conduct on-site inspections of potential suppliers in terms of quality, compliance, environment, etc., to ensure suppliers meet procurement requirements.

Evaluation and Assessment

- Organize and carry out supplier performance assessment and evaluation, thoroughly examining factors such as the quality of products and services, delivery conditions, etc.;
- Classify suppliers based on the assessment results, urging those who fail the assessment to make corrections, and dynamically tracking the corrections until they are completed.

Communication and Cooperation

- Categorize and manage suppliers by different levels, with more efforts made to manage suppliers of products in key categories;
- Such processes as issuing inquiry, finishing inquiry, bidding evaluation and negotiations are completed on the procurement platform in a unified manner;
- Host supplier conferences to inform supplier of ESG performances and management requirements.

Removal and Exit

- Remove suppliers who fail both the assessment and the rectification;
- Suppliers who violate national laws and regulations and *Baidu's Supplier Management Standards,* will be handled according to the *Measures on Supplier Reward and Punishment*.

Number of suppliers by region[4]

25,075
Chinese suppliers (including Hongkong, Macao and Taiwan)

5,346
Overseas suppliers

[4] Calculated with the accumulated data in Baidu's supplier database

Supplier ESG Management

Baidu implements the concepts of ESG within the supply chain management, formulating the *Baidu Sustainable Development Principles[5] for Suppliers*. By establishing close communication and cooperation with suppliers, Baidu sets assessment requirements for suppliers in multiple dimensions including labor rights, business ethics, health and safety, and environmental protection, aiming to achieve high-standard ESG management practices.

ESG Dimension	Assessment Requirements
Labor Rights and Interests	• Conduct labor rights-related background checks on potential key suppliers before cooperation, including on-site assessments; • Comply with national labor laws, employ legally, do not employ child labor or forced labor, and provide institutional documents on employee human rights and labor rights; • Do not discriminate against employees based on gender, race, ethnicity, skin color, nationality, age, origin, physical condition, religious belief, marital status, etc.; • Regularly conduct training related to labor rights.
Business Ethics	• Comply with the anti-corruption, anti-bribery, anti-money laundering, and anti-unfair competition laws and regulations of the country and regions involved in the business; • Eliminate any form of corruption, embezzlement, bribery, fraud, and unfair competition; • When signing a product or service supply contract with Baidu, the suppliers must also sign the *Honest and Integrity Agreement* In 2023, the signing rate of the *Honest and Integrity Agreement* for suppliers involved in procurement reached 100%; • Develop anti-corruption related institutional documents and achieve certifications related to anti-corruption, such as ISO 37001; • Establish reporting channels and whistleblower protection mechanisms; • Regularly conduct training on business ethics; • Suppliers involved in commercial bribery, unfair competition, and other such malpratices will be uniformly included in the blacklist according to the *Baidu Management Measures on Partners Blacklist* and cooperation will be terminated indefinitely.
Health and Safety	• Develop occupational health and safety-related institutional documents and achieve related certifications, such as OHSAS 18001, ISO 45001, etc.; • Comply with information security requirements, protect users' personal privacy, personal information, and data security, and prevent data leakage.
Environmental Protection	• Production/workplaces must comply with laws, regulations, and standards related to environmental protection, pollution emission, biodiversity, and greenhouse gas emissions; • Obtain environmental management system certification, such as ISO 14001, etc.

[5] Baidu Sustainable Development Principles for Suppliers

18 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance   Building Trust   Nurturing Talent   Promoting Green Ideas   Improving Services   Contributing to Society   19

AI Ethics

Baidu believes that AI ethics serve as the foundation for a future intelligent society. The rapid rise of AI LLMs has brought new opportunities to the industry and society, while the widespread application of AI LLMs also presents many challenges in terms of technology ethics. Baidu firmly believes that the mission of artificial intelligence is to serve people. To this end, Baidu continuously improves AI ethical standards to ensure that AI technology brings welfare to humanity.

Principles of AI Ethics

Robin Li, the founder of Baidu, proposed the following four principles of AI ethics in 2018:

- AI should be "safe and controllable", which is the highest principle;

- AI's innovative vision is to promote more equal access to technologies and abilities for humanity;

- The value of AI is to empower mankind to learn and grow instead of surpassing and replacing mankind;

- The ultimate ideal of AI is to bring more freedom and possibilities to humankind.

These principles are designed to form a concept and set of rules that the whole society follows for all AI products and technologies, creating responsible and sustainable AI products and addressing the issue of harmonious coexistence between AI and humans.

AI Ethics Committee

In October 2023, Baidu officially established the Technology Ethics Committee[6], chaired by Li Zhenyu, Senior Vice President and CEO Assistant of Baidu.

> Baidu's Technology Ethics Committee is established to reduce the "black box risks" associated with AI algorithms and achieve more predictive AI governance.

Baidu's Technology Ethics Committee actively explores ethical governance in generative artificial intelligence areas such as LLMs, continuously improving AI ethical standards and regulations, upgrading Baidu's AI governance system, and firmly grasping the "steering wheel" of AI ethics.

[6] Baidu Established the Technology Ethics Committee

AI Ethics Practice

Baidu enhances exchanges and cooperation with industry organizations, research institutions, and other relevant parties, actively discussing and promoting the research of technology ethics norms and standards. It participates in and optimizes the formulation of standards in the field of AI ethics.

☑ AI Ethics Themed Training

In 2023, Baidu invited a professor from the Institute for Data Governance of China University of Political Science and Law to conduct themed training on "International Governance of Artificial Intelligence and Technology Ethics". The training delved into topics such as the legality and compliance of AI LLMs, fairness and unbiased operation, and AI accountability mechanisms. Targeted at Baidu's Technology Strategy Committee and T9 level (Chief Architect) and above employees, the training aimed to deepen the understanding of technology ethics from the top down, providing a more solid ethical foundation for the Company's technological development and strategic decision-making, and guiding the future direction of technology development.

Baidu is exploring the explainability, transparency, controllability, and fairness of AI algorithms in the development of AI technologies and products. Baidu has built a complete heterogeneous data set[7], optimizing AI fairness from the data acquisition aspect. Moreover, in the development and application process of large language model products, Baidu constantly improves information recommendation strategies to effectively avoid the problem of information cocoons, presenting a broader world to users.

In 2023, Baidu established multiple AI safety and ethics standards, covering areas such as algorithms, privacy protection, deep learning, autonomous driving, smart devices, system services, and more, aiming to build a healthy and trustworthy artificial intelligence industry development ecosystem.

[7] A collection of multiple relevant databases, where data sharing and transparent access can be achieved

20 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance   Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society   21
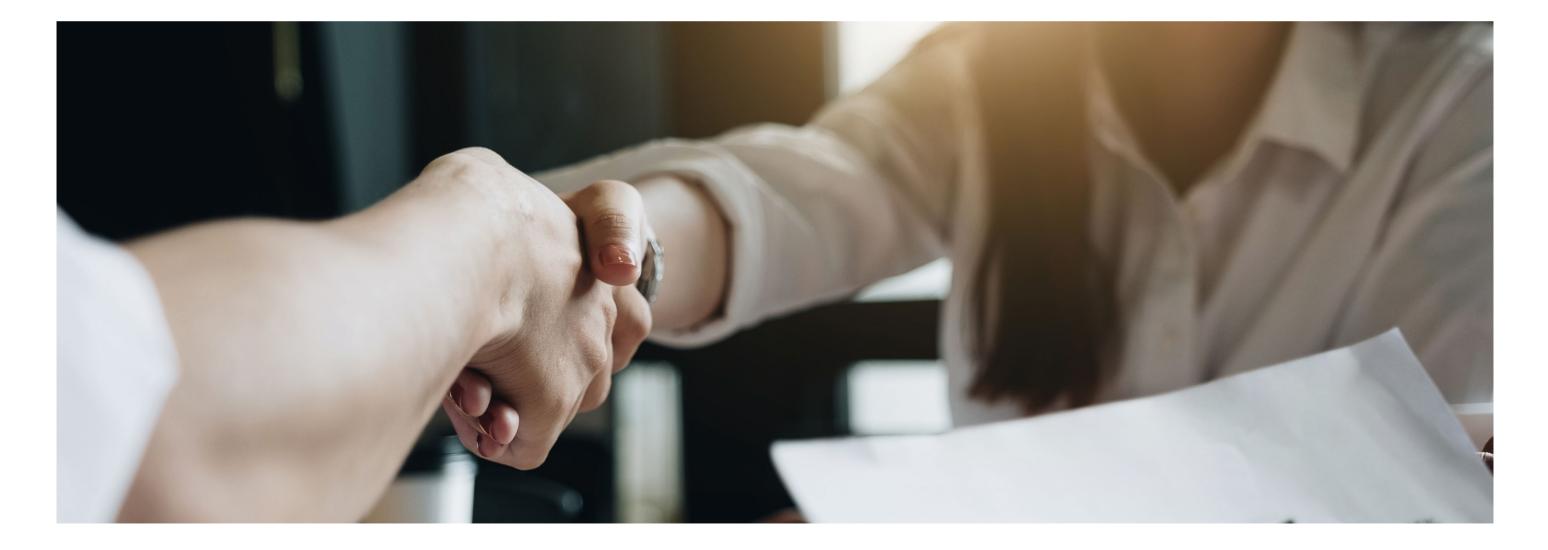
Human Rights Governance

As a signatory to the United Nations Global Compact, Baidu is committed to the Ten Principles and has developed the *Baidu Human Rights Policy* with reference to the *Universal Declaration of Human Rights,* the *International Covenant on Economic, Social and Cultural Rights*, the *United Nations Guiding Principles on Business and Human Rights* (UNGPs), and the *Declaration on Fundamental Principles and Rights at Work developed by the International Labor Organization. Baidu Human Rights Policy* covers employees, users, supply chain, community and other stakeholders, and applies to Baidu Inc., entities owned by Baidu, entities in which Baidu holds a majority stake, and organizations managed by Baidu. At the same time, we invite Baidu's partners and suppliers to comply with the policy and encourage them to develop a human rights protection system based on their own realities.

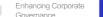Baidu Human Rights Policy and Tracking Indicators

Following the guidelines of UNGPs, we have developed the Baidu Human Rights Tracking Indicator System, which covers various human rights issues in Baidu's key business scenarios, such as the right to privacy and information self-determination, the right to freedom of opinion and expression, the right to equality and freedom from discrimination, the right to be free from harassment and violence, the right to fight corruption and human rights, the right to life and health, the right to social security, the right to just and favorable conditions of work and so on.

We collaborate with third-party human rights experts to regularly conduct a company-wide human rights impact due diligence, identify potential impacts and risks in order to avoid or mitigate potential human rights risks in the company and its value chains. At the same time, we provide or take fair and equitable remedial measures for identified adverse human rights impacts caused by business activities. Baidu discloses the risk identification, tracking and response for each human rights issue in this Report (Please see Appendix – Human Rights Tracking Indicators Index).

[2]

Building Trust

Baidu believes that security is the most important. We continuously develop advanced security assurance technologies, enhance the performance of security products, consistently strengthen information security management and privacy protection, and actively share our experience in security. Together with the industry, we aim to build a security ecosystem, living up to the trust of users and other stakeholders.

Baidu conducted emergency drills

11 times

Intercepted **7,639** attacks with the DDoS defense platform

Completed **15** rounds of offensive and defensive exercises and penetration testing

In 2023, Baidu participated in the establishment of **28** security standards in the field of LLMs

including

1
international standard

6
national standards

6
industry standards

15
group standards

90,000+

participants in Baidu Security Promotion Month activities

Baidu's large language model security solution won the

WitAwards 2023 Outstanding Cybersecurity Solution Award

Baidu Dianshi's achievements in terms of industry practice were selected as the

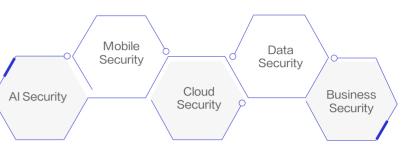**Big Data "Galaxy" Case in 2023 by the China Academy of Information and Communications Technology**

One of the Top 10 Data Management Brands of 2023

Security Management

Baidu establishes a security management concept across the entire company, a comprehensive security management system, and clear security management measures, ensuring the efficient operation of the Company's security system while also providing security management services externally.

Baidu's Security Management

Security Management Measures

Baidu continues to make efforts in cutting-edge fields such as vulnerability attack and defense and security testing to enhance its protection capabilities. We are also launching products to enhance the capabilities across various industries.

Infrastructure Security	• Baidu has improved a series of internal systems for all business lines, such as the *Baidu Data Management Measures,* the *Baidu Data Circulation Specification,* the *Baidu Data Authority Management Specification*, and the *Baidu Data API Management Specification* to standardize the data security organization and improve the risk management system.
Cybersecurity	• Full-flow protection IDS, host IDS, WAF system, firewall, anti-virus software, white box audit, and black box scanning systems are deployed at the network zone boundaries, as well as on the application layer, database layer, and host layer for effective identification of and protection against external attacks.
Code Security	• Strict code management authorities have been set up and a security coding guide has been prepared to regulate coding and enhance code security.
Cloud Security	Baidu takes AI as core and big data and machine learning as the foundation to build a defense-in-depth system: • **Cloud Network:** The intelligent threat-hunting platform is adopted to guarantee the security of customers' data assets on the cloud. • **Cloud Security:** HOSTEYE cloud server security protection product is used. • **Data Security:** Complete data security schemes and key products like intelligent data security gateway are provided to improve the overall data security management capabilities of users.
Product Security	Baidu has incorporated data security and privacy protection measures into product and service development: • **Before the launch of each product (including each iteration):** They must undergo tests of the Springer testing platform, federal multi-party security computing, and privacy benchmark tests. • **After the launch of each product:** They must go through security hole scanning. The Security Department and the Business Department will jointly follow up on the hole repair through the handling platform for uniform security hole operation & maintenance. The product then goes through internal security evaluation before accessing third-party SDK.

In 2023
• Baidu's DDoS protection service solution, offering the exceptional experience of "local + cloud" coordinated defense, won the 2023 CSA Security Golden Shield Award;
• The Springer security and privacy compliance platform has passed the CCRC "App Personal Information Security Test" capability verification.
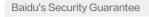
Security Management Services

Baidu Security builds a security ecosystem with AI as the core, providing exampling powers solutions to the entire industry.

Baidu Security Products

AI Security — Mobile Security — Cloud Security — Data Security — Business Security

Five Security Matrix

Baidu applies technologies such as blockchain, trusted computing, big data, and AI to develop data security and privacy protection products that cover the full life cycle of key aspects such as large language model training, deployment, and business operations. Based on our experience of security practice in the large language model domain, we empower industries such as finance, government affairs, automotive, education, and the Internet.

Data Security Protection Products

Dianshi Federated Learning Platform	• Supported by technologies such as Multi-party Computation (MPC), Federated Learning (FL), and Differential Privacy (DP), the platform protects privacy throughout the entire process by strictly limiting the data region.
Dianshi Confidential Computing Platform	• This platform constructs virtual security zones based on hardware and maintains close to full hardware performance while using encrypted computation. It implements joint computing using both machine learning and deep learning algorithms.
Dianshi Data Security Sandbox	• This platform, driven by authority and access control, data desensitization, sampling, and other technologies, utilizes multiple isolation measures to construct data security zones, separating the real data environment and the model basic debugging environment, allowing the data owner to provide access in a one-way manner to the data processor.

✍ **Baidu Dianshi Selected as the Big Data "Galaxy" Case in 2023**

To ensure the privacy and security of tobacco industry data elements during their transmission, Baidu Dianshi applied Federated Learning on the Qiancaiyun platform[8], allowing all participating parties to explore the value of data together while ensuring data security. The achievements concerning the *Research and Application of Privacy Computing Technology in the Digital Finance of Guizhou Tobacco Commercial Supply Chain* were selected as the Big Data "Galaxy" Case in 2023 by the China Academy of Information and Communications Technology.

[8] Qincaiyun, a comprehensive big data platform for the tobacco industry, integrates key data elements of the industry, such as production, sales, consumption, and other information.

26 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 27

Security Guarantee

Baidu has established a comprehensive information security protection system, from aspects such as policies, processes, certification, and auditing, establishes full security protection mechanisms to ensure the continuity of organizational business.

Baidu's Security Guarantee

Security Emergency Response Process

Baidu has established internal regulations such as the *Baidu Data Classification Specification,* the *Detailed Rules on Handling of Security Events of Baidu,* the *Baidu Data Security Emergency Response Process,* the *Data Security Emergency Plan*, and the *Baidu Information and Product Security Punishment Measures*. These regulations help standardize the definition and classification of security incidents, the responsibilities of security management, and the punishment mechanisms for security incidents at all levels, ensuring that security incidents are dealt with seriously according to their severity.

Security Emergency Response Processes

Monitoring and Response	• The emergency response team, after confirming the security event through evaluation, will immediately contact related business sides to take effective measures to handle the emergency and stop loss.
Analysis and Reporting	• The emergency response team conducts source tracing analysis to investigate situations such as intrusions or information leakage, and after clarifying the scope of impact, they simultaneously carry out control over the impacted area. They assess and classify the security incident, and based on the results, report the security incident.
Recovery and Review	• The emergency response team collaborates with the business side to make rectifications, clarifying short-term solutions as well as medium and long-term governance plans. The security side verifies and tracks the implementation of the rectification plans.

Security Audit

Baidu actively carries out internal and external security audits to guarantee the effectiveness and reliability of our security management system. In 2023, Baidu focused on conducting compliance audits in the fields related to data security and personal information protection, with a key assessment of the Company's overall governance structure, data classification and grading, and corresponding security control measures and response. All risks were properly handled.

Internal:

The Internal Audit Department conducts regular evaluations and audits on the risks of personal information data and high-sensitivity data.

Security Audit

External:

Baidu appoints third-party institutions with professional qualifications to audit and evaluate the Company's data security policies, systems, processes, and governance.

Personal Information and Privacy Protection

Baidu continuously improves the personal information and privacy protection system and prevents the leakage of personal information through the development of cutting-edge protection technologies, regular certification and audit, and improvement of internal management.

Baidu Personal Information and Privacy Protection Meassures

Privacy Protection Measures

Baidu continuously updates the privacy protection technology. By conducting regular privacy certification and enhancing the protection for key groups of people, we protect personal privacy information throughout its life cycle.

Privacy Protection Technology

Baidu integrates personal information protection into the entire process of product and service research, development, and launch, enhancing management systems, developing cutting-edge technology, and conducting training and publicity. We incorporate the concept of user privacy functionality into product development and conduct real-time monitoring and assessment of security risks.

In 2023, Baidu launched a database middleware service, which provides full life cycle management for data applications and authorities through a data management platform. This service currently includes ERNIE Bot, Netdisk, Corporate Netdisk, Mobile Baishitong, Mini Program, Baidu Cloud Push, Baidu Open Platform for Mobile User Growth, and other services, with daily authentication requests exceeding 600 million times.

Highlight Features of Data Management Platform

Authority Control	Authentication Capability	Encryption Protection
Control database authorities at the field or row level	Verify specific access instructions based on user identity, ensuring data access for the right user and the right authority	Enhance the functionality of data desensitization and data encryption

We replace sensitive personal information (such as IDs) with tokens[9] that do not contain user personal information through means such as data encryption, and by implementing data fencing controls, we achieve protection of the raw data.

In 2023

• Baidu's large language model security solution won the WitAwards 2023 Outstanding Cybersecurity Solution Award

• The "Mobile Network Cross-Domain Intelligent Troubleshooting Knowledge Graph Case" submitted by Baidu, China Unicom, and Nokia Bell Labs was selected as an "Outstanding Case of Trusted AI Knowledge Computing Application in 2023"

[9] A digital form of representation. In large language model training, each token is associated with a unique numerical ID, and the model distinguishes different tokens through the ID to encode and decode the input text.

28 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 29

Third-Party Privacy Protection Requirements

Regarding third-party data management, all data provided by Baidu are for the purposes necessary to complete the service. Personal information will never be rented, sold, or provided to third-party users for purposes beyond completing transactions/services. Please visit the official website for Baidu's third-party privacy protection requirements.

Personal Information Protection Training

Baidu actively conducts training on security culture, enhances the awareness of personal information protection among all employees and partners, and empowers the healthy development of the digital ecosystem in all aspects.

Employee

Training for all employees: Baidu provides comprehensive information security training and assessments for part-time and outsourced employees and conducts induction training for new employees.

Special activities: Around the three themes of "cybersecurity, data security, and privacy protection", Baidu promotes the security compliance concept and knowledge of information security.

Emergency drills: In 2023, Baidu conducted 11 emergency drills, intercepted 7,639 attacks with the DDoS defense platform, and completed 15 rounds of offensive and defensive exercises and penetration testing. Based on the results of the drills, relevant data systems were optimized and emergency plans were compiled.

Supplier and Partner

Training: Baidu provides free resources and course training services related to data security and privacy protection to stakeholders such as contractors, suppliers, and outsourced employees.

Assessment: Baidu established a data and privacy security assessment and punishment mechanism.

✎ "Ensuring Security with Baidu" Security Publicity Month

In 2023, Baidu launched the Security Publicity Month activity themed "Ensuring Security with Baidu", with over 90,000 participants. The activity was selected by the China Cybersecurity Industry Alliance (CCIA) as one of the *Data Security and Personal Information Protection Social Responsibility Practice Cases*. It was also one of the first domestic benchmark cases during the China Cybersecurity Week 2023.

Co-Building a Security Ecosystem

Baidu actively participates in co-building a security ecosystem, collaborating with numerous outstanding enterprises and research institutes to develop industry standards and enhance the security system. Baidu has participated in the establishment of 365 standards, including 12 international standards, 101 national standards, 127 industry standards, 123 group standards, and 2 local standards. In 2023, Baidu issued 41 standards, covering SDK security, personal information protection, AI security, etc.

Security Standards Baidu Helped Developed and Issued in 2023

IEEE-P2952 "P2952-Standard for Secure Computing Based on Trusted Execution Environment"
GB/T 42888-2023 "Information Security Technology—Assessment Specification for Security of Machine Learning Algorithms"
GB/T 35274-2023 "Information Security Technology—Security Capability Requirements for Big Data Services"
GB/T 43435-2023 "Information Security Technology—Security Requirements for Software Development Kit (SDK) in Mobile Internet Applications (App)"
GB/T 42460-2023 "Information Security Technology—Guide for Evaluating the Effectiveness of Personal Information De-identification"
GB/T 42574-2023 "Information Security Technology—Implementation Guidelines for Notices and Consent in Personal Information Processing"
GB/T 29246-2023 "Information Security Technology—Information Security Management Systems—Overview and Vocabulary"
GB/T 42884-2023 "Information Security Technology—Guidelines for Life Cycle Security Management of Mobile Internet Applications (App)"

Baidu actively participates in and promotes the establishment of security standards in the field of large language models. In 2023, Baidu participated in the development of 28 security standards in the field of large language models, including 1 international standard, 6 national standards, 6 industry standards, and 15 group standards.

By the end of 2023, the Company participated in the development of over 240 standards, involving multiple business directions such as personal information protection, data security, and anti-fraud, and led the development of several standards in areas such as personal information protection in maps and large language models.

Nurturing Talent

[3]

Baidu values the growth of its employees with the Company. With a comprehensive talent selection, development, and welfare system, we fully unleash the "power of AI" with the strong talent tool. Furthermore, we are committed to creating a healthy workplace filled with opportunities and care for employees.

Female representation of

44.5%

in management

China Artificial Intelligence Industry Innovative Talent Competitiveness Report (2023) – Champion of

"Innovative Talent of AI Industry"

Employee training coverage rate of

100%

38.5

training hours per employee

Forbes——

2023 China's Most Digitally Responsible Employer of the Year

Certified to

ISO 45001 Occupational Health and Safety Management System

Baidu Comate, a native R&D tool, has improved R&D personnel's average efficiency by

11.6%

year-on-year

85%

of employees provided positive feedback in the employee engagement survey

32 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 33

Talent Structure

Diversified Talent Structure

Indicator Name	Category	Unit	2023
Number of Employees	/	Person	33,700
Number of Employees by Gender	Male	Person	20,758
	Female	Person	12,942
Number of Employees by Age	30 and below	Person	16,445
	31–40	Person	15,296
	41 and above	Person	1,959
Number of Employees by Rank	Senior manager	Person	18
	Middle manager	Person	193
	General staff	Person	33,489
Female	Female representation in management	%	44.5
	Female representation in middle management	%	27.5
	Female representation in senior management	%	27.8
	Female representation in top management	%	22.2
	Female representation in revenue-generating management	%	56.2
Minority Groups	Employees with disabilities	Person	20
	Employees from China's Hong Kong, Macao and Taiwan regions	Person	41
	Employees from foreign countries	Person	81
	Employees from ethnic minority groups	Person	1,880
Local Recruitment	South Korea	%	100
	The U.S.	%	17.6
	Japan	%	57.1
	Thailand	%	33.3
Temporary Worker	Part-time employees	%	6.9
	Contractors/consultants	%	0.01

Employee Turnover

Indicator Name	Category	Unit	2023
Employee Turnover[10]	Employee turnover rate	%	27.8
Employee Turnover Rate by Gender	Male	%	28.0
	Female	%	27.3
Employee Turnover Rate by Age	30 and below	%	30.8
	31–40	%	23.9
	41 and above	%	32.3
Employee Turnover Rate by Region	Chinese mainland	%	27.7
	China's Hong Kong, Macao and Taiwan regions	%	26.8
	Overseas	%	40.7

[10] Employee Turnover Explanation: In the context of the global economy, Baidu has continuously adapted to market development and has achieved certain results in its talent management strategy. With a turnover rate of 30.1% in 2022, Baidu's human resources department implemented positive and effective initiatives for nurturing and retaining talents. These efforts resulted in a marked reduction in employee turnover, which in turn bolstered the company's consistent business growth.

34 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 35

Talent Selection

Talent Retention & Selection

Baidu continuously optimizes talent selection and retention plans and technologies. We match high-quality talent from multiple perspectives to support the Company's long-term development and pioneering exploration in fields such as AI-native. In 2023, Baidu added new AI-related positions such as data science engineers, data labeling algorithm engineers, and model compression engineers. We created 16,406 new job opportunities for society and 1,130 job opportunities for graduates.

Talent Retention and Selection Programs

Elite Internship Program	The program aims to establish an AI-native mindset from 0 to 1 and nurture talent for the era of LLMs.
Campus AIDU Program	The program aims to attract top AI talent from college campuses and offer high-quality team guidance, professional training, and competitive salaries.
Management Trainee Program	The program aims to recruit outstanding young talent and enable them to grow rapidly through such means as two-year mentorship, rotation development, and specialized training. To date, the program has recruited over 30 management trainees.
Top Talent Program for Autonomous Driving	The program aims to recruit top talent specializing in autonomous driving globally. It also gives talent support to Baidu in actively exploring next-generation autonomous driving technologies and maintaining its leading position in the R&D of autonomous driving technologies.

Talent Retention and Selection Tools

Outstanding Talent Pool	In 2023, Baidu Talent Intelligence Center collaborated with the talent recruitment team to build an outstanding talent pool. Over 1,000 refined portraits of high-end talent were constructed, aiding the Company in matching multidimensional high-quality talent.
Intelligent Recruitment System	The intelligent recruitment system provides functions such as resume analysis, resume profile, candidate-job matching, talent assessment, and intelligent written examinations/interviews. The system intelligently analyzes the fluctuation of AI talent supply and demand in the market to aid recruitment decision-making.

Baidu Establishes AI Talent Portrait System

In 2023, Baidu delved deep into the demand characteristics of AI talent and constructed an AI talent assessment model. Based on the 3E talent labeling system[11], the model consists of five dimensions, namely educational background, professional knowledge, AI skills, AI experience, and professional competency. Leveraging our self-developed AI algorithms and big-model technologies, we conducted in-depth mining and analysis of employee data to generate AI profile reports for key talent. This initiative helps to identify tens of thousands of key talents.

Baidu prioritizes fairness and transparency in the recruitment process. During interviewer training, we emphasize that interviewers should impartially screen and evaluate candidates and respect their diversity. Interviewers should not discriminate against candidates on the grounds of factors such as salary, gender, age, financial status, marital status, appearance, religious belief, political affiliation, and sexual orientation.

Diversified Talent Selection and Retention Policies and Mechanisms

[11] The 3E talent labeling model is comprised of Evidence (objective facts, outcome-oriented), Engagement (organizational role, behavior-oriented), and Engine (professional quality, assessment-oriented). It covers various talent management scenarios such as talent inventory, promotion management, organizational assessment, and talent identification.

36 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 37

Talent Empowerment

Baidu utilizes AI to reshape talent training and development models and relies on top talent teams to tackle complex challenges.

Promotion & Development

Baidu encourages cross-level or exceptive promotion and offers various development channels and internal transfer opportunities.

Baidu's Talent Promotion and Career Development Mechanisms

Hierarchic Governance Mechanism of Talent Cultivation

Meanwhile, Baidu empowers the promotion and development of AI talent through a flexible talent mobility mechanism. We encourage outstanding employees to participate in major AI projects and offer more opportunities to excellent AI talent through project performance appraisals, expert assessments, and other methods.

Talent Training

Baidu's Talent Training Platform and Training Mechanisms

Baidu offers a comprehensive training package for all employees, covering professional qualities, leadership, technical skills, and job-specific competencies. This initiative is designed to improve the quality and job proficiency of AI talent. We also empower employees to enhance their core competitiveness, including job abilities, AI skills, and industry insights. In 2023, our internal learning platform "Online Baidu School Learning Platform(下文简称 Online Baidu School)" added 7 new sections related to AI LLMs and provided 210 courses[12] to enrich AI learning resources for employees.

Baidu has established a variety of training programs tailored to employees at different positions and career development stages.

Fresh Graduate Training	Baidu offers various training programs for new recruits to facilitate their transition from the campus to the workplace, integration into the corporate culture, and stimulation of AI awareness. These programs include Baidu New Employee Orientation, mentorship, and the "AI to the Future" plan. Additionally, each business group within Baidu implements specialized training plans for graduates, such as the MEG Hongdu Program, TPG Zhixin Program, and ACG Tengyun Program. These programs aim to enhance the professional capabilities and teamwork awareness of college recruits.
Manager Training	For managers, Baidu provides leadership development training programs such as Qihang (Starting to Lead), Qingzhou (Sailing for Leadership), and Linghang (Navigating Through Management). These programs combine into a sound leadership development system, thus ensuring that managers acquire the leadership qualities for innovation, change, and team development.
Professional Training	In 2023, the Baidu Institute of Technology (BIT) organized a series of AI-themed training sessions and activities for employees in the "TPE" sequence, aiming to improve AI-native thinking of all employees. • LLMs and AI-native training: Various training and learning activities were organized, including basic knowledge of LLMs, Prompt, and AI-native applications. These activities had a total of over 450,000 enrollments. • 27th Hackathon: Focusing on the "Applications of LLMs", this event attracted 823 employees and gathered 435 creative ideas. It effectively facilitated innovative applications of LLMs in business. • Engineers' Day: Various activities such as the coding competition, the AI conference, and the efficiency forum were conducted to help engineers leverage AI capabilities to reshape R&D processes. These initiatives advocated for a new paradigm of AI-native R&D in the era of LLMs.
Joint Training and Degree Certification	Baidu collaborates with Renmin Business School to offer in-service graduate studies and tuition discounts to all employees. This partnership is designed to support the long-term career development of employees. In 2023, a total of 21 employees enrolled in the program.

[12] The courses cover fundamental applications of LLMs, first principles of LLMs, AI business mindset, and overview of AI papers.

38 | Baidu 2023 Environmental, Social and Governance Report

| Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 39

Baidu's First Prompt Contest

Baidu planned its first Prompt Contest, which includes 11 segments in various business scenarios. The competition attracted 238 employees across 88 departments, who submitted 38 Prompt templates. The produced works were trialed by 1,847 people for 7,725 times. 40% of the participants were non-R&D sequence employees, which means that more diverse roles can develop AI-native products through Prompt.

Baidu New Employee Orientation

On-board training is the first "mandatory course" for new employees. The offline training takes the form of "point-based competitions". Through means such as individual task, team task, and camp-closing examination, the program helps new employees gain a deep understanding of Baidu's values and culture. It also aims to foster strong teamwork skills and enhance overall work efficiency.

Baidu New Employee Orientation training Site

Compulsory Courses for New Technicians

For technical talent, the Coding Boot Camp is a must-have for new employees in the "T" sequence. This boot camp aims to help new hires quickly familiarize themselves with the tools, platforms, and security protocols offered by Baidu. After completing the training, trainees will raise their engineering awareness, solidify basic development skills, and improve R&D efficiency. The program consists of "pre-employment", "introduction", and advancement". It targets the "T" sequence employees before boarding, during their first week of service, and within the first six months of employment. Through methods such as online course learning and certification exams, the program facilitates new employees' adaptation to their roles and enhances their professional skills.

Diversified Training

In alignment with the *Baidu Human Rights Policy,* the *Baidu Employee Manual* and other relevant systems, Baidu provides all employees equal access to training. For female managers, Baidu has set up the Baidu Women's Leadership Forum to assist female employees in achieving better career development. For employees from different countries, regions, ethnicities, and genders, Online Baidu School offers a learning module on the "Baidu Diverse and Inclusive Workplace Culture". This initiative aims to foster an equal and inclusive workplace.

Training Performance

In 2023, Baidu allocated approximately RMB 20 million to support employee training and talent development. These training budgets were standardized to ensure comprehensive training and growth opportunities for employees in all aspects. We achieved 100% coverage of employee training, thus ensuring that employees have all-round access to training and growth.

Performance of Employee Training in 2023

Indicator	Category	Unit	2023
Percentage of Employees Trained	/	%	100
Percentage of Employees Trained by Gender	Male	%	100
	Female	%	100
Percentage of Employees Trained by Rank	Senior manager	%	100
	Middle manager	%	100
	General staff	%	100
Average Number of Training Hours of Employees	/	Hour	38.50
Average Number of Training Hours of Employees by Gender	Male	Hour	38.09
	Female	Hour	39.17
Average Number of Training Hours of Employees by Rank	Senior manager	Hour	31.15
	Middle manager	Hour	36.35
	General staff	Hour	42.17

40 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 41
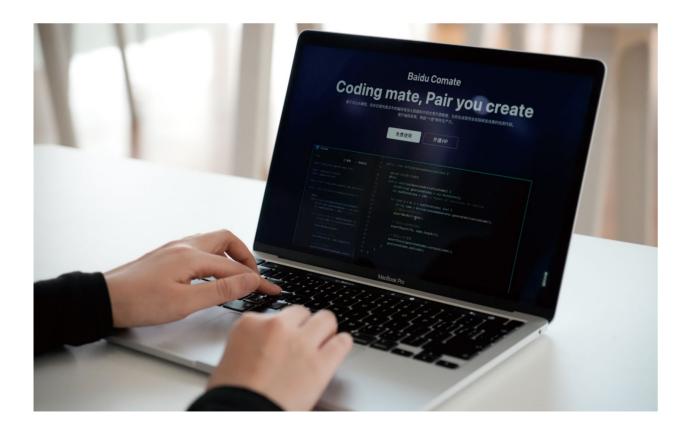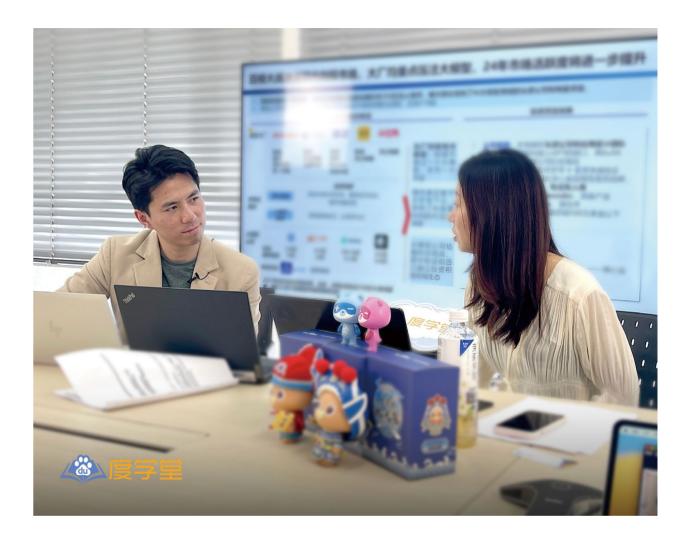
Digital Empowerment

Baidu leverages its self-developed AI tools to help employees improve work and learning efficiency, thus facilitating their career development and personal growth.

☑ Comate Boosts Work Efficiency for Employees

By automatically generating code with AI, Baidu's Comate provides robust support for the procedural scenario of big-model R&D and improves the R&D efficiency of employees. In 2023, Baidu's technical staff overachieved annual demand by 11.6% compared to 2022 with the aid of the Comate platform.

Comate Platform	The Comate platform supports AI-powered code generation. The code adoption rate of Comate has reached 80%, and group-wide AI-generated codes have accounted for over 20%.
Comate Stack	It provides support for AI-native development tools in four scenarios: SFT data flow closed loop, Prompt development and release process, LLMs and AI application evaluation, and low-code AI application development platform. In 2023, Comate Stack was used by over 10,000 internal users of Baidu.

☑ Online Baidu School Improves Training Efficiency with AI LLMs

Baidu's "Online Baidu School" achieves cost reduction and efficiency improvement in employee training through digital means. It has greatly improved the efficiency of online learning and boosted employee productivity.

Lecture of AI Digital Human	Online Baidu School utilizes AI Digital Human to replace human lecturers, saving time by avoiding repeated course recordings.
AI Intelligent Search and Summary	With intelligent search and summary features embedded into online courses, Baidu's employees can effectively identify and filter through massive course content and acquire knowledge and skills more efficiently.

42 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 43

Talent Protection

Baidu always respects and protects the rights and interests of all employees. We strive to create a fair, diverse, respectful, caring, and positive workplace.

Protection of Rights and Interests

Baidu highly prioritizes safeguarding the human rights of employees and prohibiting illegal employment practices such as forced labor and child labor. We also strictly prohibit harassment, discrimination, and any other infringements on human rights in the workplace. By doing so, we fully protect the legitimate rights and interests of employees.

Baidu Human Rights Policy and Human Rights Tracking Indicators

Salaries & Benefits

While continuously improving its salary competitiveness, Baidu has also implemented an incentive model through which both short-term and long-term incentives are provided to employees. In this way, all employees are motivated to create and share success with the Company. In 2023, Baidu's short-term incentive policies covered all employees, while long-term incentive policies, such as stock options, covered nearly half of full-time employees.

Baidu's Employee Salaries and Performance Incentive Mechanism

Non-Remunerative Benefits & Care

Baidu has developed a comprehensive non-remunerative benefits system to care for employees across various aspects such as life, education, family, and healthcare. These efforts have enhanced employees' sense of belonging, value, and happiness.

Baidu's Employee Non-Remunerative Benefits and Employee Care Measures

Health & Safety

Baidu has established a series of risk prevention and emergency measures and obtained ISO 45001 Occupational Health and Safety System certification. We also make every effort to prevent work-related injuries and fatalities, organize psychological counseling and physical exercise activities, and alleviate employees' occupational and health pressures. These measures aim to safeguard their health and safety to the fullest extent possible.

Baidu's Employee Health and Safety Management Measures

Employee Communication & Feedback

Baidu cares deeply about the opinions and feelings of its employees and advocates a culture of "being straight to the point" to foster a transparent, inclusive, and open workplace. In 2023, we conducted an employee engagement survey covering all staff members. 85% of employees provided positive feedback in the questionnaire, which indicates that overall satisfaction and engagement are increasing year by year.

✎ Director Meeting

In 2023, the Company held 3 director meetings to communicate the Company's strategic directions to employees, with a total of over 300,000 views. Additionally, key leaders from various departments and business leaders actively shared their ideas on strategic progress, business development, while listening to the voices of front-line employees, and addressing their concerns on occasions such as all-staff meetings and internal communication meetings. Relevant viewpoints and speeches were dynamically published on the internal network to facilitate thorough communication between employees and management.

Employee Reporting Channel

Baidu encourages employees to provide feedback on the difficulties and issues they encounter in the workplace through various channels and actively speak out against unfairness. The *Baidu Employee Manual* details reporting and complaint channels available for employees, including email addresses, postal addresses, the location of business ethics suggestion boxes, and contacts of in-person reporters for building a clean workplace.

Baidu's Employee Communication and Appeal Mechanisms

The average PUE of Baidu's data centers[13]

1.19

with an annual average minimum of

1.11

Baidu launched the Energy Management Monitoring Platform

for the first time

The consumption of renewables

52,179,275.0 kWh

The annual electricity saving of "Lingxi" cooling system in Baidu's data center

26,000 kWh

Baidu Campus, Baidu Technology Park, and Baidu Kuike Technology Building obtained

ISO 50001
ISO 14001 certifications

CDP Climate Change rating: **B**

"Zero Carbon Conference"

Baidu World 2023

The 4th IFF
Global Green Finance Award

4

Promoting Green Ideas

Baidu actively responds to the international goal of the *Paris Agreement* and the national "30-60" dual carbon targets. We are committed to achieving green transformation through AI and empowering users, industries, and society for green development.

[13] Comparing the data from 2022, the main factors for the change in Baidu's PUE are as follows: 1) Global warming, with frequent scorching weather, necessitates a greater need for server cooling; 2) The training of large language models has resulted in higher electricity consumption; 3) As Baidu's business has scaled, the electricity required for server operations has also increased accordingly. In response to these factors, we are committed to optimizing and harmonizing the use of energy with our business growth, aiming to reduce costs and increase efficiency, ensuring sustainable development.

46 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 47

Addressing Climate Change

Climate change is a common challenge for humanity, and it requires concerted efforts from all sides to address the climate risks. Baidu fully undertakes the corporate responsibility in addressing climate change by identifying climate risks in its operations and seeking opportunities for sustainable development.

Governance

With reference to the framework and recommendations outlined in the *International Financial Reporting Standards (IFRS) S2 Climate-related Disclosures*, Baidu has established a climate change management system with its Board of Directors as the highest leadership body. A special team for climate-related risk management has been set up to implement the system and progressively integrate climate change into corporate governance.

Board of Directors	• Guiding and approving the overall goal and implementation of plans for climate change risk reduction
ESG Committee	• Providing suggestions on climate change response and setting relevant objectives and action pathways
ESG Working Group	• Supervising the implementation and execution of climate-related work
Special Team for Climate-Related Risk Management	• Conveying the latest climate-related risk information and response strategies to each department • Formulating and implementing response plans

Strategy

Since we released the environmental goal of achieving carbon neutrality by 2030 in 2021, Baidu has established six emission reduction pathways[14] and initiated green practices. We continuously improve energy efficiency and increase the use of clean energy. Moreover, we leverage AI technology to empower the green development in various industries.

Baidu's Six Emission Reduction Pathways

Building green data centers	Constructing smart office buildings	Carbon offset
Whole-chain carbon reduction technologies empowered by intelligent transportation	Energy-efficient and carbon reduction technologies empowered by Baidu AI Cloud	Partnership mechanism for green supply chain

[14] Baidu's Six Emission Reduction Pathways

Risk Management

In 2023, along with the existing climate change risk identification list, Baidu took into account potential impacts arising from the development of LLMs. Based on the climate change risks identified, Baidu has formulated specific countermeasures.

Baidu's Climate Change Risks and Countermeasures

Risk Type	Risk Description	Countermeasure
Policy and Legal Risk	• International regulatory agencies and capital market rating indexes have increasingly raised the disclosure requirements for environmental information of enterprises.	**Strengthening environmental information disclosure** • Researching policies for risk control, strengthening communication with stakeholders, and responding to their requirements; • Implementing refined energy management, automatically collecting energy efficiency data, and regularly disclosing the data; • Disclosing the proportion of green technologies and clean energy used to achieve energy conservation and efficiency improvement and reduce carbon emissions; • Participating in capital market evaluations such as CDP to enhance environmental disclosure. In 2023, Baidu was rated B in the climate change survey of CDP.
Technical Risk	• Amidst the national push for carbon peaking and carbon neutrality goals, there is a surge in low-carbon technology, which is intensifying the pressure on Baidu to advance our research and development efforts in energy conservation and environmental protection technology. Additionally, it necessitates a heightened investment focus on energy conservation and emission reduction initiatives. • The rapid development of LLMs has remarkably increased the demand for computing power, resulting in rising energy consumption, and posing more severe challenges to R&D of Baidu's green data centers.	**Accelerating low-carbon technology transition** • Exploring the integration of AI, power supply systems, cooling systems, and computing power, and considering the adaptability of technical solutions; • Maximizing the use of renewable energy sources such as wind and solar energy in data centers, and adopting energy-efficient equipment; • Conducting predictive analytics and automated scheduling through AI to effectively coordinate resources and enhance overall computing efficiency; • Baidu data centers have implemented various intelligent cooling solutions and systems, such as the "Iceberg" transformer cooling technology, "Lingxi" liquid cooling technology, and immersion liquid cooling technology; • In 2023, the average PUE of Baidu's data centers was 1.19, with the annual minimum of 1.11.
Market Risk	• As the public's demand for low-carbon consumption increases, if Baidu's existing data centers and products such as Xiao Du smart homes fail to effectively reduce carbon emissions in the production and operation process, it will directly lead to a lower demand for related products and services from downstream customers due to a low-carbon consumption preference, resulting in a decline in business revenue.	**Responding to market demand for low-carbon consumption** • Leveraging years of AI technology development and launching green solutions such as intelligent heating, smart water management, and intelligent transportation for traffic and high-emission enterprises, and assisting clients in achieving green and low-carbon transformation; • Building green data centers, and committing to providing customers with 100% renewable energy AI cloud services; • Optimizing the packaging materials of Xiao Du smart homes and adopting renewable and recyclable materials to meet the demand for green consumption.
Reputational Risk	• Potential concerns will be raised by customers, investors, and the public of "greenwashing behavior" if Baidu only releases the climate strategy or relevant statement without concrete actions, thus undermining the corporate image.	**Managing reputational risk** • Regularly disclosing emission reduction measures and results according to the six emission reduction pathways, and further formulating emission reduction targets and corresponding target attainment approaches.
Acute Risk	• Extreme weather events such as typhoons and extreme precipitation may disrupt the daily operations of the data centers and the Company, thus negatively affecting the business operation and corporate image.	**Reducing the impact of extreme weather** • Completing the pre-analysis of local natural disasters according to the location of the data centers, so as to avoid the areas being affected by extreme weather in advance and protecting the safety of the data centers; • Formulating emergency management plans for coping with extreme natural disasters, contingency plans for natural disaster prevention and control, and emergency measures for unexpected incidents; • In 2023, Baidu's data centers formulated the *G-IDC-STA-OP-005-Baidu Data Center Emergency Management V1.0*, which specified emergency plans for various extreme scenarios such as public health emergencies, fires, typhoons, earthquakes, safety accidents, power outages, and flooding. Regular drills involving all staff were also conducted.
Chronic Risk	• Changes in climate and precipitation patterns may lead to risks such as continuous high temperatures and water scarcity, which may increase the water use cost for data centers' operations and pose greater challenges to the cooling and water-saving technologies.	**Addressing changes in climate and precipitation patterns** • The self-built data centers are preferentially built in the area where natural cold source technology can be efficiently utilized with abundant green energy (such as wind energy); • Continuously developing liquid cooling technology to reduce energy consumption of mechanical refrigeration.

50 | Baidu 2023 Environmental, Social and Governance Report

| Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 51

Green Finance

Baidu actively explores the use of green financial products to ensure the stable supply and delivery of green technology R&D funding. Since the successful pricing and issue of a USD 1 billion sustainable development bond, Baidu has set up a working group for sustainable finance. In alignment with the sustainable financing framework and the United Nations Sustainable Development Goals (SDGs), Baidu continuously contributes to 10 sustainable issues, including affordable and clean energy, sustainable cities and communities, and good health and well-being.

In 2023, Baidu won the "Annual Award" of the IFF Global Green Finance Award in recognition of its positive actions and leadership in energy conservation, carbon reduction, environmental protection, and social green development facilitated by green bonds.

Metrics and Targets

Since the release of its carbon neutrality target[15], Baidu has actively conducted greenhouse gas (GHG) emissions inventory and refined the management of energy consumption and carbon emissions. We have developed action plans for carbon reduction and advanced our efforts in reducing GHG emissions.

Baidu's GHG Emissions[16]

Scope	Unit	2021	2022	2023
Scope 1 GHG Emission[17]	tCO₂e	16,407.0	20,320.9	20,039.0
Scope 2 GHG Emissions (based on location)[18]	tCO₂e	601,740.2	801,942.2	903,195.5
Scope 2 GHG Emissions (based on market)[19]	tCO₂e	–	–	851,017.7
Scope 3 GHG Emissions[20]	tCO₂e	1,173,460.6	1,299,528.5	1,452,401.7
Total GHG Emissions (based on location)	tCO₂e	1,791,607.8	2,121,791.6	2,375,636.2
Total GHG Emissions (based on market)	tCO₂e	–	–	2,323,458.5
Intensity of GHG Emissions (based on location)	tCO₂e / RMB 1 million	14.4	17.2	17.6
Intensity of GHG Emissions (based on market)	tCO₂e / RMB 1 million	–	–	17.2

Green Operations

Baidu actively engages in green actions. We continuously explore pathways to conserve energy and reduce emissions through every practical action. We are committed to increasing the use of new energy and promoting green culture.

Environmental Performance

In 2023, Baidu initiated carbon checks for 33 operating sites, including the office buildings and data centers. For details of the carbon checks, please refer to "*Appendix – Carbon Emission Accounting Methods*".

Baidu's Energy Consumption

Indicator	Unit	2021	2022	2023
Diesel	t	184.0	118.5	81.1
Gasoline	kg	8,712.7	377,725.3	8,171.2
Natural Gas	10,000 m³	260.0	267.2	277.3
Electricity	MWh	673,829.3	902,076.0	1,020,507.6
Purchased Heat	GJ	110,680.7	447,437.2	456,329.5
Renewable Energy	kWh	3,049,469.3	6,074,031.0	52,179,275.0

[15] For details, please visit the Baidu Environmental Governance Measures

[16] Baidu's GHG emissions (Scope 1, 2 and 3) in 2023 were verified and certified by third-party professional institutions

[17] Direct emissions, including lost and fugitive emissions from stationary combustion sources, boilers, kitchen equipment, refrigerators, etc.

[18] Indirect emissions, involving emissions from purchased electricity, steam, and heating

[19] Indirect emissions, involving emissions from purchased electricity, steam, and heating

[20] Other indirect emissions, involving employee commuting and power consumption of rented data centers

52 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 53

Waste Produced by Baidu

Indicator	Unit	2021	2022	2023
Total Non-Hazardous Waste[21]	t	6,939.0	5,273.8	5,105.2
Intensity of Non-Hazardous Waste	t/person	0.2	0.2	0.2
Total Hazardous Waste[22]	t	27.5	6.9	26.6
Intensity of Hazardous Waste	t/person	0.0008	0.0002	0.0008

Baidu's Water Consumption

Indicator	Unit	2021	2022	2023
Total Water Consumption	t	1,576,309.8	1,997,531.4	2,071,681.1
Intensity of Water Consumption	t/person	43.3	57.4	61.5
Wastewater Discharged	t	584,399.9	903,837.2[23]	698,859.4
Rainwater Collected	t	6,640.0	5,210.0	5,551.0

[21] Including office paper, waste cartons, books and newspapers, scrap metal, waste plastic, kitchen waste, and other non-hazardous wastes.

[22] Including used lamps, electronic equipment, toner cartridges, and batteries. In 2022, Baidu sold obsolete electronic equipment to the second-hand market, greatly reducing emissions from hazardous waste.

[23] The data about wastewater discharged in 2022 was found to be inaccurately reported. The data about total wastewater discharged in 2022 was corrected in this report.

54 | Baidu 2023 Environmental, Social and Governance Report

| Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 55

Green Data Centers

Baidu is committed to building energy-efficient and low-carbon data centers. These green data centers have formed low-carbon energy conservation management teams and developed their operation & management platforms. With reference to the operational data of previous years, we set annual targets for indicators such as Carbon Usage Effectiveness (CUE), Power Usage Effectiveness (PUE), and Water Usage Effectiveness (WUE). These targets are broken down into monthly and quarterly indicators for evaluation and assessment. In 2023, the annual average PUE of Baidu data centers was 1.19, with the annual minimum of 1.11 recorded in Module 1# of Baidu Yangquan Data Center.

Green Measures Adopted by Data Centers

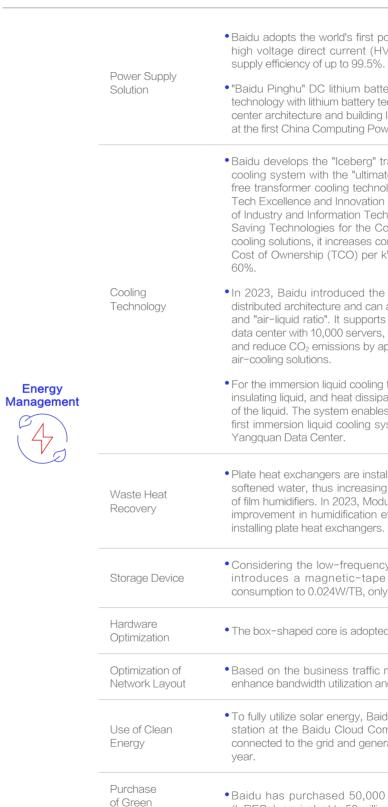|		
WUE Management	Water-Saving Technology	• Baidu adopts electromagnetic wave water treatment technology to uniformly purify wastewater. • In 2023, the water treatment system at Baidu Yangquan Data Center adopted electromagnetic wave water treatment technology, achieving a water-saving rate of 20%.
		• Baidu has utilized wastewater recycling technology to treat discharged wastewater through processes such as ultrafiltration and desalination. Cooling water that meets relevant requirements is generated in this way. • The Baidu Cloud Computing (Yangquan) Center achieved a water-saving rate of 44.8% per module, saving a total of 480,000 tons per year.
	Water-Saving Equipment	• Baidu prioritizes the use of water-saving cooling towers. • Baidu adopts reverse osmosis water treatment systems to recycle wastewater.

Energy Management	Power Supply Solution	• Baidu adopts the world's first power supply solution that combines grid and high voltage direct current (HVDC) for power supply, achieving a power supply efficiency of up to 99.5%. • "Baidu Pinghu" DC lithium battery system has integrated high-voltage DC technology with lithium battery technology for the first time. By innovating data center architecture and building layout, it won the "Innovation Pioneer Award" at the first China Computing Power Conference.
	Cooling Technology	• Baidu develops the "Iceberg" transformer cooling technology and pioneers the cooling system with the "ultimate reverse Carnot cycle". We also adopt the oil-free transformer cooling technology. This innovation has been granted the DC-Tech Excellence and Innovation Pioneer Award by the Data Center of the Ministry of Industry and Information Technology and included in the Catalogue of Energy-Saving Technologies for the Communications Industry. Compared to traditional cooling solutions, it increases computing power by 20% and reduces annual Total Cost of Ownership (TCO) per kW IT by 20%, while cutting carbon emissions by 60%. • In 2023, Baidu introduced the "Lingxi" liquid cooling system, which adopts a distributed architecture and can achieve adaptive adjustment of "air-liquid source" and "air-liquid ratio". It supports a power density of over 100 kW per rack. For a data center with 10,000 servers, it can save annual electricity by 262.8 million kWh and reduce CO_2 emissions by approximately 206,300 tons compared to traditional air-cooling solutions. • For the immersion liquid cooling technology, all IT equipments are immersed in an insulating liquid, and heat dissipation is achieved through the circulation exchange of the liquid. The system enables 100% liquid cooling of IT equipment. In 2023, the first immersion liquid cooling system was officially deployed in Module 13 of the Yangquan Data Center.
	Waste Heat Recovery	• Plate heat exchangers are installed to utilize chilled water to preheat and humidify softened water, thus increasing humidity and reducing the energy consumption of film humidifiers. In 2023, Module 1 # in Yangquan Data Center achieved a 35% improvement in humidification efficiency and saved 38,000 kWh of electricity by installing plate heat exchangers.
	Storage Device	• Considering the low-frequency reading characteristics of stored data, Baidu introduces a magnetic-tape storage solution, thus reducing the power consumption to 0.024W/TB, only 1/13 of traditional hard disk drives.
	Hardware Optimization	• The box-shaped core is adopted to reduce the power demand per server cabinet.
	Optimization of Network Layout	• Based on the business traffic model, Baidu optimizes the regional topology to enhance bandwidth utilization and reduce energy consumption.
	Use of Clean Energy	• To fully utilize solar energy, Baidu has constructed a 100KWp photovoltaic power station at the Baidu Cloud Computing (Yangquan) Center. It has successfully connected to the grid and generates approximately 120,000 kWh of electricity per year.
	Purchase of Green Certificates	• Baidu has purchased 50,000 International Renewable Energy Certificates (I-RECs), equivalent to 50 million kWh of green electricity.

56 | Baidu 2023 Environmental, Social and Governance Report

| Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 57

Green Office

Baidu actively manages the energy and resources in office areas and promotes the certifications of international standardized energy management systems and environmental management systems. In 2023, Baidu Campus, Baidu Technology Park, and Baidu Kuike Technology Building have obtained ISO 50001 and ISO 14001 certifications.

Water Resource

Operation & Maintenance	• We established water conservation goals.
Water-Saving Devices	• We adopted sensor-based water-saving devices.
Recycling	• We adopted rainwater recovery technology. In 2023, Baidu Technology Park collected 3,195 m^3 of rainwater.
	• We added overflow return devices to cooling towers, thus recycling 15,830 m^3 of water.
	• We installed overflow return devices for cooling towers and water landscapes at Baidu Campus, reclaiming 568 m^3 of water for irrigation.

Energy

Integrated Environmental Monitoring Cloud Platform

• The platform is applied in office areas to monitor and adjust environmental data such as temperature and humidity in real-time, refining energy and resource management.

Energy Management Monitoring Platform

• The platform aims to achieve a refined and intelligent management system of the Group from multiple dimensions.

Equipment Transformation and Maintenance

• We replaced 57,000 LED lights and upgraded the intelligent lighting systems in the technology park garage and office areas. We also replaced the conditioning system filters more frequently. In 2023, a total of 5.58 million kWh of electricity was saved.

• In 2023, we implemented energy-saving renovations for 60 elevators and generated electricity of 190,000 kWh for the 28 units in the first phase.

Clean Energy

• We installed solar photovoltaic panels in Baidu Campus, Penghuan Building, Baidu Technology Park, and Shenzhen Baidu International Building. In 2023, these facilities generated a total of 1.497 million kWh of electricity.

• In 2023, we utilized solar energy to heat domestic water, reducing natural gas consumption of 45,000 m^3.

Trading of Green Electricity

• We purchased 1.2 million kWh of green electricity.

58 | Baidu 2023 Environmental, Social and Governance Report

| Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 59

☑ Baidu Applies Energy Management & Monitoring Platform

In 2023, Baidu developed an energy management monitoring platform based on its expertise in green operation strategies and intelligent control. This platform deployed over 1,300 energy automatic collection points across office buildings, thus refining the management of water, electricity, heat, gas, and other sources of energy. It has also facilitated integrated management of energy and carbon targets and intelligent operation and maintenance of Heating, Ventilation and Air Conditioning (HVAC) systems.

Energy automatic collection points
1,300+

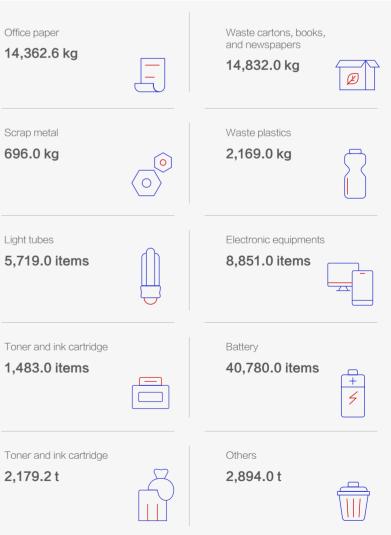### ☑ Zero-Carbon Baidu World 2023

On October 17, 2023, Baidu World 2023, with the theme of "PROMPT THE WORLD", was held in Beijing Shougang Park. The conference purchased wind energy carbon emission reduction credits in line with international standards, with 80.1 tons of carbon dioxide generated by the conference completely neutralized after data verification by an authoritative third-party organization, staging a zero-carbon conference.

Waste Management

To promote refined waste management, Baidu focuses on cultivating employees' habits of waste classification. We classify waste and then engaged specialized companies to clear and transport the categorized waste. Additionally, we monitor and record the daily production of various types of waste. Baidu also commissions qualified enterprises to collect and sell discarded computers and other office equipment as well as dispose of useless items in an environmentally friendly manner.

Baidu's Office Waste in 2023

Office paper **14,362.6 kg**	Waste cartons, books, and newspapers **14,832.0 kg**
Scrap metal **696.0 kg**	Waste plastics **2,169.0 kg**
Light tubes **5,719.0 items**	Electronic equipments **8,851.0 items**
Toner and ink cartridge **1,483.0 items**	Battery **40,780.0 items**
Toner and ink cartridge **2,179.2 t**	Others **2,894.0 t**

AI large language model increased content moderation efficiency by an estimation of

20%

Removed over

86.453 million pieces
of harmful information through manual content moderation

Removed over

60.436 billion pieces
of harmful information through automatic content moderation

Commercial promotional content risk elimination rate was

99.90%

Risk exposure rate of serious violations was

0.10%

The number of complaints received

30,780,043

The number of complaints accepted

30,516,857

Handling rate of **99%**

Set up Baidu ERNIE Investment Fund of RMB **1** billion

More than **3,000** Chinese patent applications

More than **5,000** Chinese patent granted

Ranking No. 1 in China for **6** consecutive years

Awarded **15** China Patent Awards on AI, including **1** Gold Award and **6** Silver Awards

Awarded the titles of **"National Telecom Service Star for Customer Satisfaction"** and **"National Telecom Service Star Team for Customer Satisfaction"** by the Ministry of Industry and Information Technology

Won the **3rd Most Beautiful Customer** Service Award by *China Consumers*

Baidu ranked among the Top 100 Chinese Service Brands for 2 consecutive years

Improving Services

At Baidu, we are committed to providing users with high-quality, secure, and reliable products and services. We respect and protect human rights, focus on content governance, and enhance user service experience. We continuously boost corporate innovation and development, empower industry development with AI technology, and develop industry partnerships.

62 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 63

Content Governance

Baidu adheres to the mission to "make the complicated world simpler through technology", continuously improves the content governance system, and stays committed to providing users with high-quality, secure, and responsible products and services.

Product Content Governance

Based on the original content governance process, Baidu leverages the unique characteristics and review advantages of AI large language models to ensure the standardization of moderation standards and improve review efficiency and quality; By integrating AI large language models with the existing appeal mechanism, Baidu enhances the handling rate of user appeals.

Baidu's Content Governance Initiative

Advantages of Moderation Based on AI Large Language Models

Ensuring the Standardization of Moderation Standards	• Based on the characteristics of semantic understanding and analytical judgment of large AI models, by infusing dynamic content moderation principles into the large language models, we train the large language models and help them learn and understand content moderation standards, ensuring the stability and standardization of moderation standards.
Improving Moderation Efficiency and Quality	• By pre-training large language models and to build real-time moderation capabilities, we provide prompts for moderation standards when users are generating content, assisting them in promptly adjusting non-compliant content; • By efficiently utilizing large language models, we shortened moderation time, improved efficiency, increased the enthusiasm for content production, and enriched the content ecosystem.
Improving the Appeal Handling Rate	• Leveraging the automatic identification and detection capabilities of large language models, we conducted preliminary moderation and filtering of user appeals, accelerating the process.

Governance Achievements

Baidu has always fulfilled the obligation of conducting public content governance and maintaining the security of the online community. We crack down on various types of harmful information on the Internet, and regularly release the *Monthly Report on Comprehensive Governance of Information Security* to disclose the results of our content governance efforts. In 2023, Baidu removed over 86.453 million pieces of harmful information through manual content moderation and over 60.436 billion pieces through automatic content moderation. Malicious information of all kinds has been intercepted 61.346 billion times and malicious websites of all kinds have been intercepted 79.75 billion times to prevent them from reaching users, while websites and Apps involved in fraud have been intercepted 89.6 million times. Additionally, users' personal information has been protected from malicious disclosure on average 250,000 times per day.

Number of harmful information deleted in 2023

Gambling	Pornography	Fraud
19.513 billion	**28.699 billion**	**5.53 billion**
Illegal trading	Counterfeiting	Violence
1.711 billion	**1.313 billion**	**651 million**
Drugs	Others	
605 million	**2.501 billion**	

Governance Training

Baidu regularly conducts training on content governance to enhance awareness of content risk management and governance standards, thereby improving the quality and efficiency of content moderation. In 2023, Baidu conducted a total of 247 training sessions on content risk management, including 64 special training sessions and 183 training sessions on security awareness for new employees.

64 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 65

Commercial Promotion Content Governance

Baidu strictly adheres to the *Advertising Law of the People's Republic of China,* the *Anti-Unfair Competition Law of the People's Republic of China,* the *Interim Measures for the Administration of Internet Advertising*, and other legal regulations of the operating location. The Company has formulated the *Baidu Management Measures on Commercial Advertisement*, strictly standardizing the advertisement placements in multiple industries including food, health, chemical and energy, agriculture, forestry, animal husbandry and fishery, real estate, and home furnishing, bags, clothing, games, software, etc., guiding the daily management.

Governance System

Baidu has a comprehensive business content governance system of "AI inspection + human double-check + human patrol", utilizing a variety of algorithms and models to form a "pre-monitoring, instant interception, and post-tracing" full life cycle control mechanism[24] for commercial promotion content, effectively ensuring the compliance of advertising content.

Baidu leverages large language models to monitor commercial promotion content generated in real-time, quickly capture and identify harmful information, and promptly remove such advertisements. This approach effectively saves the time needed for reviewing appeals on non-compliant content and enhances the efficiency of producing high-quality, high-standard advertisements.

In 2023, Baidu received more than 300 appeals related to medical advertisements, with a response rate of

100%

In 2023, Baidu effectively improved its inspection capabilities for text, audio, and video content in advertisements, with the accuracy increasing by more than

56%

In 2023，the risk exposure rate of serious violations was 0.10%,[25]

99.90 %

of harmful commercial promotion content was removed

Governance Training

Baidu conducts advertising governance training activities for inspectors at all its bases nationwide, strengthening commercial risk control awareness and ensuring that the governance of advertising content is carried out in a standardized manner. In 2023, Baidu conducted over 175 training courses related to advertising governance, including training for new employees and training related to various business lines. The training covered 100% of inspectors, with an average training duration of 3 hours per week.

[24] For details, refer to Page 77 of *Baidu's Environmental, Social and Governance (ESG) Report 2020*

[25] The risk exposure rate of serious violations equals 1 minus the removal rate of harmful commercial promotion content. Serious violations include endangering national security, improper commercial promotions, banned promotions, and lack of qualifications

Users' Rights Protection

According to the *Baidu Human Rights Policy*, Baidu actively implements basic human rights protections for users in the process of providing products and services, creating a clean and healthy Internet environment.

Rights Protection Mechanisms

Users' Rights	Protective Measures
The Right to Freedom of Opinion and Expression	• Continuously improve policies and measures related to the right to freedom of opinion and expression, and respects and safeguards the right to freedom of speech for all users; • Continuously improve the appeal handling and compensation mechanisms, increase the number of user appeal handled and response rates, and supports users in freely expressing their views.
The Right to Life and Health	• Step up efforts to identify and remove illegal and harmful information on the Internet to maintain a healthy and orderly content ecosystem; • Intensify efforts to crack down on commercial promotion content related to healthcare and remove information involving violence to protect the right to life and health of users.
The Right to Equality and Non-Discrimination	• Empower all social groups, including vulnerable groups, to have equal access to information at lower cost, and to achieve "data equality"; • Crack down on commercial promotion information involving discrimination to protect users; • Continue to carry out special governance work on ethical issues related to technology, eliminating discrimination in algorithms and reducing unfair treatment of minority groups; • Launch the "Baidu Users' Rights and Interests Protection Plan",[26] aimed at ensuring the authenticity of information and fairness of transactions when users use the search function. We provide full compensation for users who suffer financial losses due to fraud encountered when clicking on Baidu search promotions. In 2023, we had a total of 37,307 disputes, and offered effective guarantees for 10,585 of them, with an advance compensation amount reaching RMB160,000.
The Right to Freedom from Harassment and Violence	• Increase the efforts to crack down on harmful information such as cyber violence and harassment, ensuring users enjoy basic respect.

☑ AI-Based Content Moderation Safeguards the Physical & Mental Health of Minors

Baidu leverages AI large language models to enhance the recognition of implicit emotional sentiments in text, improving the ability to identify sensitive words and negative emotions. With the comprehension ability of AI, we are able to properly address issues related to minors' physical and mental health risks that prove to be a challenge for conventional moderation, identify information that may affect minors' physical and mental health in advance, and carry out offline interventions. Additionally, large AI models have also been trained to identify underage pornographic content, and they show a significantly higher accuracy compared with conventional manual moderation.

Baidu Tieba has integrated AI large language model technology into its existing content moderation process, training the large language model to understand obscure and subtle content, further enhancing the effectiveness of content review and governance, and achieving more comprehensive protection for minors.

[26] Baidu User Protection Measures

66 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 67

User Experience

Baidu is dedicated to creating a comprehensive user service management mechanism and demand response system, continuously optimizing service quality, and improving user satisfaction.

Baidu User Service Protection Initiative

User Service Management

Baidu established the User Service Management Committee, striving to protect users' rights and interests.

User Service Management Committee

Duyouyou Service Committee	• The committee is made up of experts from both inside and outside the industry as well as Baidu employees who value user experience. They supervise Baidu's service quality and study service strategies.
Duchacha Self-Disciplinary Committee	• As a committee that encourages "participation of and supervision by all", it encourages the public to engage in joint governance, efficiently handles the harmful information reported by users, and carries out special actions to handle serious issues.

User Service System

Baidu continuously improves the user service system covering employees, users, and products, creating a Baidu service ecosystem that integrates services and protection into a closed loop.

Employee	• Set up a fully closed-loop performance monitoring system for all employees in the Service Experience Development Center from three aspects: work efficiency, work quality, and codes of conduct, and conducts regular assessments on a monthly basis.
User	• Provides a 24/7 service for over 1 billion users, with an average of 500,000 responses to user needs delivered per day. The monthly average response time of the customer service hotline is a maximum of 30 seconds, and the manual service response rate exceeds 85%.
Product	• Adds a mark identifying the official website in the search results to prevent false websites from infringing on users.

User Complaint Management

In 2023, Baidu received 30,780,043 complaints, and accepted 30,516,857 complaints, with a handling rate of 99%. Among these, 738,622 complaints were accepted via Baidu's customer support hotline 400, with a satisfaction rate of 95%; 1,100,358 complaints were accepted via Baidu's online IM, with a satisfaction rate of 85%.

Service Platform	Baidu User Service Center[27]	Provide users with a one-stop self-service platform for feedback, complaints, and problem resolution, covering all products including Baidu Search
Report Channel	Complaint and reporting hotlines, reporting websites, reporting mailboxes, reporting reception rooms, etc.	Ensure that users can find a solution channel as soon as they encounter a problem, achieving the shortest service path
Tiered System for Handling Complaints	User segmentation, issue categorization, and graded responses to key complaints	All other complaints are ensured to be handled within one working day

[27] Baidu User Service Center

68 | Baidu 2023 Environmental, Social and Governance Report

| Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 69

Innovation Management

Baidu persistently advances innovation management, continuously enhances independent innovation, and collaborates with ecological partners to consolidate innovation achievements.

Improving Innovation Capabilities

Baidu firmly believes that innovation is the driving force behind technological progress. We place great importance on and encourage technological innovation and invention, and actively foster a culture of technological innovation.

Innovation Investment

Thanks to long-term, intensive R&D investments, Baidu possesses key self-developed technologies in the AI chip layer, framework layer, model layer, and application layer. According to statistics, Baidu's annual R&D investment accounted for more than 15% of revenues in the past decade and the share of core R&D investment in 2023 reached 21.67% in 2023.

Full-stack Layout of AI Self-development Technology

Application Layer	Search	Intelligent Transportation	Finance	Water	Electric Power	...
Model Layer	文心大模型	Information Distribution Large Language Model	Transportation Large Language Model	Energy Large Language Model	...
Frame Layer	飞桨 PP
Chip Layer	昆仑芯 KUNLUNXIN

☑ Baidu Establishes ERNIE Investment Fund

In May 2023, Baidu established the Baidu ERNIE Investment Fund with RMB1 billion for promising companies in the AIGC field. It provides comprehensive support including the capital, technology, and business resources, aiming to promote the development of China's AI large language model ecosystem.

Innovation Guarantee

Baidu has established a comprehensive IP protection management system and mechanism, involving aspects of the entire life cycle of IPs, including IP training, patent layout, patent application, patent quality management, patent maintenance, innovation incentives, litigation management, risk prevention and control, and transformation operations.

Policy
- In 2023, Baidu updated the *Baidu Group Patent Incentive Measures*, refining patent incentives and innovation quality management, and encouraging higher quality technological innovation and its application.

Training
- Baidu holds regular patent training sessions for various business departments every year on patent applications, quality improvement, and operational empowerment based on the requirements of corresponding technological and business characteristics. In 2023, Baidu held more than 75 IP training sessions, aiming to improve business innovation.

Talent
- According to the *China AI Industry Innovation Talent Competitiveness Report (2023)*, Baidu's R&D team won the "AI Industry Innovation Talent" championship in 2023 with a leading advantage by a significant margin and ranked first in 7 major fields.[28] Baidu's pre-trained large language models ranked first in China in terms of innovative achievements, innovation capability, and team size.

[28] The report was released by the Intellectual Property and Innovation Development Center of the China Academy of Information and Communications Technology. Baidu's 7 leading areas include: pre-trained large language models, deep learning, natural language processing, knowledge graphs, intelligent voice, computer vision, and autonomous driving

70 | Baidu 2023 Environmental, Social and Governance Report

| Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 71

Innovation Achievements

Baidu achieves the diversification of patent value by leading in its patents and securing multiple domestic and international patent collaborations.

In 2023, Baidu applied for over 3,000 patents in China and was granted 5,000 patents. Baidu has ranked first in China for the number of AI patents applied and granted for 6 consecutive years, with the leading rate of patents granted and patent quality. In addition, Baidu has the greatest number of patents in the AI framework, model layer, and application layer in China. Baidu was awarded 15 China Patent Awards on AI, including 1 Gold Award and 6 Silver Awards.

● Accumulative number of AI patents applied

2023	19,308
2022	16,754
2021	13,007

● Accumulative number of AI patents granted

2023	9,260
2022	5,705
2021	3,652

Total Number of AI Patents Applied

☑ Baidu Releases Top 10 Tech Trends for 2023

On September 12, 2023, Baidu released Top 10 Tech Trends for 2023, more than 70% of which involve large model and reconstruction innovation. Top 10 Tech Trends for 2023 was a concentrated display of Baidu's cutting-edge innovations in 2023, reflecting the realization and breakthroughs of Baidu in international cutting-edge core technologies. The high-quality patented innovations represented by the Top 10 Inventions are an important driving force for Baidu's technologies to empower industrial transformation and upgrading, scientific and technological revolutions, and industrial transformations.

Top 10 Tech Trends for 2023 Release Conference

Protecting the Rights and Interests of Creators

Baidu respects others' IPs, attaches great importance to IP protection, and stays committed to establishing and maintaining a healthy interactive platform order.

Technical Monitoring
- Adopts technology to monitor original programs and content from key high-quality creators in real time and conducts reasonable investigations and handling of potentially infringing content.

Baidu Copyright Complaint Platform
- Establishes and continuously upgrades the Baidu copyright complaint platform and sets up smooth user complaint channels to efficiently and quickly handle user complaints about copyright issues and reduce the risk of infringement.

Leading Ecosystem Co-Building

Baidu fully leverages the advantages of its patent resources to help build an industry IP ecosystem. By sharing IPs through patent cooperation, we facilitate collaborative innovation among partners and lead in co-building the ecosystem.

☑ "Promoting Industry Development with AI Patent Application" Forum

On April 26, 2023, Baidu joined hands with the Beijing Intellectual Property Protection Association in hosting the "Promoting Industry Development with AI Patent Application" forum. The *Baidu Artificial Intelligence Innovation and Patent White Paper 2023* was released, which showcased Baidu's leading position in AI patents, covering areas such as large AI models, integration of cloud and AI, autonomous driving, and intelligent search. The forum served as a bridge for patent cooperation and exchange within the AI industry. Dozens of industry representatives attended the event, further enhancing the attractiveness of Baidu's AI industry IP operation ecosystem and expanding Baidu's AI industry ecosystem.

[6]

Contributing to Society

Baidu always adheres to the principles of people-oriented and upholds the social responsibility concept of "Do Better with Tech", to create a better life for the public.

Baidu Scholarship has

granted over RMB

10 million

to **106**

global outstanding students and talents in AI

By 2023, Baidu had successfully trained

4.2 million

AI talents for the society

Baidu allocates

RMB **30** million

to support flood relief

Baidu launched the "Galaxy Talent Cultivation Program" to cultivate

5 million

AI large language model talents

The PaddlePaddle community gathers over

10.7 million

AI developers

74 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 75

AI Talent Cultivation

Baidu is committed to promoting technological equity in the era of LLMs, providing differentiated cultivation programs to AI enthusiasts, AI developers, and business users and entrepreneurs, breaking down the boundaries of native AI applications and enabling every user to gain the right to learn and use AI technology.

AI Community Building

With PaddlePaddle and ERNIE Large Language Model as the core, Baidu launched the PaddlePaddle Galaxy Community. Developer community is the key support for the development of the ecosystem. PaddlePaddle community, as China's largest AI community, has gathered over 10.7 million AI developers to learn, exchange, compete and grow. The platform boasts a cumulative of more than 6.9 million hands-on training projects, covering AIGC, CV, recommendation, and other fields. It supports online experience of over 5,000 applications, as well as multiple creation methods, and provides developers with an integrated large language model development experience. It also has rich product features to facilitate developers' communication, achieving progress together with developers.

Young AI Talent Cultivation

In 2020, Baidu announced its ambition to train 5 million AI talent cultivate for the society. In 2023, Baidu released the "Galaxy Talent Cultivation Program" on the basis of the 4.2 million AI talent goal, and would cultivate 5 million large language model talents for the society.

☑ Baidu Scholarship Program

The Baidu Scholarship Program is designated to discover outstanding young people who have unique insights in the field of AI, and have the courage to challenge traditions and make breakthroughs, thus promoting technological innovation and application expansion in the field of AI. The 11th Baidu Scholarship selects 10 students from top international universities, with research interests including the construction of cognitive intelligence based on large language models, multimodal fundamental large language models, and AI + Art. Since its establishment in 2013, the Baidu Scholarship has awarded more than RMB 10 million to 106 top global AI talents.

High-end Hybrid AI Talent Cultivation

Baidu, together with the National Engineering Research Center for Deep Learning Technology and Applications, launched the "AICA Chief AI Architect Training Program", aiming to cultivate new hybrid talents who can solve practical business problems with the help of AI technology under the trend of the integration of artificial intelligence and the real economy. The program has delivered 410 AI architects to the industry since the first phase was launched in 2019. On October 28th, 2023, the 7th session of the AICA program was successfully completed, with 88 trainees obtaining AI architect certification, and one-third of the graduated trainees focusing on the topic of the large language model industry application and has achieved promising results. Baidu ERNIE Large Language Model has been deployed in a wide range of industry scenarios such as finance, manufacturing, energy, transportation, etc., accelerating industrial intelligence.

76 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 77

Rural Revitalization

Baidu has actively engaged in rural construction endeavors, contributing scientific and technological power to the development and digital transformation of the agricultural industry.

☑ The "Tech for A Better Countryside" E-Commerce Plan

In respond to the national "rural revitalization" strategy, and to further promote the "10,000 enterprises in 10,000 villages" action, Baidu has launched the "Tech for A Better Countryside" Assistance Plan, introduced dozens of enterprise representatives of rural revitalization from local leading industries to the e-commerce platform. Baidu created the "The Sun Never Sets" digital live broadcasting room to sell more than 70 kinds of goods 24 hours a day. Joining hands with Beijing civil affairs systems, Baidu has built the first model intelligent community in Beijing, under the new joint promotion mode of combining online digital live broadcasting and community efforts, with the aim to help farmers establish online sales channels and increase sales of agricultural products, thereby increasing farmers' income.

"Huiboxing", Baidu's digital human livestreaming platform, assists tea farmers in selling Jiangsu's intangible cultural heritage of white tea

Difficulty Relief

As a company honoring social responsibility, Baidu utilizes its extensive social influence and communication power to help the needy.

Baidu invests resources and specialized teams to provide emergency assistance to disaster areas affected by extreme weather for post-disaster recovery and sustainable development.

☑ Supporting Beijing-Tianjin-Hebei Storm Flood Relief

In July 2023, the Beijing-Tianjin-Hebei region was severely affected by floods and geological disasters brought about by Typhoon Dusu Rui. Baidu promptly set up a special team for relief supplies, and utilized the resources of merchants linked to the platform to raise relief materials worth more than RMB 3.2 million, covering 51 categories and 51,000 items, such as emergency relief equipment, food, daily necessities, etc. These efforts secured the life safety and basic living of the affected people. On August 3rd, Baidu announced to allocate RMB 30 million for flood relief in Beijing, Tianjin, Hebei, and other regions.

Baidu Maps worked with the traffic polices and governmental departments in cities to guide users to navigate their journeys so that they can avoid waterlogged and congested roads with dangers. This has been achieved by providing real-time information on waterlogged roads, public transportation service adjustments and temporary closure of public venues. Baidu Maps has also cooperated with the Ministry of Emergency Management, launched the thematic column "Rain Rescue in Beijing, Tianjin and Hebei" for national risk warnings, facilitating green channels for disaster relief.

☑ Baidu Digital Humans Help Users Sustain Their Love and Company to Their Loved Ones

In 2023, Baidu helped Samy, a former employee, preserve the voice and face of Xiaoying, his wife, who was seriously ill, through AI technology. With the joint efforts of Baidu's technical teams, a customized digital human "Xiaoying" was launched on the App of ERNIE Bot. Xiaoying has had her love and company continued across the boundaries of time and space in her conversations with Samy and her family.

☑ Baidu Joins Hands with Media Outlets to Make Victims of Domestic Violence Heard [29]

On November 25th, the International Day for the Elimination of Violence against Women, Baidu joined hands with a number of media outlets to set up the "Baidu × Media Coalition against Domestic Violence", leveraging on the platform's strengths to popularize the danger of domestic violence and self-help guides for multiple scenarios, and to call on the victims to use legal means to safeguard their rights and interests. Relevant videos received more than 12 million views.

[29] For more information, please scan the QR code

78 | Baidu 2023 Environmental, Social and Governance Report

Enhancing Corporate Governance | Building Trust | Nurturing Talent | Promoting Green Ideas | Improving Services | Contributing to Society | 79

Care for Key Groups

Committed to social responsibility concept of "Do Better with Tech", Baidu has made unremitting efforts to create better life.

Caring for the Elderly

☑ "Warm Sun Program" to Keep the Elderly Safe on the Internet

Baidu launched the "Baidu Users' Rights and Interests Protection Plan" and the "Elderly Assistance Mechanism", which has helped the elderly solve their problems on many occasions. In 2023, Baidu cooperated with the Shatou Street Social Work Service Station in Panyu, Guangzhou, to establish the "Warm Sun Program", a smart elderly program to help the elderly to access the Internet safely. With this project, Duchacha was awarded "Outstanding Community Social Organization" and "Best Public Welfare Partner" by Shatou Street, Panyu District, Guangzhou.

Education and Protection of Minors

Baidu continues to focus on the education and healthy growth of minors.

☑ Baidu Donates Xiaodu Smart Learning Devices to Youth in Remote Areas

Baidu donated Xiaodu smart learning devices to 1,000 teenagers in disaster-stricken areas in Gansu, aiming to channel quality education resources to remote areas.

☑ Baidu Supports Candidates for College Entrance Exam in Mountainous Regions, Contributing to Education Equality

Baidu Marketing, in conjunction with Wang Lo Ka, applied understanding and generation capabilities of ERNIE Large Language Model to intelligently generate the first set of "College Entrance Exam AI Mock Papers" in history, and traveled thousands of miles into the mountainous areas of Gannan areas in Gansu Province, to deliver those papers to the children, helping the children get one step closer to their dreams with the power of AI.

☑ Baidu Participates in the Development of Programming Teaching Content for the New Curriculum

The Baidu ABC (AI, Big Data, Cloud Computing) Institute helps develop teaching solutions for the new curriculum standard IT courses, integrates standardized programming courses into the teaching content of primary and secondary schools, and provides systematic support for the development of teachers' professional competence to meet the requirements of teacher training at different stages of development.

Grade	Teaching content
3	Online Learning and Online Living
4	Data and Coding
5	Algorithms Around Us
6	Process and Control
7	Applications and Innovation Internet of Things
8	Internet of Things Practice and Exploration

☑ Baidu Visits Communities to Care for the Physical and Mental Health of Teenagers

In 2023, Baidu visited communities with a focus on the physical and mental health of young people with the provision of mental health learning activities. The initiative aimed to help them to better understand their emotions and learn to express emotions, as well as cultivating their positive attitudes and values in life.

Photo of the Event

Baidu Business Case Study

Baidu is committed to creating sustainable business value, aligning our business practices with the United Nations' 17 Sustainable Development Goals (UN SDGs). Spanning from thousands of industries and households, ensuring AI accessibility to all, and fostering a prosperity-shared ecosystem, we strive to drive sustainable growth for society, our customers, and users alike.

Mobile Ecosystem Group (MEG)

The Mobile Ecosystem Group (MEG) at Baidu encompasses a suite of mobile ecosystem services, including Baijiahao, Baidu App, Haokan Video, Baidu Tieba, Baidu Knows, and Baidu Wenku, among other leading products. It links billions of users with vital information and security measures, supports the business ventures of countless industries, and is dedicated to technological innovation. We stand together with our users and customers in a relationship of mutual support and shared growth.

How Does Baidu Protect the Rights and Interests of Content Creators?

Plagiarism and copyright violations have persistently troubled original content creators in the Baidu community, making them a primary target for Baidu's vigilance and enforcement actions. Baijiahao continues to strengthen content management, actively guides and regulates the behavior of original content creators to protect their rights and interests and is committed to fostering an internet community that thrives on mutual respect and beneficial engagement.

Strengthening policy	Protecting original content	Banning accounts
▪ In May 2023, Baijiahao released the *Concept and Specification on Content Generated with AI Technology* and leveraged large AI models to comprehensively identify and combat behaviors such as content scraping, plagiarism, and spreading rumors, to protect the rights of original creators.	▪ Baijiahao provides professional rights protection services for high-quality original content creators. As of 2023, Baidu Baijiahao had over 40,000 content creators and more than 1 million articles protected through the creator certification, with over 99% of the plagiarism content taken down from mainstream platforms.	▪ The "Highly Similar Account Asset Transfer" mechanism of Baijiahao bans highly similar accounts and transfers their followers to the original creators. In 2023, Baijiahao banned more than 5,000 highly similar accounts, and the number of fans transferred exceeded 10 million.

How Does Baidu Empower MSMEs to Grow Together?

Baidu Baiqingteng, Aicaigou merchant operations and other teams have been focusing on the challenges faced by micro, small, and medium enterprises (MSMEs) in their development for many years. With Baidu's unique AI technology as the foundation, they inject new vitality into MSMEs and collaboratively write a new chapter of growth and development.

A small and medium-sized enterprise in Hunan, facing revenue pressure, joined forces with the Baidu Baiqingteng to blaze an innovative path of development, achieving a double harvest in advertising revenue and user data.Through "advertising alliance" and "content alliance" cooperation, the enterprise established a content ecosystem and introduced new monetization methods. Data shows that in the past six months, the enterprise's revenue from advertising alliance partnerships has increased by 20%, and revenue from content alliance partnerships has increased by 200%. User engagement time and retention rates have also increased by 8%.

The Aicaigou merchant operations team has created *The Boss Says* platform, which, through various means of dissemination, allows more people to hear the entrepreneurial stories of small and medium-sized business owners, empowering the small and medium-sized business to ride the wave of digital transformation, forge ahead confidently and speed up their dream achievement. Dozens of enterprises have been introduced to the public through this platform, achieving growth in orders and doubling their revenue.

AI Cloud Group (ACG)

ACG serves customers from a wide range of industries including government, education, finance, energy, and manufacturing. It provides one-stop content security solutions involving cloud computing, big data, and AI, which helps customers improve content management efficiency, enhance user experience, and drive the intelligent upgrade of industries. Additionally, it is dedicated to guiding and empowering our customers to be at the vanguard of advancing sustainable development objectives and actively addressing climate change challenges.

How Does Baidu Empower Climate Change Monitoring?

To achieve the smart meteorological goal of "intelligent observation, precise forecasting, open service, scientific management, and continuous innovation", Baidu has launched a new model of intelligent meteorological observation by combining the edge cloud, sensing technology, and AI analysis. For the "City Brain" system of Haidian District, we have introduced a "Tianlian Recognition" solution. Leveraging urban video resources and AI visual recognition algorithm technology, it comprehensively and intelligently identifies various weather and social scenarios such as rainfall, snowfall, snow accumulation, road icing, and the fluttering of willow catkins. This solution achieves a "real-time, fixed-point, and comprehensive" collection of meteorological observation data, providing "precise, accurate, and detailed" meteorological services. As a result, we can better cater to the community's needs, safeguard the well-being of residents, and ensure the city's smooth and secure functioning.

How Does Baidu Implement Flood Control and Emergency Measures Under Extreme Weather Conditions?

Due to extreme weather induced by climate change, floods and waterlogging disasters have become more frequent. In response to the increasingly frequent risks of heavy rainfall and floods, Baidu AI Cloud is exploring in-depth AI technology for scenario-based water solutions and effective addressing of the issues of urban flood prevention and emergency response. In a certain region of South China, Baidu AI Cloud has provided smart water services by installing an intelligent control system for urban waterlogging and ponding, ensuring comprehensive monitoring and real-time alerts for flood-prone points and waterlogging areas, enhancing the city's emergency response capability to floods:

Flood-prone Point Monitoring : By monitoring most of the flood-prone points in tunnels and culverts throughout the area, we have reduced the time to deal with waterlogging events from hours to minutes;

Waterlogging Risk Identification: Based on technologies such as the Internet of Things (IoTs), AI, and cloud computing, we have combined the Water Management Brain with AI to identify safety risk factors such as waterlogging, ponding, and tunnel travel, ensuring safety in public mobility in extreme weather conditions;

Early Warning for Waterlogging: We have integrated Baidu Maps, and through the navigation interface, issued early warnings for waterlogging areas; We have also collaborated with emergency management systems of water departments at all levels to automatically identify abnormal conditions such as water accumulation and stranded people and vehicles, and promptly notify relevant departments, plan the optimal route, and improve the efficiency of accident handling.

How Does Baidu Help Boost Urban Economic Development?

Baidu AI Cloud implements the strategy of "integrating cloud and AI, deep industry exploration, ecological prosperity, and AI for all", leveraging its powerful advantages in platforms and resources to establish city-level AI industrial parks, bringing new lifeblood to urban economic development.

In 2023, Baidu cooperated with Jiangbei New Area in Wuhu City to actively support the "East Data and West Computing" project by building an AI basic data industry base and empowering thousands of industries in Wuhu City with digital technology. The initiative includes building an intelligent industrial park that gathers enterprises with significant computing power, big data, and large language models, and fostering an AI industry chain ecosystem. It provides multi-scenario computing power empowerment solutions, including government services, urban governance, government and enterprise office work, and content creation to optimize the development of the city's industrial supply chain, value chain, and ecological chain, continuously driving the transformation and upgrading of the urban economy.

How Does Baidu Leverage AI Technology to Protect People's Right to Life?

Baidu is constantly reflecting on how to harness technology with a human touch to enhance the well-being of communities and their inhabitants. Within urban contexts involving water, we have led the way in employing AI to safeguard the lives of residents.

In 2023, Baidu participated in the Smart Water project in Lintao County, Gansu Province, implementing "special actions for water security" and building AI video analysis capabilities for the Taohe River basin.

Pedestrian bridges in crowded areas were essential spots for keeping a close watch on high-risk river channels. Baidu's AI cameras were strategically placed to precisely monitor and analyze the behavior of people around rivers in busy districts. In case that any potential suicidal behavior is detected, such as climbing over railings, approaching water, or lingering in dangerous areas, the system will immediately trigger an alert, ensuring that rescue personnel can take actions swiftly.

Through close coordination with local police patrols and fire-fighting teams, the project has accelerated emergency response and significantly boosted rescue efficiency. Upon receiving an alert, the emergency response teams promptly reach the location, persuade individuals away from potential danger, and provide emergency assistance when necessary, effectively preventing drowning tragedies.

Baidu's Smart Water project has not only pioneered an innovative approach to intelligent safety management but also acts as an unseen safety blanket, supporting the lives and hopes of the people in Lintao County. The implementation of this project has made a significant contribution to advancing the modernization of regional social governance.

Intelligent Driving Group (IDG)

IDG is committed to providing comprehensive solutions for the automotive industry and autonomous driving. It possesses a complete system of R&D, production, operation, and services. In the business of intelligent driving, Baidu aims to enhance traffic efficiency and security and advocates for green mobility as its primary goal. It promotes emission reduction in mobility and implements "Climate Action" while aligning with the goal of "Sustainable Cities and Economic Growth", making travel more convenient and vehicles smarter, and transforming the dreams of the future into a reality that's within easy reach today.

How Does Baidu Ensure the Privacy Security of Intelligent Driving?

As Baidu's AI technology rapidly advances, we remain steadfast in our original mission to safeguard user data security. Baidu's autonomous driving ensures comprehensive protection of user data through cybersecurity, data security, and privacy protection to avoid hacker attacks and data leakage incidents.

Cybersecurity	Data security	Privacy protection

- We adopt the model of static protection + dynamic protection to defend against cyberattacks.

Static protection: We have established a layered defense system through measures such as secure boot, two-way authentication, secure upgrade, and secure login.

Dynamic protection: We have formed a dynamic defense system based on the knowledge graph, carried out cybersecurity emergency drills, simulated hacker attacks, ensured accurate and agile monitoring of autonomous driving cybersecurity, and enhanced capabilities to defend against hacker attacks.

- Based on the *Automotive Data Classification and Grading Specification,* we manage data through classification and grading, including measures such as data encryption, data desensitization, and coordinate deviation, and conduct regular data risk assessments.

- We have conducted the personal information protection impact assessment (PIA) for the Robotaxi App and effectively obtained individual consent through the privacy terms and agreements, with clear specifications of the content and purpose of data collection.

How Does Baidu Help Facilitate Shared Mobility?

Guided by the principles of intelligent technology and green mobility, Baidu integrates autonomous driving with new energy vehicles and has launched the Robotaxi ride-hailing service platform, which has commenced fully unmanned autonomous driving operations in cities such as Beijing, Wuhan, Chongqing, Guangzhou, and Shanghai. As of January 2024, Robotaxi has provided more than 5 million autonomous driving services in over 10 cities nationwide, solidifying its leading position in the global autonomous driving services sector. In the future, we will continue to expand our business, stay dedicated to building the world's largest autonomous driving operation area, and promote the prosperity and development of China's intelligent connected vehicle (ICV) industry through continuous technological innovation and service optimization.

We are confident that Robotaxi will play a pivotal role in advancing society and improving the well-being of individuals. With tireless dedication and innovation, it will usher in a futuristic era of travel characterized by greater intelligence, ease, and sustainability.

How Does Baidu Empower the Green Transformation and Development of the Logistics Industry?

Over the past five years, China's express delivery industry has undergone rapid growth, accompanied by a significant increase in carbon emissions, exceeding 200%[30] Transportation is the industry's largest source of carbon emissions, and road and air transportation are the most critical areas for emission reduction.

To address this challenge, Baidu Maps has released a traffic and logistics development plan, aiming to create industry-leading digital comprehensive services for traffic and logistics. Its intelligent scheduling provides intelligent services for many logistics enterprises through precise data analysis and algorithm optimization, including Jianhua Logistics, CNBM, and Shuanghui Logistics, improving transportation efficiency by more than 90% and significantly reducing carbon emissions during transportation.

Baidu Maps is leading the transportation and logistics industry towards a more intelligent, efficient, and environment-friendly direction, contributing to carbon neutrality. Looking ahead, Baidu Maps is committed to further propelling the digitalization of the transportation and logistics industry, guiding China's express delivery towards an eco-friendlier and more sustainable path.

[30] *See the report Carbon Emissions of China's Express Delivery Industry* published by the international environmental organization Greenpeace: express-industry-emissions.pdf (greenpeace.org.cn)

HealthCare Group (HCG)

HCG represents two core businesses, Internet health and smart healthcare, and two brands, Baidu Health and Lingyi Zhihui (Baidu Intelligent Healthcare Unit). Baidu promotes medical equality with large language model technology, striving to become the preferred health manager for the Chinese people. We use large language models to assist in the innovative development of the healthcare industry, contributing to the goal of "Good Health and Well-being" and ensuring that the technology benefits countless patients.

How Does Baidu Promote Medical Equality?

"The difficulty and high cost of accessing medical care" has long been a pressing issue for patients. In response to uneven distribution of medical resources, Baidu Health has launched an innovative "Precise Doctor-Patient Matching Mechanism" using its advanced AI large language model algorithms, aiming to optimize the allocation of medical resources and ensure that users can efficiently access medical services that suit their needs for enhancing the efficiency of medical resource utilization and accurately meeting users' medical needs.

The mechanism mainly addresses the pain points of long waiting times for medical treatment, cumbersome processes, and the complexity of accessing information for the public. By matching the relevant information searched by users with the existing disease knowledge graph and considering the patient's location, we recommend patients to trustworthy medical clinics in the area and provide them with a full process guide for online registration, hospital visits, diagnosis, and treatment on the Baidu Mini Program. This mechanism, pioneered and verified by Baidu, significantly improves the efficiency of patients in accessing medical information and reducing the cost of seeking medical treatment.

In 2023, Baidu collaborated with the Fifth People's Hospital of Chongqing. Based on the digital and AI strengths of Baidu and the expertise of the hospital, we matched patient searches with the hospital's leading departments and doctors, creating a "one-click" medical process for patients that features online consultation, precise matching, and online diagnosis and treatment, providing intelligent solutions. Currently, Baidu Health's medical service network covers over 70 grade-A tertiary public hospitals in 19 provinces, significantly improving the efficiency and quality of public medical services.

Through its endeavors, Baidu Health has driven the intelligent upgrade of medical services while actively contributing to raising the general health standards of the public.

How Does Baidu Empower the Development of the Healthcare Industry?

Taking into account the three parties of doctor, patient, and medicine, Baidu has launched the first large language model in the medical industry in China named "Lingyi". This model has significant advantages in algorithm, computing power, data, and industry expertise. It has been tested and used by over 1,000 institutions and enterprises of various types, continuously infusing AI technology as a powerful driving force for the high-quality development of the health industry.

Multi-Scenario Application

- Baidu continuously improves the "Lingyi" large language model and applies it to scenarios such as Internet healthcare, public hospitals, pharmaceutical and medical device companies, pharmacies, and clinics, providing users with convenient online medical consultation experiences, accurate diagnostic assistance and efficient intelligent triage. These services improve the efficiency and quality of medical care while greatly enhancing patients' experience in seeking medical treatment.

AI Medication Instructions

- Combining AI digital human technology, pharmaceutical expertise data, and diversified service capabilities, Baidu has launched the "AI Medication Instructions", replacing the paper instructions that are hard to read, understand, and remember, and making it easier for medication consultation.

Technological Innovation and Cooperation

- Baidu actively promotes integration, innovation, and service upgrades in the medical field. In 2023, Baidu collaborated with GlaxoSmithKline to construct mechanisms for disease defense. We also partnered with Fubao Intelligent Technology to integrate the "Lingyi" large language model into its medical and healthcare robots, promoting the intelligent development of medical care.

Technology Platform Group (TPG)

TPG represents Baidu's AI technology, platforms and ecosystems, enterprise efficiency and intelligent work, security, etc. TPG is dedicated to leading in technological innovation, improving efficiency, ensuring security, and supporting the Company's sustainable development. Main focuses include the PaddlePaddle deep learning platform, the ERNIE large language model, and technologies based on these for multimodal understanding, generation, and interaction such as natural language processing (NLP), knowledge graphs, voice, computer vision, and AR/VR; Enterprise efficiency platforms that support office work, R&D, and management to improve efficiency and intelligent upgrades; And comprehensive security platforms that ensure the security of the Company's technology, products, and business.

Make the complicated world simpler through technology is the mission of Baidu and the core philosophy and standard by which TPG measures its progress in business innovation and breakthroughs to continually contribute to technological innovation and exploration.

How Does Baidu Promote Cutting-Edge Scientific Research in the Field of Life Sciences?

Baidu combines large language models (LLMs) with protein structure prediction to create value for life science research. In August 2023, researchers from Baidu published significant findings in the field of computational biology in the prestigious academic journal, *Nature Machine Intelligence*. The breakthrough, named HelixFold-Single, is a method for predicting protein structures based on protein language models. This method involves learning about the evolutionary information of species through protein language models, thereby accurately predicting the 3D spatial structure of proteins. It improves the efficiency of inference by a hundredfold compared with previous structural prediction methods, supports high-throughput protein structure prediction, and increases accuracy in scenarios such as peptides and antibodies, with broad application prospects in the fields of protein analysis and design.

How Does Baidu Empower Industries to Enhance Their Information Security Governance?

In September 2023, Baidu held a training and publicity event for App developers on personal information protection. Baidu shared its insights, practices, and thoughts on App personal information protection compliance and engineering with more than 240 mobile App developers from over 80 companies. We joined hands with Beijing's Internet industries to actively implement the related laws and regulations such as the *Cybersecurity Law*, the *Data Security Law*, and the *Personal Information Protection Law* to create the best practices for information security protection.

Xiaodu

As an important part of Baidu's "AI Living", Xiaodu is committed to ensuring widespread AI applications to make life better. It has now entered over 45 million households. With DuerOS at its core and hardware as the medium, Xiaodu enables more users to experience the intelligent life brought by technology through integrated innovation of software and hardware and enhances the quality of life for them.

How Does Baidu Enhance the Welfare of the Elderly?

Nowadays, with the global population aging at an accelerated pace, Baidu has recognized the multiple challenges faced by the elderly in physical and mental well-being. In response, we aspire to offer services and products tailored to the elderly, providing them with a more convenient, secure, and comfortable living environment. Our mission is to empower the elderly to navigate the evolving world around them and to fully embrace the rewards of a well-deserved and fulfilling life in their silver years.

Baidu has developed a series of elderly-friendly features for Xiaodu smart products, leveraging their technological and market advantages to provide intelligent solutions for the elderly care industry.

Safety Monitoring	Home Care	Medical Records	Life Services
▪ The Xiaodu Smart Screen is equipped with a highly accurate visual algorithm in the industry, capable of detecting changes in light and darkness, intensity, and depth one by one. Compared with regular cameras, Xiaodu only activates the light monitoring function to ensure user privacy while safeguarding the safety of the elderly.	▪ By calling the Xiaodu Smart Screen, the elderly can easily access community services, such as calling for an elderly care manager to assist with meals and daily living. In an emergency, the elderly can immediately seek help from their children and the elderly care manager through Xiaodu.	▪ In collaboration with health and medical institutions, Xiaodu can achieve easy and smart medical information recording and storage for the elderly, eliminating the cumbersome and error-prone manual data reporting process during physical examinations, and enhancing the quality and efficiency of services provided by medical personnel.	▪ Working with partners, Xiaodu developed the "15-Minute Living Circle", which adds local services including medical appointment bookings, meal delivery, supermarkets, and ride-hailing to the main screen of the feature interface. It can also provide tailored services according to the actual conditions of different regions and communities, fully ensuring the physical and mental health of the elderly.

In 2023, Baidu has accumulated 45 million users in terms of smart living, greatly facilitating the lives of the elderly and the building of a smart elderly care industry ecosystem that integrates the "end, cloud, and service". By harnessing technological advancements and dedicating ourselves to community services, we aim to forge a warmer, more convenient and safer living environment for the elderly, thereby enhancing their well-being and ensuring they lead joyful and dignified lives in their silver years.

Appendix

Human Rights Tracking Indicators Index

Category	Policy Commitments	Section	Location
Right to privacy and informational self-determination	*Baidu General Compliance Principles on Users Personal Information Protection* *Baidu Digital Security Strategy* *Master Privacy Policy* *Outbound Data Transfer Security Management System* *Baidu Data Management Measures* *Baidu Data Circulation Specification* *Baidu Data Classification Specification* *Baidu Data Authority Management Specification* *Baidu Virtual Resources Management Specification* *General Rule on Handling of Security Issues of Baidu* *Detailed Rules on Handling of Security Events of Baidu* *Baidu Management Measures on Commercial Advertisement* *Baidu's Four Principles of AI Ethics* *Baidu's Six Initiatives on Science and Technology Ethics*	Security Management Measures Security Emergency Response Process Personal Information and Privacy Protection Commercial Promotion Content Governance	P24、26-28、64
Right to freedom of opinion and expression	*Baidu Human Rights Policy* *Baidu Employee Manual* *Baidu Content Ecosystem Management Standards,* *Baidu Risk Control Redlines for User Products* *Baidu's Children Personal Information Protection Statement* *Baidu Safety Review Standards*	Employee Communication & Feedback Users' Rights Protection	P43、62-65
Anti-corruption and human rights	*Baidu Management Regulation of Construction of Professional Ethics* *Baidu Professional Ethics Reporting Management Regulations* *Baidu Professional Ethics and Code of Conduct* *Baidu Avoiding Conflicts of Interest Policy* *Baidu Management Measures on Undisclosed Material Information and Prohibiting of Insider Trading* *Baidu Management Measures on Business Ethics Red Line* *Baidu Management Measures for Rewards and Punishments* *Baidu Management Measures on Partners Blacklist* *Honest and Integrity Agreement* *Supplier Management Standards* *Measures on Supplier Reward and Punishment* *Baidu Sustainable Development Principles for Suppliers*	Business Ethics Management System Reporting and Whistleblower Protection Supplier ESG Management	P12-13、15、17
Right to life and health	*Baidu Human Rights Policy* *Baidu Employee Manual* *Management Standard of Baidu Recruitment* *Baidu Safety Management Standards*	Health & Safety Users' Rights Protection Supplier ESG Management	P42、65、17
Right to just and favorable conditions of work	*Baidu Human Rights Policy* *Baidu Employee Manual* *Supplier Management Standards* *Baidu Sustainable Development Principles for Suppliers*	Supplier ESG Management Protection of Rights and Interests	P17、42
Right to social security	*Baidu Human Rights Policy*	Non-Remunerative Benefits & Care	P42
Right to equality and freedom from discrimination	*Baidu Human Rights Policy* *Baidu Employee Manual* *Baidu Management Regulation of Construction of Professional Ethics* *Baidu Professional Ethics Reporting Management Regulations* *Baidu Professional Ethics and Code of Conduct* *Baidu Management Measures on Business Ethics Red Line* *Honest and Integrity Agreement* *Baidu Sustainable Development Principles for Suppliers*	Protection of Rights and Interests Users' Rights Protection Supplier ESG Management	P42、65、17
Right to freedom from harassment and violence	*Baidu Human Rights Policy* *Baidu Employee Manual* *Baidu Management Regulation of Construction of Professional Ethics* *Baidu Professional Ethics Reporting Management Regulations* *Baidu Professional Ethics and Code of Conduct* *Baidu Avoiding Conflicts of Interest Policy* *Baidu Management Measures on Undisclosed Material Information and Prohibiting of Insider Trading* *Baidu Management Measures on Business Ethics Red Line* *Baidu Management Measures for Rewards and Punishments* *Baidu Management Measures on Partners Blacklist* *Baidu Sustainable Development Principles for Suppliers*	Protection of Rights and Interests Users' Rights Protection Supplier ESG Management	P42、65、17

Materility Assessment

Baidu listens to the opinions and suggestions from stakeholders through multiple channels and ensures smooth communication with them, committed to creating sustainable value.

In 2023, Baidu held a cumulative total of 32 ESG communication roadshows to respond to concerns of shareholders and stakeholders in a timely manner and update the progress of related issues.

Stakeholders	Means of Communication	Expectations and Demands
Shareholders and investors	General meetings of shareholders Regular reports and announcements Communication with investors via emails and conferences Roadshow of ESG communication	Ongoing and stable growth Compliant operations Risk management Product service and quality
Users	Feedback channels Product surveys Interaction via our websites and social media	Improving user experience Information security Data and privacy protection Ecological management of contents Product quality assurance
Governments and regulators	Information disclosure Collaborative projects Routine communication and reporting Supervision and inspections Visitor reception	Compliant operations Information security Data and privacy protection Ecological management of contents
Employees	Internal office systems Internal meetings Regular surveys for feedback Online and offline trainings	Protection of employee rights and interests Employee training and development Employee benefit guarantee Occupational disease prevention
Suppliers	Invitation for bids Project procurement Contracts and agreements Supplier management conferences Supplier business communication meetings Other supplier communications	Sustainable supply chain Integrity Mutual benefit Supplier enpowerment

Stakeholders	Means of Communication	Expectations and Demands
Partners/NGO	Baidu World Congress Baidu Create ABC Summit Baidu Union Summit Project-based cooperation Technology exchanges Achievements sharing	Technological innovation Cooperative development Product quality assurance Low-carbon operations Corporate social responsibility
Media	Press conferences Exclusive interviews Invitation to meetings or events held by Baidu Interaction via our websites and social media	Transparency Compliant operations Information security Data and privacy protection Ecological management of contents Corporate social responsibility
Environment	Adopting energy-saving and emission reduction technology Developing green products Cultivating low-carbon awareness for users	Emissions management Energy and resource conservation Low-carbon operations
Communities	Community activities Interaction via Baidu websites and social media	Charity projects Volunteering activities

In 2023, we developed the material ESG issue matrix through intensified research on UN SDGs, the *GRI Sustainability Reporting Standards,* the *SASB Standards* and other standards, factoring into mainstream ESG rating indexes in capital market, through frequent and irregular communication with stakeholders, as well as discussion and analysis of sustainable development by the management. There are no major changes in material ESG issue matrix comparing with that in 2022.

Baidu's Material ESG Issue Matrix in 2023

List of Baidu's Material Issues in 2023

Importance	No.	Issue	Category	Location
High	1	Data and privacy protection	Economic	Personal Information and Privacy Protection
	2	Information security	Economic	Building Trust
	3	Protection of employees' rights	Social	Nurturing Talent
	4	Product quality assurance	Economic	Improving Service
	5	Improving user experience	Economic	User Experience
	6	Staff development	Social	Nurturing Talent
	7	Protecting employees' benefit	Social	Talent Protection
	8	Protecting intellectual property rights	Economic	Innovation Management
	9	Anti-corruption and business ethics	Economic	Business Ethics
	10	Ecological management of contents	Economic	Content Governance
Moderate	11	Energy and resource conservation	Environmental	Promoting Green Ideas
	12	Low-carbon operations	Environmental	Promoting Green Ideas
	13	Contribution to community/charity	Social	Contributing to Society
	14	Occupational health	Social	Talent Protection
	15	Supplier sustainability management	Economic	Supply Chain Management
	16	Effectiveness of board governance	Economic	Board Governance
Low	17	Emission management	Environmental	Promoting Green Ideas

HKEX ESG Index

Indicator	Description	Location
Governance Structure		
	A disclosure of the board's oversight of ESG issues	P09
	The board's ESG management approach and strategy, including the process used to evaluate, prioritise and manage material ESG-related issues (including risks to the issuer's businesses);	P08-09
	How the board reviews progress made against ESG-related goals and targets with an explanation of how they relate to the issuer's businesses	P08-09
Reporting Boundary		
	A narrative explaining the reporting boundaries of the ESG report and describing the process used to identify which entities or operations are included in the ESG report. If there is a change in the scope, the issuer should explain the difference and reason for the change.	About This Report
A. Environmental		
Aspect A1: Emissions		
General Disclosure		P50-59
	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	
A1.1	The types of emissions and respective emissions data.	P50-52、59
A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P50-51
A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P52
A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P52、59
A1.5	Description of emissions target(s) set and steps taken to achieve them.	P51-59
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.	P54-59
Aspect A2: Use of Resources		
General Disclosure		P50-59
	Policies on the efficient use of resources, including energy, water and other raw materials.	
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).	P50-51
A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	P53
A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	P51-59
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.	P54、56
A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	P59
Aspect A3: The Environment and Natural Resources		
General Disclosure		P50-59

Indicator	Description	Location
	Policies on minimising the issuer's significant impacts on the environment and natural resources.	
A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	P50–59
A4: Climate Change		
General Disclosure		P46
	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	
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.	P46–50
B. Social		
Aspect B1: Employment		
General Disclosure		P32–35
	Information on:	
	(a) the policies; and	
	(b) 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.	
B1.1	Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region.	P32
B1.2	Employee turnover rate by gender, age group and geographical region.	P33
Aspect B2: Health and Safety		
General Disclosure		P42
	Information on:	
	(a) the policies; and	
	(b) 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 hazards.	
B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	P42
B2.2	Lost days due to work injury.	P42
B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	P42
Aspect B3: Development and Training		
General Disclosure		P36–39
	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	
B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	P39
B3.2	The average training hours completed per employee by gender and employee category.	P39
Aspect B4: Labour Standards		
General Disclosure		P42
	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.	
B4.1	Description of measures to review employment practices to avoid child and forced labour.	P42
B4.2	Description of steps taken to eliminate such practices when discovered.	P42

Indicator	Description	Location
Aspect B5: Supply Chain Management		
General Disclosure		P16
	Policies on managing environmental and social risks of the supply chain.	
B5.1	Number of suppliers by geographical region.	P16
B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	P16
B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	P16–17
B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	P16–17
Aspect B6: Product Responsibility		
General Disclosure		P62–64
	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.	
B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	N/A
B6.2	Number of products and service-related complaints received and how they are dealt with.	P67
B6.3	Description of practices relating to observing and protecting intellectual property rights.	P70
B6.4	Description of quality assurance process and recall procedures.	P62–64
B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	P27–28
Aspect B7: Anti-corruption		
General Disclosure		P12
	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.	
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.	P15
B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	P15
B7.3	Description of anti-corruption training provided to directors and staff.	P15
Aspect B8: Community Investment		
General Disclosure		P74–79
	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	
B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	P74–79
B8.2	Resources contributed (e.g. money or time) to the focus area.	P74–79

GRI Content Index

Statement of use	Baidu has reported in accordance with the GRI Standards for the period [January 1, 2023 to December 31, 2023].
GRI 1 used	GRI 1: Foundation 2021

GRI Standard	Disclosure	Location
GRI 2: General Disclosures 2021	2-1 Organizational details	P04-05
	2-2 Entities included in the organization's sustainability reporting	About This Report
	2-3 Reporting period, frequency and contact	About This Report
	2-4 Restatements of information	About This Report
	2-5 External assurance	P105-106
	2-6 Activities, value chain and other business relationships	P16-17、80-89
	2-7 Employees	P31-43
	2-8 Workers who are not employees	P16-17
	2-9 Governance structure and composition	P8-9
	2-10 Nomination and selection of the highest governance body	P8
	2-11 Chair of the highest governance body.	P8
	2-12 Role of the highest governance body in overseeing the management of impacts	P8
	2-13 Delegation of responsibility for managing impacts	P8
	2-14 Role of the highest governance body in sustainability reporting	P8
	2-15 Conflicts of interest	P12-15
	2-16 Communication of critical concerns	P92-94
	2-17 Collective knowledge of the highest governance body	P8
	2-18 Evaluation of the performance of the highest governance body	/
	2-19 Remuneration policies	P9、42
	2-20 Process to determine remuneration	P9、42
	2-22 Statement on sustainable development strategy	P8
	2-23 Policy commitments	P8-9
	2-24 Embedding policy commitments	P9
	2-25 Processes to remediate negative impacts	P14
	2-26 Mechanisms for seeking advice and raising concerns	P14
	2-27 Compliance with laws and regulations	P12
	2-28 Membership associations	P14
	2-29 Approach to stakeholder engagement	P92-94
	2-30 Collective bargaining agreements	P12
GRI 3: Material Topics 2021	3-1 Process to determine material topics	P92-94
	3-2 List of material topics	P94
	3-3 Management of material topics	P94

GRI Standard	Disclosure	Location
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	See the annual report for details
	201-2 Financial implications and other risks and opportunities due to climate change	P48-49
	201-3 Defined benefit plan obligations and other retirement plans	P42
	201-4 Financial assistance received from government	P12
GRI 203: Indirect Economic Impacts	203-1 Infrastructure investments and services supported	P74-79、82、84
	203-2 Significant indirect economic impacts	P74-79、82-85、87-88
GRI 204: Procurement Practices	204-1 Proportion of spending on local suppliers	P16
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	P12-14
	205-2 Communication and training about anti-corruption policies and procedures	P12-15
	205-3 Confirmed incidents of corruption and actions taken	P15
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	P12
GRI 301: Materials 2016	301-1 Materials used by weight or volume	P59
	301-2 Recycled input materials used	P59
	301-3 Reclaimed products and their packaging materials	P59
GRI 302: Energy 2016	302-1 Energy consumption within the organization	P50
	302-2 Energy consumption outside of the organization	P50
	302-3 Energy intensity	P50
	302-4 Reduction of energy consumption	P50
	302-5 Reductions in energy requirements of products and services	P56-59
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	P54、56
	303-2 Management of water discharge-related impacts	P54、56
	303-3 Water withdrawal	P53
	303-4 Water discharge	P53
	303-5 Water consumption	P53
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	N/A
	304-2 Significant impacts of activities, products and services on biodiversity	N/A
	304-3 Habitats protected or restored	N/A
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	N/A

GRI Standard	Disclosure	Location
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	P50
	305-2 Energy indirect (Scope 2) GHG emissions	P50
	305-3 Other indirect (Scope 3) GHG emissions	P50
	305-4 GHG emissions intensity	P50
	305-5 Reduction of GHG emissions	P50
	305-6 Emissions of ozone-depleting substances (ODS)	N/A
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	N/A
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	P59
	306-2 Management of significant waste-related impacts	P59
	306-3 Waste generated	P59
	306-4 Waste diverted from disposal	P59
	306-5 Waste directed to disposal	P59
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	P16-17
	308-2 Negative environmental impacts in the supply chain and actions taken	P17
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	P32-33
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	P42
	401-3 Parental leave	P42
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	P42
	403-2 Hazard identification, risk assessment, and incident investigation	P42
	403-3 Occupational health services	P42
	403-4 Worker participation, consultation, and communication on occupational health and safety	P42
	403-5 Worker training on occupational health and safety	P42
	403-6 Promotion of worker health	P42
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	P42
	403-8 Workers covered by an occupational health and safety management system	P42
	403-9 Work-related injuries	P42
	403-10 Work-related ill health	P42

GRI Standard	Disclosure	Location
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	P39
	404-2 Programs for upgrading employee skills and transition assistance programs	P36-39
	404-3 Percentage of employees receiving regular performance and career development reviews	P36
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	P32
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	P43
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	P43
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	P42
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	P42
GRI 411: Rights of Indigenous Peoples 2016	411-1 Incidents of violations involving rights of indigenous peoples	N/A
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	P76-79
	413-2 Operations with significant actual and potential negative impacts on local communities	N/A
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	P16-17
	414-2 Negative social impacts in the supply chain and actions taken	P17
GRI 415: Public Policy 2016	415-1 Political contributions	P76-79
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	P62-64
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	P62-64
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	P27-28

SASB Standard

Topic	Accounting Metric	Code	Location
Environmental Footprint of Hardware Infrastructure	(1)Total energy consumed; (2) percentage grid electricity; (3) percentage renewable energy	TC-SI-130a.1	P51
	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	TC-SI-130a.2	P53
	Discussion of the integration of environmental considerations into strategic planning for data center needs	TC-SI-130a.3	P54-55
Data Privacy & Freedom of Expression	Description of policies and practices relating to behavioral advertising and user privacy	TC-SI-220a.1	P27-28、62-64
Data Security	(1) Number of data breaches; (2) Percentage involving personally identifiable information (PII); (3) Number of users affected	TC-SI-230a.1	P27
	Description of approach to identifying and addressing data security risks, including use of third-party cybersecurity standards	TC-SI-230a.2	P24-29
Recruiting & Managing a Global, Diverse & Skilled Workforce	Employee engagement as a percentage	TC-SI-330a.2	P32
	Percentage of racial/ethnic group representation for (1) management, (2) technical staff, and (3) all other employees.	TC-SI-330a.3	P32
Managing Systemic Risks from Technology Disruptions	Description of business continuity risks related to disruptions of operations	TC-SI-550a.2	P24-26、48-49

UN SDGs Contributions

Key SDG responded	Our Commitments and Main Actions	Location
1 NO POVERTY	Actively responding to the call for "Rural Revitalization", assisting in the development of the agricultural industry and helping more people in rural areas increase income	Rural Revitalization
3 GOOD HEALTH AND WELL-BEING	Establishing workplace risk prevention and emergency response measures and making every effort to protect employee health and safety	Health & Safety
4 QUALITY EDUCATION	Cultivating 5 million AI talents for the society. Discovering outstanding youth in AI field and encouraging technological innovation in the AI field. Delivering AI management talents to various industries	AI Community Building. Young AI Talent Cultivation. High-end Hybrid AI Talent Cultivation
5 GENDER EQUALITY	Eliminating illegal labor practices in the workplace, rigorously preventing human rights violations in the workplace, and safeguarding the legitimate rights and interests of employees. Continuously promoting a diverse, equal and inclusive working environment	Protection of Rights and Interests
7 AFFORDABLE AND CLEAN ENERGY	Baidu's data centers constantly optimize energy structure, vigorously using clean energy, and purchasing 50 million kWh green power annually. Actively managing energy and resources in the office area	Green Operations
8 DECENT WORK AND ECONOMIC GROWTH	Providing excellent talents with perfect talent promotion and career development mechanism. Providing employees with a perfect training system for skill enhancement and personal development. Empowering digital workforce with digital skills by using self-researching large language model technology in working scenarios	Promotion & Development. Talent Training. Digital Empowerment

Key SDG responded	Our Commitments and Main Actions	Location
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	Adhering to the concept of "Everyone can AI" and actively open-sourcing AI-related technology tools	AI Could Groups (ACG)
	Implementing the strategy of "Cloud- Intelligence Integration, Deepening Industry, Ecological Prosperity, AI Inclusion", utilizing platform and resource advantages to establish city-level AI industrial parks and promote the development of urban economy	Technology Platform Group (TPG)
10 REDUCED INEQUALITIES	Helping older groups learn electronical and digital knowledge	Caring for The Elderly
	Helping minors obtain digital skills learning opportunities	Education and Protection of Minors
11 SUSTAINABLE CITIES AND COMMUNITIES	Supporting rural construction and contributing to the development and digital transformation of the agricultural industry	Rural Revitalization
	Deploying professional resources to provide emergency assistance and sustainable post-disaster reconstruction in disaster-stricken areas	Difficulty Relief
	Utilizing media platforms and influence to combat domestic violence	
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	Putting in place comprehensive information security management systems and formulating a personal information and privacy protection systems	Personal Information and Privacy Protection
	Integrating the protection of personal information into the entire process of research and development, development and launch of products and services, incorporating the concept of user privacy features into product development, and monitoring and evaluating security risks in real time	Product Content Governance
	Relentlessly improving the construction of content governance system and providing users with high-quality, safe and responsible products and services	
13 CLIMATE ACTION	Establishing a climate change governance system with reference to the framework and recommendations of the IFRS S2 Climate-related Disclosures, setting carbon reduction strategies and targets, regularly identifying climate change risks, and carry out actions to address climate change	Climate Change
16 PEACE, JUSTICE AND STRONG INSTITUTIONS	Integrating the ESG concepts into the corporate operation and management, continuously improving governance, controlling business operation risks, and building a solid bottom line of business ethics	ESG Management Board Governance Business Ethics
17 PARTNERSHIPS FOR THE GOALS	Sharing intellectual property rights through patent cooperation, promoting collaborative innovation among partners, and leading ecological co-construction	Innovation Management

Independent Statement of Assurance

Greenhouse Gases Verification Statement

is awarded to

Baidu, Inc.

Bureau Veritas Certification (Beijing) Co., Ltd. (hereinafter referred to as BVC) was engaged to conduct an independent verification of the greenhouse gases (GHG) emissions reported by Baidu, Inc.for the period stated below. This verification statement applies to the related information included within the scope of work described below. The determination of the GHG emissions is the sole responsibility of Baidu, Inc. BVC's sole responsibility was to provide independent verification on the accuracy of the GHG emissions reported, and on the underlying systems and processes used to collect, analyze, and review the information.

Boundaries covered by the verification:

•Site name：**Baidu, Inc.**

•Verified address：Baidu Campus,NO.10 Shangdi 10th Street,Haidian District,Beijing,The People'sRepublic

of China 100085 (HQ), Including 26 Office locations,6 Baidu Opereted Digital Centers and 1 Vehicle Operation Site

•Reporting period covered： 01/01/2023 to 31/12/2023

Organizational boundaries: Activities and facilities of Baidu, Inc. under operational or financial control approach.

Reporting boundaries: Direct GHG emissions generated in [Office and data center areas, vehicle operations] and related management activities within the organizational boundaries, as well as significant indirect greenhouse gases emissions

Emissions data verified under reporting boundaries:

•Category 1：Direct GHG emissions: 20039.03 tonnes of CO_2e

•Category 2：Indirect GHG emissions from imported energy：901395.51tonnes of CO_2e （location-based）

Indirect GHG emissions from imported energy：851017.74tonnes of CO_2e （market-based）

•Category 3：Indirect GHG emissions from transportation：1938.32 tonnes of CO_2e

•Category 4：Indirect GHG emissions from products used by organization：1450463.36 tonnes of CO_2e

•Category 5：Indirect GHG emissions associated with the use of products from the organization：Non-significant indirect emissions and not quantified

•Category 6：Indirect GHG emissions from other sources：Non-significant indirect emissions and not quantified

Total quantified emissions: 2375636.22 tonnes of CO_2e （location-based）

2323458.45 tonnes of CO_2e （market-based）

Limitations and exclusions: Excluding other non-significant indirect GHG emissions

GHG reporting protocol against which verification was conducted:

- ISO 14064-1:2018 Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals

GHG verification protocol used to conduct the verification:

- ISO 14064-3:2019 Greenhouse gases — Part 3: Specification with guidance for the verification and validation of greenhouse gas statements

Certification body address: Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738
Further clarifications regarding the verification scope of this statement may be obtained by consulting the organization.
To check this statement validity please call: +86 01 59683888
Page 1 of 2

Bureau Veritas Certification

Bureau Veritas Certification

Level of assurance and qualifications:

Reasonable assurance

GHG verification methodology:
- Interviews with relevant personnel;
- Review of documentary evidence;
- Review of data and information systems and methodology for GHG emissions data collection, aggregation, analysis, and review of information used to determine GHG emissions;
- Sample verification of data to determine GHG emissions.

Assurance opinion:

Based on the verification process and findings, the GHG emission data in the GHG inventory report from Baidu, Inc.is in conformance with ISO 14064-1:2018.

Statement of independence, impartiality, and competence

Bureau Veritas Group is an independent professional services company that specializes in Quality, Health, Safety, Social and Environmental management with over 190 years' history in providing independent assurance services.

No member of the verification team has a business relationship with Baidu, Inc.and its directors or managers beyond that required by this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest.

Bureau Veritas Group has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities.

Lead verifier: Kathy Zhai

Statment No.: EMICN100314A

Version No.: No.1

Verification date: 29/01/2024- 02/02/2024

Issue date: 19/02/2024

Signed on behalf of
Bureau Veritas Certification (Beijing) Co., Ltd.

Certification body address: Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738
Further clarifications regarding the verification scope of this statement may be obtained by consulting the organization.
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Page 2 of 2

Reader Feedback Form

Dear readers,

Thank you for reading our 2023 Environmental, Social and Governance Report. We sincerely welcome your valuable comments and suggestions on this report and our work. You can mail the form and email the form after scanning to give your feedback. Thank you!

1. As a stakeholder of Baidu, what is your relationship to Baidu?

☐ Shareholder   ☐ Employee   ☐ Supplier   ☐ User

☐ Government   ☐ Community   ☐ Financial Institution

☐ Academic Institution   ☐ Others (Please specify)

_____

2. What is your overall comment on this Report?

☐ Excellent   ☐ Good   ☐ Average   ☐ Below average

3. What do you think about the clarity, accuracy and completeness of the information disclosed in this Report?

☐ Excellent   ☐ Good   ☐ Average   ☐ Below average

4. What do you think about the comprehensiveness of Baidu's economic responsibilities reflected in this Report?

☐ Excellent   ☐ Good   ☐ Average   ☐ Below average

5. What do you think about the comprehensiveness of Baidu's environmental responsibilities reflected in this Report?

☐ Excellent   ☐ Good   ☐ Average   ☐ Below average

6. What do you think about the comprehensiveness of Baidu's social responsibilities reflected in this Report?

☐ Excellent   ☐ Good   ☐ Average   ☐ Below average

7. What do you think about the design and layout of this Report?

☐ Excellent   ☐ Good   ☐ Average   ☐ Below average

8. Which part of this Report do you think needs improvement?

☐ Enhancing Corporate Governance   ☐ Building Trust   ☐ Nurturing Talent

☐ Promoting Green Ideas   ☐ Improving Services   ☐ Contributing to Society

9. Content that you wish to know more about beyond this Report?

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10. Your suggestions regarding the compilation of our ESG Report?

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