

2022

Environmental, Social, and Governance (ESG) Report

VNET Group, Inc.

01 Message from CEO

 \bigcirc

, T ,

 \angle

03/06 About VNET

- 03 Group Profile
- 05 Highlights in 2022
- 06 International Recognition

07/14 **ESG Strategy**

- 07 ESG Governance Structure
- 09 SHIELD System
- 14 Stakeholder Engagement

15/24

Holding the Business Bottom Line: Responsible Governance

- 17 Governance Structure
- 18 **Risk Management**
- 19 Business Ethics

WE SUPPORT S LOBAL COAR

25/44

Contributing to Sustainability: Towards a Zero-carbon Future

- 27 Carbon Neutrality Progress
- 30 Full Life Cycle Construction of Green Data Centers
- 34 Empowering Energy Transition
- 37 Promoting Circular Economy
- 39 Climate-related Financial Disclosure

45/54

Empowering the Digital Economy: High-quality Development

- 49 Reliable Products and Services
- 51 Information and Data Security

55/68

Demonstrating Corporate Responsibility: Common Value Co-creation

- 57 Diverse and Inclusive Workplace
- 61 Broad Development Platform
- 67 Reciprocal Partnership
- 68 Responsible Corporate Citizen

69/82

Appendix

- 69 About this Report
- 71 Key Performance Indicators
- 75 GRI Index
- 81 Independent Assurance Statement

Message from CEO

The year 2022 was full of challenges. The turbulent international situation, intensified climate change and the sluggish global economy have all increased the complexity of the business environment and the uncertainty of business operations. However, looking back on the year, VNET, as a leading carrier- and cloud-neutral internet data center services provider in China, faced the challenges head-on and forged ahead bravely.

We have ridden the wave of the global digital economy, responded to the East-Data-West-Computing strategic deployment and the "dual carbon" target proposed by China. On the basis of providing a neutral digital base, we actively explore new technologies, new industries, new formats, and new models, helping to create a new era of networked, digital, and intelligent transformation.

While developing our business, we have relied on the SHIELD sustainability system and deeply implemented the ESG concept. We have been able to promote the harmonious coexistence between the enterprise and the economy, society and environment with practical actions, writing a new chapter in the sustainable development of the global digital economy.

Towards zero carbon

VNET has been adhering to the green development path of high-efficiency, intensive, low-carbon circulation for data centers, responding to the national call to "accelerate the construction of a new power system based on new energy" and making unremitting efforts to build "zero-carbon" data centers. In early 2022, we developed the "4C" pathway towards carbon neutrality and fully leveraged an array of approaches including renewable energy transition, energy-saving technology application and empowerment of the upstream and downstream industrial chain to achieve our commitment to carbon neutrality. In 2022, we have continued exploring carbon reduction in the full life cycle of data centers, empowering energy transition to boost the circular economy. VNET has actively aligned our operations with international advanced standards and practices and incorporated climate change issues into corporate strategic considerations in our response to climate change.

Digital empowerment

Building a sound, robust and secure new infrastructure is the fundamental condition for promoting the healthy development of the digital economy. We are committed to becoming a full-lifecycle partner in the digital transformation of industry users. Based on the "wholesale + retail" dual-core strategy and the SPEAR plan, we have accelerated the construction of the next-generation intelligent information infrastructure. We have actively responded to the national call to promote the construction of Digital China, participated in the construction of the East-Data-West-Computing hubs and made efforts in the same direction as the national economic development. Attaching great importance to information security and data protection, we have been dedicated to providing customers with reliable and stable products and services, continuously expanding customer communication channels and improving the quality of customer service.

Value co-creation

VNET has demonstrated its corporate responsibility in an all-round way and regards long-term social responsibility as its foundation. Adhering to the "people-oriented" employment philosophy, we respect and protect the rights of employees, create a diverse and inclusive working environment and insist on sustainable talent cultivation to achieve mutual development between employees and the enterprise. We have built up a responsible supply chain, established win-win relationships with suppliers, and worked together with them to continuously enhance sustainability and promote green development, reform and innovation in the industry. We have practiced social responsibility and deeply participated in various social welfare fields such as ecological and environmental protection, and community development, and have been able to share the fruits of our development with the whole society.

Looking back on 2022, VNET's ESG work has achieved fruitful results. We have been highly recognized by ESG rating agencies of the international capital market. Our influence in the field of sustainability has been continuously expanded and the international competitiveness improved.

Looking forward to the future, under the guidance of the national "14th Five-Year Plan", the "dual carbon" target and the development of new generation data centers, digital intellectualization will further penetrate every link of the social economy, integrating the digital economy with sustainability. VNET will focus on the its long-term value, continuously strengthen ESG management, adhere to high-quality and sustainable development and work with all stakeholders to create a better digital future.



Chief Executive Officer of VNET Group, Inc. Jeff Dong

About VNET

Group Profile

VNET Group, Inc. (hereinafter referred to as "VNET", "the Group" or "we") was founded in 1996. In 2011, VNET was listed on the NASDAQ exchange, becoming China's first Internet data center (IDC) provider listed in the United States. After more than 20 years of development, VNET has become one of the world's most influential cyberspace infrastructure service providers and a leading provider of innovative digital new infrastructure.

With more than 20 years of experience in the data center industry, VNET has built large-scale data center clusters in the Beijing-Tianjin-Hebei region, the Yangtze River Delta and Guangdong-Hong Kong-Macao Greater Bay Area. These clusters have formed a solid, vast and fully connected digital core foundation. VNET is committed to providing industry-leading tailored one-stop data center solutions for ultra-large clients and building an infrastructure operation platform with core wholesale advantage, hyper-scale operation capacity and high valueadded. By the end of the reporting period, the Group operated over 50 data centers in over 30 cities throughout China, with over 87,300 cabinets, more than 4T of the port capacity of over 4T and more than 1T of high-speed cloud dedicated access. This makes us stand out as a new engine for customers' digital transformation. At the same time, VNET is catering for a new collection of scaled-up, standardized, eco-friendly, high-capacity data centers in efforts to meet the demand of the rapid market expansion of enterprises in China and beyond.

Based on its strong resources and capital strength, powerful technological innovation capabilities, efficient delivery capabilities and outstanding operational capabilities, VNET has become an ideal partner for tailored data centers for leading Internet companies. With cloudnative and hybrid cloud solutions at our core, we focus on creating comprehensive IT solutions which cover valueadded cabinets and services which encompass network, bare metal, hybrid cloud, operational and maintenance. In addition, VNET supported the entry of large international cloud solutions into the Chinese market, including Microsoft Azure, Office 365, Dynamics 365, Power Platform, etc. These platforms have landed in China and are now under independent operation.

With the rapid development of China's digital economy and the support of new infrastructure policies, VNET serves the national strategy and seizes the opportunity of constructing new power systems and East-Data-West-Computing hubs. We also provide professional services with an increasingly adept service system and greater efficiency for customers to support the digital transformation and upgrade of the national economy and society.

Beijing-Tianjin-Hebei Region

By the end of reporting period

Domestic Operation Capacity

Over 30 cities

More than 50 data centers

More than 87,300 cabinets

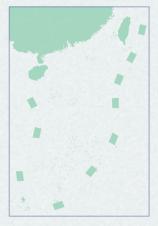
More than 4T of port capacity

More than 1T of high-speed cloud-dedicated access

Chengdu-Chongqing Economic Circle

Guangdong-Hong Kong-Macao Greater Bay Area

Yangtze River Delta Region



Highlights in 2022



International Recognition¹

In 2022, with its outstanding performance in ESG management and climate change response, VNET was repeatedly recognized by various international rating agencies and capital markets, demonstrating its continuously enhanced international competitiveness.

We received a B score in the Climate Change Questionnaire of the Carbon Disclosure Project (CDP) and were also the highest-scored enterprise in China's IDC industry.

Morgan Stanley Capital International (MSCI) upgraded our ESG rating to A which is the highest rating in Software & Services industry in China.

We scored 57 in the S&P Global Corporate Sustainability Assessment (S&P CSA), ranking among the top 10% of the global IT Services industry and becoming the highest-scored enterprise in China's IT Services industry.

1. Ratings/scores and related information were derived from publicly available information as of March 31, 2023.

ESG Strategy

ESG Governance Structure

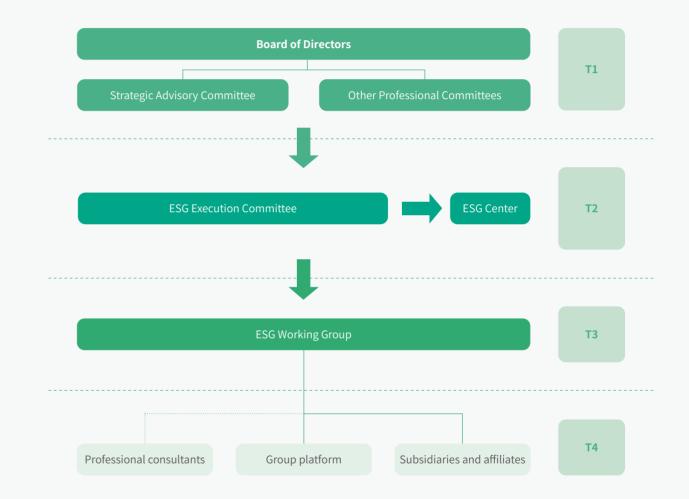
VNET's Board of Directors and management are responsible for ensuring that the Group's ESG strategy and related activities, including climate-related issues, are both relevant and effective. The Group has established an ESG governance structure with the Board of Directors taking the responsibility, management taking the lead, enhancing cross-functional cooperation and cross-level collaboration. The Group has incorporated ESG management philosophy into Group's major decisions to promote high-quality development of the enterprise.

Tier 1: The Board of Directors steers the ESG strategy of the Group and takes ultimate responsibility for ESG-related matters. The Strategic Advisory Committee takes the role of supervision to effectively supervise and manage the implementation of the ESG-related work at the Group level.

Tier 2: Led by the CEO, the ESG Execution Committee is comprised of senior management of relevant departments. The Committee is mainly responsible for developing ESG strategies, annual performance targets and plans of key improvement areas. The Committee reports the progress of ESG-related work to the Board of Directors on a quarterly basis. As the coordinating organization, the ESG Center is responsible for coordinating the planning, promotion and implementation of ESG-related work.

Tier 3: The ESG Working Group, consisting of leaders from respective functional departments, promotes both the internal and external ESG-related work.

Tier 4: The Group platform, our subsidiaries and affiliates implement the ESG-related work with the assistance of coordinating department and professional consultants.



:___

SHIELD System

As a participant of UNGC, we pledge to support its Ten Principles and the achievement of the United Nations Sustainable Development Goals (SDGs). In 2022, based on the SHIELD sustainability system we developed, we actively carried out sustainable actions in six action areas, namely Social, Human, Innovation, Environment, Leadership and Development.





governance system, strengthen risk prevention and control, and foster an honest business environment.

৾৾৾

Innovation

Key performance of year 2022

Quality products and services

- Passed Business Continuity Management System (ISO 22301) certification
- Major IDC operational disruptions and network outages were
- Participated in the preparation of the national standard: Information Technology Service - Grade Evaluation Criteria for Business Continuity of Data Center
- Number of customer complaints was 0
- Customer satisfaction after the call was 100% for the fourth consecutive year
- The national customer satisfaction was 99.85%

Renewable energy

- Signed a 2023 green power purchase agreement (approximately 4 million kWh) with CGN Solar Energy, which contains a green power supply guarantee clause of about 500 million kWh in the next five years.
- Purchased 1 million kWh of green electricity certificate.

Intellectual property protection

• Obtained 30 patents, 38 software copyrights, 30 trademarks in 2022

Privacy and data security

- Number of information security incidents was 0
- Number of trade secret leakage incidents was 0
- Passed Information Security Management System (ISO 27001) certification
- Received the Level 3 service certification issued by the CCRC

Sustainable supply chain

• The total number of suppliers reached 2,623

Community engagement and contribution

E

 Θ

Human

Development

planting activity

Employee attraction and retention

- The total number of employees reached 3,293
- Ratio of employee returned to work after parental leave reached 100%
- The number of new employees reached 648

Diversity and gender equality

- Percentage of female employees in management positions was 29%
- Ratio of male to female employees was 1.02:1 in terms of the average of monthly salary

Employee training and development

- Average training hours per employee reached 23.8 hours
- Total number of VNET E-Learning courses reached 576
- The Honor O&M Expert Program series attracted about 5,000 participants



Climate change

• Became a supporter of TCFD

Business ethics

- Achieved 100% coverage of anti-corruption training for directors and employees
- Achieved 100% pass rate in anti-corruption examination for new employees
- Number of corruption and bribery related lawsuits against the Group or our employees was 0
- Passed Anti-bribery Management System (ISO 37001) certification

Leadership

Carbon emission

- The average annual PUE of data centers with stabilized operations in 2022 was 1.37
- 8 data centers obtained green data center certifications
- The average annual CO₂ emission reductions of photovoltaic power projects in Boxing Data Center reached 183 tons
- The annual carbon emission reductions of the "PV + energy storage" project in Foshan Data Center reached about 75 tons
- Foshan Smart City Data Center won the Outstanding Achievement Award in the selection of "Innovation Pioneer" Low-carbon Computing Power Pioneer Cases

Corporate governance

• Independent directors account for 83% in the Board

- VNET Blue Cloud received 11 TRUCS certificates
- VNET Blue Cloud passed the SOC audit for three consecutive years
- Xi'an ETDZ Data Center received Class A certification for power systems of financial information DCs
- Achieved 100% coverage of information security training for employees
- 100% of suppliers signed the Anti-bribery Commitment Letter
- Employees invested nearly 400 hours in voluntary tree Donated RMB 20,000 to the Inner Mongolia Chahar Right Back Banner People's Government

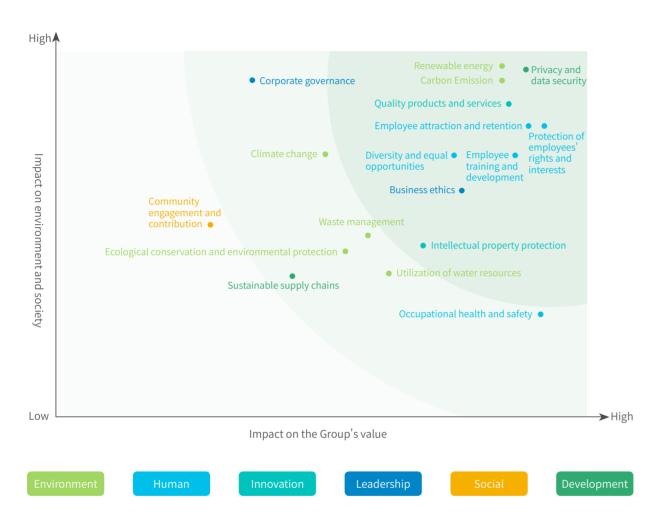
Occupational health and safety

- Passed the Occupational Health and Safety Management System (ISO 45001) certification
- Number of construction accidents occurred due to negligence was 0
- Number of fire accidents occurred at operation sites was 0
- Ratio of male to female employees was 1: 1.14 in terms of the median of monthly salary

• Supported 18 external training sessions and reimbursed RMB 205,000 for employees to obtain professional certifications

Materiality assessment

In 2022, we conducted a comprehensive materiality assessment of ESG issues based on the concept of double-materiality by referring to domestic and foreign ESG best practices combined with the concerns of various stakeholders on the sustainable development of VNET. We considered the financial materiality and impact materiality of each issue, and finally summarized and updated the 2022 material issues list of VNET.



Explanation for changes

In previous years, intellectual property protection was assessed as part of the business compliance issue. VNET constantly enhances its scientific and technological innovation capabilities, strengthens its intellectual property protection and develops an overseas intellectual property presence. Therefore, intellectual property protection was assessed and presented separately.

Renewable energy applications offer an important opportunity for VNET's future development. In 2022, we focused on exploration on technologies and applications in hydrogen, green electricity and energy storage. As a result, we elevated the financial materiality and the impact of the renewable energy issue.

Stakeholder Engagement

and needs. We actively expand diverse communication channels to continuously optimize our ESG strategy and improve our ESG performance.



:___

oncerns	Major communication channels
servation and l protection e ons ement vater resources ergy	 Government consultation Information disclosure Thematic reports Statistical statements
ernance ergy ons e	 Information disclosure General meetings of shareholders Roadshows On-site visits
equal opportunities employee rights and retention health and safety evelopment	 Seminars Trade union Trainings Reporting system
cts and services ata security s ons	 Product launches Customer service hotline Satisfaction surveys Complaint system
ipply chains bliance operty protection	Industrial summitProcurement activitiesSupplier trainings
cts and services ata security l environmental e vater resources ergy upply chains	Information disclosurePress conferences
ngagement and servation and I protection	 Questionnaires Public welfare activities

Holding the Business Bottom Line Responsible Governance

- Governance Structure
- Risk Management
- Business Ethics

VNET adheres to the business bottom line, actively creates a sound internal and external governance environment, and promote the Group's compliant and robust development.





VNET is committed to promoting high-standard corporate governance. In strict accordance with the Company Law of the People's Republic of China, the Securities Exchange Act of the United States and other relevant laws and regulations, we consistently optimized the governance structure, improved internal control and operated with integrity and compliance. As a result, we thereby enhanced the long-term corporate value of the Group and protected the rights and interests of our shareholders.

Governance Structure

VNET strictly complies with relevant laws and regulations of our operation and listing areas, and constantly improves the modern corporate governance structure. Our robust governance structure consists of the general meeting of shareholders, the Board of Directors and its subordinate committees and management. Under the supervision and guidance of these Board committees, the Board of Directors provides consultation and suggestions on the management of various divisions, including formulating relevant strategies, supervising their implementation, and monitoring the operational and financial performance of the Group, ensuring soundness of internal control and risk management systems. Our Board committees' scope of responsibilities is published on the official website² of VNET and is available for shareholders upon request.

We value the independence and diversity of Board members. The Audit Committee, the Nomination and Corporate Governance Committee and the Compensation Committee of the Board of Directors are all led by non-executive independent directors. Various factors, including but not limited to expertise, industry experience and qualifications, educational and cultural background, gender, race, etc., are considered in the selection process and the appointment of Board members. This course of action ensures that an appropriate balance is maintained in terms of skills, experience and diversity of views, thereby enhancing the effectiveness of the Board.

As of the end of the reporting period, the Board of Directors consisted of six members, including one executive director and five independent non-executive directors. Independent directors account for 83% of the total.

_				Expertise	
Туре	Name	Educational Background	Industry experience	Risk management	Financial management
Founder and Chairman	Mr. Josh Sheng Chen	Bachelor of Electrical Engineering		$\sqrt{-}$	
Independent Director	Mr. Erhfei Liu	Master of Business Administration	$\sqrt{-}$	$\sqrt{}$	
Independent Director	Mr. Sean Shao	Master of Management	$\sqrt{-}$		
Independent Director	Mr. Yoshihisa Ueno	Bachelor of Business Administration	$\sqrt{-}$	$\sqrt{-}$	
Independent Director	Mr. Kenneth Chung-Hou Tai	Master of Business Administration	$\sqrt{-}$	$\sqrt{-}$	$\sqrt{-}$
Independent Director	Mr. Changqing Ye	Master of Business Administration			

The Group encourages our directors to participate in appropriate professional training and courses, as well as providing them with legal and regulatory updates for reference and study, aiming to enhance the Board's compliance awareness and performance. We invest in anti-corruption training for them, focusing on anti-corruption training for directors. In 2022, all directors of the Group have participated in various forms of anti-corruption training.

2. https://ir.vnet.com/corporate-governance/policies-committee-charters

Risk Management

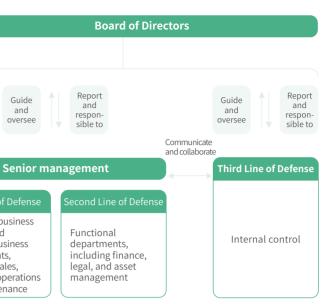
VNET firmly believes that the effective risk management and internal control hold the key to the success of the Group operation. In accordance with the NASDAQ's Corporate Governance Guidelines and other guidelines, we develop risk management and internal control systems tailored to the characteristics of our business development. We identify and give early warnings to financial and nonfinancial risks in the operation process to form an effective risk prevention and control mechanism. We also clearly define the roles and responsibilities of the Board of Directors, management, internal control teams and external audit agencies in the risk prevention and control system to ensure both soundness and effectiveness.

"Three lines of defense" for risk management

Based on the Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), VNET follows the three lines of defense for risk management under the Sarbanes-Oxley Act, clarifies the level and role of risk management and develops specific control procedures for various risks.



This year, VNET further strengthened the identification, assessment, management and supervision of risks within the business. We updated and issued the Risk Management Policy to clarify the definition and process of risk identification, classification, assessment, control, etc. to standardize risk prevention and control, effectively avoid and reduce data center operation risks, and ensure safe and reliable data center operation. At the same time, we strengthened personnel training and evaluation to enhance the team's risk awareness and coping capability.



Forward-looking risk management

VNET pays close attention to risks that are highly sensitive to corporate operations, including the risk of relevant transactions, implement a comprehensive and forwardlooking risk management work, and effectively control potential risks such as climate change and energy supply risks. We have formulated a series of emergency response guidelines, such as the Response System for Suddenonset Emergencies, and obtained the disaster recovery information security service qualification certification issued by China Cybersecurity Review Technology and Certification Center, which safeguards the normal business operation of the Group amid potential risks.

This year, the Group further carried out risk identification and materiality assessment, including risks of information security, human resource, and climate change. The risk assessment results and internal control system effectiveness were reported to the Board of Directors and accepted its supervision.

Internal control and audit

We conduct annual test and self-evaluation of the effectiveness in the design and execution of the internal control system, and invite external auditors annually to assess the effectiveness of the internal control of financial reports and disclose the significant defects of the internal control identified in non-financial reports. The full text of financial and internal control audit reports presented by the auditors are published on our official website for review and supervision by all stakeholders.

Business Ethics

We believe in the importance of upholding business ethics in the fiercely competitive and fast-changing global business environment and pledge to conduct business operations in accordance with the highest ethical standards. We formulated and issued the Code of Business Conduct and Ethics, requiring employees of the Group and third-party agencies to engage in business activities accordingly.

Compliance management

VNET adheres to the concept of "conduct business with integrity". We strictly abide by relevant laws and regulations, including the Company Law of the People's Republic of China, the Anti-Unfair Competition Law of the People's Republic of China, the Anti-Monopoly Law of the People's Republic of China, the Foreign Corrupt Practices Act of the United States, and the Sarbanes-Oxley Act. We have also established a complete and sound compliance management system tailored to the Group. The Group formulated and issued the Regulations on Compliance and Information Security Management and other systems, which specify issues such as anti-corruption, antimonopoly, intellectual property and confidentiality, and form a three-tier compliance management system.

The Group gives high priority to the construction of compliance culture and actively organizes publicity and education on compliance. We set up a series of compliance courses through the VNET E-learning platform. In addition, all employees are required to enhance their compliance awareness and improve the business ethics of compliance, veracity and integrity.

Intellectual property management

VNET keeps exploring new directions of technology, focusing on the timely transformation of innovative achievements. In accordance with the laws and regulations related to intellectual property, such as the Patent Law of the People's Republic of China, the Trademark Law of the People's Republic of China, and the Copyright Law of the People's Republic of China, the Group has established a robust intellectual property management system and specified the organizational structure of intellectual property management and the responsibilities of all departments involved.

In 2022, VNET further optimized the management of patents and trademarks through its Intellectual Property Management System, magnified incentives for patent innovation and trademark registration and clarified the process of intellectual property rights application. We are

In 2022, VNET obtained

Patents	
Software Copyrights	38
Trademarks	30



gradually laying out overseas patents, initiate international patent applications for self-developed technologies as per the Patent Cooperation Treaty (PCT), and started the first step of the deployment of overseas patents, providing a solid backing for VNET to participate in global market competition.

VNET resolutely safeguards its intellectual property rights and legitimate rights and interests. In addition, we keep track of the patent applications of peers to avoid infringement of other parties' intellectual property rights. When signing contracts with other parties, we meticulously review the terms of intellectual property rights and agree on the ownership of intellectual property rights to avoid intellectual property rights disputes caused by unclear ownership.

Until the end of 2022, VNET has obtained a total of

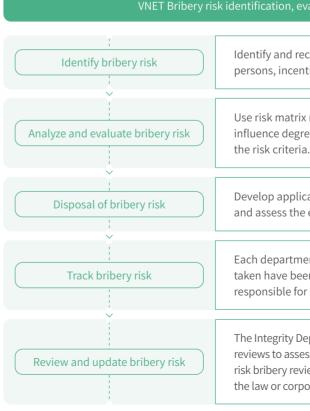
Patents	
Software Copyrights	
Trademarks	<u> </u>

Anti-corruption

VNET adopts zero-tolerance policies towards corruption. Adhering to the principles of education, supervision, punishment, and protection, we establish a complete integrity management system and formulate various policies, such as the Gift Registration System, the Integrity Inspection System, the Integrity and Whistleblowing Rewards Program, and the Whistleblowing and Whistleblower Protection Policy. In addition to specifying the anti-corruption system, supervision management, integrity education, whistleblowing, and investigation, we also require all employees and third-party suppliers to sign the Anti-bribery Commitment Letter, and implement an effective anti-corruption mechanism, to ensure the access in advance, early warning in the process, and law enforcement afterwards, thus ensure the healthy, stable and long-term development of the Group.

Risk prevention

VNET establishes an anti-corruption risk identification management process, conducts regular bi-annual inspections to identify risks and urge relevant departments to resolve risks in a timely manner. We develop the risk identification, assessment and control process, and identify potential integrity risks and management loopholes within the Group in the daily work based on the risk identification and evaluation system model. After confirming the existence of risks, relevant departments will conduct investigations and carry out quantitative





analysis of integrity risks. According to the complaints from external channels, we also investigate post responsibilities and corruption risks, identify the risks of corruption events and solve them promptly.

This year, VNET organized various departments of the Group to carry out a bribery risk assessment to identify, analyze, evaluate and address bribery risks involved in the departments and evaluate the effectiveness of countermeasures.

VNET Bribery risk identification, evaluation and control procedures

Identify and record information related to bribery risk, including involved persons, incentives, occurrence time, occurrence place, etc.

Use risk matrix method (LS method) to analyze the possibility and influence degree of risk occurrence, and the results are compared with the risk criteria.

Develop applicable risk control measures for each category or level of risk and assess the effectiveness of existing control measures for such risks.

Each department tracks related risks to ensure that the measures taken have been effectively implemented. The Integrity Department is responsible for supervising the implementation of all departments.

The Integrity Department organizes and carries out annual bribery risk reviews to assess changes in risks and the implementation of measures. The risk bribery review will be reconducted when there is a significant change in the law or corporate structure. In 2022, VNET's main workplaces passed the Antibribery Management System (ISO 37001) certification. We plan to gradually expand the scope of certification in the future, and always align our management standards throughout the group consistent with the system.

intertek CERTIFICATE **OF REGISTRATION** Beijing VNET Broadband Data Center Co., Ltd. Issuing Date 06 July 2022 Valid Until: 05 July 2025 ISO37001:2016

Whistleblowing mechanism

VNET has developed an effective whistleblowing process and whistleblower protection system, and resolutely fights non-compliant misconducts such as accepting, giving or seeking bribes, and kickbacks. Any external and internal stakeholders can make a report or complaint, either using their name or remaining anonymous, by e-mail, phone, or other means.

For reports and complaints that requires further investigation, we will immediately initiate investigation process and set up an investigation team to carry out the work. The investigation process and results are reported directly to both the management and the Board of Directors.

This year, there was no corruption and bribery related lawsuits against the Group or its employees.

The Group offers whistleblowing channels to all relevant parties, including employees and suppliers:

- **Q** Whistleblowing Hotline | (010)84562121-1897
- Chaoyang District, Beijing
- Whistleblowing E-Mail | ju.bao@vnet.com
- 8 Handling Post | Head of the Integrity Department
- Postal Code | 100016

After receiving a report or complaint, the Integrity Department shall contact the people involved to acquire the basic information, decide Respond immediately to get the basic information whether the matter requires further investigation, develop a work plan, and then report it to the management. For reports and complaints approved by the Group for investigation, the Initiate the investigation procedure with dedicated Integrity Department shall initiate the investigation procedure and set up a personnel assigned dedicated team. Submit the investigation report (including handling suggestions and Report to the Board of Directors rectification plans) to the management and the Board of Directors to be for comments and advises replied within two working days. Upon confirmation by signature of the investigation report, the Integrity Announce results Department shall issue the Notification of Investigation Results to the whistleblower/reporter and make an announcement within three working days.

Whistleblower protection

The Group respects and protects every whistleblower. We adhere to the "protection of whistleblowers and anonymous investigations" to firmly safeguard their interests. We also strictly control the access to whistleblowing-related information within the Group. Confidential materials that are involved in the investigations are protected through such means as technical encryption and physical isolation. We will not disclose the whistleblower-related information without the whistleblower's consent. We will also strictly limit the scope of disclosure when the identity of the whistleblower is required to be disclosed for investigative purposes or as required by law. The Group also accepts anonymous whistleblowing and makes the channels available.



The Group seriously deals with the investigators who violate the confidentiality of whistleblowing and/or improperly perform their duties, as well as those who retaliate against the whistleblowers or take hostile measures against the investigators, in accordance with the law. If the circumstances are serious enough to constitute a crime, they shall be transferred to judicial authorities.

In 2022, VNET further improved the Whistleblower Protection System, clarified the key aspects of the whistleblower protection mechanism and popularized self-protection methods to employees.

• Investigators will follow "one-on-one and single-line contact" to communicate with whistleblowers, and shall not disclose the case without

• Rewards for whistleblowing are issued through exclusive channels to ensure effective protection for whistleblowers.

• Place reporting box in the office area, and adjust the monitoring Angle of the camera to make sure whistleblowers' images are not monitored.

• Adhere to the principle of "minimum scope of knowledge", and only designated personnel have the right to receive information about reports

• There is no tolerance for any retaliation against employees for reporting

• Report through the report channel issued by the Integrity Department.

• For those who report anonymously or under pseudonyms, please ensure the contact with the Integrity Department is in a timely manner, and provide the name, department, specific circumstances and evidence of

• Fully trust the Integrity Department to keep confidential, encourage real-

Anti-corruption training

VNET highly values the anti-corruption training and focuses on building a corporate culture of transparency and integrity. The Group has set up an Integrity Education column on the i-Vnet platform to regularly post integrity education content and warning cases to establish employees' awareness of clean practices. We have included anti-corruption training courses in our employee training system to popularize the Group's anti-bribery culture, penalties for bribery, reporting requirements and whistleblower protection. Furthermore, we have included anti-corruption training test results in new employee assessments during their probation period. In 2022, VNET achieved 100% coverage of anti-corruption training for directors and employees as well as 100% pass rate in anticorruption training exams for new employees.

This year, 12 online articles related to integrity education were sent to employees.

Put up 8 warning posters in the office area.

Based on the business characteristics of departments, we carry out integrity training and educational seminars tailored to those departments and positions with higher corruption risks, and supervise their behaviors in daily management. Since VNET joined the Anti-Fraud Alliance (hereinafter referred to as "the Alliance") in 2019, we have participated in online courses and offline training sessions organized by the Alliance regularly to ensure the best practice of business ethics and compliance requirements are met.



Human rights protection

As a participant of United Nations Global Compact (UNGC), VNET has always unswervingly supported and protected internationally recognized human rights. We strictly comply with the Labor Law of the People's Republic of China, the Provisions on the Prohibition of Using Child Labor, and other relevant domestic laws and regulations. Meanwhile, we commit to abide by international human rights conventions and incorporate them into the Group's governance activities, including Universal Declaration of Human Rights of United Nations, Guiding Principles for Business and Human Rights of United Nations, the Ten Principles of the United Nations Global Compact, Core Labor Standards of International Labor Organization, and the Convention



Anti-Fraud Alliance Training Courses

on the Elimination of All Forms of Discrimination against Women of International Labor Organization.

:___

We oppose any disregard or violation of human rights, and never tolerate any unlawful discrimination or harassment against race, ethnicity, region, gender, age, nationality or class, etc. We incorporate personal privacy protection, employee rights protection, and supply chain human rights protection into our business activities. We also respect the rights to subsistence and development for the impoverished, the disabled and other special groups, and offer support to the development of human rights in disadvantaged and remote areas.

Contributing to Sustainability Towards a Zero-carbon Future

- Carbon Neutrality Progress
- Full Life Cycle Construction of Green Data Centers
- Empowering Energy Transition
- Promoting Circular Economy
- Climate-related Financial Disclosure

VNET actively responds to the national "dual carbon" strategy, set carbon neutrality goals and carries out actions, in order to promote the green transformation of enterprises and the society.





Facing the global challenge of climate change, VNET sets ambitious carbon neutrality targets, scientific and reasonable carbon neutrality strategies and takes multiple measures to advance the low-carbon transition of the Group and green development of the society and economy. We develop green data center solutions for the full life cycle and continuously promote energy transformation to help the country build a new power system based on new energy. In addition, we adhere to the path of green development, focus on the improvement of resource utilization efficiency, and promote the development of a circular economy.

Carbon Neutrality Progress

Our targets

Facing the global challenge of climate change, VNET set an ambitious target of carbon neutrality in 2021 as a part of the efforts to advance the comprehensive low-carbon transition of the Group.

Our strategies

Based on our current carbon emission status and business model, we have developed a "4C" pathway towards carbon neutrality, through four dimensions of carbon avoidance, carbon reduction, carbon offset, and carbon empowerment, fully leveraging an array of approaches including renewable energy transition, energy-saving technology use, carbon sinks, carbon trading and empowerment of the upstream and downstream industrial chain to achieve our carbon neutrality target.

Carbon Avoidance

Achieve 100% renewable energy use by 2030 through direct purchase of green power, purchase of renewable energy certificates (RECs), and investment in clean energy sources.

Achieve carbon neutrality by 2030

Carbon Offset

Make investment in high-quality carbon offset projects to offset carbon emissions that are difficult to be avoided or removed.

• achieving operational carbon neutrality in Scope 1 and Scope 2 emissions

⊘ *VNET's ESG Targets*

By 2030,

achieving 100% renewable energy use in operations

Carbon Reduction

Uphold green building standards in data centers while continuously improving energy efficiency and reducing PUE and carbon emissions through waste heat recovery and application of new cooling technologies.

Carbon Empowerment

Promote carbon reduction actions across the supply chain through adopting a green and low-carbon procurement model and regularly disclosing the Group's carbon neutrality progress, thus becoming an industry leader in green development and achieving "dual carbon" goals. In 2022, we continued our work on green power trading, ene which achieved remarkable results.

Strategies	Directions of action	Short-term pathways	Long-term pathways	Our progress
	Green power trading	Conduct green power trading in some data centers and actively promote exchanges and cooperation with government and power generation enterprises; Consider renewable energy accessibility during the site selection phase.	Promote and scale up green power trading in data centers.	 Signed a 2023 green power purchase agreement (approximately 4 million kWh) with CGN Solar Energy, which contains a green power supply guarantee clause of about 500 million kWh in the next five years. Developed a green power management platform for park-level distributed grid power management and trading.
Carbon	Renewable energy investment	Actively explore quality renewable energy investment projects.	Actively invest in renewable energy projects, and cooperate with power grid dispatching while meeting our internal power demand.	 Responded to the East-Data-West-Computing strategy to consume renewable energy in the western region. Jointly promoted direct renewable energy supply to data centers using green dedicated lines. Cooperated with CPECC to explore the source-grid- load-storage integration model based on existing data centers in multiple locations. Carried out pre-research on the construction of hydrogen power stations.
avoid- ance	Renewable energy certificates	Purchase RECs to supplement g investment.	reen power trading and	 Purchased 1 million kWh of green electricity certificate.
		Install distributed photovoltaic (PV) equipment in data centers to power office and lighting system;	Expand the sources and application of distributed renewable energy equipment in the park and explore market-based trading;	 A Data Center in Jiangsu Province adopts "Building + PV" integration design. PV project of Boxing Data Center in Yizhuang, Beijing, was successfully connected to the grid.
	Distributed renewable energy	Continue to study energy storage technology and expand its application in data centers;	Further exploit the role of energy storage technology in the steady supply of renewable energy;	 Built Foshan Smart City Data Center, China's first data center applying new large-scale energy storage technology. Prepared White Paper on Energy Storage Technology.
	Conduct in-depth research on the application of hydrogen energy.	Continue to promote the application of other types of clean energy such as hydrogen energy in data centers where feasible.	 Conducted research on modular technologies such as hydrogen production, hydrogen storage and hydrogen transmission. Conducted research on stationary hydrogen fuel cell pilot test and pre-research project. Prepared White Paper on Hydrogen Energy Development in Data Centers. 	
	Green buildings	Increase standards for new constructions and optimize existing buildings.	Achieve 100% green buildings ³ .	 Designed all new data centers in accordance with the China green building one-star standard. A total of 8 data centers have been certified as green data center.
Carbon reduction	Application of energy-saving technology	Continue to improve energy efficiency standards for newly purchased equipment and increase the energy efficiency of existing equipment; Promote waste heat recovery.	Achieve 100% high-efficiency equipment.	 Optimized the structure of power distribution systems and used high-efficiency and energy-saving, distribution equipment. Launched the Deep Cold system to improve energy efficiency of cooling. Conducted in-depth research on waste heat recovery technology.
Smart operation & maintenance system		Realize comprehensive perception, smart analysis, and smart operation & maintenance of digital assets.	Promote the full coverage of smart operation &maintenance system in self-owned data centers to empower the industrial chain.	 Applied the Data Center Infrastructure Management system to realize intelligent and green operation and maintenance. Applied AI energy efficiency management technology. Promoted the R&D of a Dual Carbon Management and Energy Efficiency Monitoring Platform to achieve precise carbon management. Applied Building Automation Energy-Saving Control System.
Carbon offset	Investment in quality carbon offset projects	Actively explore opportunities to invest in quality carbon offset projects; Keep tabs on the carbon trading market.	Actively invest in quality carbon offset projects; Actively engage in the carbon trading market.	 Paid close attention to the carbon offset project market and explored opportunities for participation. Participated in the pilot work of carbon emission rights trading in Beijing and sold about 60,000 tons of excess carbon emission rights.
Carbon empower- ment	Industrial chain empowerment	Establish green procurement standards and improve green procurement ratio; Participate in the formulation of relevant industry standards.	Achieve 100% green procurement; Promote low-carbon development in the industry, share green practices, and drive the entire industrial chain towards zero-carbon emissions.	 Participated in the preparation of Evaluation Standards for Zero-carbon Data Centers. Participated in the preparation of Study Report on Data Center Carbon Emission Accounting, Verification and Measurement.

3. Green buildings refer to data centers that have received international or domestic green building certification, including the Open Data Center Council (ODCC)'s certification for green data centers, the Ministry of Industry and Information Technology's certification for green data centers, and other green building rating certifications of the same level or higher.

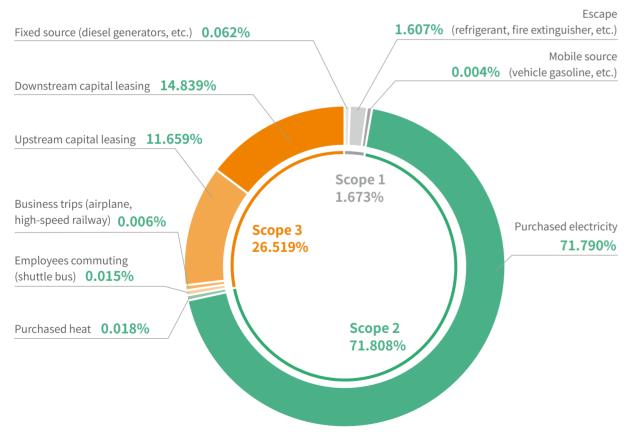
In 2022, we continued our work on green power trading, energy storage, hydrogen research, and distributed PV equipment

Our performance

VNET conducted a greenhouse gas emission inventory, covering the greenhouse gas emissions of Scope 1, Scope 2, and partial Scope 3 within the organizational and reporting boundaries of 2022. The greenhouse gases involved include carbon dioxide (CO₂), methane (CH₄) nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF₃), and sulfur hexafluoride (SF₆) and etc. The greenhouse gas emission inventory results show that the five types of greenhouse gas emissions involved during the reporting period are CO₂, N₂O, CH₄, HFCs, and SF₆.

In accordance with the ISO14064-1:2018 Specification with Guidance at the Organizational Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals, Greenhouse Gas Protocol (GHG Protocol) Corporate Accounting and Reporting Standard (Scope 1 and Scope 2) of World Resources Institute (WRI) and World

Business Council for Sustainable Development (WBCSD), GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard of WRI and WBCSD, ISO 14064-3:2019 Specification with guidance for the verification and validation of greenhouse gas statements, and other applicable laws and regulations and relevant standards, VNET conducted the stocktaking of greenhouse gas emissions and removals in 2022, and also invited gualified third-party institutions for verification. The emission coefficients are derived from the Intergovernmental Panel on Climate Change (IPCC) 2019 Refinement to the IPCC 2006 Guidelines for National Greenhouse Gas Inventories, and 2012 Baseline Emission Factors for Regional Power Grids in China of National Center for Climate Change Strategy and International Cooperation (NCSC) and other authoritative references.



The composition of GHG emission activities in Scope 1, 2 and 3 of the VNET



Full Life Cycle Construction of Green Data Centers

To achieve carbon neutrality targets, VNET is actively following a green development path that is "high-efficient, lowcarbon, intensive and circular". We focus on improving the green management capabilities throughout a full life cycle of siting, design, construction and operation of data centers to reduce our carbon footprint. This Year, the average PUE of our stabilized data centers was 1.37.

Siting

During siting phase of data centers, we strictly follow the principles of regional ecological conservation and environmental protection, and carry out environmental impact assessments in accordance with the Law of the People's Republic of China on Environmental Impact Assessment, Regulations on the Administration of Construction Project Environmental Protection and other relevant regulations to ensure that there are no environmental pollution risks in target areas. We strictly abide by the requirements and principles of various biodiversity-related regulations and principles such as the Convention on Biological Diversity of the United Nations, assess relevant risks, and make our best efforts to mitigate biodiversity impact of our operational footprint.

The accessibility of clean energy is also one of our key considerations in project siting. VNET actively responds to the national "East-Data-West-Computing" strategic project, considers the clean energy consumption of data centers in West China undertakes the overflow demand of computing power from the east and raises the proportion of green energy usage to help achieve the national dual carbon target. With our outstanding performance in the "East-Data-West-Computing" construction and green lowcarbon development, VNET was awarded the 2022 "East-Data-West-Computing" Carbon Neutrality Pioneer Award.



GHG Emissions Verification Statement of VNET Group, Inc.

In the future, the Group will increase the proportion of data centers in West China, with the growth rate of data center investment in West China twice than that in East China for the next five years.

In addition, due to the high dependence of data centers on water resources, we pay close attention to the water stress in our operation location. In the siting process, we evaluated the current and future local water stress, and compared them with historical water use data from nationwide data centers as reference for the siting of new data centers, in order to enhance the reliability and resilience of facility operations, while preparing for future aggravation in water stress.



:__

Planning and design

We strictly comply with the requirements of the Code for Design of Data Centers (GB 50174-2017) and benchmark our practices against Uptime Tier III Ready for the reliability and flexibility of international data centers in planning and design, while fully considering the green attributes of data centers under the premise of ensuring computing power.

In terms of the architectural design of data centers, we adopt more sophisticated structures or designs to improve energy efficiency. In considering the layout of equipment, we maximize the application of green energy-saving equipment or technologies, and continuously optimize the equipment arrangement to enhance efficiency during operation.

IT equipment	 Achieve reasonable IT infrastructure deployment to improve energy efficiency management in computer rooms to achieve lower carbon emissions per unit of computational power. Select energy-efficient IT equipment for newly constructed data centers and phase out high energy consumption equipment in existing data centers. Actively apply energy-saving technologies for IT equipment to improve energy efficiency and minimize energy waste.
Cooling system	• Improve the operation efficiency of the cooling system by optimizing the airflow organization design, using high-efficiency energy-saving units, smart temperature control system, and air-conditioning AI energy efficiency management technology, helping to reduce the PUE of the equipment room and GHG emissions.
	• For the heat generated from the equipment operation in data centers, we recover the waste heat to avoid energy waste.
Power supply and distribution system	 Optimize the structure of power distribution systems and uses high-efficiency and energy-saving distribution equipment to reduce the power loss and improve the efficiency of energy transmission. Use the industry-leading dynamic environment monitoring system to monitor the equipment of the power system in a real-time basis and issue timely alarms to avoid energy waste caused by equipment failures.

📋 Case: Green design of fluorine pump

One of VNET's data center in Guangzhou plans to apply the fluorine pump phase-change cooling technology to minimize the temperature difference between evaporation and condensation, significantly reducing the mechanical energy consumption of the cooling system. The high-efficiency variable frequency fluorine pump delivered refrigerant directly to the end, effectively reducing the delivery power consumption compared with conventional water-cooling systems. The high-efficiency heat exchange design enabled the data center to operate at a high evaporation temperature, thus reducing the requirement for the outdoor temperature and fully leveraging natural cooling sources.

A data center of VNET in North China is equipped with a pilot test line for the integrated fully variable frequency fluorine pump to verify its performance in severe cold and waterless conditions. The equipment adopts an integrated design and requires no on-site joint commissioning or consumption of water which greatly leverages the green design of the data center.

Project construction

During the construction of data centers, we make efforts to minimize the environmental impact and avoid pollution. For the selection of building materials, we give priority to materials that are durable, environment-friendly and recyclable. We also try to reduce carbon emissions during transportation through local procurement as well as adopting prefabricated components to shorten the construction period and reduce the risk of environmental pollution at the project site. During the construction process, we build the three-level management network for construction site environmental governance. We also adopt various measures to prevent the environmental



pollution generated during construction, such as dust, noise and wastewater. This year, VNET's main operation locations all passed the Environmental Management System (ISO 14001) certification.

All new data centers are designed in accordance with the China green building one-star standard. In addition, we plan to apply for green building certification for all newly-planned data centers. As of the end of the reporting period, a total of eight data centers have been certified as green data center.

• The construction site shall be equipped with the personnel responsible for dust prevention and control, on-site cleaner, and sprinkler for dust removal.

• The closed enclosure management shall be implemented on the construction site. Hardening and greening shall be conducted at site entrances, site exits,

• The dust-type construction materials and construction waste on site shall be stored in closed warehouses or covered.

• Set up centralized waste storage sites, arrange regular cleaning by professional companies, and send the waste to designated qualified waste recyclers.

• Air pollution emergency plan should be in place and the emergency response should be initiated promptly when pollution warning is issued.

• Preference shall be given to low-noise equipment or muffler equipment in the construction site, and noise reduction measures shall be adopted during the

• Improve operation efficiency and reduce the operation time of noise-making

• Construction should be conducted in strict accordance with the timetable stipulated by the national and local noise management regulations.

• For domestic sewage and production wastewater, separate collection pipelines and collection tanks are placed, and the diversion of rain and sewage is achieved. After pretreatment, the sewage and wastewater shall be reused or discharged into municipal sewage treatment pipes.

• For construction waste, the generation should be reduced through such means as technical improvements, strengthening management and recycling. For the construction waste already generated, a qualified third parties should be hired

Efficient operations

Energy efficiency

VNET is committed to promoting the efficient operation and maintenance of data centers and constantly explores operating modes or technologies that can improve energy efficiency and reduce carbon emissions to help achieve the zero-carbon target. We have formulated documents such as the Carbon Emissions Management System and the Energy Management System, aiming to guide energy saving and consumption reduction of the data centers, and continuously strengthen water management and improve water use and cooling efficiency. In 2022, we compiled guidelines on the energy-saving operation of data centers and conducted project statistics and analysis of the existing data centers nationwide to promote the energy-saving transformation of equipment. VNET's main business premises all passed the Energy Management System (ISO 50001) certification.

VNET organically combines the application of energysaving technologies with intelligent management. The independently-developed Data Center Infrastructure Management (DCIM) platform system realizes the efficient operation and maintenance management of data centers through functions such as "centralized intelligent monitoring" and "intelligent capacity". At the same time, we continuously explore the application of Al technologies in data centers and, utilizing Al energy efficiency management technologies to output optimal control strategies and parameters through intelligent analysis and processing of operational data. This approach thereby reduces the overall energy consumption of cooling systems. In VNET's data centers, Al technologies are also used for fully automated system inspection and fault prediction to improve operation and maintenance efficiency.

In response to the common problem of heat loss in data centers, we carry out waste heat recovery project to maximize the recycling of wasted heat. In 2022, we conducted in-depth research on waste heat recovery, surveyed the surrounding resources of data centers nationwide and carried out feasibility studies to promote the application of waste heat recovery in data centers. In addition, we cooperated with a third-party waste heat utilization company to investigate the waste heat utilization scheme of Boxing Data Center and improve the efficiency of heat utilization. In 2022, VNET Ulanqab Data Center explored the application of new air source heat recovery to realize the secondary utilization of heat and reduce the PUE of the data center.

💼 Case: Building Automation Energy-Saving Control System

Through the application of Building Automation Energy-Saving Control System, VNET realizes automatic control of cold source. The system utilizes AI technology to calculate the optimal operating frequency of the water pump according to the test data and automatically adjust the frequency. The cooling water main engine can also adjust the cooling water temperature appropriately according to the changes of environment and seasons, effectively improving the energy efficiency.

This year, VNET continued to promote the research and development of the Dual Carbon Management and Energy Efficiency Monitoring Platform, in order to achieve accurate and effective carbon management and improve the digitalization level of energy-saving management. Based on big data, artificial intelligence, Internet of Things and other technologies, the platform reflects real-time energy consumption and greenhouse gas emission information of each energy consumption system, and provides intelligent energy efficiency optimization solutions through the functional modules of energy consumption data analysis, intelligent carbon emission data accounting, carbon footprint tracking and supervision. In addition, the system can generate energy efficiency analysis reports on a regular basis, making data traceable and management evidence-based.

Case: Zero-Carbon Management Platform for Data Center Park

VNET takes the Data Center Infrastructure Management (DCIM) as the digital base and takes "green, low-carbon, economically feasible, digital-wise, safe and reliable" as the basic principle to build the Zero-Carbon Management Platform for Data Center Park (hereinafter referred to as "the Platform"). The Platform helps the parks achieve green, low-carbon and digital development through four major functions.

- Carbon Monitoring: The Platform achieves the comprehensive view of the park carbon source monitoring, and real-time monitoring of unnormal state of energy consumption, carbon emissions and helps the data center park realize the unified dispatching and management of energy and carbon emissions in real time.
- Carbon Analysis: Through the three-dimensional analysis of energy consumption and carbon emissions data, the Platform implements the park carbon emissions measurement model. In addition, the Platform can also compare and analyze the carbon reduction actions with substandard effects, and gain insight into the root causes of energy consumption and carbon emission alarms.
- Carbon Optimization: The Platform achieves the collaborative application of carbon reduction measures, such as low carbon energy supply management, energy conservation and management of equipment, etc. At the same time, it can assist in the analysis of carbon reduction effect and predict the annual total carbon emission curve.
- Carbon Action: The Platform establishes the refined management mode of the whole process, which can realize the progress tracking of carbon targets and dynamic evaluation of implementation effects, and can establish the evaluation standard system of zero carbon parks and green buildings, and propose optimization measures.

Water resources

The proper use and management of water resources can provide an important guarantee for the stable and sustainable operation of data centers. VNET takes a variety of actions to effectively manage data center water use efficiency. We actively develop and apply water-free cooling technologies, adopt cooling systems that consume no or less water wherever possible and constantly optimize the water use efficiency of existing water-cooling systems to reduce dependence on water resources.

We are committed to improving the recycling rate of water resources and reducing the consumption of natural water resources through recycling and reusing water. We encourage our data centers to use reclaimed water and explore rainwater recycling to improve water use efficiency. At present, we are actively exploring rainwater collection and reuse technologies in data center parks where conditions permit, thus effectively reducing water consumption.

Empowering Energy Transition

VNET actively responds to the country's goal of accelerating the construction of a new power system based on new energy. We explore the fields of renewable energy, energy storage technologies and energy Internet, leading the energy transition of the industry.

Clean energy

VNET continuously explores the best method to increase the proportion of clean energy applications to promote the application of large-scale wind power and PV power in data centers. We actively apply clean energy on a pilot basis in existing data centers, cooperate with the power grid to develop green dedicated lines and conduct research on hydrogen energy as well as continuously increase the proportion of clean energy in data center energy consumption.

In addition, we have developed a Green Power Management Platform to promote the transition and upgrading of the energy structure by intelligent means. The platform is a comprehensive solution for green power applications that integrates data integration, intelligent analysis, and collaborative management. It helps data centers refine energy management by incorporating green energy from surrounding areas and industry parks into the management scope, performing centralized management and optimizing power dispatch management and power distribution.

Distributed renewable energy

In 2022, VNET constantly explored and applied distributed renewable energy, using solar energy to provide clean energy for data centers.

Case: Exploring "Building + PV" integration

A data center of VNET in Jiangsu Province is researching and adopting a "Building + PV" integration design that installs PV power generation arrays on the surface of building curtain walls to provide electricity. This innovative PV installation not only increases the proportion of clean energy used in the data center but also saves land resources. Currently, the project has a planned installed capacity of 1,000 kW. After completion, it is expected to generate 1 million kWh of electricity and reduce carbon emissions by 780 tons each year. Developed independently by VNET, the air conditioning system - "Deep Cold" system combines evaporative cooling, fluorine pump, heat pipe and natural cooling technologies with energy-saving technologies such as variable frequency, magnetic levitation compressor and phase change cooling. It can adequately use natural cooling to replace mechanical cooling and extend the duration of natural cooling to reduce air conditioning energy consumption. Compared with conventional watercooling systems, the "Deep Cold" system can improve energy efficiency by about 30% to 50% each year. The "Deep Cold" system performs well in improving water utilization and consumes much less water than the conventional cooling systems with cooling towers.

📋 Case: Boxing Data Center PV Project

VNET Beijing Yizhuang Boxing Data Center has realized the comprehensive use of solar energy and buildings by installing PV power generation equipment on the roof and increasing the proportion of green power used in the data center. In 2022, the project generated about 220,000 kWh of electricity and reduced carbon emissions by about 183 tons.

Hydrogen energy research

In 2022, VNET strengthened its research on hydrogen energy in the field of data centers and promoted the research on hydrogen production, storage, transmission and other module technologies. We also compiled the White Paper on Hydrogen Energy Development in Data Centers and carried out feasibility studies on the application of hydrogen energy in IDCs to promote the development and application of hydrogen energy technologies. We have actively cooperated with external professional institutions, and planned the patent layout in various related fields such as hydrogen source, hydrogen conversion to electricity and hydrogen energy grid connection.

In April 2022, we signed the strategic cooperation framework agreement with Jinghui Hydrogen Energy in Beijing. Based on our respective resources and professional capabilities, the two parties will jointly explore the in-depth integration of technologies such as hydrogen energy equipment manufacturing, diversified hydrogen production, green power and hydrogen storage with data centers.

In September 2022, VNET launched a hydrogen energy pilot test and pre-research project research to explore the first domestic stationary hydrogen fuel cell as a common power source for long-term power supply solutions for data centers. With data centers as main load objects, the project is equipped with a 100 kW hydrogen fuel cell module, which can provide a 24-hour uninterrupted power supply for data centers and reduce carbon emissions by about 1.4 tons per day, exploring the new technical route for the establishment of future zero-carbon data centers.

Green power trading

VNET actively participates in green power trading. In 2022, we signed a 2023 green power purchase agreement (approximately 4 million kWh) with CGN Solar Energy (Shenzhen) Co., Ltd, which contains a green power supply guarantee clause of about 500 million kWh in the next five years.

Green electricity certificate

In 2022, VNET purchased 500,000 kWh of green electricity produced by Xi 'an Longji photovoltaic power generation grid parity project in Xinrong, Shanxi Province, and 500,000 kWh of green electricity produced by 90,000-kW photovoltaic power plant of Datang Shanxi photovoltaic power generation project in Lingchuan, Shanxi Province, which are equivalent to reducing 826,900kg of carbon dioxide emission, 470kg of sulfur dioxide emission and 430kg of nitrogen oxide emission in total.







Energy storage technologies

exploring new scenarios for integrating clean energy and energy storage.

In 2022, VNET shared its advanced experience, enhancing the high-quality development path within the new energy storage industry. We carried out research on long-time energy storage technologies and relevant investment costs such as photovoltaic and chemical batteries, and prepared the white paper on energy storage technologies to promote the industrial development of energy storage technologies. In addition, we teamed up with several institutions, including the Energy Internet Research Institute of Tsinghua University, to launch the global collaborative innovation initiative – "New Energy Storage – SPEAR 2030". Following the upgrade and implementation guidelines within the original SPEAR demonstration project, the initiative intends to achieve the goal of 100 GWh of new energy storage by 2030 through two practical approaches known as "node project + technological innovation", and thereby establishes an enterprise-based, market-oriented green energy storage innovation paradigm integrating the efforts of enterprises, universities and research institutions.

Up to now, VNET has implemented a series of demonstration projects including the Foshan Smart City Data Center and has analyzed and calculated the economic benefits of these projects. In the future, we will actively promote multiple energy storage application projects in Beijing, Ulanqab and Hangzhou.

Case: "Photovoltaic + energy storage" technology in Foshan data center

VNET Foshan Smart City Data Center is the first project in China to apply new energy storage technologies on a large scale to a data center. Balancing efficiency and safety, the project adopts the mode of "peak load shifting" to effectively enhance the renewable energy consumption capacity of the power system. In addition, the Data Center also improved its clean energy selfsufficiency rate through distributed PV power supply. As a result, the annual carbon emission reduction reached about 75 tons. The project was awarded the Outstanding Achievement Award in the selection of "Innovation Pioneer" Low-carbon Computing Power Pioneer Cases at the 2022 China Computing Conference for its role in low-carbon innovation demonstration, and was selected as an excellent case in the New Wave of Green Power Consumption in Technology Enterprises: Cases, Challenges and Recommendations jointly released by Greenpeace and Sichuan Energy Internet Research Institute, Tsinghua University.

Collaborative exploration

VNET works with partners to actively promote the development of smart energy. By carrying out a series of cuttingedge projects, as well as integrating computing power and energy, VNET improves energy utilization efficiency and comprehensively promotes the green and low-carbon transition of the industry.

🖹 Case: VNET and China National Nuclear Corporation (CNCC) reached cooperation on "smart energy + new computing power"

VNET will work with CNNC to implement a series of demonstrative projects based on the "smart energy + new computing power" model. This marks the starting point to advance the exploration of a digital industry model for the collaborative development of power and computing and to help the implementation of new infrastructure in China.

📋 Case: VNET partners with China Power Engineering Consulting Group (CPECC) to build a new energy system for net-zero carbon data centers

VNET signed the strategic cooperation agreement with CPECC to jointly promote the "VNET Net-Zero Carbon Data Center New Energy System" project, jointly strengthening cooperation in the development and construction of new energy, data center, AI, etc. This partnership will also promote the effective integration of power grid and computing networks and the implementation of the national "East-Data-West-Computing" project.

Case: VNET participated in the industrial standards' development

VNET keeps up with the trend of developments associated with new energy technologies and actively participates in the formulation of industry standards related to green energy conservation. In 2022, VNET participated in the preparation of Evaluation Standards for Zero-carbon Data Centers. This document proposed specific evaluation standards for data centers in the "Zero Carbon China" standard system of the Investment Association of China, thus further promoting the standardization of energy-saving and carbon-reducing practices in data centers.

Promoting Circular Economy

VNET insists on building new data centers that are intensive and circular. We are committed to comprehensively improving resource use efficiency and promoting the development of a circular economy.

The waste generated by VNET mainly consists of electronic and domestic waste generated by the daily operation

Data center prefabrication

VNET promotes the prefabrication of data centers. By dividing a data center into multiple functional modules, such as cooling, IT and power supply, VNET can design, assemble and integrate them in advance to shorten the

Case: Prefabricated integrated refrigeration plant

In 2022, one of VNET's construction projects in Beijing applied the prefabricated integrated refrigeration plant to realize the integration of design, construction and commissioning processes, improving the efficiency of resource utilization. During the design phase, we analyzed and optimized the complex nodes to reduce the overall steel consumption of the project. During the construction phase, the main construction processes of the prefabricated refrigeration plant were completed in the factory. This meant that only the assembly work needed to be done at the construction site, thus reducing the waste produced on the construction site. In addition, the prefabricated refrigeration plant required only two-thirds of the footprint of a conventional chiller plant, greatly reducing the consumption of building materials. of data centers and office spaces. We strengthen management during the construction and operation of data centers to reduce waste generation and waste of resources. We also actively and continuously increase our waste reuse ratio and dispose of waste that cannot be recycled in compliance with relevant standards.

period required on the construction site. This in turn reduces the use of raw materials and avoids the generation of construction waste and the waste of materials.

📋 Case: Power module solution used in Kunshan Data Center

VNET Kunshan Data Center adopted the latest power module solution for power distribution, reducing the power system footprint by 30% through the integrated design of high-density components. Through prefabrication and deengineering of the solution, the deployment period was shortened, achieving simplified delivery and control over quality, avoiding any unnecessary waste of resources. In addition, the intelligent features of the equipment enable full-chain visual management and predictive maintenance, effectively ensuring the safe operation of the system, a reduction in equipment loss and an improvement of power supply efficiency.

Waste management

Committed to the recycling of resources, VNET strictly abides by relevant national laws and regulations in waste storage, transportation, disposal and other procedures to prevent and control the risk of environmental pollution.

Waste lead-acid batteries make up the largest proportion of VNET's waste and are mainly used to power uninterruptible power supplies (UPS) in data centers. We strictly comply with the requirements for the storage and disposal of hazardous waste and disposal of waste lead-acid batteries by qualified recyclers in compliance with relevant regulations. Other wastes related to VNET's business operations include scrapped servers, UPS systems, power distribution cabinets, vehicles and household waste. These are recycled by the supplier or handed over to qualified organizations for disposal.

Intelligent office

VNET constantly promotes the practice of intelligent and paperless office. In 2022, we launched the i-Vnet mobile office platform and upgraded the original enterprise resource planning system (ERP system) into the Zhixin Cloud Digital Intelligent Collaboration Platform. This upgrade covered all business lines within the Group. Through our intelligent transformation, various business



Moreover, we provide recycling services for electronic waste generated by our customers in data centers to fill the gap in service at the end of the life cycle of IT equipment.

- Secured recycling: We cooperate with service providers with professional data destruction qualifications to carry out full demagnetization, data removal and physical destruction treatment of stored media in scrapped IT equipment. These processes prevent information leakage.
- Environment-friendly treatment: We cooperate with qualified recycling partners to dispose of scrapped equipment under relevant laws and regulations, improve the efficiency of resource use and reduce pressure on the ecological environment.

needs of employees can be satisfied, such as online mobile office, video conferencing, one-click approval, reducing not only paper consumption generated by office work but also carbon emissions caused by employees needing to travel, truly enabling cloud-based collaboration and efficient office work.

Climate-related Financial Disclosure

Climate change brings realistic, severe and long-term challenges to mankind. At present, the international community has further realized the severity and urgency of the climate crisis. The 27th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27) in 2022 focused on "implementation" and emphasized that all parties should effectively put the proposed goals into actions and cooperate to address the urgent climate change challenges.

As a TCFD support organization, VNET has incorporated climate change into our corporate strategic considerations and regularly conducts comprehensive assessments of the risks and opportunities associated with all assets and business based on the extent of potential financial impact, the impact on stability of business activities, customer and shareholder concerns and other dimensions. Based on the results of the risk assessment, the Group has established an effective internal control mechanism to minimize the negative impact of climate-related risks on the Group and to also actively seize new opportunities.

Taskforce on Climate-related Financial Disclosures Alignment

Disclose the organization's governance in relation to climaterelated risks and opportunities. ESG Strategy

> ESG Governance Structure

Disclose the actual and potential impacts of climaterelated risks and opportunities on the organization's businesses, strategy, and financial planning.

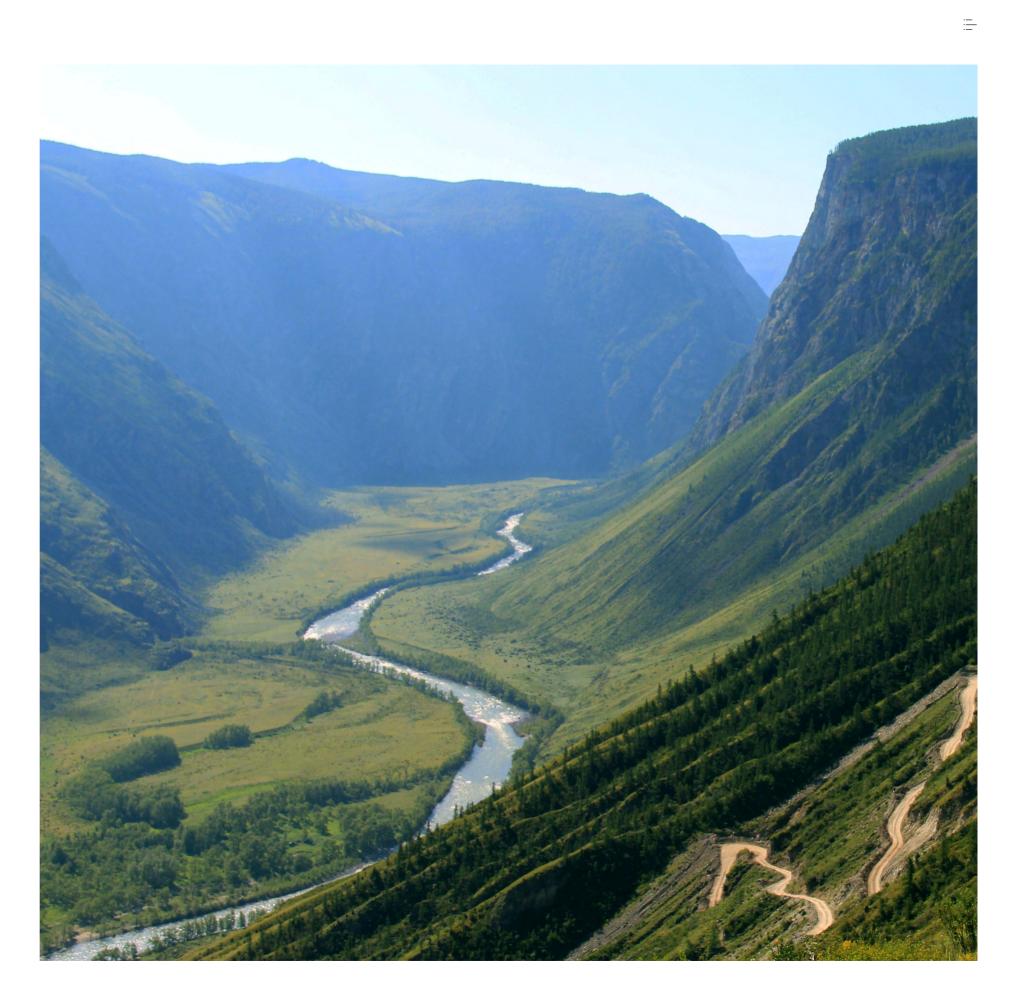
Contributing to Sustainability: Towards a Zero-carbon Future > Climate-related Financial Disclosure

Disclose how the organization identifies, assesses, and manages climate-related risks.

Contributing to Sustainability: Towards a Zero-carbon Future > Climate-related Financial Disclosure

Disclose indicators and goals used in assessing and managing relevant climate-related risks and opportunities.

Contributing to Sustainability: Towards a Zero-carbon Future > Carbon Neutrality Progress



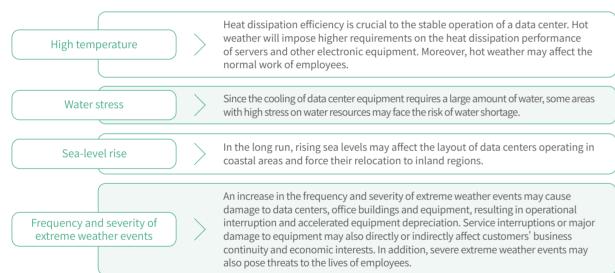
Metrics and Targets

Climate scenario analysis

To gain a better understanding of the potential impact of climate change on VNET's business, the Group, based on the assumptions of the Shared Socioeconomic Pathways (SSPs) adopted by the IPCC combined with the external environment of the Group's operations (such as natural ecology and socioeconomic environment). The approach identified multi-dimensional influencing factors including temperature, extreme weather, climate policy and renewable energy demand and selected the Sustainability Pathway (SSP1) and Fossil-fueled Development Pathway (SSP5) to carry out qualitative preliminary climate scenario analysis.

SSP1 represents a sustainability-focused low-emission scenario, in which global macro and climate-related policies are tightened and the society-wide low-carbon transition may expose companies to more potential policy restrictions, which in effect impact their operations and

Major physical risks relevant to the Group under the SSP5 path:



revenues. Therefore, VNET will face more challenges

a high-emission scenario, in which economic growth

and technological advancement are driven by fossil

fuels. Greenhouse gas emissions will remain at a high level before the year 2100, which may exacerbate the

occurrence of extreme weather events. Therefore, we identified and analyzed VNET's acute and chronic physical

Based on the nature of the Group's business and the

geographical location of our operations, we identified the

physical risks under the SSP5 path and the transitional

risks under the SSP1 path. We considered the possibility

and extent of the impact of relevant risks on the Group's

operations to determine the relevance of each climate

risks and countermeasures in this scenario.

issue to VNET's business operations.

from transitional risks in this scenario. SSP5 represents

Major transitional risks relevant to the Group under the SSP1 path:

Policy and legal	>	China's national and local governments may launch more stringent climate policies (such as implementing a carbon price mechanism and urge the use of renewable energy), which will therefore have impact on the management of energy use and carbon emissions at VNET's data centers.
Technology	>	The emergence of new technologies (such as renewable energy, energy storage, and energy efficiency) will require VNET to keep abreast of the development of the latest technologies to improve our energy efficiency and reduce carbon emissions.
Market	>	Shifts in customer preferences may increase the focus on low-carbon data centers and renewable energy and such shifts may produce an impact on the marketing of our core business.
Reputational	>	Shareholders, customers, news media and other stakeholders are highly interested in VNET's efforts to reduce energy and carbon emissions and address climate change. Therefore, we need to take positive actions to meet the expectations of the stakeholders under this issue.

Climate risk analysis and countermeasures

Risk type	Risk description	Duration of impact	Countermeasures
Acute physical risk- Significant increase in frequency and severity of extreme weather events	At the company level, worldwide extreme weather events caused by climate change, such as extreme rainfall, typhoons, and floods, may threaten the physical security, stable power supply, and short-term electricity cost of our data centers and the IT infrastructure of our customers. Moreover, the growing frequency and intensity of regional extreme weather events further increases the possibility and impact of acute risks.	Short-term Mid-term Long-term	To mitigate the impact of such risk, we consider the risk exposures of extreme weather events at different stages of the asset life cycle. We first manage potential risks through scientific site selection and design standards for data centers, and then take preventive measures to reduce losses associated with acute weather events. We evaluate and check the effectiveness of these measures annually and ensure that effective management measures are in place for climate change risk factors in each data center Meanwhile, VNET receives reports from insurance service providers, and purchases insurance for each item of asset accordingly.
Chronic physical risk- High temperature	On the one hand, hot weather may shorten the working hours of the Group's employees in the open air and place higher requirements for heatstroke prevention and cooling. On the other hand, hot weather may increase the difficulty in cooling equipment at data centers. An increase in temperature may raise the possibility of fires, potentially exposing us to the risk of operational interruption or asset loss.	Long-term	We are always concerned about the occupational health and safety of our employees and provide a series of protective measures and subsidies for outdoor operations of employees in hot weather. We apply greater prudence in the planning and siting phase, considering the potential physical risks of building data centers in areas with prolonged hot weather to avoid relevant risks or to take early countermeasures. We optimize cooling systems during the design phase and continuously improve cooling efficiency through various technology upgrades during the operational phase.
Chronic physical risk- Water stress	Water resource shortage may translate into stress on equipment cooling in data centers, affecting their operational stability. Severe droughts may lead to more expensive water bills and higher operating costs.	Long-term	We identify and assess the water resources stress where our data centers are located, and consider it in data center planning and siting. Meanwhile, we actively develop water-free cooling technologies, take various measures to improve water use efficiency and continuously reduce dependence on water resources.
Chronic physical risk- Sea-level rise	In the long run, rising sea levels may flood data centers in coastal areas, resulting in loss of assets and revenue.	Long-term	We consider the potential physical risks of building data centers in coasta areas and constantly optimize the layout of data centers.
As policies and legal requirements such as carbon emission-related laws, regulations, policies and taxes and mandatory carbon trading come into effect, compliance costs may rise.		Short-term Mid-term Long-term	To reduce this risk, we strengthen energy management and control as well as gradually raising the proportion of clean energy. We have a dedicated team that regularly studies national policies and proposes countermeasures to ensure our operational compliance.

:___

Climate risk analysis and countermeasures

Risk type	Risk description	Duration of impact	Countermeasures
Policy and legal	There are expected to be more stringent codes and standards for data center construction, potentially increasing design and construction costs and requiring the application of new technologies.	Mid-term Long-term	To mitigate such risks, our design team adheres to high standards when building data centers to reduce the impact of any data center construction codes on data center operations and development. For more information about the risk- mitigating measures we adopt in data center construction, see Planning and Design, and Project Construction.
Technology	Failure to identify and apply emerging technologies promptly, such as low- carbon technology and artificial intelligence, may result in our operations becoming less efficient and/or our products lagging behind those of our peers, losing our edge in the competitive market and thus affecting the Group's revenue.	Short-term Mid-term	To reduce such risks, we actively explore the possibility of achieving technological advances in energy storage technology, hydrogen energy research, development and application of DCIM platforms, and strengthen the construction of a green, low-carbon and intelligent IT infrastructure in the future.
Market	If the market's preference for low- carbon data centers continues to rise, the Group needs to outperform its peers in adapting to the market shift and responding to the low-carbon demand in the market. If these goals are not met, the Group may suffer a loss of revenue and market share.	Short-term Mid-term Long-term	To control such risks, we actively track customer needs through communication and feedback mechanisms. We are also committed to making key progress in renewable energy and low-carbon targets (emission reduction targets) and advancing the construction of low-carbon/zero-carbon data centers.
Market	During the transition to an economic model powered by renewable energy, our suppliers may experience higher costs due to the impact of climate- related policies, the transition to renewable energy, etc. In turn this may lead to higher costs for us.	Mid-term Long-term	To mitigate such risks, we seek suppliers that are less exposed to climate change, such as those using alternative energy sources or evaluating the use of alternative raw materials. For our energy suppliers, we explore price advantages by means of cooperation or agreements. In the meantime, we have signed power purchase agreements with renewable energy suppliers progressively to secure energy supply and stabilize prices.
Reputational	Stakeholders' negative perceptions of VNET include but are not limited to failure to identify laws and regulations in a timely manner; inaction or delayed response to climate change; and bad corporate conduct, including inconsistencies between reported and actual actions. These perceptions can lead to damage in reputation, affect the income, agency ratings and public reputation. This outcome can thus hinder the long-term development of the Group.	Mid-term Long-term	To address such risks, VNET performs comprehensive management on all ESG risks through the SHIELD system. It also establishes an effective governance structure to regularly assess the impact of climate change- related issues on the Group's reputation, and continuously improve the transparency of our sustainability disclosures.

Opportunity management

The low-carbon development of data centers will be an important driving force to promote the sustainable development of the Group in the future. We hope to seize the historic opportunity of the energy revolution and market shift in the process of the industrial and national transition to a low-carbon economy, providing a new green infrastructure solution to address climate risks on the global level.

Renewable energy	Transitioning to low- and zero-emission solutions will potentially lower our ope of data centers to possible risks in carb have the opportunity to increase our re for our customers. To seize these oppo increasing the proportion of renewable related technology R&D and applicatio renewable energy targets and minimize For more information about
Energy efficiency	The continuous advancement of techn ventilation, waste heat reuse and intell reduce the PUE and operating costs of To leverage these opportunities, we de and energy-saving technologies to ach and energy efficiency improvement. M implementing energy efficiency optimi cost optimization. For more information about
Products and services	Developing sustainable data centers an services are crucial to improving our m our customers in sustainable developm development solutions, which will bec seize such opportunities, we continue and provide low-carbon products and
Market	Our diversified product portfolio enabl and renewable energy and low-carbon technology investments are paying off growth in a cost-effective way. We activ invest the funds raised into designing,
Resilience	Our customers rely on our stable data of continuity. Through site selection, clim design, efficient operation and mainten and physical security, we continue to in enhance our market competitiveness b For more information about our Construction

sion energy sources and investing in new renewable energy operating expenses in the long run and reduce the exposure arbon-related regulations, fees or taxes. Additionally, we in revenue by developing renewable products and solutions oportunities, our energy team is committed to continuously able energy use through procurement, cooperation and ation, and developing clean energy solutions to realize our mize carbon emissions in a cost-effective way.

bout our actions in promoting renewable energy in 2022, see Empowering Energy Transition.

chnologies such as high-efficiency cooling, advanced telligent energy consumption control in data centers can s of our data centers.

e develop and apply intelligent management platforms achieve efficient data center operation and maintenance ... Meanwhile, we focus on monitoring, identifying and timization projects, and keep track of the performance and

bout our actions in R&D and the application of energy-saving technologies in 2022, see Efficient Operations.

s and providing low- and zero-carbon products and r market competitiveness in the future. We can support opment by providing renewable energy and sustainable become a critical path to attract and retain our customers. To ue to increase the investment in low-carbon development nd services that meet our customer needs.

ables us to leverage a wide range of public utility incentives, oon products. Meanwhile, the associated low carbon off and attracting more investors to sponsor our business ctively evaluate the feasibility of issuing green bonds and will ng, building and operating our sustainability projects.

ata centers to ensure their data privacy, security and business climate change response plans, insurance, green building ntenance, as well as practices in data privacy, cybersecurity to improve our resilience to climate change and further ss by providing stable and high-quality data center services.

our actions in enhancing resilience in 2022, see Full Life Cycle ion of Green Data Centers and Information and Data Security.

:___

Empowering the Digital Economy High-quality Development

- Powering Digital China
- Reliable Products and Services
- Information and Data Security

Computing power is becoming an important drive force in the digital economy age. As one of the world's most influential cyberspace infrastructure service providers, VNET empowers development by innovation, helps the building of a digital China and continually optimizes our products and services to promote China's high-quality economic development.





Based on the core base of digital infrastructure, VNET has created a dual-engine strategic innovation business model combining hyper-scale green IDC wholesale solutions with next-generation IDC retail solutions. Relying on its rich experience and advantages in the field of data centers, the Group develops and builds large-scale, high-level, high-availability, green, energy-saving and efficient tailored data centers for leading cloud vendors, large Internet companies, and other enterprises. Meanwhile, we integrate our offerings such as data center, network products, hybrid cloud, cloud-native, bare metal and O&M management services to launch global full-stack managed cloud services and build a hyper-connected new computing infrastructure for the future to power the development of the digital economy.

Powering Digital China

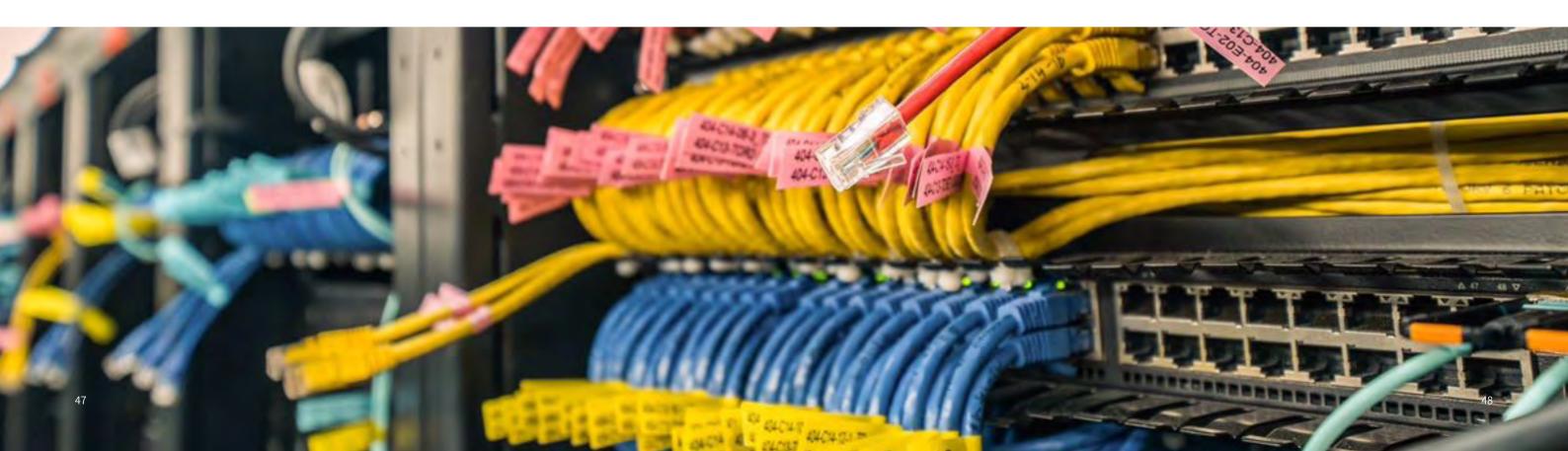
With the continuous advancement of the Digital China strategy, computing power, as an important fulcrum, will promote the digital economy to a higher level. VNET actively responds to the national strategic guidelines and participates in the layout of "East-Data-West-Computing" hubs to contribute to the digital power of the state. We have launched tailored products and applications such as digital scenario solutions, continuously enriched the offering of computing products and scenarios, created value by sharing data and contributed to the development of the digital economy.

Against the backdrop of the implementation of the "East-Data-West-Computing" project and the accelerated construction of a national integrated big data center collaborative innovation system, the IDC investment and construction scale in China constantly expands and the IDC business layout continues to be optimized. VNET always aligns its development with the national strategy and actively responds to and participates in the national "East-Data-West-Computing" project by giving priority to the new construction projects of central and western regions and upgrading the function of the data center in the east. At present, VNET has laid out "East-Data-West-Computing" hub nodes in Beijing-Tianjin-Hebei Region, Yangtze River Delta, Guangdong-Hong Kong-Macao Greater Bay Area, Chengdu-Chongqing and Inner Mongolia. In addition, VNET has built a large-scale data center industry cluster covering the east and west.

Network transmission is one of the important foundations for the implementation of the "East-Data-West-Computing" project. Improving network connectivity and ensuring the quality of data transmission is critical to optimizing the supply and demand of computing power between the east and the west. Relying on its advantages in cloud ecology, VNET has built a backbone network covering North China, East China, Central China, South China and West China. VNET has established connections with major operators

□ Case: Construction of the national computing network (Guiyang) hub - "Hyper-connected" New Municipal Infrastructure commenced

In 2022, the construction of the "Guiyang Gui'an Hyper-connected New Computing Infrastructure Project" jointly undertaken by VNET and Guizhou Gui'an Industrial Investment Co., Ltd officially started. The project was listed as the first key project of the national integrated computing network hub node in Guizhou province. The project aims to realize the integrated supply of urban computing resources by building a new type of city-scale data center and computing network. This project realizes interconnection and the sharing and trading of resources with better data transmission capacity through the nonblocking of transmission to support the construction of the national "East-Data-West-Computing" digital network system.



and mainstream cloud vendors to meet customers' needs for multi-cloud networking.

Through cloud connection and the nationwide highcapacity Data Center Interconnection (DCI) ring network, VNET can realize direct network connection between data centers in the eastern and western regions to meet the needs of computing power scheduling. In addition, VNET can also carry out high-frequency real-time, flexible data interaction and business interaction through cloudnetwork integration. This achievement truly realizes network interconnection and provides strong support for the computing power dual transformation of the "East-Data-West-Computing" project.

Reliable Products and Services

VNET provides customers with safe and reliable products to ensure the stable operation of data centers. We put customers first, and continuously improve service quality, and enhance customer satisfaction.

Business continuity management

Providing customers with the stable and reliable Internet infrastructure is the core of VNET's business. Therefore, we continuously strengthen our business continuity management and have passed the Business Continuity Management System (ISO 22301) certification.

We choose to build our facilities and systems in lowrisk locations and built the redundancy mechanism. In response to a range of incidents (such as natural disasters, power outages or cyber-attacks), VNET has developed emergency action plans and procedures as well as established emergency response guidelines such as the Response System for Sudden-onset Emergencies. These plans and procedures ensure that our key operations can continue during the event of an outage or disaster. We carry out a series of emergency drills, make appropriate adjustments and improvements to the emergency response plan based on the results of the drills, and continuously improve the emergency response capabilities of our team and facilities.

We pay particular attention to the assurance of operational stability under high pressure status. We formulate relevant plans and corresponding work processes, adopts the Battery Monitoring System and Building Automation to monitor the operating parameters and operating status of data centers in real time. In addition, they can diagnose and address faults, ensuring that the data centers can maintain stable operation under abnormal circumstances.

According to the incident management system and emergency response procedures, VNET will protect our employees, customers and partners and minimize the risk to our operations in the event of an emergency. We have established a data backup center to continuously refine our data backup and disaster recovery management work. We will also communicate with customers promptly to ensure that they are kept updated and can activate their business continuity plans when needed.



Relying on years of experience in data center operations and successful practices in ensuring data center business continuity, VNET participated in the preparation of the national standard of Information Technology Service - Grade Evaluation Criteria for Business Continuity of Data Center. This standard can be used to evaluate the business continuity grade of different data centers as well as guide data centers to improve their business continuity management level.

Customer services

VNET provides customers with high-standard pre-sales and after-sales services and focuses on the continuous improvement of service levels. We are committed to achieving zero customer complaints and have taken various measures to improve customer satisfaction. We further refine the service process and improve the level of service response by subdividing customer categories, expanding communication channels, conducting an indepth analysis of customer needs and optimizing the structure of service personnel.

We carry out two regular national customer satisfaction surveys each year. The number of customers responding to each survey accounts for about 40% of the total number of customers nationwide. We summarize and forward the comments made by customers in the surveys to functional departments and provide feedback on our response to customers immediately after the problems are solved. Satisfaction data is provided to the Group's management in real-time to further supervise and promote the improvement of service quality. This year, VNET received no customer complaints, and maintained 99.85% national customer satisfaction.

In 2022, VNET innovated and implemented a data center service satisfaction survey mechanism, sending realtime satisfaction questionnaires to random customers who have data center service needs on the day. In 2022, the survey results showed that the data center service satisfaction was 100%.



⊗ VNET's ESG target

• Nationwide customer satisfaction > 95%



Information and Data Security

VNET is deeply involved in the field of information security. We rely on our solid information security management system, strict data protection system, information security system and risk management procedures and our sound employee information security training programs to continuously improves and strengthens the operation and management capabilities of data centers and cloud service platforms to safeguard customers' information and data.

⊘ *VNET's ESG target*

• NO major information security incidents

System construction

VNET constantly strengthens the construction and implementation of the information security management system. Through the Compliance and Information Security Management Regulations, the Information Security Management System Guidelines, the Information Security Risk Management Procedures and other systems, the Group clarifies the information security management responsibilities of each business department, and provides standardized guidance for the daily practice of information security management.

Management structure

VNET has established a Compliance and Information Security Management Committee, which is the highest leading body for the management of compliance and information security. The Compliance and Information Security Working Group under the committee is responsible for daily information security management with the primary goal of ensuring business legality, compliance, security and alignment as well as efficient operations.

We have established a mechanism to identify and manage information security risks, summarized our information assets, carried out risk assessment regularly, and guided the incident handling personnel to make timely emergency response through the emergent/major information security incident response mechanism, in order to minimize the possible adverse impact of the incident. Meanwhile, we have established a smooth communication mechanism with the Ministry of Industry and Information Technology, the Cyberspace Administration, the Ministry of Public Security, other regulatory agencies and their supporting units to timely understand and assess changes in the legal environment and integrate our understanding into targeted management practices.

Certification for Information Security Management System

Our data centers are certified as level 3 by the China Cybersecurity Review Technology and Certification Center (CCRC) for information system security integration service, information security emergency response service, and information security risk assessment service. In addition, we are ISO 27001 certified in our main operating regions.

In terms of cloud service, VNET Blue Cloud passed a range of international and domestic authoritative certifications related to information security and data privacy, including Information Technology Service Management System (ISO 20000), the Public Cloud Personal Information Protection Management System (ISO 27018), Trusted Cloud Services), and etc. Among them, ISO 27018, also known as the "Cloud Privacy Protection Certification", aims to provide a set of codes of practice for cloud providers to protect Personally Identifiable Information (PII) in the public cloud against infringement. VNET Blue Cloud has passed this certification for five consecutive years. Trusted Cloud Services (TRUCS) certification is an authoritative



4. System and Organization Controls (SOC) is the name of a suite of standard reports defined by the American Institute of Certified Public Accountants (AICPA). SOC reports are globally recognized, highly authoritative and compliant with professional security standards.

assessment of the trust system of cloud computing in China. VNET Blue Cloud has been TRUCS-certified since the first batch of certificates was issued in 2014. To date, Blue Cloud has received 11 TRUCS certificates. In 2022, VNET Blue Cloud also passed the Class III network security assessment, covering Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS). These achievements mean that we can provide customers with all-around cloud security services, ranging from basic network systems, cloud platforms to cloud applications.

VNET Blue Cloud has passed the SOC⁴ audit conducted by an independent third-party auditor for three consecutive years and obtained SOC1, SOC2, and SOC3 reports. This demonstrates that the capabilities of Blue Cloud in terms of internal control, security, availability, process integrity and confidentiality have reached the industry's authoritative standards.

CCRC	bsi. 🛞 🕷
信息安全服务资质认证证书	Certificate of Registration
当正考 北京世纪互联宽带数据中心有限公司 8-4462808-4010HemissisteDD	Link of the second seco
 ・・信息空変を展開する。当年後月行 ・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	A DADY Appendix and an office of the second
寶 ∞三 兆火 ()	Anna Litatus Band Litatus Ba
中國网络安全审查技术与认证中心 ## 68 BFARFUG (10000)	 All and the second secon

Information security service gualification certificate

Information security management

Physical security is the basis for our information security management. Data centers are designed under national grade-A standards of GB 50174-2017, and meet the Class III physical environment security protection requirements. We pay close attention to the security around data centers and install surveillance facilities inside these data centers as well as at their entrances or exits; place gate machines at the entrances of data centers and office buildings and set access permissions; and require visitors to register and obtain permission before entering our workplaces to protect our equipment and facilities and strengthen access control. On top of this, we provide a higher level of physical security management by incorporating the special needs of customers.

In terms of internal network security, VNET mainly focuses on internal network management and continuously standardizes employee behaviour. We formulated the Regulations on Access Management Systems, the Office Network Security Access Management Regulations, the Remote Access Permission Management Regulations and other regulations to standardize security operations by employees in different working environments. Employees must follow all the regulations on equipment, networks, accounts, IPs and firewalls before they can be granted network access. Data loss prevention (DLP) terminals are installed on all employees' office equipment to manage all programs within the computers and monitor information transfer tools to avoid leakage of important information. In addition, we conduct weekly security audits of sensitive operations on critical information systems.

To ensure external network security, VNET actively monitors and responds to potential network security threats. By deploying information security products, we monitor the Group's office network for viruses and malicious attacks each day; Meanwhile, we perform vulnerability scans and penetration tests every month to evaluate the integrity of the existing network security system and make improvements. We have developed special defence solutions to address various types of network attacks. For example, we apply high-availability unified threat management (UTM), web application firewall (WAF), traffic cleaning, etc. to prevent malicious and unauthorized intrusions and carry out network boundary defence; and perform network detection and response (NDR), endpoint detection and response (EDR), log audit, etc. to improve the ability to detect and discover advanced persistent threats (APTs) and post-exploitation and conduct in-depth defence.

Case: Deploying UTM equipment

VNET deployed dual-boundary UTM equipment in East China and South China to ensure that the system can provide continuous stable and efficient service. Meanwhile, it also provides the capabilities of network boundary isolation, intrusion prevention, virus filtering, URL filtering, file filtering and mail security for the two systems.

Case: Anti-phishing tests

Anti-fraud and anti-phishing are among the important tasks in VNET's information security system. We regularly conduct anti-phishing tests on employees and send phishing warning emails to them to raise their information security awareness.

Case: Information system certification for financial industry

To further improve our information security management practices, we commissioned a third-party organization to conduct an information security audit and assessment of VNET's major self-built and self-operated data centers in 2022 according to the regulatory requirements of the financial industry. The Xi'an Economic and Technological Development Zone Data Center, as a pilot site, took the lead to obtain the certification for information system hosting and maintenance services for small and medium-sized banks and the Class A certification for power systems of financial information system computer rooms.

Privacy and data security protection

VNET has utilized world-leading encryption methods, protocols and algorithms to ensure that customer data is securely transmitted and confidentially stored within our infrastructure. We have applied a variety of security protection technologies and methods to fully secure the customer cloud computing environment. While discussing the choices of technology types with our customers in the early phase of a project, we conducted research on customers' requirements for information security to customize cloud platform information security solutions, including the selection of cloud platforms and security components as well as suggestions on security strategies and network isolation.

We have formulated a privacy protection policy to ensure the security of personal data and privacy. In the process of data collection, we adhere to the principle of "minimization"; we provide employees and customers with the permission to authorize access to, manage and delete their personal information as well as inform them of the ways to use data to ensure their right to know and make decisions; in addition, we have established a comprehensive data protection process to maximize the security of data.



Personnel training

We highly value fostering an information security culture and awareness among our employees and offering targeted training covering multiple dimensions such as information security regulations, concepts, systems and technologies based on different risks in different positions that the employees may face. The Group organizes various forms of information security training for employees, including data and privacy protection-related training; adds information security modules to the induction training program for recruits; and conducts special training on laws and regulations related to information security from time to time.

In 2022, we engaged security experts to explain the 2.0 requirements of Class III information security protection to all employees to enhance their knowledge of information security. 100% of our employees have received training in information security.

Demonstrating Corporate Responsibility Common Value Co-creation

- Diverse and Inclusive Workplace
- Broad Development Platform
- Reciprocal Partnership
- Responsible Corporate Citizen

VNET consistently adheres to the "people-oriented" philosophy, practices our social responsibility and demonstrates corporate responsibility.





VNET is committed to promoting the development of its people and the overall progress of society to achieve inclusive growth. Adhering to the "people-oriented" philosophy, we provide employees with various growth opportunities; maximizing our respective advantages, we join hands with partners along the supply chain to build a new cooperation ecosystem. We constantly improve social welfare and demonstrate our image as a responsible corporate citizen.

Diverse and Inclusive Workplace

VNET adheres to sustainable talent cultivation, fully respects and strictly protects the rights and interests of employees as well as focuses on the fairness, diversity and inclusiveness of the workplace environment. We also care for the physical and mental health and welfare of employees. We are committed to creating a working environment that is conducive to the personal development of all employees.

Employee rights and interests protection

VNET strictly complies with the Labor Law of the People's Republic of China, the Provisions on the Prohibition of Using Child Labor, and other relevant laws and regulations that is relevant to the standardization of our employee management. As a signatory to the UNGC, we adhere to international treaties such as the Declaration on Fundamental Principles and Rights at Work established by the International Labor Organization. We compiled the Employee Manual and Implementation Measures on Human Resources Management in the VNET Group and Regions to further regulate the protection of employee rights and interests.

VNET adheres to equal employment and is committed to providing employees with an equal workplace free from discrimination, harassment and any form of abuse. There

Diversity and gender equality

We believe that a diverse and inclusive team can bring a diversity of perspectives, which will help the Group consider and solve problems from multiple angles. VNET insists on recruiting, assessing, motivating and training every employee equally, ensuring that minorities are not treated differently and employees' different cultural beliefs are respected.

VNET actively implements gender equality policies to build gender-friendly corporate systems and environments. We pay attention to the challenges and difficulties that female

is no discrimination in the recruitment, appointment, promotion, and turnover of employees based on race, ethnicity, place of origin, gender, age, and marital status. We ensure equal pay for equal work regardless of gender and promote the employment of people with disabilities to implement equal employment rights. We prohibit all forms of child labor and forced labor. If illegal employment is found, we will immediately take serious actions against those responsible for the work based on the severity of the circumstances, and report the cases to the labor security administration. In the case of child labor issues, we will actively render assistance in contacting their legal guardians upon occurrence. This year, there were no incidents of human rights violations, employee discrimination, and employment of child labor.

employees may face in the workplace and offer them necessary support. In 2022, VNET became a signatory of the Women's Empowerment Principles (WEPs) to work with global enterprises in improving gender equality practices and unleashing the potential of women.

We have taken continuous practical measures to protect women's rights, launched the "V-Can" Gender Equality Action Plan to encourage all employees to break gender stereotypes in the workplace and help more women become the backbone of the IDC industry.



- functions in the Group:
- parental leave:
- Organizing tailored caring activities according to gender differences;
- the same development opportunities as men.

In addition, VNET fully considers the needs of employees for childcare, strictly implements the parental leave policy, arranges flexible working hours for breastfeeding female employees and also provides private and convenient breastfeeding rooms in the office area.



Employee involvement

positions was 29%

VNET has engaged in fully protecting the rights of employees concerning their information, participation, privacy, expression and supervision. We organize online discussions, training courses and inspections for the protection of rights and interests as well as track the problems, supervise their rectifications.

We have a trade union to represent the interests of our employees. The union oversees the protection of employee rights and interests, participates in the formulation of corporate rules in close relation to employees' interests from their perspectives and provides suggestions to the management on enhancing employee diversity, safeguarding occupational health and safety and improving employee welfare.

In addition, we regularly conduct employee satisfaction surveys among all employees to understand their work status and actively adopt their reasonable opinions and suggestions.

VNET has established a multi-channel employee communication and appeal mechanism to guarantee employees' legitimate right to fair appeal under the law

Case: Blue Cloud Employee Warm-heart Standing Committee

To involve employees in the daily management of the Group, VNET Blue Cloud has established the Employee Warmheart Standing Committee (hereinafter referred to as "the Committee"), consisting of representatives elected by each department, and the general election is held at the beginning of each year.

The members exercise their democratic rights on behalf of employees and provide the management with various suggestions to safeguard the rights and interests of employees. In 2022, the Committee participated in the evaluation of employees in need and helped them obtain approval from the Mutual-aid Fund.

• Timely setting goals for talent optimization and comprehensively promoting gender equality across all levels and

• Guaranteeing equal pay for equal work and ensuring that all employees receive equal training and mentoring; • Supporting employees in terms of childbirth and childcare by granting all eligible working parents fully paid

• Breaking gender stereotypes and encouraging employees, especially women, to work in non-traditional fields; • Working with other stakeholders to promote gender equality and provide women in underdeveloped areas with

In 2022

The ratio of male to female employees was 1.02:1in terms of the average monthly salary

before receiving any internal disciplinary action, and protect whistleblowers from improper dispositions as a result of whistleblowing.

Employees may file an appeal when they are harassed, bullied, or unfairly treated during work, or when they believe that the problem is not resolved or handled improperly in case of disciplinary action.

To strengthen internal communication, VNET has established a communication and reporting mechanism reviewed and approved by the board of directors and has set up reporting channels such as the reporting box, whistleblowing hotline, labor union and email. Employees can also communicate with HR business partners (HRBPs), their department heads or cross-departmental leaders to solve problems.

VNET will never tolerate any workplace bullying or harassment. If any employee suffers abuse, discrimination and harassment, we will assist the employee to solve problems under the relevant laws and regulations as well as providing psychological counselling and legal aid.

Occupational health and safety

VNET believes that creating a safe and healthy work environment for employees is a fundamental responsibility of the Group. We carry out occupational health and safety management work with the target of zero fatalities and zero serious injuries. In 2022, based on the Work Safety Law of the People's Republic of China, the Fire Protection Law of the People's Republic of China

Work safety management

We provide and maintain devices, equipment and work systems for the safety and health of our employees. Safety drills and fire safety training are organized regularly to reduce the possibility of accidental injuries and enhance employees' safety awareness. In 2022, VNET focused on the protection against high-risk and high-incidence safety hazards in construction projects and developed the first series of safety standardization atlases in a targeted manner to provide visual and actionable safety standards for each project. In addition, we developed different safeguard measures and emergency response plans based on the seasonal and geographical characteristics of the

Safety inspection

VNET has a dedicated team responsible for conducting unannounced inspections and patrol inspections of construction projects as well as supervising and checking the safety responsibility goals set at the beginning of construction. We engage third-party agencies to inspect construction projects for quality defects and potential and other relevant laws, regulations and standards, VNET prepared and issued document such as the Regulations on Work Safety Management and VNET Enterprise Safety Management System to further improve its occupational health and safety management. All main workplaces of the Group have passed the Occupational Health and Safety Management System (ISO 45001) certification.

construction projects to manage project safety issues in a targeted manner.

We also placed emphasis on the occupational health and safety of the employees of contractors during project construction, signed work safety agreements with contractors and required subcontractors to follow VNET's work safety management practices. In 2022, VNET conducted safety-related education and training for our employees and contractors' employees.

safety hazards from a professional, objective and impartial perspective, issue early warnings and carry out rectification to eliminate potential risks. In 2022, all VNET's construction projects achieved the safety goal of zero fatalities and zero serious injuries in liability accidents.



Health and safety-themed activities

To strengthen culture construction of the Group's occupational health and safety culture, we continuously carry out health and safety-themed activities for our employees to enhance their health and safety awareness.

📋 Case: First aid training

The Group has provided automatic external defibrillators (AEDs) in the office area and actively organizes training on first aid and cardiac resuscitation. By now, more than 100 employees have participated in training and many of them have passed the examination and obtained the first-aid skills certificate issued by the Red Cross.



📋 Case: Health Room

In July 2022, VNET launch the Health Room project to provide employees with free services such as Chinese medicine consultation and massage therapy at regular times each week. We also invited experts from external medical and health service platforms to give lectures and share health knowledge with our employees.



📋 Case: Mental health counselling

VNET puts emphasis on the mental health of employees and has set up a psychological consultation room for employees in the office area to provide professional psychological counselling for employees.

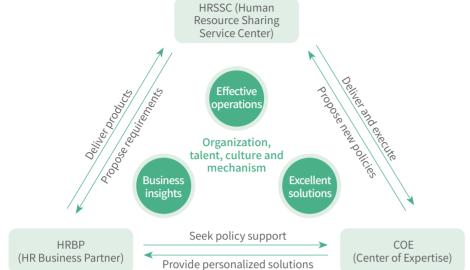
Case: Safety training and drills

VNET continuously strengthens the safety responsibility of all employees through themed training. In 2022, VNET Blue Cloud organized a total of 5 safety trainings and drills for all employees as well as adding nearly 100 safety signs in many offices, effectively improving employees' awareness of work safety.



Broad Development Platform

We hope that every employee can demonstrate their value in VNET and enjoy adequate and equal opportunities for professional development. Through the implementation of VNET's "three-pillar" human resource management system, we actively understand and meet the needs of our business lines and continuously practice the long-term talent development strategy.

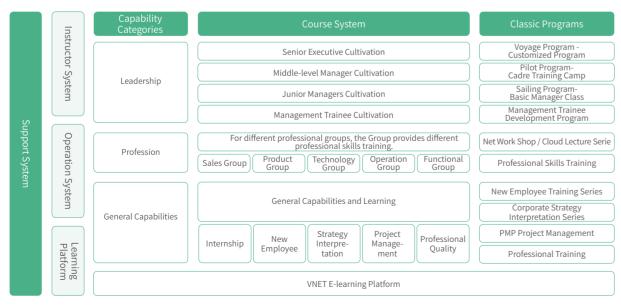


Nurturing talent

VNET places great emphasis on employee development. We have formulated the Employee Training Management System and established a multi-level and systematized employee training system. We ensure that our employees are trained according to their development stages and all kinds of talents can gain support for their career development. We have built the VNET E-Learning platform to cultivate talents for each business line via digital means and achieve knowledge cocreation and sharing. The platform focuses on nurturing leadership skills, professional skills and general skills as well as delivering resource integration to tailor learning maps for each employee. Currently, a total of 576 premium courses have been launched online.

We regularly conduct featured training programs for different positions to enhance their comprehensive abilities and professional skills.

VNET's backbone is our operation and maintenance engineers. The Group created Honor O&M Expert Program series in 2017 and this encompassed technical competitions and training camps for operation and maintenance personnel to enhance their professional skills and exchange technical ideas. By the end of the reporting period, the number of questions in the Honor O&M Expert Program test question database exceeded 5,000, about 5,000 engineers participated in the competition, and more than 100 of them were selected.

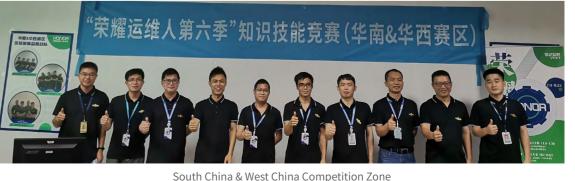


🖹 Case: The 6th session of Honor O&M Expert Program

To celebrate the annual O&M Day, VNET launched the sixth session of Honor O&M Expert Program on July 22, 2022. This session lasted for nearly two months and attracted more than 1,600 participants. We set up four modules: daily training, individual competition, team competition and premium operation and maintenance training camp. The professional knowledge, practical skills, management knowledge, corporate culture and strategic thinking of the contestants were examined with multi-dimensional questions. This purpose was to select outstanding individuals and teams who were provided with bonuses and learning opportunities for exchanges and visits. The program has provided our diligent front-line O&M engineers with comprehensive learning and growth opportunities and the stage to demonstrate their value. In addition, the event has also injected a strong impetus to boost VNET's competitive advantage and high-quality development.









East China Competition Zone

North China Competition Zone

Ulanqab Competition Zone

For the cultivation of managerial talent, we carried out the young talent training program to systematically empower the talents by stages according to the nature of leadership development. VNET Blue Cloud provides core talent with opportunities for mutual learning and cross-disciplinary exchange by launching the leadership development program "Elite Plan".

Case: VNET Blue Cloud Internal Trainer Cultivation Program

To maximize the value of the rich professional knowledge and management experience of business backbones and management cadres in the targeted training of new recruits, VNET Blue Cloud has launched an internal trainer cultivation program to cultivate excellent management cadres into internal trainers, and the internal trainers gradually pass on their experience to the trainees through the Blue Cloud Diamond Lecture Platform. In 2022, we trained the first batch of 26 trainers and developed 20 training courses through three sessions. This program enhances the sense of belonging of new recruits while helping them to grow, and also enables internal trainers to improve their own abilities in the process of teaching.



VNET applies the formal talent pipeline development strategy to actively develop new pools of talent that have great potential. We carry out diverse training practices and competitions and strengthen school-enterprise cooperation to inject fresh blood into the Group's talent pool. In 2022, VNET established a school-enterprise cooperation mechanism known as a "oriented class" with 1 institution, and reached cooperation agreements with 8 institutions to jointly build internship bases and participated in the "Innovation and Entrepreneurship Initiative" organized by the China Association of Higher Education.

Case: VNET Blue Cloud New Generation Training Program

To develop the core strength of future talents, VNET Blue Cloud focuses on the rising generations of post-95s and post-00s and has set up a special training channel for the new generations. In 2022, three training sessions were organized to train a total of 59 talents. In the process of talent development, the Group helped the new generation of employees to build a communication and interaction platform, and developed the new talent pool for the management team and business backbone team in the future.



In addition, VNET encourages employees to leverage external professional resources to improve their expertise and provides RMB 205,000 for related expenses.

Promotion and incentive program

VNET has established a comprehensive rank structure and promotion mechanism to ensure equal opportunities for all employees. In 2022, we formulated and released the VNET Position & Rank Management Procedure, providing employees with four career development paths: management, sales, technician and special talent. Employees can choose their paths according to their career plans.

We value the long-term performance of our employees and comprehensively manage their promotion from multiple perspectives based on five basic principles: organizational development needs, ability, performance, value and fairness and equality. For vacant positions, we encourage internal recommendation or self-recommendation and candidates are provided with opportunities for internal transfer through competition and evaluation process.

VNET continuously attracts and motivates outstanding talents with competitive salaries and the fair and effective performance appraisal mechanism. In 2022, we further improved our remuneration system and launched layered





remuneration incentive plans for employees of different paths and ranks.

In 2022, we formulated the Employee Assessment and Competency Management Procedure for the O&M Department and established the planned, standard and quantifiable employee assessment management mechanism based on the rank system. The performance appraisal results are linked to employees' personal development and incentives to stimulate their creativity and enthusiasm. At the same time, we shared corporate achievements with our employees and offer long-term incentives such as stock options for eligible employees.

We ensure that performance appraisal results are clearly and transparently communicated to employees and allowed them to submit written appeal requests to the human resources center if they disagree with or refuse to accept the results. After verifying the content related to the appeal, relevant departments will conduct performance appraisal recheck, and provide the appeal result to the complainant within the corresponding time limit.

recheck

Feedback o

Employee welfare and care

VNET has built a robust welfare system. In addition to social insurance and welfare prescribed by national and regional regulations, we provide employees with six categories of supplemental benefits: exclusive benefits, anniversary benefits, employee care benefits, health and safety benefits, recreational benefits and special holiday benefits.





Employee care

VNET provides all-round support for employees, we provide assistance and subsidies for employees who encounter emergencies or experience sudden difficulties, sending warmth when they need it most. In 2022, VNET's trade union distributed a total of RMB 65,000 for living subsidies to seriously ill employees and difficult employees.

Employee activities

VNET organizes a variety of cultural and sports activities for our employees. In August 2022, VNET's 6th "Cloud Riding Cup" Internal Football League concluded successfully in Beijing. The tournament lasted more than a month and attracted 6 teams consisting of 85 players from different divisions and departments, adequately arousing the team spirit of the employees.



The 6th "Cloud Riding Cup" Internal Football League

In October 2022, VNET organized its 2nd "VNET Wingspaning Cup" internal basketball league. A total of 6 teams consisting of 80 employees from various departments participated in the competition, demonstrating the extraordinary passion of VNET employees.



The 2nd "VNET Wingspaning Cup" Internal Basketball League

:___

Reciprocal Partnership

VNET cooperates with diverse business partners and is committed to establishing to mutually beneficial cooperation with suppliers. We strictly implement the responsible procurement principle, actively identify, prevent and control potential risks in all aspects of the supply chain. We spare no effort to help the entire industry chain to jointly create an open and mutually beneficial cooperation environment.

Closed-loop procurement management

VNET strictly complies with national laws and regulations and relevant regulations of the industry. Through developing internal regulations such as Regulations on Procurement Management, Rules on Supplier Management, Rules on Procurement Personnel Behavior, we clearly define the responsibilities for each step of the procurement process, standardizes the behavior of procurement personnel, strictly controls the quality of suppliers, and implements closed-loop procurement management.

In 2022, VNET further optimized its supplier access management and improved supplier management efficiency by distinguishing between "standard access" and "express access". For substandard suppliers, we improved the classification mechanism and classified

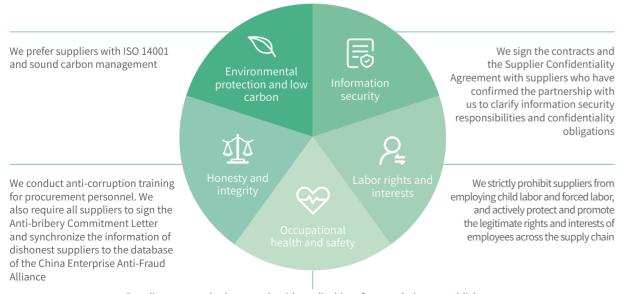
Sustainable supply chain

Committed to building a sustainable supply system, VNET identifies, prevents and controls the potential risks in all aspects of procurement. The comprehensive performance of suppliers is assessed from multiple perspectives based on a full-chain model integrating supplier qualification review, on-site inspection, internal assessment and testing, shortlist announcement and final selection. them into rectifying suppliers, unqualified suppliers, suspended cooperation suppliers and blacklisted suppliers, helping substandard suppliers solve problems in a targeted manner.

Meanwhile, we have also built a supplier relationship management (SRM) system. The SRM system allows us to perform online supplier sourcing, supplier certification and supplier life cycle management. These functions can be performed while enhancing the visualization and traceability of the procurement process.

As of the end of the reporting period, we had a total of 2,623 suppliers recorded in the database, including 5 from Hong Kong, Macau and Taiwan and 5 from other countries and regions.

We aim to safeguard procurement needs and ensure obligation fulfillment while actively urging our suppliers to improve sustainability. In each work process of the supplier management, we incorporate considerations on their ESG risks and focus on their performance in environmental protection and low carbon, information security, labor rights and interests, occupational health and safety, as well as honesty and integrity.



Suppliers are required to comply with applicable safety regulations, establish a sound occupational health protection system, and provide health and safety training to their staff when appropriate

Responsible Corporate Citizen

VNET actively fulfills social responsibilities as a corporate citizen and leverage our industrial strengths so that local communities can benefit from our operations. In 2022, we carried out various public welfare projects related to ecological protection, rural revitalization, and teenager education.

Case: 2022 Voluntary Tree Planting Activity

On March 31, 2022, nearly a hundred employees of VNET (including VNET Blue Cloud), which included management and employee representatives, went to the forest land of Daying Village in Yanqing to carry out the voluntary tree planting activity. The employees spent nearly 400 hours planting more than 600 saplings and contributed to the protection and restoration of the ecosystem with practical actions.



Case: Charity sale

Guang Ai School is the first non-profit boarding school for homeless and left-behind children in China. As a pure-charity non-governmental organization, all materials and funds needed for school operations come from donations from caring enterprises and individuals from all walks of life. VNET also hopes to offer its own share of care to these children in need. In March 2023, we held a charity sale of second-hand goods. Part of the money raised from the event was used to purchase daily necessities and were donated by a team of volunteers representing VNET employees to the children of Guang Ai School.





Appendix

About this Report

Introduction

This Report offers full visibility into the ESG performance and management measures of VNET Group, Inc. and its affiliates in 2022, with a special focus on the concerns of key stakeholders.

Reporting Period

Unless otherwise specified, this Report covers information and data concerning the Group from January 1, 2022 to December 31, 2022. Part of the content is beyond the above period. We regularly review the reporting period to ensure that this Report covers the significant impact of the overall business portfolio of the Group.

Reporting Changes

Based on the previous year's materiality analysis, the report summarizes, updates, and concludes the Group's 2022 ESG material issues and assessment results, as described in the "Materiality Assessment" section.

Compilation Basis

Global Sustainability Standards Board, GSSB	GRI Sustainability Reporting Standards
Hong Kong Exchanges and Clearing Limited, HKEx	Environmental, Social and Governance Reporting Guide
Sustainability Accounting Standards Board, SASB	SASB Standards for Software & IT Services
Task Force on Climate-related Financial Disclosures, TCFD	The TCFD Recommendations on Climate-related Financial Disclosures
National Association of Securities Dealers Automated Quotations, NASDAQ	ESG Reporting Guide 2.0
International Organization for Standardization	Guidance on Social Responsibility (ISO 26000)
International Initiatives	Ten Principles of the United Nations Global Compact
international initiatives	Sustainable Development Goals, SDGs

Data Source and Reliability Assurance

This Report follows the principles of materiality, quantitative, balance and consistency. Data sources used in this Report include public data of government departments, internal documents and statistical reports of the Group, as well as third-party questionnaires. This Report is released after being approved by the Board of Directors and the Group undertakes that this Report does not contain any false or misleading statements or omissions of material facts herein.

External Warranty of the Report

Standards	Issuing Authority
ISAE 3000(Revised)	Bureau Veritas Certification (Beijing) Co., Ltd
AA1000 Assurance Standard	Bureau Veritas Certification (Beijing) Co., Ltd
ISO/IEC 20000-1 Information Technology Service Management System	British Standards Institution, American National Standard Institute
ISO 22301 Business Continuity Management System	British Standards Institution, American National Standard Institute
ISO/IEC 27001 Information Security Management System	British Standards Institution, American National Standard Institute, International Accreditation Forum, China National Accreditation Service for Conformity Assessment
ISO/IEC 27018 Public Cloud Personal Information Protection Management System	British Standards Institution
ISO 14064-3:2019 Specification with guidance for the verification and validation of greenhouse gas statements	Bureau Veritas Certification (Beijing) Co., Ltd
ISO 14001 Environmental Management System	
ISO 9001 Quality Management System	HXC (Beijing) Certification Center Co., Ltd, International Accreditation Forum, China National
ISO 45001 Occupational Health and Safety Management System	Accreditation Service for Conformity Assessment
ISO 50001 Energy Management System	CEPREI, China National Accreditation Service for Conformity Assessment
ISO 37001 Anti-bribery Management System	Intertek Group, The United Kingdom Accreditation Service

Access to this Report

The Chinese and English versions of this Report are available at www.vnet.com. Should there be any discrepancy between the Chinese and English versions, the Chinese version shall prevail. If you have any questions or suggestions about this Report, please email to esg@vnet.com. Your feedback will help us further improve this Report and our ESG performance.

-

Key Performance Indicators

Energy and Water consumption¹

Energy consumption ² MWh Gasoline MWh Diesel MWh	
Diesel MWh	1,152,854.37
	181.79
	2,964.95
Self-generated renewable energy electricity MWh	278.29
Purchased electricity MWh	1,148,316.52
Purchased heat MWh	1,112.82
Energy intensity MWh / \$1,000 revenue	1.13
Water consumption ³ tons	2,201,779.16
Water intensitytons / \$1,000 revenue	2.15

Notes:

The data cover the data centers and offices that VNET put into operation in 2022, which means it has a larger statistical scope than that in 2021.
 Energy consumption is calculated according to the conversion factor in the General Principles for Calculation of the Comprehensive Energy

Consumption (GB/T 2589-2020) of the People's Republic of China.

3. The water mainly comes from municipal tap water, and there are no problems in obtaining suitable water source.

Greenhouse Gas Emissions¹

Total GHG emissions	ton CO₂e	1,276,566.27
Scope 1	ton CO ₂ e	21,361.20
Scope 2	ton CO ₂ e	916,677.93
Scope 3	ton CO₂e	338,527.14
GHG intensity ²	ton CO₂e / \$1,000 revenue	0.92

Notes:

1. The data cover the data centers and offices that VNET put into operation in 2022, which means a larger statistical scope than that in 2021. Greenhouse gas emissions data does not include green electricity certificate emission reduction.

2. As companies approach Scope 3 in very different ways, GHG intensity are calculated on the basis of the total of Scope 1 and 2.

Greenhouse Gas Emission Reduction		
Green Electricity Certificate Emission Reduction	ton CO ₂ e	826.90

Waste

General waste ¹	Kg	110,780
Hazardous waste ²	Kg	177,086

Notes:

General waste mainly include abandoned electronic equipment and abandoned vehicles, which are recovered and disposed of by recyclers.
 The hazardous wastes involved in the group's operations mainly include waste lead-acid batteries, which are all recycled and disposed of by qualified recyclers.

Anti-Corruption

Number of corruption lawsuits filed and concluded against the Group or Group employees	0
Total number of confirmed incidents in which employees were fired or punished for corruption	0
Coverage of anti-corruption training for directors and employees	100%

Supply Chain Management

Number of suppliers	
Within the territory of China	
Hong Kong, Macao and Taiwan	
Other countries and regions	

Customer Services

National customer satisfaction
Customer service hotline call answer rate
Customer service hotline service level ¹
Customer satisfaction after the call
Number of annual customer complaints
Customer complaint resolution satisfaction
Notes:

1. Customer service hotline service level=Number of calls picked up in 20s/Total number of Incoming Calls×100%

Health and Safety

	2020	2021	2022
Number of work-related fatalities	0	0	0
Work-related fatalities	0	0	0
Number of working days lost due to work-related injury	0	1	6
Number of work-related injury incidents which can be recorded	-	-	2
Total Recordable Incident Rate (TRIR) (per 200,000 hours worked)	-	-	0.06

2,623
2,613
5
5

	99.85%
	97.14%
	95.77%
	100%
	0
Ν	lot Applicable

Employment

		Total	Female	Male	Female percentage
management	Total	3,293	908	2,385	28%
el and Ider	Management Position	941	277	664	29%
	Non- management Position	2,352	631	1,721	27%
	≤ 30	30-50	≥ 50		
age group	1,096	2,111	86		
region	Within the territory of China	Hong Kong, Macao, and Taiwan regions	Other countries and regions		
	3,164	127	2		
By ethnicity ¹	Minority nationality	Non-minority nationality	Minority nationality Percentage		
	138	3,014	4%		
	China 3,164 Minority nationality	Taiwan regions 127 Non-minority nationality	2 Minority nationality Percentage		

Notes:

1. The data by ethnicity only covers the data within the territory of China.

Training

		Total	Female	Male
By gender	Training coverage (%)	100%	26%	74%
	Average training hours	23.80	20.56	24.92
Total				
D.c		Total	Management Position	Non-management Position
By management level	Training coverage (%)	Total 100%		

Turnover and recruitment

		Total	Female	Male
	Number of new hires	648	199	449
By gender	Percentage of new hires (%)	100%	31%	69%
	Number of turnover	790	170	620
	Turnover rate (%)	20%	17%	22%
		≤ 30	30-50	≥ 50
	Number of new hires	350	292	6
By age group	Percentage of new hires (%)	54%	45%	1%
	Number of turnover	410	359	21
	Turnover rate (%)	30%	15%	20%
		Within the territory of China	Hong Kong, Macao, and Taiwan regions	Other countries and regions
	Number of new hires	617	31	0
By region	Percentage of new hires (%)	95%	5%	0%
	Number of turnover	752	38	0
	Turnover rate (%)	20%	24%	0%
arental l	eave			
Employees	that were entitled to parental lea	ve ¹		3,293
		Total	Female	Male
	Number of Employees that took parental leave	195	116	79

By gender Return to work rates of employees that took parental leave (%)²

Retention rates of employees that took parental leave (%)³

Notes:

 Parental leave includes both maternity leave, paternity leave and an extended parental leave that has been promoted within the territory of China since November 2021. Among them, the statistical caliber of return rate and retention rate is maternity leave and paternity leave.
 Return to work rates of employees that took parental leave refers to the percentage of people returning to work after their maternity/paternity leave end.

3. Retention rate refers to the percentage of employees who have returned to work after the parental leave and are still in service after 12 months.

		3,293
Total	Female	Male
195	116	79
100%	100%	100%
83%	88%	81%

GRI Index

Use Instructions:

VNET Group, Inc. prepared the report in compliance with GRI standards for the time period between January 1, 2022 and December 31, 2022.

GRI1: Foundation 2021

GRI Standards and	l Disclosu	re	Page	Additional information (UNGC 10 Principles included)
GRI 2: General Disclo	sure 2021			
	2-1	Organizational details	P4	VNET Group, Inc. (NASDAQ: VNET) is listed on the Nasdaq Stock Exchange, operates in China, and the location of its headquarter is No.10, Jiuxianqiao East Road, Chaoyang District, Beijing, China.
	2-2	Entities included in the organization's sustainability reporting	P69	The entities covered in the report are VNET Group. Inc. and its affiliates, and the entities covered in the report are the same as the entities covered in financial reports.
The organization and its reporting practices	2-3	Reporting period, frequency and contact point	P69	This Report is an annual report. The reporting period is from January 1, 2022 to December 31, 2022, which is the same reporting period as financial reports. If you have any questions or suggestions about this Report,
				please email to esg@vnet.com.
	2-4	Restatements of information	P69	There are no restatements of information during the report period.
	2-5	External assurance	P81-82	See Appendix: Independent Assurance Report for details.
	2-6	Activities, value chain and other business relationships	_	See the 2022 Form 20-F for details.
Activities and workers	2-7	Employees	P73-74	See Appendix: Key Performance Indicators
	2-8	Workers who are not employees	-	There are no workers who are not employees.
	2-9	Governance structure and composition	_	See the 2022 Form 20-F for details.
	2-10	Nomination and selection of the highest governance body	-	See the 2022 Form 20-F for details.
	2-11	Chair of the highest governance body	_	Mr. Sheng Chen
Governance	2-12	Role of the highest governance body in overseeing the management of impacts	P17-18	
	2-13	Delegation of responsibility for managing impacts	P7-8	
	2-14	Role of the highest governance body in sustainability reporting	P7-8	The Board of Directors fully oversees ESG-related matters of VNET to review and approve the release of this Report.
	2-15	Conflicts of interest	-	See the 2022 Form 20-F for details.
	2-16	Communication of critical concerns	P14	

GRI Standards and D	isclosur	e	Page	Additional information (UNGC 10 Principles included
GRI 2: General Disclosu	re 2021			
	2-17	Collective knowledge of the highest governance body	P17	The Group regularly or irregularly provides the directors with the latest laws, regulations and regulatory requirements documents and organizes necessary training, including but not limited to ESG general knowledge, climate change, anti-corruption, etc.
-	2-18	Evaluation of the performance of the highest governance body	_	See the Charter of the Remuneration Committee of the Board of Directors for details.
Governance	2-19	Remuneration policies	_	See the 2022 Form 20-F for details.
	2-20	Process to determine remuneration	_	See the Charter of the Remuneration Committee of the Board of Directors for details.
	2-21	Annual total compensation ratio	-	Confidentiality Restriction: Such disclosure is commercia and competitive sensitive information and personal privacy information of employees, and therefore will not be disclosed.
	2-22	Statement on sustainable development strategy	P9-10	
	2-23	Policy commitments	-	See the Code of Business Conduct and Ethical Standards for details.
	2-24	Embedding policy commitments	_	See the Code of Business Conduct and Ethical Standards for details.
Strategy, policies and	2-25	Processes to remediate negative impacts	_	See the Code of Business Conduct and Ethical Standards for details.
practices	2-26	Mechanisms for seeking advice and raising concerns	-	See the Whistleblowing and Whistleblower Protection Policy for details.
	2-27	Compliance with laws and regulations	P19,24,30, 38,57,67	There were no major violations of laws and regulations in 2022.
	2-28	Membership associations	P9,23,57	 United Nations Global Compact (UNGC) United Nations Women (UN Women) Women's Empowerment Principles (WEPs) Enterprise Anti-Fraud Alliance
Stakeholder	2-29	Approach to stakeholder engagement	P14	
engagement	2-30	Collective bargaining agreements	_	Collective bargaining agreements cover all employees.
GRI 3: Material Topics 2	2021			
3-1		Process to determine material topics	P13	
3-2		List of material topics	P13	
3-3		Management of material topics	_	Please refer to the following table.

GRI Standards and Disclo	osure	Page	Additional information (UNGC 10 Principles included)		
GRI 201: Economic Performance					
GRI 3: Topic management disclosures	How it manages economic performance	_	See the 2022 Form 20-F for details.		
Topic disclosures	201-1 Direct economic value generated and distributed	_	Subject to confidentiality, our revenue, operating cost, employee remuneration and benefits, payments to capital providers and governments shall not be disclosed. Such information is commercially and competitively sensitive and will therefore not be disclosed.		
	201-2 Financial implications and other risks and opportunities due to climate change	P39-44			
GRI 202: Market Presence					
GRI 3: Topic management disclosures	How it manages market presence	_	<principle 6=""></principle>		
GRI 203: Indirect Economic I	mpacts				
GRI 3: Topic management disclosures	How it manages indirect economic impacts	_			
Topic disclosures	203-1 Infrastructure investments and services supported	P68	VNET organizes diversified community investment activities to support the development of the communities where we operate.		
GRI 205: Anti-corruption					
GRI 3: Topic management disclosures	How it manages anti-corruption	P20-23	<principle 10=""></principle>		
Topic disclosures	205-2 Communication and training about anti- corruption policies and procedures	P20-23	VNET has put in place sound anti-corruption and anti-bribery measures. This boundary of topic covers our employees, businesses and clients. Training on compliance covers all employees.		
	205-3 Confirmed incidents of corruption and actions taken	P21	No related reports were received during the reporting period.		
GRI 206: Anti-competitive Be	havior				
GRI 3: Topic management disclosures	How it manages anti-competitive behavior	P19			
Topic disclosures	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	_	No relevant actions involved during the reporting period.		
GRI 302: Energy					
GRI 3: Topic management disclosures	How it manages energy	P33-36	<principle 7,="" 8,="" 9=""></principle>		
	302-1 Energy consumption within the organization	P71			
Topic disclosures	302-2 Energy consumption outside of the organization	P29,71			
	302-3 Energy intensity	P71			
GRI 303: Water and Effluent	S				
	How it manages water and effluents	P30,32,34			
GRI 3: Topic management disclosures	303-1 Interactions with water as a shared resource	P30,34	<principle 7,="" 8,="" 9=""></principle>		
	303-2 Management of water discharge-related impacts	P32			
Topic disclosures	303-3 Water withdrawal	P30,34,71			

GRI Standards and Disclo	osure	Page	Additional information (UNGC 10 Principles included)
GRI 304: Biodiversity			
GRI 3: Topic management disclosures	How it manages biodiversity	P30	<principle 7,="" 8,="" 9=""></principle>
Topic disclosures	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	P30	The Group has no operational sites managed in or adjacent to, protected areas and areas of high biodiversity value outside protected areas.
GRI 305: Emissions			
GRI 3: Topic management disclosures	How it manages emissions	P27-30	<principle 7、8、9=""></principle>
	305-1 Direct (Scope 1) GHG emissions	P29,71	
	305-2 Energy indirect (Scope 2) GHG emissions	P29,71	
	305-3 Other indirect (Scope 3) GHG emissions	P29,71	
Topic disclosures	305-4 GHG emissions intensity	P71	
Topic disclosures	305-5 Reduction of GHG emissions	P71	
	305-6 Emissions of ozone-depleting substances (ODS)	-	No ozone-depleting substances (ODS) emissions involved in operations of the Group.
	305-7 Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	_	The major gas emissions of the Group are mainly GHG emissions, no nitrogen oxides (NOx) emissions involved in direct operations.
GRI 306: Waste			
	How it manages waste	P32,37,38	
GRI 3: Topic management disclosures	306-1 Waste generation and significant waste- related impacts	P37,38	<principle 7、8、9=""></principle>
	306-2 Management of significant waste-related impacts	P38	
Topic disclosures	306-3 Waste generated	P38,71	
GRI 308: Supplier Environme	ental Assessment		
GRI 3: Topic management disclosures	How it manages supplier environmental assessment	P67	<principle 1,="" 10="" 2,="" 3,="" 4,="" 5,="" 6,="" 7,="" 8,="" 9,=""></principle>
	308-1 New suppliers that were screened using environmental criteria	P67	
Topic disclosures	308-2 Negative environmental impacts in the supply chains and actions to be taken	P67	Substandard suppliers are required to conduct rectification and would be eliminated if the rectifications proved to be below our standards.

GRI Standards and Disclo	osure	Page	Additional information (UNGC 10 Principles included)
GRI 401: Employment			
GRI 3: Topic management disclosures	How it manages employment	P57-58	<principle 3,="" 4,="" 5,="" 6=""></principle>
	401-1 New employee hires and employee turnover	P74	
Topic disclosures	401-2 Benefits provided to full-time employees that are not provided to temporary or part- time employees	P65-66	
	401-3 Parental leave	P58,74	
GRI 403: Occupational Healt	h and Safety		
	How it manages occupational health and safety	P59-60	
	403-1 Occupational health and safety management system	P59	
GRI 3: Topic management disclosures	403-5 Worker training on occupational health and safety	P59-60	
	403-6 Promotion of worker health	P59-60	
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	P59	
Topic disclosures	403-8 Workers covered by an occupational health and safety management system	P59	
	403-9 Work-related injuries	P59,72	
GRI 404: Training and Educa	tion		
GRI 3: Topic management disclosures	How it manages training and education	P61-64	<principle 6=""></principle>
	404-1 Average hours of training per year per employee	P73	
Topic disclosures	404-2 Programs for upgrading employee skills and transition assistance programs	P61-64	
	404-3 Percentage of employees receiving regular performance and career development reviews	P64	
GRI 405: Diversity and Equal	Opportunity		
GRI 3: Topic management disclosures	How it manages diversity and equal opportunity	P57-58	<principle 3,="" 4,="" 5,="" 6=""></principle>
	405-1 Diversity of governance bodies and employees	P17,57	
Topic disclosures	405-2 Ratio of basic salary and remuneration of women to men	P58	

GRI Standards and Disclo	osure	Page	Additional information (UNGC 10 Principles included)
GRI 406: Non-discrimination			
GRI 3: Topic management disclosures	How it manages non-discrimination	P24	<principle 6=""></principle>
Topic disclosures	406-1 Incidents of discrimination and corrective actions taken	-	No incidents of discrimination against employees in 2022.
GRI 408: Child Labour			
GRI 3: Topic management disclosures	How it manages child labour	P24,57	<principle 5,="" 6=""></principle>
Topic disclosures	408-1 Operations and suppliers at significant risk for incidents of child labor	-	No incidents of child labor in 2022.
GRI 409: Forced or Compulso	ory Labor		
GRI 3: Topic management disclosures	How it manages forced or compulsory labor	P57	<principle 4=""></principle>
Topic disclosures	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	_	No incidents of forced or compulsory labor in 2022.
GRI 414: Supplier Social Asse	essment		
GRI 103: Management approach disclosures	How it manages supplier social assessment	P67	<principle 1,="" 10="" 2,="" 3,="" 4,="" 5,="" 6,="" 7,="" 8,="" 9,=""></principle>
	414-1 New suppliers that were screened using social criteria	P67	
Topic-specific disclosures	414-2 Negative social impacts in the supply chain and actions taken	P67	Substandard suppliers are required to conduct rectification and would be eliminated if the rectifications proved to be below our standards.
GRI 418: Customer Privacy			
GRI 3: Topic management disclosures	How it manages customer privacy	P51-54	
Topic disclosures	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	-	No major complaints concerning breaches of customer privacy and losses of customer data received in 2022.

Independent Assurance Statement



INDEPENDENT ASSURANCE STATEMENT

Introduction and objectives of work

Bureau Veritas Certification (Beijing) Co., Ltd ("Bureau Veritas") has been engaged by VNET Group, Inc. ("VNET Group") to conduct an independent assurance of its 2022 Environmental. Social and Governance Report (the "Report"). This information and its presentation in the Report are the sole responsibility of the management of VNET Group. Bureau Veritas was not involved in the drafting of the Report. Our sole responsibility was to provide independent assurance on the accuracy and reliability of information included, and on the underlying systems and processes used to collect, analysis and review it.

Scope of work

VNET Group requested Bureau Veritas to verify the following contents:

- · The accuracy and objectivity of key data, information and management support system of the Report within the disclosure period (2022.01.01-2022.12.31);
- Appropriateness and robustness of underlying reporting systems and processes, used to collect, analysis and review the information reported

Excluded from the scope of our work is any assurance of information relating to:

- Activities outside the defined assurance period;
- Positional statements (expressions of opinion, belief, aim or future intention by VNET Group) and statements of future commitment;
- Operating financial data in the Report, which were separately audited by an external auditor and therefore excluded from the scope of work.

Methodology

As part of its independent assurance. Bureau Veritas undertook the following activities:

- Interviews with relevant personnel of VNET Group:
- Review of written evidence produced by VNET Group, including documentary, records, photos, website downloads and other evidence
- Evaluation of information against GRI Standards principles i.e. Accuracy, Completeness, Balance, Clarity, Comparability, Sustainability context, Timeliness and Verifiability;
- Verify sampled performance data;
- Review of data and information management processes and systems for collection, aggregation, analysis and review.

The work was conducted against Bureau Veritas Group's standard procedures and guidelines for external assurance of ESG reports, based on current best practice in independent assurance. In the assurance process, we have used ISAE 3000 (Revised), the AA1000 Assurance Standard and the GRI Standards

The work was planned, carried out and concluded on a reasonable and rather than absolute basis.

Our findings

On the basis of our methodology and the activities described above, it is our opinion that:

- The information and data included in the scope of our assurance are accurate, reliable and free from material mistake or misstatement;
- The information is presented in a clear, understandable and accessible manner;
- VNET Group has established appropriate systems for the collection, aggregation and analysis of relevant information.

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 10 59683888



0

rtificati

0

 \mathbf{O}

S

σ

L t

D

>

 σ

C

 \square

m



from different aspects. The report is objective, reliable and traceable.

Additional commentary

Materiality

Objectivity

materiality

Completeness

The Report covers VNET Group and its affiliates. The Report discloses VNET Group sustainability strategy, underlying management systems, actions and performance in the three areas of environmental, economic and social accountability. The Report discloses key issues of concern to the stakeholders within the reporting period, including carbon emissions, renewable energy, climate change, privacy and data security, occupational health and safety, employee rights and interests, and community engagement and contribution, etc.

Statement of independence, impartiality and competence

Bureau Veritas Group is an independent professional services company that specialises in Quality, Health, Safety, Society responsibility and Environmental management with more than 190 years history in providing independent assurance services. No member of the assurance team has a business relationship with VNET Group, its Directors or Managers beyond that required of this assignment. We have conducted this assurance independently, and there has been no conflict of interest. The 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: Haoyu Zhang Certificate Number: CN100225A

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 10 59683888

VNET Group adopts information systems to manage data and information. The relevant departments are responsible for collecting, checking, sorting, summarizing and analyzing data and information

VNET Group identified and disclosed key ESG issues and relative information according to the Core Scheme of GRI Sustainability Reporting Standards issued by the Global Sustainability Standards Board, the ESG Reporting Guide 2.0 issued by NASDAQ, and the Environmental, Social and Governance Reporting Guide issued by the Stock Exchange of Hong Kong Limited. The Report has

Authorized Signatory March 27th 2023



General Disclaimer

The information in this report may contain predictive statements, including but not limited to, future business model, the development trend of relevant industries and new technologies. These statements may include descriptions regarding the intent, belief or current expectations of the Group or its officers with respect to the consolidated results of operations and financial condition of the Group. Such predictive statements are not guarantees of future performance and involve risks and uncertainties, and actual results may differ from those in the predictive statements as a result of various factors and assumptions. The Group or any of its affiliates, advisors, representatives or underwriters has no obligation and does not undertake to revise predictive statements to reflect future events or circumstances, except as required under law.