
GenScript
Scripting Possibilities
2024
GenScript Biotech Corporation
Environmental, Social and Governance Report 2024

Contents

About the Report 02

Message from Our CEO 03

Company Overview 04

Supporting the UN SDGs 06

01 Improving Governance

Corporate Governance 10

ESG Governance 19

02 Enabling Our Clients

Product Responsibility 24

Innovation and R&D 29

Supply Chain Management 33

Service Excellence 37

03 Empowering Our Employees

Diverse and Inclusive Workplace 42

Talent Development 46

Employee Engagement 49

Occupational Health and Safety 52

04 Preserving Our Environment

Environmental Management 57

Resource Conservation 60

Waste and Pollution Control 67

Addressing Climate Change 72

05 Contributing to Communities

Charitable Initiatives 76

Industry Engagement 79

List of Laws and Regulations 81

ESG Key Performance Indicators 84

HKEX ESG Reporting Guide Index 99

About the Report

Overview

This report is the ninth annual Environmental, Social, and Governance Report (the "Report" or the "ESG Report") issued by GenScript Biotech Corporation ("GenScript," or "We"), together with its subsidiaries (collectively, the "Group"). This report is published each year to provide information on the Company's environmental, social, and governance ("ESG") policy development and performance and objectively disclose the Company's management and effectiveness in respect of sustainable development to respond to the expectations of our stakeholders.

Reporting Scope and Boundary

The report discloses the management and results of ESG related issues for the period from January 1, 2024, to December 31, 2024 (the "Reporting Period" or the "Year"), and part of the information dates to the previous year or covers the first quarter of 2025. For details on the Company's business[1], please see the 2024 Annual Report available on our website at https://www.genscript.com/annual-results-packages.html.

Basis of Preparation

The Report has been prepared strictly in accordance with the requirements of the Environmental, Social, and Governance Reporting Guide (the "ESG Reporting Guide") as set out in Appendix C2 of the Listing Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "HKEX"), and is based on the following principles:

Materiality: The Report discloses the procedures of identifying material ESG factors, including stakeholder identification and survey, materiality assessment using the materiality matrix, and reporting of ESG-related material factors and issues.

Quantitative: The Report measures key performance indicators (KPIs), discloses quantitative data as required by the ESG Reporting Guide issued by the HKEX, and specifies the scope of statistics and basis of calculation.

Balance: The Report provides an unbiased and objective view of our ESG performance.

Consistency: The Report uses consistent methodologies and explains statistical methodologies and standards.

[1] Effective October 18, 2024, Legend Biotech Corporation was deconsolidated from the Group and has since been reclassified as an associate. Therefore, the quantitative and qualitative data disclosed in the Report do not include information from Legend Biotech.

Process of Preparation

The contents of the Report have been determined based on a set of systematic procedures. Such procedures include, among others, forming a working group, identifying key stakeholders, conducting interviews with the stakeholders, isolating and prioritizing material ESG related topics, deciding the scope of the ESG Report, collecting relevant materials and data, determining the framework, compiling the report, designing the report, and conducting reviews by relevant departments and the senior management.

Data Sources and Reliability Statement

The information and data disclosed in the Report are derived from the statistical reports and formal documents of the Company and have been reviewed by relevant departments. The Company confirms that there is no misstatement or misleading representation contained in the Report and takes responsibility for the truthfulness, accuracy and completeness of the contents of the Report. Unless otherwise stated, all monetary amounts in the Report are denominated in U.S. dollars[2] and all intensity data are based on revenue data in the annual report..

Acknowledgment and Approval

Subject to the acknowledgement of the Management, the Report has been approved by the Board on March 11, 2025.

Availability of the Report

This report is published in electronic form on the website of the HKEX and the Company's website available at https://www.genscript.com/.

We value the opinions of all stakeholders and are open to your feedback through the following contact information. Your opinions will help us improve this Report as well as our ESG performance.

Email: ESG@genscript.com

[2] Subject to the average rate for CNY to USD at 7.11225.

A Message from Our CEO



Sherry Shao

Dear stakeholders,

I am delighted to present GenScript's 2024 Environmental, Social, and Governance (ESG) Report, which highlights our progress in embedding sustainability into the fabric of our operations and strategic vision. In 2024, through collaborative innovation and strategic execution, we have made significant strides in advancing responsible business practices while driving long-term value creation.

Our governance structure provides robust oversight, with a Board-level Risk Management and ESG Committee steering our sustainability strategy and objectives, facilitated by the ESG Working Team comprising heads of ESG-related functions. As a participant of the United Nations Global Compact (UNGC), we have aligned our priorities with the UN Sustainable Development Goals (SDGs) and established ambitious targets to drive measurable progress towards a more sustainable future.

Our diverse workforce of 5,568 members serves as the foundation of our success. We strive to create a workplace where everyone can grow and thrive by offering competitive compensation packages above living wage benchmarks and fostering an inclusive culture that celebrates diversity. Through various training programs and development opportunities, we empower our team members to unlock their full potential, which in turn fuels our company's innovation. In 2024, GenScript was named Best Places to Work by BioSpace for the second consecutive year.

Environmental sustainability stands as a global imperative and a fundamental aspect for responsible corporate citizenship. As part of our commitment to reducing the environmental impact of our operations and value chain, we took a significant step by committing to the Science Based Targets initiative (SBTi), and we are excited to see our climate targets validated by SBTi in early 2025. Our systematic approach to decarbonization focuses on process and equipment upgrading, innovative efficiency programs, and increased use of renewable energy from a rooftop photovoltaic system to green electricity. These initiatives are driving us towards our 2050 net-zero goal in alignment with the Paris Agreement.

Our commitment to sustainability also extends seamlessly across our value chain. In 2024, we joined the Pharmaceutical Supply Chain Initiative (PSCI) as a supplier partner, elevating our sustainability management standards. In our operations, we follow PSCI principles for ethics, human rights, health and safety, environment, and management systems to support our clients in global regulatory compliance. To ensure responsible practices in our supply chain, we conduct supplier assessments by incorporating PSCI requirements. By doing so, we aim to build a resilient supply chain and enable our business partners to navigate various regulatory landscapes.

To fulfill social responsibility within our communities, we launched a volunteer platform across our operational sites globally. Our employees engaged in a range of initiatives, from environmental protection and community support to education and advocacy, contributing a total of 1,408 voluteer service hours in 2024. In our industry, we leverage our expertise and innovation to deliver cutting-edge solutions and foster industry collaborations through global forums, with a view to expediting the development of novel therapies and expanding patient access.

Our sustainability commitments and actions have earned us global recognition, including the "A" rating from MSCI and the bronze medal from EcoVadis. Looking ahead, GenScript remains steadfast in our mission to "Make People and Nature Healthier Through Biotechnology" by embedding sustainability principles into every aspect of operations. I invite you to read this report and learn about our initiatives and progress in ESG focus areas. We extend our sincere thanks to all stakeholders for your trust and support, and we look forward to working with global partners to build a more sustainable future.

Sherry Shao

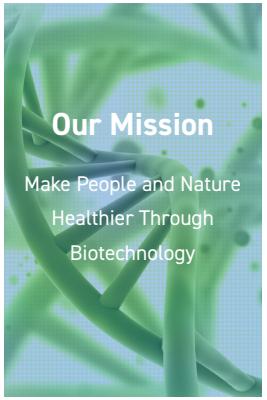
Rotating Chief Executive Officer (CEO)

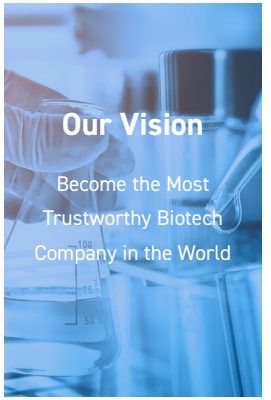
Company Overview

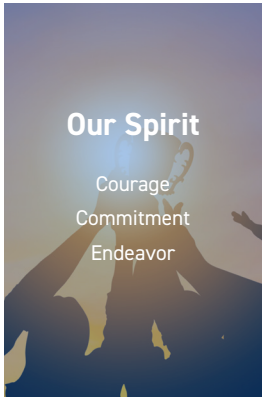
GenScript Biotech Corporation is a well-recognized biotechnology company. Based on our proprietary gene synthesis technology and the other technology and know-hows on life science research and application, we have well established major platforms including a life science services and products platform to provide one-stop solutions to global research communities, a biologics contract development and manufacturing organization (the "CDMO") platform, and an industrial synthetic biology products platform.

Founded in 2002 in New Jersey, GenScript's business operations span over 100 countries and regions worldwide with legal entities located in Mainland China, the U.S., Hong Kong, Japan, Singapore, Netherlands, the United Kingdom, Korea, Spain, Australia and Macao. GenScript accelerates innovation in biotech and healthcare by providing researchers and companies with the building blocks needed to develop groundbreaking treatments and products. As a trusted global leader, GenScript has served more than 200,000 customers across 100 countries.

Aligned with our mission to "Make People and Nature Healthier Through Biotechnology", we are dedicated to delivering innovative services and products that address environmental issues and major diseases, while enhancing human well-being. In pursuit of our vision to "Become the Most Trustworthy Biotech Company" and guided by our spirit of courage, commitment and endeavor, we strive to provide premium solutions to our customers, foster the growth and development of our employees, and create sustainable value for society.







GenScript Life Science Group

The life science services and products segment offers services and products covering gene synthesis, oligo nucleotide synthesis, peptide synthesis, protein production, antibody development, and life science equipment and consumables. By servicing early-stage research and discovery projects at pharma, biotech and academic institutions, our business has made significant contributions to the global life science research community.

ProBio

Probio Technology Limited ("ProBio") is a subsidiary of the Group. As a leading CDMO, Probio empowers biologics innovators worldwide by providing seamless end-to-end solutions. Our comprehensive platform integrates discovery, development, and manufacturing services, streamlining the development process, reducing timelines, and increasing the success rate of biologics projects. By accelerating the development and manufacturing of life-changing biologic therapies, we aim to improve the lives of patients worldwide and contribute to a healthier future.

Bestzyme

Bestzyme Biotech Corporation ("Bestzyme") is a subsidiary of the Group engaged in the industrial synthetic biology fields. Bestzyme uses our advanced protein engineering technology to develop products for feed, food, grain processing, and home care industries. We believe synthetic biology offers us new opportunities from both technical and commercial perspectives.

ESG Commitments and Ratings

A signatory of
the United Nations Global Compact (UNGC)

WE SUPPORT
UN GLOBAL COMPACT

Decarbonization targets approved by
the Science Based Targets Initiative (SBTi)

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Pharmaceutical Supply
Chain Initiative (PSCI) Supplier Partner

PSCI Supplier Partner

Received an A rating from MSCI

MSCI ESG RATINGS A
CCC B BB BBB A AA AAA

Awarded a bronze medal by EcoVadis, placing
GenScript in the top 17% of all assessed companies

BRONZE | Top 35%
ecovadis
Sustainability Rating
MAR 2025

Received a B rating for Climate Change
from CDP

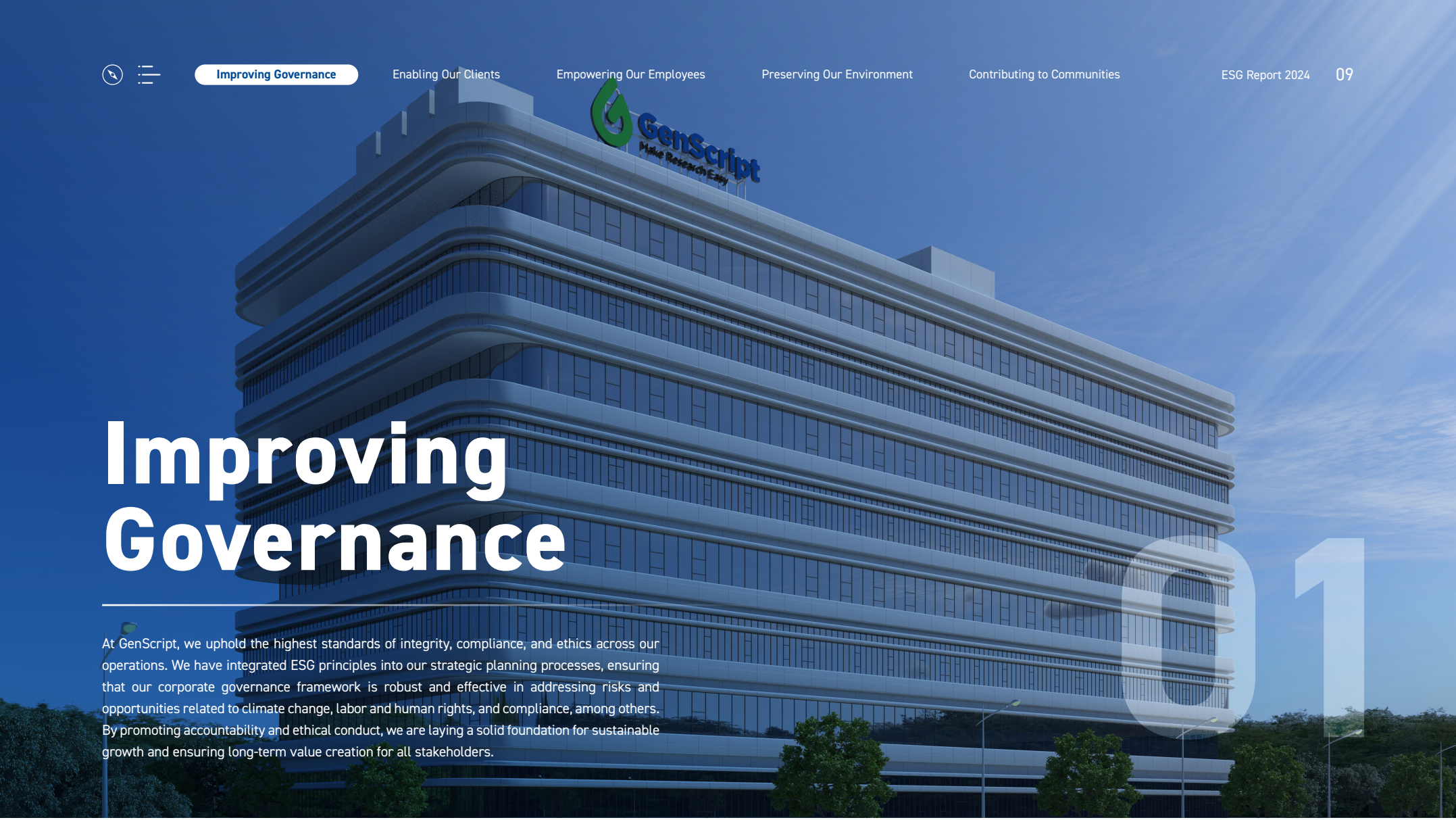
CDP
Discloser
2024

Supporting the UN SDGs

SDGs	2024 Progress
 **Ensure healthy lives and promote well-being for all at all ages**	Embedded in our mission, we promote health and well-being for all by accelerating innovative therapies, protecting employee health and safety, and supporting communities. ▸ We leverage our expertise and track record to develop innovative services and products that enable therapeutic development and commercialization. In 2024, we increased R&D investment by 2.1%, and we were granted 53 new patents in 2024. ▸ We care for physical and mental health of our employees and encourage work-life balance. Zero work-related fatalities occurred in the past three years. ▸ We raise public awareness of vulnerable groups and support patients with rare diseases through volunteer services. In 2024, we launched 51 volunteer campaigns, contributing a total of 1,408 volunteer service hours.
 **Ensure inclusive and quality education for all and promote lifelong learning**	We provide employees with a range of training programs on leadership, competency and degree advancement, and expand our educational outreach to reach wider communities. ▸ We have created career plans for employees and used development maps to guide employees throughout their career journey. ▸ In 2024, 100% of employees received professional training. Employee training hours increased by 34% compared to 2023. ▸ We inspire the next generation through science education for primary and middle school and university students, fostering a passion for science and innovation.
 **Achieve gender equality and empower all women and girls**	Gender equality is essential for creating a more inclusive and productive workplace. We uphold human rights, diversity, equity and inclusion (DEI), and ensure equal opportunities for all employees in recruitment, promotion, compensation and benefits. ▸ In 2024, female employees accounted for over 58% of our workforce. Due to our efforts to increase representation in leadership, we achieved a 43% representation of women among top executives. ▸ We launched DEI programs to empower women in the workplace. ▸ We work to close the gender pay gap and promote fair compensation practices.
 **Ensure access to water and sanitation for all**	We enhance water efficiency and reduce wastewater in our operations. ▸ We prioritized water conservation and efficient water use by reclaiming and reusing water, managing contractors' water use, water balance testing, and promoting employee engagement. ▸ We improved management effectiveness by focusing on wastewater reduction and treatment. ▸ We achieved our annual target for reducing water intensity.

SDGs	2024 Progress
Ensure access to affordable, reliable, sustainable and modern energy	We adopt a systematic approach to energy management and improve energy efficiency across construction, production, R&D, and office operations. ▸ We have the *Energy Management Policy* in place, providing a strategic framework to systematically control and optimize energy use. ▸ Our enzyme manufacturing facility has been certified to ISO 50001 Energy Management System. ▸ We adopted energy-saving technologies, upgraded equipment, implemented waste heat recovery systems, and refined our energy mix by using solar energy and wind-based green electricity.
Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Aligned with market dynamics and business needs, we maintain a global talent base. We empower employees by preventing discrimination and harassment, offering competitive compensation and equal career opportunities, and creating a safe workplace. ▸ In 2024, we had a total of 5,568 employees worldwide. The voluntary turnover rate decreased by 3% compared to 2023. ▸ No discrimination or harassment occurred. ▸ 100% of our employees received occupational health and safety training.
Build resilient infrastructure, promote sustainable industrialization and foster innovation	We prioritize R&D and innovation to deliver sustainable solutions that drive environmental benefits, while leveraging lean management practices to reduce production waste and improve resource utilization. We also focus on upgrading our facilities by replacing outdated equipment with more energy-efficient alternatives. ▸ In 2024, employees contributed 11,655 constructive suggestions for continuous improvement, and over 120,000 hours were saved through lean projects. ▸ By phasing out on-site boiler-generated steam and transitioning to municipal steam, we saved approximately 9.3 million m^3 of natural gas in one of our manufacturing facilities, reducing emissions by approximately 26,040 tCO_2e annually.
Reduce inequality within and among countries	We promote DEI in the workplace by preventing any discrimination or harassment based on race, gender, religion, physical condition, or other backgrounds and supporting the inclusion of minority and vulnerable groups in the workplace. ▸ We have developed and implemented the *Diversity, Equity and Inclusion Policy*, guiding our efforts to create an inclusive environment. ▸ We appointed the Head of Global DEI to oversee our DEI strategy and ensure its effective implementation across all regions.
Make cities inclusive, safe, resilient and sustainable	We contribute to sustainable society through ethical, responsible, and low-carbon practices in our operations and proactive community engagement. ▸ We have established global volunteer teams, focusing on initiatives in environmental protection, support for vulnerable groups, education, healthcare, and social equity. ▸ In 2024, we donated US$352,763 to charitable causes.

SDGs	2024 Progress
 **Ensure sustainable consumption and production patterns**	We offer sustainable products by adopting green and ethical business practices in our production processes and supply chain. ▸ We communicated our sustainability standards and expectations to suppliers through the *Sustainable Procurement Policy* and the *Supplier Code of Conduct*. ▸ We integrate the 3R principles (Reduce, Refine, Replace) into our research and operations to advance animal welfare standards. ▸ We have implemented green manufacturing initiatives to reduce our carbon footprint.
 **Take urgent action to combat climate change and its impacts**	We strive to enhance our climate resilience and reduce greenhouse gas (GHG) emissions across our value chain to address climate change. ▸ We pledge to align our GHG emissions from business activities with the 1.5°C target of the *Paris Agreement*, aiming to achieve net-zero emissions by 2050. ▸ To achieve our decarbonization targets approved by SBTi, we have developed a science-based decarbonization pathway. ▸ We established annual corporate GHG inventory, identifying emission sources and quantifying our carbon footprint. ▸ In recognition of our commitment and action to address climate change, we received a B rating for Climate Change from CDP.
 **Promote just, peaceful and inclusive societies**	We uphold the highest standards of business ethics and regulatory compliance, fostering a culture of accountability and ethical behaviors among all stakeholders. ▸ We have the *Whistleblowing and Investigation Policy* in place to improve mechanisms for speaking up against any violations. ▸ 100% of our employees received training on business ethics and anti-corruption. ▸ We required all suppliers to sign the *Supplier Code of Conduct* and the *Integrity Undertaking* and signed integrity agreements with customers.
 **Revitalize the global partnership for sustainable development**	Creating a sustainable community requires collaborative efforts and strong partnerships. We have proactively established partnerships, participated in the development of industry standards, and worked with global partners to create a sustainable ecosystem. ▸ As a participant of the UNGC, we align our operations with universal principles on human rights, labor, environment, and anti-corruption. ▸ In 2024, we became a Supplier Partner of the Pharmaceutical Supply Chain Initiative (PSCI), advancing a resilient supply chain in the pharmaceutical sector.



Improving Governance

01

At GenScript, we uphold the highest standards of integrity, compliance, and ethics across our operations. We have integrated ESG principles into our strategic planning processes, ensuring that our corporate governance framework is robust and effective in addressing risks and opportunities related to climate change, labor and human rights, and compliance, among others. By promoting accountability and ethical conduct, we are laying a solid foundation for sustainable growth and ensuring long-term value creation for all stakeholders.

Contributing to the UN SDGs



Chapter Content

Corporate Governance 10

ESG Governance 19

1.1

Corporate Governance

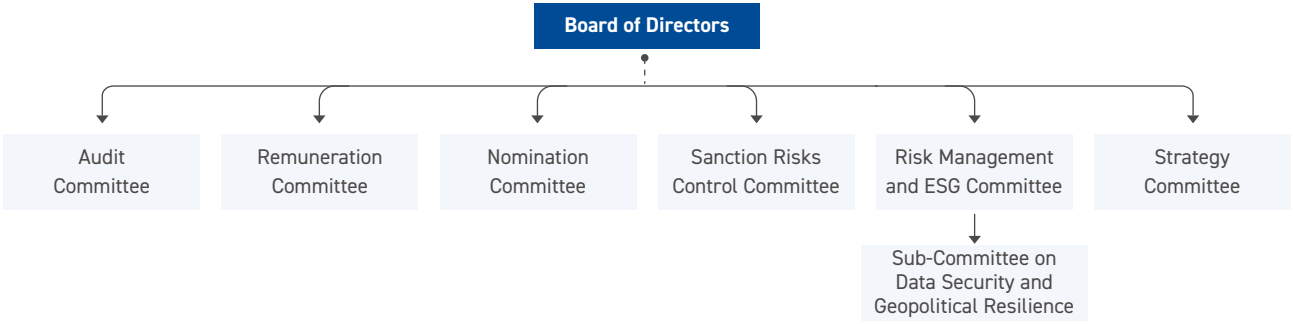
Corporate governance is integral to our commitment to responsible business practices. Our initiatives focus on Board oversight, business ethics, information security, and risk management, ensuring that the Company navigates through evolving business landscapes.

Board Oversight

We have established a robust governance framework that defines management roles and responsibilities throughout the Company, ensuring operational efficiency and improving transparency in business oversight.

Board Governance Structure

The Board plays a pivotal role in steering the Group's strategic direction, ensuring sound decision-making, and monitoring overall performance. The Board has established specialized committees that leverage their expertise to oversee critical operational and strategic areas.



Board Diversity

The Group recognizes that diversity within the Board enhances overall performance and decision-making. The Board has adopted a board diversity policy to ensure that board diversity will be considered from a number of aspects, including but not limited to gender, age, cultural and educational background, professional experience, skills, and knowledge. All Board appointments will be based on meritocracy, and candidates will be considered against objective criteria, having due regard to the benefits of diversity on the Board.

The Board will consider setting measurable objectives to implement the board diversity policy and review such objectives from time to time to ensure appropriateness and ascertain the progress made towards achieving those objectives. In 2024, we onboarded new Board members to add to our global perspectives and insights. Currently, the Board comprises 12 directors: four executive directors, one non-executive director, and seven independent non-executive directors.

Board Skills Matrix

All members of the GenScript Board contribute a diverse and comprehensive array of business expertise, knowledge, and experience. Their proficiency in risk management, environmental sustainability, and business management is instrumental in guiding the Group's oversight of ESG-related issues.

			Knowledge & Expertise							
Name	Type of Director	Gender	Business Management	Technology and R&D	Finance	Human Resources	Marketing & Sales	Environment and sustainability	IT	Global business experience
Fangliang Zhang	Executive Director	Male	✓	✓						✓
Ye Wang	Executive Director	Female	✓					✓	✓	✓
Jiange Meng	Executive Director	Male	✓		✓					✓
Li Zhu	Executive Director	Male	✓	✓						✓
Luquan Wang	Non-Executive Director	Male	✓	✓						✓
Ross Grossman	Independent Non-Executive Director	Male	✓			✓	✓			✓
Zumian Dai	Independent Non-Executive Director	Male	✓		✓					
Jiuan Pan	Independent Non-Executive Director	Male	✓			✓				
Yi Leung Andy Cheung	Independent Non-Executive Director	Male	✓		✓			✓		✓
Chenyang Shi	Independent Non-Executive Director	Male	✓	✓	✓		✓			✓
Alphonse Galdes	Independent Non-Executive Director	Male	✓	✓						✓
John Quelch	Independent Non-Executive Director	Male	✓				✓			✓

Business Ethics

As a responsible corporate citizen, we uphold high standards of business ethics and integrity. We ensure compliance with applicable laws and regulations in all countries and regions where we operate and address issues related to corruption and unfair competition.

To maintain operational compliance, we have established a set of business ethics policies and rules, including the *Business Conduct Guidelines*, the *Anti-Corruption Policy,* and the *Avoidance of Conflicts of Interest & Anti-Fraud Management Policy*. These policies establish the guidelines for anti-bribery, anti-corruption, anti-unfair competition, and integrity practices for all stakeholders, including our employees, suppliers and business partners.

In 2024, we updated the *Business Conduct Guidelines*, reinforcing our standards of integrity, transparency, and accountability. In addition, we have developed the *Whistleblowing and Investigation Policy* to improve the reporting mechanism and ensure confidentiality.

Organizational Structure

The Anti-Commercial Bribery Committee, operating under the Compliance Management Committee, functions as the executive organization responsible for upholding business ethics and addressing issues related to corruption and commercial bribery within the Group. The Committee plays a key role in monitoring compliance issues and ensuring ethical practices across all business operations.

Business Ethics Supervision Process

Step1:	Step2:	Step3:	Step4:
Establish the goals for anti-commercial bribery	Implement anti-commercial bribery requirements and identify potential compliance risks	Monitor changes in laws, regulations, and business needs, and periodically review the management of anti-commercial bribery	Develop, update, and oversee the execution of related policies

Business Ethics Targets

In 2024, we set quantitative targets and implementation timelines in the *Business Conduct Guidelines*. Our targets for 2025-2027 and progress are as follows:

2025-2027 Targets	Progress
Business ethics awareness training covering 100% of employees by 2025-2027	Both targets were achieved in 2024
Conflicts of interest evaluations covering 100% of employees by 2025-2027	

Reporting, Investigation, and Whistleblower Protection

We are committed to maintaining high standards of integrity and transparency. We have established secure and effective reporting channels that empower stakeholders, including employees and external partners, to report any existing or potential misconduct such as corruption, fraud, and policy violations.

Channel	Corporate website	Hotline	Mailbox
Description	A designated portal for reporting on our website	Hotline for urgent and immediate reporting	A secure mailbox (compliance@genscript.com) for reporting and correspondence

The *Whistleblowing and Investigation Policy* establishes a rigorous review mechanism to ensure the authenticity of reported materials, prohibiting fabricated evidence, while outlining incentives and discipline to encourage truthful reporting.

We have implemented robust measures to protect whistleblowers who report unethical conduct from retaliation and discrimination.

Protection Measure	Description
Anonymity	We allow anonymous reporting.
Special Protection List	We maintain a list of real-name whistleblowers who provide valid evidence and kept their information confidential.
Monitoring and prohibition against retaliation	A dedicated individual is in place to protect whistleblowers, monitor their job changes or resignations, and implement protection measures to prohibit any form of retaliation or threat against whistleblowers.

Internal Audit

With an internal audit system in place, we implement audit projects under an annual audit plan. The internal audit team conducts targeted audits across our business units, branches, subsidiaries, and key functions covering sales, procurement, expense management, asset management, and compliance. Our internal audit practices ensure that our business operates under high ethical standards.

Integrity Management

To ensure that every aspect of our business is conducted with ethical principles, we have established comprehensive integrity management procedures for internal and external stakeholders.

Internal Management	External Management
Require all employees to acknowledge and sign the commitment letter under the *Business Conduct Guidelines*	Sign integrity agreements with customers
Require all employees to declare conflicts of interest and prohibit them from offering or promising any improper benefits to any individual or organization for the purposes of securing or maintaining business opportunities	Require all suppliers to sign the *Supplier Code of Conduct* and the *Integrity Undertaking* to prevent bribery, corruption, or unfair competition in securing business
Maintain a gift and entertainment declaration process for employees to report gifts received from suppliers or partners, ensuring that such transactions do not result in conflicts of interest or undue influence	Collect information on supplier violations, conduct investigations, and penalize suppliers that breach the *Integrity Undertaking* through payment deductions, liquidated damages, legal liabilities, or blacklisting

Identifying, preventing and responding to corruption risks across the value chain is a priority for GenScript. We communicate the principles and compliance requirements for anti-corruption and anti-commercial bribery to our suppliers, ensuring ethical and responsible practices across our supply base. Our *Supplier Due Diligence Procedures* are designed to identify and mitigate potential risks related to bribery and corruption.

In 2024, we signed integrity agreements with hundreds of customers, reflecting our commitment to business ethics, integrity, transparency and fairness in all collaborations.

Ethics and Compliance Culture

With integrity embedded into our core values, we shape an ethical business environment by providing anti-corruption training to our Board members and employees. In 2024, 100% of employees took business ethics training on the *Business Conduct Guidelines* and anti-corruption policies, which keeps all employees informed of ethical standards and anti-corruption measures. All employees are also required to sign the *Business Conduct Guidelines*.

Level	Business Ethics Training
Board	• Training on related-party transaction compliance requirements and case studies for all directors • Compliance training for new directors prior to their appointment
Leaders	• Anti-fraud and anti-corruption training for the leadership team, covering compliance requirements and case studies on common risks
Employees	• Training on the *Business Conduct Guidelines* for all employees, with online sessions for all employees and an enhanced onboarding module designed for new hires

Integrity and Compliance Engagement

We participated in industry integrity and compliance initiatives. In 2024, we attended the Biopharmaceutical Industry Integrity and Compliance Seminar hosted by the Trust and Integrity Enterprise Alliance, which provided valuable insights into how to address integrity and compliance challenges in the biopharmaceutical sector.

Indicators	Unit	2024
Number of concluded legal cases regarding corrupt practices	Number	0
Average training hours of Board members on anti-corruption	Hour	2
Average training hours of employees on anti-corruption	Hour	1
Percentage of Board members trained on anti-corruption	%	100%
Percentage of employees trained on anti-corruption	%	100%
Number of participants in anti-corruption training (including Board members and employees)	Person-times	6,378



Information Security

Safeguarding our business data and systems is crucial for maintaining business continuity and meeting customer needs. At GenScript, we prioritize robust information security measures to uphold the integrity and confidentiality of customer data and intellectual property. Our commitment is reflected in the release of the *Data Security White Paper 2024*, which specifies our comprehensive approach to data security governance and life cycle data security management standards for business data and customer privacy.

Information Security Governance Structure

We have established a multi-layered governance structure, consisting of the Information Security & Data Compliance Committee, the Information Security Department, and IT Department and assessed teams to proactively manage and mitigate information security risks.

Information Security Policies

In 2024, we developed and updated a range of information security policies, such as the *Information Security Management Policy*, the *Information Security Risk Assessment Management Rules*, the *Human Resources Information Security Management Rules*, and the *Threat and Vulnerability Management Rules* according to the requirements of ISO 27001 Information Security Management System. These policies are designed to elevate information security governance across key areas of risk management, data privacy, access control, third-party oversight, and incident response.

Information Security Management System Certification

We have obtained ISO 27001 certification for 16 entities, covering 100% of our operational sites, which demonstrates the effectiveness of our information security and privacy protection efforts.

Measures to Mitigate Data Leak Risks

01	Terminal device and document security management measures for outbound documents, cloud documents, and software installation
02	Network access control for unauthorized network devices
03	Employee information security awareness programs, including annual information security commitments signed by all employees, annual training accompanied by quarterly exams, phishing simulations, and specialized training for those who fail phishing tests
04	Annual external audits and assessments, such as IT and security questionnaires from customers, data security audits, Authorized Economic Operator (AEO) audits by the customs authority, and third-party vulnerability scanning and penetration testing on major information systems

To efficiently detect and mitigate security risks, we have a reporting process in place for employees to report risks which are then assessed and addressed by the information security team. Additionally, we maintain a structured incident management protocol to ensure efficient handling of security incidents. Employees are required to report any discovered or suspected security vulnerabilities immediately to the information security team, which coordinates a rapid response to mitigate impacts. This proactive approach protects our business and systems from potential threats.

Customer Privacy Protection

Aligned with data protection laws, regulations and industry best practices, we are dedicated to protecting customer privacy. Our *Privacy Policy*, which is publicly available on our website, outlines our principles for the collection, use, deletion and storage of customer data. We ensure that data is processed only to the extent necessary, with a focus on minimizing data collection and usage while maintaining transparency and accountability.

To comply with global and regional compliance requirements and customer preferences, we have established multiple global data storage centers, and store customer data separately in our data centers in the U.S., Singapore, and Mainland China. This approach ensures local data storage, mitigates cross-border data transfer risks, and enhances data security through encryption and strict access controls.

In 2024, no breaches of customer privacy occurred.

Principles of the *Privacy Policy*	
Collection	Minimize the collection of customer data
Use	Clarify the scope of data use
Deletion	Enable customers to manage and delete personal data
Storage	Ensure secure and reliable data storage

01 Data security measures

We have employed advanced technical measures such as data isolation, encryption, and desensitization so that employees access only the minimal information necessary for work purposes. Critical data is encrypted and backed up with regular recovery testing.

02 Employee education and awareness

We conduct regular training programs, including compliance with the *General Data Protection Regulation* (GDPR).

03 Customer-centric privacy practices

Our contracts with customers cover privacy protection clauses. Customers may request access to, correction or deletion of their data.

04 Innovative digital solutions

For our biologics CDMO segment, we have deployed a dual system architecture to meet stringent information security and validation requirements under global Good Manufacturing Practice (GMP) standards.



Risk Management

In line with regulatory requirements, we have refined our "Three Lines of Defense" system for risk management, enabling earlier identification and response to potential risks and ensuring stable business operations.



1st line	2nd line	3rd line
All business units and functions	**Risk management functions and ESG Committee**	**Internal audit team and Audit Committee**
Design and implement rules and processes, and identify, assess, manage, monitor and report risks within their areas of responsibility	Coordinate the development of risk management policies, provide expertise, monitor the 1st line, and offer improvement advice	Provide independent and objective assurance, and oversee the established risk management processes, procedures and activities

In 2024, we optimized the "Three Lines of Defense" model to reinforce the responsibilities of the first and second lines of defense:

01 Strengthening the first line of defense

Business departments are primarily responsible for risk management. To address accountability gaps, we have set up the role of Global Process Owner (GPO) acted by tier-1 organization heads to mitigate risks at the first line.

02 Refining the second line of defense

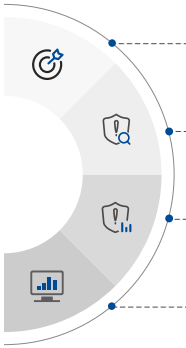
We further defined the second line's responsibilities for process, compliance, finance, security, and operation controls.

03 Optimizing risk management architecture

We optimized the level-1 process architecture, enhanced process-based risk management, and appointed GPOs for core processes. A cross-site cross-check mechanism is adopted to ensure consistent implementation of the "Three Lines of Defense" framework.

Our three lines of defense system is deployed across our operations. In 2024, we conducted over 100 risk inspections, implemented corrective actions for the identified risks, and improved processes.

Risk Assessment Procedures



Target setting	Key business departments set operation and compliance objectives based on the level of risk tolerance
Risk identification	Identify risks through questionnaires, panel discussions, industry benchmarking, and interviews
Risk analysis	Analyze and prioritize identified risks by multiplying probability, severity, and controllability scores
Risk response	Evaluate risks and benefits and choose a risk response solution, such as risk prevention, acceptance, mitigation or sharing based on risk tolerance

Risk Management Culture

We enhance risk management by offering regular education and training for the management and employees.

Risk Management Training	• Specialized risk training and communication sessions for all employees to enhance awareness and skills in "risk control, problem diagnosis and root cause analysis"; • Third-party risk management training, aiming to align understanding and internalize practices that resonate with our core values and organizational culture.
Assessment based on risk identification and response	• Risk management and compliance metrics are integrated into performance reviews for both organizations and managers. This incentivizes proactive risk identification and mitigation while reinforcing our compliance and risk prevention framework.
Risk reporting channels	• We have established diverse channels for employees to report risks, including a dedicated reporting mailbox, hotline, Employee Voice platform, corporate website, and the conflicts of interest declaration process, which allows employees to efficiently raise concerns and contribute to a robust risk management system.

1.2

ESG Governance

Our ESG governance framework underpins our commitment to sustainability and corporate social responsibility (CSR). We refine this framework by evaluating and improving our ESG initiatives based on performance metrics, ensuring that our efforts are aligned with best practices and stakeholder expectations. We prioritize stakeholder engagement and incorporate ESG considerations into our decision-making processes to drive sustainable growth.

Board Statement

The Board integrates ESG management into our business strategy by closely monitoring market dynamics, assessing ESG risks and opportunities, and overseeing ESG governance. The Board continuously optimizes our ESG management system to align with evolving regulatory requirements and business needs.

Responsibilities of the Board

The Board plays a central role in overseeing ESG-related matters and transparent information disclosure. By considering the Company's strategies, manufacturing capabilities, operational context, and stakeholder engagement, the Board works to identify and assess ESG-related risks and opportunities, and conduct regular reviews and approvals of ESG disclosures to ensure transparency and accountability.

ESG Execution

At the execution level, the Risk Management and ESG Committee under the Board is responsible for developing the ESG vision, targets, strategy and policies, and supervising the execution of ESG strategy. The ESG Working Team facilitates the implementation of ESG initiatives, coordinates cross-functional efforts, and focuses on continuous improvement of our ESG performance.

As part of our environmental stewardship, the Risk Management and ESG Committee oversees climate-related risks and opportunities through established governance processes. The Committee also ensures the strategic approach to addressing significant climate-related risks and opportunities aligned with ESG policies and targets.

ESG Risk Management

The Board proactively identifies and evaluates the materiality of sustainability risks, embedding mitigation plans and objectives into our strategy. The Risk Management and ESG Committee oversees the identification and evaluation of sustainability risks, ensuring the effective management of key issues.

ESG Target Monitoring

The Board consistently reviews our ESG initiatives, monitors progress towards ESG targets, and appropriately adjusts strategies.

Communication with Stakeholders

We value the inputs of all stakeholders and develop robust management strategies to address material sustainability risks and issues. The Board assesses and manages stakeholders' concerns by engaging with stakeholders and consulting external experts.

Board Oversight

- Reviewed and endorsed the ESG materiality matrix;
- Developed and assessed the Company's ESG management objectives;
- Mapped out climate-related risks and opportunities facing the Group;
- Reviewed and approved the publication of the ESG report.

ESG Governance Framework

Effective ESG governance is fundamental to our commitment to sustainability. We have refined our ESG governance framework through a top-down structure. As the primary decision-making organ, the Board is ultimately accountable for ESG matters. The Risk Management and ESG Committee assists the Board in overseeing ESG progress, while the ESG Working Team coordinates resources and facilitates the implementation of ESG action plans.

ESG Management Level	Members	Duties
Board of Directors	All Board members (comprising four executive directors, one non-executive director, and seven independent non-executive directors)	• Be ultimately responsible for the management of ESG topics and information disclosure; • Identify, evaluate, and manage ESG-related risks and opportunities through established governance processes, controls, and procedures; • Approve and oversee ESG information disclosures.
Risk Management and ESG Committee	Composed of one executive director and two independent non-executive directors	• Develop our ESG vision, targets, strategy, and policies; • Monitor the execution of the ESG strategy, track progress towards ESG targets, and assess the effectiveness of ESG initiatives; • Review ESG-related policies and standards, and respond to stakeholder inquiries.
ESG Working Team	Chaired by Rotating Chief Executive Officer and Chief Financial Officer Composed of heads of ESG-related departments	• Provide strategic guidance on ESG matters; • Assess and prioritize material ESG issues; • Coordinate resources to drive ESG performance and ensure effective implementation of ESG initiatives; • Collaborate with ESG-related departments to develop action plans based on ESG targets, and follow up on the implementation; • Regularly report ESG topics to the Risk Management and ESG Committee.
ESG-related departments	Composed of designated ESG owners from departments related to material ESG issues	• Implement the ESG strategy and action plans; • Provide regular updates on ESG progress to the ESG Working Team; • Offer ESG improvement suggestions based on professional expertise and experience.

In response to the external context and business imperatives, we have established a Sub-Committee on Data Security and Geopolitical Resilience under the Risk Management and ESG Committee. This sub-committee is responsible for managing risks related to geopolitical dynamics, data security and privacy, cyber security and information technology systems, as well as cross-border intellectual property and technology transfers.

Stakeholder Engagement

Sustainability is woven into our operations and strategic framework. We enhance our awareness of ESG risks and opportunities, proactively manage these risks, and refine our strategic planning to ensure operational resilience.

We maintain active engagement with all stakeholders through routine communication channels, addressing their concerns promptly and integrating their concerns and expectations into our operations and decision-making.

Given the nature of our business, we have identified key stakeholders, including government and regulatory authorities, shareholders and investors, clients and the public, employees, suppliers and business partners, social organizations, and media entities.

Category	Issue of Interest	Communication Channels
Government and Regulatory Authorities	▸ Energy management ▸ Wastewater, exhaust and waste management ▸ Community engagement ▸ Operation compliance ▸ Business ethics	▸ Regular announcements ▸ On-site audits and inspections ▸ Conferences ▸ Information disclosure
Shareholders and Investors	▸ Energy management ▸ Water resource management ▸ Addressing climate change ▸ Wastewater, exhaust gas, and waste management ▸ Innovation and intellectual property protection ▸ Operation compliance ▸ Business ethics ▸ Risk management	▸ Corporate announcements ▸ Investor relations website ▸ Investor relations hotline ▸ Investor relations mailbox ▸ Investor and analyst conferences ▸ Roadshows ▸ Corporate Day
Clients and the Public	▸ Addressing climate change ▸ Innovation and intellectual property protection ▸ Privacy protection ▸ Product and service quality ▸ Community engagement ▸ Responsible marketing	▸ Information disclosure ▸ Customer surveys ▸ Emails and phone calls ▸ Satisfaction surveys
Employees	▸ Compensation and benefits ▸ Talent development ▸ Health and safety ▸ Employee rights and interests ▸ Employment compliance and employee diversity	▸ Employee communication platform ▸ Employee activities ▸ Employee training
Suppliers and Business Partners	▸ Supply chain management ▸ Product and service quality ▸ Accelerating industry development ▸ Business ethics ▸ Operation compliance ▸ Risk management ▸ Addressing climate change	▸ Supplier evaluations ▸ Supplier communication and visits ▸ On-site visits ▸ Industry forums
Social Organizations and the Media	▸ Innovation and intellectual property protection ▸ Community engagement ▸ Accelerating industry development ▸ Responsible marketing	▸ Interviews and business results announcements ▸ Briefings

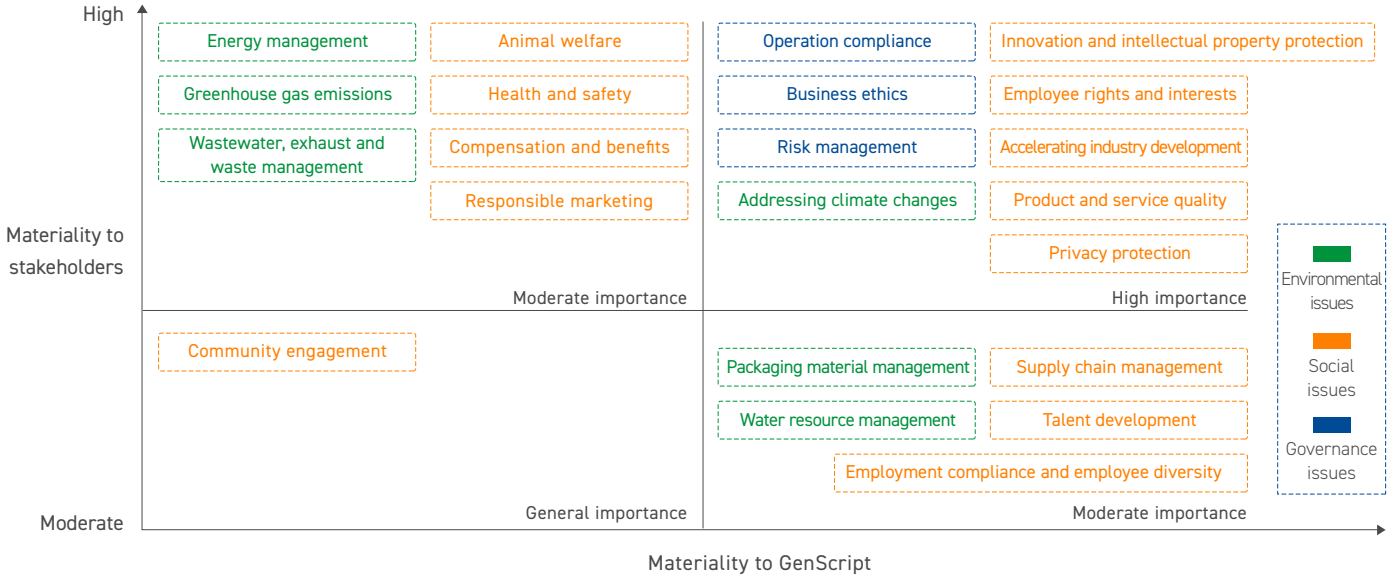
Materiality Matrix

Guided by the *ESG Reporting* Guide of the HKEX, we have developed a materiality matrix to identify and manage the most significant ESG issues for the Company. This matrix is informed by stakeholders' focus areas and peer performance, enabling us to prioritize risks and opportunities effectively.

Materiality Assessment Process

Identify Materiality	Identify material ESG issues by integrating regulatory requirements, peer benchmarking, media analysis, and the focus areas of the capital markets
Communicate with Stakeholders	Engage with stakeholders and conduct interviews to collect and refine stakeholder's perspectives on priorities
Prioritize Materiality	Rank identified issues and develop a materiality matrix to guide strategic initiatives
Approve Materiality	Review and finalize material issues based on management evaluations





Materiality Matrix



Enabling Our Clients

02

As a pioneering biotechnology company, GenScript is committed to delivering exceptional quality in our products and services, which is central to our vision to "Become the Most Trustworthy Biotech Company". By harnessing the power of quality management systems and innovation, we enable our biopharma and biotech clients to expedite therapeutic development, regulatory approval and commercial launch. Moreover, we are dedicated to creating a responsible value chain that benefits all our suppliers and partners.

Contributing to the UN SDGs



Chapter Content

Product Responsibility 24
Innovation and R&D 29
Supply Chain Management 33
Service Excellence 37

2.1

Product Responsibility

Through rigorous quality control and life cycle management, GenScript strives to deliver world-class products and services to customers globally. Our commitment to excellence drives us to deliver products and services that meet the highest level of quality and reliability. In addition, our lean management system drives continuous improvement in operational efficiency and streamlines production processes across the Company.

Quality and Safety Assurance

Quality Management System

At GenScript, our unwavering devotion to quality and safety is the bedrock of our operations. We comply with regulatory requirements of the countries and regions where we operate, ensuring that our practices meet global regulations. Under our quality management systems, we have developed a core set of policies, procedures and work instructions, such as the *Standard Operating Procedures for Material Release*, the *Standard Operating Procedures for Product Release,* and the *Non-conforming Product Management Procedures*, which guide quality management throughout our product and service life cycle.

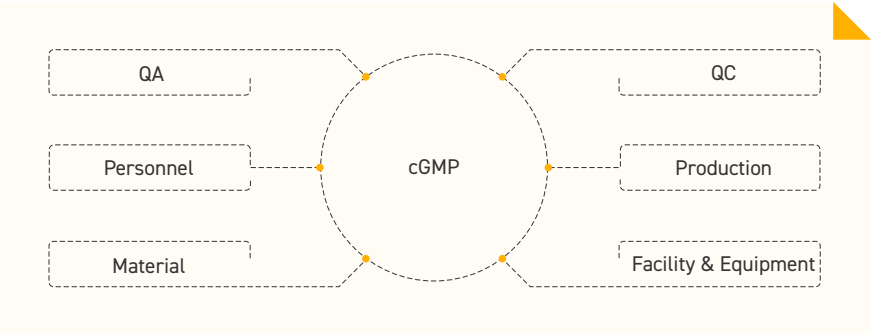
To meet evolving regulatory and customer requirements, we continuously enhance our quality management systems, demonstrating that our processes are not only compliant but also optimized for efficiency and sustainability.

Quality System Enhancement Measures

Life Science Services and Products	• Key components of the quality management system: quality assurance, personnel and organization structure, laboratory management, production management, facilities and equipment, and materials • Extended ISO 9001 to cover Seattle and New Jersey sites
Biologics CDMO	• Established a contamination control strategy system, and completed related reports and strategy assessment plans for various production lines • Upgraded the specifications for viral detection to meet the commercial needs of customers
Industrial Synthetic Biology Products	• Enhanced the specifications for finished products by updating the accepted ranges of monitoring indicators and adding control requirements for fermentation processes • Revised the quality and food safety principles to "Compliance, Safety, High Quality, High Efficiency, Continuous Improvement, Customer Satisfaction"

GMP Quality Management System

We maintain strict compliance with regulatory requirements of global regulatory authorities, including but not limited to the U.S. Food and Drug Administration (FDA), the International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use (ICH), the European Medicines Agency (EMA), and the National Medical Products Administration (NMPA). Our comprehensive GMP quality management system is structured around six core components to ensure consistent high-quality standards.



Food Safety Management System

GenScript has established food safety management systems aligned with the Food Safety System Certification 22000 (FSSC 22000) standards for life science services and products and enzyme products as part of industrial synthetic biology products. In 2024, we obtained FSSC 22000 certification for catalog products.

Stability Testing

Following the *Standard Operating Procedures for Material Release* and the *Standard Operating Procedures for Product Release*, GenScript has maintained an effective in-house quality testing system. We conducted extensive testing across multiple areas, including physical and chemical analysis (e.g. enzyme activity, pH value, moisture content, lead and arsenic content, and dry matter), microbiological testing (e.g. total colony count and coliform bacteria), and comprehensive testing for products (e.g. recombinant antibodies, recombinant proteins, plasmids, peptides, nucleic acids, and magnetic beads).

Quality Control Activities

Process Validation	Data Management	Compliance Evaluation
When process changes occurred, we conducted stability testing on the modified process.	We connected all chromatographic testing instruments to web-based software to ensure data integrity.	We maintained traceability of all quality control documentation to meet regulatory requirements of the U.S. FDA, EMA, and NMPA.

Product Recalls

Our *Non-conforming Product Management Procedures* define the requirements for the identification, assessment, labeling, segregation, storage, downgrading, and disposal of non-conforming products, as well as associated responsibilities. To facilitate clients to handle potential quality incidents, we follow the *Product Recall Management Procedures*. In 2024, no product recalls due to safety or health incidents occurred.

Product Recall Process

Identify quality incidents, investigate and assess potential quality issues, and determine appropriate actions	Establish a recall team to develop and implement the recall plan, including the handling of recalled products	Evaluate recall effectiveness, prepare a recall report, and close the recall with proper documentation archived

Mock Recall

In 2024, GenScript conducted mock recalls for cosmetic peptides, food-related products, biologics products, and enzyme products according to ISO 9001, ISO 13485 and food quality management system requirements.

By following the *Product Recall and Withdrawal Control Procedures*, the mock recalls of food-related products were completed within five business days, spanning from the release of the recall announcement to the destruction of related products, due to prompt cross-functional response and effective implementation of the recall plan. The successful mock recall validated the effectiveness of our recall procedures.

Quality Inspection and Audit

We perform regular quality inspections across all business units throughout the production process. Annual internal quality audits focus on key quality metrics in overall and specialized audits. Additionally, we engage in external audits to obtain quality certifications and ensure compliance with customer and regulatory inspection requirements.

Internal Audit Process

- Develop an internal audit plan
- Organize internal auditor assignment and training
- Conduct an internal audit
- Incorporate audit findings into an internal audit report
- Create and implement a corrective and preventive action (CAPA) plan

Quality Inspection

To enhance on-site quality management and mitigate quality risks, we developed the *Production Line Site Inspection Policy* and formed an inspection team to conduct thorough assessments of production facilities, warehouses, laboratories, and offices and follow up on the effectiveness of corrective actions.

Quality System Certifications

Business Units	Quality Certification
Life Science Services and Products	ISO 9001 Quality Management System ISO 13485 Medical Devices Quality Management System FSSC 22000 American Halal Foundation (AHF) European Federation for Cosmetic Ingredients (EFfCI) GMP Certification
Biologics CDMO	ISO 9001 Quality Management System EU Qualified Person (QP) Passed the pre-approval inspection (PAI) by the Indonesia BPOM Drug Manufacturing Certificate issued by Jiangsu Medical Products Administration
Industrial Synthetic Biology Products	ISO 22000 Food Safety Management System ISO 9001 Quality Management System FSSC 22000 Feed Additives and PreMixtures Quality System Kosher Certification Halal Certification

Quality Culture

By implementing quality training programs and culture initiatives, we reinforce quality and safety awareness among all employees. In line with regulatory requirements, we organized systematic training on quality management and manufacturing expertise and specialized training for key projects, as well as third-party training for quality teams.

Quality Training

Systematic training	▸ We offered hybrid annual training on quality management processes and product processes, covering regulatory requirements, GMP basics, microbiological knowledge, as well as changes and deviations.
Specialized training	▸ We organized specialized training programs on food safety systems, including ISO 22000, FSSC 22000, Food Safety Modernization Act, and food safety standards. ▸ Training on how to manage change control records helped employees improve written submissions.
Third-party training	▸ We sourced an online GMP training platform dedicated to the pharmaceutical industry, which provides regular training updates. External training opportunities are also available to quality teams.

Quality Culture Initiatives

In 2024, we launched Quality Month and Quality Day campaigns across our operational sites to enhance quality awareness. Our initiatives included promoting the zero-defect culture, delivering training sessions, and organizing knowledge contests, which involved over 90% of employees.

Lean Management

GenScript integrates a lean management system for eliminating waste, driving continuous improvement, optimizing operational efficiency, while advancing sustainability practices. Our approach is built on standardized methodologies derived from internal best practices and supported by three core components: lean improvement projects, training and awareness campaigns.

Our lean operation framework is governed by the Group Lean Committee, the Group Lean Management Team, and lean operation teams across business units. With a company-wide lean ecosystem, we fostered a performance-driven culture of continuous improvement, delivering substantial cost savings and operational excellence.

Lean Operation Approaches

Enhancing productivity	Remove unnecessary steps during operations by analyzing production processes and implementing automated solutions
Reducing material costs	Reduce material costs by optimizing product processes, enhancing raw material utilization, sourcing locally, and minimizing material consumption
Improving quality	Strengthen process control capabilities by using Failure Mode and Effects Analysis (FMEA), poka-yoke and standard work methods
Increasing capacity	Improve equipment utilization through automation and reduce equipment downtime based on Total Productive Maintenance (TPM) principles
Shortening lead time	Shorten process lead time by using Value Stream Mapping (VSM) to analyze each process step and eliminate non-value-added activities

Through hybrid lean training and campaigns on VSM, TPM, Standardized Work, Line Balance, and FMEA, we enhanced employees' lean competencies and operational excellence by engaging employees in process optimization.

Virtual training
3,051 trainees

In-person training
2,849 trainees

73
lean activities

11,655 constructive suggestions
up ***19% YoY***

We equip employees with lean methodologies and tools to contribute to sustainable business practices, including resource conservation, environment improvement, process efficiency enhancement, and service optimization. By fostering employee-led innovation and measuring benefits, we establish a self-reinforcing cycle of continuous improvement.

120,000+ labor hours saved

US$3.1 million+ saved through lean management in 2024

Intelligent gene production project

In 2024, we developed an intelligent manufacturing platform that integrated polymerase chain reaction (PCR) amplification, ligation, transformation and plating. As workload imbalance within a production line resulted in waiting waste, we implemented lean manufacturing initiatives to boost productivity.

Our Actions

Analyze working hours to calculate workload	Use the Eliminate, Combine, Reorder, Simplify (ECRS) method to optimize processes	Workstation design based on line balancing

Benefits

Increased production capacity by **100%**	Increased productivity by **18%**
Reduced reagent consumption by **31%**	Reduced hazardous waste by **2,099 L**

Steam usage reduction for the liquid facility

Our expanding enzyme production capacity led to increased steam consumption. By analyzing and identifying steam waste scenarios, we developed various optimization measures to reduce steam used in the liquid facility.

Our Actions

Renovate leakage points to reduce steam waste	Renovate equipment, add storage tanks, and reduce the sterilization frequency	Standardize operations to reduce operation mistakes

Benefits

Reduced steam usage by **3,882** tons	Steam saving by **54%**

Peptide process optimization to reduce reagent usage

Reagent usage increased as peptide production scaled up in 2024. We used lean tools to analyze production data and identify key factors, and the production team worked out measures to optimize reagent usage.

Our Actions

Optimize the DMF washing volume and frequency of synthesizers to reduce hazardous waste generated	Predict retention time for High Performance Liquid Chromatography (HPLC) to reduce reagents used

Benefits

Reduced hazardous waste by **27** tons per year

2.2

Innovation and R&D

GenScript is dedicated to supporting our clients to push the boundaries of science and delivering innovative therapies. R&D efficiency is crucial for enabling our clients and accelerating industry growth. To this end, we prioritize innovation through strategic investments in talents, pioneering R&D initiatives, and effective intellectual property management.

Dedication to Innovation

Innovation lies at the heart of our ability to lead and stay competitive. With nearly 10% of our global workforce dedicated to R&D, we have significantly invested in enhancing technological capabilities. This focus allows us to relentlessly advance product innovation and service excellence, delivering efficient, cutting-edge solutions to our customers.

8.8% of employees dedicated to R&D

R&D spending up by ***2.1%*** YoY

Incentives for R&D Projects	Incentives for R&D Achievements	Innovation Award
We evaluate innovation across multiple criteria, e.g. technical indicators, industry influence, and customer feedback. Bonuses are tied to project evaluations and commercial outcomes.	We maintain a comprehensive R&D incentive system in recognition of the commercial success of innovative products, inventions, and patents.	We run an annual innovation award for employees across all teams with creative initiatives, technological breakthroughs, and process enhancement.

R&D Incentive System

R&D talents are the core force behind our innovation journey. By fostering a culture of creativity and providing access to top-tier resources, we empower our teams to drive breakthroughs across life science services and products, biologics CDMO, and industrial synthetic biology products.

Life Science Services and Products

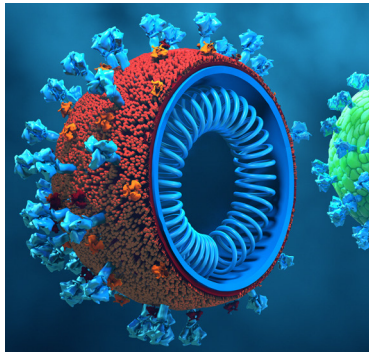
Proprietary TurboCHO™ platform leads the industry in turnaround time

GenScript's proprietary TurboCHO™ platform offers high throughput production of purified antibodies, featuring the market's fastest turnaround time — just 5 business days from gene to antibody. With a large capacity of over 30,000 targets per month, TurboCHO™ ensures seamless production with scalable production up to gram level, accelerating scientific research and new drug development.



This platform addresses fundamental antibody part challenges in ADC development, from scalability to precision. Due to this innovation, along with other key contributions, GenScript received the BioSpectrum Asia Excellence Award for Top Innovation & Collaboration in ADC Drug Development, highlighting its contribution to significantly reducing development timeline and advancing targeted cancer therapeutics.

CytoSinct™ platform successfully supported IND approvals of cell therapies



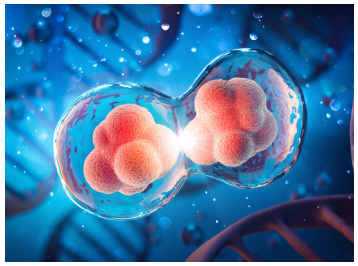
GenScript's CytoSinct™ platform completed the drug master file (DMF) activation with the U.S. FDA and successfully supported global Investigational New Drug (IND) applications.

With our CytoSinct™ Cell Isolation Nanobeads (GMP) and CytoSinct™ 1000 instrument, we assisted Base Therapeutics Co., Ltd. in developing the world's first base-edited universal NK cell product, NK510 Cell Injection, for the treatment of advanced solid tumors, which received IND approvals from the U.S. FDA and the NMPA.

Biologics CDMO Services

Upgraded ProSpeed™ Single B Cell platform accelerates therapeutic antibody discovery

Our subsidiary ProBio has upgraded the ProSpeed ™ Single B Cell Antibody Discovery Platform, and integrated Beacon® technology with our proprietary ProSpeed™ expression system. It is one of the disruptive, best-in-industry platforms for single B-cell screening, enabling customers to achieve fast and cost-effective discovery of confirmed functional antibody leads in as fast as one month.



ProSyn™ linearized DNA process advances novel therapies with cell-free technology

Our subsidiary ProBio launched ProSyn™ cell-free linearlized DNA platform, which uses enzymatic DNA synthesis through rolling circle amplification (RCA) to enable GMP linearized plasmid production in shorter turnround time. This innovation will facilitate scalable production of cell and gene therapies (CGT) and personalized cancer vaccines, underscoring our dedication to advancing accessible, next-generation healthcare solutions.

Industrial Synthetic Biology Products

Advanced synthetic biology platform drives nutrition and health innovation

Our subsidiary Bestzyme has been dedicated to nutrition and health areas through synthetic biology and safe fermentation processes. For our natural protein sweeteners, we have attained the self-affirmed GRAS status and submitted a GRAS notice to the U.S. FDA. The natural sweet protein has been successfully launched in the U.S. market. Following GMP and HACCP-compliant procedures, our sweeteners are sourced from natural plants and meet consumers' demand for health.



Intellectual Property Protection

Intellectual property is the cornerstone of innovation. GenScript prioritizes intellectual property protection and takes a zero-tolerance approach to intellectual property infringement. We comply with applicable intellectual property laws and regulations across our global operations.

Our intellectual property team works to ensure compliance and protect our innovations. We have implemented systematic training programs to enhance employees' expertise in patents and intellectual property and raise awareness of intellectual property protection.

Intellectual Property Training	
Patent basics and risk management	Patent essentials and freedom to operate (FTO) analysis, from patent interpretation and patent cooperation treaty (PCT) applications to FTO assessment and invalidation procedures through case studies
Intellectual property applications	Intellectual property fundamentals and application strategy, with specialized intellectual property frameworks for different business units
Technology licensing and commercialization	Technology licensing and commercial use of biological materials
Patent prosecution	U.S. patent prosecution seminar on patent eligible subject matters and strategies

Intellectual Property Achievements

Our R&D innovation capabilities and intellectual property management system are fueling our journey to build a strong portfolio of intellectual property assets.

GenScript has been granted an invention patent for its proprietary "Method for Synthesizing Single-Stranded DNA".

GenScript's subsidiary Bestzyme has been granted an invention patent for several proprietary protease molecules that offer ultra-high stability in liquid detergents, exceptional cleaning performance, and superior formula compatibility.

GenScript has been granted an invention patent for its "Preparation Method of Sulfonated Alanine Peptides". This patent protects the unique method for producing high-purity, cost-effective sulfonated alanine peptides.

GenScript has been granted a Japanese patent for its "Codon Optimization" method, which is designed to enhance protein expression by optimizing nucleic acid sequences for expression in host organisms.

53 new patents granted in 2024 | Cumulatively **254** patents granted

Animal Welfare

At GenScript, we adhere to ethical standards of animal welfare in our research and operations. By complying with regulations, industry standards and guidelines of the countries and regions where we operate, we uphold ethical treatment and humane care of laboratory animals.



We have established the *Standard Operating Procedures for Daily Maintenance and Disinfection of Barrier Facilities* and the *Standard Operating Procedure for Animal Environment Enrichment in Conventional Facilities*. In accordance with regulations of the *Guide for the Care and Use of Laboratory Animals* and the *European Convention for the Protection of Vertebrate Animals Used for Experimental and Other Scientific Purposes* on breading cages, we updated the *Animal Breeding Management Regulations*. In addition, we developed the *Veterinary Management Procedures*, which defines the responsibilities and rights of veterinarians and details the scope and procedures of their daily tasks.

We have the Institutional Animal Care and Use Committee (IACUC) in place, which oversees laboratory animal-related activities, such as ethical review, animal use, animal care, and animal welfare assessments, advancing robust animal welfare practices across our business operations.

The Company follows the principles of "Reduce, Refine and Replace" (3R) in animal use. In 2024, we developed a new immune adjuvant, featuring enhanced immune potency and antibody yield and shortened immunization timeline, which resulted in a 20% reduction in animal use.

Animal Welfare Initiatives

Training	• In 2024, we delivered 36 internal training sessions to 281 participants, including IACUC members, laboratory technicians, veterinarians, animal caretakers and sanitation workers. • We offered third-party training opportunities, including the Laboratory Animal Scientific Management and Academic Seminar and training on seeking and maintaining AAALAC International accreditation.
Culture	• We hosted an Animal Welfare Day event to raise the awareness of animal welfare among the leadership team and laboratory employees through training, collective oath-taking, and an animal memorial ceremony.

GenScript has received renewed full accreditation from AAALAC International, the Animal Welfare Assurance from the Public Health Service of the U.S., and the experimental animal use license from China.

2.3

Supply Chain Management

At GenScript, we work with global suppliers to ensure that our services and products meet the required quality and sustainability criteria. With a dynamic and resilient supplier ecosystem, we establish long-term, mutually trusted partnerships with our suppliers.

Supplier Life Cycle Management

Supplier Management System

Strong supplier partnerships are crucial for the delivery of high-quality products and services. We ensure effective supplier management according to the *Supplier Management Policy*, the *Supplier Management Rules*, the *Sustainable Procurement Policy*, and the *Supplier Code of Conduct*.

Supplier Management Process	
Development & selection	We evaluate and select suppliers based on consistent, objective criteria, including quality, price, delivery capabilities, financial stability, and ethical and sustainability standards. By prioritizing direct transactions with original manufacturers, multi-sourcing, and supply chain compliance, we aim to minimize supply chain risks from the outset.
Evaluation & qualification approval	We assess and approve suppliers based on their capabilities, track record, and compliance with our guidelines through due diligence on qualifications, quality audits, on-site sustainability audits, and customer feedback.
Supplier classification	We regularly measure and monitor supplier performance against key metrics to evaluate their ability to meet expectations in quality, service, risk management, and ESG performance. Based on their performance, we classify suppliers as strategic, preferred, maintained, or eliminated, enabling efficient management of our supplier base.
Supplier relationship management	We implement tiered communication mechanisms to address any issues, concerns, or changes in requirements. Additionally, we encourage suppliers to provide suggestions for process improvements and innovations.
Supplier risk management	We manage supplier risks by systematically identifying, evaluating, and controlling risks related to capabilities, credit standing, finance, quality, production, logistics, and ESG performance throughout the supplier development, selection, and approval process.

In 2024, we enhanced our supplier evaluation framework by adding quantitative metrics to the *Supplier Assessment Questionnaire*, supporting our three-year roadmap for comprehensive supplier evaluation.

100% of new suppliers covered by assessments

70% of targeted suppliers (including platform suppliers and critical material suppliers) covered by annual evaluations

Number of Suppliers

Indicators	Unit	2024
Total number of suppliers	Number	2,000
Number of suppliers in Asia	Number	1,728
Number of suppliers in Europe	Number	90
Number of suppliers in Americas	Number	182
Number of suppliers certified to ISO 9001 Quality Management System	Number	1,278
Number of suppliers certified to ISO 14001 Environmental Management System	Number	483
Number of suppliers certified to ISO 45001 Occupational Health and Safety Management System	Number	189

Supplier Quality Improvement

As part of our commitment to procurement excellence, we have established a comprehensive supplier quality audit system guided by the *Supplier Quality Audit Standard Operating Procedures*. We implement quality supervision, training and improvement programs for direct suppliers, service providers and raw material suppliers through desktop, on-site, and remote audits. In 2024, we completed quality audits on 223 suppliers.

Supplier Quality Audits

Direct supplier audit

Evaluate supplier performance in quality management through on-site audits on personnel, equipment and facility, material, production, laboratory, and quality systems

Service provider audit

Structure on-site audits according to service features and follow the same audit process as direct suppliers

Raw material supplier audit

Conduct quality audits according to the audit plan and ensure the quality of raw materials under control through qualification confirmation, trial sampling, and on-site inspections

Quality Improvement Communication

We foster dynamic dialogues with our suppliers to enhance their industry insights and market perspectives through a combination of virtual and in-person training.

In 2024, we conducted quarterly business reviews with all significant suppliers and hosted monthly quality improvement meetings with those with quality issues. We guided and supported suppliers in enhancing quality management practices and performance, ensuring supply chain continuity.

In 2024, we identified a total of **93** significant suppliers in Tier-1, accounting for **41%** of our total spend.

Sustainable Procurement

As a global company, GenScript implements the sustainable procurement strategy by prioritizing suppliers with strong ESG practices and integrating ESG principles into the supplier management process. In 2024, we reinforced our commitment to sustainable supply chain by joining the PSCI as a supplier partner.



Guided by PSCI principles, we updated our *Supplier Management Rules*, specifying supplier requirements on environment, ethics, human rights, health & safety, and management systems, and conducted supplier risk assessments to ensure responsible practices across our supply chain. With PSCI partnership, we are able to follow higher ESG standards and enhance our collaboration with global business partners across diverse regulatory environments.

We drive sustainable procurement with clear objectives and strategic planning. As of the end of 2024, we achieved our objective to conduct environment, labor and human rights assessments on 50% of targeted suppliers and ensure 100% of targeted suppliers sign the *Supplier Code of Conduct*. Additionally, 82% of our suppliers have signed contracts that include clauses on environmental, labor, and human rights.

We have updated our sustainable procurement responsibilities by taking a more proactive approach to sustainable supply chain.

Sustainable Procurement Targets	
Environment	• 80% of targeted suppliers are required to obtain at least one environmental certification by 2030.
Palm oil procurement	• We will complete evaluations or audits of 80% of suppliers of palm oil and its derivatives by 2028. • We will complete evaluations or audits of all suppliers of palm oil and its derivatives to ensure 100% from sustainable sources by 2030.
Conflict minerals procurement	• Ensure that 100% of suppliers sign a *Statement on Conflict Minerals* by 2028. • Conduct conflict mineral audits or evaluations for 100% of targeted suppliers by 2030.
Labor and human rights	• Ensure that 100% of targeted suppliers sign the *Supplier Code of Conduct* by 2028.
ESG evaluation	• Conduct annual ESG evaluations for 80% of targeted suppliers by 2028. • Conduct annual ESG evaluations for 85% of targeted suppliers by 2030.
Carbon emissions	• Engage suppliers representing 83% of total Scope 3 emissions to set SBTi targets by 2029.

Sustainability Risk Management

We integrate sustainability risk assessments throughout supplier life cycle management according to the *Supplier Risk Analysis and Management Procedures*. During supplier selection, qualification, and annual evaluation, suppliers are required to complete the *PSCI Self-Assessment Questionnaire* (SAQ) and targeted suppliers are assessed on CSR risks annually as a way to identify suppliers' critical and major risks and any regulatory non-compliance that might directly impact our business governance. In 2024, no major findings were identified in our supplier CSR risk assessments.

Supplier CSR Risk Management Matrix

Risk level	Suppliers are classified into high-risk, medium-risk, and low-risk suppliers based on annual CSR risk assessments.
Training requirements	Regular training sessions for suppliers across all risk levels
Audit and supervision requirements	On-site audits and SAQ due diligence on an annual, triennial or as-needed basis based on risk levels
Action requirements	Audit results incorporated into supplier performance reviews and selection, and incentives for suppliers with strong performance

1,645 **suppliers**
assessed via desk assessments/on-site assessments

100%
significant suppliers assessed

100%
unique significant suppliers in capacity building programs

15 **suppliers**
terminated due to substantial or potential negative impacts

In addition, we have created the *Supplier Information Security Due Diligence Procedures* and the *Supplier Information Security Assessment Questionnaire* to identify and mitigate information security risks across our supply chain.

We have strengthened conflict mineral management and due diligence on conflict minerals by issuing the *Statement on Conflict Minerals*, ensuring transparent supply chain practices and ethical procurement standards.

Aligned with international standards, we assess our supply chain through the *OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas* and the *Responsible Minerals Initiative* (RMI) of the Responsible Business Alliance. To ensure that our suppliers use conflict-free minerals, we conduct due diligence by requiring suppliers to complete the *Conflict Minerals Reporting Template* (CMRT) and sign the *Commitment to Conflict-Free Minerals*. This enables us to transparently map our mineral supply chain and mitigate any potential sourcing risks.

ESG Audit

According to the Supplier Management Rules, we perform ESG on-site audits to assess suppliers' sustainability practices and provide guidance on suppliers' corrective action for audit findings. We conduct annual performance evaluations of suppliers through desktop and on-site assessments. A total of 225 targeted suppliers were covered by CSR assessments in 2024.

In 2024, we completed ESG on-site audits on ***10*** significant suppliers, representing ***11%*** of our total significant suppliers.

Responsible Sourcing

We promote ethics, human rights, labor, health and safety, and environment standards among our suppliers to address challenges in the pharmaceutical industry in a transparent and collaborative way. To align understanding of social and environmental issues, we offer training on sustainable procurement to all buyers and integrate sustainable procurement metrics into their performance reviews.

Responsible Procurement Initiatives

Empowering suppliers	We empower suppliers through ESG training, evaluation communication, and best practice sharing. We engage suppliers in environmental actions (e.g. streamlining packaging) to reduce waste and GHG emissions.
Supplier diversity	We strive to increase supplier diversity by working with businesses owned by women and vulnerable groups. As a result, our spending on diverse suppliers increased from 3.99% in 2023 to 6.11% in 2024.
Two-way Communication	We communicate annual and quarterly ESG performance evaluations with suppliers and facilitate them to improve sustainability performance. We integrate ESG best practice sharing into our technical workshops to learn from suppliers that demonstrate strong ESG performance.

2.4

Service Excellence

Aligned with our core values, we upgrade innovative services and customer-centric solutions in pursuit of excellence. Our efforts to enhance our service capabilities, drive innovation, and embed responsible marketing principles across our value chain ensures that customer needs are met in every aspect.

Customer Satisfaction

At GenScript, we value every customer's voice and feedback. To improve complaint handling efficiency, we have established an online complaint tracking process.

Complaint Management Process

Customer feedback received by the after-sales team → Complaint identification → Investigation and follow-up on corrections by the quality assurance team → Complaint handling → Complaint closure

In addition, we have launched Voice of Customer (VOC) management channels to collect customer inputs, including concerns, complaints, suggestions, requests, as well as recognition and commendation through our corporate website, bi-weekly emails, and monthly project meetings.

As of the end of 2024, we resolved ***100%*** of customer complaints.

To gain insights into customers' experiences, we conduct customer surveys, assessing overall satisfaction, product quality, service level, delivery speed and website experience. By translating these insights into tangible operational improvements, we ensure that our actions are informed by customer feedback. We have implemented enhancements by improving delivery information, expanding product variety, and offering customized specifications.

In 2024, we achieved the overall satisfaction rate of ***93.67%***, up by 3% compared to 2023.

Customer Service Upgrade



GenScript prioritizes customer-centric innovation, delivering value through advanced technological solutions that address evolving market needs. By integrating innovative offerings, platform capabilities, and operational excellence, we consistently meet and exceed customer expectations.

Platform Development	
FLASH Gene service offers the fastest sequence to plasmid service	GenScript launched the FLASH Gene service, an ultra-fast sequence-to-plasmid solution that offers the fastest turnaround time in the industry at just four business days. This advancement is poised to significantly accelerate research and discovery efforts in the development of antibody drugs, vaccines, and CGT.
GenCircle™ dsDNA revolutionizes gene therapy	The GenCircle™ platform, a novel, small circular dsDNA vector with a minimal 429 bp backbone, eliminates antibiotic resistance genes or bacterial origin sequences. Its streamlined design offers superior stability, lower cytotoxicity, reduced immunogenicity, and higher transfection efficiency. This helps clients address key challenges in gene delivery and achieve safer and more effective outcomes for therapeutic development, vaccine production, and advanced genetic research.
UproCHO™ media system empower our clients to reach the next level of productivity	GenScript's subsidiary ProBio developed UproCHO™ media system for cell line CHOK1-GenS, which has been proven to significantly optimize productivity and product quality in fed-batch, intensified fed-batch, and perfusion processes. This empowers clients to achieve higher throughput at more competitive costs.
Ready-Edit LNP Service addresses challenges in delivery systems for gene editing	GenScript launched the Ready-Edit LNP Service, which combines cutting-edge CRISPR-mRNA technology with optimized Lipid Nanoparticle (LNP) delivery system to provide highly efficient, precise, and safe delivery solutions for gene editing. The platform will support clients in achieving breakthrough scientific discoveries and advancing therapeutic innovations in gene editing applications.

By leveraging our expertise and strategic partnerships, we catalyze innovation in the biopharmaceutical sector and support our clients throughout the journey from preclinical research to commercialization.

Anti-PD-1 NME licensing supports our partner in unlocking therapeutic potential	GenScript's subsidiary ProBio licensed its anti-PD-1 new molecular entity (NME) to LaNova Medicines. This collaboration has enabled LaNova to develop a PD-1/VEGF bispecific antibody that is central to the LM-299 program. Merck's partnership with LaNova on LM-299 further validates the potential of this innovative therapeutic approach. Our anti-PD-1 single-domain antibody is a key component of anti-cancer treatments and represents the next generation in the fight against cancer.
Pre-clinical CMC services enable global development of groundbreaking therapies	GenScript's subsidiary ProBio supported its partner Chengdu Chimagen Biosciences Co., Ltd. ("Chimagen") in a strategic agreement with GSK. This collaboration included GSK's acquisition of Chimagen's clinical-stage trispecific antibody, CMG1A46. ProBio has provided comprehensive preclinical CMC services for CMG1A46, which is the first CD3/CD19/CD20 trispecific antibody to enter clinical trials, exhibiting promise for treating resistant and relapsed B-cell blood cancers.
GMP RNA services advance the development and clinical approval of cell therapies	In 2024, GenScript's GMP-grade RNA services contributed to securing 12 IND clearances for clients. Notably, we supported the clinical approval of CNK-UT002 Cell Injection, the first clinically approved allogeneic universal cell therapy targeting solid tumor in China. We also supported the clinical approval of NK510 Cell Injection, the world's first base-edited universal NK cell product for advanced solid tumors in both the U.S. and China. In addition, we assisted in the development of BRL Medicine's CAR-T cell therapy, the first allogeneic universal CAR-T that reported successful treatment of autoimmune diseases.

Empowering Next-generation Therapies

In 2024, our biologics CDMO services supported ***35*** new IND clearances and cumulatively a total of ***115*** IND clearances.

Revolutionizing Laundry Innovation

PuriWise® LPP delivers superior performance in laundry pod applications	Following PuriWise® 1.0L for laundry liquid formulations, GenScript's subsidiary Bestzyme launched PuriWise® LPP, a new protease product designed for laundry detergent pods. This product is compatible with various pod formulations and demonstrates eight-fold stain removal efficacy compared to standard detergents. As a result, PuriWise® LPP can significantly reduce detergent usage and improve laundry experience.

Responsible Marketing

Responsible marketing is a fundamental aspect of GenScript's approach to ethical business and meaningful societal engagement. We uphold the highest standards of integrity and transparency in all our marketing activities and comply with laws, regulations and industry standards of the countries and regions where we operate.

We have developed the *Responsible Marketing Policy* that applies to all employees and subsidiaries of the Company. Grounded in the principles of transparency, integrity, and respect, this policy guides our marketing behaviors and interactions with stakeholders. We regularly offer training on responsible marketing through legal insights and case studies and review public communication materials, ensuring accurate marketing information disclosure and protecting customer privacy.

We have an effective review mechanism in place for advertisements and promotional materials, involving department heads and the legal team. We regularly assess our marketing-related activities and follow the marketing material review procedures to review sensitive information and misleading promotions. In 2024, all marketing activities at GenScript were fully compliant with the *Responsible Marketing Policy* with no violations.





Empowering Our Employees

03

At GenScript, we believe that the growth and well-being of our employees are vital to the Company's enduring success. We uphold high employment standards, maintaining a fair, respectful, and safe working environment. We strive to offer diverse development opportunities designed to foster talents, and provide top-tier compensation and comprehensive benefits that reflect their value to our organization. Together with our employees, we are creating a workplace where everyone can thrive and contribute to our shared vision.

Contributing to the UN SDGs



Chapter Content

Diverse and Inclusive Workplace 42
Talent Development 46
Employee Engagement 49
Occupational Health and Safety 52

3.1

Diverse and Inclusive Workplace

We believe that our people are our greatest asset, and we are unwavering in building strong, meaningful employment relationships with each and every one of our team members. Beyond compliance with labor laws and regulations in our global operations, we are working towards targets related to workforce human rights, diversity, equity and inclusion (DEI), and working conditions. We have a full range of policies in place to protect the rights and well-being of our employees, such as the *Labor and Human Rights Policy*, the *Diversity, Equity and Inclusion Policy*, and the *Employee Handbook*.

Targets		Progress in 2024
Labor relations	At least two staff briefings on business results per year and a workers' congress every two years	Achieved
Child labor and forced labor	Zero child labor, forced labor or other illegal employment issues	Achieved
Diversity, discrimination and harassment	100% participation in anti-discrimination and anti-harassment training 100% of operational sites covered by a grievance mechanism on discrimination and/or harassment issues	Achieved

In 2024, GenScript was named among the Top 30 Large Employers on BioSpace's 2025 Best Places to Work list for the third consecutive year, with its ranking climbing to 11th from 24th in the previous year.



BioSpace 2025 Best Places to Work

Talent Acquisition

Aligned with market dynamics and business needs, GenScript maintains a robust talent pool. We acquire talents through multiple channels, including campus recruitment, social hiring, and internal recruitment. We provide opportunities and platforms that enable employees from all backgrounds to unleash their potentials.

As of the end of 2024, GenScript had a total of 5,568 employees worldwide, with a turnover rate of 8.67%[3].

Employee Diversity Metrics

Indicator		2024	
		Percentage	Number
Total number of employees		/	5,568
By employment type	Full-time	99.96%	5,566
	Part-time	0.04%	2
By gender	Male	41.51%	2,311
	Female	58.49%	3,257
By age	Under 31	53.07%	2,955
	31-50	44.77%	2,492
	Over 50	2.17%	121
By job level	Senior management level	3.48%	194
	Middle management level	3.93%	219
	Primary management level	5.77%	321
	Non-management level	86.82%	4,834
By region	Asia	90.91%	5,062
	Americas	7.81%	435
	Europe and others	1.28%	71
Percentage and number of women among top executives		43.3%	84
Percentage and number of women in managerial positions		47.96%	352
Percentage of women in STEM-related positions		56.11%	2,446

Employee Turnover Rate

Indicator			
		Percentage	Number
Employee turnover rate		8.67%	483
By gender	Male	9.22%	213
	Female	8.29%	270
By age	Under 31	10.86%	321
	31-50	5.98%	149
	Over 50	10.74%	13
By job level	Senior management level	7.22%	14
	Middle management level	6.85%	15
	Primary management level	2.80%	9
	Non-management level	9.21%	445
By region	Asia	7.92%	401
	Americas	15.63%	68
	Europe and others	19.72%	14

[3] The calculation of turnover rate is based on voluntary turnover.

Diverse Talent Base

GenScript prioritizes the recruitment and development of a diverse global workforce to fuel our business success. We attract talents worldwide as part of our talent pipeline that supports our sustainable growth.

- Campus recruitment: In 2024, we hosted campus events and job fairs in over 100 universities and research institutions to recruit new graduates.
- Referral program: We launched an internal referral program targeting international graduates with master's and doctorate degrees as well as bioinformatics talents. The program offered special bonuses to referrers to attract high-caliber talents.
- Internal mobility program: Throughout 2024, we posted job openings on our online platforms to encourage internal transfers, enhancing talent mobility across various roles within the Company.



Connecting with Young Talents

GenScript embraces an "Innovation and Win-Win Cooperation" spirit, attracting top talents and maintaining partnerships with universities globally. We implement scholarship programs and leverage our extensive professional expertise to support the career development of graduates. This strategy infuses the Company with new vitality and contributes to future innovation of the industry.

Internship programs play a vital part in growing our talent base. We provide one-on-one mentorship for interns to acquire necessary skills and competencies, preparing them for full-time opportunities.

In 2024, we hosted workshops, campus talks, and summer camps in the U.S., the Netherlands, China and Singapore, enhancing students' understanding of the biotechnology industry and the opportunities it offers.

U.S.	We hosted a discussion with PhD students and postdoctoral researchers from Rutgers University, covering our innovation efforts and potential opportunities at GenScript, increasing the Company's visibility.
China	We continued our scholarship programs with top universities. We plan to initiate a dedicated scholarship program, contributing a total of US$126,542 within the next three years.
Singapore	We conducted a master class workshop at the National University of Singapore, presenting the Company's frontier research and technology in antibody engineering. This event underscores our role in facilitating closer collaboration between academia and industry.
Europe	We engaged with top universities across Europe (e.g. Utrecht University and the University of Nottingham) by sharing cutting-edge biotechnology and having in-depth discussions about future career development, attracting potential talents.

Employee Rights Protection



GenScript is dedicated to offering equal employment opportunities and ensuring compliance with employment standards. We protect equal rights of every employee in recruitment, promotion and development, compensation and benefits regardless of race, skin color, gender, religion, nationality, disability, sexual orientation, gender identity, marital status, or other protected status.

In line with internal policies such as the *Employee Handbook* and the *Business Conduct Guidelines*, we oppose any illegal employment practices, including but not limited to child labor, forced labor, and any discrimination or harassment based on an employee's race, gender, religion, physical condition, or any other backgrounds. We verify employees' identification documents during the onboarding process and regularly perform human rights impact assessments to eliminate labor-related risks. In 2024, no violations of child labor or forced labor occurred.

GenScript has developed the *Diversity, Equity and Inclusion Policy*, which protects the interests of all employees at GenScript. At the board level, the Risk Management and ESG Committee oversees DEI issues, and at the execution level, we have appointed the Head of Global DEI. With this governance structure in place, we work to build a more inclusive workplace by improving our talent recruitment, development, and engagement practices.

We encourage employees and candidates to report any suspected discrimination, harassment, or unfair treatment issues through various compliance channels. We undertake to keep any such reports confidential and protect whistleblowers from any form of retaliation.

The Company offers reporting channels, including but not limited to:

- Reporting to your superiors, Human Resources Department or Internal Audit Department
- Reporting email: compliance@genscript.com
- CEO mailbox: Employee Voice platform

In 2024, no discrimination and harassment incidents occurred.

GenScript compares employees' wage levels against local living wage standards, ensuring that our compensation packages are not only competitive but also sufficient to cover essential living expenses. In 2024, GenScript conducted a living wage benchmarking analysis through a combination of internal assessment and external research. Based on the analysis, we have set a target to raise the percentage of employees paid above living wage to 90% by 2030. These practices are designed to enhance the well-being of employees and foster a workplace where everyone feels valued and empowered to succeed.

3.2

Talent Development

At GenScript, we offer a wide range of training and development opportunities, along with competitive and variable compensation packages. We believe this approach will help unlock employees' potential and align personal growth with corporate success.

Training and Development

GenScript maintains a dynamic training management system to address varied development needs of our workforce. We are dedicated to achieving our career management objectives, ensuring a continuous pipeline of top-tier talents to drive the Company's long-term success. In 2024, GenScript provided an orientation for 100% of new hires and developed individual development plans for all employees.

Target		Progress in 2024
Career management	Provide an orientation for 100% of new employees worldwide Develop individual development plans for all employees	Achieved

Our training programs focus on leadership, general and professional competency, and degree advancement. In 2024, 100% of our employees received career development training, with 31 training hours per employee. Throughout the year, we conducted 204 training sessions, with a total of 170,349 training hours, increasing by 34% compared to 2023.

Employee Training Metrics

Indicator		Unit	2024
Training spending		US$	562,340
Number of career development training sessions		/	204
Number of employees trained		Number	5,568
Percentage of employees trained		%	100%
By gender	Male	%	41.5%
	Female	%	58.5%
By job level	Senior management level	%	3.5%
	Middle management level	%	3.9%
	Primary management level	%	5.8%
	Non-management level	%	86.8%

Indicator		Unit	2024
Total training hours of employees		Hour	170,349
Average training hours per employee		Hour	30.59
By gender	Male	Hour	28.90
	Female	Hour	31.80
By job level	Senior management level	Hour	30.79
	Middle management level	Hour	30.90
	Primary management level	Hour	38.04
	Non-management level	Hour	30.08

Training and Development Programs in 2024

Job-specific Development

GenScript prioritizes employee growth and promotes cross-functional best practice sharing. By integrating strategic goals of the Company with individual career paths, we develop tailored career development plans for employees in different roles.

Global Technical Staff Training

To enable our global teams to enhance skills and advance their careers, we have created customized training courses and career paths for production teams in Singapore and the U.S. by extending the learning map approach, including milestones and recommended training programs.

Leadership Development

Training programs for primary, middle, and senior management

We have dedicated training programs in place to enhance management capabilities across all levels.

For the senior management, we combine third-party training resources with internal knowledge-sharing and business simulations to broaden strategic thinking and leadership skills.

The middle management receives comprehensive training through presentations, intensive sessions, practical experience, and reflective reviews to better tackle workplace challenges.

The primary management focuses on hands-on development with a blend of intensive training, real-world application, peer sharing, and reflective learning to build essential skills and confidence in their roles.

Advanced Leadership Program

To elevate the leadership competencies of mid-to-senior management, the Company launched the "Advanced Leadership Program". We engaged a third-party institution to deliver training courses. By combining external coaching and peer coaching, this program prepared high-potential talents for higher roles.

Mentorship Program for High Performers

We introduced a pilot mentorship program at U.S. Site, which is designed to offer mentorship opportunities to high performers and help them develop into future leaders.

Degree Programs and Certifications

We empower our team members to achieve continuous self-improvement and professional growth through comprehensive learning and certification programs.

Joint Training Program for On-the-Job Doctoral Studies

In addition to an ongoing Associate to Bachelor's degree advancement program, GenScript partnered with Nanjing University to launch a joint training program for employees pursuing doctoral degrees in bioinformatics. This initiative offers a high-end academic platform that enables employees to excel in cutting-edge technologies and underpin future innovation.

Professional Competency Training Program

We facilitate employees to advance their careers through self-directed learning and competency enhancement. In 2024, our qualification certification program enabled employees in different roles to acquire job-specific qualifications and internal certificates, e.g. the Lean Six Sigma Yellow Belt Certificate and the Quality Management Certificate. Additionally, we provide funding for employees to pursue specialized training and obtain professional certification.

Experience Sharing Salon

4DX Practical Sharing and Experience Exploration

In 2024, we organized a salon for leaders from different business units to share their understanding and experience in applying the Four Disciplines of Execution (4DX). This event helped create a culture of strategic execution, aligning our efforts with key business objectives.

In 2024, we enhanced our talent review and succession planning processes to include monthly reviews for critical positions, ensuring that employees are well-prepared for leadership transitions. Additionally, we conducted annual reviews and succession assessments for key roles across our business units. These assessments are designed to identify the readiness levels of potential successors and evaluate their strengths and areas for improvement. By aligning succession planning with the needs of key organizational roles and critical business functions, we ensure the right fit between people and jobs.

Performance Review and Incentives

With the *Individual Performance Management Policy*, the *Low-Performing Employee Management Process*, and the *Performance Communication and Complaint Process* in place, GenScript has established an effective performance review and employee incentive system.

Performance Review

Our performance management system focuses on deliverables and key behaviors. This approach ensures employees align individual goals with the Company's organizational objectives and understand how to contribute to the organization's success.

We encourage employees to engage in regular two-way communication with their supervisors to set performance goals and indicators and to review performance. This approach provides a fair and objective evaluation of individual performance and informs personal development and training plans. Performance reviews are conducted on a quarterly, semi-annual, or annual basis, depending on the nature of an employee's role.

In 2024, all employees received performance reviews and career development assessments.

Employee Incentives

Guided by the "Contribute and Share" system, the Company offers variable incentives tied to individual and organizational performance and contributions. Based on performance reviews, we recognize and reward employees with outstanding contributions through performance-based bonus programs. In 2024, under our equity incentive plans, we granted equity to 1,753 employees, driving collective efforts towards sustainable growth.

Long-term Incentives
- Options
- Restricted share units
- Long-term retention bonuses

Short-term Incentives
- Performance-based bonuses
- Project excellence awards
- Dedicated recognition awards

Promotion and Internal Mobility

GenScript has developed and continuously refined internal policies such as the *Promotion Management Policy* and the *Individual Performance Management Policy*. We offer clear and transparent career paths across management, professional, and operational tracks. We leverage the performance review mechanism as a tool to provide targeted development and facilitate career enhancement.

Nomination → Eligibility review → Collective review → Nomination approval → Releasing promotion results → Job level adjustment after promotion

Employee Promotion Process

Management (M track)	Technical, marketing & sales, back-office (P track)	Operational (O track)

Career Tracks

We promote talent mobility across regions and departments, providing employees with broader career opportunities while supporting the Company's new business. With an internal recruitment platform in place, we have established a robust succession pipeline and a dynamic talent pool, offering every employee access to internal positions. In 2024, over 900 employees completed internal transfers, and over 70% of new management positions were filled by internal hires.

3.3

Employee Engagement

At GenScript, we strive to create a supportive and inclusive working environment that values employee well-being and brings a strong sense of belonging. Our comprehensive approach includes employee benefits, corporate culture activities, initiatives that care for the vulnerable, and open, democratic communication channels. These efforts are designed to enhance work satisfaction, promote work-life balance, and ensure every team member feels heard and valued.

Employee Benefits

Comprehensive Benefits

GenScript ensures that our statutory benefits cover all employees, including social insurance applicable to our operational sites. Additionally, we strive to offer a variety of non-statutory benefits designed to support and engage our entire workforce, including full-time and part-time employees, contractors, and interns. Our benefits package encompasses health protection, allowances, work-life support, as well as family-friendly benefits such as paid parental leave and nursing leave. Our employee benefits may vary by country and region to reflect local market practices and regulatory requirements.

Statutory Benefits

- Pension insurance
- Unemployment insurance
- Medical insurance
- Critical illness insurance
- Work-related injury insurance
- Maternity insurance
- Housing provident fund

Supplementary Benefits

Health Protection

- Supplementary commercial insurance
- Accidental injury and medical insurance
- Supplementary work-related injury insurance
- International business travel insurance
- Annual health check-up
- Psychological counseling and stress management training
- Free gym

Allowances and Other Benefits

- Employee consolation money
- Small incentives for additional contributions
- Appreciation benefits for 5th, 10th and 15th work anniversary

Work-life Support

- Free transitional housing
- Telecommuting and flexible working hours

Family-Friendly Benefits

- Paid annual leave
- Bonus leave
- Paid maternity leave
- Paid paternity leave
- Paid prenatal check-up leave
- Paid parental leave
- Paid breast-feeding leave
- Paid nursing leave for only-child family
- Nursing room
- Paid bereavement leave

Benefits System

At GenScript, we support the mental well-being of our employees by offering accessible channels for psychological counseling and introducing a confidential advisor program for employees to address mental health concerns. We also organize stress management training and resources to help employees achieve a healthy work and life balance.

Corporate Culture Activities

To build a positive and cohesive workplace, we have organized a range of cultural activities to enrich employees' work experiences and foster cross-cultural communication and deeper connections among employees.

Organizational Culture Building

We integrate corporate culture into various activities e.g. contests, workshops and employee recognition events.

- Culture workshop exploring our stories through comics

In 2024, we held an interactive session that encouraged open communication and storytelling. This event provided a creative platform for participants to share work experiences, enhancing empathy and understanding of diverse perspectives.

- Employee anniversary appreciation events

We hosted appreciation events for employees at their 5th, 15th or 20th anniversary to celebrate their dedication and contributions. Employees' families were also invited for a site visit and interactions.

Festival Celebrations

We enhance cross-cultural understanding and inclusivity through a variety of festival celebrations.



Diwali – painting earthen lamps



Ugly Holiday Sweater contest



Halloween Costume Contest



Celebrating Mid-Autumn Festival

Caring for Vulnerable Groups

We create an inclusive and supportive workplace for all employees, with a special focus on women and individuals with disabilities. According to the *Occupational Health Management Policy*, we prioritize the interests and professional growth of female employees. Our actions include signing the *Collective Agreement for the Protection of Rights and Interests of Female Employees*, furnishing facilities such as nursing rooms and maternity parking, and organizing a support network for working mothers.

In addition, we support the disabled community by providing employment opportunities for those who are capable of working. We ensure accessible infrastructure is in place to support and care for everyone.

D&I event on the International Women's Day

In 2024, GenScript hosted a diversity and inclusion (D&I) event across China, Singapore, and the Netherlands sites. Over 1,600 employees participated in programs that promoted empowerment and gender equality, including a stereotype-breaking campaign, virtual and in-person talks on women's career advancement, and a "Women's Stories" exhibition. These initiatives inspire inclusivity by bringing employees together to celebrate diverse perspectives and promote equal opportunities.



Democratic Communication

GenScript prioritizes an open and inclusive culture. We respect employees' rights of association and freedom of speech. By working towards employee engagement targets, we ensure that our management practices are transparent, efficient and effective. In 2024, the employee satisfaction rate reached 90.2%.



Target		Progress in 2024
Employee Engagement on Working Conditions	Annual satisfaction survey on working conditions with no less than 90% participation	Achieved
Labor Relations	At least two staff briefings on business results per year and one worker's congress every two years	Achieved

GenScript has multiple communication channels in place to establish open connections with employees. In 2024, we established a feedback mechanism to gather employees' concerns and constructive suggestions on annual key tasks, followed by evaluation and integration into decision-making.

Fresh Graduate Communication Event	The Company organized an event for 2024 fresh graduates, where senior employees were invited to share perspectives about the workplace, corporate culture, and professional development at GenScript.
Monthly CEO Discussions	The Company organizes a monthly CEO discussion with employees from various groups, providing direct interaction with the top management and allowing cross-functional experience sharing.
Workers' Congress	In December 2024, the Company held the 5th workers' congress, where we reviewed a number of policies regarding employees' well-being.

Employee Communication Highlights

3.4

Occupational Health and Safety

At GenScript, occupational health and safety (OHS) is a top priority and a fundamental aspect of our operations. We have developed and continuously enhanced our work safety management systems. Through targeted training programs, we aim to raise safety awareness and minimize occupational safety risks in production and operations.

Work Safety Management

Under internal policies such as the *GenScript EHS Guideline* and the *EHS Responsibilities and Accountability Policy,* GenScript has established the Work Safety Committee to oversee occupational safety management. We implement a work safety accountability system that drives the achievement of our OHS targets. Through regular audits, risk assessments, and employee training, we proactively identify and mitigate potential hazards. Our enzyme manufacturing facility is certified to ISO 45001 OHS Management System.

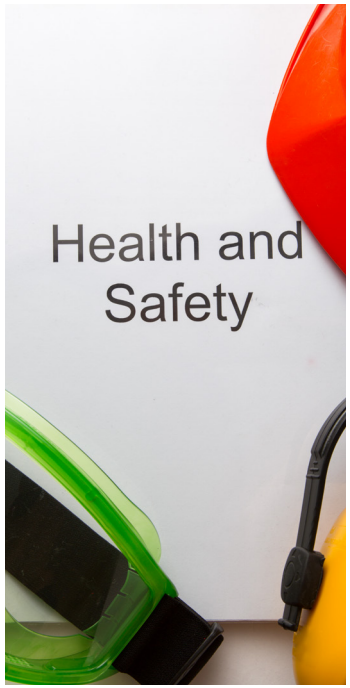
Target		Progress in 2024
Occupational health and safety	Regular occupational health and safety inspections and training covering 100% of our operational sites No severe safety accidents No occupational diseases	Achieved

In 2024, we prioritized enhancing emergency preparedness and response capabilities by focusing on fire prevention, hazardous chemical leaks, workplace injuries, and other emergencies. We continuously optimized internal safety emergency plans and implemented the Behavior-Based Safety (BBS) program to improve safety performance by identifying and reinforcing critical safe behaviors. To further embed a "Safety First" culture, we implemented an internal safety certification program for employees in key roles, including department heads and safety coordinators. These programs aim to equip them with the necessary skills and knowledge to lead by example and drive safety initiatives across the Company.

Employee safety certification

Department head certification	Safety coordinator re-certification	Certification and practical assessment for key roles	Safety education and awareness
126 managers completed safety training courses and assessments focusing on: • Safety leadership • EHS responsibilities • Hazard identification and risk assessment • Hazard investigation • Safety operating procedures • Behavior-based safety observation	127 safety coordinators completed safety training courses and practical assessments, ensuring effective execution of safety policies at the departmental level.	728 employees in key positions received a combination of theoretical training and practical assessments, mitigating unsafe acts in the workplace.	We launched a company-wide safety campaign to raise safety awareness among employees. This event highlighted the importance of safety by addressing the key questions of why, for whom, and how we ensure safety. To facilitate safety communication, we rolled out a campaign symbol as a visual reminder of safety consciousness.

Health and Safety Initiatives



GenScript prioritizes employees' occupational health and safety by refining the occupational health protection mechanisms in line with the Company's production and business needs. We are committed to creating a safe working environment through a number of initiatives, including occupational hazard assessment, personal protective equipment (PPE), preventive actions for repetitive strain injury (RSI), and health benefits.

Initiatives to prevent occupational diseases

Occupational hazard assessment	Based on the *Directory of Occupational Disease Hazard Factors*, we identify and assess occupational disease hazards in the workplace.
Personal protective equipment	We provide essential protective equipment for employees in relevant positions, including goggles, dust masks, anti-static and fire-resistant clothing, chemical-resistant suits, heat-insulating and corrosion-resistant gloves, as well as anti-static shoes and hats. We also improve our facilities by installing noise reduction boxes and setting up ventilation and alarm signs.
Emergency preparedness assessment	In 2024, we conducted unannounced emergency exercises to evaluate the effectiveness and preparedness of employees for an emergency event. As part of our initiatives to strengthen emergency response capabilities, we carried out 1,534 emergency tests throughout the year, ensuring readiness and efficiency in handling potential crises.
Preventive actions for RSI	Ergonomic chairs are available to employees to prevent possible RSI at work.
Health benefits	We offer a range of health benefits to employees, including neck and shoulder massage, critical illness mutual aid system, supplementary commercial insurance, and annual occupational health check-ups.

In 2024, days lost due to work-related injuries totaled 330, and no work-related fatalities occurred among employees and contractors in the past three years.

Indicators	Unit	2022	2023	2024
Number of work-related fatalities	Number	0	0	0
Rate of work-related fatalities	%	0	0	0

OHS Training

GenScript drives safety education and awareness through the Safety Month campaign and safety training programs. These initiatives are designed to enhance employees' risk identification skills and response abilities, all of which are essential in building a strong safety culture. In 2024, 100% of our employees received occupational health and safety training.

First-Aid Training

In 2024, we regularly organized first-aid training sessions covering first-aid techniques, the use of automated external defibrillators (AEDs), and cardiopulmonary resuscitation (CPR), which equipped employees with the knowledge and skills to respond to medical emergencies.



AED Training

Supplier OHS Management

Our *Supplier Safety Management Rules* articulates our expectations and requirements with respect to supplier safety during on-site work at GenScript. Contractors are required to perform risk assessments before starting a project, implement control measures, and take safety training. After a risk evaluation, specialized work requires an authorization from the EHS team through a permit-to-work system. During operations, contractors must wear PPE to mitigate potential occupational health and safety risks.



Hazardous Chemical Management



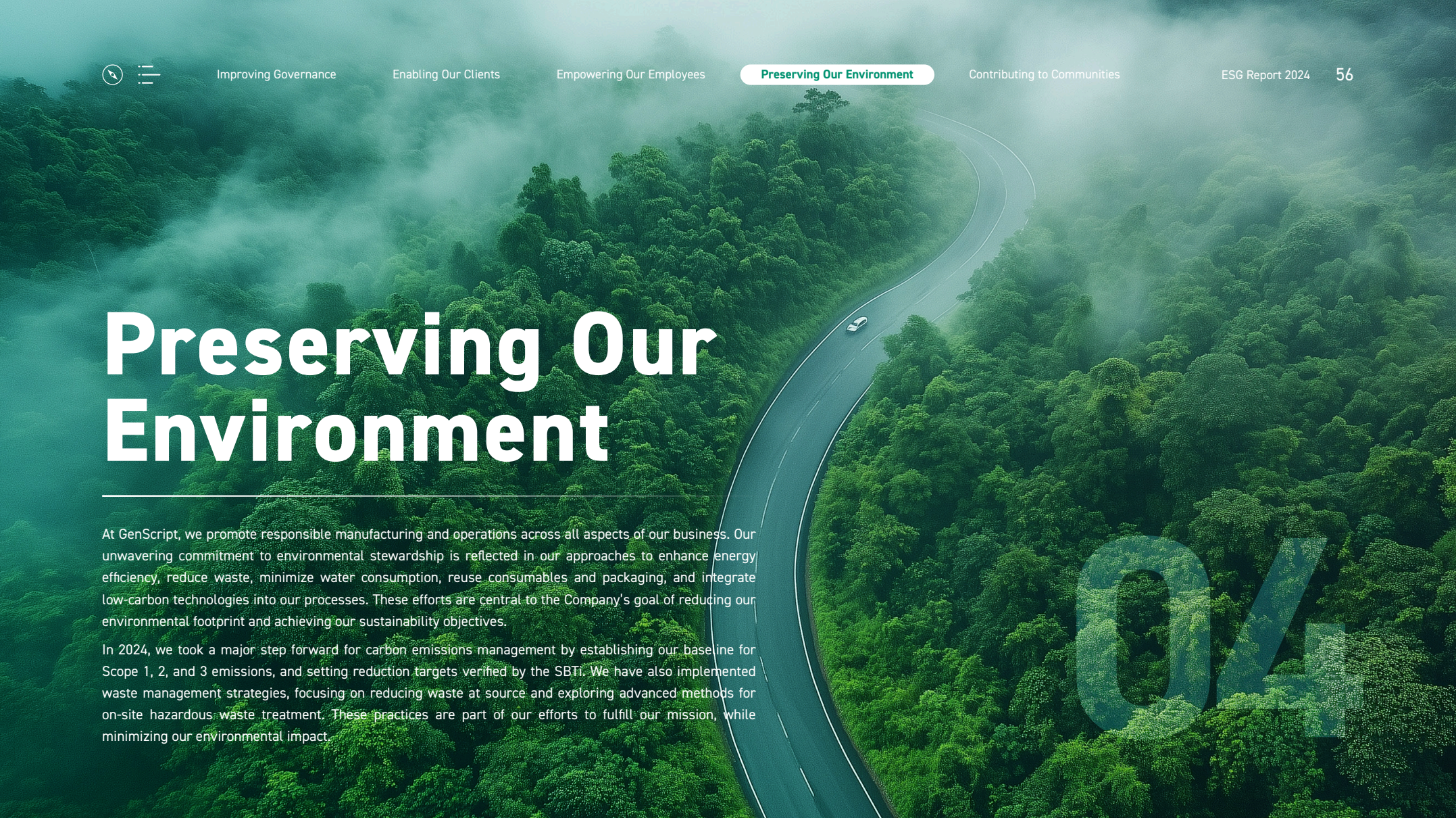
GenScript has developed the *Hazardous Chemical Management Policy* and the *Hazardous Chemical Process Safety Assessment Management Procedures* in accordance with relevant laws and regulations. These policies govern the entire life cycle of hazardous chemicals from purchase and transportation to storage, use, and disposal, reducing potential safety risks.

We have implemented incentive programs to drive the safe management of hazardous chemicals and the reduction of their usage. These measures encourage efficient use of hazardous chemicals, so as to reduce chemical-related risks and contribute to a safer workplace.

In 2024, the Company implemented 17 initiatives to discontinue the use of hazardous chemicals, and replaced three high-toxicity chemicals with less toxic alternatives.

Chemical Safety Initiatives

Special rectification	To address the challenges in managing hazardous chemicals, we reviewed our hazardous chemical inventory and standardized the procurement process. Additionally, we introduced safety equipment, including explosion-proof cabinets, fume hoods, and spill containment trays, and revised the management policies. These actions have effectively mitigated the risks associated with the storage and use of hazardous chemicals.
Chemical emergency preparedness	We carry out a number of emergency exercises designed to address chemical-related incidents, such as spills, leaks, fires, toxic gas releases, explosions, and transportation accidents. By simulating real-life scenarios, these exercises help employees become familiar with emergency protocols and procedures and prepare them to handle hazards effectively.
Process improvement	We have enhanced the safety of our production lines by adopting environmentally friendly processes and mitigated chemical-related safety risks by adopting alternative methods and prioritizing the use of less toxic substances.



Preserving Our Environment

At GenScript, we promote responsible manufacturing and operations across all aspects of our business. Our unwavering commitment to environmental stewardship is reflected in our approaches to enhance energy efficiency, reduce waste, minimize water consumption, reuse consumables and packaging, and integrate low-carbon technologies into our processes. These efforts are central to the Company's goal of reducing our environmental footprint and achieving our sustainability objectives.

In 2024, we took a major step forward for carbon emissions management by establishing our baseline for Scope 1, 2, and 3 emissions, and setting reduction targets verified by the SBTi. We have also implemented waste management strategies, focusing on reducing waste at source and exploring advanced methods for on-site hazardous waste treatment. These practices are part of our efforts to fulfill our mission, while minimizing our environmental impact.

Contributing to the UN SDGs



Chapter Content

Environmental Management 57
Resource Conservation 60
Waste and Pollution Control 67
Addressing Climate Change 72

4.1

Environmental Management

We protect the environment by integrating eco-friendly practices throughout our services, products, and activities. To drive sustainable practices, we have established long-term targets for energy and water consumption, carbon emissions, and recycling and reuse of resources. These targets guide our continuous efforts to improve environmental performance.

Environmental Management System

We comply with applicable local environmental laws and regulations at all operational sites. We regularly conduct gap analyses on our environmental management system (EMS) to identify any non-compliance with laws and regulations and take corrective actions as needed.

In 2024, we obtained ISO 14001 certification for four additional operational sites. As of the end of 2024, 31% of our operational sites have been certified to ISO 14001. In accordance with regulatory requirements and the ISO 14001 standard, we have established a set of robust policies in our major manufacturing sites, including the *Environmental Sustainability Policy* and the *Energy Management Policy*, which provide a structured framework for managing key environmental priorities.

Environmental Targets

In 2024, we advanced our sustainability commitments by focusing on reducing energy and water intensity, driving down carbon emissions, and enhancing resource recycling and reuse practices.

After committing to the SBTi in 2024, we set near-term and long-term carbon reduction targets, with 2023 as the base year. These targets have been approved by the SBTi in early 2025, demonstrating our determination to limiting global warming to 1.5°C in line with the *Paris Agreement*.



- **Energy consumption**
  - Achieve a 5% reduction in electricity intensity per year
- **Water consumption**
  - Achieve a 5% reduction in water intensity per year
- **Emissions management**
  - Ensure 100% compliance with emissions standards for wastewater, exhaust, and noise
  - Achieve a 5% reduction in hazardous waste intensity
  - Ensure 100% compliant disposal of waste
- **Resource recycling and reuse**
  - Increase the percentage of recyclable and renewable materials in specific raw materials by 30%

Environmental Performance Management

We regularly assess environmental management procedures and performance under the *EHS Responsibility & Accountability Policy*. To strengthen environmental oversight, we integrated environmental indicators into performance reviews of the management team, ensuring a clear and measurable commitment to environmental goals and promoting accountability at all levels of management.

We have established a comprehensive environment, health, and safety appraisal system, which is linked to performance indicators. 60% of department heads' personal performance commitments (PBCs) are tied to organizational KPIs. We integrate environmental indicators into the organizational KPIs to align organizational and personal performance with environmental targets, ensuring effective oversight and continuous improvement of environmental practices. All employees are required to follow environmental requirements, and any non-compliance may influence their PBC ratings.

Appraisal Mechanism	
Facilities and EHS team	Environmental targets are incorporated into PBCs.
Production teams involved in energy consumption Energy management teams	Environmental targets are included in organizational KPIs and reflected in the relevant managers' PBCs. Progress towards targets is reported quarterly to the management at Safety Committee meetings.

We have reward rules in place to incentivize efforts to reduce adverse environmental impacts.

Monthly EHS evaluations	Our monthly EHS evaluations focus on process optimization practices that reduce raw material consumption or minimize chemical hazards. Good practices are publicly acknowledged across the Company, and those responsible persons are offered rewards. In 2024, a total of 128 exemplary cases were recognized.
Process improvement incentives	Process improvement practices that meet specific sustainability criteria are eligible for additional credits in organizational KPIs. In 2024, we identified 39 process improvement practices that resulted in reductions in resource consumption, waste generation, or the hazards of raw and auxiliary materials.

Environmental Risk Management

As environmental risks are tied to underlying environmental factors, our EHS team guides each department in developing an environmental factor checklist according to the *Environmental Factor Identification and Evaluation Control Procedures*. This checklist must be updated annually or in the event of any changes in processes, materials or facilities. The EHS team monitors the checklists and ensures the implementation of necessary control measures and effective risk management. As of the end of 2024, we conducted environmental factor and risk assessments at 16 sites, covering 100% of our operational sites.

Enhancing Environmental Consciousness

We enhance the environmental awareness of our employees and stakeholders through targeted training and proactive advocacy, aiming for continuous improvement in environmental practices throughout the Company.



Environmental Training

In 2024, we engaged a professional third party to provide training on the ISO 14001 standard and EMS audit practices. An internal audit team, covering three business units, was established and certified as ISO 14001 internal auditors. This team is qualified to conduct internal EMS audits to evaluate the effectiveness of our EMS and support environmental management efforts. The EHS team also organized environment training for employees across different sites, covering waste classification and recycling, environmental emergency response, and wastewater management.

Environmental Protection Advocacy

In 2024, we launched an environmental campaign to encourage employees to propose creative ideas and solutions for environmental improvement. We have received 23 proposals on energy conservation, packaging recycling, and waste reduction. These proposals will be evaluated through our PDCA system to ensure effective implementation.



4.2

Resource Conservation

Our initiatives to improve efficiency in energy, water, and production resources focus on deploying energy-efficient systems, conducting energy audits and water balance testing, and applying lean manufacturing principles to streamline processes.

Energy Management

We have established the *Energy Management Policy*, defining our approaches to electricity, natural gas, and steam management. By monitoring energy consumption in production and operations, we minimize energy waste, reduce energy usage, and enhance energy efficiency, which delivers both environmental and economic benefits.

We have improved our energy management system by establishing a set of internal policies in accordance with ISO 50001. Our enzyme manufacturing facility has been certified to ISO 50001, and conducted annual internal and external audits to ensure ongoing compliance and continuous improvement. We are also working to expand ISO 50001 certification to other operational sites.

As part of our energy efficiency initiatives, we proactively explore and integrate the latest energy-saving technologies while adhering to industry-leading technical standards. Our initiatives include upgrading equipment and production process, implementing waste heat recovery systems, and increasing the use of renewable energy. Additionally, we collect energy consumption data from production and R&D activities to streamline the Company's energy distribution networks.

Equipment upgrade and transformation

Air conditioning and steam humidification integration

We used clean steam humidification to maintain optimal production humidity during the autumn, winter, and early spring seasons. To enhance efficiency and reduce steam loss, we reconfigured steam generators, enabling one unit to serve both buildings during low-demand periods. This project, completed in November 2024, is expected to save 16,000 to 27,000 tons of water, 82,000 to 137,000 kWh of electricity, and 150 to 250 tons of steam annually.

Installing a municipal water atomization system for chiller cooling efficiency enhancement

In response to high outdoor temperature during the summer, we installed a municipal water atomization system to improve chiller performance. The system atomizes water into fine droplets that evaporate around the chiller's heat dissipation system, improving cooling efficiency. This initiative is expected to save approximately 8,100 tons of water, 41,000 kWh of electricity, and 75 tons of steam annually.

Production process optimization

Optimized non-viral DNA vector production processes led to energy saving

In 2024, our novel therapeutic material platform optimized large-scale production processes for non-viral DNA vectors. For the GMP-grade production of GenExact™ ssDNA, we have streamlined production steps and shortened upstream production time from 6 to 4 days, saving 64 man-hours per batch. This increased facility utilization by 50% and reduced energy consumption by 73,577 kWh per unit output.

Energy optimization with single-use bioreactor processes

In 2024, our commercial manufacturing center in Zhenjiang became operational. Equipped with single-use bioreactors from 50 L up to 2000 L, the center eliminates the need for cleaning and sterilization, significantly reducing its environmental impact. Compared to traditional stainless-steel systems, single-use processes reduce energy consumption by 49% and water consumption by 70%.

Waste heat recovery project

Air compressor heat recovery

At Jinan Site, we implemented an air heat exchanger system to recover heat from high-temperature compressed air, reducing reliance on external heat sources such as steam and hot water. This system can increase the temperature of compressed air from 20°C to 50°C, saving 0.33 tons of steam per hour. Annually, the system can save 2,613 tons of steam and reduce carbon emissions by 810 tCO_2e.



Increased use of renewable energy

Distributed photovoltaic power generation

In 2024, we deployed a rooftop photovoltaic power generation system at Nanjing Site. It is expected to generate 500,000 kWh of electricity annually, reducing emissions by approximately 327 tCO_2e.



Green electricity procurement

In 2024, we purchased 9 million kWh of wind-based electricity for production and operations, reducing 5,900 tCO_2e emissions.



Energy Consumption and GHG Emissions Indicators

Indicator		Unit	2024
Direct energy	Natural gas	m^3	1,781,149.88
	Diesel fuel	tons	35.92
	Gasoline	tons	54.07
	Renewable energy — solar energy	kWh	627,030.00
	Direct energy consumption	tons of coal equivalent	2,575.30
	Direct energy consumption intensity	tons of coal equivalent/US$10,000	0.04
Indirect energy	Purchased steam	tons	118,115.78
	Purchased electricity - green electricity	kWh	9,000,000.00
	Purchased electricity - excluding green electricity	kWh	134,221,454.74
	Total indirect energy consumption	tons of coal equivalent	32,791.61
	Indirect energy consumption intensity	tons of coal equivalent/US$10,000	0.55
Total energy consumption		tons of coal equivalent	35,366.90
Total energy consumption intensity		tons of coal equivalent/US$10,000	0.59
Renewable energy consumption		kWh	9,627,030.00
Percentage of total energy consumption from renewable sources		%	3.35%
Scope 1 emissions[4]		tCO_2e	39,376.80
Scope 2 emissions[5]		tCO_2e	114,034.82 (market-based) 112,287.37 (location-based)
Scope 3 emissions[6]		tCO_2e	387,028.00 (market-based) 387,589.81 (location-based)
Total emissions (Scope 1 + Scope 2)		tCO_2e	153,411.61 (market-based) 151,664.16 (location-based)
Emissions intensity (Scope 1 + Scope 2)		tCO_2e/US$10,000	2.58 (market-based) 2.55 (location-based)

[4] Our Scope 1 emissions are mainly from diesel, natural gas, and gasoline, and calculated based on the GHG emission factors for each fuel specified in the *Guidelines for Greenhouse Gas Emission Accounting and Reporting for Industrial Enterprises in Other Sectors in China (Trial)* and the *2006 IPCC Guidelines for National Greenhouse Gas Inventories*.

[5] Our Scope 2 emissions are mainly from purchased electricity and purchased steam. Scope 2 emissions from purchased electricity – market-based are calculated based on the average carbon dioxide emission factor of China's power grids (excluding commercially-traded electricity generated from non-fossil fuel) of 0.5856 $kgCO_2$/kWh in 2022 as set out in the *Announcement on the 2022 CO_2 Emission Factors for Power Grids* by China's Ministry of Ecology and Environment. Scope 2 GHG emissions from purchased electricity – location-based are based on the average carbon dioxide emission factor of China's power grids of 0.5366 $kgCO_2$/kWh in 2022, as published in the same announcement. Scope 2 GHG emissions from purchased steam are based on the emission factor of 0.3 $kgCO_2$/kg according to the *Guidelines for Greenhouse Gas Emission Accounting and Reporting for Industrial Enterprises in Other Sectors in China (Trial)* and the *2006 IPCC Guidelines for National Greenhouse Gas Inventories*.

[6] Inventory of Scope 3 emissions (Scope 3) were conducted according to the GHG Protocol and ISO 14064 standards. The emissions cover carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).

Water Management

At GenScript, water conservation is one of our environmental management priorities. We have proactively transformed water usage practices across our operations to minimize waste and maximize efficiency.

Our water management strategy focuses on water consumption reduction and water reuse. In operations, we have rolled out a range of measures to recover condensate water from our Heating, Ventilation, and Air Conditioning (HVAC) and steam systems, reducing reliance on freshwater. In construction projects, we require contractors to submit water usage plans in advance and track consumption against approved levels to ensure efficient water use. In 2024, we engaged qualified third-party agencies to perform water balance testing, which enabled us to assess and optimize our water usage.

We implement targeted water-saving initiatives by upgrading processes and reusing reclaimed water for non-production purposes (e.g. landscape irrigation). Additionally, we engage employees through awareness programs to encourage water-saving actions in work and life.

Condensate recovery project

At Zhenjiang Site, we implemented a condensate recovery system, where recovered steam condensate is directed to the ventilation inlet of the air conditioning room. This process raises the fresh air temperature, reducing the heating load and improving energy efficiency. This is expected to save 1,215 tons of steam, lowering carbon emissions by approximately 377 tCO_2e per year.

Water Consumption Indicators

Indicators	Unit	2024
Total water consumption	tons	1,237,196.00
Water consumption intensity	tons/US$10,000	20.81

Production Resource Management

We have enhanced production resource management through a two-pronged approach of internal optimization and enabling solutions. Internally, we focus on raw material usage, packaging materials and consumables. Externally, we are committed to optimizing resource utilization across the value chain. These approaches maximize resource efficiency while ensuring our operational excellence.

Internal Optimization

In our operations, we prioritize reducing resource waste and improving resource efficiency by optimizing raw material usage, managing packaging and consumable materials, and enhancing product efficiency.

Raw Material Management

NGS high-throughput detection platform upgrade	We upgraded our NGS high-throughput detection platform for internal quality control, which reduced sequencing time by 50%, increased the capacity by 50%, and accelerated turnaround time by one day. The sequencing accuracy reached over 90%, with a 99% success rate. The upgrade eliminated the need for 80% ethanol in Sanger sequencing, resulting a reduction in reagent waste by 850 L annually. This also reduced tip usage by 15%, further lowering hazardous waste.
Tip-cleaning optimization	Our automated cleaning machines for conductive tips required substantial amounts of 75% ethanol to ensure contamination-free tips. To reduce waste generation, we replaced ethanol with purified water, achieving the same cleaning effect. This reduced ethanol usage by 1,440 kg annually and eliminates safety risks associated with ethanol.

Packaging Material and Consumable Management

Streamlined packaging solutions	We optimized the packaging design of 48-well plates to reduce material usage and minimize waste. Plates were originally packed in smaller paper boxes inside a cardboard box. We worked with our supplier to remove the paper boxes and pack 50 sealed individually plates in a single inner bag within the cardboard box instead, saving 18 tons of packaging materials annually.
Recyclable shipping boxes	We replaced plastics with 100% recyclable paper-based shipping packaging, using water-based and biodegradable ink, along with paper's structural strength. This initiative reduced waste by 82% and cut carbon emissions by 5 tons annually, equivalent to the CO_2 absorbed by 273 trees[7]. 

[7] The calculation is based on the estimation provided by the Ministry of Ecology and Environment of the People's Republic of China, that is, one tree can absorb 18.3 kilograms of carbon dioxide per year.

Simplified RNA production and purification process	At Seattle Site, we have streamlined RNA production and purification steps, cutting plastic labware consumption by 40% and improving operational efficiency by 50%. These innovations reduced waste, energy consumption, and operational costs.
mRNA production process optimization	Through process optimization, we implemented a biological approach to reduce dsRNA generation during mRNA production, instead of traditional chromatography-based purification. By shortening the turnaround time, this innovation reduced energy consumption in production by 50% and decreased resource usage.

Packaging Material Consumption Indicators

Indicators	Unit	2024
Packaging material consumption	tons	1,259.61
Packaging material consumption intensity	tons/US$10,000	0.02
Packaging material savings	tons	24.11

Enabling Solutions

We have reinforced sustainable practices by developing innovative products and solutions across various fields. Our investment in sustainable products, including laundry protease PuriWise® LPP and feed enzymes, supports the transition towards green practices in detergent and agricultural applications.

PuriWise® LPP sustainable laundry solution

By integrating our advanced laundry protease into detergent pod formulations, GenScript's subsidiary Bestzyme has launched PuriWise® LPP, which can significantly reduce detergent usage and minimize pollutant discharge while enhancing cleaning efficacy for protein stains.

PuriWise® LPP improves stain removal efficiency by eight times compared to standard detergents, achieving the same cleaning effectiveness with just one-tenth of the dosage. This not only significantly reduces overall detergent usage but also lowers phosphorus emissions into water. Due to its lower operating temperature, PuriWise® LPP can also reduce energy consumption and carbon emissions during washing.

Our innovative feed enzymes, such as xylanase and the EnerGen Supreme series, address global challenges related to feed shortages while delivering significant environmental benefits. This enhances nutrient utilization and reduces carbon, nitrogen, and phosphorus emissions, contributing to environment-friendly practices in animal husbandry.

Application of xylanase for the feed sector

GenScript's subsidiary Bestzyme has developed a new type of xylanase applied in animal feed, which overcomes the limitations of feed resource utilization. Xylanase, a non-starch polysaccharide enzyme, degrades xylan (an anti-nutritional factor found in cereal grains), improving the overall nutrient utilization in animal feed. The application of xylanase enhances animal productivity and disease resistance and reduces pollution caused by animal excrement. As an environmentally friendly additive, xylanase holds significant value in promoting sustainable animal husbandry.

By upgrading the xylanase strain and production process, the fermentation yield has increased by more than 300%, methanol usage has decreased by over 2,000 tons annually, and waste emissions have been reduced by over 60%.

Feed enzyme solutions for sustainable livestock farming

Our compound enzymes (EnerGen Supreme series), protease (ProMax), and phytase increase the utilization rate of nutrients in feed and reduce fecal emissions, mitigating pollution caused by livestock and poultry farming.

- EnerGen Supreme increases the digestibility of carbohydrates in livestock and poultry by 3-5%, improving nutrient absorption;
- ProMax protease reduces crude protein levels in livestock and poultry feed by 0.5-1%, saving approximately 20 kg of soybean meal per ton of feed and reducing nitrogen emissions by 5-10%;
- Phytase reduces the need for dicalcium phosphate in feed formulation, saving 6-10 kg per ton and lowering phosphorus emissions.

According to rough estimation, the use of EnerGen Supreme in feed has cumulatively reduced carbon emissions by 2 million tons, while the application of ProMax protease has reduced nitrogen emissions by 10,000 tons. The use of phytase has cut dicalcium phosphate consumption by 1 million tons, resulting in a reduction of 160,000 tons of phosphorus emissions.

Office Resource Management

GenScript promote circular practices in office operations. We have implemented several initiatives, including shared desks to optimize space usage, an office furniture reuse platform, and waste sorting and recycling programs. These efforts are aligned with our goal of reducing resource consumption and improving operational efficiency.



Shared desks	Allowing employees with temporary or mobile work needs to share desks, reducing unused office space
Resource sharing platform	Offering a platform for sharing unused office furniture, reducing the demand for new ones 100+ pieces of office furniture in reuse
Waste recycling and sorting	Setting up designated bins for recyclables such as paper, cardboards, plastics, and aluminum to support waste recycling efforts

4.3

Waste and Pollution Control

To reduce waste, wastewater, and exhaust emissions, we have implemented stringent pollution controls throughout our production processes, including on-site waste disposal, improvements to wastewater treatment, and enhanced monitoring of air pollution.

Wastewater Management

Our wastewater primarily originates from laboratory processes, cleaning operations during production, flushing of animal facilities, and domestic sewage. Main pollutants include chemical oxygen demand (COD) and ammonia nitrogen. All wastewater flows through the sewage pipelines to our treatment facilities. Wastewater is only allowed to enter the municipal system and be directed to the local sewage treatment plant after meeting regulatory standards and obtaining the necessary discharge permits.

The wastewater treatment facility outlets are equipped with real-time online monitoring devices that transmit data to pollutant monitoring platforms. We also worked with a qualified third party to conduct periodic testing of wastewater quality, ensuring discharge in compliance with regulatory standards.

Wastewater early warning systems

At Nanjing Site, we have deployed an online wastewater early-warning system for real-time monitoring, with pollutant thresholds set below discharge standards. When wastewater exceeds the thresholds, the system triggers alerts and notifies the EHS team via an application, enabling a swift response to maintain compliant wastewater discharge.

To minimize wastewater discharge during operations, we have enhanced management practices across the entire process from generation to treatment, and closely tracked the effectiveness of wastewater treatment.



Generation

- Implement stricter controls during production to reduce wastewater generation at source

Treatment

- Improve wastewater treatment processes and treatment technologies
- Deploy an online monitoring system to monitor water quality and prevent leaks during production

Wastewater treatment upgrading project

We upgraded wastewater management infrastructure at Zhenjiang Site to meet stricter local standards, reducing COD limits from 500 mg/L to 60 mg/L.

Key improvements include installing a membrane bioreactor (MBR) system for higher sludge concentration, optimizing MBR zones for COD and ammonia nitrogen removal, and using dissolved air flotation with chemicals dosing for total phosphorus compliance. These upgrades are expected to cut annual discharge by approximately 190 tons of COD, 10 tons of ammonia nitrogen, 15 tons of total nitrogen, and 3 tons of total phosphorus, significantly reducing pollutant discharge and protecting natural water bodies.

Wastewater Discharge Indicators

Indicators		Unit	2024
Wastewater	Total discharge of wastewater	tons	776,112.86
	COD emissions	tons	32.49
	Ammonia nitrogen emissions	tons	1.37

Air Emissions Management

To ensure effective exhaust gas management, we have implemented the *Operation and Maintenance Procedures for Exhaust Gas Treatment Facilities*. The procedures focus on major air emissions, including volatile organic compounds (VOCs), acid mist, hydrogen sulfide (H_2S), ammonia (NH_3), nitrogen oxides (NOx), sulfur oxides (SOx), and particular matter (PM) generated during R&D and production.

In 2024, we optimized processes, upgraded steam facilities, and enhanced online monitoring systems to effectively manage air emissions.

Organic dust control project in solid facilities

Considering the risks of dust leaks and high energy consumption, we implemented dust control measures at Jinan Site. Our key actions included optimizing the method for conveying air and feeding locations, upgrading dust removal systems, and installing dust monitors. Additionally, we enhanced dust collection efficiency and strengthened fire and explosion measures for the cyclone separator in spray drying systems and unloading rotary vibrating screen. These actions have significantly improved the facility environment, eliminated fugitive dust emissions, and reduced PM levels to below 3 mg/m³, significantly lower than the standard limit of 8 mg/m³.

Transition from on-site boilers to municipal steam

We replaced boiler-generated steam with municipal steam at Zhenjiang Site, resulting in reductions in energy consumption and air pollution. By utilizing the newly established municipal steam pipelines within the local industrial park, we reduced reliance on on-site steam generation and natural gas. This transition led to a reduction of 0.9 tons of PM, 1.7 tons of SOx, and 3.3 tons of NOx emissions annually. Additionally, the project achieved an annual saving of approximately 9.3 million m³ of natural gas, reducing emissions by approximately 26,040 tCO_2e.

Installing new exhaust monitoring systems

In 2024, we intensified exhaust monitoring at Zhenjiang Site by installing nine online monitoring systems. This enables real-time tracking of exhaust pollutant concentrations to ensure ongoing compliance with emission standards.

Indicators		Unit	2024
Exhaust gas	NOx emissions	kg	9,032.47
	SOx emissions	kg	2,232.65
	PM emissions	kg	2,471.55
	VOC emissions	kg	5,289.11

Exhaust Gas Indicators

Waste Management

To ensure waste management compliance, we abide by applicable laws and regulations in all countries and regions where we operate. We have established a comprehensive management system throughout the entire life cycle of waste from generation and storage to disposal.



According to waste categorization principles, we have developed management strategies tailored for non-hazardous waste and hazardous waste. Additionally, we implement ongoing training on waste management and emergency response, enhancing environmental awareness among employees and contractors.

Generation	Optimize production processes and upgrade equipment to reduce waste generation at source
Storage	Install real-time monitors and deploy intelligent electronic management systems in warehouses to track the movements of waste
Disposal	Engage a qualified third party for disposal Transition from end-of-pipe treatment to resource recovery

In 2024, we strengthened waste management through process optimization and automation, leading to measurable improvements in waste reduction and resource recovery.

Automation process optimization project

At Zhenjiang Site, we optimized production processes by introducing continuous flow equipment to reduce reagent consumption and upgrading semi-automatic equipment to improve precision. This initiative can reduce approximately 10 tons of hazardous waste annually.

We established the *Hazardous Chemical Safety Management Policy*, outlining scrapping requirements for hazardous chemicals. In conjunction with the *Solid Waste Management Procedures*, we ensure strict control over chemicals throughout their life cycle from purchase and storage to use and disposal, minimizing their negative impact on the environment.



Optimizing processes and enhancing material efficiency

In 2024, through process optimization, improved material efficiency, and proactive pretreatment strategies, our protein and antibody production line reduced potential hazardous waste, achieving a 15% year-on-year reduction.

Small vector approach for oligo synthesis

In 2024, we developed small vectors for oligo synthesis, which reduced reagent usage and waste generation. By optimizing the vector plate size, assembly method, and synthesis procedures, we achieved a 28% reduction in reagents while reducing hazardous waste by 25,200 L annually.

Waste medium pretreatment project

Instead of direct third-party incineration, we pretreated culture media through a specialized water treatment process to meet discharge standards. This initiative reduced 300 tons of hazardous waste annually.

Waste Indicators

Indicators	Unit	2024
Total hazardous waste	tons	13,304.90
Hazardous waste intensity	tons/US$1 million	0.22
Total non-hazardous waste	tons	38,052.93
Non-hazardous waste intensity	tons/US$1 million	0.64
Total waste recycled	tons	11,508.40

4.4

Addressing Climate Change

Climate change has become one of the most pressing global challenges, impacting both business operations and societal development. As a responsible corporate citizen, GenScript takes proactive and innovative measures to enhance operational resilience and address climate-related risks and opportunities.


Statement of Conformity CN25/00001888

SGS

Greenhouse Gas Verification Statement

The inventory of Greenhouse Gas emissions in 01 Jan. 2024 to 31 Dec. 2024 of

GENSCRIPT BIOTECH CORPORATION

Business address : 4th Floor, Harbour Place, 103 South Church Street, George Town, P.O. Box 10240, Grand Cayman KY1-1002, Cayman Islands

Organization boundary: Detail organization boundary information has been listed in Annex, for multi-site statement

has been verified in accordance with ISO 14064-3:2019 as meeting the requirements of

ISO 14064-1:2018

Direct Emissions [Category 1]
28,276.80 tonnes of CO2e
Indirect Emissions from Imported Energy [Category 2]
152,287.37 tonnes of CO2e (Location-Based)
114,034.62 tonnes of CO2e (Market-Based)
Indirect Emissions from Transportation [Category 3]
17,934.21 tonnes of CO2e
Indirect Emissions from Products Used by An Organization [Category 4]
310,277.45 tonnes of CO2e (Location-Based)
310,708.17 tonnes of CO2e (Market-Based)
Indirect Emissions Associated with The Use of Products from The Organization [Category 5]
50,370.14 tonnes of CO2e (Location-Based)
60,384.62 tonnes of CO2e (Market-Based)
Indirect Emissions from Other Sources [Category 6]
[no determined as non-significant indirect emissions and not quantified]
Total Emissions Quantified
539,253.97 tonnes of CO2e (Location-Based)
540,419.62 tonnes of CO2e (Market-Based)

Authorized by
David Wu
Sr. Director - Business Assurance
SGS-CSTC Ltd.
SGS-CSTC Standards Technical Services Co., Ltd.
168 Century Yuhui Mansion, No. 73 Fuxing Road, Beijing, P.R. CHINA 100142
t +86 (10) 6850 2888 www.sgsgroup.com.cn

SGS

This document is issued by the Company subject to its General Conditions of Certification service available on Terms and Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. The document is copyright protected and any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful.

Page 1 of 3

ISO 14064 certification

In 2024, we conducted carbon accounting across the Company and engaged a third-party certification body to verify our GHG emissions according to ISO 14064, which quantified emissions across our operations and value chain and informed targets and strategies for reducing our carbon footprint. With 2023 as the base year, our carbon reduction targets approved by the SBTi are as follows:

Near-term target:	Near-term target:	Long-term target:
Operations Emissions: Reduce Scope 1 and Scope 2 GHG emissions by 54.6% by 2033 (base year 2023).	Supplier Engagement: Engage suppliers representing 83% of total Scope 3 emissions to set science-based targets by 2029.	Net-Zero Emissions: Achieve net-zero emissions across Scope 1, Scope 2, and Scope 3 by 2050.

To pursue low-carbon transition, we have developed robust frameworks for climate risk and opportunity assessment, and implemented science-based strategies for climate change mitigation and adaptation.

Climate-Related Risks and Opportunities

Guided by the Task Force on Climate-related Financial Disclosures (TCFD) framework, we have systematically identified climate-related risks and opportunities and potential impacts on our operations. Through assessments of physical and transition risks and stakeholder engagement, with reference to industry best practices, we have developed specific action plans to address these challenges.

Risk Type	Potential Financial Impact	Response Strategy
Acute Physical Risks		
Typhoon	Potential damage to power and water infrastructure, disrupting operations and research activities	Implement a typhoon emergency plan and enhance resilience through advanced response systems
Extreme heat	Increased energy and water usage, impacting production, storage, and transportation efficiency	Proactively monitor weather patterns, conduct safety checks, and issue timely alerts to mitigate risks
Flood	Potential infrastructure damage and operational disruptions	Fortify infrastructure by installing flood barriers and improving drainage systems, and devise a robust supply chain contingency plan to ensure business continuity
Chronic Physical Risks		
Global warming	Higher cooling demand, leading to increased energy consumption and operational costs	Upgrade cooling systems for energy efficiency and ensure regular maintenance for optimal performance
Sea level rise	Threat to coastal facilities and potential damage to critical infrastructure	Conduct regular risk assessments and enhance adaptive measures to address rising sea level
Transition Risks - Policy and Legal Risks		
Stricter emissions reporting	Higher compliance costs for ESG reporting and transparency requirements	Regularly review and update disclosure practices to align with Hong Kong Stock Exchange and global ESG standards
Transition Risks - Technology Risks		
Low-Carbon transition costs	Higher R&D and operational costs for adopting low-carbon technologies	Prioritize energy-efficient equipment and integrate renewable energy sources to reduce carbon footprint
Reliability risks of green technologies	Uncertainty in the reliability of green production technologies	Collaborate with industry experts and pilot new technologies to ensure scalability and effectiveness
Transition Risks - Market Risks		
Shifting customer preferences	Loss of market share due to rising demand for green products	Develop sustainable products, measure carbon footprint, and align offerings with customer preferences
Market trend uncertainty	Impact on research focus and market dynamics	Continuously monitor market trends and adapt business strategies to remain competitive
Transition Risks - Reputation Risks		
Failure to meet stakeholder expectations	Damage to brand reputation	Provide detailed climate-related disclosures in ESG reports and improve ESG governance to meet stakeholder expectations.

Opportunity Type	Description	Financial Impact	Response Strategy
Resource efficiency	Implement more efficient production processes and recycle resources	Improve efficiency to reduce operating costs, increase capacity, and grow revenue	Optimize production processes, adopt low-carbon resources, and upgrade operational technologies
Energy sources	Transition to renewable energy such as wind, solar and hydropower in line with global net-zero goals	Reduce reliance on fossil fuels, lower energy costs, and cut GHG emissions	Install photovoltaic systems, purchase green electricity, and increase clean energy usage
Products and services	Develop climate adaptation plans and launch low-carbon products to enhance competitiveness	Enhance market presence and create new revenue streams through innovative offerings	Design sustainable production processes, develop low-carbon products, and offer eco-friendly solutions
Markets	Explore new collaborations to unlock financing and growth opportunities	Identify new business opportunities and expand into markets with strict carbon regulations	Partner with value chain stakeholders and offer climate-adaptive products and services
Resilience	Strengthen resilience across value chain, including long-lived fixed assets, supply and distribution networks, and critical dependencies on utilities, infrastructure, and natural resources	Optimize resource use to lower expenses, avoid fines through regulatory adaptation, attract investment by demonstrating resilience, and ensure supply chain continuity to minimize revenue losses	Strengthen supply chain resilience, upgrade infrastructure, optimize resource management, enhance distribution networks, and secure green financing to build climate resilience

▲ **Climate-Related Opportunities**

◀ **Climate-Related Risks and Potential Impact**

Climate Change Emergency Preparedness



To better address climate-related challenges and enhance our adaptation to climate change, we have established an emergency management system by mitigating extreme weather risks, ensuring personnel safety, maintaining operational continuity, and building climate resilience.

Emergency plans	We have extreme weather response plans and inspection protocols in place, informed by lessons learned from emergency drills to improve preparedness.
Early warning system	We upgraded alert mechanisms for heatwaves, heavy rain, flooding, and cold snaps to ensure timely and effective responses.
Training programs	We provided training on heatstroke prevention, flood response, and cold weather protection to equip staff with necessary skills.
Resource preparedness	We maintained emergency supply inventories and implemented rigorous inspections to ensure operational readiness.
Operational resilience	We established proactive planning and rapid response mechanisms to safeguard personnel and maintain uninterrupted operations.



Contributing to Communities

05

At GenScript, we believe that our success is intertwined with the well-being of the communities we serve. As a global biotechnology company, we recognize the profound impact that our actions can have on society and the environment. Our ongoing efforts to give back through charitable initiatives, community outreach, and industry engagement are central to our mission. We are committed to creating positive change and fostering a sustainable future for all.

Contributing to the UN SDGs



Chapter Content

Charitable Initiatives 76
Industry Engagement 79

5.1

Charitable Initiatives

We prioritize supporting causes that align with our values and mission, focusing on health, education, and environmental sustainability. Through volunteer services and donations, we aim to make a tangible difference in the lives of those in need. In 2024, the Company contributed a total of US$352,763 to various charitable causes.

GenScript Volunteer Program

Aligned with our corporate mission, we launched a global corporate responsibility platform — GenTeer (GenScript Volunteer) in 2024. GenTeer is designed to engage employees in volunteer services that address critical social issues such as environmental protection, support for vulnerable groups, education, healthcare, and social equity.



By establishing global volunteer teams, we have mobilized employees across the U.S., China, France, Spain, Japan, South Korea, India, and Singapore. Our global volunteer teams tailored their action plans to local needs, using our core expertise. By engaging our employees as ambassadors of philanthropy, we have expanded our reach to include customers, partners, and family members, amplifying the impact of our efforts.

In 2024, we launched 51 volunteer campaigns, contributing a total of 1,408 volunteer hours and engaging 406 participants. These initiatives spanned various causes, from environmental conservation and community support to educational outreach.

GenScript's volunteer services

Environmental conservation



New Jersey team cared for trees at Willowwood Arboretum, protecting local natural vegetation.



Seattle team pruned trees to maintain trails in St Edward State Park



Beijing team cleaned litters in Olympics Forest Park

Community support



New Jersey team joined "Hands of hope community soup kitchen" initiative, distributing food to those in need.



Seattle team joined "Run of Hope Seattle" program, raising money by running for pediatric cancer research.



Asia-Pacific team worked with The Salvation Army to raise donations for children, the elderly and people with disabilities.

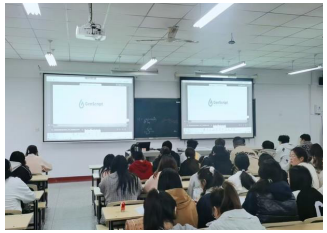


GenScript and the Amity Foundation co-sponsored a charity bazaar to sell donated items and support physically challenged people.

Educational outreach



Nanjing team organized a science outreach program, promoting understand of the Nobel Prize in Physiology among primary and middle school students.



Zhenjiang team partnered with local universities to offer specialized courses for college students, covering eight critical areas within the biotechnology field.

Community Outreach

GenScript is committed to enhancing community well-being through concrete actions. By organizing various cultural and sports events, we show care for the community and forge stronger connections, making a positive impact.

Breast cancer awareness campaign: driving change and support

In October 2024, GenScript joined the Breast Cancer Awareness Month by launching several initiatives in support of those affected by breast cancer. To empower our community with knowledge on emerging therapies, we share informative resources on current advancements in breast cancer research and treatment. This campaign reflects our dedication to community health and advocacy, uniting us in the fight against breast cancer.



Educational support for reading among children

In 2024, GenScript supported the Reading Action Plan for children through a donation to Dandangzhe Foundation, a non-profit organization committed to promoting educational equity. This initiative aims to expand reading opportunities in schools and communities and ensure that more children have access to high-quality reading experiences.

GenScript Nanjing Universities 100K Relay: empowering rare disease awareness

GenScript Nanjing Universities 100K Relay 2024 combined sports and charity by rolling out a charity run. The event aimed to raise awareness and support for patients with Epidermolysis Bullosa (EB), a rare genetic disorder. For every kilometer run by participants, GenScript donated about US$1.4 to support EB patients. The event also featured charity sales and stalls to engage participants and promote awareness. All proceeds were donated to the DEBRA Shanghai for essential care of EB patients. This initiative underscores GenScript's dedication to empowering rare disease communities through impactful engagement and charitable action.



5.2

Industry Engagement

At GenScript, we recognize that our impact extends beyond our operations and into the broader industry landscape. By working with industry partners, academic institutions, and regulators, we strive to solve complex challenges and create lasting value. Our commitment to giving back to society is deeply intertwined with our efforts to drive positive change across the biotechnology sector. Our industry engagement initiatives reflect our belief that collective action is essential for addressing global issues and building a more resilient future for all.

Development of Industry Standards

With over 20 years of dedication to the life science field, GenScript has played an important role in advancing industry standards, leveraging our technical expertise and experience to promote the standardization of the biopharmaceutical industry.

GenScript participated in the development of the *Guidelines for the Development of mRNA-LNP-Based Cell Immunotherapy Products*, which were released in September 2024. The guidelines provide a comprehensive framework for the core principles, organizational structure, personnel management, facility and equipment management, material management, process analysis, quality control and functional validation involved in cell immunotherapy development using mRNA-LNP technology, serving as a critical reference for the development and launch of new immunotherapy products.

Additionally, GenScript's subsidiaries acted as leading editors in drafting the *Technical Specifications for the Production of RNA-Based Biopharmaceutical Products*. The specifications are designed to standardize the application of RNA technology in biopharmaceutical products and enhance product quality and safety.

Industry Collaboration

True innovation and progress are achieved through collaboration. In 2024, we engaged with partners across the industry to explore cutting-edge technologies and market trends. By working closely with our partners, we aim to enhance our impact and contribute to the advancement of global health.

GenScript Biotech Global Forum



In 2024, GenScript Biotech Global Forum made its debut in London, showcasing cutting-edge advancements in cell and gene therapy. The event highlighted valuable insights into the current landscape and future potential of CGT, explored cutting-edge developments in gene therapy and mRNA vaccine research, and highlighted CMC challenges with developing and manufacturing CGT. The event underscored the importance of collaboration across the industry and called for collective efforts to drive the development of biotechnological solutions for healthcare.

During the 2025 J.P. Morgan Healthcare Conference, GenScript's 4th Global Forum brought together CGT pioneers and leaders to explore the "Challenges and Opportunities of Cell and Gene Therapy in the New Era". The forum featured enlightening keynotes from Thomas Whitehead, sharing the inspiring journey of his daughter Emily with innovative immunotherapy, Dr. Carl June discussing the scientific evolution of CAR-T technology, and Dr. Peter Marks outlining regulatory advancements at the FDA. Additionally, three panel discussions addressed pivotal topics including CGT market outlook, CGT challenges in biomanufacturing and supply chain management, and innovations in CGT, providing a comprehensive view of the industry's landscape and driving forces for future growth and collaboration.

GenScript Life Science Research Grant Program



In 2024, GenScript launched the Life Science Research Grant Program to catalyze innovation across diverse life science fields, including CGT development, antibody drug discovery, vaccine development, diagnostic development, and plant sciences research. The initiative empowers researchers by providing essential funding and access to cutting-edge technologies, enabling them to accelerate their work and drive transformative breakthroughs.

The program received over 800 applications from 71 countries and awarded 154 grants totaling over US$1.6 million to researchers globally. This represents a substantial contribution to scientific advancements.

GenScript sponsored iGEM 2024



Continuing our commitment to advancing synthetic biology, GenScript has supported International Genetically Engineered Machine (iGEM) competitions for 15 consecutive years since 2009. As a Partner Plus Sponsor of the 2024 iGEM competition, GenScript supported the next generation of innovators by offering a gene fragment giveaway to all 2024 iGEM teams and managing kit distribution, facilitating the development of innovative projects. As of the end of 2024, GenScript has supported over 90 iGEM teams.

GenScript sponsored Emily Whitehead Foundation



In 2024, GenScript sponsored the Emily Whitehead Foundation in its mission to advance the development of therapies to treat pediatric cancers. The foundation is dedicated to raising awareness and funding for innovative childhood cancer therapies, such as CAR-T cell therapy.

Through its sponsorship and participation, GenScript plays a vital role in supporting the Foundation's efforts to ensure that patients have access to life-changing therapies and support throughout their treatment.

List of Laws and Regulations

Chapter	Laws and Regulations
Improving Governance	U.S. Foreign Corrupt Practices Act
	U.S. Federal Trade Commission Act
	UK Bribery Act 2010
	Anti-Unfair Competition Law of the People's Republic of China
	Anti-Monopoly Law of the People's Republic of China
	Company Law of the People's Republic of China
	Criminal Law of the People's Republic of China
Enabling Our Clients	EU Guidelines for Good Manufacturing Practice
	EU General Data Protection Regulation
	UK Data Protection Act 2018
	U.S. FDA 21 CFR Part 211
	U.S. Animal Welfare Act
	U.S. Guide for the Care and Use of Laboratory Animals
	AVMA Guidelines on Euthanasia: 2020 Edition
	U.S. Health Research Extension Act
	U.S. Title 35 of the United States Code – Patents
	U.S. Data Protection Act
	U.S. 15 U.S. Code Chapter 22 – Trademarks
	Good Manufacturing Practice for Drugs (2010 Revision)

Chapter	Laws and Regulations
Enabling Our Clients	Good Pharmacovigilance Practice
	Good Clinical Practice
	Biosafety Law of the People's Republic of China
	Regulations on the Administration of Laboratory Animals
	Patent Law of the People's Republic of China
	Trademark Law of the People's Republic of China
	Copyright Law of the People's Republic of China
	Hong Kong Patents Ordinance of 27 June 1997
	Hong Kong Trade Marks Ordinance Cap. 559
	Civil Code of the People's Republic of China
	Cyber Security Law of the People's Republic of China
	Data Security Law of the People's Republic of China
Empowering Our Employees	U.S. Equal Employment Opportunity Commission
	U.S. Fair Labor Standards Act
	U.S. Employee Rights for Workers with Disabilities Paid at Special Minimum Wages
	U.S. Pay Transparency Nondiscrimination Provision
	Singapore Tripartite Guidelines on Fair Employment Practices
	European Labour Law
	Labor Law of the People's Republic of China
	Labor Contract Law of the People's Republic of China
	Law of the People's Republic of China on the Protection of Minors

Chapter	Laws and Regulations
Preserving Our Environment	U.S. Clean Air Act
	U.S. Solid Waste Disposal Act
	U.S. Clean Water Act
	U.S. Energy Policy Act of 2005
	Law of the People's Republic of China on Environmental Protection
	Law of the People's Republic of China on Energy Conservation
	Law of the People's Republic of China on the Prevention and Control of Water Pollution
	Law of the People's Republic of China on the Prevention and Control of Air Pollution
	Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes

ESG Key Performance Indicators

Social Indicators[8]

Indicators		Unit	2023	2024
Employment				
Total number of employees		/	6,937	5,568
By Employment type	Full-time	/	6,933	5,566
	Part-time	/	4	2
By gender	Male	/	2,962	2,311
	Female	/	3,975	3,257
By age	Under 31	/	3,486	2,955
	31-50	/	3,164	2,492
	Over 50	/	287	121
By region	Asia	/	5,251	5,062
	Americas	/	1,359	435
	Europe and others	/	327	71

[8] Unless otherwise specified, the social indicators in 2023 include data from GenScript's subsidiary, Legend Biotech. Due to the deconsolidation of Legend Biotech, all social indicators in 2024 exclude data from Legend Biotech.

Indicators		Unit	2023	2024
By job level	Senior management level	/	381	194
	Middle management level[9]	/	725	219
	Primary management level[9]	/	/	321
	Non-management level	/	5,831	4,834
Employee turnover rate		%	9.00%	8.67%
By gender	Male	%	9.90%	9.22%
	Female	%	8.40%	8.29%
By age	Under 31	%	11.30%	10.86%
	31-50	%	6.80%	5.98%
	Over 50	%	6.30%	10.74%
By region	Asia	%	8.90%	7.92%
	Americas	%	9.90%	15.63%
	Europe and others	%	8.00%	19.72%
By job level	Senior management level	%	/	7.22%
	Middle management level	%	/	6.85%
	Primary management level	%	/	2.80%
	Non-management level	%	/	9.21%

[9] We have updated the classification of job levels by dividing the middle management into the primary management and the middle management.

Indicators		Unit	2023	2024
Total number of employees		/	/	965
By gender	Male	/	/	437
	Female	/	/	528
By age	Under 31	/	/	665
	31-50	/	/	281
	Over 50	/	/	19
Employee Engagement				
By age	Percentage of the total workforce across all locations who are covered by employee satisfaction survey	%	100%	100%
	Employee satisfaction target	%	/	100%
	Employee satisfaction	%	90%	90.2%

Indicators		Unit	2023	2024
Health and safety				
Lost days due to work injury	2024	Days	298	330
Number of work-related fatalities	2022	/	0	0
	2023	/	0	0
	2024	/	0	0
Rate of work-related fatalities	2022	%	0%	0%
	2023	%	0%	0%
	2024	%	0%	0%
Percentage of manufacturing sites covered by health and safety risk assessments		%	100%	100%
Number of health and safety training sessions		/	236	673
Number of employees trained on health and safety		/	6,937	5,568
Percentage of employees trained on health and safety		%	100%	100%
Total health and safety training hours		Hour	105,880.50	132,475.25
Lost time injury incident rate for direct workforce[10]		/	0.99	1.71
Lost time injury severity rate for direct workforce		/	0.04	0.04
Total working hours		Hour	5,040,329	9,365,139.47
Percentage of employees across all locations covered by the Work Safety Committee		%	100%	100%

[10] The scope has been updated to include Zhenjiang, Jinan, and Shanghai sites in 2024.

Indicators		Unit	2023	2024
Development and training				
Number of employees trained		/	6,937	5,568
Percentage of employees trained		%	100%	100%
By gender	Male	%	43%	41.5%
	Female	%	57%	58.5%
By job level	Senior management level	%	6%	3.5%
	Middle management level	%	10%	3.9%
	Primary management level	%	/	5.8%
	Non-management level	%	84%	86.8%
Total training hours of employees		Hour	127,462	170,349
Average training hours per employee		Hour	18.00	30.59
By gender	Male	Hour	16.00	28.90
	Female	Hour	20.00	31.80
By job level	Senior management level	Hour	5.00	30.79
	Middle management level	Hour	11.00	30.90
	Primary management level	Hour	/	38.04
	Non-management level	Hour	20.00	30.08

Indicators	Unit	2023	2024
Training spending	US$	561,923	562,340
Number of career development training sessions	/	195	204
Percentage of employees who have received performance and career development reviews	%	100%	100%
Percentage of employees who received multidimensional performance appraisal	%	/	100%
Number of internal hires	/	132	127
Percentage of internal hires	%	1.90%	2.3%
Number of child or forced labor inspections	/	112	155
Labor standards			
Number of incidents of child or forced labor	/	0	0
Total number of employees covered by formal collective agreements on working conditions	/	5,442	5,568
Percentage of employees across all locations covered by formal collective agreements on working conditions	%	100%	100%
Percentage of employees across all locations covered by formally-elected employee representatives	%	100%	100%
Diversity, equality and inclusion			
Percentage of women employed	%	57.30%	58.49%
Percentage of women within the organization's board	%	15.38%	8.33%
Percentage of women in managerial positions	%	46.00%	47.96%

Indicators	Unit	2023	2024
Precentage of women in junior management positions	%	/	54.52%
Precentage of women in middle-level management positions	%	/	42.47%
Percentage of women in top executive positions	%	41.0%	43.3%
Precentage of women in STEM-related positions (as % of total STEM positions)	%	/	56.11%
Precentage of women in management positions in revenue-generating functions (e.g. sales) as % of all such managers (i.e. excluding support functions such as HR, IT, Legal, etc.)	%	/	47.05%
Number of employees from a minority group	/	487	166
Percentage of employees from a minority group	%	7.02%	3.0%
Total number of employees from a vulnerable group	/	29	117
Percentage of employees from a vulnerable group	%	0.42%	2.1%
Percentage of employees from a minority and/or vulnerable group	%	7.44%	5.1%
Number of employees from a minority group at top management level (excluding the Board of Directors)	/	57	62
Percentage of employees from a minority group at top management level (excluding members of the Board of Directors)	%	14.96%	32.00%
Number of employees from a vulnerable group at top management level (excluding members of the Board of Directors)	/	7	20
Percentage of employees from a vulnerable group at top management level (excluding members of the Board of Directors)	%	1.84%	10.3%
Paid parental leave for the primary caregiver in excess of the minimum legal requirement	Weeks	/	32
Length of paid parental leave for the non-primary caregiver in excess of the minimum legal requirement	Weeks	/	0
Length of paid family or care leave beyond parental leave	Weeks	/	2

Indicators	Unit	2023	2024
Percentage of employees across all locations trained on diverity, discrimination and/or harassment	%	100%	100%
Number of operational sites that have been subject to human rights reviews or human rights impact assessments	/	29	16
Percentage of operational sites assessed for human rights impact or risks	%	100%	100%
Percentage of operational sites with a labor and human rights certification, such as ISO 45001, SCC, SA8000, Fair Wage Network, B Corp, GEEIS, WBENC	%	6%	6%
Supply Chain Management			
Total number of suppliers	/	1,733	2,000
Number of suppliers in Asia	/	1,500	1,728
Number of suppliers in Europe	/	60	90
Number of suppliers in Americas	/	173	182
Evaluation and development of strategically significant suppliers			
Total number of suppliers in Tier-1	/	/	1,645
Total number of significant suppliers in Tier-1	/	/	93
Total number of suppliers assessed via desk assessments/on-site assessments	/	/	1,645
Percentage of significant suppliers assessed	%	/	100%
Number of suppliers with substantial actual/potential negative impacts that were terminated	/	/	15
Total number of suppliers in capacity building programs	/	/	93
Percentage of unique significant suppliers in capacity building programs	%	/	100%

Indicators	Unit	2023	2024
Responsbile sourcing			
Percentage of targeted suppliers that have signed the Supplier Code of Conduct	%	95.7%	100%
Percentage of suppliers with contracts that include clauses on environmental, labor, and human rights	%	79.5%	82%
Percentage of targeted suppliers assessed on CSR	%	79.5%	100%
Percentage of targeted suppliers that have gone through a CSR on-site audit	%	2.0%	67.0%
Percentage of buyers trained on sustainable procurement	%	100%	100%
Percentage of audited suppliers engaged in corrective actions	%	44.7%	54.0%
Percentage of suppliers for which information regarding conflict minerals is available	%	79.5%	100%
Percentage of palm and/or palm-based products traceable to plantation	%	<0.1%	<0.1%
Percentage of certified palm and/or palm-based products	%	100%	100%
Product Responsibility			
Percentage of product recalls due to safety or health incidents occurred	%	0%	0%
Total amount of product recovered due to product discontinuation	/	0	0
Number of client health and safety incidents	/	0	0
Number of recalled products subjected to harmless disposal	/	/	0
Percentage of recalled products subjected to harmless disposal	%	/	0%
Number of collected and recycled waste products	/	/	0

Indicators	Unit	2023	2024
Number of inspections conducted to reduce consumer health and safety risks	/	/	248
Business Ethics and Anti-corruption			
Number of concluded legal cases regarding corrupt practices	/	0	0
Average training hours of Board members on anti-corruption	Hours	1.0	2
Average training hours of employees on anti-corruption	Hours	1.5	1
Percentage of Board members trained on anti-corruption	%	100%	100%
Percentage of employees trained on anti-corruption	%	100%	100%
Number of participants in anti-corruption training (including Board members and employees)	Person-times	7,571	6,378
Number of reports generated by the whistleblower procedure	/	6	11
Percentage of locations covered by internal audits/risk assessments on business ethics issues	%	100%	100%
Number of recognized information security incidents	/	15	7
Percentage of locations with ISO 27001 certified Information Security Management System (ISMS)	%	100%	100%
Number of discrimination and harassment incidents	/	/	0
Number of breaches related to customer privacy data	/	/	0
Total number of locations that have conducted internal audits/risk assessments on business ethics issues	/	/	16

Indicators	Unit	2023	2024
Total number of factories certified with ISO 27001	/	/	16
Percentage of risky trading partners covered by a due diligence process on corruption or information security	%	/	51%
Business Ethics and Anti-corruption			
Charitable contributions	US$	437,000	352,763

Environmental Indicators[11]

Indicators		Unit	2023	2024
Emissions				
Exhaust gas	NOx emissions	kg	8,602.12	9,032.47
	SOx emissions	kg	2,572.69	2,232.65
	Particulate matter emissions	kg	2,275.50	2,471.55
	VOC emissions	kg	6,393.62	5,289.11
Total weight of air pollutants		tons	19.84	19.03
Wastewater	Total discharge of wastewater	tons	1,113,301.33	776,112.86
	COD emissions	tons	31.13	32.49
	Ammonia nitrogen emissions	tons	2.81	1.37

[11] We have made retrospective changes to the data related to emissions, GHG emissions, waste, and use of resources in 2023 to align with the current reporting boundaries. The reporting scopes for 2023 and 2024 herein cover all global operational sites, excluding Legend Biotech.

Indicators		Unit	2023	2024
GHG emissions and intensity				
Exhaust gas	Scope 1 emissions	tCO_2e	48,821.78	39,376.80
	Scope 2 emissions - market-based	tCO_2e	83,758.36	114,034.82
	Scope 2 emissions - location-based	tCO_2e	83,758.36	112,287.37
	Total emissions (Scope 1 + Scope 2) emissions - market-based	tCO_2e	132,580.14	153,411.61
	Total emissions (Scope 1+ Scope 2) - location-based	tCO_2e	132,580.14	151,664.16
	Emissions intensity (Scope 1 + Scope 2)- market-based	tCO_2e/US$10,000	2.39	2.58
	Emissions intensity (Scope 1 + Scope 2) - location-based	tCO_2e/US$10,000	2.39	2.55
	Scope 3 emissions - market-based	tCO_2e	314,658.76	387,028.00
	Scope 3 emissions - location-based	tCO_2e	314,658.76	387,589.81
Total hazardous waste and intensity				
Hazardous waste	Total hazardous waste	tons	15,172.62	13,304.90
	Hazardous waste intensity	tons/US$10,000	0.27	0.22
Total non-hazardous waste and intensity				
Non-hazardous waste	Total non-hazardous waste	tons	30,355.18	38,052.93
	Non-hazardous waste intensity	tons/US$10,000	0.55	0.64

Indicators		Unit	2023	2024
Total waste recycled		tons	9,943.08	11,508.40
Percentage of total waste from company operations diverted from landfills		%	100%	100%
Use of Resources				
Direct and indirect energy consumption and intensity				
Direct energy	Natural gas[12]	m^3	5,635,601.59	1,781,149.88
	Diesel fuel	tons	27.85	35.92
	Gasoline	tons	41.17	54.07
	Renewable energy-solar Energy	kWh	249,268.00	627,030.00
	Direct energy consumption	tons of coal equivalent	7,625.66	2,575.30
	Direct energy consumption intensity	tons of coal equivalent/US$10,000	0.14	0.04
Indirect energy	Purchased steam[12]	tons	47,579.42	118,115.78
	Purchased electricity - green electricity	kWh	/	9,000,000.00
	Purchased electricity - excluding green electricity	kWh	121,902,696.18	134,221,454.74
	Total indirect energy consumption	tons of coal equivalent	21,100.55	32,791.61
	Indirect energy consumption intensity	tons of coal equivalent/US$10,000	0.38	0.55

[12] Changes in natural gas and steam consumption primarily result from our initiatives to improve the energy mix, including the transition from boiler-generated steam to municipal steam supply.

Indicators		Unit	2023	2024
Total energy consumption	Total energy consumption	tons of coal equivalent	28,726.21	35,366.90
	Total energy consumption intensity	tons of coal equivalent/US$10,000	0.52	0.59
Renewable energy consumption[13]		kWh	249,268.00	9,627,030.00
Percentage of total energy consumption from renewable sources		%	0.11%	3.35%
Water consumption and intensity				
Total water consumption		tons	1,617,573.00	1,237,196.00
Water consumption intensity		tons/US$10,000	29.17	20.81
Total packaging material used for finished products and intensity				
Packaging material type	Metal	tons	169.82	215.82
	Paper	tons	56.73	66.14
	Plastic	tons	715.41	977.65
Packaging material consumption		tons	941.96	1,259.61
Packaging material consumption intensity		tons/US$10,000	0.02	0.02
Packaging material savings		tons	15.41	24.11

[13] The increase in renewable energy consumption reflects our solar system optimization and green power procurement.

Indicators		Unit	2023	2024
Environment Management				
Energy, water or other resource savings achieved as a result of frugal product design	Water savings	tons	5,105.00	31,214.04
	Energy savings	MWh	971,293.02	2,853.01
Percentage of employees trained on environmental issues		%	100%	100%
Percentage of operational sites assessed on environmental risks		%	100%	100%
Percentage of operational sites with ISO14001 or other environmental certifications		%	10%	31%

HKEX ESG Reporting Guide Index

Subject Areas, Aspects, General Disclosures and KPIs			Index
A.Environmental			
Aspect A1: Emissions	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste. Note: Air emissions include NOx, SOx, and other pollutants regulated under national laws and regulations. Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. Hazardous wastes are those defined by national regulations.		4.3 Waste and Pollution Control
	A1.1	The types of emissions and respective emissions data.	4.3 Waste and Pollution Control
	A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	4.2 Resource Conservation
	A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	4.3 Waste and Pollution Control
	A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	4.3 Waste and Pollution Control
	A1.5	Description of emission target(s) set and steps taken to achieve them.	4.1 Environmental Management
	A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	4.3 Waste and Pollution Control

Subject Areas, Aspects, General Disclosures and KPIs			Index
Aspect A2: Use of Resources	General Disclosure Policies on the efficient use of resources, including energy, water and other raw materials. Note: Resources may be used in production, in storage, transportation, in buildings, electronic equipment, etc.		4.2 Resource Conservation
	A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas, or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	4.2 Resource Conservation
	A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	4.2 Resource Conservation
	A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	4.1 Environmental Management 4.2 Resource Conservation
	A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	4.1 Environmental Management 4.2 Resource Conservation
	A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	4.2 Resource Conservation
Aspect A3: The Environment and Natural Resources	General Disclosure Policies on minimising the issuer's significant impacts on the environment and natural resources.		4.1 Environmental Management
	A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	4.1 Environmental Management 4.2 Resource Conservation 4.3 Waste and Pollution Control 4.4 Addressing Climate Change
Aspect A4: Climate Change	General Disclosure Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.		4.4 Addressing Climate Change
	A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	4.4 Addressing Climate Change

Subject Areas, Aspects, General Disclosures and KPIs			Index
B.Social			
Employment and Labour Practices			
Aspect B1: Employment	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.		3.1 Diverse and Inclusive Workplace
	B1.1	Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region.	3.1 Diverse and Inclusive Workplace
	B1.2	Employee turnover rate by gender, age group and geographical region.	3.1 Diverse and Inclusive Workplace
Aspect B2: Health and Safety	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.		3.4 Occupational Health and Safety
	B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	3.4 Occupational Health and Safety
	B2.2	Lost days due to work injury.	3.4 Occupational Health and Safety
	B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	3.4 Occupational Health and Safety

Subject Areas, Aspects, General Disclosures and KPIs			Index
Aspect B3: Development and Training	General Disclosure Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities. Note: Training refers to vocational training. It may include internal and external courses paid by the employer.		3.2 Talent Development
	B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	3.2 Talent Development
	B3.2	The average training hours completed per employee by gender and employee category.	3.2 Talent Development
Aspect B4: Labour Standards	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labor.		3.1 Diverse and Inclusive Workplace
	B4.1	Description of measures to review employment practices to avoid child and forced labor.	3.1 Diverse and Inclusive Workplace
	B4.2	Description of steps taken to eliminate such practices when discovered.	3.1 Diverse and Inclusive Workplace
Operating Practices			
Aspect B5: Supply Chain Management	General Disclosure Policies on managing environmental and social risks of the supply chain.		2.3 Supply Chain Management
	B5.1	Number of suppliers by geographical region.	2.3 Supply Chain Management
	B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	2.3 Supply Chain Management
	B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	2.3 Supply Chain Management
	B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	2.3 Supply Chain Management

Subject Areas, Aspects, General Disclosures and KPIs			Index
Aspect B6: Product Responsibility	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.		2.1 Product Responsibility
	B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	2.1 Product Responsibility
	B6.2	Number of products and service related complaints received and how they are dealt with.	2.4 Service Excellence
	B6.3	Description of practices relating to observing and protecting intellectual property rights.	2.2 Innovation and R&D
	B6.4	Description of quality assurance process and recall procedures.	2.1 Product Responsibility
	B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	2.4 Service Excellence
Aspect B7: Anti-corruption	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.		1.1 Corporate Governance
	B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	1.1 Corporate Governance
	B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	1.1 Corporate Governance
	B7.3	Description of anti-corruption training provided to directors and staff.	1.1 Corporate Governance

Subject Areas, Aspects, General Disclosures and KPIs			Index
Community			
Aspect B8: Community Investment	General Disclosure Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.		5.1 Charitable Initiatives
	B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport).	5.1 Charitable Initiatives
	B8.2	Resources contributed (e.g. money or time) to the focus area.	5.1 Charitable Initiatives

