



2024

Bloomage Biotechnology Corporation Limited

Sustainability Report

Bloomage Biotechnology Corporation Limited

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About This Report



Report Introduction

This report is the second Sustainability Report (hereinafter referred to as "this Report") released by Bloomage Biotechnology Corporation Limited (hereinafter referred to as "Bloomage Biotech", "the Group", "the Company" or "We"), following four consecutive annual Corporate Social Responsibility (CSR) reports since the Company's listing in 2019. This report discloses information pertinent to the Company's sustainable development and fulfilment of social responsibilities.



Report Scope

This Report covers Bloomage Biotechnology Corporation Limited together with its subsidiaries, in line with the reporting period covered in Bloomage Biotech's Annual Report, unless specifically stated otherwise. The reporting period of this Report spans from 1 January 2024 to 31 December 2024. To ensure continuity, integrity and comparability, certain content extends beyond the scope mentioned above, with detailed explanations provided within the report.



Basis of Compilation

Self-Regulatory Guidelines for Listed Companies of the Shanghai Stock Exchange No. 14 - Sustainability Reporting (for Trial Implementation)', with reference to the standards of the *GRI Sustainability Reporting Standards* (hereinafter referred to as the "*GRI Standards*") issued by the Global Commission, *International Financial Reporting Standard on Sustainability Disclosure 1 - General Requirements for Disclosure of Sustainability-Related Financial Information* ("*IFRS S1*"), the *Framework Recommendations of International Financial Reporting Standard on Sustainability Disclosure 2 - Climate-Related Disclosure* ("*IFRS S2*"), the United Nations Sustainable Development Goals (SDGs), the Ten Principles of the United Nations Global Compact (UNGC) ("the Ten Principles of the UNGC"), issues monitored by Morgan Stanley Capital International ESG Ratings (MSCI), and issues monitored by EcoVadis Ratings. For readers' convenience, a comprehensive index is provided in the appendix for easy reference.



Data Sources

All information presented in this report originates from internal official documents, statistical reports, third-party questionnaires and surveys, and relevant public sources within Bloomage Biotech. Financial data is meticulously sourced from the Company's annual reports, with all monetary amounts denoted in Chinese Renminbi (RMB) unless explicitly stated otherwise.



Board Statement

This report has been deliberated and approved by the Board of Directors of Bloomage Biotech. The Board of Directors solemnly assures that there are no falsifications or misleading statements within this report, and assumes full accountability for the truthfulness, accuracy and completeness of its content.



Report Release

Both a Simplified Chinese and English version of this report will be officially published. In case of any ambiguity, the Simplified Chinese version shall take precedence.

Electronic copies of this report in both Chinese and English are readily accessible through the Company's official website and the Shanghai Stock Exchange's website:

<https://www.bloomagebiotech.com/>

<http://www.sse.com.cn/>



Feedback

For inquiries or feedback regarding this report and its contents, you are welcome to reach out through the following contacts:

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华熙国际中心
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Chairwoman and CEO's Message

To Our Esteemed Stakeholders,

In 2024, Bloomage Biotech was deeply committed to sustainable development. We made remarkable progress in ESG management and entered a new stage of development. To comprehensively showcase our management philosophy, guiding principles, strategic vision, and dedication to social responsibility, we're proud to present our second annual Sustainability Report. We sincerely invite you to read this report. On behalf of Bloomage Biotech, I express our deepest gratitude for your attention and support.

Sustainable development has become a global consensus, and ESG serves as a crucial language for Chinese enterprises to communicate with the global market. As a globally influential biotechnology company, Bloomage Biotech, driven by a strong sense of social responsibility, has integrated sustainable development into its corporate strategy. We have carefully implemented it across all aspects of our operations, ensuring the Company's healthy, long-term growth while contributing to the future of our planet and the sustainable development of human society.

In 2024, the global landscape was marked by volatility, with domestic and international economies facing formidable challenges and consumer demand remaining subdued. These numerous uncertainties posed substantial obstacles to business development. However, challenges and opportunities coexist, and change is the only constant. Confronting dynamic challenges, Bloomage Biotech spearheaded sustainable innovation and resilient adaptation. We made every effort to promote and implement various management transformation initiatives, including the establishment of an ESG management system. This has enhanced our operational resilience and efficiency, fostering a healthier organization and enabling the growth and development of our talent.

Science and technology form the cornerstone of Bloomage Biotech's development. **Starting with frontier research in basic biology, particularly in glycobiology and cell biology, we harness the power of synthetic biology to drive industrial transformation. We have established an end-to-end value chain for biomaterials, cover-**

ing upstream R&D, industrial solutions, and brand building. Leveraging our strengths in R&D innovation, result transformation, and market expansion, we are advancing the development of the biotechnology and broader health industries. We provide high-quality, efficient life-health products and services globally, delivering health, well-being, and opportunities to more people. In the past year, Bloomage Biotech has reached several significant milestones. We officially opened the world's first Bio-Manufacturing 5.0 Science and Technology Museum in Tianjin; we established our health food headquarters in Hangzhou, expanding our influence in the large-scale health sector. The commissioning of our pharmaceutical-grade pilot-scale results transformation workshop has established the world's largest platform for this purpose. Our Xiangtan production base has officially begun operations, marking a new phase in the development of our medical terminal business. By integrating cross-disciplinary technologies like AI and microfluidics, we have developed personalized production equipment and introduced customized skincare services. These innovations provide consumers with precise solutions for skin health.

Low-carbon and green development is the inevitable path for Bloomage Biotech. **We base our efforts on the entire product lifecycle, covering R&D, procurement, production, and sales. We are committed to promoting the green and low-carbon transition.** In the past year, we successfully initiated greenhouse gas Scope 3 accounting and product lifecycle assessment (LCA) for the first time, establishing a robust data foundation for emission reduction. We continued to optimize our production processes, consistently reducing energy and

resource consumption. We actively participated in green power market-based trading, introduced biomass heat energy, and effectively decreased our reliance on fossil fuels. We continuously improved our product packaging designs to facilitate multiple uses and recycling. Furthermore, we enhanced our digital energy management platform and environmental data management platform, significantly improving our low-carbon and green data management capabilities. In line with our strategic vision, we have established clear pathways and targets for carbon emission reduction by 2030, fully integrating these goals into our performance management system to ensure the comprehensive implementation of our low-carbon transformation.

At Bloomage Biotech, we remain committed to creating a win-win situation for all stakeholders. **We strictly adhere to compliant operations, uphold high-standard business ethics, safeguard employees' rights and interests, fulfill our social responsibilities, address stakeholders' concerns, and protect the interests of all parties.** In the past year, Bloomage Biotech officially joined the United Nations Global Compact (UNGC), promoting the sustainable development of both our company and the entire industry. We strengthened our compliance, risk management, and audit monitoring systems, obtaining ISO 37301 and ISO 37001 management system certifications. We adhere to a people-centered approach and have become a signatory to the United Nations *Women's Empowerment Principles (WEPs)*. By optimizing our human resources system, we have created a fair, safe, and healthy working environment that supports employees' growth and development. In addition, we have established a supplier ESG management mechanism. This mechanism strengthens cooperation with suppliers in areas such as business ethics, environmental protection, and labor rights, promoting high-quality development. Furthermore, for the 14th consecutive year, we have carried out the "In Cloud" Public Welfare campaign, contributing to the inheritance of national culture, rural development, and the improvement of more people's lives.

We firmly believe that in future development, enterprises must place greater emphasis on integrating economic, environmental, and social values, aligning profit-seeking with righteousness. Looking ahead, Bloomage Biotech will continue to uphold the concept of sustainable development, further enhance our ESG management capabilities, and resolutely advance our sustainable development strategy. We are committed to creating greater value and contributing to the development of society at large.

Chairwoman and CEO
of Bloomage Biotech
Zhao Yan



About Bloomage Biotech

Company Overview

Established in 2000 and publicly listed on the A-share Science and Technology Innovation Board (Stock Code: 688363. SH) in November 2019, Bloomage Biotech is a biotechnology company propelled by innovation in synthetic biology and a platform company for the whole industrial chain of biological materials, dedicated to improving people's quality of life by creating healthier experiences with a mission of "Let every life be alive".

The R&D and business layout of Bloomage Biotech is based on the understanding of aging, and the essence of all aging is cellular aging, so the Company starts from the basic research of biology, focuses on two basic disciplines of glycobiology and cell biology, and relies on the advantages of industrial transformation in the field of synthetic biology, to provide scientific solutions for life and health, including cellular regulation-grade raw materials, medical end-products, translational dermatology innovation products and nutritional science innovation translation business, through biotechnology to achieve anti-aging intervention and regeneration to extend the healthy life, leading the new era of cellular anti-aging, and truly achieving "let every life be alive".

Embracing the development logic of "science to technology, to product, to branding", Scientific and technological innovation forms the foundational bedrock of Huaxi Bio's enterprise development, anchored in fundamental and applied research. The company's business model comes from its three core capabilities, the first most core and bottom support is the R&D innovation capability; the second is the results conversion capability; the third is the market conversion capability. We have built a biomaterials all-chain conversion path, which opens up the whole process from material discovery, to product conversion and product development, and thus we are able to take the business of B-B, B-B-C and B-C to serve companies and consumers around the world.

In the future, Bloomage Biotech will always adhere to the long-termism, holding an open and embracing attitude to create more 'healthy, beautiful and happy' life experiences with all industry chain partners, and promote the development of the global life science and technology industry.

Major Honors of the Year

In recent years, Bloomage Biotech has won the second prize of National Science and Technology Progress Award, National Enterprise Technology Centre, National Manufacturing Individual Champion Demonstration Enterprise, National Green Factory, China Patent Gold Medal, First Prize of Shandong Province Science and Technology Progress Award, Shandong Province Governor's Quality Prize, and other national and provincial honours, as well as several national association honours such as Science and Technology Prize of China Association for the Food Industry, China Association of Technology Markets' Golden Bridge Prize, and China Good Technology (China Productivity Promotion Centre) and many other national association honours.

In 2024, Bloomage Biotech continues to communicate with the government, industry associations, research institutions, media and other related parties to maintain a good relationship, and jointly promotes the industry and even the society to the good development of the Company harvested a number of honours and awards, some of the honours are as follows:

Honours received by Bloomage Biotech in 2024 (partial)

Included in the All-China Federation of Industry and Commerce's list of 500 private enterprises with invention patents in 2024
All-China Federation of Industry and Commerce

Received "A" in the rating of companies listed on the Science and Technology Board (2023-2024)
Shanghai Stock Exchange

National March 8 Red Flag Collective
All-China Women's Federation (PRC, established 1949)

Listed Company Board Best Practice Cases 2024, Sustainability Best Practice Cases 2024
China Listed Companies Association

Demonstration project on innovation and application of new materials in Shandong Province (innovation platform demonstration project)
Department of Industry and Information Technology of Shandong Province

Selected for the 'China Good Technology' Project Pool
China Association of Productivity Promotion Centre

2024 Water Conservation Incentive Second Prize of Jinan City
Jinan Urban and Rural Water Bureau

China's 500 Most Valuable Brands 2024
World Brand Lab

The 26th 'Golden Trust and Disclosure Award' for Listed Companies
China Securities Journal

Top 10 Innovative Biotech Companies of 2024
China Times

01

Sustainable Development Management

Bloomage Biotech has joined the United Nations Global Compact (UNGC) and become a global signatory to the United Nations Women's Empowerment Principles (WEPs). We are accelerating the integration of sustainable development principles into our business operations and systematically advancing our ESG management initiatives. By optimizing our ESG management system, formulating comprehensive ESG strategic plans, fostering communication and collaboration among stakeholders, and enhancing our focus on material issues, we are steadily elevating the quality of our ESG management.



Sustainable Development Management System

Sustainable Development Management Framework

Bloomage Biotech has established a top-down ESG governance structure and an effective ESG management mechanism. This enables the Company to synergistically promote ESG management practices in a multi-faceted manner and among multiple departments.

Bloomage Biotech's ESG Management and Governance Structure

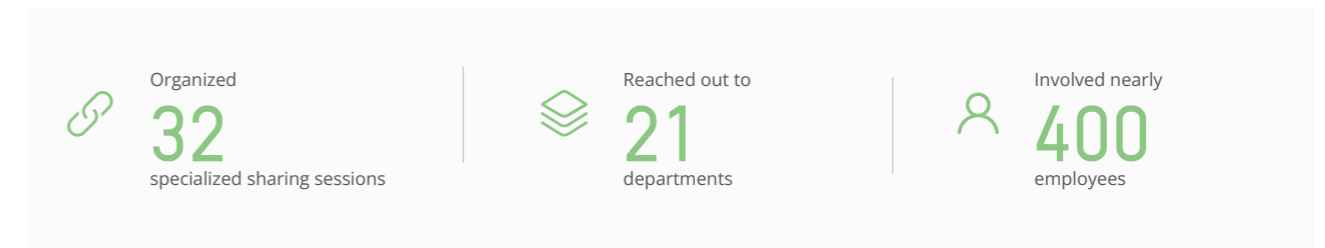


- Board of Directors**
 - The Board of Directors is responsible for overseeing and coordinating all ESG-related matters. It reviews and approves relevant recommendations from the ESG Committee, ensuring that the Company implements sustainable development principles from top to bottom while integrating ESG management into business decision-making processes
- ESG Committee**
 - The ESG Committee, supervised by the Board of Directors and chaired by independent director Cao Fuguo, oversees ESG-related affairs. Established and supervised under the Board of Directors, the ESG Committee reports to the Board of Directors and aims to achieve high-quality sustainable development for the Company, which also deliberates on ESG-related matters and provides regular reports to the Board
- ESG Management Center**
 - Tasked with overseeing the Company's ESG management, including establishing the ESG management system, assessing ESG risks, formulating ESG strategic plans, facilitating the implementation of key ESG initiatives, evaluating and optimizing key ESG indicators, and managing ESG communication and disclosure. The center reports annually to the ESG Committee on its achievements of the year and future plans, receiving guidance and supervision from the Committee
- ESG Working Groups**
 - Additionally, dedicated ESG working groups have been established within each business line, production base, and functional department. These teams, consisting of fixed personnel, are responsible for managing and executing all ESG-related tasks

In 2024, both the Company's Board of Directors and the ESG Committee conducted one review of ESG initiatives each, while the Chairwoman and CEO reviewed these initiatives three times. The review encompassed significant areas such as ESG management system, sustainable development strategy, low-carbon transformation plan, supplier ESG management system, digital ESG management, sustainable corporate culture development, and information disclosure practices. Furthermore, the Company's management has approved a key plan for its 2025 ESG projects. This comprehensive plan includes various aspects such as supplier engagement in terms of their own sustainability practices, environmental impact assessment throughout product life cycles, development of organizational capabilities for sustainable growth, optimization of our overall ESG management system.

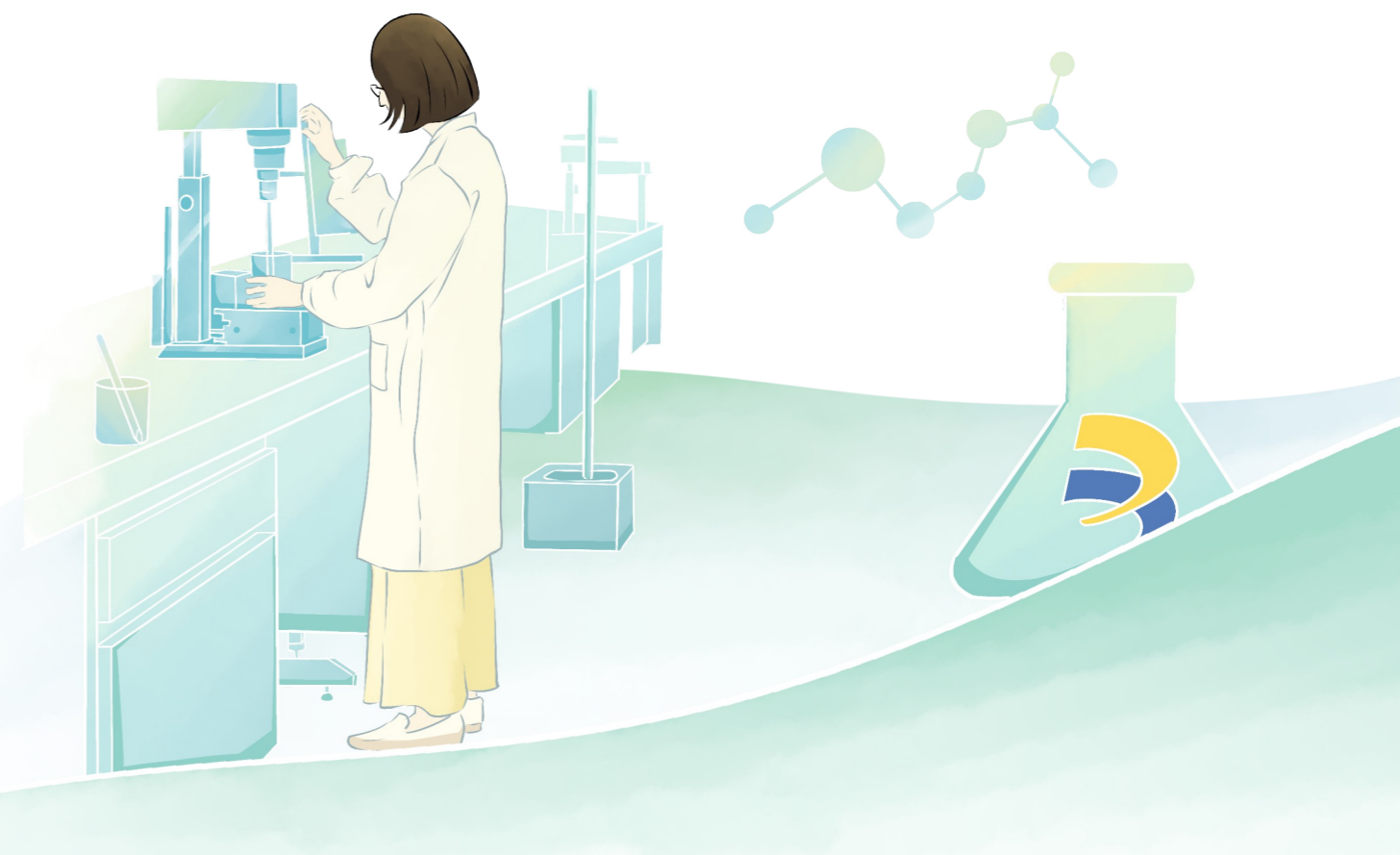
Building a Sustainability Culture

Bloomage Biotech places significant emphasis on fostering employees' awareness of sustainable development and enhancing their capabilities in this area. In 2024, the Company organized 32 specialized sharing sessions that covered ESG concepts, policies, industry trends, and professional skills. These sessions reached out to 21 departments and involved nearly 400 employees. Moreover, the Company has been actively promoting initiatives focused on green office practices and low-carbon living. Employees are encouraged to take personal responsibility by practicing sustainable development in their daily lives. For example, the Company organized awareness-raising campaigns during key observances including the International Day for Biological Diversity and World Environment Day. Furthermore, an ESG literacy initiative was launched enterprise-wide. Interactive quizzes were used to deepen employees' understanding of sustainability principles and practices.



Sustainability Performance Management

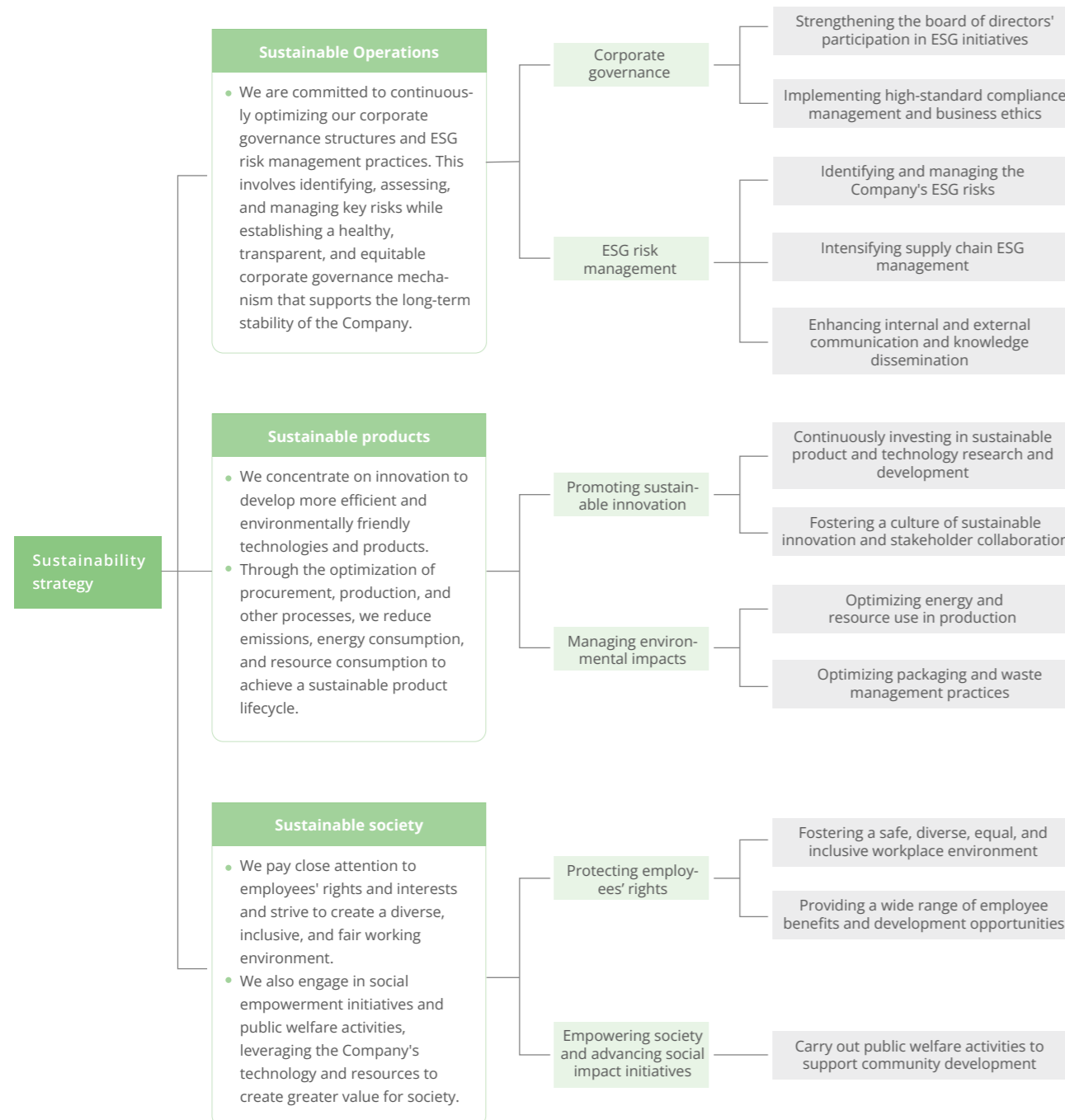
In 2024, Bloomage Biotech integrated ESG performance requirements into the performance evaluations of relevant senior executives and departments to ensure the effective implementation of our sustainable development initiatives. The Company assigned a specific weight to ESG performance within the annual Personal Business Commitment for senior executives, department heads, and relevant personnel. Evaluations were conducted based on two key aspects: the effectiveness of management improvements and the completion status of key projects. The assessment results directly influence the performance ratings of these individuals, which subsequently affect their salary and bonus determinations.



Sustainability Strategy

Guided by our strategic vision, Bloomage Biotech implements a high-quality development model that considers the interests of multiple stakeholders, integrates green concepts, and enhances social welfare. We focus on three core pillars: sustainable operations, sustainable society, and sustainable products. By centering our efforts around six key areas—corporate governance, ESG risk management, sustainable innovation, environmental impact management, protection of employees' rights and interests, and social empowerment through philanthropy—we establish a series of management indicators and objectives. Conducting our operations in a systematic, scientific, and rational manner strengthens our operational resilience and enhances our ability to adapt to future developments.

Bloomage Biotech's Strategic Framework for Sustainable Development



Stakeholders Engagement

Bloomage Biotech earnestly listens to the ESG concerns of various stakeholders, including regulatory authorities, shareholders, employees, customers, partners, and local communities. The Company fosters mutual understanding and recognition between internal and external entities, integrates the expectations of all parties into its operational and decision-making processes, and promptly discloses relevant information through annual reports and other channels. This approach is designed to continuously enhance stakeholders' trust and confidence in the Company.

The Company has established a sophisticated ESG audit preparation framework for its production bases. In 2024, we engaged an internationally renowned auditing firm to conduct SMETA (Sedex Members Ethical Trade Audit) on its production bases in Jinan, Dongying, and Tianjin. The Company successfully completed issue rectification and closure, meeting the ESG management requirements of customers and other relevant stakeholders.

Bloomage Biotech Stakeholder Engagement Mechanism

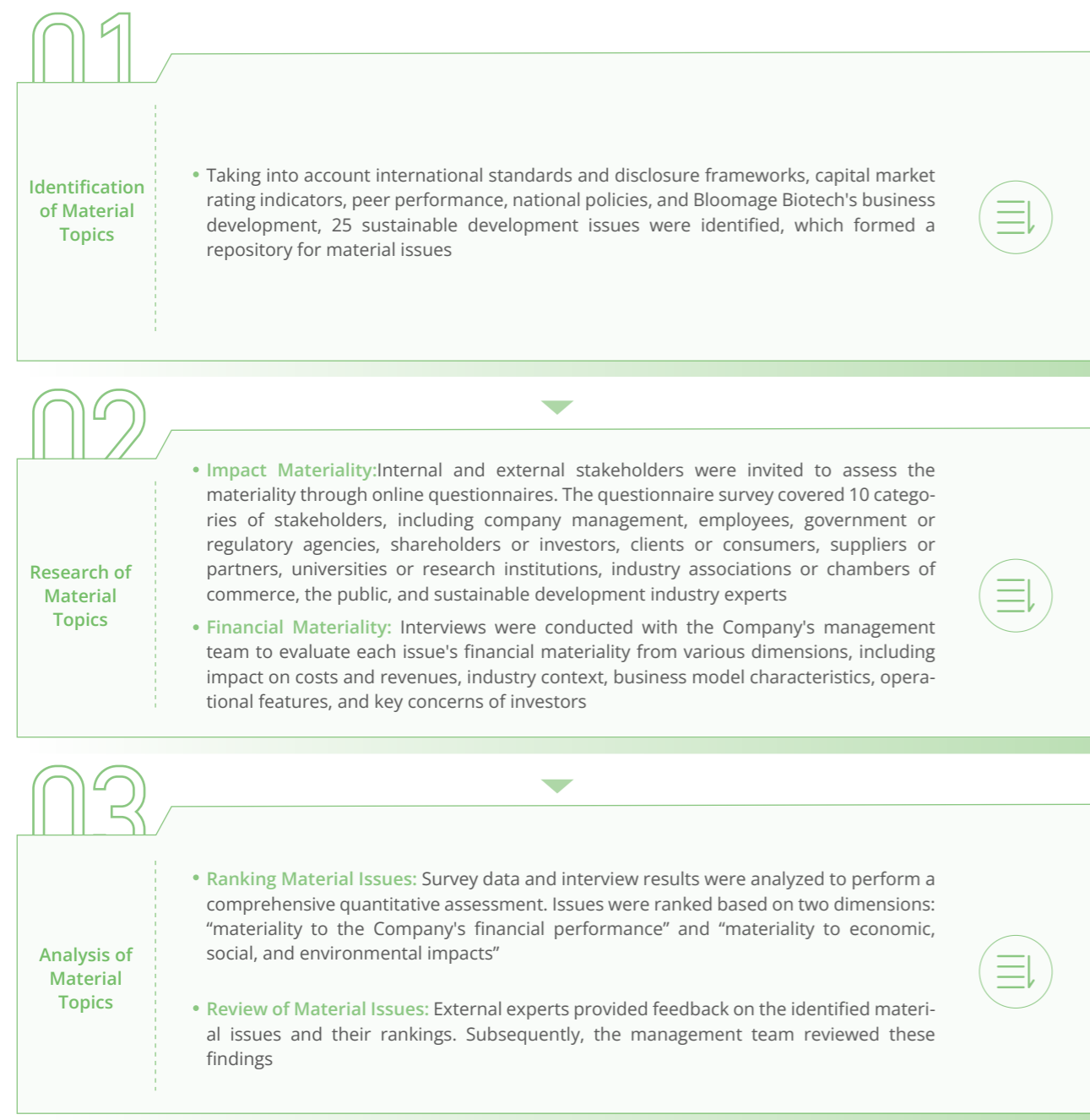
Stakeholder	Expectations and Demands	Engagement and Response
 Government and Regulatory Agencies	<ul style="list-style-type: none"> Compliant operations Tax compliance Economic development Anti-corruption Product responsibility 	<ul style="list-style-type: none"> Supervision and inspection Daily management Meetings and exchanges Public consultation
 Shareholders and Investors	<ul style="list-style-type: none"> Corporate governance Risk management Shareholder rights ESG performance Business ethics Information transparency 	<ul style="list-style-type: none"> Shareholders' meetings Investor exchange meeting Information disclosure Field investigations Teleconferencing Email and online engagement platforms
 Employees	<ul style="list-style-type: none"> Employee rights protection Employee compensation and benefits Employee training and development Employees safety and health 	<ul style="list-style-type: none"> Employee roundtables Employee training Employee satisfaction surveys Performance evaluations
 Clients and Consumers	<ul style="list-style-type: none"> Product responsibility Provide excellent services Product accessibility Product affordability Client privacy protection 	<ul style="list-style-type: none"> Client satisfaction surveys Customer service hotlines Social media platforms Client follow-up
 Suppliers and Partners	<ul style="list-style-type: none"> Honorable fulfillment of contracts Sustainable purchasing Green product Product responsibility Intellectual property protection 	<ul style="list-style-type: none"> Supplier assessments Supplier training Supplier meetings and exchanges Strategic cooperation
 Community	<ul style="list-style-type: none"> Support charity and welfare Environmental protection Rural revitalization Community development 	<ul style="list-style-type: none"> Public welfare activities Community events Media communication Public consultation
 Industry Associations and Chambers of Commerce	<ul style="list-style-type: none"> Scientific and technological innovation Industry development Product responsibility 	<ul style="list-style-type: none"> Industry exchanges Formulation of industry standards Field visit
 Media	<ul style="list-style-type: none"> Product responsibility ESG performance Response to climate change Business performance 	<ul style="list-style-type: none"> Press conferences Social media platforms Public opinion monitoring Field interviews
 Universities and Research Institutes	<ul style="list-style-type: none"> Scientific research innovation Talent development 	<ul style="list-style-type: none"> Education assistance Academic research Technology cooperation

Double Materiality Assessment

Material Issue Assessment

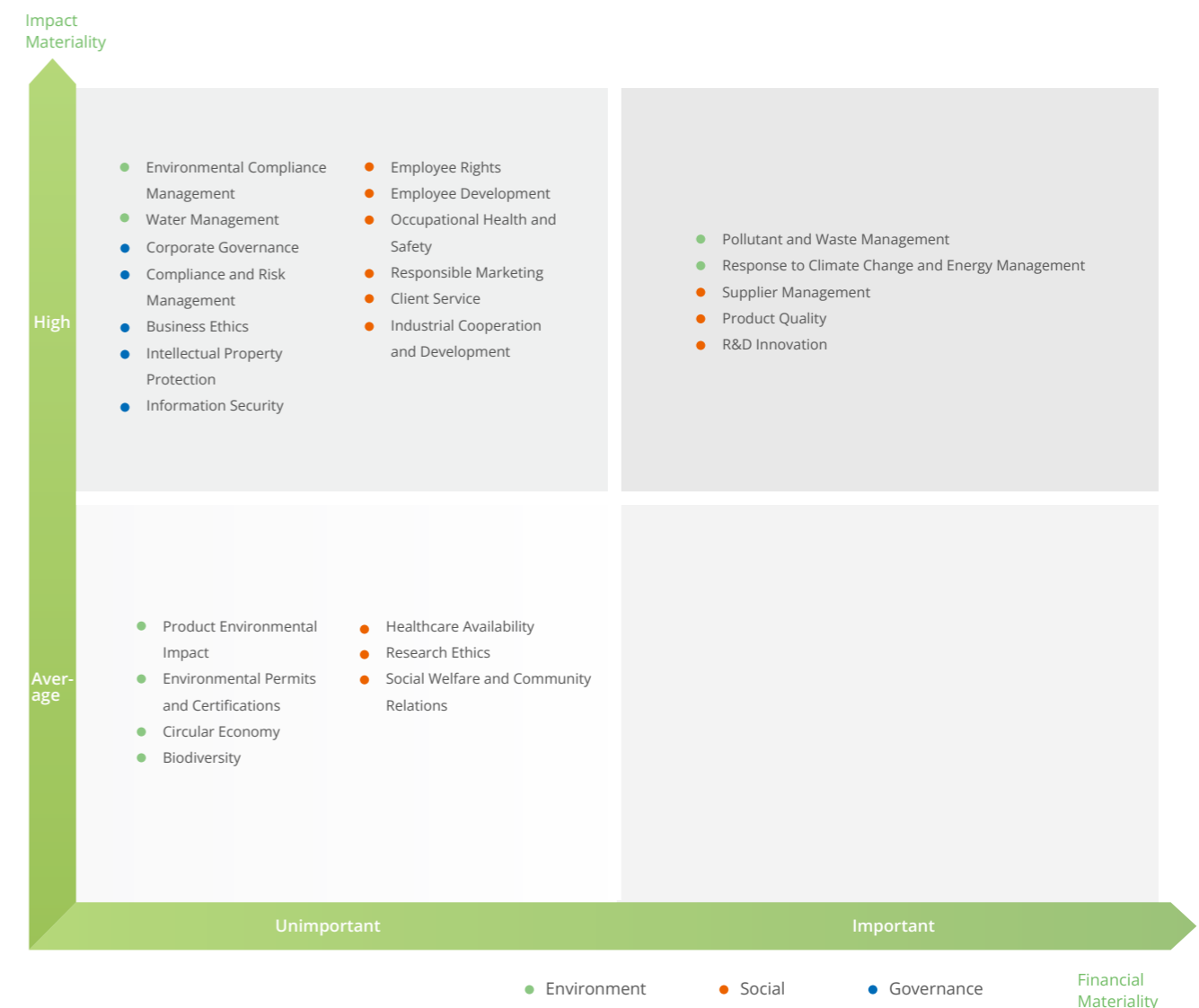
In 2024, Bloomage Biotech conducted a materiality assessment in accordance with relevant regulatory requirements and mainstream information disclosure standards. Building on previous assessments, this evaluation incorporated a financial perspective for the first time. The specific steps of the assessment process are outlined below:

Assessment Process of Double Materiality Issues of Bloomage Biotech



Based on the principles of "Double Materiality", Bloomage Biotech assessed 25 ESG issues, identifying 18 high-impact material issues and 5 financially material issues, thereby determining key content for this report.

Bloomage Biotech's Double Materiality Matrix



Financial Material Issues

For those financial material issues identified, we have summarized their impact areas along with associated potential risks and opportunities, as well as their potential financial impacts. In accordance with the guidance from the Shanghai Stock Exchange's Sustainability Report Guidance Framework, we emphasize relevant management strategies and actions within this report.

Pollutant and Waste Management	
Impact Areas	Company operations
Potential Risks	<ul style="list-style-type: none">Improper management of pollutants and waste may cause environmental contamination, which may trigger compliance risks resulting in financial penalties or losses and damage to corporate reputation
Potential Opportunities	<ul style="list-style-type: none">Enhancing pollutants and waste management can improve our environmental stewardship while ensuring compliance with regulatory requirements. This proactive approach not only bolsters corporate reputation but also strengthens market competitiveness
Potential Financial Impacts	<p>Risks: Increased operational and management costs</p> <p>Opportunities: Increased operating revenue</p>
For more management content	Please refer to the “Green, Low-Carbon and Resilience” section and the ESG Key Performance Tables

Response to Climate Change and Energy Management	
Impact Areas	Upstream value chain; company operations; downstream value chain
Potential Risks	<ul style="list-style-type: none">Physical risks arising from climate change, such as extreme precipitation and heat, pose threats like production disruptions and equipment damage, which can undermine the stability of our production and operational processesTransitional risks related to climate change, including evolving policies, regulations, and market trends, may lead to stricter compliance requirements or increased raw material costs. These factors heighten compliance pressures on the Company while raising operational expenses
Potential Opportunities	<ul style="list-style-type: none">There is an increasing customer demand for green products, enhancing our product competitivenessThe ongoing development of energy-efficient technologies and low-carbon equipment presents favorable conditions for cost reduction and efficiency improvements within our operationsBy decreasing reliance on fossil fuels, we can mitigate risks associated with energy supply instability
Potential Financial Impacts	<p>Risks: Asset impairment losses and increased employee and property insurance expenses</p> <p>Opportunities: Reduced operational and management costs; increased operating revenue</p>
For more management content	Please refer to the “Green, Low-Carbon and Resilience” section and the ESG Key Performance Tables

Product Quality	
Impact Areas	Company operations; downstream value chain
Potential Risks	<ul style="list-style-type: none">If the Company fails to provide higher-quality products, it may lead to customer attrition risksImplementing more comprehensive product testing will incur additional investments and costs
Potential Opportunities	<ul style="list-style-type: none">Superior quality products will further improve customer satisfaction, thereby consolidating and expanding the customer baseHigher-quality products contribute to elevating the Company's reputation and image, strengthening market competitiveness, and help explore potential markets
Potential Financial Impacts	<p>Risks: Increased operational and management costs</p> <p>Opportunities: Increased operating revenue</p>
For more management content	Please refer to the “R&D Innovation and Quality Management” section and the ESG Key Performance Tables

R&D Innovation	
Impact Areas	Upstream value chain; company operations; downstream value chain
Potential Risks	<ul style="list-style-type: none">Delays in developing green product technologies may hinder compliance with increasingly stringent environmental requirements. Furthermore, if product innovations do not accurately align with consumer demands, this could weaken market competitivenessInsufficient protection of intellectual property rights may lead to disputes that negatively impact the application and promotion of the Company's innovative achievements
Potential Opportunities	<ul style="list-style-type: none">Adopting a customer-needs-oriented approach in R&D innovation will enable the Company to adapt effectively to market trends while enhancing its competitivenessOngoing efforts in low-carbon product design aimed at improving energy efficiency can potentially create green business opportunities
Potential Financial Impacts	<p>Risks: Increased operational and management costs</p> <p>Opportunities: Increased operating revenue</p>
For more management content	Please refer to the “R&D Innovation and Quality Management” section and the ESG Key Performance Tables

Supplier Management	
Impact Areas	Upstream value chain; company operations
Potential Risks	<ul style="list-style-type: none">Factors such as climate change, raw material inventory levels, and turnover rates can affect supply chain stability. This instability may pose potential negative impacts on production operationsInadequate supplier auditing, certification processes, or performance management can reduce supply chain transparency. ESG risks, including labor and environmental management issues, may adversely impact production operations and corporate reputation
Potential Opportunities	<ul style="list-style-type: none">Establishing a sustainable supply chain enhances stability in product service delivery while ensuring continuity within company operationsDeveloping long-term partnerships with suppliers is crucial for improving product quality, innovation capabilities, and market competitivenessEncouraging suppliers to enhance their ESG management practices contributes positively to our brand image and reputation within both local markets and the global platform
Potential Financial Impacts	<p>Risks: Increased operating and administrative costs</p> <p>Opportunities: Increased operating revenue</p>
For more management content	Please refer to the “A Sustainable Value Chain” section and the ESG Key Performance Tables

Major Honors in Sustainability

Bloomage Biotech places significant emphasis on communication with regulatory authorities, capital markets, customers, leading domestic and international ESG rating agencies, industry associations, and the media. Through these concerted efforts, the Company has significantly enhanced its ESG rating performance and garnered numerous honors.

Bloomage Biotech's ESG Rating Performance (Selected)

EcoVadis Global Supply Chain
Sustainability Rating
Bronze Medal

CDP Global Environmental Disclosure
Climate Change: B
Water Security: A-

MSCI ESG Rating
BB

CSI ESG Rating
AA

SynTao Green Finance ESG Rating
A

Wind ESG Rating
A

Bloomage Biotech's Awards and Honors in Sustainability (Selected)

2024 Best Practice Case of Sustainable
Development for Listed Companies
China Association for Public Companies

2024 ESG Best Practices in the
Fragrance & Cosmetics Industry
China Association of Fragrance Flavour
and Cosmetic Industries

2024 CSR Excellence Cases by CNR
(China National Radio)
CNR News

2nd Guoxin Cup ESG Golden Bull Award
China Securities Journal

ESG Zhiyuan Award: Eco-Friendly
Enterprise Pioneer
Caillian Press

2024 ESG Model Enterprise &
Innovation Award
Guancha.cn

Annual ESG Outstanding Practice Award
Hexun.com

2024 Green Development Excellence Case by the
Beijing News Zero Carbon Research Institute
The Beijing News



In 2024, Bloomage Biotech Featured in 2024 Report on Green Transformation Practices of Chinese Enterprises and showcased at COP29

02

Safeguard: Compliance Governance and Risk Control

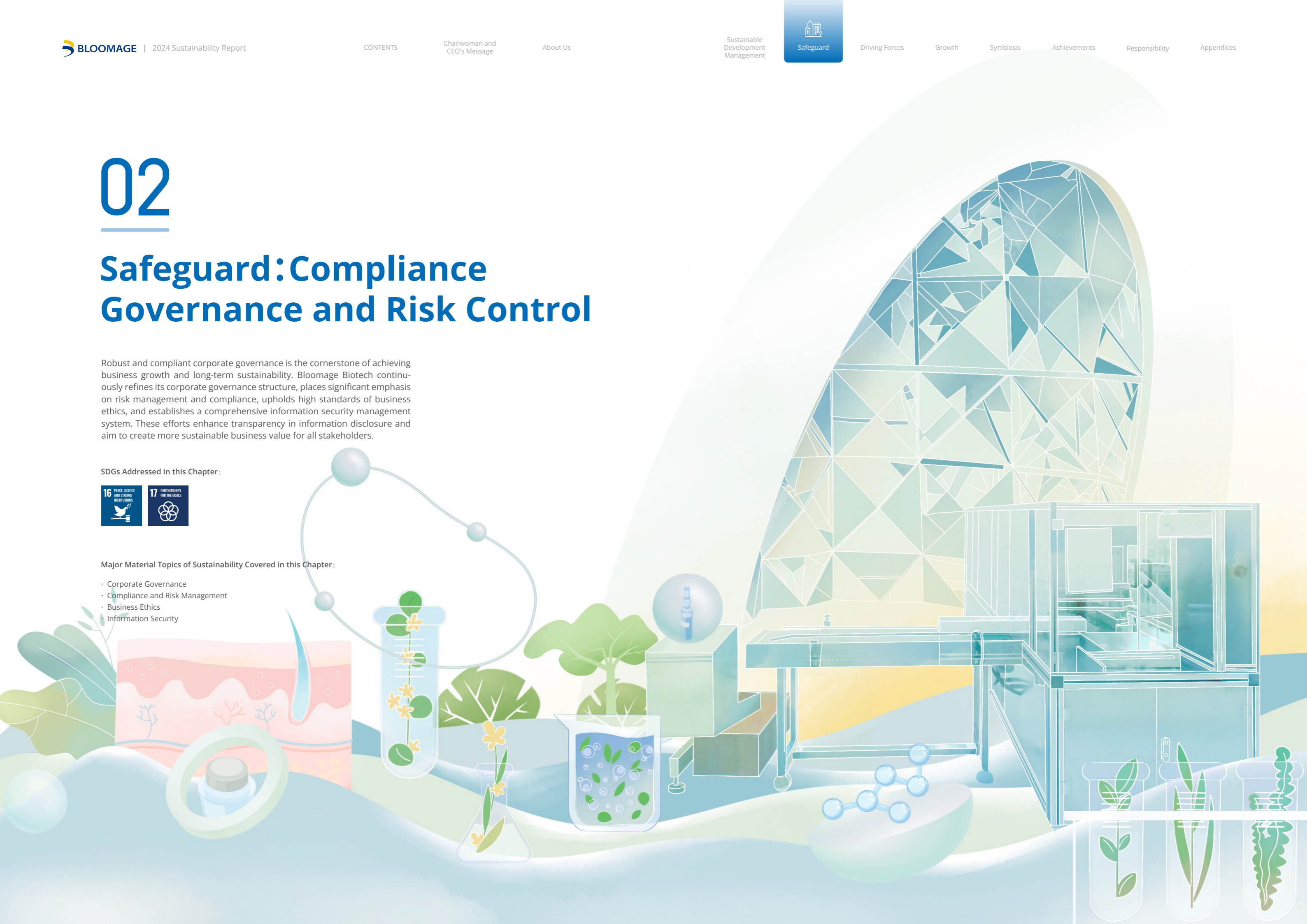
Robust and compliant corporate governance is the cornerstone of achieving business growth and long-term sustainability. Bloomage Biotech continuously refines its corporate governance structure, places significant emphasis on risk management and compliance, upholds high standards of business ethics, and establishes a comprehensive information security management system. These efforts enhance transparency in information disclosure and aim to create more sustainable business value for all stakeholders.

SDGs Addressed in this Chapter:



Major Material Topics of Sustainability Covered in this Chapter:

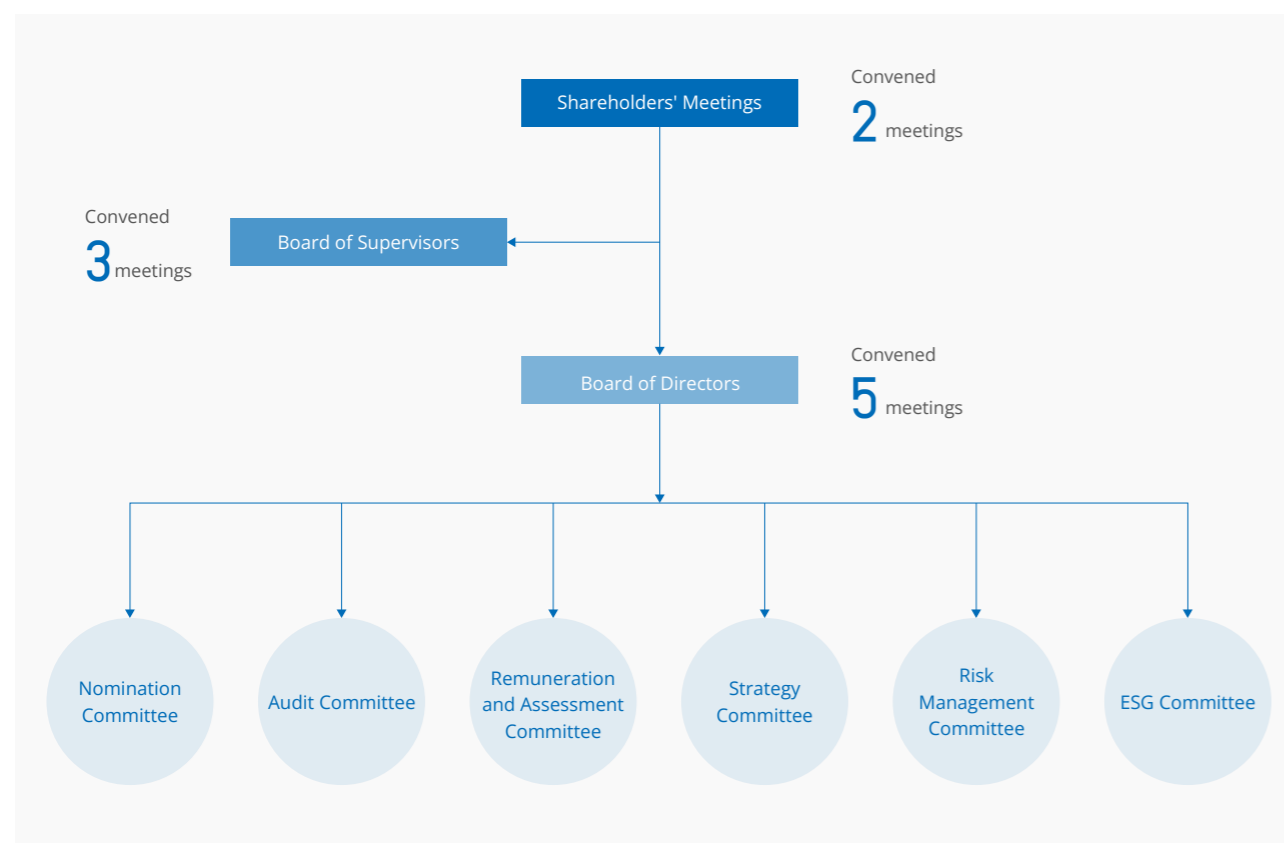
- Corporate Governance
- Compliance and Risk Management
- Business Ethics
- Information Security



Board of Directors

Bloomage Biotech strictly adheres to relevant corporate governance laws, regulations, and stock exchange requirements. The Company continually strengthens its board of directors and associated committees. In 2024, the Company established the Risk Management Committee to enhance the board's capabilities in managing compliance, business ethics, and risk.

Board Structure at Bloomage Biotech



In 2024, the Company undertook a comprehensive revision of its board management system. This includes 18 management regulations and working procedures, such as the *Articles of Association*, *Rules for Board Meetings and Decision-Making Procedures for Related Party Transactions*. New regulations were also introduced, including the *System for Selecting Accounting Firms and Rules for Conducting Risk Management Committee Meetings*, forming a more scientifically sound institutional framework.

The Company values diversity among its board members by considering multiple factors such as gender, age, cultural background, educational qualifications, professional experience, skills, and knowledge when selecting candidates. Additionally, in accordance with laws and regulatory requirements, Bloomage Biotech appoints independent directors; revisions to the *System for Independent Directors* were made in 2024. The directors possess diverse backgrounds in biomedicine, skincare products, risk management, financial accounting, law, and sustainability, which facilitates informed decision-making in a complex market environment.

In 2024, the Company continued to provide training to all board members covering areas such as internal control management, regulatory compliance, standard operational procedures, and information disclosure, thereby enhancing their governance capabilities.

Compliance Management

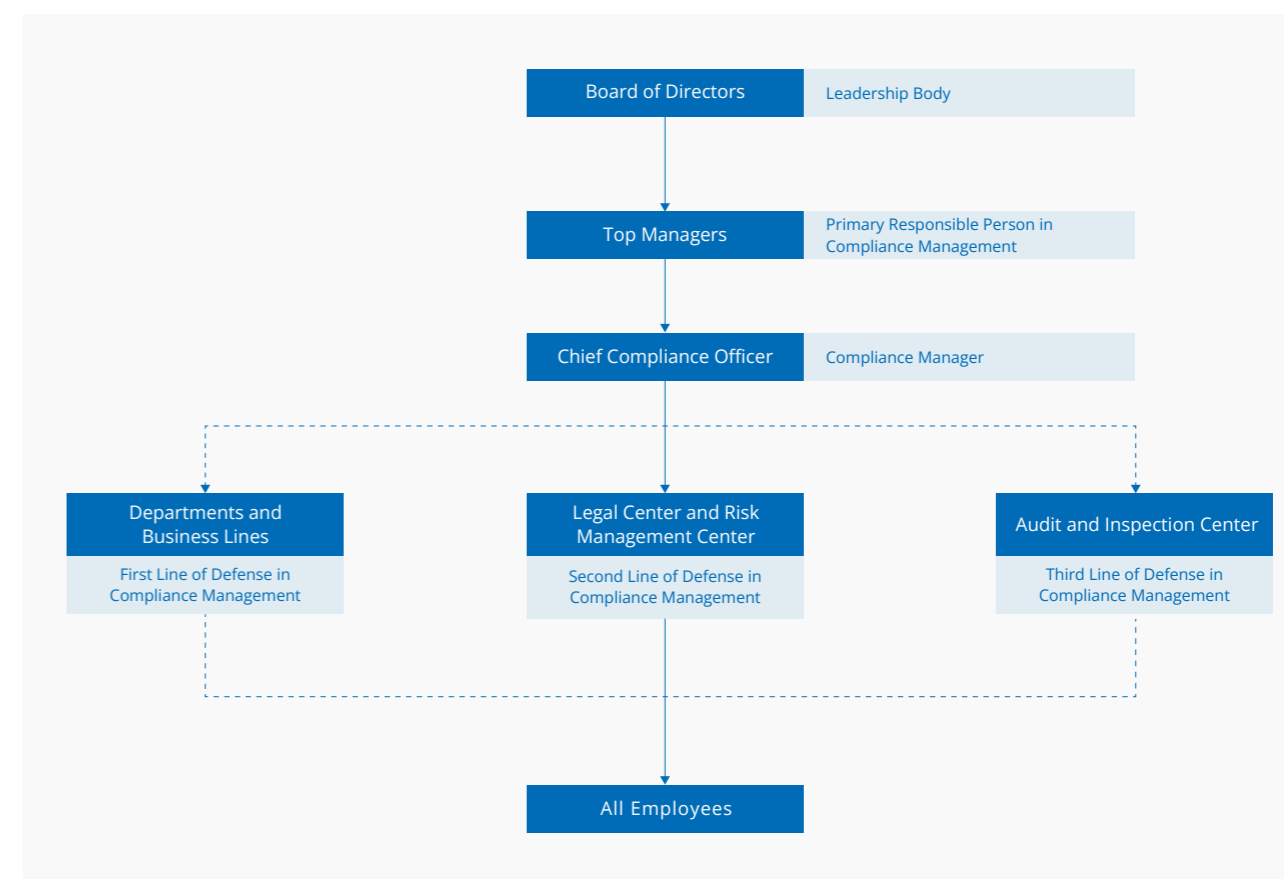
Bloomage Biotech is committed to continuously enhancing its legal compliance capacity to avoid any regulatory penalties. The Company has established an institutionalized, standardized, and regulated compliance management system that instills the principles of "law-abiding compliance and integrity" among all employees and conducts promotional activities related to compliance initiatives. Furthermore, we adhere strictly to rigorous tax-management principles, ensuring timely and lawful tax contributions necessary for stable operations.

Compliance Management System

Bloomage Biotech adheres to relevant laws and regulations, as well as the ISO 37301 standards, to establish a robust compliance management framework. The Company has developed internal policies, including the *Compliance (Anti-Bribery) Management Regulations and the Employee Compliance and Anti-Bribery Handbook*. These policies are applicable to all employees and are designed to effectively manage external partnerships.

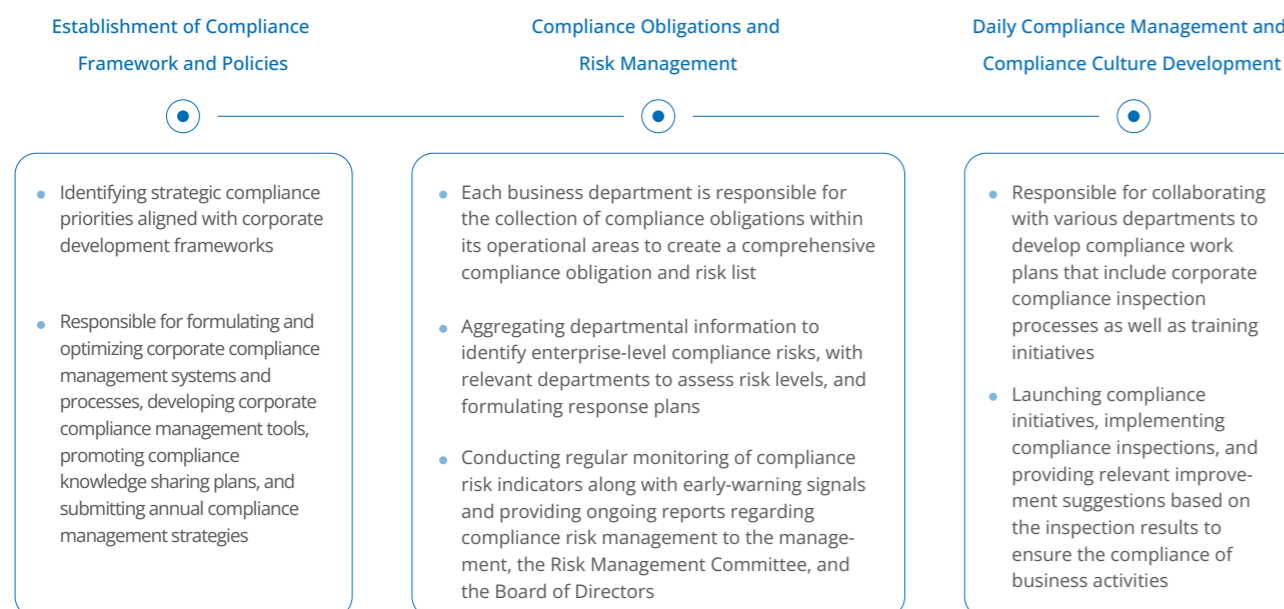
The compliance management structure is coordinated by the Legal Center, which is responsible for overseeing and planning all compliance-related activities. A Chief Compliance Officer has been appointed to this role, ensuring that there are no conflicts of interest in key operational areas such as market development, operations, and procurement. In addition, we have included the Company's compliance system and major compliance risk prevention and control within the scope of audit supervision.

Bloomage Biotech Compliance Management Structure



To enhance its compliance management capabilities further, Bloomage Biotech has implemented systematic and process-oriented methodologies that provide clear rules and guidelines for compliance throughout all operational phases. The Company has successfully achieved ISO 37301 certification for its compliance management system and undergoes annual surveillance audits to confirm the ongoing effectiveness of this certification.

Compliance Management System of Bloomage Biotech



Compliance Culture Development

Bloomage Biotech has developed a comprehensive compliance training plan, categorized into three programs: general compliance, key personnel training, and critical regulations training. This plan is designed to encompass all employees while providing specialized compliance training for key departments and critical positions. Personnel in key positions, including senior management, purchasing managers, and finance and sales personnel, are required to complete the training on the *Employee Compliance Handbook* within 30 days of joining the Company. The Company delivers compliance training programs through diversified channels, including live webinars, on-site workshops, and a dedicated e-learning platform, with assessments including exams, questionnaires, and attendance checks. This multi-dimensional approach enables the organization to objectively measure employees' comprehension of compliance requirements and their ability to apply knowledge in practical scenarios.

In addition to formal training programs, Bloomage Biotech cultivates a compliance-oriented culture through regular awareness campaigns, including compliance-themed poster promotions and compliance knowledge competitions. All employees are required to sign a Compliance Commitment Letter to reaffirm their adherence to the Company's ethical standards. Furthermore, the Company conducts targeted training sessions for third parties (e.g., suppliers) when necessary, ensuring broader dissemination of its compliance principles and policies.

Bloomage Biotech's Compliance Training Plan



In 2024, Bloomage Biotech implemented multi-faceted compliance training programs covering various specialized topics in alignment with business operations and systemic requirements. These encompassed Compliance Management System Development, Bribery Risk Mitigation, Criminal Compliance, and Interpretation of the Revised Company Law. Notably, we engaged external legal experts specializing in commercial law and anti-corruption to deliver lectures on the Revised Company Law and criminal compliance frameworks.

Furthermore, the Company formulated the *Compliance Performance Data Collection Management Procedures and Compliance Assessment & Evaluation Management Procedures*, establishing a comprehensive performance measurement mechanism. Evaluation outcomes are systematically linked to business units, individual employees, and third-party partners, with corresponding incentives or disciplinary actions implemented to cultivate a robust compliance culture within the organization.

Key Performance

2024



The signing rate of
Compliance Commitment Letter
100%



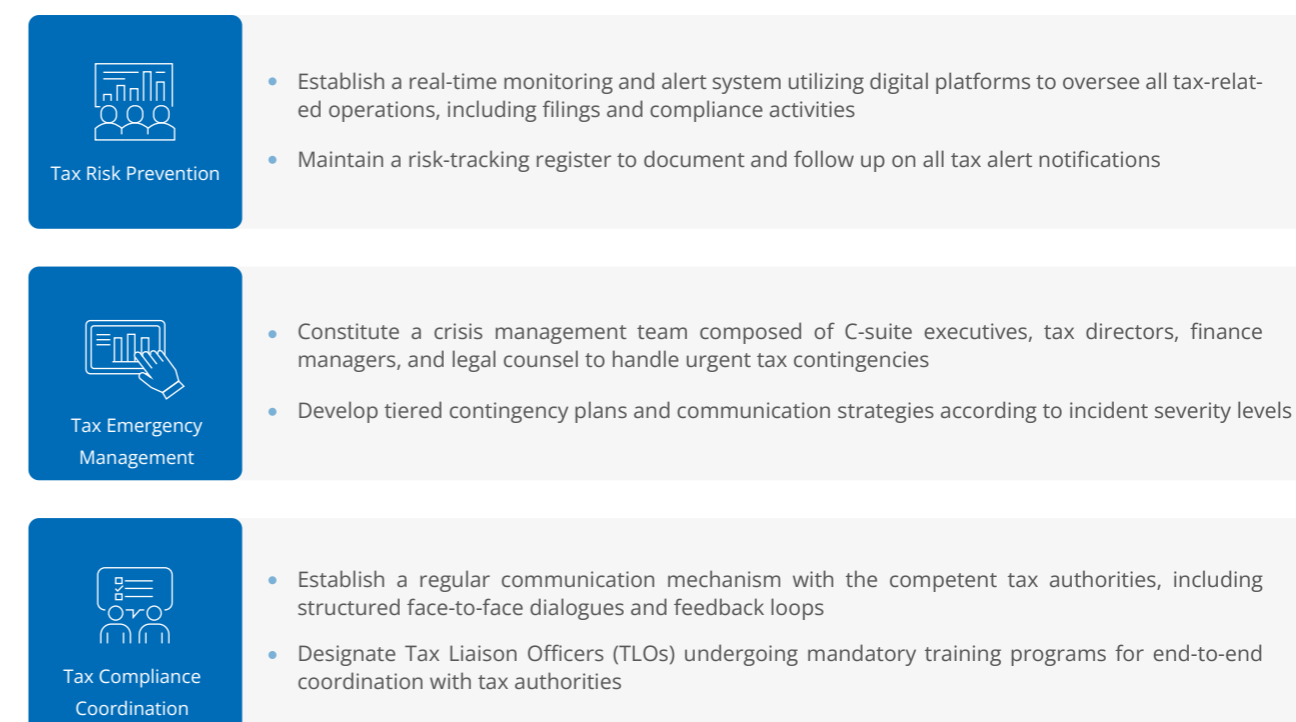
Conducted
3 compliance
training sessions

Coverage for
key personnel
100%

Tax Compliance Management

Bloomage Biotech strictly complies with tax laws and regulations, and has established and regularly updates tax management systems such as the *Tax Internal Control Manual*. The Company ensures continuous oversight of tax policy implementation through measures including a tax risk monitoring mechanism, tax emergency management protocols, and regular communication with tax authorities. This systematic approach underscores its proactive fulfillment of tax obligations.

Bloomage Biotech's Tax Management Measures



For further insights into the Company's tax management practices, please refer to the *Bloomage Biotech 2024 Annual Report*.

Internal Control and Risk Management

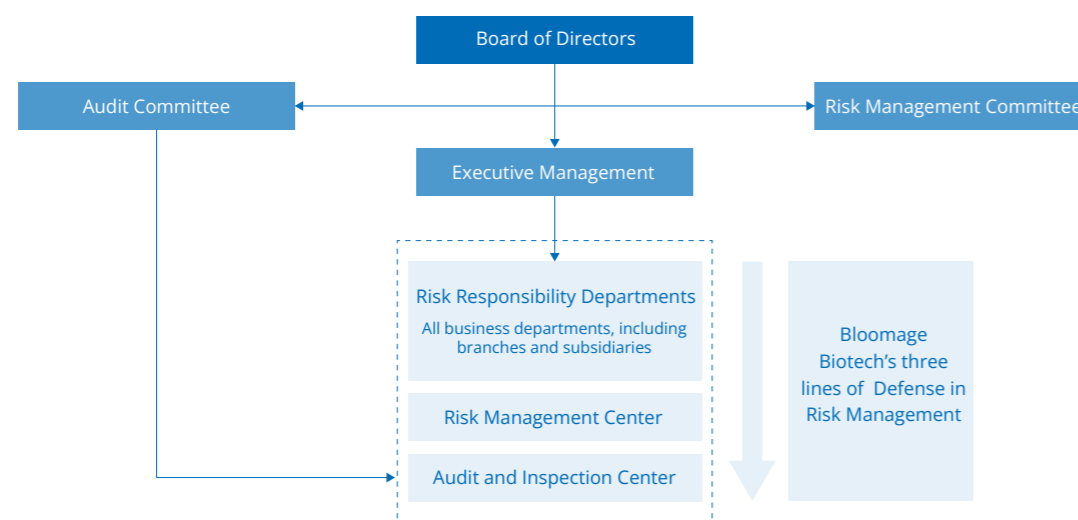
Bloomage Biotech is committed to continuously refining its risk management framework and internal control systems. The Company conducts regular internal audits and inspections to evaluate the effectiveness of these systems in managing compliance risks. By strengthening its risk-emergency management capabilities, the Company proactively identifies potential risks while establishing controls necessary for promoting sustainable growth and stability in its operations.

Risk Management

Risk Management System

In 2024, to further advance the implementation of risk management practices, Bloomage Biotech formulated and publicly disclosed the *Rules of Procedure for the Risk Management Committee*, establishing a top-down governance framework. Under this structure, the Board of Directors, as the supreme decision-making authority, holds ultimate accountability for the efficacy of risk management.

Bloomage Biotech Risk Management Structure and Supervision Mechanisms



The Company has implemented the Three Lines of Defense (3 LoD) model. Each line fulfills its designated responsibilities while synergizing to form a multi-tiered, cohesive, and mutually constrained operational mechanism. This integrated approach ensures continuous monitoring and systematic management of diverse risks across the organization.

Risk Responsibility Departments



- As the first line of defence, these departments are responsible for risk prevention and control within their operational scope. Key duties include conducting risk information collection and identification, and maintaining updates to the risk management matrix

Risk Management Center



- Serving as the second line of defence, this center coordinates group-wide risk governance through formulating institutional frameworks for risk management, developing risk rating criteria, driving digital transformation of risk management systems, and implementing daily monitoring and corrective action tracking

Audit and Inspection Center



- As the third line of defence in this model, under the supervision of the Board's Audit Committee, this center independently conducts audits and assessments on the effectiveness of the Group's risk management framework. The audit results, identified issues, and improvement recommendations are periodically reported to the Audit Committee

Key Performance

In 2024



Conducted

10

risk management
training sessions

Reaching over

2,000

employees

In 2024, Bloomage Biotech comprehensively updated its *Risk Management Regulations* and formulated three critical processes, including the *Enterprise Risk Framework* and the *Policy Development Guidelines*. These initiatives aim to institutionalize a science-driven and systematic risk governance mechanism, ensuring the effectiveness of the overall risk management process.

To cultivate an enterprise-wide risk management culture, Bloomage Biotech has implemented a multi-tiered risk management training program across all organizational levels. This initiative encompasses customized courses and project-based learning initiatives designed for board directors, supervisory committee members, C-suite executives, mid-level managers, and frontline operators, with the objective of enhancing the skills, capabilities, and expertise of risk management personnel.

Risk Identification and Response

In alignment with its business management and operational practices, Bloomage Biotech categorizes risks into five primary types: strategic risks, financial risks, market risks, operational risks, and legal-compliance risks. This categorization forms a comprehensive risk classification framework that underpins the Company's risk management strategy. In 2024, the Company further refined its risk mapping framework and established a robust risk reporting mechanism. As a result, the Company produced essential internal documents, including the *Quarterly Risk Monitoring Report*, *Annual Risk Management Report*, and *Risk Management Matrix*. Bloomage Biotech maintains a dynamic risk identification process that systematically evaluates and ranks risks using quantitative severity matrices. This enables the prioritization of material risks requiring immediate mitigation. Cross-functional teams are mobilized to develop risk mitigation action plans and refine strategies for managing critical risks.

In 2024, the Company implemented risk management initiatives across all business units, with a dedicated focus on work safety, product quality, and procurement management. This strategic alignment embeds risk-conscious decision-making into core business processes, supported by systematic risk profiling, analytical evaluation frameworks, and continuous management optimization cycles. Additionally, the Company seamlessly incorporated ESG considerations into its daily risk management practices. In this regard, 13 ESG-related risks were identified, encompassing key issues such as climate change response; pollutant and waste management; employee rights; product quality; and supplier oversight.

Risk and Emergency Management

Bloomage Biotech places strong emphasis on the standardized management of emergency incidents to ensure the sustainable development of the Company and maintain its corporate image. In 2024, the Company formulated and issued the *Emergency Management Measures*. These measures clearly define the scope, classification criteria, and management procedures for various emergency incidents across multiple business domains, including brand-related public opinion management, product quality assurance, pharmacovigilance, safety and environmental compliance, and information security. Each relevant business unit is required to develop specific emergency response plans in accordance with their respective operational requirements.

Additionally, Bloomage Biotech established a company-wide Emergency Response Leadership Team led by the CEO. This team is tasked with actively addressing unexpected events in accordance with the *Emergency Management Measures*. The team is responsible for promptly implementing appropriate reward and punishment mechanisms while effectively preventing and managing emergency incidents.

Internal Control

Bloomage Biotech continuously assesses and enhances its internal control system to ensure its robustness and effectiveness. In 2024, the Company formulated the *Economic Responsibility Audit Management Regulations* and revised the *Internal Audit Management System*. This marked a significant step in refining its internal audit framework and enhancing audit efficiency and quality. In 2024, phased internal special audits were conducted across core management areas, including procurement, production, sales, R&D, investment, performance evaluation, and EHS. These audits aimed to identify any potential deficiencies that could impact the Company's operational development. Fortunately, no significant deficiencies were uncovered.

Business Ethics

Bloomage Biotech remains steadfast in its commitment to upholding high standards of business ethics. The Company prioritizes the prevention of corruption, bribery, unfair competition, conflicts of interest, and other fraudulent activities. To this end, Bloomage Biotech continuously strengthens its business ethics system, enhances its complaint and reporting mechanism, and rigorously oversees matters related to business ethics, such as integrity in operations, anti-corruption initiatives, and complaint handling. This comprehensive approach ensures that any form of corruption and unfair competition is avoided.

Professional Ethics

Bloomage Biotech is committed to strict compliance with applicable laws and regulations, including the *Anti-Monopoly Law of the People's Republic of China* and the *Anti-Unfair Competition Law of the People's Republic of China*. The Company has established clear behavioral principles and standards concerning anti-bribery, anti-fraud, conflict of interest, anti-unfair competition, responsible marketing, and commercial confidentiality. This governance framework requires all employees to adhere to these standards as a binding obligation. Bloomage Biotech requires all employees to sign a confirmation form for the *Professional Ethics and Conduct Guidelines*. Any behaviour that violates relevant professional ethics regulations, once discovered by the Company, will be subject to verbal warnings, written warnings, contract termination, or other corresponding penalties.

Bloomage Biotech's Business Ethics-Related Systems (Selected)

Code of Ethics for Employee Personal Conduct

Code of Professional Ethics and Conduct, Employee Compliance and Anti-Bribery Handbook, Compliance (Anti-Bribery) Management Regulations, Bloomage Biotech Anti-Corruption and Anti-Fraud Guidelines, Management Measures for Compliance Reporting, Investigation and Handling, Manager's Red Line Behavior - 12 Articles, etc.

Code of Ethics in Dealing with External Partners

Anti-Commercial Bribery Compliance Guidelines, Sales Personnel and Sales Conduct Management System, Business Partner Compliance Management Measures, Compliance Guidelines for Interactive Engagements (Including Conferences, Exhibitions, and Sponsorships), etc.

The *Employee Compliance and Anti-Bribery Handbook* clearly outlines compliance norms for individual employees, sales operations, and customer interactions. This handbook includes professional ethics that all employees are required to adhere to upon joining the Company and throughout their employment. Additionally, it specifies ethical business conduct expectations for employees in critical roles such as sales and procurement when engaging with third-party partners.

Moreover, the *Code of Professional Ethics and Conduct* delineates the following responsibilities of all employees towards the Company, customers, and the market:

Responsibilities to the Company

- Respect for every employee
- Prohibit using one's position for personal gain, accepting unreasonable hospitality from suppliers, purchasing to achieve sales, or making payments for special favors
- Prohibit using company assets for activities unrelated to work
- Adhere to safety and health-related rules and policies to maintain workplace safety

Responsibilities to clients

- Keep confidentiality of all client information
- Prohibit unauthorized disclosure; timely notify potential conflicts of interest to relevant parties
- Carefully select business partners and clients

Responsibilities to the market

- Fairly trade with the Company's customers, suppliers, and competitors
- Prohibit manipulation, concealment, damage, defamation, abuse of proprietary information, or false reporting of significant facts
- Prohibit providing illegal, improper, or suspicious payments or promises to others for undue benefits

01 Falsification

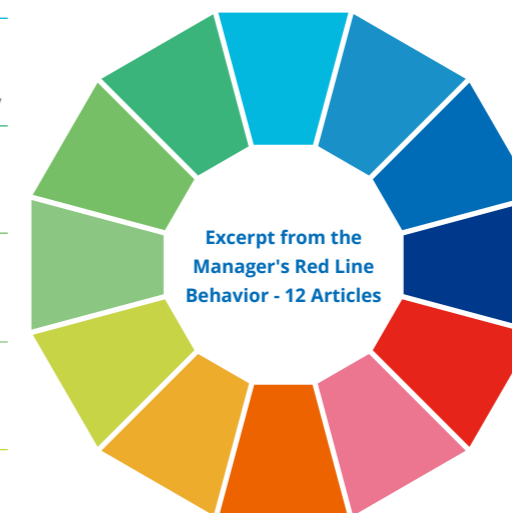
02 Misappropriation of company property

03 Misappropriation of public funds, private borrowing of funds, or unauthorized guarantees

04 Unauthorized loans or credit sales

05 Speculative use of enterprise funds

06 Disclosure of company trade secrets



07 Doing business with relatives that harms company interests

08 Unauthorized part-time work for remuneration

09 Spreading illegal or reputation-damaging remarks that affect the Company's reputation, brand image, or organizational unity

10 Soliciting benefits from partners, customers, subordinates, or affiliated companies

11 Provocation or causing troubles

12 Dereliction of duty or gross negligence

Anti-Bribery Management

Bloomage Biotech is resolutely opposed to all forms of corruption, bribery, and other unethical behaviors. The Company strictly complies with national policies and regulations such as the *Anti-unfair Competition Law of the People's Republic of China* and has formulated systems including the *Anti-Corruption and Anti-Fraud Regulations* and the *Anti-Commercial Bribery Compliance Guidelines*. These systems cover anti-corruption, anti-fraud, anti-unfair competition, and conflict-of-interest management guidelines. In 2024, Bloomage Biotech conducted internal audits focusing on anti-bribery, anti-fraud, and anti-corruption across key areas like sales and purchasing within its domestic subsidiaries, to assess the implementation of relevant policies.

The Company has established a comprehensive business ethics management system comprising the Board of Directors, Audit Committee, and relevant departments. The Board of Directors assumes overall responsibility for overseeing and coordinating all aspects related to business ethics. To ensure the continuous and effective operation of our anti-bribery framework, we annually engage a third-party certification agency to conduct an ISO 37001 Anti-Bribery Management System Certification Audit.



In terms of bribery risk management, the Company has identified four key areas of concern: 1) Interactions with government officials; 2) Interactions with distributors, agents, and other transaction-influencing parties; 3) Interactions with medical institutions, hospitals, and other transaction-influencing entities; 4) Sponsorships and donations to hospitals or medical institutions. To address these concerns, the Company has clearly outlined employee conduct guidelines in the *Anti-Commercial Bribery Compliance Guidelines*, covering both prohibited and permitted activities within these areas.

In 2024, the Company established a conflict of interest declaration mechanism, requiring all employees to regularly declare their personal conflict of interest situations. During the reporting period, the coverage rate of employee conflict of interest declarations at Bloomage Biotech was 100%.

To build a culture of integrity and clean governance, we regularly provide anti-corruption and anti-bribery training to board members, management, and all employees. In addition, specialized training programs are provided for high-risk positions, such as marketing. In 2024, the Company conducted three training sessions on compliance and anti-fraud requirements for all employees and incorporated special lectures on anti-corruption and anti-bribery within the framework of criminal compliance training. Furthermore, the Company disseminates educational and awareness-raising materials on anti-corruption and anti-bribery through its internal journals, aiming to strengthen all employees' commitment to ethical conduct and integrity.

In our external collaborations, the Company includes compliance commitment letters (covering clauses on good-faith cooperation, financial compliance, and anti-commercial bribery) in all procurement contracts, thereby establishing clear business ethics requirements and responsibilities with suppliers and other partners.

Key Performance

In 2024



0

Embezzlement lawsuits involving Bloomage Biotech or its employees were filed and concluded



Conducted

1

company-wide anti-bribery risk assessment



4

Specialized anti-bribery training sessions were held

Achieving

100%

coverage of key position holders

Specifically

11

Managers participated



The signing rate of the production materials supplier compliance commitment letter

100%

Whistle-blowing Management Mechanism

Bloomage Biotech encourages joint supervision and integrity maintenance among employees, clients, suppliers, and other stakeholders. We've established a regular reporting and investigation mechanism for compliance violations through our *Management Measures for Compliance Reporting*, Investigation and Handling. Reportable matters include, but are not limited to, violations of laws and regulations, as well as breaches of business ethics such as acts of dishonesty, fraud, corruption, unfair competition, and other unethical conduct.

We have established a wide range of complaint and reporting channels, including telephone, email, and on-site complaints, which are publicized to all employees, distribution clients, and suppliers. In 2024, Bloomage Biotech successfully managed the response to reports and executed special investigations with a 100% handling rate.

To protect the privacy and security of whistleblowers effectively, the Company has standardized the management of whistleblower information. This includes safeguarding personal details, reporting content, and communication methods. Any form of retaliation against whistleblowers is strictly prohibited. A dedicated reporting email address has been established for this purpose. This email is maintained by designated personnel who ensure that all communication with whistleblowers remains confidential and limited to one-on-one interactions only. For verified reports that lead to substantiated findings against accused parties or misconducts identified through these reports, appropriate disciplinary actions will be taken. Furthermore, in accordance with our reward system policies, we may provide whistleblowers with material or moral incentives as recognition for their contributions in identifying unethical behavior.

Whistle-blowing Workflow Process



Reporting Channels

Email: jubao@bloomagebiotech.com

Tel: 010-85670099-1503



Cybersecurity and Privacy

Maintaining robust information security measures and privacy protection is fundamental for fostering long-term cooperation between Bloomage Biotech and its business partners, customers, as well as employees. We are committed to continuously strengthening our information security management frameworks as well as our customer privacy protection mechanisms to comprehensively safeguard the data security concerns related to all stakeholders involved.

Management System

Bloomage Biotech strictly adheres to relevant laws and regulations and has developed comprehensive information security and data protection policies, including the *Information Security Risk and Emergency Management System* and the *Information Security Control Policy*, in alignment with the ISO/IEC 27001 information security management standard. The Company is committed to continuously enhancing its institutional framework for information and data security, thereby effectively managing data protection across all business operations.

Essential Port-Opening Principle

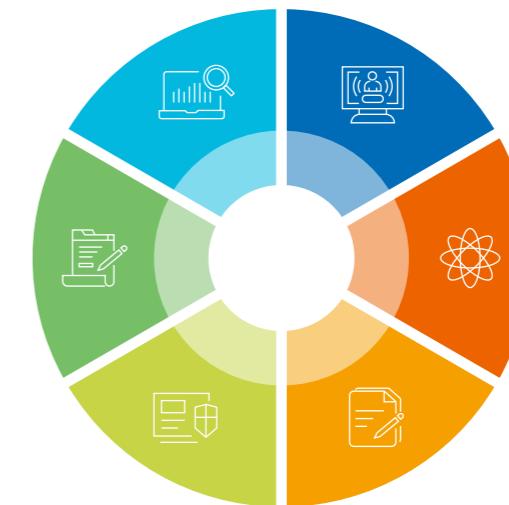
Only open ports that are essential for business functions to mitigate unnecessary network exposure.

Principle of Least Privilege Access

Ensure that users and services are granted only the minimum privileges necessary to perform their tasks, thus reducing potential security risks.

Regular Security Audit Principle

Conduct regular security assessments to identify and rectify vulnerabilities promptly, ensuring ongoing network security.



Strict Authentication Mechanism

Enhance authentication processes to guarantee that only authorized users or services can access applications, thereby preventing unauthorized access.

Trusted Source Access Control Principle

Allow access requests solely from trusted sources or verified IP address ranges to strengthen network perimeter defenses.

Access Log Recording Principle

Maintain comprehensive records of all application access activities, including access time, source, and target information for effective traceability and auditing purposes.

Excerpt from the *Management Regulations for Public Internet Access of Information Systems*

The Company has established an effective information security management system through five key perspectives: organization, management, technology, training, and supervision. The Information Security Management Committee oversees and coordinates the Company's efforts in this regard, with dedicated departments entrusted to execute information security protection strategies and procedures. In 2024, Bloomage Biotech successfully obtained ISO 27001 certification for its information security management system. Annual reevaluations were conducted for two critical systems—the anti-counterfeiting and traceability system and the raw materials portal system—both of which passed a second-level information security assessment.

The Company actively encourages employees in relevant positions to pursue professional certifications in information security to continuously enhance their expertise. As of the end of 2024, three members of our information security team have obtained Certified Information Security Professional (CISP) national certification while one member has achieved Certified Information Systems Auditor (CISA) international certification.

Furthermore, Bloomage Biotech has developed a *Privacy Policy*, which is published on our official website. This policy outlines key elements such as our usage authorization strategies, data retention periods, as well as individuals' rights regarding accessing, correcting, or deleting their personal information. Moreover, in collaboration with third parties and business partners, the Company strictly adheres to laws and regulations, requiring third parties to sign agreements and implement necessary security measures to handle relevant user personal data in accordance with privacy policy requirements. In 2024, no incidents involving violations of information or data security were reported within the Company.

Safeguard Measures

Bloomage Biotech has implemented a comprehensive array of measures to enhance information and data security protection, thereby solidifying the foundation of network security and ensuring the stability and security of our information systems.

Measures for Protection of Bloomage Biotech's Information Security

Use of Information-Security Technologies

- Internally, we utilize security center plugins provided by cloud service providers, which are deployed on our key servers
- We conduct regular vulnerability scans with the assistance of external security operation and maintenance services
- We employ web application firewalls to safeguard and reinforce websites that provide public services

Information Security Risk Assessment

- We conduct monthly penetration tests in critical plant areas, covering critical servers within our network
- We comprehensively identify and analyze risks and vulnerabilities across various aspects such as company network infrastructure, data storage, transmission and processing. Moreover, based on assessment results, we establish corresponding plans and corrective measures to continuously enhance data security

Monitoring of the Information Security System

- We ensure internal applications are deployed in strict isolation from those that provide public access
- Access to internal applications is granted only after rigorous identity verification processes are completed
- Publicly accessible applications benefit from protective measures implemented by cloud service providers

Information Security Emergency Management

- We have established a Computer Security Incident Response Team (CSIRT) to coordinate responses to technical issues related to computer security incidents
- A reporting procedure is in place for individuals who discover violations; they can promptly report these issues to management or the CSIRT

Promotion of Information Security Awareness

- Training on port-opening procedures including procedure requirements, operational guidelines, and best practices is provided for network administrators and system administrators
- In November 2024, we organized an online "Data Security Awareness" training event tailored for all employees. This training focused on key points regarding data protection practices applicable in daily work. Throughout the year, 1,249 employees participated in information-security training sessions

We have established independent reporting channels for complaints that are managed by a dedicated team within the Company. Strict measures ensure the protection of personal information related to reporters/complainants with guarantees against retaliation:

Personal Information Protection Complaint and Reporting Channel: privacy@bloomagebiotech.com
Information Security Violation Reporting and Feedback Channel: CSIRT@bloomagebiotech.com



Investor Rights Protection

Bloomage Biotech strictly complies with laws and regulations such as the *Measures for the Administration of Information Disclosure by Listed Companies* issued by regulatory authorities. In 2024, the Company revised the *Information Disclosure Management System* and the *Investor Relations Management System* to continuously enhance information disclosure management capabilities and protect the rights and interests of investors and other stakeholders.

We adhere strictly to principles such as authenticity, accuracy, completeness, timeliness, and fairness when disclosing information, ensuring that investors can access timely updates about company activities. Multiple channels have been established, ranging from large-scale public communication efforts through strategy meetings organized by securities firms; receiving investor research input; conducting teleconferences; utilizing SSE e-interaction Platform; holding roadshows; all designed to foster robust communication between investors and Bloomage Biotech while enhancing transparency regarding company operations.

Key Performance

In 2024



Published
announcements
93



Held earnings
presentation
meetings
4



Hosted investor research
activities or conference
exchanges
272



Achieved the highest rating of
Grade A in the annual information
disclosure evaluation conducted by
the Shanghai Stock Exchange



Participated in compiling the 2023 *Annual China Listed Companies Investor Relations White Paper*, jointly released by Roadshow China, IR Research Institute, and other supporting institutions



03

Driving Forces: R&D Innovation and Quality Management

Bloomage Biotech is committed to advancing in fundamental biological research, focusing on glycobiology and cell biology. By leveraging the advantages of industrial transformation in synthetic biology, we provide innovative scientific solutions for health and well-being. The Company initiates its operations from the upstream R&D of biomaterials, seamlessly integrating raw material production with brand development to establish a comprehensive transformation pathway for biomaterials. We rely on technological innovation, the expansion of materials and solutions, achievement transformation, intellectual property protection, and collaborative efforts between industry and academia to strengthen our scientific foundation. Simultaneously, we conduct in-depth quality research while gaining insights into market demands to deliver high-quality products and services.

SDGs Addressed in this Chapter:



Major Material Topics of Sustainability Covered in this Chapter:

- R&D Innovation
- Product Environmental Impact
- Industrial Cooperation and Development
- Research Ethics
- Product Quality
- Healthcare Availability
- Client Service
- Information Security
- Intellectual Property Protection



R&D Innovation

Bloomage Biotech places a high value on independent research and development as well as the successful transformation of innovative outcomes. We have established a robust innovation system that prioritizes green and sustainable practices while adhering to scientific ethics. Our focus also includes protecting intellectual property rights and fostering industry collaboration to promote high-quality development within both our company and the broader industry landscape. Rooted in the foundational scientific principles of glycobiology and cell biology, we are dedicated to achieving groundbreaking innovations in bioactive substances through cutting-edge technologies such as synthetic biology and regenerative medicine. Our goal is to diversify product offerings while expanding application scenarios that meet consumers' personalized needs, realizing Smart Biomanufacturing across six major categories of bioactive substances.

R&D Management System

Bloomage Biotech has established an evolving product-planning-and-development management system that centers on market demands as well as customer needs. We have implemented an Integrated Product Development (IPD) management system aimed at shortening product development cycles, enhancing the efficiency with which R&D results are transformed into market-ready products, and ultimately improving market performance by bridging gaps between market insights and research efforts.

Innovation Platform Development

Bloomage Biotech has built a global R&D platform, integrated innovative resources and established a system for key biomanufacturing technologies. The Company focuses on the R&D, innovation, and production of 6 categories of biologically active substances related to human health, including functional sugars, proteins, peptides, amino acids, nucleotides, and natural active compounds, covering the entire industry chain from cell construction to commercial applications.

The Company places high emphasis on fundamental research and applied fundamental research, and has eight R&D platforms, including Synthetic Biology R&D Platform, Functional Saccharides R&D Platform, Cell Biology Research Platform, Regenerative Medicine Research Platform, Pilot Conversion Platform, Application Mechanism R&D Platform, Material Functionalization Technology Platform, and Formulation Development Platform. Through AI-enabled functional integration and intelligent upgrades, these platforms span the full product lifecycle from cell construction to commercial applications. This establishes a full industry chain business system covering bioactive materials, medical end products, innovative transformation of dermatology, and innovative transformation of nutritional science, solidifying competitive advantages in core technology development and commercialization.

Key Performance

As of the end of 2024



6
National High
Tech Enterprises (NHTEs)



1
Provincial-Level Specialized,
Sophisticated, Distinctive,
and Innovative (SSDI) Enterprise



R&D Investment
466 million RMB

4.46 %
increase over last year

8.68 %
of R&D investment to revenue



392
invention patents
directly related to our core
business functions

920
of R&D professionals

20.70 %
of total employees

Case | the Construction of the Pilot-Scale Results Transformation Center Completed by Bloomage Biotech



In June 2024, Bloomage Biotech completed the construction of its Pilot-Scale Results Transformation Center. This platform, with a total investment of RMB several billion yuan, spans an area of 30,000 square meters and is equipped with 64 pilot-scale production lines. It encompasses the entire process from fermentation and purification to refining, enabling the Company to undertake pilot-scale and small-scale commercial production of various bioactive raw materials for pharmaceutical-grade, skincare-grade, and food-grade products.

The platform is characterized by its flexibility, platform-based operation, and digitalization. It adopts an open cooperation model featuring modularization and drawer-type approaches across the entire industry. Bloomage Biotech actively provides a range of services, including pilot-scale maturation, experimental validation, inspection, and testing, to universities, research institutions, enterprises, investment firms, as well as public service sectors, supporting the industrial and market transformation of research achievements.

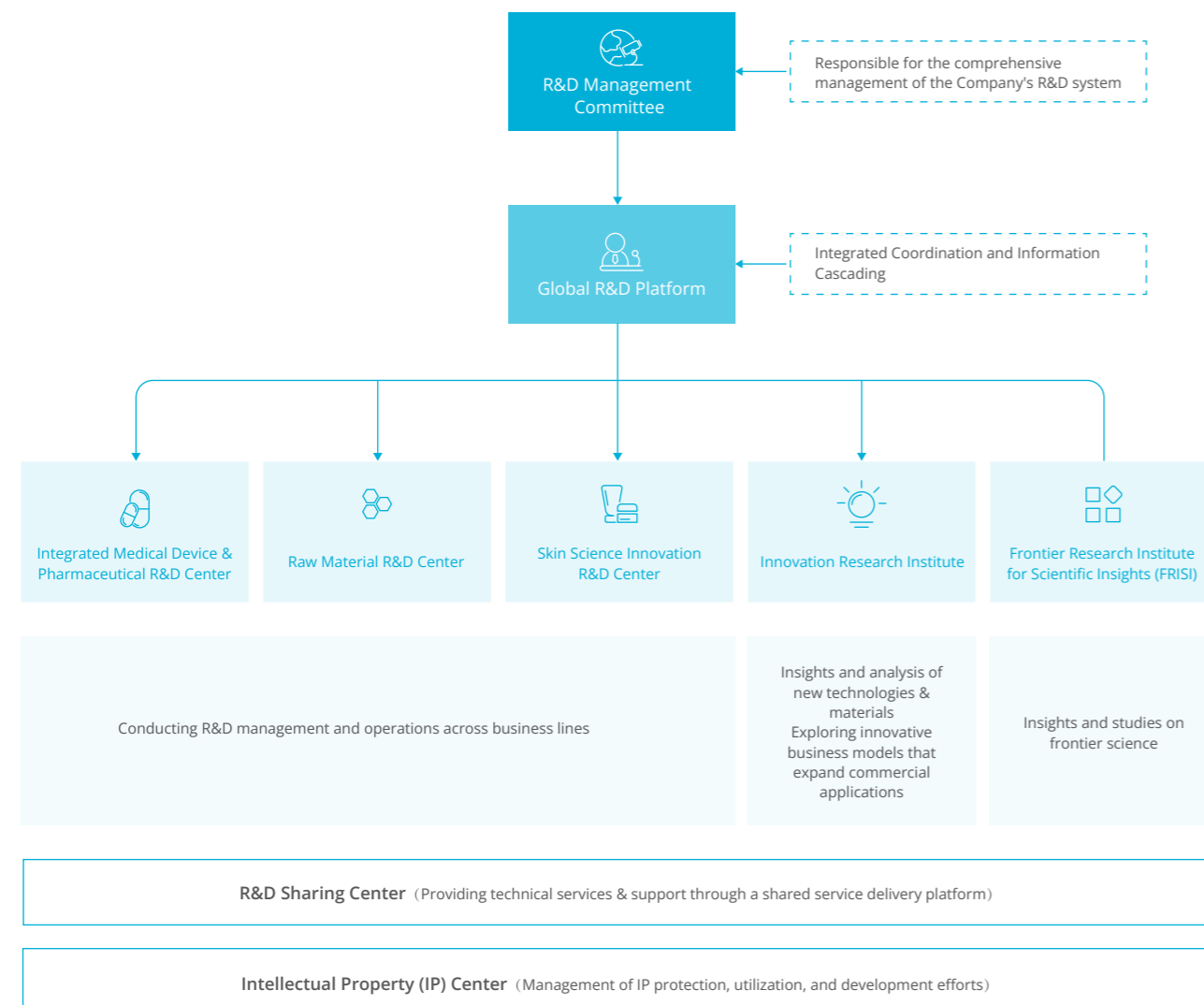


Bloomage Biotech Pilot Scale Results Transformation Center

R&D Management Structure and Systems

Bloomage Biotech has established the R&D Management Committee led by our Chairwoman with participation from senior executives and core technical managers. This committee oversees all aspects of our R&D system management and has created a global R&D platform to facilitate business-oriented operations through the introduction of an Integrated Product Development (IPD) management system. This approach breaks down barriers between different R&D units by establishing a project-oriented personnel deployment mechanism that enables efficient human resource utilization.

R&D Management Structure at Bloomage Biotech



The Company strictly complies with laws and regulations including the *Law of the People's Republic of China on Promoting the Transformation of Scientific and Technological Achievements*, *Safety Management Measures for Biotechnology Research and Development*, *Measures for Drug Registration*, and *Regulations on the Supervision and Administration of Cosmetics*. We consistently update and implement internal systems such as the *Pilot-Scale Testing and Trial Production Control Procedures*, *R&D-to-Production Technology Transfer and New Product Introduction (NPI) Governance Framework*, *Design and Development Control Procedures*, *Patent Management Regulations*, and *Patent Incentive Measures*. These efforts contribute to establishing a robust and standardized R&D project management framework, continuously refining evaluation criteria for scientific achievements and talent incentive mechanisms. Furthermore, the Company has developed a series of research project management regulations to ensure that relevant activities are conducted legally and compliantly throughout project initiation, development, review and other stages.

Sustainable Innovation

Grounded in a comprehensive and advanced R&D system, Bloomage Biotech prioritizes green sustainable innovation, integrating concepts related to environmental protection, health, and safety in every phase involved in developing new substances, technologies, materials, and processes. The Company actively explores profound synergies between biotechnology and sustainable development. This commitment aims to promote green transformations within industries while ensuring ecological harmony.

Product & Solution Innovation

Bloomage Biotech leverages scientific principles and effective biomanufacturing technologies characterized by safety-focused development. It aims to develop formulations/products that do not contain toxic elements and have low toxicity levels. These formulations exhibit lower impurity levels while maintaining high purity and meeting high stability standards. We integrate sustainability throughout our product development process.

We implement source substitution and green processes by replacing virgin materials with recycled alternatives whenever feasible. Our commitment extends to prioritizing low-toxicity and environmentally friendly reagents and consumables in our operations. We actively utilize biobased carbon sources and innovate packaging applications to minimize negative impacts on the environment, ecology, biodiversity, and human health throughout the entire product life cycle. In doing so, we not only contribute to environmental protection but also foster the development of new quality productive forces. Additionally, we harness artificial intelligence technology to predict substance efficacy, screen potential active ingredients, develop differentiated products, unlock new functionalities, and expand solution scenarios.

Implementation and Contributions of Major Green Technology Innovations in 2024

- Our upgraded emulsification technology reduces energy consumption by approximately 10% while cutting chemical reagent usage (e.g., methylene chloride & ethanol) by over 50%, further enhancing both product safety and environmental sustainability.
- The introduction of COP pre-filled syringes (a drug-device combination product) into our pharmaceutical production line has completed pilot-scale testing. This innovation reduces medical waste processing costs and achieves an approximately 80% reduction in energy consumption during manufacturing.
- By adopting serum-free formulations with chemically defined compositions, we have significantly reduced reliance on animal-derived materials, thereby mitigating potential ecological risks associated with traditional biopharmaceutical production processes.

Key Performance

In 2024

310
number of R&D projects

2
participated in national and provincial key R&D projects

Case | Research on Biodegradable Materials in Single-Use Packaging

Bloomage Biotech, focusing on environmental protection and quality enhancement, conducted a systematic study on the potential issues of biodegradable material Bio-PE during prolonged contact with cosmetics. Through dedicated material modification studies, the Company successfully optimized Bio-PE for application in single-use packaging materials. This innovation significantly reduces the consumption of non-biodegradable plastics and advances the sustainable development of the beauty industry.

Case | Development of Eco-Friendly Packaging to Empower Customer Sustainability

In 2024, Bloomage Biotech developed an eco-friendly polyolefin film packaging that complies with international standards. This packaging utilizes a single-material design, achieves over 90% recyclability, and generates no toxic or harmful emissions during incineration. The successful development of this packaging has accelerated the Company's sustainable innovation and development, enabled customers to embrace the green concept, and set an example of sustainable development for the industry.

Ingredient Sustainability

Bloomage Biotech strictly adheres to domestic and international regulations such as the *Cosmetic Safety Technical Specifications and the Regulation on Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH Regulation)*, ensuring products are registered or certified for ingredient safety, mildness, efficiency, and natural organic properties. The Company extensively references authoritative industry and market standards to develop systems such as the Chemical Use List for Research and Development. We have established comprehensive chemical use management mechanisms to standardize the selection of raw materials for our products.

The Company is committed to ongoing hazard identification processes, implementing measures to reduce, substitute, or prohibit controversial ingredients and minimize the use of preservatives. These actions enhance the safety, sustainability, and biodegradability of our ingredients, thereby significantly reducing their negative impact on both human health and the environment. To achieve a balance between efficacy and safety, we select active ingredients based on scientific principles. Our approach focuses on delivering precisely targeted solutions while minimizing unnecessary active additions, ensuring a superior combination of comprehensive efficacy with fewer components. In addition, Bloomage Biotech conducts radioactive substance testing on products from our MedRepair brand that contain marine-sourced raw materials. This proactive measure ensures product safety for consumers. In 2024, the Company did not receive any penalties from regulatory agencies for non-compliance with chemical usage in products.

Manufacturing Innovation

Bloomage Biotech has established a refined technical system for biomanufacturing hyaluronic acid alongside green preparation methods. Our commitment involves continuously enhancing production designs and processes, investing in state-of-the-art equipment, establishing efficient process systems, and elevating digitalization & automation levels throughout production stages. By integrating sustainable principles, such as environmental protection & safety into every aspect of manufacturing operations, we ensure that sustainability remains at the core of our practices. We are also dedicated to exploring & deploying technologies related to Industry 4.0. Our AI-powered platform for rapid screening of active ingredients is widely utilized across production lines. By optimizing workflows and improving management models, we drive technological upgrades and innovations within product manufacturing processes, thereby leading the advancement of intelligent manufacturing trends.



Bloomage Biotech Creates a Fully Production and Linked Unmanned Operation Production Workshop

Ethics in Technology

Bloomage Biotech strictly complies with domestic and international regulations and guidelines for biomedical research, including *Ethical Review Measures for Life Sciences and Medical Research Involving Human Subjects*, *Regulations on the Management of Laboratory Animals* (aligning with the 3R principles of Replacement, Reduction, and Refinement in animal studies), *Good Clinical Practice (GCP) for Drugs*, *Guidelines for Registration and Review of Animal Testing in Medical Devices*, *Clinical Trial Guidelines for Sodium Hyaluronate-based Facial Injectable Fillers*. To ensure systematic compliance, we have developed internal governance documents such as the *Technical Guidelines for Cosmetic Consumer Usage Testing*. We also strictly adhere to the *World Medical Association's Declaration of Helsinki* and region-specific ethical frameworks to ensure legal and regulatory conformity of testing activities, whether conducted internally or externally. The Company's R&D Management Committee oversees global R&D operations to coordinate issues related to technology ethics. Additionally, we have established the Cosmetic Efficacy Evaluation Ethics Committee responsible for reviewing and supervising ethical concerns during efficacy assessments of functional skincare products. In 2024, the Company did not incur fines from regulatory bodies for violating ethical technology testing guidelines.

Guided by the principles of scientific rigor, ethical integrity, and corporate accountability, we have established rigorous assessment frameworks that leverage cutting-edge technologies and innovative alternative testing methodologies to ensure product safety and efficacy. Our commitment extends to systematically minimizing and ultimately replacing animal testing and human trials. We have developed AOF (Animal Origin-Free) medium technology that is serum-free with no animal-derived components, significantly decreasing our dependence on animal-sourced materials. We use cell testing, ex vivo skin testing, and 3D skin model testing. Additionally, we have a subject-testing model that is entirely based on voluntary participation with a freely exercisable withdrawal mechanism, which is used in place of animal testing for efficacy trials on functional skincare products. When designing trials for medical device efficacy, we prioritize alternative methods to minimize the frequency of conducting animal and human clinical trials.

Bloomage Biotech does not directly conduct animal or human testing and therefore has no staff involved in animal testing or any requirements for the management of care or welfare for test subjects. The Company conducts thorough in-vitro evaluations on key raw materials related to product efficacy to replace animal testing while enhancing overall product safety. All the Company's necessary animal and human clinical trials are entrusted to qualified Contract Research Organizations (CROs) or hospitals. Contracts are in place to stipulate compliance with national regulations on trial ethics and related measures for the welfare of human and animal subjects. They also ensure compliance with the Company's management regulations for third-party animal-testing and inspection institutions, thereby ensuring that the company's responsibilities of respecting life ethics and safeguarding welfare are effectively fulfilled. In 2024, Bloomage Biotech conducted regular training sessions aimed at enhancing R&D personnel's awareness concerning experimental ethics.

Case | Standardization of Engineered Epidermal Models and Their Application as Alternatives to Animal Testing for Skin Irritation Assessment



Bloomage Biotech has developed a standardized reconstructed human epidermal model, specifically designed for functional evaluation of cosmetics and pharmaceuticals, serving as an alternative to conventional animal testing methodologies. This innovative model addresses ethical dilemmas associated with such practices while overcoming human-testing bottlenecks. It shortens evaluation cycles with precise and highly repeatable data, thereby advancing skin irritation-related applications within China's framework for reducing reliance on animals. Additionally, this model serves as an essential platform facilitating toxicological evaluations along with pharmacological studies alongside molecular biology research focusing both raw materials and finished products. This initiative significantly enhances the safety assessments of raw materials and finished products while ensuring the effectiveness of cosmetics and pharmaceuticals.

Furthermore, the Company follows and implements requirements related to AI ethics and information ethics. We use AI responsibly in our business operations. When utilizing AI systems, we adhere to a human-centered approach. When adopting generative-AI solutions, we implement manual controls and conduct comprehensive evaluations of the results. Moreover, we treat data as a crucial asset and install encryption software on the office equipment for all R&D personnel to further enhance the full-process compliance control of data and information. In 2024, the Company organized three training sessions related to information ethics.

Collaborative Development

Bloomage Biotech leverages its technological innovation capabilities and technical platform advantages to implement open cooperation, actively collaborating with governments, industry organizations, research institutions, etc., to promote joint scientific research, the establishment of standardized norms, and industry knowledge popularization, driving the sustainable and healthy development of related industries.

Industry-Academia-Research Collaboration

The Company places significant emphasis on the in-depth integration of industry, academia, and research for collaborative technological innovation. Through strategic cooperation agreements, joint establishment of research centers, the development of advanced pilot-scale conversion platforms, as well as applied basic research and academic discussions in related fields of technology and manufacturing, Bloomage Biotech facilitates a seamless connection among industry stakeholders that accelerates the transformation from R&D to commercial application. In 2024, we deepened our collaboration within the realm of industry-academia-research partnerships, resulting in substantial achievements. We conducted 29 projects in collaboration with 12 universities and research institutions across diverse areas such as small-scale process development for substance creation, quality inspection protocols, and efficacy studies on various applications involving functional sugars and amino acids.



Bloomage Biotech participated in the "2024 China-Korea Cutting-edge Biotechnology Exchange and Cooperation Symposium", co-hosted by the Chinese Embassy in South Korea and the Korean National Institute of Green Technology

Industry Popularization and Communication

In 2024, Bloomage Biotech inaugurated its Bio-Manufacturing 5.0 Science and Technology Museum in Tianjin, marking the completion of three landmark industrial exhibition halls: the World Hyaluronic Acid Museum, the Synthetic Biology Science Pavilion, and the Bio-Manufacturing 5.0 Science and Technology Museum. These facilities employ cutting-edge interactive technologies such as simulated models, three-dimensional holographic projections, and dynamic light-shadow installations. Through these technologies, they offer panoramic demonstrations of hyaluronic acid applications, synthetic biology innovations. They also showcase the pivotal role of bio-manufacturing in advancing carbon peaking and carbon neutrality strategies. Collectively, they serve as an educational portal for the public to explore the scientific frontiers and industrial implications of biotechnology. Since their respective openings, these three museums have hosted over tens of thousands of visitors.



A delegation comprising the Deputy Chair of the International Federation of Societies of Cosmetic Chemists (IFSCC) and faculty members from the University of São Paulo, Brazil, conducted an official visit to Bloomage Biotech World Hyaluronic Acid Museum



The Bio-Manufacturing 5.0 Science and Technology Museum Was Inaugurated in Tianjin



Bloomage Biotech has established exhibition halls in its main offices, factories, and R&D centers to conduct science popularization activities for visiting groups. Additionally, the Company actively participates in industry exhibitions and exchanges and integrates internal and external professional resources to conduct online public education. In 2024, the Company conducted 145 scientific popularization campaigns focusing on bioactive ingredients throughout the year. Meanwhile, the Company jointly developed and published the *2024 Scientific Skincare Guidelines for Oily Skin* in collaboration with academic institutions and dermatology experts. This initiative delivers comprehensive solutions for consumers while advocating science-based skincare principles.

Intellectual Property Protection

Bloomage Biotech integrates intellectual property management into the entire product operation process. The Company has built a standardized and effective intellectual property management system by clarifying management policies and objectives, improving management structure and resource elements, and strengthening lifecycle management of intellectual property. The Company has been certified by GB/T 29490 intellectual property management system. As of 2024, the Company has accumulated a total of 587 authorized patents, and 580 valid patents.

The Executive Director of the Company's R&D Committee is responsible for overseeing the operation and continuous improvement of the intellectual property management system. The Intellectual Property Center is tasked with providing professional expertise and implementing specific initiatives related to IP management. The Company reviews the suitability and effectiveness of the intellectual property management system every year.

Bloomage Biotech strictly adheres to current laws and regulations, referring to standards such as the *Intellectual Property Management System Standard for Enterprises* to formulate and enhance its intellectual property protection policies and procedures. These measures are effectively implemented in all aspects of IP management activities. The Company has clarified its principles and division of responsibilities for intellectual property management in patents, trademarks, copyrights and business secrets. We have established clear procedures for the application, registration, utilization, management, transfer, and protection of intellectual property rights.

Bloomage Biotech's Measures on Strengthening Intellectual Property Protection



Risk Identification and Management

- Bloomage Biotech has implemented a comprehensive patent search and competitor patent monitoring mechanism to conduct systematic analyses, including Freedom to Operate (FTO) at various stages such as project initiation, R&D progression, project completion, and pre-market launch. This mechanism enables the Company to proactively identify and mitigate infringement risks throughout the entire product lifecycle
- We have paid attention to the regional characteristics of intellectual property protection and have actively applied for international patents to fully protect our intellectual property and enhance our ability to respond to supply chain risks.
- We allocate necessary budgets every year to respond to possible intellectual property risks



Awareness-raising Training and Exchange

- The Company carries out intellectual property training activities for its employees every year, such as professional internal training and bi-weekly sharing sessions. In 2024, the Company carried out 9 intellectual property-related publicity and training sessions, with more than 1,800 participants and more than 18 training hours
- In addition, we have actively participated in relevant external exchange activities and received investigations and research from relevant supervisory and management departments on our intellectual property management. We have also been involved in various seminars, training classes, and other activities



Performance Evaluation

- We have clearly defined the requirements for rewarding and penalizing intellectual property-related matters and decomposed the intellectual property management objectives and conducted regular assessments. In 2024, the Company provided intellectual property-related performance incentives to 240 employees, with a total bonus amounting to RMB 1.49 million



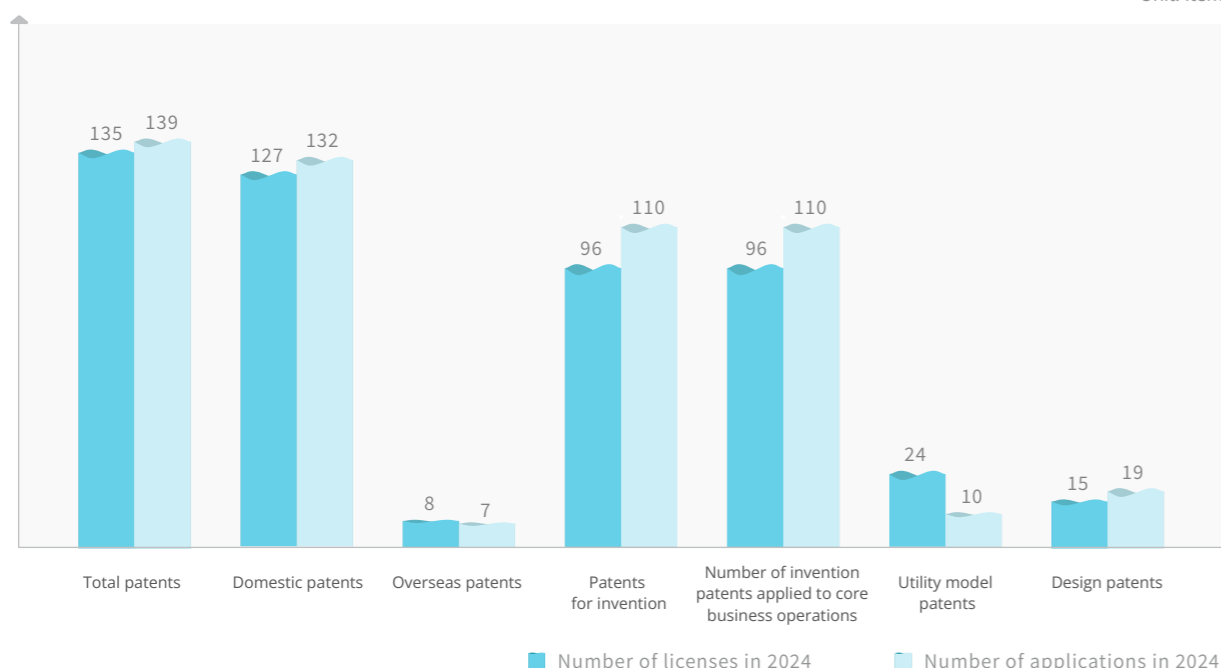
Protection of Rights and Interests

- We have actively cooperated with police and judicial authorities in many places by assisting in handling cases of counterfeit production and sale to protect intellectual property rights
- We have entrusted professional third-party organizations to follow up on infringements of our trademarks, patents and other intellectual property rights. In 2024, the Company filed 16 rights protection litigation cases. The Company has not been punished by relevant competent authorities or held liable by court judgments for infringement of others' intellectual property rights. There have been no major infringement litigation cases of intellectual property (including abuse of a dominant position, counterfeiting and piracy)

Additionally, the Company respects the outcomes and spirit of the *Declaration on the TRIPS Agreement and Public Health*, and abides by compulsory licensing requirements for public interests, public health and other purposes in the *Patent Law of the PRC*. We involuntarily transfer relevant patents when necessary to popularize and promote technologies. In this way, the Company can benefit more people with its innovative achievements.

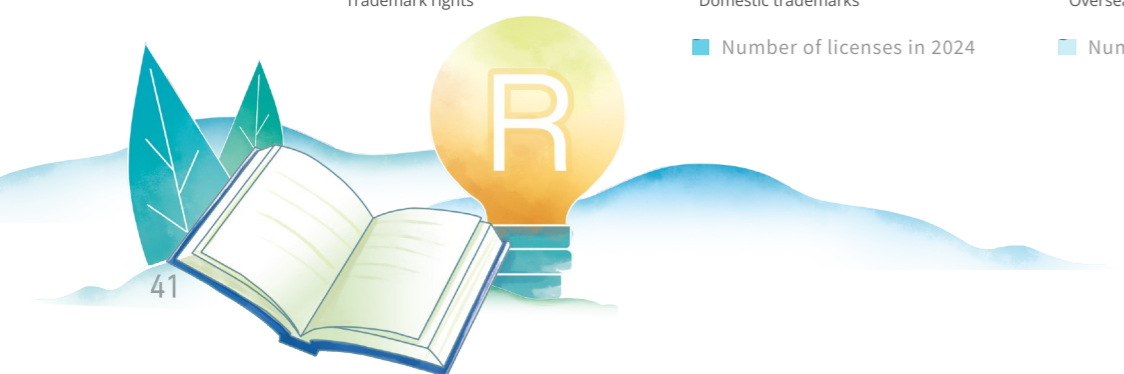
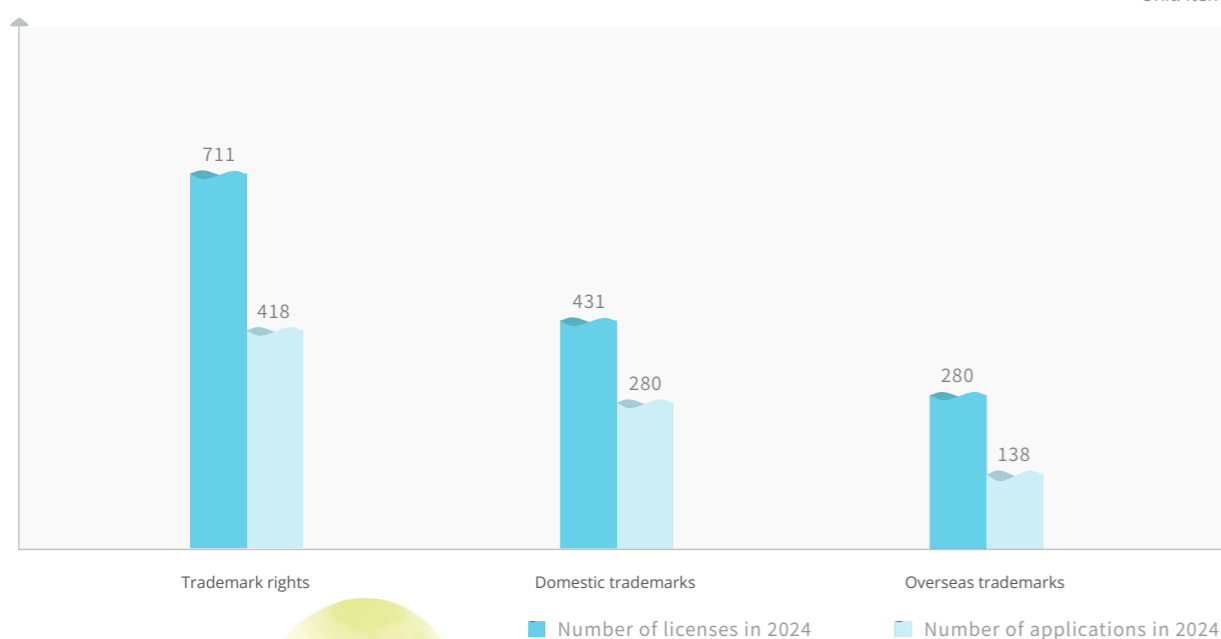
Bloomage Biotech's intellectual property licensing

Unit: Item



Bloomage Biotech's annual trademark status

Unit: Item



Quality Management

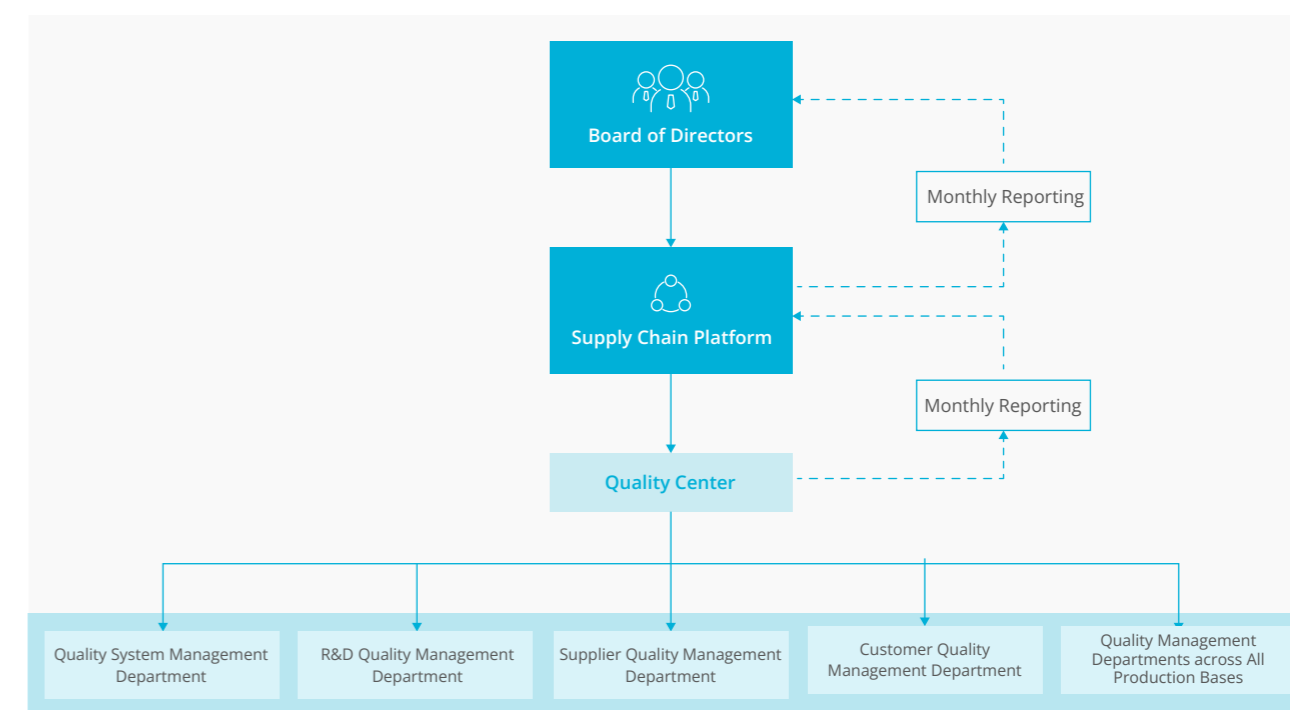
Bloomage Biotech follows the quality management policy and principles of "leading technology, standardized management, safe and reliability, and professional service" with product quality always prioritized. Bloomage Biotech enhances its "Operational Excellence and Lean" globally aligned quality management system through lifecycle management, by establishing quality standards and objectives that surpass national regulatory requirements and industry standards, with an unwavering commitment to delivering premium-quality products for global consumers. Each year, we set goals related to product inspection pass rates, first-inspection pass rates for finished products, customer satisfaction with product quality, ex-factory pass rates, and on-time delivery rates. In 2024, the Company successfully achieved all these established goals.

Quality Management System

Quality Management Structure

The Chairwoman of Bloomage Biotech holds overall responsibility for product quality and safety. This includes strategic planning, the formulation of quality policies, review of quality objectives, and oversight of their implementation. Relevant quality management departments and employees collaborate closely within the Company to fulfill their respective responsibilities effectively. Together, they form a robust quality assurance network that safeguards product quality and safety.

Bloomage Biotech's Architecture for Integrated Product Quality & Safety Management



Quality Management Systems, Processes, and Measures

Bloomage Biotech strictly adheres to comprehensive legal frameworks including the *Law of the People's Republic of China on Product Quality*, the *Drug Administration Law of the People's Republic of China*, the *Food Safety Law of the People's Republic of China*, the *Regulations for the Implementation of the Food Safety Law*, the *Good Pharmacovigilance Practices (GVP)*, the *Cosmetics Production Quality Management Standards*, and the *Medical Device Operation Quality Management Standards*. The Company has established and implemented a systematic quality governance system encompassing the *Quality, Food Safety, and HACCP (Hazard Analysis Critical Control Point) Integrated Management Manual and Product Monitoring & Measurement Control Procedures*. This system enforces full life-cycle quality management spanning product design, R&D, manufacturing, and post-market surveillance, with clearly defined quality accountability across all stages to ensure regulatory compliance, safety, and efficacy of products.

Quality Audits and Certifications

Bloomage Biotech has established and continuously improved a product life-cycle quality management system, with the construction of a quality management information system to drive the implementation and application of digitalized and intelligent systems across all product lines. This initiative aims to advance comprehensive quality management practices, ensuring end-to-end quality control and safety throughout the product life cycle.

Bloomage Biotech has established a dedicated Quality Inspection & Audit Team that standardizes quality review processes, including self-inspections and preparations for external audits. This team systematically conducts internal audits of the quality management systems at production facilities. Alongside rigorous product testing protocols and actively collaborates with external regulatory authorities, accredited certification bodies, and customer audits. Through continuous improvement, the Company has received exemption-from-inspection evaluations from some customers and has passed MDR audits conducted by certain customers with zero defects. In 2024, Bloomage Biotech completed a total of 147 customer-factory inspections and third-party audits organized by customers. All of these were successfully passed, with no major quality risks detected. General defects were promptly rectified.

The Company has obtained the following certifications: ISO 9001 Quality Management System, ISO 13485 Medical Devices Quality Management System, ISO 22716 & GMPC (US) Cosmetic Good Manufacturing Practices, EFCI GMP Standard for Cosmetic Ingredients, Kosher Certification, Halal Certification, HACCP Food Safety Management System, FSSC 22000/ISO 22000 Food Safety Management System, and Laboratory Accreditation. Its high-standard production lines comply with the requirements of US Current Good Manufacturing Practices (cGMP), China's GMP, and ICH Q7 Guidelines for Active Pharmaceutical Ingredients. Additionally, the Company has successfully passed quality audits and on-site inspections conducted by regulatory authorities including the EU Medical Device Regulation (MDR), US Food and Drug Administration (FDA), South Korea's Ministry of Food and Drug Safety (MFDS), Japan's Pharmaceuticals and Medical Devices Agency (PMDA), and China's National Medical Products Administration (NMPA) for GMP compliance.

Life-Cycle Quality Control

Bloomage Biotech establishes internal product quality and safety management procedures and systems in accordance with applicable laws and regulations. We implement quality risk assessment and control measures to effectively address and manage quality risks, thereby enhancing Bloomage Biotech's brand reputation through high-quality standards. The Company consistently identifies, assesses, controls, communicates, audits, and minimizes quality risks throughout its product's lifecycle to decrease the likelihood and impact of risks to an acceptable level while protecting consumer safety, health, and rights. The Company conducts comprehensive quality risk assessments annually and rectifies any defects identified.

In 2024, the Company did not experience any significant safety or quality-related liability incidents concerning our products or services. There were no fatalities linked to the use of Bloomage Biotech products, nor were there any enforcement actions taken due to violations of the *current Good Manufacturing Practice for Pharmaceuticals (cGMP)*.

Key Performance

In 2024, the Company



Conducted internal audits of the production-based quality management system at least

1 a year

Carried out over

120,000 product tests



Undergone

168

official and customer audits, with no major quality risks or defects identified



Obtained

2

new drug/API (Active Pharmaceutical Ingredient) registration certificates

Obtained

2

Domestic class III medical device registration certificates

Obtained

7

Class II medical device registration certificates

Bloomage Biotech's Lifecycle Quality Control



Supplier Quality

- Supplier quality is rigorously assessed during the onboarding process. We sign quality assurance agreements with qualified suppliers, establishing clear quality standards.
- In addition, from mold development, sampling, testing to mass production, we work collaboratively with suppliers to address bottlenecks as well as any quality or safety issues that may arise. On-site communication is employed when necessary for the immediate resolution of issues. We implement monthly tracking management processes that ensure non-compliance issues are resolved in a closed-loop manner. For more detailed information regarding supplier quality management practices, please refer to the "Achievements: Sustainable Value Chain" section.



R&D Quality

- A comprehensive mapping of the R&D platform's quality management system has been developed with an established framework for R&D documentation. A total of 66 specific quality control requirements and management procedures have been formulated to standardize our product development process effectively.
- We have established a robust cross-departmental communication mechanism that enhances collaboration across six key systems: quality assurance, materials management, equipment facilities oversight, analytical laboratory control, and R&D production/preparation processes. This holistic approach ensures stringent adherence to quality control throughout every stage of product development.



Production Quality

- Bloomage Biotech implements strict controls through various measures including raw material testing, equipment management, standardized operations, process and flow optimization, lean production techniques, and environmental controls. We have established comprehensive regulations such as the *Product Monitoring and Measuring Control Procedure* to standardize the acceptance and inspection processes for materials, water usage, intermediate products, and finished goods. Additionally, we ensure meticulous management of device calibration. Throughout each stage of production, we conduct thorough performance evaluations as well as functionality assessments alongside comprehensive quality testing. This integrated approach enables us to achieve all-around control over product process quality.
- After production, products are subject to internal or external quality testing. Qualified products are cleared for release based on an inspection report. Otherwise, an unqualified inspection report is issued, and non-conforming products are handled under company regulations. This ensures the quality, efficacy, and safety of products before they leave the factory.



Management Quality

- Monitoring and Auditing Management:** We conduct at least one routine audit for all products each year and collaborate with regulatory authorities, customers, and other parties for special and routine supervision and inspection. In 2024, no major product quality defects were identified, indicating manageable quality risks in the operational phase.
- Product Traceability Management:** Bloomage Biotech has established and updated the *Product Identification and Traceability Control Procedures* in line with ISO 9001 and ISO 22000 standards, creating a comprehensive product traceability system. This system ensures that product outer packaging is intact and clearly labeled. Records are kept truthfully, accurately, and standardly for easy access, review, and traceability of product information. Regular simulations are conducted to quickly trace products using batch numbers and labels.
- Non-Conforming Products Management:** Bloomage Biotech has set up regulations like the *Non-Conforming Products Management Rules* and *Cosmetics Quality Release Procedure*. Non-conforming products are clearly labeled, stored separately, and undergo investigation, handling, correction, and inspection. Products that can be reworked are corrected to meet quality standards, while those that can't are disposed of under supervision to prevent them from entering the market.
- Quality Emergency Management:** Bloomage Biotech has developed management systems including the *Emergency Preparedness and Response Control Procedures* and the *Food Safety Emergency Response Plan* to effectively manage product safety incidents. These measures aim to prevent product safety incidents proactively and ensure quick control if they occur. The Company continuously refines its handling processes for product safety incidents by incorporating monitoring, early warning systems, reporting mechanisms, emergency response protocols, post-incident handling procedures, and safeguard measures. An annual emergency drill focusing on drug and food safety incidents ensures relevant departments can respond promptly, protecting public health.



After-Sales Quality Management

- Aftersales Tracing:** Bloomage Biotech has established the *Product Release Authorization Procedure* and the *After-Sales Monitoring and Governance Procedure* to ensure only qualified products leave our facilities. A Customer Quality Management Department has been set up for front-line quality management, collecting feedback on business quality issues and tracking their resolution effectively. This department ensures timely market feedback for necessary product adjustments.
- Products Recall:** Bloomage Biotech has implemented regulations like the *Product Recall Management Standard Operating Procedure*, *Returned Product Control and Handling Procedure*, and *Medical Device Mock Recall Management Standard Operating Procedure*. Recall management is executed based on product categories, with defective items handled appropriately. A summary of recall situations is documented with corrective actions to prevent recurrence of issues identified during recalls. Separate recall plans exist for pharmaceutical and non-pharmaceutical product lines, with at least one mock recall drill conducted annually in each category. In 2024, no recalls were required due to safety or health concerns related to sold or tested products.

Pharmacovigilance and Adverse Reactions

Bloomage Biotech has established a vigilance system covering products such as pharmaceuticals, medical devices, and functional skincare products, along with procedures for reporting and handling adverse reaction events. Monthly literature research related to product adverse events is regularly conducted, and relevant regulations are collected. Internal training and health-and-safety awareness campaigns are organized periodically. The Company also maintains communication with regulatory agencies and other stakeholders to continuously enhance pharmacovigilance and product adverse reaction management, thereby safeguarding public health and safety.

Pharmacovigilance

The Chairwoman of the Board of Directors leads drug safety management and has established the Drug Safety Committee and a leading group for monitoring medical device adverse events. Other committee members are managers from departments related to drug safety, including pharmacovigilance, quality management, production, sales, R&D, and registration. We ensure pharmacovigilance and adverse reaction management throughout the product lifecycle.

Bloomage Biotech strictly follows national, local, and international pharmacovigilance regulations and guidelines. In line with external policies, regulatory directions, stakeholder expectations, and internal compliance requirements, the Company continuously revises a series of pharmacovigilance and medical-device vigilance management mechanisms, procedures, and standard operating procedures covering the entire product life-cycle, including the *Drug Safety Committee Operating Bylaws* and the *Pharmacovigilance Quality Management System*. In 2024, Bloomage Biotech revised and implemented 21 procedural documents related to its pharmacovigilance system and the medical device adverse event monitoring system.

The Company actively participates in training sessions organized by regulatory authorities to enhance vigilance awareness and improve management capabilities. Additionally, we disseminate professional knowledge internally to strengthen employees' understanding of pharmacovigilance and their skills in handling adverse reactions. Throughout the year, Bloomage Biotech organized and completed seven internal audits and self-inspections of the pharmacovigilance system. The Company also underwent nine official inspections related to pharmacovigilance practices, specifically focusing on medical device adverse event monitoring. Furthermore, we received one audit from a customer related to our pharmacovigilance systems and conducted 15 internal and external training sessions on pharmacovigilance and medical device adverse reactions.

Bloomage Biotech is committed to continuously optimizing its pharmacovigilance risk management system. We formulate comprehensive pharmacovigilance plans that involve monitoring and analyzing drug safety signals. Regular risk assessments concerning adverse reactions are conducted, leading to insightful reports that inform us of our control measures. To enhance stakeholder engagement, we have established accessible feedback channels that allow for the active addressing of feedback regarding adverse events. We maintain close communication with provincial/municipal drug reaction monitoring centers as well as other regulatory agencies. Adverse events are reported promptly, enabling collaborative efforts in testing procedures and risk assessments.

In 2024, the Company received and handled 171 reports of adverse drug reactions and 65 reports of adverse medical device reactions. There were no product-related deaths or violations of the current *Good Pharmacovigilance Practices*.

Adverse Reaction Management for Functional Skincare Products

Bloomage Biotech adheres to the management principles of "safety first, openness and transparency, scientific validation, and risk notification" in developing and continuously refining its adverse reaction management system for functional skincare products. In compliance with relevant laws, regulations, and industry standards, the Company regularly updates and revises the *Cosmetic Adverse Reaction Monitoring and Reporting Standard Operating Procedure (SOP)*. This process optimizes information collection, monitoring and analysis, emergency response procedures, and feedback mechanisms to safeguard consumer rights while enhancing product quality and safety control capabilities.

The Company conducts relevant tests during product development based on industry standards as well as internal procedures, including the *Human Skin Patch Testing Protocol for Cosmetics*, *In Vitro 3T3 Neutral Red Uptake Phototoxicity Assay*, and *Skin Sensitization Assessment: Direct Peptide Reactivity Assay (DPRA)*. These measures help mitigate potential adverse reactions on human skin caused by functional skincare products. The Company has analyzed and evaluated reports and monitored data of adverse product reactions before and after marketing, which have been actively and passively collected, and ensured product traceability.

Through internal audits, external inspections, training sessions, and effective communication channels, we ensure that assessments related to suspected or confirmed adverse reactions are conducted in a timely manner while remaining efficient and compliant with legal standards. In 2024, Bloomage Biotech was subjected to four external audits concerning the monitoring of adverse cosmetic reactions while hosting five internal training sessions focused on managing these reactions related specifically to functional skincare products. Notably in that year, one case of a suspected adverse reaction was reported concerning our functional skincare line. In accordance with our established regulations on cosmetic adverse reaction monitoring management, we carried out thorough collection processes alongside reporting measures. And analysis evaluations were conducted swiftly followed by an investigation into this occurrence. Effective risk control measures were implemented ensuring that no widespread adverse reaction events occurred.

Adverse reaction feedback
telephone number of the Company

0531-82685091

Cultivation of Quality Culture

Bloomage Biotech clearly defines quality management goals, promotes lean production, and encourages cross-site collaboration and empowerment. Additionally, the Company advocates quality training and education, values practical drills on quality management, and implements quality assessments and incentive mechanisms. All these efforts contribute to building a distinct quality management culture. At Bloomage Biotech, we actively nurture our employees' quality concepts and awareness by organizing quality monthly activities, providing quality training and promotion, participating in the construction of quality standards, maintaining cooperation and communication with external parties, etc. In 2024, we conducted hundreds of offline/online trainings related to quality control and product safety, covering all relevant personnel involved in product quality management.

Bloomage Biotech's efforts to foster an atmosphere of quality culture



- Launching the "Quality Month" initiative, featuring 33 themed activities such as: Quality Culture Campaign, Quality Control Team Competitions, Visual Storytelling Photography Competition, "Innovative Quality Excellence in My Eyes – Bloomage" Essay Series
- Implementing a series of training and awareness campaigns, including: Job-specific knowledge training; Quality process dissemination; Thematic training on quality enhancement; Compliance-focused training ("Strengthening Quality and Compliance"); Monthly training on quality regulations and procedures
- Collaborative Training on Hands-On and Professional Skills for Compliance Risk Management
- Organizing the "Building the Great Wall of Quality" Knowledge Contest 2024: Adapting to Industry Transformation
- Conducting Quality Scenario Simulation and Technical Skills Competition
- Interactive Quality & Safety Engagement Campaigns: Gamified Learning for Operational Excellence
- Narratives of Resilience: Quality-driven Production Recovery and Employee Dedication
- Participating in the "2024 Cosmetics Industry High-Quality Development Symposium" organized by the Shandong Provincial Medical Products Administration
- Participating in the "Quality Month" Campaign organized by Hainan Provincial Medical Products Administration
- Attending external workshops and training activities
- Attending Jinan City quality typical exchange speech
- Showcasing smart factory practices through video presentations by the Provincial Medical Products Administration
- Showcasing exemplary works from Shandong's quality - driven brand storytelling campaigns
- Organizing media tours to promote regionally certified products under the "Quancheng Good Products" initiative
- Participating in the "2.25 Skin Care Day" event
- Attending the Second Medical Device Innovation and Development Conference
- Inviting regulators and industry associations to base their training courses in the Bloomage Biotech
- Participating in the construction of international, national, industrial and group quality-related standards actively



Product Accessibility and Affordability

Driven by making products and services of better quality, more accessible, more inclusive, safer and longer-lasting, Bloomage Biotech has always been expanding product application areas and consumption scenarios, to bring healthy, beautiful and happy life experiences to mankind. The Board of Directors remains actively engaged in making informed decisions regarding issues impacting enterprise development within the context of healthcare accessibility among other relevant considerations.

Product Accessibility

Bloomage Biotech is committed to expanding applications for hyaluronic acid products across various fields while enhancing accessibility for diverse populations globally. The Company continuously explores broader applications for medical sodium hyaluronate beyond dermatology into areas like gynecological health while progressively increasing application areas for micro-crosslinked hyaluronic acid extending from facial applications to body areas such as hands or necks.

Our range which includes various bioproducts featuring hyaluronic acid is distributed across over 70 countries worldwide promoting both industry growth and enhanced market penetration efforts thereby facilitating safe and effective solutions accessible globally. In 2024, Bloomage Biotech established a Southeast Asia Regional Centre, formed a localized team, and actively developed and expanded emerging markets.

The Company is committed to improving drug accessibility and medical levels in underdeveloped areas. We have actively cooperated with sectors of society, such as governments, medical institutions, and non-governmental organizations, to carry out the Patient Care Charity Campaign. For example, the Chairwoman leads her charity walk campaign to help solve the health problems of people in underdeveloped areas.

Case | A Clinical Trial on the Treatment of Genitourinary Syndrome of Menopause with Hyaluronic Acid Conducted by Bloomage Biotech



Genitourinary syndrome of menopause (GSM) significantly impacts women's health and quality of life. Hyaluronic acid, recognized for its excellent biocompatibility, offers potential advantages in enhancing tissue hydration and lubrication. Bloomage Biotech, in partnership with Beijing Hospital, has pioneered a clinical trial to evaluate the use of hyaluronic acid in treating GSM. This research aims to assess the safety and efficacy of this treatment approach within the Chinese population. The findings will provide valuable guidance for clinicians and offer technical support in developing safe and effective treatment options for menopausal patients.

Product Affordability

Bloomage Biotech strives to provide customers and consumers with high-quality raw materials and terminal products at reasonable prices. To continuously improve the affordability of our products in the global market, we fully consider the level of economic development in each region in product pricing.

While abiding by the market pricing mechanism, the Company has considered factors such as the affordability and amount purchased from different countries and regions for all its products. Adhering to business ethics rules such as anti-monopoly and anti-unfair competition, the Company has priced fairly in accordance with the local market, industry pricing, and regulatory requirements.

At present, the Company owns one ophthalmic pharmaceutical product and one orthopedic drug, both of which have been included in the medical insurance to benefit the whole country, reducing the economic burden of patients and benefiting more patients.

Customer Services and Rights Protection

Bloomage Biotech has established a dedicated service team committed to responsible marketing practices. The Company has developed diverse communication channels that enable prompt responses while addressing customer feedback and inquiries accurately. Through rigorous quality control measures and reliable after-sales support, we effectively safeguard consumer rights and interests, thereby fostering positive relationships with customers over the long term.

Responsible Marketing

Bloomage Biotech rigorously complies with laws and regulations in terms of responsible marketing, such as the *Law of the People's Republic of China on the Protection of Consumer Rights and Interests*, the *Advertising Law of the People's Republic of China*. The Company has devised policies like the *Code of Conduct for Advertising Release*, *Compliance Guidelines for Live Streaming Promotion*, *Sensitive Term Base for Cosmetics and Daily Chemical Products* to regulate marketing and communication practices. Additionally, we establish marketing compliance procedures and regularly organize internal training. The Company's legal center conducts a comprehensive review of product promotion information and related marketing language to ensure legal compliance. In 2024, Bloomage Biotech did not face any legal disputes related to false marketing claims.

Enhancing Product Information Transparency

Bloomage Biotech closely monitors the latest regulatory developments regarding product manuals, labeling, and packaging. The Company promptly updates its internal management procedures and conducts regular self-audits to rectify any discrepancies. Committed to the principle of information transparency, Bloomage accurately labels product ingredients, usage instructions, contraindications, and shelf life to ensure full compliance with applicable laws and regulations. All claims regarding product efficacy are substantiated by results from external authoritative testing and validation processes. To further enhance transparency, the Company clearly communicates product ingredients and their sources during promotional activities. Comprehensive ingredient information is publicly disclosed across multiple platforms, including the Company's official website. Moreover, ingredient explanation seminars are organized for interested parties. This approach fosters an open environment where customers and consumers can provide oversight. Additionally, Bloomage Biotech regularly educates consumers about product shelf life and proper usage methods through various channels such as social media platforms, advertising campaigns, and customer service hotlines.

Compliance in Marketing

In its external marketing collaborations, Bloomage Biotech incorporates marketing risk clauses in its promotional contracts. These clauses require partner agencies and influencers to sign a *Commitment Letter for Marketing Compliance*, ensuring strict adherence to laws, regulations, company policies, and the guidelines of promotional platforms related to internet marketing activities. Prior to initiating partnerships, we conduct comprehensive background checks and audits of online influencers and major V-streamers. We provide training to ensure they are well-versed in relevant regulations and prohibited terms, as well as review the promotional content they intend to use for product advertising. During live-streaming events, we implement manual monitoring across multiple platforms to closely track any negative public sentiment in real-time.

Online platform stores and e-commerce livestreams serve as the primary sales channels for Bloomage Biotech's functional skincare and food products. To raise employees' awareness of responsible marketing and ensure compliance during the sales process, the Company conducts training on compliance in promotion and advertising practices for key marketing employees, promptly summarizing and sharing regulations and policies related to compliant product promotion and advertising. External experts are occasionally invited to conduct compliance promotion training for sales personnel. Furthermore, the Company regularly reviews prohibited marketing keywords and other online sales risks, reinforcing the compliance and operational capabilities of relevant personnel through post-event analysis, weekly exchanges and special training so as to avoid providing consumers with negative experiences due to violations.

Key Performance

Bloomage Biotech responsible
marketing training overview



22,243
participants

15,312
training hours

In 2024, all brands under Bloomage Biotech maintained high DSR¹ scores on major mainstream online platforms such as Tmall, JD.com, and TikTok without content moderation alerts, comment suspension and serious violations.

Improving Customer Satisfaction

Bloomage Biotech has established management documents such as the *Operating Procedures for Customer Satisfaction Survey and Analysis*, which clearly define customer service objectives. The Company continuously conducts training programs aimed at enhancing customer service capabilities while establishing quality inspection standards linked directly to customer service staff performance assessments. Bloomage Biotech has established a dedicated consumer research team that collaborates with external data analysis firms to conduct satisfaction surveys regarding product quality and company services both before and after product launches. The results of these surveys are analyzed in depth, enabling timely updates and iterations of our products while continuously optimizing our operational methods and content. In addition, Bloomage Biotech promotes awareness of its products while building trust among customers through various outreach initiatives, such as publishing scientific articles and white papers, organizing skincare-related seminars, providing online educational content, hosting sessions featuring industry experts, and partner training workshops.

In 2024, we established a centralized customer feedback collection mechanism alongside standardized monitoring processes for service delivery. By integrating information from multiple channels into clear standards at each interaction step, we effectively addressed issues related to information fragmentation or processing delays while significantly boosting response times. We also enhanced technical support by assembling a specialized expert team capable of conducting targeted training that refine usage scenarios, enriching our knowledge base while updating raw material labeling standards to comprehensively improve customer experience.

Customer Privacy Protection

Bloomage Biotech places a high priority on customer privacy and security. To safeguard customer information and trade secrets while preventing privacy breaches, the Company encrypts data related to user privacy and enforces strict permission isolation at the original layer of its Operational Data Store (ODS). We have established a hierarchical access system for customer information based on departments, job levels, and positions, accompanied by a rigorous data access approval process. This structure ensures the secure and compliant use of customer information. Bloomage Biotech has required employees to strictly control and manage documents and other materials according to relevant provisions and administrative regulations. It is forbidden to arbitrarily leak any documents and materials of the Company to outsiders. In addition, the Company organizes special training on trade secret protection on an irregular basis to enhance employees' confidentiality awareness.

The Company strictly protects the privacy and data security of B2B customers. We have confidentiality clauses in all contracts signed with customers. We do not disclose privacy without his or her knowledge and consent. The Company abides by the *Personal Information Protection Law of the People's Republic of China* and the data protection policies of online shopping platforms. We have strengthened our internal self-discipline and autonomy. Based on legality and compliance, the Company has handled B2C consumers' personal information, following the principle of personal information notification and consent. Regarding medical aesthetic products and services, Bloomage Biotech has implemented management measures such as the *Image Rights License Agreement* and the *Facial Injectable Treatment Informed Consent* to protect the privacy rights of distributors and patients.

The Company continuously develops specific processes for identifying, assessing, prioritizing, monitoring, and managing risks related to customer privacy protection. These measures provide comprehensive safeguards for securing customer privacy information. In 2024, Bloomage Biotech did not experience any incidents involving leakage of customer privacy or verified complaints related to invasion of privacy or loss of customer data. Furthermore, there were no complaints arising from inadequate management of customer data security.

¹DSR score is the detailed evaluation score given by buyers on e-commerce platforms to sellers, reflecting the performance of sellers in aspects such as product description, logistics service, communication, and transaction experience.

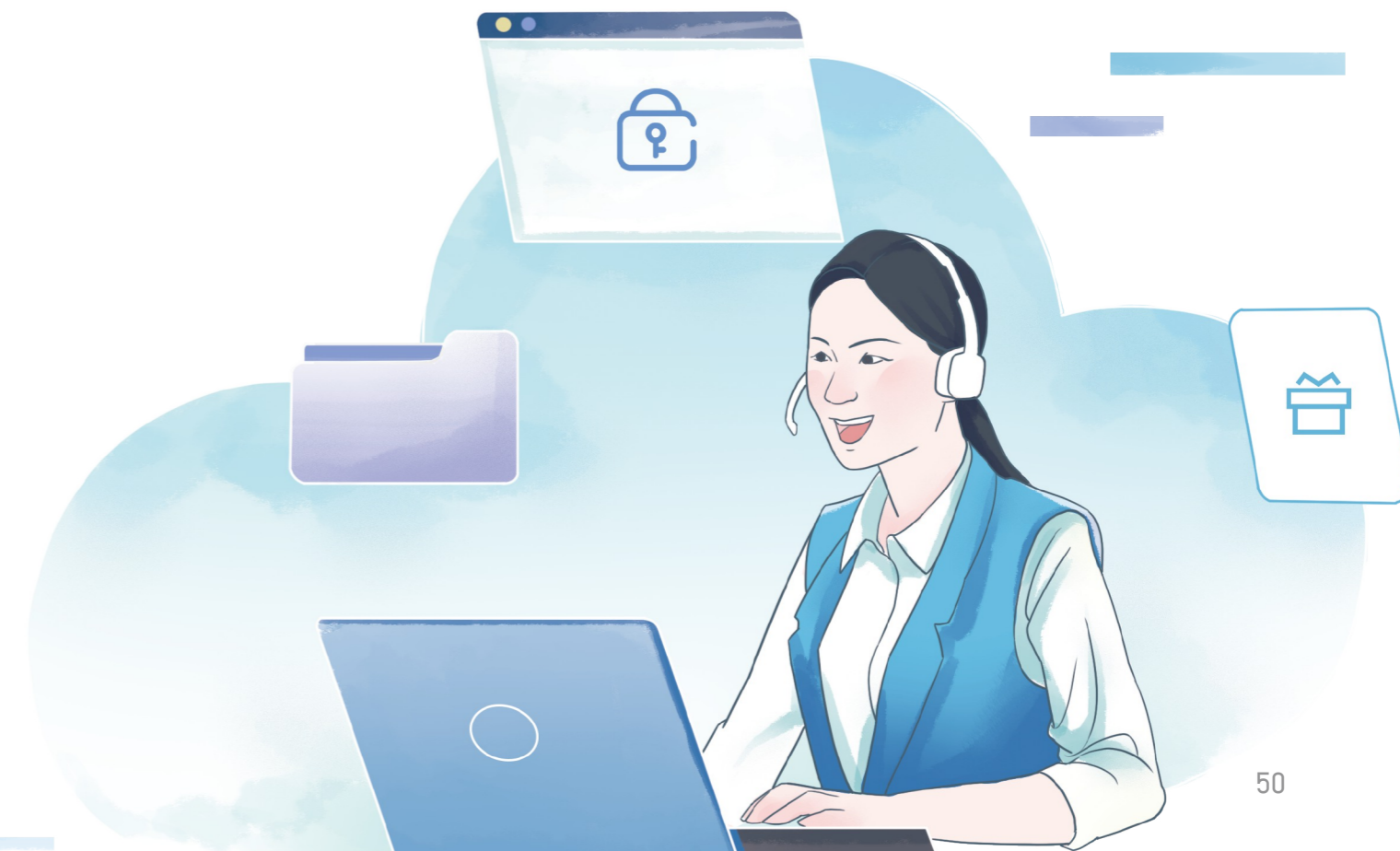
Customer Feedback and Complaints

To respond to customer feedback on time and handle customer complaints efficiently, Bloomage Biotech formulated the *Customer Complaint Handling Standard Operating Procedure* as well as *Customer-Related Processes and Closed-Loop Feedback Management Procedure*. Also, we have established handling and feedback procedures, customer service standards and specifications, and emergency handling procedures. We have optimized its service quality through daily inspections, research and analysis, and timely training for relevant employees.

Upon receiving feedback and complaints, the Company conducts thorough cause investigations along with risk assessments where applicable. The company may take actions such as sampling or initiating product recalls based on the findings, and the company develops corrective action plans accordingly and implements preventive measures aimed at effectively resolving various types of feedback. We have established distinct handling procedures based on the nature of customer feedback. If a complaint pertains to product quality, the customer complaint handling process is initiated. Feedback involving adverse reactions triggers the Adverse Event (AE) support process. For feedback related to product usage experiences or consumer demands, our Product Management Department will assess the possibility to develop new products and services.

The Company welcomes feedback from B2B customers via WeChat, email, phone calls, and interviews. In 2024, the Company received a total of 38 complaints from B-end customers through various channels, with a response rate of 100% and a complaint resolution rate of 100%.

The Company welcomes queries, requests and suggestions from B2C consumers via online or offline channels. The Company has provided online customer service on e-commerce platforms, such as Tmall, JD.com and TikTok, and participated in the "Hassle-Free Return Protection" program promoted by the platforms. If consumers have any questions or complaints, they can contact us through customer service channels. Furthermore, we consistently engage private-domain fans alongside recruiting public-domain consumers by inviting them into trial runs featuring new products to gather valuable perspectives covering diverse aspects like user experience, efficacy, weight packaging material and fragrance. In 2024, the Company received a total of 53 complaints from B2C consumers via various channels, with a response rate of 100% and a complaint resolution rate of 100%.



04

Growth: Talent Employment and Development

Bloomage Biotech firmly believes that talent is a crucial cornerstone for the Company's sustainable development. We are dedicated to fostering an equitable, diverse, inclusive, and safe working environment for all employees. Our commitment includes providing a comprehensive, full-cycle talent training system that supports professional development and broadens career advancement opportunities while facilitating the personal growth of our employees. We will continue to enhance our occupational health and safety management practices, ensuring the safeguarding of our employees' occupational safety as well as their physical and mental well-being. By doing so, we aim to collectively achieve our goals for sustainable development.

SDGs Addressed in this Chapter:



Major Material Topics of Sustainability Covered in this Chapter:

- Employee Rights
- Employee Development
- Occupational Health and Safety



Fair and Standardized Employment

Bloomage Biotech adheres to the principles of legal and equal employment. The Company is committed to comprehensively respecting and protecting human rights, as well as safeguarding laborer rights and interests, through standardizing employee recruitment and hiring processes, continuously improving employment management systems, and clarifying ethical codes of conduct.

Compliance in Employment

Bloomage Biotech is committed to upholding the principles outlined in the *Universal Declaration of Human Rights* and strictly adheres to national and local laws and regulations, including the *Labor Law of the People's Republic of China*, *Labor Contract Law of the People's Republic of China*, and *Regulations on the Prohibition of Child Labor*, in all its operational regions. In alignment with standards such as the SA 8000 Social Responsibility Standard, ISO 26000 Social Responsibility Management System Standard, and Ethical Trading Initiative (ETI) Base Code, we have developed and implemented an *Employee Handbook* along with several associated management policies. The Company is dedicated to treating all employees fairly and equitably, regardless of their race, skin color, ethnicity, gender, age, religious beliefs, or cultural background. We have a strict zero-tolerance policy towards child labor in any form. Additionally, forced labor, including any use of violence, threats, or illegal restrictions on personal freedom, is expressly prohibited. Corporal punishment, intimidation, harassment, abuse, or any form of discrimination against employees is likewise strictly forbidden.

We have made employee recruitment and management standards, including but not limited to:

Recruitment Process



- The Company has formulated the *Recruitment Management Regulations*. Recruitment is carried out under the principle of "openness and fairness", ensuring that recruitment decisions are not influenced by discrimination based on factors such as ethnicity, religion, disability, gender, or marital status
- Necessary background checks are conducted with the informed consent of candidates to prevent issues such as identity fraud and conflicts of interest

During Employment



- Bloomage Biotech has established the *Attendance and Leave Management Policy* to implement standard working hour systems and comprehensive time-keeping procedures. This ensures the smooth operation and production order of the Company while safeguarding employees' legal rights to rest and time off

Position Changes, Terminations, and Resignation



- Employee-Initiated Termination of the Labor Contract:**
- The Company respects employees' voluntary decisions to resign and adheres to established resignation procedures
- Company-Unilateral Initiation of Position Changes or Termination of Employment Contracts:**
- Compliance with Law and Labor Contract:** Bloomage Biotech is committed to complying with local employment laws, regulations, and labor contracts, ensuring that termination or layoff procedures are conducted legally and fairly
 - Unimpeded Communication and Transparency:** Employees are informed in advance about terminations. The specific reasons for termination, along with detailed processes and follow-up arrangements, are clearly conveyed
 - Support and Compensation:** Employees' rights are fully respected throughout this process. Appropriate financial compensation is provided in accordance with legal requirements. Additionally, Bloomage Biotech offers support for re-employment through various means such as career counseling, training opportunities, internal referrals, and job transfer options

The Company strictly prohibits the use of child labour. We have established and implemented work management procedures for the prohibition of child labour and the protection of underage workers. Identity and background checks are carried out on employees, and the following measures are taken to ensure effective management:

Statement and Principle

- The Company firmly opposes any form of child labour use and will never collaborate with suppliers who knowingly employ children

Recruitment and Hiring

- Prior to employee onboarding, we employ a multi-tiered verification approach that combines third-party background checks with manual reviews. Personnel files are meticulously created, and we conduct in-depth verification and authentication of employees' true identity details. This comprehensive process is designed to prevent the inadvertent recruitment of child labour, especially in cases where employees might submit false information

Protection of Underage Workers

- For underage workers between the ages of 16 and 18, we strictly adhere to legal and ethical guidelines. They are not permitted to engage in, nor will they be assigned to, work in high-risk environments such as high-altitude jobs, underground operations, radioactive, highly toxic, flammable, and explosive work areas. Additionally, they are excluded from tasks involving the fourth-level physical labour intensity as defined by national regulations and other internship work with inherent safety risks. In compliance with legal requirements, regular health examinations are arranged to safeguard their well-being

Child Labour Rescue Procedures

- In the event that child labour is detected, immediate action is taken. The child's work is halted without delay, and a comprehensive health check is arranged. Subsequently, the child is safely escorted home, and both the child's guardian and relevant authorities are promptly notified

The Company categorically prohibits all forms of forced labour and abuse, including sexual coercion, sexual assault, threats, unwarranted body searches, maltreatment, humiliation, exploitation, and harassment. A comprehensive management system has been established. This system clearly outlines employees' rights and interests, sets explicit requirements for management personnel, and provides a well-defined complaint channel. A dedicated department is responsible for conducting investigations to ensure effective supervision and continuous improvement of management quality.

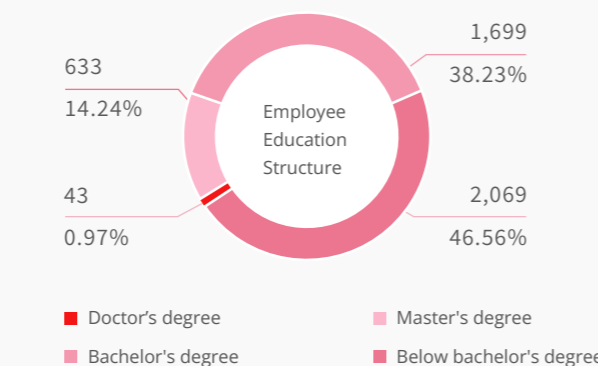
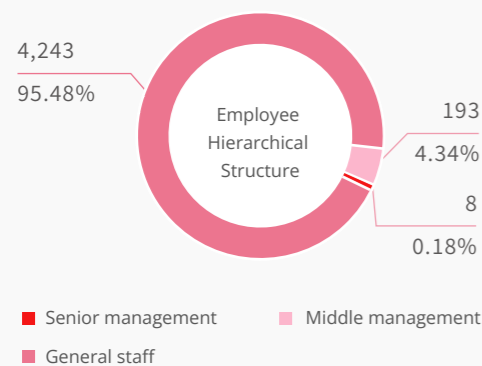
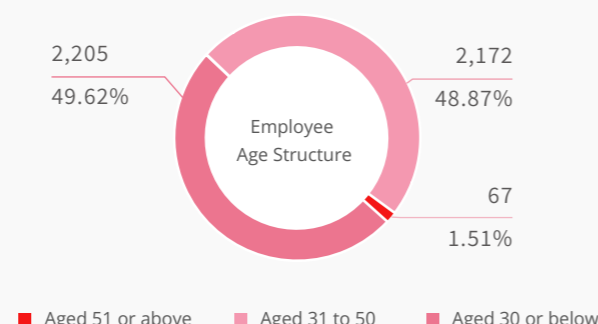
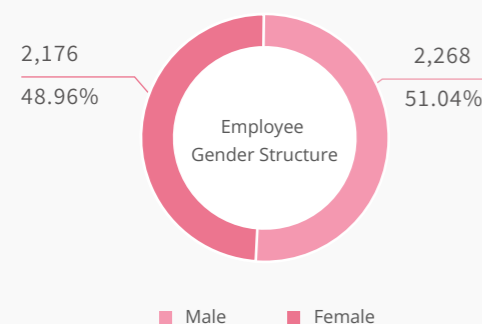
Bloomage Biotech continues to expand its talent pool and build a well-structured talent pipeline. By the close of the reporting period, the Company had a workforce of 4,444 employees. The labour contract signing rate reached 100%, and the employee turnover rate stood at 28.75%. All employees were adults above 18 years old. There were no incidents of child labour employment, forced labour, or other severe human rights violations such as debt-bondage labour, labour trafficking, or transfer.

Diversity and Inclusion

Bloomage Biotech respects employees of different ages, races, genders, nationalities, and physical conditions. To ensure the fairness and justice of the Company's procedures and processes in recruitment, salary incentives, training, and promotion, we have formulated and implemented the *Professional Code of Ethics and Conduct* and other systems. In this way, we ensure that employees enjoy equal rights, prohibiting any form of discrimination and accepting employees' complaints when necessary.

Employee Structure of Bloomage Biotech in 2024

Unit: person/%



Key Performance

As of the end of the reporting period, the proportion of female employees at Bloomage Biotech was as follows:



The Company has provided equal opportunities for all employees. We have fully utilized the respective advantages of gender differences and capability differences at work. In 2024, awareness training on diversity, discrimination and harassment, and forced and abusive labour was newly developed and incorporated into the *Employee Onboarding Guidebook* for new employees.

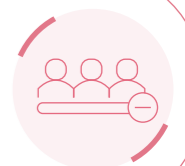
Female Employees



- We respect and protect the rights and interests of female employees and clarify the scope of work for female employees:
 - We forbid arranging female employees in super labor-intensive positions
 - We prohibit arranging pregnant and lactating female employees to engage in any work that may endanger their and their children's health and safety
 - Provide diversified care to our female employees by setting up a dedicated lactation room in the Company and organizing regular care activities

Retired and Re-employed Employees

- We have formulated the *Management Regulations on Retirement and Re-employment*. We have not restricted the opportunities for employees to develop old employees' abilities. Oriented to personal expertise and industry experience, we fully protect the rights and interests of re-employed employee
- In 2024, Bloomage Biotech has had 11 re-employed employees



Employees of Different Races and Ethnicities



- We are highly attentive to the lives of employees from diverse racial and ethnic backgrounds, showing full respect for their emotions, cultural, and dietary customs. In our company cafeteria, we make distinctions in food offerings according to the religious beliefs of ethnic-minority employees
- In 2024, Bloomage Biotech has employed a total of 9 foreign employees and a total of 120 minority employees

Disabled employees

- The Company supports the employment of special groups such as people with disabilities. We have prohibited discrimination against the disabled in the recruitment and appointment process. When conditions permit, we provide suitable positions for such individuals to protect their legitimate rights and interests
- In 2024, Bloomage Biotech has employed a total of 17 disabled employees



Case | Bloomage Biotech's Signing of the United Nations Women's Empowerment Principles (WEPs)



"True gender equality should transcend the over-emphasis on gender. Gender equality is not only an indicator of social progress but also a linchpin for the sustainable development of enterprises. Bloomage Biotech is committed to doing its part to assist more women in realising their self-worth, enabling them to shine with wisdom and radiance, and contributing to the creation of a more equitable social environment."

— Zhao Yan, Chairwoman and CEO of Bloomage Biotech

In May 2024, Bloomage Biotech officially became a signatory member of *UN Women's Women's Empowerment Principles (WEPs)*. This initiative aims to empower women in the workplace, marketplace, and community, thereby promoting the realization of gender equality. The signing of the WEPs also signals international recognition of Bloomage Biotech's commitment and efforts in promoting gender equality and women's empowerment. Looking ahead, Bloomage Biotech will further deepen its practices in gender equality and women's empowerment. By establishing a high-level leadership mechanism and strengthening education and training for female employees, the Company aims to enhance the personal and social values of its female workforce.

Talent Development

Bloomage Biotech attaches great importance to attracting and retaining talents. We have striven to make career development channels smooth, continuously optimized employee training systems, and built a complete performance incentive mechanism. By doing so, we provide a broad platform for employee development.

Talent Introduction

Bloomage Biotech approaches talent development and management from a strategic perspective. The Company has established an efficient talent recruitment management mechanism and scientifically forecasts talent development requirements. We promptly engage external human resources service agencies to assist in building our talent pool in technology, management, and professional fields. We conduct social and campus recruitment activities on mainstream social and recruitment platforms. Additionally, the Company has drawn attention to talent acquisition by actively participating in industry activities, conducting training with schools, promoting employer brands, and providing competitive benefits.

When recruiting talent, Bloomage Biotech adopts a diversified talent acquisition strategy. The Company has established a scientific, objective, and comprehensive evaluation system. By utilizing diverse assessment tools such as scientific evaluations and situational simulations, and integrating professional and systematic interview processes, we thoroughly assess the capabilities of candidates, thereby strengthening our talent development strategy. Furthermore, Bloomage Biotech continuously refines the *Internal Referral Management Regulations*. For referrers who successfully recommend management-level candidates for employment, the Company offers bonuses to encourage employees to continuously support the Company in attracting high-quality talent.

In recent years, Bloomage Biotech has received prestigious employer awards such as the ECHO 2023 King's Ark-Most Talent-Centric Employer Award and the China HR Venus Grand Awards: Talent Management Benchmark Enterprise. These recognitions signify the Company's continuous exploration of employee development pathways and the achievements it has attained.

Talent Cultivation

Bloomage Biotech has improved employee qualities and fueled their career development through training. The Company has established talent cultivation systems such as the *Training Management System* and the *Internal Job Posting System*, which clearly define its talent cultivation strategy. By developing diversified promotion channels and establishing an open development platform, we have provided employees with more opportunities for training and further study.

Employee Training System

Bloomage Biotech has built a systematic talent training system framework. To facilitate the internal talent pipeline development, we have provided multi-field and multi-level training programs covering management training, professional training, new staff training, and general skills training. In addition, we provide rich academic resources and platforms, such as various AI office tools and CNKI accounts, to help employees make efficient use of office and learning resources and support their development.

Key Performance

In 2024



Training sessions

6,279 participants

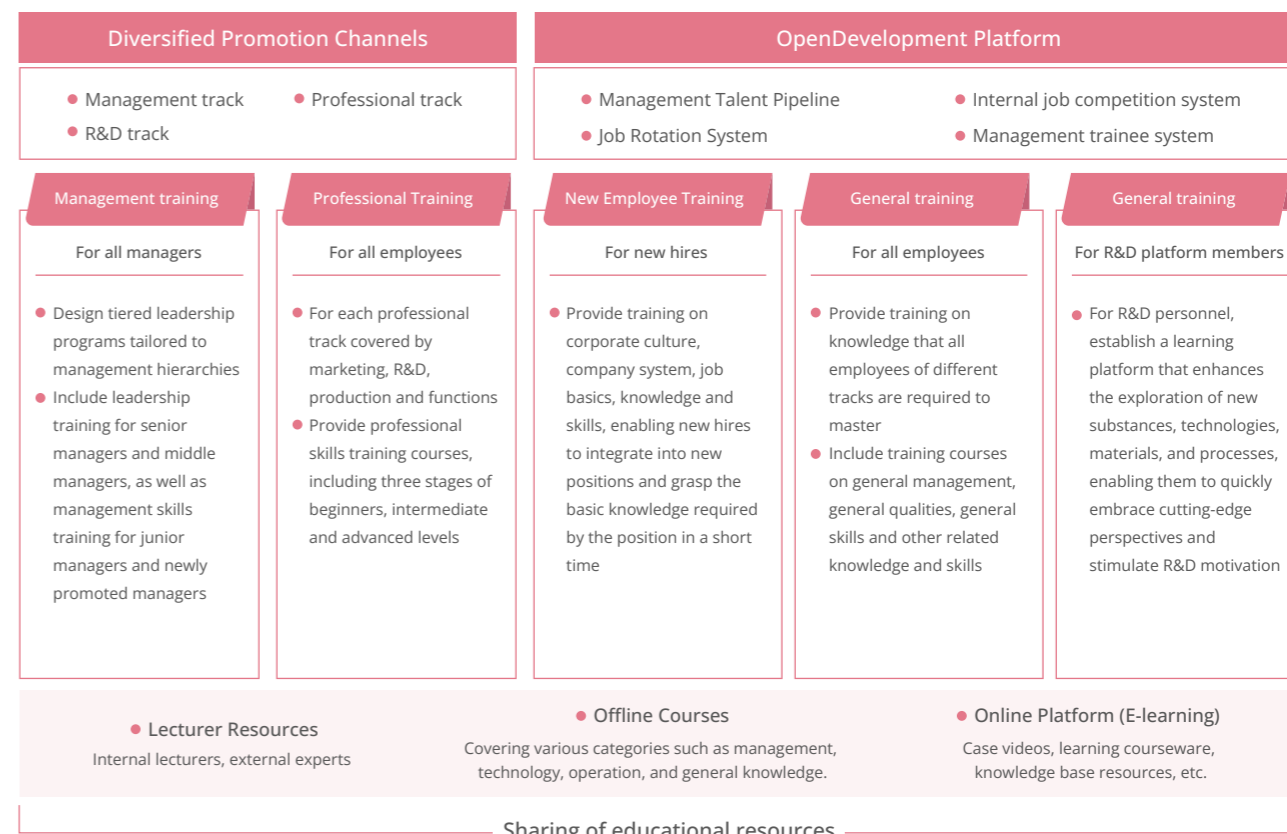
Training hours per employee

26.61 hours

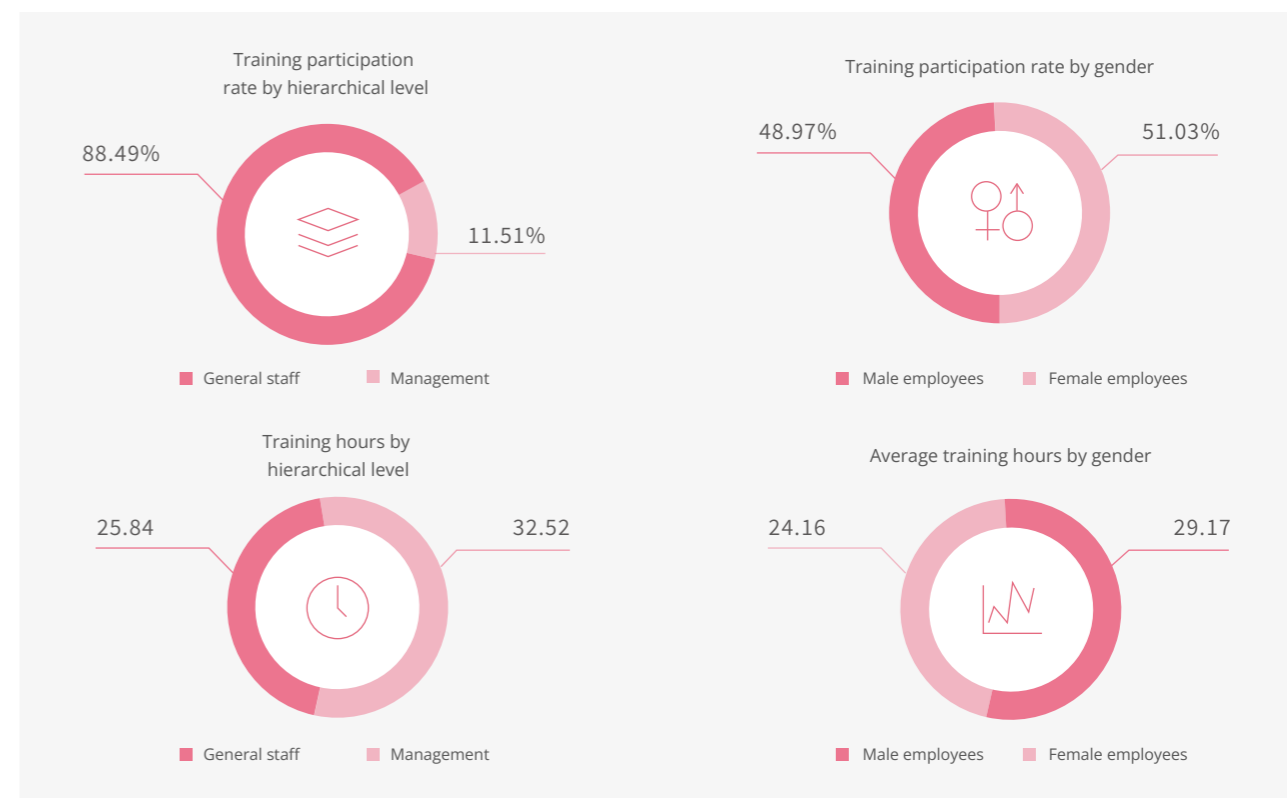
Overall investment in employee training

2.67 million RMB

Bloomage Biotech's all-round employee training system



Employee training performance of Bloomage Biotech in 2024



Case | Bloomage Biotech's New Employee Onboarding Camp



Bloomage Biotech conducts a comprehensive 5-day onboarding training program for newly hired employees. This training integrates various formats, including classroom lectures, group discussions, on-site visits, outdoor team-building activities, and practical drills. The program aims to impart essential knowledge regarding corporate culture, product information, and quality and safety management. This approach not only deepens employees' identification with the corporate culture but also enhances their professional skills and fosters a spirit of teamwork, thereby facilitating the smooth integration of new employees into the workplace.



New Employee Onboarding Camp, Jinan Production Base

Case | Bloomage Biotech has launched diversified leadership training programs



In 2024, the Company organized 4 leadership training sessions across different business lines, engaging approximately 200 participants in total. The training adopts a thematic approach combined with situational interaction to promote in-depth and amicable collaboration among departments. This initiative contributes to the optimal allocation and efficient utilization of resources.



Active Ingredient Business Line & Pharmaceutical & Medical Device Business Line: "Driving Growth through Development" Management Leadership Training

Global R&D Platform - Raw Material R&D Center & Active Ingredient Business Line: Specialized Horizontal Leadership Training Centered on "Value Linkage: Synergy for Win-Win Results"

Personal Health Consumer Goods Business Line & Global R&D Platform - Personal Care R&D Center: "Boundary-less Communication: Win-Win Cooperation" Horizontal Leadership Training Project

Global R&D Platform - Raw Material R&D Center: "Fusion-Innovation" First Phase Project Management Capacity-Building Training Camp

Case | Vocational Skills Training Conducted by Bloomage Biotech



In 2024, the Company organised 7 vocational skills training sessions, with around 500 participants. These trainings employed thematic instruction alongside group competitions and situational interactions to assist employees in clarifying their thought processes from user needs to improving business performance. This approach deepened employees' understanding of market dynamics and enhanced the success rate of new product development as well as market promotion.



This year marks Bloomage Biotech formally initiated the Reserve Cadre Nomination Process for Tier 1 (Including 1.5) and Higher Management Team. Managers are encouraged to nominate candidates who demonstrate exemplary character and performance while aligning with organizational development needs. This effort lays a foundational framework for systematic long-term talent reserve within the Company's talent management strategy.

The Company has continued to enhance the *Implementation Rules for Learning and Growth Welfare*, which encompasses vocational qualification training projects and educational programs for all employees, including part-time and contract workers. The initiative encourages employees to pursue relevant professional qualification certificates or upgrade their academic education. It also clearly outlines reimbursement policies for personal academic advancement expenses and provides subsidies for obtaining certificates. In 2024, the Company invested a total of RMB 196.4 thousand in subsidies to support employees in achieving educational qualifications and professional certificates.

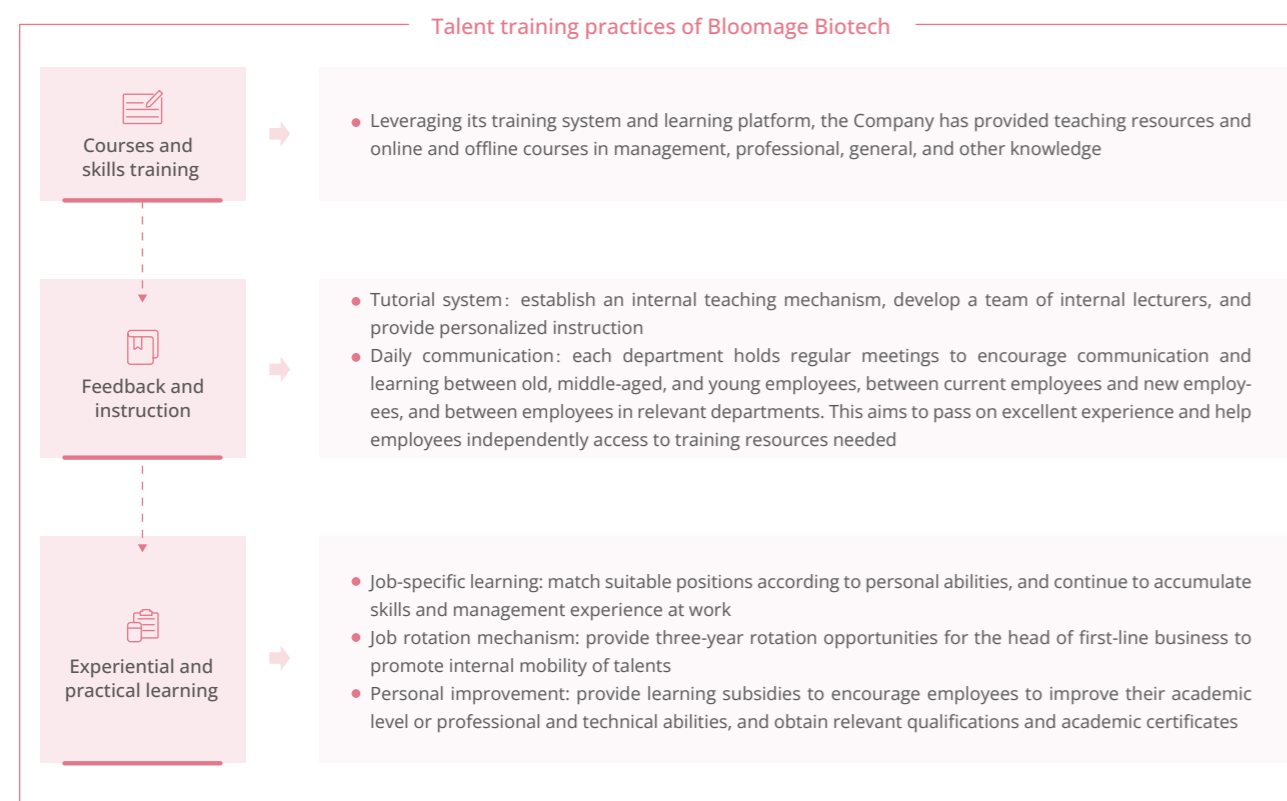


Employee Training Model

Bloomage Biotech continuously expands its talent development models including internal tutoring, external expert teaching, and college-enterprise cooperation. Besides, the Company has continued to enrich the existing teaching resource library to meet employees' diverse growth needs.

In 2024, the Company further refined internal documents, such as the *Interim Regulations on the Management of Tutoring New* and *Interim Regulations on the Management of Internal Trainers*. By doing so, we have clarified the tutoring process, tutor qualifications and appointments, teaching responsibilities, and assessment methods. We have regulated internally established tutorial systems and apprenticeship to build a stable and high-quality team of trainers.

Additionally, Bloomage Biotech improved employee development paths in terms of three directions: "experiential and practical learning", "feedback and instruction" and "courses and skills training".



This year, the Company has initiated a pilot rotation program designed to cultivate mid-to-senior-level composite leadership talents and enhance cross-functional management competencies, thereby building a robust talent development ecosystem.

Innovative Talent Cultivation

Bloomage Biotech actively explores innovative talent - cultivation models and promotes the transformation of scientific and technological achievements. In 2024, the Company continuously refined the innovative talent management model. The R&D Management Committee takes the lead in overall planning, supervision, and guidance, while various departments collaborate in management, each performing its own duties. Bloomage Biotech places significant emphasis on attracting innovative talent and optimizing the structure of its talent pool. The Company actively encourages R&D personnel to engage in internal transfers and job rotations, thereby establishing pathways for the cultivation and development of innovative talents. We regularly formulate and update our talent assessment and incentive mechanisms to align with best practices. In doing so, we continuously enhance our model for the cultivation and management of innovative talents. Currently, we boast a multidisciplinary, professionally structured, industry-experienced, deeply capable, and efficiently collaborative talent team, providing fundamental support for the Company's technological innovation.

Bloomage Biotech places a strong emphasis on providing various training opportunities for R&D personnel to empower innovative researchers. In 2024, the Company conducted a total of 43 training sessions focused on innovative talent development, with 2,931 participants accumulating 128 hours of training. Among these, seven sessions were specifically designed for core staff and team leaders, engaging a total of 382 participants. Additionally, the Company arranged for relevant personnel to attend external technical training programs to enhance industry technical exchanges.

Case

Conducted Business Competency
Training Conducted by Bloomage Biotech



In 2024, the Company organized 6 training sessions themed "R&D Personnel Understanding Business Operations" for all R&D staff involved in raw materials and pharmaceutical and medical device research. A total of 952 person-time participated in these sessions. The training aimed to enhance capabilities in knowledge transfer, management cognition, organizational awareness, project management, and self-growth among R&D personnel. Through thematic instruction, case studies, interactive discussions, and simulated problem-solving scenarios, the program improved employees' business awareness as well as their problem-solving skills and collaborative thinking, supporting the continuous optimization of the Company's R&D system in alignment with its strategic objectives.

Key Performance

In 2024, Bloomage Biotech



The Company employs approximately
920 R&D professionals
(around 50% hold postgraduate degrees or higher)

represents about
20.70%
of our total workforce



2
experts enjoying special
government subsidies
from the State Council

2
Provincial Experts with Outstanding
Contributions

3
Taishan Industry Leading Talents

3
Municipal Leading Talent

30
Key technical personnel in critical
fields such as senior/deputy
engineers and pharmacists.



Training rate of our
innovative talent
100%

Talent Development

Promotion Mechanism

Bloomage Biotech provides a growth framework that aligns with job requirements and career planning objectives while establishing scientific evaluation criteria for employees' promotion pathways. The Company has implemented a *Performance Management System* that standardizes key performance management processes, including setting performance indicators, conducting performance communication and coaching, evaluating performance, and facilitating interviews with feedback. This system combines quarterly and annual evaluations to regularly assess employee performance while providing a basis for salary distribution as well as talent promotion and development decisions. We are committed to eradicating any form of discrimination during career advancement processes to ensure equal promotional opportunities for all employees.

In 2024, Bloomage Biotech initiated the Personal Business Commitment (PBC) performance assessment across all employee levels. Additionally, we have continuously optimized our *Employee Performance Evaluation Grievance Redress Mechanism*. Employees who have questions or concerns regarding their performance results can initiate an appeal at any time, and we guarantee that responses will be provided within 2-3 days.

In 2024, Bloomage Biotech issued the *Interim Regulations on Internal Job Posting Management V2.0*. This update introduced an evaluation mechanism for the adaptation periods of Tier 1 Organizational Unit Leaders, Senior Management, and Core Technical Personnel through a Dual-Tier Evaluation process complemented by a 360-Degree Assessment approach. These mechanisms comprehensively evaluate the compatibility between employees and their roles while encouraging individuals to seek more suitable career development opportunities within Bloomage Biotech. Furthermore, the establishment of standardized internal job posting processes enhances our ability to effectively allocate and manage talent resources across the organization.

Incentives and Recognition

In 2024, Bloomage Biotech implemented the *Management Measures of Honors and Recognition V2.0* for all employees, further enhancing our selection mechanism for honors and recognition. Additionally, we established an assessment and incentive framework that focuses on "product development projects as individual units", guided by the "goal of meeting market and customer demands". By leveraging project-based performance evaluations along with bonus structures, we aim to enhance employees' motivation for progress and accelerate high-quality, innovative research and development of products.

Key Performance

In 2024



100%
employees received
performance evaluations



322
internal promotions

Internal promotion rate

7.25%

Honor and recognition system of Bloomage Biotech



Objects of
recognition

- Teams or individuals excelling in our quarterly recognition program
- Benchmark Models: Recognized role models within each business line
- Employees who have made significant contributions to critical projects or tasks
- Employees involved in key milestone events for the Company



Forms of
recognition

- Spiritual Incentives: We enhance employees' sense of honor and achievement through awards such as medals of honor or prestigious titles
- Material Incentives: We conduct annual evaluations to identify outstanding projects, providing bonus incentives to both teams and individuals recognized for their contributions
- Talent Development Incentives: Key accomplishments are documented in personal development file. Include employees in the core reserve echelon for special training opportunities. Provide promotion opportunities
- Equity Incentives: We implement long-term incentive measures for the Company's directors, senior management, and key personnel. Outstanding individuals are given priority access to equity and other medium-to-long-term incentive programs



Recognition
frequency

- Awards will be given in the annual/quarterly summing-up meeting
- Awards will be given timely after important projects/tasks are completed

Case | Commendation activities on Bloomage Biotech's anniversary



In celebration of our anniversary in 2024, Bloomage Biotech honored benchmarked model employees at our celebration event by awarding a total of 16 prizes (eight categories) comprising individual awards such as 1 Chairwoman's Special Award, 7 Excellent Teamwork Award, and 8 Outstanding Contribution Award. This not only expresses gratitude towards our dedicated workforce but also aims to motivate outstanding performers to continue achieving excellence alongside us.



Group Photo of the Commended Employees at the Company Anniversary Celebration

Safety and Health

Bloomage Biotech places paramount importance on employee occupational health and safety. The Company adheres strictly to legal regulations such as the *Work Safety Law of the People's Republic of China* and the *Law of the People's Republic of China on Prevention and Control of Occupational Diseases*. We have established a comprehensive work safety management system alongside occupational health protocols that focus on enhancing safety practices across all operations, ensuring compliance with work safety regulations while safeguarding employee well-being.

Safety Management

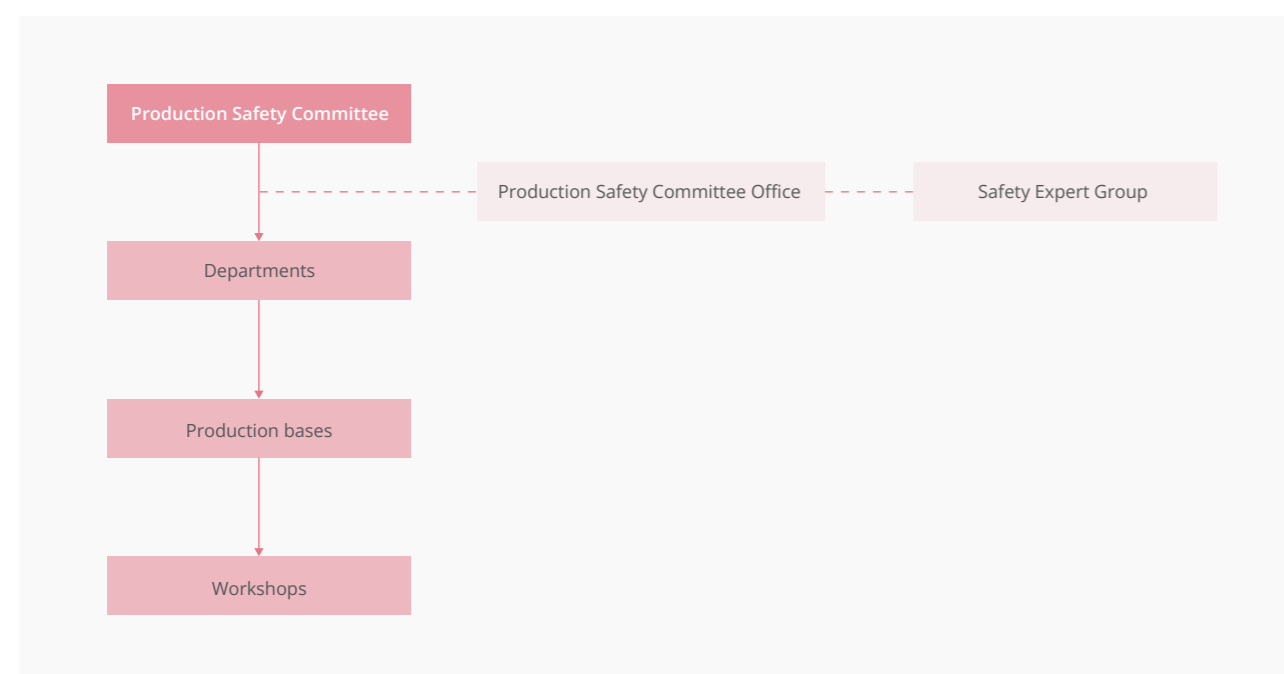
By benchmarking against ISO 45001 standards and international best practices, we have further refined our policies governing safety and health management, including the *Work Safety Management System* and *Occupational Health Management System*. As of the end of this reporting period, Bloomage Biotech's production bases in Jinan, Tianjin, and Dongying have all achieved ISO 45001 certification for their occupational health and safety management systems. Regular internal audits are conducted alongside external audits to ensure adherence across all production bases.

Security Structure

Bloomage Biotech emphasizes standardized development for work safety through a top-down organizational approach that directs, coordinates, and implements safety tasks across subsidiaries while regularly convening meetings focused on work safety. The Company's Work Safety Committee serves as the supreme authority for safety-related affairs. The Chairwoman and CEO of the Company assumes the role of director, while the heads of various departments and safety heads of production bases are members.

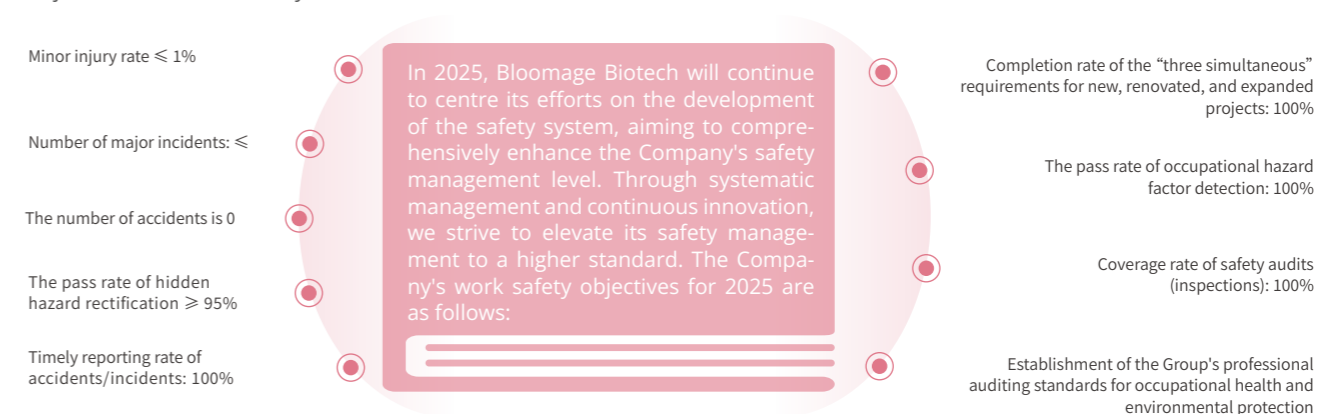
In 2024, Bloomage Biotech newly established the Safety and Environmental Protection Management Center. This center is tasked with formulating and implementing the Company's safety and environmental protection strategies, ensuring the effective operation of the safety and environmental protection systems. The Group has set up an internal safety expert panel and collaborated with a third-party to form an external expert panel. By conducting audits alternately between the internal and external expert panels, the Company further strengthens the foundation of its safety system management and continuously improves its safety-management standards. This approach supports activities such as formulating work safety regulations, conducting safety audits, and engaging in academic discussions on work safety.

Safety production management structure of Bloomage Biotech



Safety Goals

Bloomage Biotech sets goals related to occupational health and work safety every year, as a guide to promote various work safety management tasks. In 2024, the Company adjusted the safety production goals of 2024 by combining the safety audit rectification opinions and national laws and regulations related to safety production. We have finally developed 19 annual goals and distributed them to each subsidiary and branch, ensuring their implementation at each production base. In 2024, all of the Company's safety objectives were successfully achieved.



To achieve its safety production targets successfully, the Company has broken down the targets and delivered them to subsidiaries, departments, manufacturing workshops, teams, and individuals. We have completed the targets from top to bottom by standardizing the production system, improving the safety management structure, developing a safety culture, and assessing safety performance.

Key Performance



10.82 million RMB
Invested in work safety and occupational health²

135.2 thousand RMB
allocated to employees' work safety liability insurance

100%
related positions' work safety liability insurance³

Based on its realities, each production base has formulated its management measures for performance appraisal, which are related to vocational health and safety. These measures stipulated safety performance appraisal standards and procedures covering all relevant employees. We also require general managers of all production bases and employees to sign a safety target responsibility letter. In 2024, the signing rate of employee safety target responsibility letters in all production bases of Bloomage Biotech reached 100%. Besides, the work-related injury insurance purchase rate also stood at 100%.

Employees' occupational health and safety conditions of Bloomage Biotech

Indicators	Unit	2023	2024
Number of work-related deaths	person	0	0
Number of work-related injuries	count	3	0
Number of working days lost due to work-related injuries	day	53	0
Work-related accidents per million work hours	/	0.32	0

² The statistical scope encompasses the entire Bloomage Biotech Group, including safety investments, employee health check-ups, occupational disease check-ups, detection of occupational disease hazard factors, and other occupational health and safety investments, as well as investments in employees' work safety liability insurance and work-related injury insurance.

³ This is not a mandatory requirement for the industry in which Bloomage Biotech operates.

Work Safety

Work Safety System

Bloomage Biotech has formulated and continuously refined a comprehensive set of regulations, including the *Hazard Identification and Risk Assessment System* and the *Safety Inspection and Hidden Danger Investigation Management System*. These systems encompass all aspects of work safety management, such as risk identification, safety hazard investigations, chemical management, occupational health management, equipment management, contractor management, operational safety management, emergency response protocols, and incident management. Additionally, we integrate safety culture development with safety monitoring and internal/external audits to consolidate our achievements in safety management.

Bloomage Biotech Safety Management System (Selected):



Safety Management

- Work Safety Responsibility Management System
- Management System for the Withdrawal and Use of Work Safety Expenses
- Work Safety Meeting Management System
- Safety Performance Appraisal Management System



Risk Assessment and Control

- Management System for the Classification and Control of Work Safety Risks
- Identification of Hazards and Risk Analysis of Operational Activities



Hidden Danger Investigation

- Management System for Safety Inspections and the Investigation and Treatment of Hidden Dangers



Chemical Management

- Safety Management System for Hazardous Chemicals
- Safety Management System for Precursor and Explosive Chemicals
- Safety Management System for Major Hazard Sources



Occupational Health Management

- Management System for Labour Protection Equipment
- Occupational Health Management System



Contractor Management

- Safety Management System for Contractors and Suppliers



Equipment Management

- Management System for Special Equipment
- Safety Management System for Production Facilities



Emergency Response and Incident Management

- Incident Management System
- Emergency Rescue Management System



Operation Safety Management

- Management System for Special Operations
- Safety Management System for Confined Spaces


Work Safety Management

The Company implements a dual-prevention system that combines the classification and control of work safety risks with the investigation and management of accident hazards. Safety education and training activities are carried out regularly. Through annual internal and external safety audits, the Company sorts out the list of safety risk factors each year and implements safety management measures, thus achieving standardised closed-loop management throughout the entire production life cycle.


Each production base of Bloomage Biotech has established a risk classification and control system and a system for the investigation and management of accident hazards. These systems are reviewed annually to ensure their effectiveness. The production bases have established risk control lists, including risk ledgers, records of hazard identification and analysis. They also organise comprehensive inspections, seasonal inspections, special inspections, holiday inspections, monthly inspections, and irregular daily inspections. Potential hazards discovered during inspections are promptly issued to the responsible parties via the OA system for rectification within a specified time limit, and the relevant responsible parties are evaluated.

The Company also attaches great importance to the safety management of engineering contractors and other suppliers within the production bases. It strictly implements the *Safety Management System for Contractors and Suppliers*. Compliance checks are carried out on contractors' qualifications. Before the entry of all engineering contractors, safety requirements and the responsibilities of both parties are clearly defined. Safety training, assessment, and technical disclosure are provided for external construction workers. Safety supervision and management are carried out throughout the process to promptly identify and rectify potential safety hazards of contractors, preventing safety risks during the contractors' and suppliers' operations within the park. In 2024, all production bases of Bloomage Biotech conducted a total of 467 safety education sessions for suppliers, contractors and other personnel, with 27,823 participants. In addition, we care about the safety of employees' daily lives. System documents such as the *Canteen Management Regulations* and the *Employee Apartment Management Regulations* have been formulated to ensure the safety and hygiene of employees' food and accommodation.


The Company also actively promotes the automation and digitisation of work safety and strengthens safety monitoring in the following ways:



Configure automatic alarm systems, including combustible gas detectors, automatic fire alarms, temperature detectors, and audible and visual alarms.



In daily management, we issue, rectify, and eliminate hazards through the OA system to improve work efficiency.



Production bases have built security integration platforms equipped with intelligent systems. Real-time dynamic monitoring is obtained through electronic maps, achieving comprehensive safety monitoring of the park.

Key Performance

In 2024



The internal safety audit coverage rate of Bloomage Biotech was

100%

Covering

12

elements such as work safety objectives and indicators, organisational structure and responsibilities, production equipment and facilities management, operation safety, risk classification and control, hazard investigation and management, in all departments and production workshops.

The rectification completion rate was

100%.

Chemical Safety

To prevent hazardous chemical accidents, Bloomage Biotech adheres to relevant laws and regulations such as the Work Safety Law of the People's Republic of China and the *Regulations on the Safety Management of Hazardous Chemicals*. The Company has developed a series of internal regulations, including: *Safety Management System for Hazardous Chemicals and Precursor Chemicals*; *Management System for Highly Toxic Chemicals*; *Safety Management System for Explosive and Drug Precursor Chemicals*. These regulations clarify departmental responsibilities and management approaches throughout the entire life cycle of hazardous chemicals. The Company standardizes the management process for hazardous chemicals, including procurement, storage, loading and unloading, transportation, usage, disposal, and accident handling. Regular emergency drills are conducted based on established plans such as the *List of Hazardous Chemicals* and the *Special Emergency Response Plan for Accidents of Hazardous Chemicals (Major Hazard Sources)*.



Chemical Safety Management Measures

- ◇ Identify chemicals before warehousing and establish chemical labels and Safety Data Sheets (MSDS)
- ◇ Classify and store hazardous chemical storage cabinets in separate warehouses as required, and manage them with a double-lock system by two persons
- ◇ Identify high-risk chemicals and reduce or replace their usage
- ◇ Obtain safety technical specifications from suppliers when purchasing chemicals
- ◇ Determine the inventory with the warehouse before procurement to reduce storage risks
- ◇ Reduce the risk of exposure to hazardous chemicals by installing explosion-proof cabinets, accident fans, and combustible gas detectors
- ◇ Regularly train employees on the properties, storage, retrieval, use, protection, and emergency response of chemicals
- ◇ Conduct a comprehensive survey of hazardous chemicals and establish an inventory of hazardous chemicals.
- ◇ Provide employees with labor protection equipment such as protective gloves, protective face shields, goggles, acid- and alkali-resistant clothing, and filtering gas masks according to the properties of the chemicals
- ◇ Set up safety warning signs, hazardous chemical information cards, and operating procedures for positions involving hazardous chemical operations, testing, and inspection
- ◇ Formulate emergency response measures for hazardous chemical leakage and equip accident emergency facilities such as chemical adsorption cotton, fire sand, boric acid, and drenchers

Case | Drills for On-site Disposal Plans of Hazardous Chemical and Hazardous Waste Leakage Conducted at Production Bases in Jinan, Dongying, etc.



In 2024, production bases in Jinan, Dongying, and other places simulated hydrochloric acid leakage scenarios and carried out emergency response plan drills. After the hazardous chemical keeper discovered the leakage, he notified the members of the disposal team to wear acid- and alkali-resistant chemical protective suits, gas masks, goggles, and other personal protective equipment. Then, the leaked hydrochloric acid was adsorbed with sand, and the adsorbed sand and the damaged containers were transferred to the waste chemical warehouse. Finally, the hydrochloric acid containers were replaced. This drill helps improve employees' ability to coordinate scientific on-site disposal when there is a chemical leakage, reducing the possible impact of leakage incidents.

Laboratory Safety

As Bloomage Biotech's core to promote its continuous innovation and development, the laboratory also serves as a centralized place for hazardous chemicals. To standardize laboratory safety management, the Company has formulated and implemented strict laboratory safety procedures, clarifying standard operating procedures for the management of chemicals, biological materials, and laboratory equipment. We have taken multiple measures to ensure the safe operation of the laboratories.

Safety measures of Bloomage Biotech's laboratories (partial)



System construction

- In the development of the institutional system for the global R&D platform, the Company has drafted and continuously refined the general guideline, including *Global R&D Platform Laboratory Management Procedures*, and issued special systems such as the *Global R&D Platform Hazardous Chemicals Management Regulations*, the *Global R&D Platform Hazardous Waste Management Regulations*, and the *Equipment and Facilities Safety Management System*
- For the first time, the R&D platform has established platform-level management systems, a safety performance management mechanism, and a safety mutual-inspection mechanism to boost the participation of all employees



Risk Identification and Control

- Identify safety risks in R&D laboratories and rectify them in a timely manner to reduce the exposure of personnel to risks



Hazardous chemicals management

- We properly classify, label, store, and dispose of all biological materials and chemicals to reduce the risks of cross-contamination and accidental exposures



Personal Protection Management

- We provide necessary personal protective equipment, such as lab coats, safety glasses, gloves, and masks, and ensure that employees can use them correctly



Facility and equipment management

- We regularly maintain and inspect all laboratory equipment to ensure it is in good condition



Emergency preparedness

- We have assigned safety commissioners responsible for preparing laboratory emergency plans and conducting drills



Personnel training

- We regularly organized training on laboratory operations and equipment use
- In 2024, the R&D platform organized a total of 7 EHS and safety training sessions, with 541 participants in total and a cumulative training duration of 19 hours



Occupational Health Examination

- Conduct physical examinations for R&D personnel to screen for occupational diseases promptly
- In 2024, a total of 191 occupational health examinations were carried out for R&D personnel in the platform

Safety Culture

Bloomage Biotech is dedicated to creating a safety culture atmosphere through measures such as strengthening safety training and drills, building safety culture demonstration workshops, releasing safety knowledge posts, and organizing safety knowledge competitions. Moreover, Bloomage Biotech encourages employees to put forward reasonable safety suggestions and actively participate in the Company's safety construction.

Safety Training

Bloomage Biotech formulates and implements internal documents such as the Safety Training and Education System. The safety training plan is updated regularly every year. The main responsible persons, safety management personnel, and employees on specific positions of each production base are required to receive safety education. Special operators and operators of special equipment must hold relevant professional qualifications. New employees must receive three-level training for work safety.

Case | Safety Training Conducted by Each Production Base of Bloomage Biotech

In 2024, Bloomage Biotech regularly educated and trained employees on safety and health regulations. Diverse training methods were adopted, including classroom training, simulation drills, and case analysis, to enhance the training effect by combining theory and practice. Additionally, each production base established a question bank of essential safety knowledge and urged departments to regularly assess employees to ensure that every employee masters the necessary safety knowledge.

Case | "Work Safety Month" Activities Carried Out by Bloomage Biotech in Multiple Locations

In June 2024, several production bases of Bloomage Biotech launched "Work Safety Month" activities with the theme of "Safety for All, Emergency Ready, Clear Lifelines Always". Activities such as emergency evacuation drills simulating fire and earthquake scenarios, online public classes on risk avoidance and escape, and quizzes on risk avoidance and escape were organized to enhance employees' ability to respond to emergencies and avoid risks.

Case | Special Training on Hazard and Operability (HAZOP) Analysis Conducted by Bloomage Biotech

In 2024, to continuously improve the Company's design review level regarding the safety and operability of facilities, Bloomage Biotech organized special training on Hazard and Operability (HAZOP) analysis at the group level. This training enhanced employees' ability to identify and analyze potential hazards in engineering projects or production facilities in advance, ensuring safety from the perspective of the overall equipment system.

Occupational health and safety training of Bloomage Biotech ⁴				
Indicators	Unit	2023	2024	
Number of occupational health and safety training	times	640	1,755	
Number of employees trained on occupational health and safety	participants	16,675	34,080	
Total hours of occupational health and safety training	hour	23,533	36,629	


⁴ The statistical caliber covers all of Bloomage Biotech's all operating production bases in China.

Safety Emergency Drills

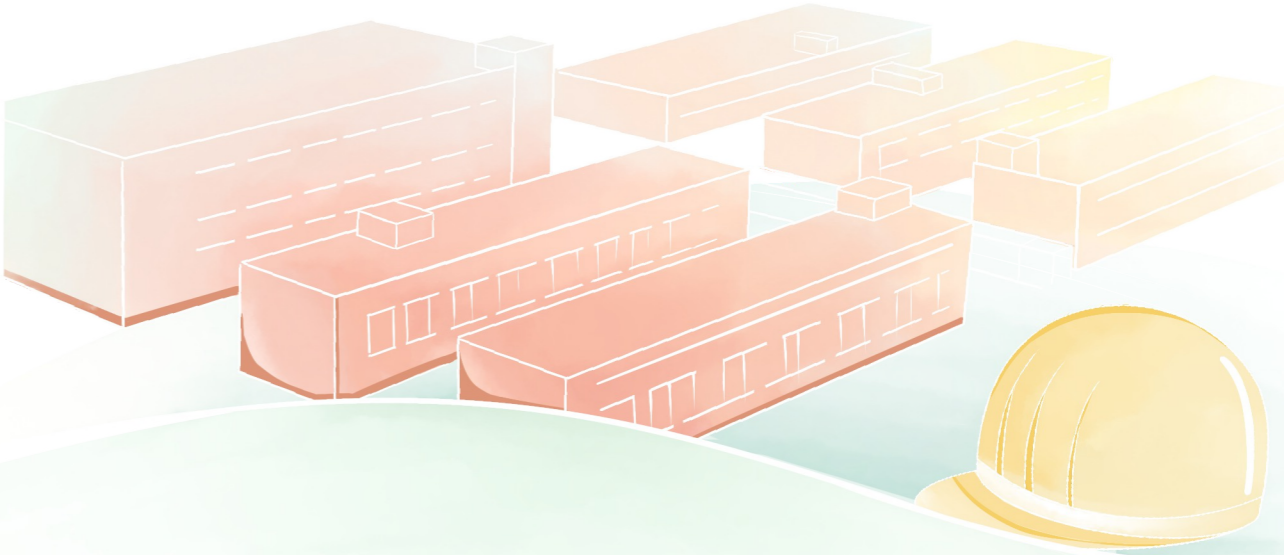
In 2024, Bloomage Biotech has optimized comprehensive emergency plans, special emergency plans and on-site disposal plans, such as the *Work Safety Incident Emergency Response Plan*, the *Special Emergency Plan for Fire and Explosion Accidents*, *Mechanical Injury Incident Response Plan*, *Typhoon Preparedness Special Emergency Plan*, *On-site Response Plan for Heatstroke in High-Temperature Environments*, *Earthquake (Evacuation) Special Emergency Plan*. The plans cover a total of 13 categories, including fire, vehicle injuries, electric shocks, alcohol accidents and scalding accidents, and the relevant plans have been registered for the record. We carry out safety emergency drills in various production bases and offices every year based on relevant emergency response plans to help employees apply the knowledge and skills learned in safety training to practice.

Case | A Variety of Safety Drills Conducted by Each Production Base of Bloomage Biotech

In 2024, each production base of Bloomage Biotech carried out various types of drills, including comprehensive emergency drills, special emergency drills for major hazard sources, and special emergency drills for fires and special equipment accidents. The themes of these drills covered aspects such as fires, simulated leakage in ethanol tank areas, abnormal boiler conditions, confined space operations, fire drills, and emergency responses during the flood season. These activities comprehensively enhanced employees' emergency response capabilities to safety incidents.



Fire Drill at the Production Base



Occupational Health

Bloomage Biotech strictly complies with laws and regulations such as the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases*. During this year, we updated and implemented occupational health-related management systems, including the *Occupational Health Management System* and the *Management System for Labour Protection Equipment*. The Company regularly hires external institutions to detect occupational hazard factors at production bases and provides comprehensive protection against occupational disease risks for employees from aspects such as personal safety protection, environmental, and engineering measures. This is to address the Company's major occupational disease risks, such as dust, high temperatures, noise, and chemicals. During this reporting period, the health examination coverage rate of Bloomage Biotech employees has reached 100%.

The Company has adopted a series of measures to reduce or eliminate occupational disease hazards:

Engineering Control and Equipment Management

- Minimize employees' exposure to occupational hazard factors through measures such as isolation, zoned operations, ventilation, dust removal, noise reduction, and the sealing and piping of production equipment

Management Measures

- In terms of risk prevention, identify the risks of occupational hazards in the workplace and formulate preventive and control measures
- Implement management control measures, such as reducing working hours and improving operation methods, to control the extent of employees' exposure to harmful factors and mitigate the potential health impacts
- Set up warning signs and instructions in prominent locations in workplaces, job positions, equipment, and facilities where occupational hazards exist or are generated
- Set up the "Hazard Snap" Mini Program in the OA system, enabling employees to report any discovered occupational health and safety hazards, risks, and issues at any time, and ensuring that these reports are promptly addressed
- Conduct regular occupational health training and organize a series of emergency drills to enhance employees' awareness and capabilities of health protection

Regular Occupational Health Checks

- Organize occupational health examinations for employees engaged in work involving exposure to occupational disease hazards before taking up their posts, during their employment, and upon leaving their posts. Inform employees of the results of the occupational health checks and the suggestions provided by the occupational health examination institutions

Personal Protection

- Provide employees and other personnel entering the production site with a full set of labor protection equipment for free, and guide and supervise employees to use and wear them correctly

Case | Occupational Health Training Conducted by Each Production Base of Bloomage Biotech

In 2024, Bloomage Biotech provided education and training on occupational health for employees. The training covered topics such as the Company's occupational health management system and operating procedures, the use of occupational disease prevention facilities at their positions, the wearing of labour protection equipment, and the knowledge and skills of emergency response to occupational disease hazards. By combining theoretical learning with practical operations, the training effectiveness was enhanced.



Practical CPR Training at the Hainan Production Base



Occupational Disease Knowledge Training at the Tianjin Production Base

In addition, Bloomage Biotech attaches great importance to preventing the risk of repetitive strain injuries that may be caused to employees during daily operations. By improving the working environment and operation methods, such as using robotic arms, automated guided vehicles (AGVs), and electric vehicles, and upgrading manual packaging processes to automatic or semi-automatic packaging machines, the Company reduces the pain or injuries that employees may suffer from repetitive movements and overuse of muscles. We also install fans to exchange air, alleviating the impact of high temperatures in the workshop and preventing negative health effects on employees during their work.



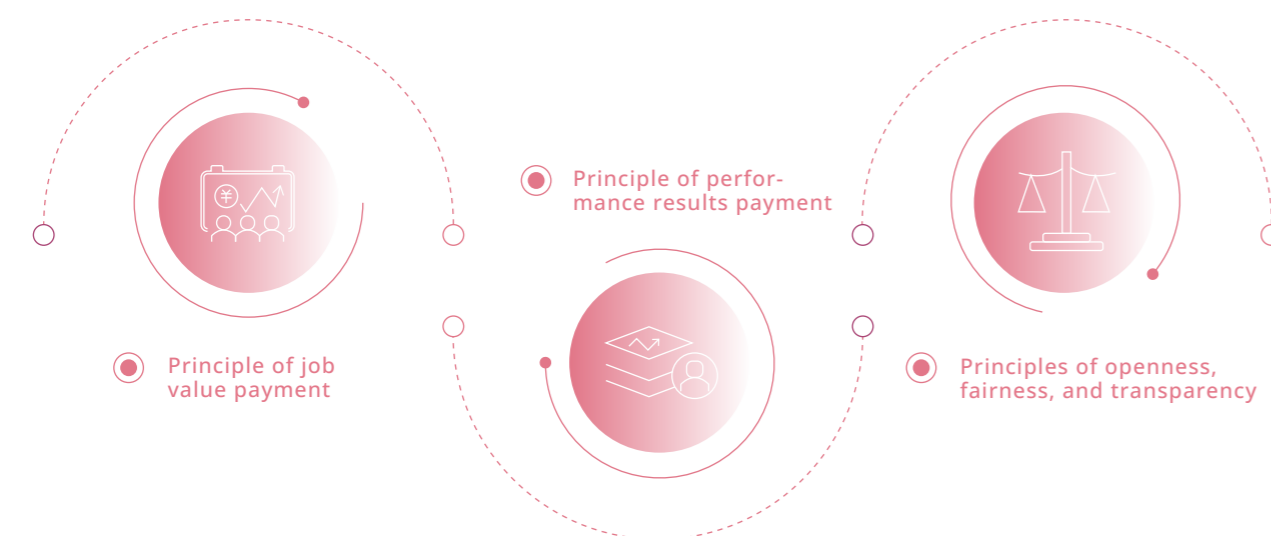
Employee Rights and Benefits

Bloomage Biotech has continued to refine its compensation and benefits system and establish standardized management policies. The Company provides employees with excellent working conditions, ensures smooth communication and complaint channels, and strives to create a respectful, fair, and friendly work atmosphere. These efforts are aimed at continuously enhancing employees' sense of happiness and belonging.

Employee Compensation

Bloomage Biotech adheres to the principle of equal pay for equal work. This year, the Company updated the *Salary Management System* and the *Performance Management System* and introduced a broadband salary model for the first time. To match salary with employees' contributions and performance and to boost their motivation, we have optimized the income distribution structure and clarified the salary incentive orientation. The Company pays salaries on time and in full and provides pay stubs to employees, enabling them to understand the details of their compensation structure, bonuses, and benefits. Each year, the Company uses annual performance ratings as the basis for salary adjustments, combining individual salary levels in the market, performance ratings, and total compensation to form a salary adjustment plan.

The Company's remuneration payments are based on the following principles:



The Company's salary structure includes the following components:

Salary type	Content
Fixed cash income	Base salary, position salary, and seniority salary
Variable cash income	Monthly performance bonus, quarterly performance bonus, project bonus, sales bonus, annual bonus, and special bonus
Overtime pay	Overtime pay for hours beyond standard working hours and holiday overtime pay
Allowances and subsidies	General subsidies such as meal allowance, transportation subsidy, and high-temperature allowance, as well as subsidies for employees stationed in other locations

Employee Benefits

In 2024, Bloomage Biotech continued to optimize the *Benefits Management System*, enhancing the employee benefits system to cover three categories: statutory benefits, supplementary benefits, and position-based benefits. Based on employee feedback, we refined our benefits structure to meet diverse employee needs. Moreover, the Company strengthened its care for employees by establishing a lactation room for female employees, and a gym, and organizing activities such as holiday celebrations, periodic condolences, and team-building events to help employees balance work and family life. Additionally, we have made the office environment more comfortable to provide employees with a more pleasant and humane workplace.

Key Performance

In 2024



The social security contribution rate for all employees

100%

The coverage rate for supplementary medical insurance and physical examination for regular employees

100%

Bloomage Biotech benefits system

<p>Statutory Benefits</p>	<p>Provide benefits to employees to meet national statutory requirements based on the Leave and Attendance Management System and the Benefits Management System:</p> <ul style="list-style-type: none"> • Social insurance (medical insurance, pension insurance, unemployment insurance, work-related injury insurance, maternity insurance) • Housing provident fund • Statutory holidays, annual leave, sick leave, marriage leave, maternity leave, parental leave, nursing leave, paternity leave, and funeral leave • Labor protection • Education and training
<p>Supplementary benefits</p>	<p>Provide additional benefits to all regular employees to enhance welfare benefits and satisfaction, including:</p> <ul style="list-style-type: none"> • Care benefits: commercial insurance, annual physical examinations, high temperature subsidies • Warmth benefits: holiday gifts, condolence allowance, birthday benefits • Economic benefits: lunch allowances, overtime meal allowances, transportation allowances, work-type residence permit, employee purchase program • Learning and growth benefits (for professional qualifications and certifications)
<p>Position-based benefits</p>	<p>Provide meal allowances based on job nature and support employees in advancing their education:</p> <ul style="list-style-type: none"> • Transportation allowances • Communication allowances • Shift allowances • Learning and growth allowances (for education advancement)

Case | Bloomage Biotech carried out Women's Day activities

In March 2024, Bloomage Biotech's subsidiaries and branches held Women's Day activities themed "Achieving a Better Self", featuring flower arranging, flower gifting, and DIY handicrafts for female colleagues. These activities promote employee happiness and work-life balance.



Bloomage Biotech's flower arranging and flower gifting activities on the Women's Day

Case | Bloomage Biotech's Children's Day activities

In June 2024, Bloomage Biotech held Children's Day activities to strengthen the bond between employees and their children and enhance the sense of identification of employees' families with the workplace, further fostering a harmonious and warm working environment.



Bloomage Biotech's family fun activities on the Children's Day

Case | Bloomage Biotech's "Happiness Proposal" plan

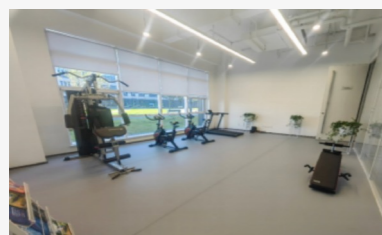
Bloomage Biotech has launched its "Happiness Proposal" plan, offering congratulations and gifts to employees on holidays and birthdays, and other key dates. In 2024, the Company organized various activities, including fun sports meet, dumpling-making activity, and the Loong Year celebration, to convey care and gratitude, enhancing employees' sense of belonging and happiness.



Bloomage Biotech's employees and their children attended the Loong Year celebration

Besides, to promote employee health, the Company has implemented diverse measures, including organizing sports activities, fun sports meets, and building a gym. Additionally, the Company has organized free medical activities to help employees monitor their health in a timely manner.

Bloomage Biotech's health benefits



Workplace gym



Free medical services provided by hospital staff



Fun sports meets

Employee Communication

Bloomage Biotech attaches importance to communicating with employees and has established multiple and open channels, including face-to-face activities like employee meetings and departmental meetings, as well as online feedback channels such as email and suggestion boxes. In 2024, the Company further democratized its systems and processes by publicizing new policies on internal communication platforms and soliciting suggestions.

To protect employees' legitimate rights, interests, and privacy, the Company has established an anonymous complaint and reporting channel and kept employees' complaints and reporting information confidential. Employees can anonymously report any violations, workplace misconduct, or health and safety issues to their superiors or the Human Resources Department. Then, the relevant responsible departments conduct follow-up investigations and handling based on employees' complaints or reports.

Bloomage Biotech's employee channel for rational suggestions and opinions:

hr@bloomagebiotech.com

Bloomage Biotech regularly conducts employee satisfaction surveys anonymously, covering five dimensions: job duties, management process, working environment, career development, salary, and benefits. We have also analyzed data with a third-party professional research platform to ensure objective and professional survey results. Currently, the Company's employee satisfaction score stands at 85 points. Additionally, Bloomage Biotech has conducted surveys on the hygiene, meals, environment, and service quality of the company cafeteria, with satisfaction rates exceeding 97%. Based on the survey analysis, the Company has an understanding of employees' work conditions, thus providing care and developing plans to improve employee satisfaction.

Furthermore, Bloomage Biotech fully respects employees' rights to freely associate and refrains from interfering with the legal establishment, operation, or management of collective bargaining, thereby facilitating effective communication between labor and management. Each of Bloomage Biotech's production bases has established its trade union. According to the *Trade Union Management System*, we listen to employees' opinions, safeguard their legitimate interests and democratic rights, and regularly carry out union welfare activities to improve their lives.

In 2024, all major production bases of Bloomage Biotech signed the *Collective Labor Agreements* with the company's trade union. The agreements cover principles of diversity, non-discrimination, and non-harassment, as well as working hours, salaries, occupational safety and health, women's rights, employee insurance, benefits, and training, ensuring the protection of employees' legal rights and reasonable treatment.

05

Symbiosis: Green, Low-Carbon, and Resilience

The genes of green technology have been deeply embedded in every aspect of Bloomage Biotech's operations. The Company actively practices the concept of green manufacturing, continuously improves its environmental management system, refines product design and processes, in an effort to reduce resource consumption and pollutant emissions. To address climate change, we proactively drive green production through technological innovation and the adoption of clean energy. Furthermore, we focus on resource recycling and reuse to advocate for a green and low-carbon lifestyle in society.

SDGs Addressed in this Chapter:



Major Material Topics of Sustainability Covered in this Chapter:

- Environmental Compliance Management
- Environmental Permits and Certifications
- Pollutant and Waste Management
- Product Environmental Impact
- Water Management
- Response to Climate Change and Energy Management
- Biodiversity



Addressing Climate Change


Bloomage Biotech actively explores the development path of green manufacturing. The Company has been less dependent on fossil-based materials and continuously reduced resource consumption and GHG emissions. While reducing its own emissions, the Company strives to provide green manufacturing solutions.

To scientifically and effectively disclose the Company's efforts in addressing climate change, we follow the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and disclose our climate change risk management system and actions from four dimensions: governance, strategy, risk management, as well as metrics and targets. The Company continuously seeks solutions to address climate change and strives to achieve sustainable, low-carbon development goals through emission reduction planning, energy-saving technology applications, and renewable energy utilization.

Climate Governance


Bloomage Biotech has established a top-down sustainable development management mechanism and assembled a dedicated team with professional knowledge, industry background, and experience. Regular specialized training was conducted to empower the organization to effectively drive climate change and energy-saving initiatives. Additionally, the Company has incorporated ESG performance evaluation requirements, including climate change, into the annual personal performance commitments of relevant senior executives, department heads, and specialized positions. To effectively implement relevant initiatives, we have utilized a salary-based incentive mechanism.

Bloomage Biotech's climate governance structure




Board of Directors

- Oversee and make decisions on climate-related matters, such as formulating strategies related to climate change, setting emission reduction targets and pathways, managing climate risks, and monitoring progress toward emission reduction goals




ESG Committee under the Board of Directors

- Review and supervise the identification and assessment of risks and opportunities related to climate change, as well as the completion of specific projects



ESG Management Center

- Tasked with overseeing the daily management of climate change issues, conducting policy research and training, developing climate change strategies and targets, leading the implementation and monitoring of climate-related projects, and supervising carbon management and information disclosure



ESG Working Groups




- Follow the Company's climate strategy and targets, implement climate-related action plans, strengthen energy resource management, and regularly report progress on these actions

Climate Strategy and Goals

Bloomage Biotech has integrated climate change response into its sustainable development strategy and conducted carbon emission accounting from dimensions of both organization and product. We have set a special budget for greenhouse gas management and implemented low-carbon transition along two paths: energy conservation and emission control.


Additionally, the Company proactively discloses its climate change management and performance on platforms like CDP, demonstrating its determination to address climate change and contributing to the mitigation of global warming.

Bloomage Biotech's climate strategy framework

	Strategic measures	Specific measures
 Production and operations optimization	Optimize energy and resource use in production	<ul style="list-style-type: none">Conduct greenhouse gas accountingContinuously implement energy-saving technological upgradesConstantly build a low-carbon corporate cultureDeploy renewable energy infrastructureParticipate in green electricity market transactions
 Product upgrades	Continue to focus on sustainable products and technology R&D	<ul style="list-style-type: none">Carry out life cycle assessments (LCAs) on products to evaluate their environmental impactsPay attention to sustainable ingredients and packaging innovation
 Supply chain enhancement	Supply chain ESG management	<ul style="list-style-type: none">Perform greenhouse gas (Scope 3) accounting across the value chainEncourage suppliers to improve their greenhouse gas management levels

Case

Conducting life cycle assessments (LCAs) on multi-category products to evaluate their environmental impacts



During the reporting period, in order to strengthen its management of product sustainability, Bloomage Biotech conducted life cycle assessments (LCAs) on multi-category products, including pharmaceutical-grade, cosmetic-grade, and food-grade Sodium Hyaluronate, as well as cosmetic-grade Ectoine and BIOHYALUX HA Barrier Conditioning Single Use Essence. The Company calculated key indicators such as product carbon footprint, resource consumption, and water consumption, and engaged authoritative auditing institutions to conduct verifications, obtaining compliance statements in accordance with ISO 14040, ISO 14071, ISO 14064, ISO 14067 standards.

Aware of the urgency and necessity to accelerate low-carbon transition, the Company aims to reduce total group-wide carbon emissions (Scope 1 + Scope 2) by 50% by 2030 (compared to that in 2023). We strive to scientifically and efficiently reduce emissions to the best of our capabilities.

Risk and Opportunity Management

Bloomage Biotech places great emphasis on identifying and managing climate-related risks and opportunities. Under the review and guidance of the Company's Board of Directors and the ESG Committee, the ESG Management Center has led the development of risk and opportunity assessment and response plans and coordinated with functional teams such as production, procurement, energy, and finance to implement specific tasks. Additionally, during this reporting period, we incorporated climate risk management into the Company's overall risk management system, conducting quarterly risk assessments and reporting.

Climate Risk and Opportunity Management Process

The climate risks and opportunity management process of Bloomage Biotech is as follows:



List of Climate Risks and Opportunities

Physical Risks

We have conducted the scenario analysis based on the two Representative Concentration Pathways (RCPs) of the Intergovernmental Panel on Climate Change (IPCC), namely RCP4.5 (low carbon emissions scenario) and RCP8.5 (high carbon emissions scenario). We have comprehensively identified our potential physical risks in the short, medium, and long term as follows:

Risk Type	Risk Level	Expected Occurrence Time	Potential Impacts	Response
Acute Risks				
Extreme Precipitation	High	Short, medium, and long terms	<ul style="list-style-type: none">Possible damages or faults to devices and infrastructure, resulting in production interruption and reduced production efficiency, as well as more additional costs in device maintenance and replacementAn increase in short-term wastewater disposal burdens leads to larger external drainage volumes and severer water pollution risks, affecting production stability	<ul style="list-style-type: none">Develop the <i>Preparedness Plan to Respond to Natural Disasters</i>, the <i>Emergency Plan for Environmental Emergencies</i>, and the <i>Production Safety Accident Response</i>, combined with regular drills to continuously improve emergency response mechanismsPre-emptively stockpile flood control materials, optimize water supply and drainage facilities, and install cutoff valves at discharge points
Tropical Cyclone	Medium	Short, medium, and long terms	<ul style="list-style-type: none">The normal operation of logistics and supply chain may be affected with logistics delays, inventory shortages, and overdue delivery, incurring a big threat to business continuity and client satisfaction	
Extreme Heat	Medium	Short, medium, and long terms	<ul style="list-style-type: none">A need produced to equip more refrigeration equipment in an increased operational costSome raw materials and products go bad during storage and shipment, affecting the quality and marketability of productsFire and explosion risks rise in the warehousing	<ul style="list-style-type: none">Develop the <i>Preparedness Plan to Respond to Natural Disasters</i>, combined with regular drills to continuously improve emergency response mechanismsKeep the ventilation, temperature, and humidity under control at a reasonable level in storage and transportationStrengthen fire prevention, including regular inspections and maintenance of fire-fighting equipment and facilities, and fire drills
Floods	Low	Short, medium, and long terms	<ul style="list-style-type: none">An increase in short-term wastewater disposal burdens leads to larger external drainage volumes and severer water pollution risksPossible damage or faults to devices and infrastructure, resulting in production interruption and reduced production efficiency, as well as more additional costs in device maintenance and replacement	<ul style="list-style-type: none">Develop the <i>Preparedness Plan to Respond to Natural Disasters</i>, combined with regular flood drills to continuously improve emergency response mechanismsPre-emptively stockpile flood control materials, optimize water supply and drainage facilities, and install cutoff valves at discharge points
Chronic Risks				
Water Shortage	Medium	Short and medium terms	<ul style="list-style-type: none">Long-term drought may cause a water shortage in production and affect production stability	<ul style="list-style-type: none">Stick to optimization of production processes, and employ water-saving devices instead of old ones for highly efficient water resource utilizationScientifically arrange production plans and strictly implement water usage plans
Sea-Level Rise	Low	Long term	<ul style="list-style-type: none">Seawater intrusion in coastal areas can damage infrastructure and production equipment, and cause erosion and flooding of factories, warehouses, and office buildings, leading to production suspension and relocationDamage to coastal ports and transportation channels, resulting in supply chain disruptions or logistics delays	<ul style="list-style-type: none">Strengthen the resilience of buildings and infrastructure to disasters, such as a design of higher building foundation and more efficient drainage systemsAssess risks related to sea-level rise in coastal sites so as to adjust investment and development plans in a timely manner that potential risks are addressed

Transition Risks and Opportunities

We analyze climate-related transition risks and opportunities facing the Company with two shared socio-economic pathways (SSPs) of the Intergovernmental Panel on Climate Change (IPCC), namely SSP1-1.9 (low carbon emission scenario) and SSP2-4.5 (high carbon emission scenario).

Type	Risk/Opportunity Type	Potential Impacts	Response
Risk	Policies and regulations	<ul style="list-style-type: none">● If the Company is included in the national or regional carbon market, the associated compliance operating costs may increase● As stricter national policies and regulations are enacted to mitigate climate change, enterprises are faced with more compliance pressures and related litigation risks● The Company's exported products may face policies related to carbon tariffs and carbon footprint and other restrictions in the future	<ul style="list-style-type: none">● Pay close attention to global market conditions and changes in laws, regulations, and policies involving carbon emissions. Carry out annual organizational carbon inventories and audits along with product carbon footprint certifications● Strengthen internal management by setting low-carbon transition targets and plans and implementing a series of actions
	Technologies	<ul style="list-style-type: none">● Technological cost in low-carbon transition● Investments in low-carbon technology failed and the Company lagged behind peers in low-carbon transition	<ul style="list-style-type: none">● Monitor the rationality and applicability assessment of related technologies
	Market	<ul style="list-style-type: none">● Raw material costs may rise due to the climate- affecting quality and quantity● Client/consumer demand for low-carbon products and growing ESG requirements for suppliers may reduce product demand● Climate change may trigger regional power and water restrictions, or increased electricity prices, leading to higher production and operating costs	<ul style="list-style-type: none">● Monitor raw material markets to anticipate price fluctuations● Strengthen supply chain management by developing diverse suppliers and promoting suppliers' carbon reduction● Engage in energy conservation and emission reduction, increase the use of clean energy, and communicate with stakeholders in a timely manner● Integrate the concept of sustainability into product R&D, production, and sales to meet the demand for green products
	Reputation	<ul style="list-style-type: none">● As the Company's ESG performance remains a focus for stakeholders, failure to address climate change risks or fulfill environmental responsibilities may damage its reputation, leading to a deterioration of its brand image and market position● If emission reduction targets are not met, the Company may need to purchase carbon offset products to fulfill voluntary emission reduction commitments, resulting in increased operating costs	<ul style="list-style-type: none">● Engage with stakeholders on climate-related concerns through various means● Plan carbon offset transactions strategically and control transaction costs
Opportunity	Policies	<ul style="list-style-type: none">● Incentive policies involving carbon reduction subsidies and support are formulated by the government	<ul style="list-style-type: none">● Actively engage in the development and implementation of carbon reduction projects and timely apply for relevant subsidies● Deploy renewable energy applications, access green electricity supply, and construct distributed photovoltaic and biogas power generation facilities at production and operational sites
	Market	<ul style="list-style-type: none">● The Company can count on new financing channels and support policies attributable to the development of green financing and sustainable investment● The demand of clients for green products increases	<ul style="list-style-type: none">● Build the capability of advancing green transformation and expand funding sources● Achieve non-hazardous disposal and low-carbon production of products by means of R&D innovation, process optimization, etc. and try to obtain product carbon footprint certification and environmental declaration for higher product competitiveness
	Technologies	<ul style="list-style-type: none">● Opportunities are provided by industrial energy- saving technologies and equipment for companies to reduce costs and increase production efficiency	<ul style="list-style-type: none">● Employ high-efficiency production equipment to improve resource recovery and utilization, and further reduce costs related to energy and resource consumption

During this reporting period, the Company effectively managed the above risks, which did not have a significant impact on normal operations and development. Additionally, the Company remained committed to low-carbon transition and continuously enhanced the low-carbon competitiveness of the organization and its products.

Low-Carbon Transition and Emission Reduction Achievements

Energy conservation and emission reduction emerge as key measures to address climate change. Bloomage Biotech has continuously carried out low-carbon transition initiatives from three aspects: improving energy management capabilities, enhancing production and operational energy efficiency, and promoting value chain carbon reduction.

Energy Management System Improvement

Bloomage Biotech actively advances the institutionalization of energy management to lay a solid foundation for ongoing energy efficiency improvements and energy consumption reduction. The Company sets annual energy management targets and has formed a multi-level, full-production-base energy management network. The energy management network comprises leading groups at each production base, the Engineering and Equipment Department, related departments, workshops, and teams, all of whom have worked together to implement these targets. In 2024, we updated several procedural documents, including the *Energy Management, Energy Saving and Consumption Reduction Regulations* and the *Energy Management Implementation Plan*, to achieve scientific, standardized, and procedural energy management. During the reporting period, Bloomage Biotech pursued ISO 50001 Energy Management System certification. The Jinan and Tianjin production bases successfully obtained the certification.

Energy management measures of Bloomage Biotech mainly include:



Energy-consuming equipment management

- Forbid the use of equipment phased out by the state and use the latest energy-saving products recommended by the state
- Carry out regular equipment maintenance, repair, and optimization to ensure that equipment operates at optimal conditions over the long term



Energy metering statistics

- Establish and improve energy measurement systems. Equip with certified measuring instruments and professionally qualified measurement personnel as required, and conduct regular energy statistics to meet the requirements for energy classification, grading, and itemized measurement
- Build an energy management platform to continuously enhance digital energy management capabilities of the organization



Energy performance management

- Engage professional agencies to assist production bases in energy audits
- Implement daily energy management inspections and a joint inspection system. Reward and punish individuals and departments based on their performance
- Encourage employees to put forward rationalized proposals and participate in technological transformations of energy-saving and consumption- reducing. Provide positive incentives based on cost savings when the proposals are implemented and evaluated to be effective



Energy cascading utilization

- Collect steam and thermal energy from the fermentation process and apply for factory heating, hot water supply, and thermal energy consumption in the employee cafeteria




Energy audits

- Conduct energy audits regularly

Case

Energy measurement audit at Tianjin production base to further strengthen energy management



In July 2024, the Tianjin production base conducted a self-inspection based on relevant regulations, covering the Company's energy measurement organizational structure, objectives, personnel, and relevant instrument management and calibration, as well as the management system, energy utilization, and energy flow. This ensured that the entire process remained under control, resulting in the *Self-inspection Report on Energy Measurement for Key Energy-Consuming Units*. Based on the self-inspection results, the Tianjin production base achieved a 100% equipment rate for energy measurement devices, and all energy measurement staff passed their job training assessments.

Energy Use

The energy use of Bloomage Biotech is as follows:

Energy Use of Bloomage Biotech ⁵			
Indicators	Unit	2023	2024
Natural gas	cubic meter	15,686,836	13,073,453
Gasoline	litre	21,706	30,112
Diesel oil	litre	8,939	7,934
Purchased heat from fossil fuels	GJ	174,331.73	245,503.80
Purchased heat from biomass fuel	GJ	38,282.69	153,263.05
Total electricity consumption	kWh	70,453,123	94,746,874
● Purchased electricity (thermal power)	kWh	66,931,210	77,625,771
● Purchased renewable electricity (wind power)	kWh	/	13,375,618
● Self-generated renewable electricity	kWh	3,521,913	3,745,485
Total comprehensive energy consumption	tons of standard coal	35,071.79	35,346.54
Comprehensive energy consumption intensity	ton of standard coal/revenue in RMB 1,000,000	5.77	6.58

Production and Operational Energy Use Optimization

In 2024, Bloomage Biotech continued to expand and deepen efforts in emission reduction actions based on two pillars: “improving energy efficiency” and “advancing energy transition”.

Improving Operational Energy Efficiency

Bloomage Biotech set goals to continuously enhance operational energy efficiency. Production bases actively explore and analyze energy-saving potential and encourage all employees to provide suggestions for energy conservation and consumption reduction. In 2024, the Company focused on the usage optimization and upgrade of energy-consuming equipment to improve energy efficiency.

Production bases	Energy efficiency improvement measures (partial)
Jinan production base	<ul style="list-style-type: none">● We implemented a compressed-air networked operation project for pharmaceutical machinery air compressors, refrigerant dryers, and instruments. By optimizing equipment operation modes, energy efficiency was improved, and energy consumption was reduced, with an estimated annual electricity savings of around 470,000 kWh and approximately RMB 370,000 in electricity costs● We set fixed stirring times for dissolving tanks to avoid unnecessary electricity consumption from ineffective stirring, with an estimated hourly electricity savings of close to 45 kWh and annual electricity cost savings of RMB 20,000–RMB 50,000
Tianjin production base	<ul style="list-style-type: none">● We upgraded sedimentation tanks to save ethanol usage while achieving estimated savings of approximately 330,000 kWh of electricity and 6,000 tons of steam annually● We modified the outlet pump of the buffer tank by adding an exhaust port and enhancing valve control to avoid repeated operations, resulting in electricity savings of 1,485 kWh
Chaohu production base	<ul style="list-style-type: none">● We optimized warehouse temperature and humidity control settings, arranged warehouse layouts more efficiently, reduced artificial lighting, and replaced traditional light sources with LED lamps to lower energy consumption

⁵ The increase in total consumption of fossil energy heat and electricity this year was attributable to increased production capacity at the Tianjin production bases, leading to higher total comprehensive energy consumption. The Jinan production base increased its purchase of biomass heat, resulting in reduced total natural gas consumption. Multiple production bases purchased renewable electricity (wind power) in 2024; The total comprehensive energy consumption calculated in tons of standard coal only includes fossil energy consumption. “/”: Not applicable.


Advancing Energy Transition

Bloomage Biotech has accelerated the transition to renewable energy, increasing the proportion of renewable energy usage. Building on existing distributed photovoltaic and biogas power generation facilities, the Company constructed new biomass boilers in 2024 and introduced purchased renewable electricity (wind power) and biomass heat, and achieved an equivalent emission reduction of approximately 26,913.24 metric tons of carbon dioxide equivalent (CO₂e).

Renewable Energy Consumption of Bloomage Biotech ⁶				
	Indicators	Unit	2023	2024
Renewable electricity	Purchased renewable electricity (wind power)	kWh	/	13,375,618
	Self-generated renewable electricity	kWh	3,521,913	3,745,485
	● Photovoltaic electricity generation	kWh	2,401,725	2,312,192
	● Biogas electricity generation	kWh	1,120,188	1,433,293
Renewable heat	Purchased heat from biomass fuel	GJ	38,282.69	153,263.05

Advocating Green Office

Bloomage Biotech actively promotes low-carbon operations in office settings through various measures, including energy management, consumables management, and digital office practices, to enhance resource efficiency in office operations.

Energy conservation

- Purchase high-efficiency office equipment
- Prohibit the use of lighting and air conditioning in unoccupied areas. In occupied areas, only necessary lighting and air conditioning facilities will operate
- Set summer air conditioning temperatures at 26°C and winter temperatures at 23°C
- Encourage employees to turn off power sources when not in use, cut off power to certain areas during statutory holidays, and post energy-saving slogans at lighting switch locations
- Arrange for dedicated personnel to conduct inspections and promptly address wasteful practices

Paper conservation

- Implement digital office platforms and encourage electronic reporting and online meetings
- Promote fully electronic invoicing and paperless operations, achieving online and paperless approval processes
- Require double-sided and black-and-white printing, set up A4 paper recycling bins, and repurpose printed waste paper for secondary use

Green transportation

- Replace office fuel vehicles with hybrid or electric vehicles
- Install charging stations in parking areas

Bloomage Biotech organizes annual training programs on energy conservation and environmental protection, and conducts environmental activities during National Low-Carbon Day (May 15), World Environment Day (June 5), and National Energy Conservation Week. These activities convey to employees the contributions of water conservation, reduced detergent use, electricity savings, paper reduction, decreased single-use products, waste sorting and recycling, low-carbon travel, and green diet to resource conservation and environmental protection. The Company encourages and guides employees to start with themselves and practice green office and low-carbon living.


⁶ The statistical caliber covers all of Bloomage Biotech's wholly-owned operational production bases in China. In 2024, multiple production bases purchased renewable electricity (wind power) and biomass heat. “/”: Not applicable.

Promoting a Green and Low-Carbon Transition across the Value Chain


While focusing on energy conservation and emission reduction in its own operations, Bloomage Biotech also pays attention to energy use and energy-saving achievements in the upstream and downstream of the value chain, striving to work with suppliers and consumers to jointly promote the carbon reduction process across the entire value chain.

 Suppliers

- We urge suppliers to pay attention to the risks and opportunities brought by climate change, take conservation and substitution measures, actively introduce green energy, reduce consumption of energy, water, and natural resources, and decrease greenhouse gas emissions
- We have collected and assessed suppliers' greenhouse gas emission information and reduction measures through questionnaires

 Logistics and packaging

- We have optimized the layout of cloud warehouses, shortened transportation distances through multi-warehouse shipping models, increased vehicle load factors, and improved transportation efficiency while reducing carbon emissions
- We choose carriers that use renewable energy and collaborate with them on emission reduction measures in the transportation process, promoting a shift from traditional air transport to sea transport for overseas business
- We have optimized the packaging space design to reduce void ratio
- We use recyclable insulation boxes and ice packs

 Consumers

- We have promoted low-carbon lifestyles among consumers through initiatives such as empty tube recycling programs, product refill core designs, supplementary packs, and large packaging to reduce small packaging usage
- We have disseminated Bloomage Biotech's sustainable development concepts and practices to consumers through media releases and exhibitions, guiding them to practice sustainable consumption behaviors

Emission Performance

In 2024, Bloomage Biotech continued to conduct greenhouse gas emissions review and performed accounting for emissions across the value chain (Scope 3) for the first time.

GHG emissions of Bloomage Biotech⁷

Indicators	Unit	2023	2024
Total GHG emissions (Scope 1 + Scope 2)			
Location-based	tCO ₂ e	100,902.09	113,510.99
Market-based	tCO ₂ e	/	109,785.94
Scope 1 Emissions	tCO ₂ e	43,554.73	37,412.27
Scope 2 Emissions			
Location-based	tCO ₂ e	57,347.36	76,098.72
Market-based	tCO ₂ e	/	72,373.66
GHG emissions per unit of revenue (Scope 1 + Scope 2)			
Location-based	tCO ₂ e/revenue in RMB 1,000,000	16.61	21.14
Market-based	tCO ₂ e/revenue in RMB 1,000,000	/	20.44
Scope 3 Emissions	tCO ₂ e	/	183,852.39

⁷ The statistical caliber of the Company's Scope 1 and 2 GHG emission data covers all of Bloomage Biotech's wholly-owned operational production bases in China. GHG emissions include emissions from natural gas consumption, diesel fuel, gasoline, fugitive methane from wastewater, refrigerant charge, fire extinguishers, purchased electricity, and purchased heat; and Scope 3 data include emissions from purchased goods and services, capital commodities, fuel and energy related activities, upstream transportation and distribution, business trips, and sold and sold products transportation and distribution. The Company conducts greenhouse gas accounting in accordance with the requirements set forth in the *Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard* as well as the *ISO14064-1:2018 Greenhouse gases—Part 1: Specification with Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals*. "/": Not applicable.



Environmental Compliance Management


Upholding the concept of green manufacturing and the management policy of "preventing accidents, complying with regulations, protecting the environment and continuously improving", Bloomage Biotech has established and continued to improve the environmental management system to ensure environmental compliance while reducing the impact of operations on the environment.

Environmental Management System


Bloomage Biotech strictly complies with laws and regulations including the *Environmental Protection Law of the People's Republic of China* and the *Law of the People's Republic of China on Environmental Impact Assessment*. With reference to the standards and requirements of ISO 14001 Environmental Management System, we have revised internal environmental management systems, including the *Environmental Protection Management System*, the *Environmental Factor Identification and Evaluation Process*, as well as management regulations on air emissions, wastewater, and waste discharge, in accordance with its own environmental management status. Through systematic management, the Company aims to enhance its performance in environmental protection. In 2024, all major production bases of Bloomage Biotech (Jinan, Dongying, and Tianjin) obtained ISO 14001 Environmental Management System certification.

During this reporting period, the Company optimized its environmental management organizational structure. At the group level, the newly established Safety and Environmental Protection Management Center is responsible for setting overall EHS goals, annual targets, and work plans, and for cascading, implementing, and evaluating these goals to ensure their achievement. At the production base level, the Safety and Environmental Protection Department is tasked with identifying and assessing environmental factors, determining significant environmental factors and related targets and indicators, and formulating and supervising the implementation of management plans. At the workshop level, environmental protection managers are appointed to implement regional environmental responsibilities and ensure the smooth progress of environmental protection efforts.

To further clarify the responsibilities of relevant departments, standardize employees' environmental protection and energy-saving behaviors, and ensure that rewards and punishments are well-founded, we have formulated the *Safety, Environmental Protection, and Occupational Health Performance Appraisal Management Procedures* and an energy efficiency incentive mechanism. We monthly assess employees of each level based on rationalized suggestions, environmental protection and energy-saving technologies, operations against regulations, and relevant penalties.




Key Performance




Total investment in low-carbon environmental protection⁸

46.74 million RMB



Wastewater discharge compliance rate

100 %



Environmental hazard rectification rate

100 %

Number of environmental pollution incidents

0

Air emissions compliance rate

100 %

Hazardous waste disposal compliance rate

100 %

National Green Factory

1 (Jinan production base)

Provincial Green Factory

1 (Tianjin production base)

⁸ The statistical caliber covers all of Bloomage Biotech's wholly-owned operational production bases in China, including waste disposal costs, environmental monitoring costs, and renewable energy costs.

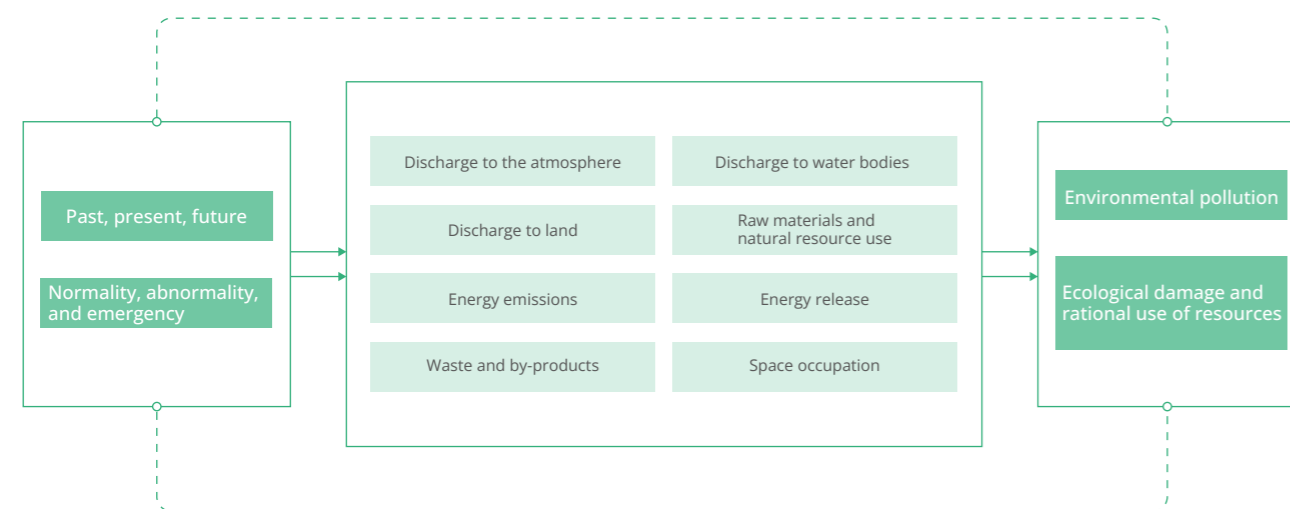
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Environmental Risk Management and Control

Daily Risk Management and Control

To step up its daily environmental risk management and control, Bloomage Biotech identifies and evaluates environmental factors involved in the Company's production, R&D, and business operations one by one and controls them effectively. We keep track of updates in laws and regulations and the demands of interested parties and regularly identify environmental factors from 3 temporal perspectives, 3 states, 8 types, and 2 aspects to form an environmental factor list. Additionally, we regularly evaluate the effectiveness of control measures for important environmental factors.

Process of environmental factor identification



The Company takes effective risk management and control measures, including environmental facility inspections, environmental monitoring, and emergency management, to minimize environmental risks:

Daily inspection

- Conduct regular inspections of environmental protection facilities to check their operation and equipment wear. Carry out timely maintenance to ensure the safe and effective operation of all kinds of environmental protection facilities

Environmental monitoring

- In accordance with the *Regulation on the Administration of Permitting of Pollutant Discharges* and the requirements of the pollutant discharge permit, we conduct regular environmental monitoring, including air emissions, wastewater, noise, and groundwater, to effectively monitor the discharge of pollutants and disclose the environmental monitoring results in a timely manner as required. The results are subject to review by regulators and public supervision

Emergency management

- We have established and improved the response mechanism for environmental emergencies, regularly identified and assessed environmental risks, and prepared documents, such as the *Emergency Plan for Environmental Emergencies* and the emergency plan for heavily polluted weather. We have carried out regular emergency drills to ensure that on-site response to environmental emergencies can be conducted in a quick, orderly, and efficient manner

Case | Dongying production base conducts a drill for environmental emergency



In 2024, the Dongying production base organized a total of 5 drills for environmental emergencies, including 2 drills for on-site hazardous chemical leakage, 2 drills for sewage workshop fire accidents, and 1 drill for on-site hazardous waste leakage. These drills tested the practicality and operability of emergency response plans and improved the coordination capabilities of various departments and workshop front-line employees, ensuring their abilities to properly handle emergencies.

Environmental Supervision and Audit

Bloomage Biotech strictly implements the "three simultaneous" system of environmental protection (environmental protection facilities and the main project must be designed, constructed, and put into use simultaneously). We conduct timely environmental impact assessments before project construction to obtain approval and organize acceptance of environmental protection after project completion to ensure that new projects meet environmental compliance requirements. We regularly conduct internal and external audits to discover problems and deficiencies in environmental management. We also take timely corrective measures to prevent potential environmental accidents and pollution incidents and to protect environmental and public interests.

The Company conducts at least 1 internal environmental audit every year, covering all operational sites and business types. Through personnel interviews, document reviews, and on-site visits, we conduct inspections and develop our *Audit Report* on environmental management policies, documented information, pollutant prevention and control measures, and emergency preparedness and response. For problems discovered in the internal audit, the audited department analyzes the causes of the non-conformities and prepares a report. Subsequently, the department makes its rectification plan based on the *Corrective and Preventive Control Procedures* and completes rectification within a time limit. Internal auditors are responsible for confirming the rectification results.

The Company regularly invites external third-party agencies to conduct ISO 14001 Environmental Management System audits to ensure the applicability and effectiveness of the management system. The Company also takes the initiative to accept external audits from regulatory authorities and clients to continuously improve resource utilization and pollution prevention and control.

Bloomage Biotech's environmental audit performance for 2024

	Audit type	Coverage	Audit performance
Internal audit	Environmental compliance inspection	All production bases	571 times
External audit	System certification and oversight audit Regulatory and client audits	Jinan, Dongying, and Tianjin production bases All production bases	Completed the required ISO 14001 oversight audit 57 times

Improving Environmental Protection Capabilities

Bloomage Biotech regularly conducts environmental knowledge training and provides in-depth interpretations of environmental laws, regulations and standards for all employees to enhance their environmental awareness and create a company-wide participation atmosphere. Furthermore, the Company also actively participates in training organized by regulatory authorities to keep abreast of the latest environmental regulations and standards, ensuring compliance with operations. In addition, the Company develops detailed operating procedures and provides specialized training for personnel involved in environmental protection to enhance their professional capabilities in environmental management. These efforts ensure compliance with operational standards and effectively prevent violations.

Environmental protection training of Bloomage Biotech⁹

Indicators	Unit	2023	2024
Number of training sessions on environmental protection and pollution prevention and control	times	43	53
Number of employees trained in environmental protection and pollution prevention and control	participants	3,622	2,987
Total hours of training on environmental protection and pollution prevention and control	hour	3,313	4,806

⁹ The statistical caliber covers all of Bloomage Biotech's wholly-owned operational production bases in China.

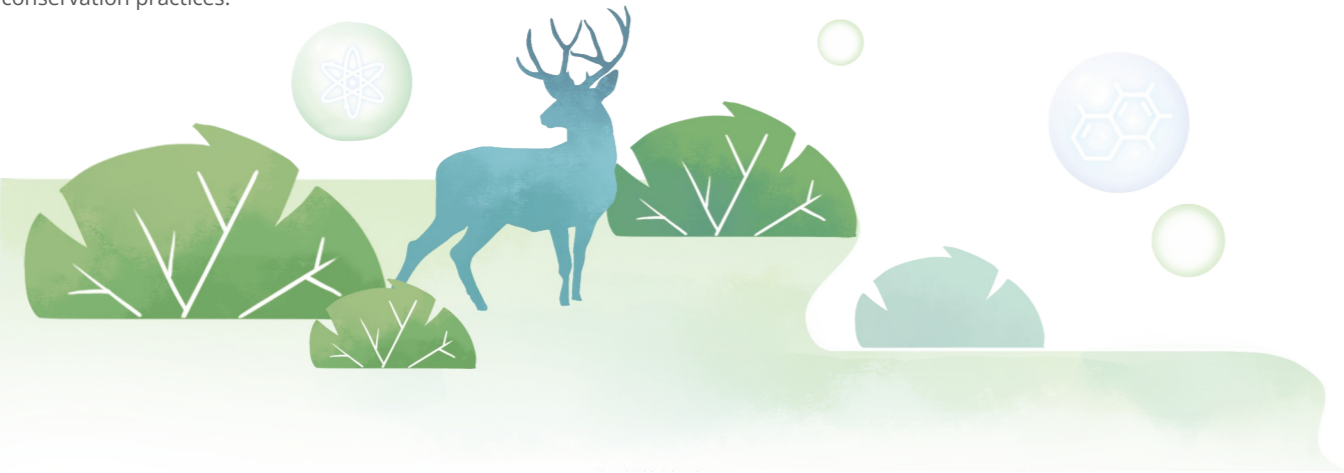
Biodiversity Assessment

Bloomage Biotech adheres to the baseline of biodiversity conservation in production and operations, actively identifying, monitoring, and mitigating potential negative impacts on surrounding ecosystems. Based on potential risk sources, affected scope, probability of occurrence, severity of impact, and risk levels, the Company formulates corresponding prevention and control measures. Besides, the Company integrates biodiversity conservation concepts into product R&D, manufacturing, and raw material procurement, leveraging its expertise in synthetic biology to reduce the impact of products on biodiversity.

Bloomage Biotech biodiversity conservation measures (partial)

Active conservation measures	Product R&D	<ul style="list-style-type: none">● We adopt fermentation methods to replace traditional extraction methods for producing various bioactive materials, reducing the consumption of rare plant resources● We have introduced green processes, such as membrane filtration and enzymatic hydrolysis, to replace traditional chemical treatment methods
	Technological innovation	<ul style="list-style-type: none">● Through measures like source substitution and process optimization, we effectively reduce the negative impact of the product life cycle on the environment and biodiversity
	Packaging optimization	<ul style="list-style-type: none">● We have researched the application of plant-based plastics and purchased biodegradable plastics and recyclable plastics to use more sustainable packaging materials
Baseline conservation measures	Project planning and design stage	<ul style="list-style-type: none">● We conduct environmental impact assessments and take necessary ecological protection measures during construction
	Daily production and operations stage	<ul style="list-style-type: none">● We regularly carry out biodiversity assessments and investigate the surrounding ecosystems, animal, and plant species. The Company has conducted biodiversity assessment, whose results have shown that there are no nature reserves, scenic spots, national and local key protected wild plants, and rare or endangered wild animals within 1 km of the area where the Company is located. The Company causes no significant negative impacts on biodiversity while maintaining the normal and effective operation of environmental protection facilities and detecting and disinfecting foreign objects. The Company will continue to conduct regular assessments and cautiously manage biodiversity risks

On May 22, 2024, the International Day for Biological Diversity, Bloomage Biotech launched a knowledge-sharing activity around the theme “Protecting Biodiversity to Promote Sustainable Development”. This initiative enhanced employees' understanding of the connection between the Company's production & operations and biodiversity, motivating their participation in biodiversity conservation practices.



Pollutant Emissions and Waste Management

Bloomage Biotech strictly complies with pollution prevention regulations and standards, including the *Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution*, the *Law of the People's Republic of China on Prevention and Control of Water Pollution*, and the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste*. The Company prioritizes pollution prevention as a key initiative of its environmental management, strengthens the operational control of environmental protection facilities, and establishes internal emission standards based on national, local, and industry standards to ensure compliance with pollutant discharge limits.

Air Emissions

Bloomage Biotech adopts advanced air emission treatment technologies to effectively manage both organized and unorganized emissions of air pollutants. Each production base has established systems and management records, such as the *Air Emission Treatment Management Process* and the *Operation and Maintenance Procedures for Air Emission Deodorization Systems*. Air emissions are treated through methods including acid washing, alkaline washing, water spraying, activated carbon adsorption, and the installation of low-nitrogen burners. Dedicated personnel are assigned to maintain emission treatment facilities, and third-party testing is regularly commissioned. During the reporting period, all environmental protection facilities operated normally and stably, effectively ensuring compliance with air emission standards.

In terms of air emission reduction, the Company continues to improve treatment efficiency and reduce emissions by upgrading process designs and transforming environmental protection equipment.

Air emission reduction measures at Bloomage Biotech

- **Ethanol collection and treatment:** The Jinan production base has added emission treatment facilities in the ethanol storage area to collect, treat, and reuse ethanol emissions, reducing fugitive emissions
- **Boiler exhaust gas reduction:** The Dongying production base has adopted natural gas boilers (equipped with low-nitrogen burners) to lower air emissions
- **Equipment electrification:** The Company has replaced diesel forklifts with electric forklifts in bulk to reduce emissions from diesel combustion

Each production base has enhanced the management of odor-generating processes by enclosing odor-emitting areas such as anaerobic reactors, anoxic tanks, regulating tanks, and sludge thickening tanks in wastewater treatment facilities. Collected odors are treated through the emission treatment system to reduce odors generated during production operations.

Bloomage Biotech's odor mitigation measures (partial)

- The Jinan production base has cleaned and repaired the biofilter beds in the wastewater treatment workshop, improving waste gas collection efficiency.
- The Dongying production base has replaced valves and manhole covers in the wastewater treatment workshop's air emission collection system to prevent leaks and odor dispersion. It has also strengthened pipeline flow regulation to enhance waste gas treatment effectiveness.

Emissions of major air pollutants of Bloomage Biotech¹⁰

Indicators	Unit	Total emissions in 2023	Total emissions in 2024
Sulfur oxides	ton	2.32	1.75
Nitrogen oxides	ton	7.46	6.22
Volatile organic compounds	ton	3.30	3.05

¹⁰ The Company monitors, collects, and treats air pollutant emissions in accordance with regulatory requirements, including particulate matter and other emissions which are insignificant in information disclosure. The statistical caliber covers all of Bloomage Biotech's wholly-owned operational production bases in China.

Wastewater

Bloomage Biotech continuously strengthens the management of water pollution prevention and control facilities and effectively controls various water body risks. The Company has formulated the *Wastewater Treatment Management Process* to strictly control all aspects of wastewater discharge and treatment. Integrated wastewater treatment facilities are used to treat pollutants such as chemical oxygen demand (COD) and ammonia nitrogen. During the reporting period, all environmental protection facilities operated normally and stably, effectively ensuring compliance with wastewater discharge standards.

Production bases listed as key sewage discharge units have established wastewater treatment workshops within their parks to ensure that wastewater treatment meets the requirements of the *Wastewater Quality Standards for Discharge to Municipal Sewers* (GB/T 31962-2015) before being discharged into the municipal sewage pipe network. Besides, in accordance with the requirements of the *Management Regulations on Pollutant Discharge Permits*, they have installed wastewater online monitoring equipment and networked with the government's environmental protection department to achieve internal and external collaborative and dynamic supervision of wastewater discharge. The wastewater quality of other production bases is regularly tested by the government and can be directly discharged into the municipal sewage pipe network. 100% of such wastewater discharged into the municipal sewage pipe network meets the discharge requirements.

The company comprehensively monitors wastewater discharge and the operation of wastewater treatment facilities by regularly inspecting production equipment and pipelines to promptly identify and address any leaks or spills. The Company also sets up anti-seepage layers and emergency ponds in key areas such as chemical warehouses and uses enclosed pipelines to transport wastewater. Anti-seepage layers are installed in wastewater pipelines and treatment facilities to effectively prevent groundwater pollution.

In addition to strengthening water body pollution control, the Company reuses wastewater for biogas power generation and implements wastewater reduction initiatives. In 2024, the Company further reduced wastewater pollutant emissions by timely maintenance and optimization of wastewater treatment processes. For example, the Dongying production base adjusted the CEAB+AAO biological treatment method for wastewater, increasing the treatment time in anaerobic tanks, thereby reducing COD and sludge production.

Bloomage Biotech has the business of producing pharmaceutical-grade products. The Company's products (hyaluronic acid and related products) may flow into the wastewater treatment system during production due to container cleaning and other reasons. Such products discharged meet the pollution discharge requirements. In addition, these products themselves are non-toxic, biologically inactive, and can be used as food ingredients, thus posing no substantial negative impact on the environment or human health.

Wastewater discharge of Bloomage Biotech¹¹

Indicators	Unit	Total emissions in 2023	Total emissions in 2024
Total volume of wastewater discharged	10,000 tons	123.85	171.54
Chemical oxygen demand (COD)	ton	54.01	102.52
Ammonia nitrogen	ton	2.03	0.80
Total phosphorus	ton	0.79	1.04
Total nitrogen	ton	10.10	11.23

¹¹ The statistical caliber covers all of Bloomage Biotech's wholly-owned operational production bases in China. This year, the increased production capacity at Bloomage Biotech's Tianjin production bases has led to a rise in total wastewater discharge and COD.

Waste

Waste Management Policies and Measures

Bloomage Biotech adheres to the sustainable development concept of green operation and upholds the principle of "reduction, recycling and harmlessness" of solid waste to promote comprehensive solid waste management and utilization. The Company has formulated systems, such as the *General Solid Waste Management Process* and the *Hazardous Waste Management Process* to standardize the classified management of waste. The Company formulates annual management plans for general solid waste and hazardous waste, and establishes records for the generation, transfer, and storage of various wastes, ensuring full traceability throughout the waste management process.

Bloomage Biotech's waste classification and disposal methods

	Classification	Waste type	Storage	Disposal
Non-hazardous Wastes	General solid waste	Waste filter residues (e.g., waste perlite, waste activated carbon), sludge, waste plastics, waste cartons, etc.	A general solid waste storage area has been built to store general solid waste, domestic waste, and kitchen waste in a classified manner	Recycle or hand over to qualified third parties for disposal and reuse after classified collection
	Domestic waste	Waste office supplies, dormitory waste, etc.		Entrust a municipal waste disposal company for transportation and disposal after classified collection
	Kitchen waste	Food waste from cafeterias		Entrust a municipal waste disposal company for transportation and disposal
Hazardous Wastes	Hazardous waste	Chemical containers	A storage room for hazardous waste has been built. In strict accordance with the relevant requirements of the <i>Standards for Pollution Control on Hazardous Waste Storage</i> and the <i>Technical Specifications for Collection, Storage, Transportation of Hazardous Waste</i> , ground anti-seepage, gas collection, and exhaust pipe equipment are installed to store various hazardous wastes in a classified manner, and prominent warning signs of hazardous waste are set in the storage area	Entrust qualified third parties for transportation and disposal in strict accordance with the <i>Hazardous Waste Transfer Management Measures</i>

Bloomage Biotech focuses on waste reduction at the source and harmless treatment at the end of the waste stream. Each production base reduces waste generation through process optimization and consumables management. For example, the Dongying production base has replaced solid alkali with liquid alkali, reducing hazardous waste alkali bags by approximately 700 kg. The Company aims to reduce the filter residue discharge per ton of pharmaceutical-grade bioactive products at its Jinan production base by 1% and the sludge discharge per ton of wastewater by 3% by 2025, compared to 2023.

Bloomage Biotech's measures to reduce the generation of various wastes mainly include:

Source reduction

- Optimize production processes and improve product quality and productivity to reduce solid waste generation
- Recycle cleaning solution to reduce chemical consumption and hazardous waste production
- Optimize the wastewater treatment process to reduce the amount of dosing and sludge generation



Harmlessness

- Entrust a qualified third party to dispose of unrecyclable general industrial solid wastes and hazardous wastes

Waste Recycling and Reuse

Bloomage Biotech responds to the national call to accelerate the building of a waste recycling system, continuously improving waste resource utilization and recycling levels in production and product development. The Company explores new pathways for recycling and reusing waste and expired products from production processes.

Bloomage Biotech's resource recycling measures (partial)

Waste type	Resource recycling measures
Scrap packaging materials	Classify and recycle by material type (e.g., cardboard, mixed paper, plastic, PET bottles) and hand over to specialized agencies for processing into other recycled products
Waste perlite and sludge	Entrust qualified third parties to incinerate waste perlite and sludge into building materials
Single-use empty tubes	Carry out the "Empty Tube Recycling" program. From its initiation in 2020 to the end of the reporting period, more than 15.63 million empty tubes had been recycled, with a total of more than 140,000 participants and a recycled weight of 23.45 tons

Waste discharge of Bloomage Biotech¹²

Indicators	Unit	Total emissions in 2023	Total emissions in 2024
Total waste	ton	10,923.55	12,204.44
Hazardous waste	ton	85.01	144.22
General industrial waste	ton	9,599.45	10,521.68
Domestic waste	ton	581.09	1,184.42
Kitchen waste	ton	658.00	354.12
Hazardous waste intensity	ton/revenue in RMB 1,000,000	0.01	0.03
Non-hazardous waste intensity	ton/revenue in RMB 1,000,000	1.78	2.25
Recycled waste	ton	7,331.00	7,125.01

¹² The statistical caliber covers all of Bloomage Biotech's wholly-owned operational production bases in China. This year, the increased production capacity at Bloomage Biotech's Tianjin production bases has led to a rise in hazardous waste, general industrial waste, and total waste.



Resource Utilization and Circular Economy

Bloomage Biotech attaches importance to the rational utilization of water resources and continuously strengthens scientific water management, and implements water recycling measures, leveraging innovation to advance resource recycling and green alternatives.

Water Management

All of Bloomage Biotech's offices and production are supplied by municipal water. The types of water used mainly include production water, make-up water for cooling circulating water, boiler replenishment water, water for environmental protection facilities, and domestic water. The Company has formulated the *Energy Management, Energy Saving and Consumption Reduction Regulations*, adding water consumption management indicators into the daily indicator management system of each workshop and team, and clarifying water metering requirements. Each production base formulates an annual water consumption plan based on local water consumption quotas, monitors and analyzes water consumption data in a timely manner, and commissions third parties to carry out water balance tests and industrial water conservation diagnoses. By doing so, we have laid a solid foundation for the long-term improvement of water resource utilization efficiency. The Company aims to continuously improve water efficiency by increasing the reuse of condensate water and improving production processes.

Bloomage Biotech focuses on building water-saving enterprises by improving water metering, identifying water management weaknesses, promoting water-saving technologies and processes, and replacing old water facilities to prevent water waste, such as leakage and venting in the water supply pipe network. The Dongying production base has been honored as a Water-saving Enterprise of Shandong Province.

Bloomage Biotech's improvement on water metering and statistical measures

- The Tianjin production base has installed remote flow meters to monitor key water use points online, in order to enhance data accuracy and support scientific water management
- The Chaohu production base has strengthened real-time measurement and monitoring of water consumption by installing 8 IoT water meter monitoring devices, so as to identify and address water consumption issues in a timely manner

Case

Jinan production base conducts water balance tests to optimize water use efficiency and reduce water waste

In 2024, Jinan production base conducted water balance tests to enhance water use efficiency and management. The tests revealed issues with corrosion and aging in the fire-fighting pipelines. By replacing the main fire-fighting pipelines and repairing leaks in the aging pipes, water waste due to leakage and spillage was reduced by 10%.

Case

Dongying production base promotes condensate recycling

In the newly launched aseptic project, the Dongying production base uses idle storage tanks to collect chilled water used for cooling in the production process. After re-cooling, the used chilled water can be supplied to the workshop for recycling, which is equivalent to saving 5,000 tons of water each year.

Water consumption of Bloomage Biotech¹³

Indicators	Unit	Consumption in 2023	Consumption in 2024
Total water consumption	10,000 tons	149.33	163.83
Water consumption intensity	ton/revenue in RMB 1,000,000	245.77	305.44

¹³ The statistical caliber covers all of Bloomage Biotech's wholly-owned operational production bases in China. This year, the increased production capacity at Bloomage Biotech's Tianjin production bases has led to a rise in total wastewater consumption. The total water consumption for 2023 was recalculated to be 1.49 million tons.

Packaging Material Management

Bloomage Biotech strictly follows the requirements of the *Product Quality Law of the People's Republic of China*, the *Food Safety Law of the People's Republic of China*, the *Drug Administration Law of the People's Republic of China*, the *Regulations on Cosmetics Supervision and Administration*, the *Regulation on the Supervision and Administration of Medical Devices*, the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste* and other laws and regulations to carry out packaging design, procurement, and disposal. Besides, we comply with national standards including the *Requirements of Restricting Excessive Package—Foods and Cosmetics* and the *Sustainable Packaging Initiative for Cosmetics* to practice sustainable packaging material management. We actively embrace the principles of the circular economy, implementing strategies focused on lightweight design, material substitution, and recycling. By reducing pollution and waste at the design stage, increasing the use of sustainable raw materials, and recycling and reusing packaging materials at the end of a product's life cycle, we promote resource circulation and sustainability.

Lightweight and Plastic-Reduced Packaging

Bloomage Biotech strictly adheres to relevant regulations, reducing packaging material usage and plastic consumption through design optimization, process improvement, material substitution, and recycling initiatives. Additionally, the Company has introduced refill and supplementary packaging options across multiple brands, prioritizing larger packaging formats to minimize the use of smaller packaging and glass materials.

Bloomage Biotech's key measures to reduce weight and plastic in packaging include:

Green packaging design

- Conduct research on the application of sugarcane-based plastics in disposable packaging materials. Compared with traditional petroleum-based plastics, each ton of bio-based plastics can reduce carbon dioxide emissions by about 3 tons
- Employ BOPP environmentally friendly film in place of PVC cigarette wrapping film to avoid the impact of harmful substances contained in PVC on the environment and employees' health
- Adopt lightweight and reduced packaging designs such as refill cores and supplementary packaging

Process improvement

- Replace plastic film sealing with dispensing in packaging to reduce plastic use

Material substitution

- Reduce the use of composite materials and use a single material
- Select degradable, renewable, or recyclable materials. For example, use paper-aluminum foil bags in facial mask packaging instead of pure aluminum foil bags to reduce plastic film usage at the same thickness

Packaging recycling

- Recycle waste plastics, waste outer packaging cartons, and other waste generated during the production process to minimize the amount of waste packaging

Supply chain enhancement

- Choose FSC-certified packaging suppliers

Reduce packaging for transportation

- Optimize transportation packaging by reducing fillers and avoiding excessive packaging

Case | QuadHA CT50 Skin Dynamic Youth Cream uses card boxes instead of hardcover boxes



Bloomage Biotech's brand QuadHA's new product CT50 Skin Dynamic Youth Cream abandons the previous hardcover pasting process and EVA lining, and adopts white cardboard boxes and corrugated folding inner supports, reducing packaging weight by nearly 60%. The use of single paper material facilitates recycling, lowers processing complexity, and reduces the production process, thereby reducing energy consumption.

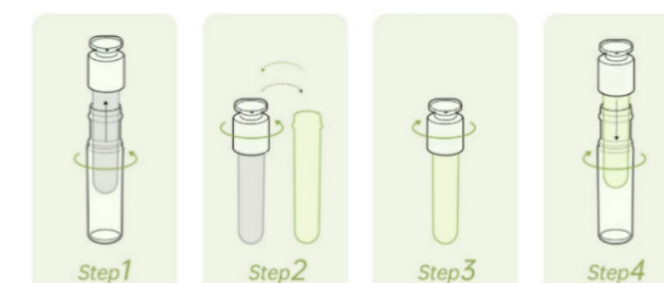
Case | Saving energy and reducing plastic, starting from the "core"



- Bio-Meso Soothing & Delicating Conditioning Essence and Bio-Meso Facial Purifying & Delicating Conditioning Essence use refill cores, reducing plastic shell usage by approximately 37.6g per unit (77% of total packaging weight). Bio-Meso Hydrating Cleansing Honey's supplementary packaging design reduces plastic shell usage by about 42.2g per unit (82% of total packaging weight)
- BIOHYALUX Elasticity Filler Essence Cream's refill packaging reduces outer cap and bottle weight by about 204g per unit (87% of total packaging weight)
- CT50 Skin Dynamic Youth Cream's refill core reduces cap and glass shell weight by about 223.5 g per unit (96% of total packaging weight)



油敏精华使用小贴士 替换芯更换方法 节能减塑 从「芯」开始



Sustainable Packaging Material Usage

Bloomage Biotech continuously explores and adopts biodegradable and recyclable packaging materials, avoiding unsustainable wood sourcing, high-energy-consuming, or high-pollution petroleum-based materials.

Material type	Material features	Product application
Post-Consumer Recycled (PCR) Plastics	The generation of plastic waste is reduced by recycling and reusing PCR. Compared with traditional materials, the production of PCR materials lowers carbon dioxide emissions.	During the injection molding process of the bottle of the Bio-MESO Saccharomyces Rice Vitality Purifying Balancing Milk, 30% of PCR recycled materials were added, fully integrating the concept of environmental protection into the product without affecting the functionality of the product.
Paper-Plastic Inner Supports	Paper-plastic is a natural packaging material made from recycled cardboard, wood, bagasse, reeds, and other fiber sources. It is recyclable and biodegradable.	BIOHYALUX's single-use packaging replaces XPE material inner supports with paper-plastic options.
FSC (Forest Stewardship Council) Certified Packaging Paper	FSC-certified materials guarantee consumers that the product is sustainable and environmentally friendly throughout the supply chain.	Bloomage Biotech has been certified to FSC-COC (chain of custody), allowed to purchase FSC (Forest Stewardship Council) certified packaging materials.

Packaging Recycling and Reuse

Bloomage Biotech incorporates recycling considerations into packaging design from the outset, upgrading multiple products to single-material options and implementing waste packaging and product recycling plans to promote material circulation.

Case


MedRepair uses a single material all-plastic pump and plastic soft packaging for end-of-line recycling




In 2024, the Bloomage Biotech brand MedRepair upgraded its products, including MedRepair Soothing Radiant Essence, MedRepair Barrier Repairable Hydragel Cream, and MedRepair Hydrating Gel Cream. The packaging now features single-material plastic pumps, with all pump components (including springs, beads, gaskets, and straws) made from PP material, facilitating recycling and reducing manual sorting and disassembly costs. Additionally, MedRepair's Soothing Skin Essence Sample packaging uses single-material OPP plastic soft packaging, which is 100% recyclable.

Case

BIOHYALUX's "Empty Tube Recycling" program for single-use products



2024 marks the fifth year of BIOHYALUX's "Empty Tube Recycling" program for Bloomage Biotech brands. The recycling program encourages green and low-carbon consumption by issuing no-threshold coupons and exchanging empty tubes for official products. The recycled second-throw empty tubes will be sent to the recycling factory for processing and made into recycled environmentally friendly peripherals. As of December 2024, over 140,000 participants have joined the "Empty Tube Recycling" program, recycling over 15.63 million empty tubes with a total weight of 23.45 tons. In 2024, BIOHYALUX expanded the recycling program to allow year-round participation without brand restrictions, fully integrating sustainable and circular concepts into consumers' daily lives.



Case

Turning waste plastic bottles into eco-friendly gifts



Bloomage Biotech actively practices the concept of resource recycling, customizes canvas bag souvenirs made of waste packaging materials, and conveys the concept of sustainable consumption and circular economy to business partners. Each canvas bag is made from 25 recycled plastic bottles, transforming waste through circular regeneration technology. This not only reduces plastic pollution but also demonstrates the potential of resource recycling.



Bloomage Biotech’s packaging material procurement

Indicators	Unit	2023	2024
Total procurement of packaging materials ¹⁴	ton	5,270.00	8,494.23
Purchase volume of FSC-certified paper packaging materials	ton	846.00	1,635.00

¹⁴The packaging materials purchased by the Company mainly include paper, plastic, glass, and aluminum.

06

Achievements: A Sustainable Value Chain

A stable and reliable supply chain is crucial for corporate sustainable development. Bloomage Biotech adheres to the principles of integrity, mutual benefit, and win-win cooperation, working with suppliers to create a stable, high-quality biomanufacturing supply chain ecosystem. We consistently practice responsible procurement, aiming at a positive impact on the environment and society while product quality is guaranteed.

SDGs Addressed in this Chapter:



Major Material Topics of Sustainability Covered in this Chapter:

- Supplier Management
- Product Environmental Impact
- Response to Climate Change and Energy Management
- Product Quality



Ensuring Supply Chain Security

Bloomage Biotech is committed to building and maintaining a secure, stable, and sustainable supply chain network. We continuously improve our supply chain management system by refining supplier admission and classification management to fortify the supply chain's security.

Supply Chain Management System and Structure

Bloomage Biotech continues to improve its supply chain management system. This year, the Company comprehensively sorted out the supply chain management process and optimized it from the aspects of procurement material classification, procurement process, supplier access, and management.

Bloomage Biotech's supply chain management initiatives (partial)



In 2024, the Company optimized its organizational structure by establishing the "Global Supply Chain Platform" and "Global Shared Platform." These platforms integrate and optimize production bases, enhance the management efficiency of functional departments, coordinate with various business lines, ensure stable material supply and continuous product production, and boost supply chain resilience. The Company also strengthened the construction of dedicated teams for procurement, bidding, and supplier management to solidify supply chain risk management capabilities.

Additionally, the Company implemented systematized management of procurement and supplier access processes through the SRM system. This system incorporates supplier qualification review, archive information maintenance, and dynamic supplier processes (performance, suspension, exit) to improve supply chain management efficiency.

Supplier Access and Classification Management

Bloomage Biotech has established a rigorous supplier admission mechanism, conducting comprehensive assessments of potential suppliers based on basic qualifications, quality assurance, scale, competitiveness, and other factors. Necessary on-site audits are carried out to select suppliers that meet requirements and include them in the annual *List of Qualified Suppliers*.

The Company implements classified management of qualified suppliers, and the suppliers are classified according to their procurement amount, importance of goods, and impact on the Company's products and production, and other dimensions. By stratifying suppliers according to these dimensions, we implement supplier management in a tiered manner, effectively controlling supplier risks and ensuring high-quality, stable, and safe operation of the supply chain.

As per the Company's requirements, suppliers of raw materials, packaging materials, and other types must be qualified with certificates for production and operation, necessary management system (eg. quality management system, GMP, etc.), and for purchased items (such as production process description, safety assessment, quarantine certificates, toxicology and efficacy study data or inspection reports of raw materials, etc.), accompanied with appropriate production conditions. Besides, the Company assesses the performances of suppliers in environmental protection, occupational health and safety, energy management, and labor rights, and rewards additional credits to excellent suppliers with well-established management systems and certifications.

Supplier Access Flow Chart



In the reporting period, Bloomage Biotech has developed partnerships with 1,339 production suppliers, distributed as follows:

Region	Unit	Quantity
Mainland China	count	1,333
Hong Kong, Macao, and Taiwan, China	count	1
Overseas countries or regions	count	5

Bloomage Biotech recognizes that material stability is a key risk in the supply chain. Therefore, the Company has developed targeted supply chain risk response strategies to ensure high-quality, stable, and secure operations. These strategies include:



Supply Chain Quality Management

Bloomage Biotech has established a comprehensive supplier quality management mechanism, referencing regulatory requirements and standards to develop quality management systems for different categories of suppliers. These include the *Regulations for Sampling, Inspection, and Retention Management of Cosmetic Packaging Materials*, the *Regulations for Sampling and Retention Management of Raw and Auxiliary Materials for Cosmetics*, the *Nonconforming Product and Return Processes*, the *Outsourced Processing Management Regulations*, and the *Quality Management Regulations for Class A Raw Material Suppliers*. The Company also signs the *Quality Assurance Agreements* with suppliers to ensure the stability and reliability of the materials provided.

Dedicated personnel are assigned to evaluate supplier admission quality, assess quality performance, and drive continuous quality improvement. The Company sets annual management targets for supplier delivery quality inspection pass rates, regularly collects and analyzes target completion status, and promptly follows up on nonconforming situations to ensure closed-loop handling.

Supplier Quality Supervision and Review

The Company has established a robust supplier quality audit mechanism, based on regulations such as the *Cosmetics Supplier Entry, Supervision and Management Regulations*, the *Regulations on Selection, Evaluation, and Management of Raw Material Suppliers*, the *Supplier Entry, Supervision and Management Regulations*, and the *On-Site Supplier Audit Regulations*. These documents standardize the supplier audit process. Each year, we develop a supplier supervision and audit plan covering multiple aspects of supplier operations, including business, production, logistics, and warehousing. For identified nonconformities during audits, we assist suppliers in developing effective corrective action plans, regularly communicate the implementation status of these plans, and conduct necessary re-audits to confirm the effective implementation of corrective actions until issues are closed.

Based on the annual evaluation and assessment results, the Company provides feedback to suppliers on areas for improvement and urges them to enhance their performance. For suppliers identified with critical disqualifying items or deemed "nonconforming" in the evaluation, the Company will no longer include them in the annual *List of Qualified Suppliers*. If such a supplier is to be reactivated, they will be assessed through the new supplier introduction process. During this reporting period, the Company conducted quality audits on 206 direct suppliers, 35 indirect suppliers, 146 raw and auxiliary material suppliers, and 41 contract manufacturers. No "nonconforming" suppliers were identified in the annual evaluation and assessment.

Supplier Quality Improvement and Empowerment

To effectively manage quality risks, Bloomage Biotech actively communicates with suppliers, organizes supplier quality training activities, and provides on-site support. We guide and discuss issues identified during audits and quality bottlenecks to help suppliers continuously improve their quality management capabilities.

Case | Supplier quality support



In November 2024, the Bloomage Biotech brand BIOHYALUX, in collaboration with packaging R&D, supplier quality, procurement center, and other departments, formed a dedicated project improvement team for customized product projects. The team visited suppliers to conduct in-depth cooperation and communication on key aspects of customized product packaging quality and technology, jointly exploring improvement and optimization solutions.

Case | Supplier quality training



In 2024, Bloomage Biotech's procurement center, in coordination with the quality department, conducted supplier quality training and empowerment activities. The training conveyed the Company's quality standards to approximately 60 suppliers across categories such as glassware, plastic products, film bags, labels, and cardboard boxes.

Case | Bloomage Biotech successfully hosts inaugural supplier conference, pioneering a new era of industrial collaboration



On December 14, 2024, Bloomage Biotech successfully held its first supplier conference themed "Leading Revolution, Embracing Brilliance." The event invited 36 suppliers, numerous partners, and industry experts to jointly explore new opportunities and challenges in supply chain collaboration. Chairwoman Zhao Yan delivered a speech titled *Growing Together, Achieving Mutual Success—Building a High-Quality Biomanufacturing Supply Chain Ecosystem*. She proposed three cooperation visions: quality, sustainable development, and innovative collaboration. Bloomage Biotech aims to reach consensus on cooperation standards with supplier partners to jointly build a robust industrial supply chain ecosystem, contributing to the development of the biomanufacturing industry.



Additionally, the conference featured a roundtable forum inviting multiple guests to discuss the opportunities and challenges brought by digitalization and ESG to enterprises. Bloomage Biotech also recognized outstanding supplier partners for their exceptional performance in product quality, innovation capabilities, and collaborative synergy. Seven awards were presented, including the Outstanding Contribution Award, Sustainable Development Award, Excellent Cooperation Award, Efficient Collaboration Award, Quality Star Award, Innovation Pioneer Award, and Cost Leadership Award.

Supply Chain ESG Management

Promoting ESG management among suppliers is a crucial aspect of Bloomage Biotech's commitment to sustainable development. The Company has established a foundational ESG management system for the supply chain, covering policy development, internal and external empowerment, assessment, data management, and sustainable procurement. This system will continue to deepen and optimize in future operations, working with supply chain partners to advance industry progress.

Policy Development

During this reporting period, the Company formulated and implemented a revised version of the *Bloomage Biotech Supplier Code of Conduct*. This code addresses labor rights and human rights protection, health and safety, environment, business ethics, and management systems, requiring suppliers to sign and comply with the *Compliance Commitment Letter* (including clauses on integrity cooperation, financial compliance, and anti-bribery). As of the end of the reporting period, 100% of production material suppliers had signed the above regulations.



The Bloomage Biotech Supplier Code of Conduct stipulates that



Internal and External Empowerment

The Company places emphasis on training the internal procurement team and suppliers in ESG management awareness and capabilities, aiming to continuously enhance the ESG capabilities of relevant personnel both internally and externally. Therefore, the Company conducts specialized empowerment sessions around ESG management systems, policy trends, low-carbon transition, and labor rights through supplier conferences and internal seminars. Additionally, the Company guides internal and external personnel in understanding these concepts through practical work in scope 3 greenhouse gas data collection and ESG management evaluation. During this reporting period, the Company conducted ESG training for 80% of procurement positions and 50% of suppliers.

Assessment

During this reporting period, the Company established a supplier ESG self-assessment management mechanism, aiming to manage the ESG risks of major suppliers through annual inquiries and to encourage suppliers to focus on and strengthen their ESG capabilities. The assessment content, in addition to covering the Bloomage Biotech Supplier Code of Conduct, has added requirements for low-carbon management, sustainable supply chains, and information disclosure. This encourages suppliers to systematically and deeply engage in related work, effectively enhancing management levels and establishing future-oriented competitiveness. In 2025, the company targets to conduct assessments for over 20% of its production material suppliers.

Data Management

Continuously improving the quantification of ESG management is a requirement that Bloomage Biotech sets for itself and its suppliers. During this reporting period, the Company conducted organizational-level scope 3 greenhouse gas data accounting and life cycle accounting (LCA) for several products, collecting data from major suppliers. In the project, the Company cooperated with suppliers to jointly establish relevant data statistical capabilities to lay the foundation for future management optimization.

Sustainable Purchasing

Bloomage Biotech actively practices sustainable procurement, aiming to enhance the sustainability of products from multiple perspectives such as low-carbon, environmental protection, and circularity. We prioritize suppliers with sustainable characteristics and advantages to build a sustainable supply chain from the source. In 2024, we deeply promoted the optimization of production materials, implementing a series of specific measures from the perspectives of material substitution, light-weighting, and recyclability. For more information, please refer to the Section "Packaging Material Management" under Chapter 5.

07

Responsibility: Community Care and Contribution

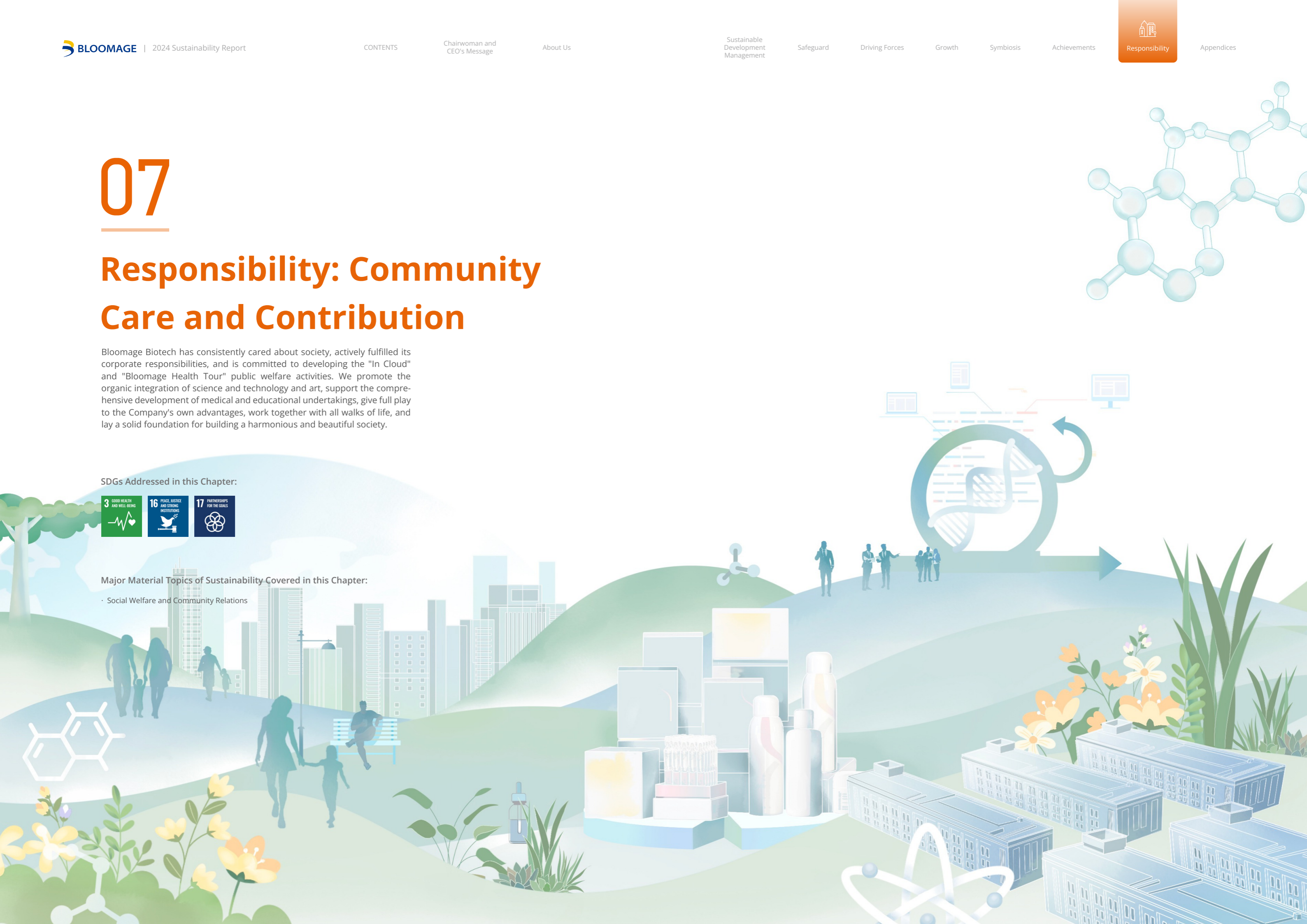
Bloomage Biotech has consistently cared about society, actively fulfilled its corporate responsibilities, and is committed to developing the "In Cloud" and "Bloomage Health Tour" public welfare activities. We promote the organic integration of science and technology and art, support the comprehensive development of medical and educational undertakings, give full play to the Company's own advantages, work together with all walks of life, and lay a solid foundation for building a harmonious and beautiful society.

SDGs Addressed in this Chapter:



Major Material Topics of Sustainability Covered in this Chapter:

- Social Welfare and Community Relations



Social Welfare and Community Relations

Over the years, we have continued to carry out two major public welfare activities, "In Cloud" and "Bloomage Health Tour", actively explored and practiced in the fields of medical popularization and cultural inheritance, and continuously enriched our public welfare initiatives to expand social influence.

Additionally, Bloomage Biotech pays close attention to the welfare of veterans and rural revitalization projects, aiming to improve the living standards of veterans and rural residents. In 2024, the company donated facial masks, moisturizing lotions, personal care products and case to charitable organizations such as the Jinan City Veterans Care Foundation and the High-Tech Zone Charity Federation. These donations were used to support social welfare and charity projects, with a total value of donated goods reaching RMB 9.61 million.

Influence distribution:

- "In Cloud" has lasted for 14 years, traveled across more than 10 provinces or autonomous regions, penetrated into ethnic minority settlements in more than 60 cities, and helped nearly 400 ethnic culture and intangible cultural heritage inheritors from 41 ethnic groups. In 2023, the project was included in excellent cases at the Pavilion, UN SDG Summit 2023 and ESG best practices for Chinese Listed Companies 2023 by China Association for Public Companies
- "Bloomage Health Tour" has been carried out for 11 years, with volunteer medical activities covering Yexian County of Henan Province, Seda County of Sichuan Province, Yinchuan City of Ningxia Hui Autonomous Region, Zibo City of Shandong Province, Bole City of Xinjiang Province, and other areas. This project has facilitated the recovery of thousands of patients

Case | Bloomage Biotech's "In Cloud" project launched the theme activity of "To See Xinjiang—Southern Xinjiang"

In 2024, the In Cloud program held the "To See Xinjiang—Southern Xinjiang" thematic activity to assist in the inheritance and development of Xinjiang's national culture. While showcasing the beautiful natural scenery of Xinjiang, the activity delved into southern Xinjiang to understand the musical intangible cultural heritage of ethnic groups such as the Tajik, Uyghur, and Kirgiz, and promoted it through promotional videos, public accounts, and video websites. Additionally, Bloomage Biotech hosted the "To See Xinjiang—Southern Xinjiang" themed concert, assisting ethnic minority compatriots in spreading the true and diverse culture of Xinjiang and promoting the profound inheritance of ethnic minority musical culture and song and dance art.



Uyghur youths performing "Dolang Muqam—Youth"



Bloomage Biotech's "In Cloud" Series of Thematic Activities

Case | "In Cloud" has been ongoing for 14 years to help the development of ethnic and cultural inheritance

"

"I have always believed that the essence of charity is to inspire passion, especially for the protection of national cultures. Only when the people of the ethnic group themselves are passionate can the inheritance and promotion be more powerful."

Ms. Zhao Yan, Chairwoman and CEO of Bloomage Biotech, initiator of "In Cloud"



In 2011, Zhao Yan, Chairwoman and CEO of the Company, initiated the "In Cloud" project with a mission to protect China's original cultures. This project explores how to preserve the intangible cultural heritage of various ethnic groups in China through art exhibitions, immersive experiences, singing and dancing performances, and culinary events. Additionally, it supports rural development by promoting the inheritance of ethnic cultures and improving local residents' living standards. In general, it contributes to rural prosperity.

Since its establishment, "In Cloud" has conducted 14 series of activities, visiting more than 10 provinces, autonomous regions, and municipalities directly under the central government, and passing through over 60 ethnic minority settlements in cities, with a total journey of more than 160,000 kilometers. It has helped nearly 400 cultural and intangible cultural heritage inheritors from 41 ethnic groups to take the stage in China and abroad. As of the end of 2024, "In Cloud" has launched 127 related series works in the form of short videos, showcasing the national style of China to the public in a flexible and quick manner. In the future, In Cloud will continue to explore and strive to preserve more brilliant national cultures, contributing to the continuity of Chinese culture.

Case | Bloomage Biotech collaborated with "Light Up Action Charity Plan" to care for autistic children

In 2024, Bloomage Biotech strengthened its support and care for children with autism. Its brands BIOHYALUX and BLOOMCARE collaborated with the "Light Up Action Charity Plan" to jointly create the "Vitality Gift Box," incorporating the paintings of children with autism into BIOHYALUX's product Collagen Vitality Boost Essence. A portion of the sales revenue was applied to the care for children with autism plan. The Company will continue to leverage its influence, attracting more forces to join the public welfare path of caring for children with autism and providing more tangible help to these children and their families.

Appendices

 Index of Indicators

SSE Sustainability Report Disclosure Guidelines

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	Principle 2: Make sure that they are not complicit in human rights abuses	P53-54
Labour	Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	P78
	Principle 4: The elimination of all forms of forced and compulsory labour	P54
	Principle 5: The effective abolition of child labour; and	P54
	Principle 6: The elimination of discrimination in respect of employment and occupation	P54
Environment	Principle 7: Businesses should support a precautionary approach to environmental challenges	P81-102
	Principle 8: Undertake initiatives to promote greater environmental responsibility; and	P81-102
	Principle 9: Encourage the development and diffusion of environmentally friendly technologies	P81-102
Anti-Corruption	Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery	P25-27

IFRS S2 Index

Suggested Disclosure		Index
Governance	Disclose the governing body (which may include the board of directors, committees, or equivalent bodies responsible for governance) or individuals responsible for overseeing climate-related risks and opportunities.	P81
	Disclose the role of management in the oversight, management, and supervision of the governance processes, controls, and procedures related to monitoring climate-related risks and opportunities.	P81
Strategy	Disclose how climate-related risks and opportunities may reasonably impact the prospects of the entity.	P82,84-85
	Disclose the current and expected impacts of climate-related risks and opportunities on the entity's business model and value chain.	P82,84-85
	Disclose the impact of climate-related risks and opportunities on the entity's strategies and decisions, including information on transition plans related to climate.	P82,84-85
	Disclose the impact of climate-related risks and opportunities on the entity's financial position, financial performance, and cash flows during the reporting period, as well as the expected impact on the entity's short-term, medium-term, and long-term financial position, financial performance, and cash flows, considering how climate-related risks and opportunities are incorporated into the entity's financial planning.	P82,84-85
	Consider the entity's ability to adapt to climate-related changes, developments, and uncertainties, and disclose the entity's strategies and its business model's adaptability to climate-related changes.	P82,84-85
Risk Management	Disclose the processes and related policies used by the entity to identify, assess, prioritize, address, and monitor climate-related risks.	P83
	Disclose the procedures used by the entity to identify, assess, prioritize, and monitor climate-related opportunities, including whether and how the entity uses climate scenario analysis to identify climate-related opportunities.	P84
	Disclose to what extent the processes for identifying, assessing, prioritizing, and monitoring climate-related risks and opportunities are integrated into the entity's overall risk management process and how they are incorporated and reported.	P83
Directions and Targets	Disclose information related to cross-industry metric categories.	P125-126
	Disclose industry-specific metrics related to specific business models, activities, or other common characteristics of participating industries.	P125-126
	Disclose the targets set by the entity to mitigate or adapt to climate-related risks or to leverage climate-related opportunities, as well as any targets required by laws or regulations for the entity to achieve, including indicators used by the governing body or management to measure progress towards these targets.	P82

GHG Verification Statement



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Greenhouse Gases Verification Opinion

is awarded to

BLOOMAGE BIOTECHNOLOGY CORP., LTD.

Bureau Veritas Certification (Beijing) Co., Ltd. was engaged to conduct an independent verification of the greenhouse gases (GHG) emissions reported by BLOOMAGE BIOTECHNOLOGY CORP., LTD. for the period stated below. This verification opinion applies to the related information included within the scope of work described below.

Boundaries covered by the verification:

- Verification site name: BLOOMAGE BIOTECHNOLOGY CORP., LTD.
- Verification site address:
 - No.678 Tianchen St.,High-Tech Development Zone, Jinan, Shandong Province, China (BLOOMAGE BIOTECHNOLOGY CORP., LTD. Jinan No.1 Factory Zone)
 - No.3333, Middle of Century Avenue, High-Tech Development Zone, Jinan, Shandong Province, China (BLOOMAGE BIOTECHNOLOGY CORP., LTD. Jinan No.2 Factory Zone)
 - No.2001, Dazheng Road, High-Tech Development Zone, Jinan, Shandong Province, China (BLOOMAGE BIOTECHNOLOGY CORP., LTD. Jinan No.3 Factory Zone)
 - No.1 Zhinuhe Road, Dongying District, Dongying City, Shandong Province, China (DONGYING FIRST BIOCHEM INDUSTRIAL Co., Ltd. Dongying Company)
 - No.33, Fangyi Road, Central District,Tianjin Economic and Technological Development Zone, Tianjin City, China (BLOOMAGE BIOTECH(TIANJIN) Co., Ltd. Tianjin Company)
 - No.8 Zhenxing Road, Chaohu Economic Development Zone, Anhui Province, China (ANHUI LEMEIDA BIOTECHNOLOGY Co., Ltd. Chaohu Company)
 - No.33 Ankang Street, Mei'an Science and Technology New City, Xiuying District, Haikou City, Hainan Province, China (BLOOMAGE BIOTECH(HAINAN) Co., Ltd. Hainan Company)
 - Room 1013-1016, 10th Floor, Building 1, Innovation and Entrepreneurship Center, No. 31 Dongfeng Road, Xiangtan Economic and Technological Development Zone, Xiangtan City, Hunan Province, China (BLOOMAGE BIOTECH(XIANGTAN) Co., Ltd. Xiangtan Company)
- Reporting period covered: 01/01/2024 to 31/12/2024

Organizational boundaries: Activities and facilities of Jinan No.1 Factory Zone、Jinan No.2 Factory Zone、Jinan No.3 Factory Zone、Dongying Company、Tianjin Company、Chaohu Company、Hainan Company、Xiangtan Company of BLOOMAGE BIOTECHNOLOGY CORP., LTD. under operational control approach.

Reporting boundaries: Direct GHG emissions generated in production of bioactive material, medical terminal products, functional skincare products, etc and related management activities within the organizational boundaries, as well as significant indirect greenhouse gases emissions.

Emissions data verified under reporting boundaries:

- Category 1: Direct GHG emissions: 37,412.27 tCO₂e
- Category 2: Indirect GHG emissions from imported energy (location-based): 76,098.72 tCO₂e
Indirect GHG emissions from imported energy (market-based): 72,373.66 tCO₂e
- Category 3: Indirect GHG emissions from transportation: 16,558.10 tCO₂e
- Category 4: Indirect GHG emissions from products used by organization: 167,294.29 tCO₂e
- Category 5: Indirect GHG emissions associated with the use of products from the organization:

Certification body address: Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738
Further clarifications regarding the verification scope of this opinion may be obtained by consulting the organization.
To check this opinion validity please call: +86 10 59683663

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Non-significant indirect emissions and not quantified

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

Total quantified emissions(location-based): 297,363.38 tCO₂e
Total quantified emissions(market-based): 293,638.33 tCO₂e

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

GHG verification protocol used to conduct the verification:

- ISO 14064-1:2018 Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
- ISO 14064-3:2019 Greenhouse gases - Part 3: Specification with guidance for the verification and validation of greenhouse gas statements

Level of assurance:

- Reasonable assurance

GHG verification methodology:

- Interview for relevant personnel;
- Review of the documentary evidence;
- Evaluation of the methodology and information systems for data collection, aggregation, analysis and review;
- Audit of sampled sites and data to verify source.

Verification conclusion:

Based on the verification process and findings, the GHG emission data in the GHG inventory report from BLOOMAGE BIOTECHNOLOGY CORP., LTD. is in compliance with ISO 14064-1:2018 Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.

Statement of independence, impartiality and competence:

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

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

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

Lead verifier: Carbon HU
No.: EMICN100561A
Version No.: No.1

Verification date: 27/02/2025
Issue date: 07/04/2025



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

Certification body address: Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738
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ESG Key Performance Tables

Environmental Performance¹⁵

Indicators				Unit	2023	2024
Greenhouse gases	Total GHG emissions (Scope 1 and 2)	Location-based	tCO ₂ e		100,902.09	113,510.99
		Market-based	tCO ₂ e		/	109,785.94
	GHG emissions per unit of revenue (Scope 1 and 2)	Location-based	tCO ₂ e/million revenue in RMB		16.61	21.14
		Market-based	tCO ₂ e/million revenue in RMB		/	20.44
	Scope 1 emissions		tCO ₂ e		43,554.73	37,412.27
	Scope 2 emissions	Location-based	tCO ₂ e		57,347.36	76,098.72
		Market-based	tCO ₂ e		/	72,373.66
	Scope 3 emissions		tCO ₂ e		/	183,852.39
Energy	Natural gas		cubic meter		15,686,836	13,073,453
	Gasoline		litre		21,706	30,112
	Diesel oil		litre		8,939	7,934
	Purchased electricity (thermal power)		kWh		66,931,210	77,625,771
	Purchased renewable electricity (wind power)		kWh		/	13,375,618
	Self-generated renewable electricity	Total amount	kWh		3,521,913	3,745,485
		Photovoltaic electricity generation	kWh		2,401,725	2,312,192
		Biogas electricity generation	kWh		1,120,188	1,433,293
	Purchased heat from fossil fuels		GJ		174,331.73	245,503.80
	Purchased heat from biomass fuel		GJ		38,282.69	153,263.05
	Total comprehensive energy consumption		tons of standard coal		35,071.79	35,346.54
	Comprehensive energy consumption intensity		tons of standard coal/million revenue in RMB		5.77	6.58

Indicators		Unit	2023	2024
Water	Total water consumption	10,000 tons	149.33	163.83
	Water usage per unit of revenue	ton/million revenue in RMB	245.77	305.04
Packaging materials	Total procurement of packaging materials	ton	5,270.00	8,494.23
	Purchase volume of FSC-certified paper packaging materials	ton	846.00	1,635.00
Wastes	Total waste discharged	ton	10,923.55	12,204.44
	General industrial waste	ton	9,599.45	10,521.68
	Hazardous waste	ton	85.01	144.22
	Domestic waste	ton	581.09	1,184.42
	Kitchen waste	ton	658.00	354.12
	Recycled waste	ton	7,331.00	7,125.01
	Non-hazardous waste emission intensity	ton/million revenue in RMB	1.78	2.25
	Hazardous waste emission intensity	ton/million revenue in RMB	0.01	0.03
Air emissions	Sulfur oxides	ton	2.32	1.75
	Nitrogen oxides	ton	7.46	6.22
	Volatile organic compounds	ton	3.30	3.05
Wastewater	Total volume of wastewater discharged	10,000 tons	123.85	171.54
	Chemical oxygen demand (COD)	ton	54.01	102.52
	Ammonia nitrogen	ton	2.03	0.80
	Total phosphorus	ton	0.79	1.04
	Total nitrogen	ton	10.10	11.23
Training on environmental protection and pollution prevention and control	Number of training sessions	times	43	53
	Number of employees trained	participants	3,622	2,987
	Total training duration	hour	3,313	4,806

¹⁵ The scope of statistics includes all operational production bases of Bloomage Biotech located within China. The total comprehensive energy consumption (in tons of standard coal) is calculated based solely on the comprehensive energy consumption of fossil fuel energy. Due to the increased production volume at Bloomage Biotech's Tianjin production base this year, the total consumption of fossil energy for heat and electricity, as well as the total water usage, have all increased. The symbol "/" indicates that the item is not applicable.

Social Performance¹⁶

Indicators			Unit	2023	2024
Employment	Total number of employees		person	4,655	4,444
	Number of employees by gender	Male	person	2,344	2,268
		Female	person	2,311	2,176
	Number of employees by age	Aged 51 or above	person	70	67
		Aged 31 to 50	person	2,017	2,172
		Aged 30 or below	person	2,568	2,205
	Number of Employees by rank	Senior management	person	8	8
		Middle Management	person	663	193
		General staff	person	3,984	4,243
	Number of employees by geographic location	Mainland China	person	4,637	4,428
		Regions or countries outside the mainland (including Hong Kong, Macao, and Taiwan)	person	18	16
Employee Diversity	Number and proportion of women in management	Female senior management (executives)	person	4	4
		Proportion of women in senior management	%	50.00	50.00
		Female middle management (above the manager level)	person	328	80
		Proportion of women in middle management	%	49.47	41.45
	Number and proportion of R&D employees	Number of R&D employees	person	926	920
		Proportion of R&D employees	%	19.87	20.70
		Number of female R&D employees	person	576	577
		Proportion of female R&D employees	%	62.20	62.72
	Number of employees by physical condition	General staff	person	4,643	4,427
		Disabled employees	person	12	17
	Number of employees by ethnic group	Number of employees of ethnic minorities	person	131	120
		Number of employees of non-ethnic minorities	person	4,524	4,324
	Number of employees by education	Doctor's degree and Professor	person	36	43
		Master's degree	person	654	633
		Bachelor's degree	person	1,712	1,699
		Below bachelor's degree	person	2,253	2,069

¹⁶ "-" indicates the item was not counted; "/" indicates the item is not applicable.

Indicators			Unit	2023	2024
Employee turnover rate	Total employee turnover rate		%	28.46	28.75
	Turnover rate by gender	Male	%	-	26.80
		Female	%	-	30.76
	Turning rate by age	Aged 51 or above	%	-	17.52
		Aged 31 to 50	%	-	18.00
		Aged 30 or below	%	-	38.51
	Turning rate by region	Mainland China	%	-	28.75
		Regions or countries outside the mainland (including Hong Kong, Macao, and Taiwan)	%	-	29.41
	Proportion of trained employees by gender	Male	%	53.39	48.97
		Female	%	46.61	51.03
	Training participation rate by rank	Management	%	20.72	11.51
		General staff	%	79.28	88.49
	Average training hours by gender	Male	hour	22.19	29.17
		Female	hour	23.15	24.16
	Average training hours by rank	Management	hour	38.52	32.52
		General staff	hour	18.49	25.84
	Total number of employees trained		participants	-	6,279
	Average hours of employee trained		hour	22.83	26.61
	Total investment in employee training		RMB 10,000	506.57	267.25
Employee Development	Proportion of employees receiving performance appraisals		%	100	100
Internal promotions	Total number of promotions		person	/	322
	Internal promotion rate		%	/	7.25
	Number of promotions by gender	Number of male employees promoted internally	person	/	114
		Proportion of male employees promoted internally	%	/	35.40
		Number of female employees promoted internally	person	/	208
		Proportion of female employees promoted internally	%	/	64.60
	Number of promotions by rank	Senior management	person	/	4
		Proportion of senior management promoted internally	%	/	1.24
		Middle management	person	/	25
		Proportion of middle management promoted internally	%	/	7.76
	Number of promotions by age	Aged 51 or above	person	/	3
		Aged 31 to 50	person	/	147
		Aged 30 or below	person	/	172

Indicators			Unit	2023	2024
Employee Compensation ¹⁷	Unadjusted average gender pay gap		%	-	-7.71
	Average gender pay gap		%	-	92.84
	Medium gender pay gap		%	-	78.46
Employee Benefits	Employee stock ownership plan	Number of employees covered	person	339	339
		Number of stocks covered	share	4,800,000	4,800,000
		Proportion of the amount of stocks covered	%	1	1
	Proportion of employees' social security contributions		%	100	100
	Supplementary medical insurance for regular employees		%	100	100
	Physical examination coverage rate for regular employees		%	100	100
Employee Health and Safety	Occupational health and safety training	Number of occupational health and safety training	times	640	1,755
		Number of employees trained on occupational health and safety	participants	16,675	34,080
		Number of safety education for suppliers, contractors, etc.	times	-	467
		Number of participants in safety education for suppliers, contractors, etc.	participants	-	27,823
		Total hours of occupational health and safety training	hour	23,533	36,629
	Work-related injury incidents	Number of work-related injuries	count	3	0
		Number of work-related deaths	person	0	0
		Number of working days lost due to work-related injuries	day	53	0
		Work-related accidents per million work hours	%	0.32	0
	Investment in occupational health and safety	Total investment	RMB 10,000	935.05	1,082.22
		Investment in employee safety liability insurance	RMB 10,000	13.76	13.52
	Safety audit	Internal safety audit rate	%	100	100
		Rectification rate of safety audit	%	100	100

¹⁷ The unadjusted average gender pay gap = (Average male pay - Average female pay) ÷ Average male pay × 100%. The male/female average wage ratio is the difference in average hourly wages between male full-time relevant employees and female full-time relevant employees, expressed as a ratio of male/female. The male/female median wage ratio is the difference in median hourly wages between male full-time relevant employees and female full-time relevant employees, expressed as a ratio of male/female.

Indicators			Unit	2023	2024
Intellectual property rights	Cumulative number of intellectual property rights	Cumulative number of invention patents authorized	item	296	392
		Cumulative number of design patents authorized	item	58	73
		Cumulative number of utility model patents authorized	item	98	122
		Cumulative number of trademark rights authorized	item	4,346	5,057
		Cumulative number of software and copyright authorizations	item	100	113
		Cumulative number of invention patents applied to main business	item	296	392
	Cumulative number of intellectual property authorizations by region	Cumulative number of domestic patent authorizations	item	445	572
		Cumulative number of overseas patent authorizations	item	7	15
		Cumulative number of domestic trademark authorizations	item	3,749	4,180
		Cumulative number of overseas trademark authorizations	item	597	877
	Annual number of intellectual property rights	Annual number of invention patent authorizations	item	87	96
		Annual number of design patent authorizations	item	16	15
		Annual number of utility model patent authorizations	item	12	24
		Annual number of trademark right authorizations	item	585	711
		Annual number of software and work copyright authorizations	item	17	13
		Annual number of invention patents authorized for main business	item	87	96
		Annual number of domestic patent authorizations	item	112	127
	Annual number of intellectual property authorizations by region	Annual number of overseas patent authorizations	item	3	8
		Annual number of domestic trademark authorizations	item	530	431
		Annual number of overseas trademark authorizations	item	55	280
Responsible Marketing	Participants in training		participants	8,585	22,243
	Cumulative Duration of responsible marketing training		hour	2,714	15,312
Suppliers	Total number of suppliers		count	712	1,339
	Responsible Marketing	Mainland China	count	601	1,333
		Hong Kong, Macao, and Taiwan, China	count	2	1
		Overseas countries or regions	count	109	5
	Signing rate of compliance commitment letters of suppliers of production materials		%	94	100
Cybersecurity	Network and data security violations		count	0	0
Social welfare	Total investment in public welfare		RMB million	2.68	9.61

Governance Performance

Indicators		Unit	2023	2024
Board composition and governance overview	Number of directors	person	9	9
	Number of female directors in the Board	person	3	3
	Proportion of female directors in the Board	%	33.33	33.33
	Number of independent directors in the Board	person	3	3
	Proportion of independent directors in the Board	%	33.33	33.33
	Number of directors with industry experience	person	5	5
	Number of directors with risk management experience	person	6	6
	Number of directors with financial management experience	person	3	3
	Proportion of independent directors of the Audit Committee	%	66.67/100	100
	Proportion of independent directors of the Nomination Committee	%	66.67	66.67
	Proportion of independent directors of the Remuneration and Assessment Committee	%	66.67	66.67
	Proportion of independent Directors of the Strategy Committee	%	20	20
	Proportion of independent directors in the ESG Committee	%	66.67	66.67
	Number of supervisors	person	3	3
	Number of female supervisors	person	3	3
	Number of employee supervisors in the Board of Supervisors	person	1	1
	Proportion of employee supervisors in the Board of Supervisors	%	33.33	33.33
	Number of the Board meetings held	times	6	5
	Number of the Supervisory Board meetings held	times	4	3
	Number of the Shareholders' meetings held	times	1	2
Special training on corporate governance	Number of meetings of each committee	times	7	10
	Number of compliance training	times	6	3
	Coverage rate of key personnel in compliance training	%	100	100
	Number of anti-bribery training	times	2	4
	Coverage rate of key personnel in anti-bribery training	%	100	100

Economic Performance

Indicators		Unit	2023	2024
Operating revenue		RMB 100 million	60.76	53.71
Net income attributable to parent		RMB 100 million	5.93	1.74
R&D investment		RMB 100 million	4.46	4.66
Proportion of R&D investment to total revenue		%	7.35	8.68