

**2023
HANSOL GROUP
SUSTAINABILITY
REPORT**

About this Report

Hansol Group began publishing its sustainability reports in 2020. Following the second report in 2022, we have adopted annual publication as a principle and now present the third Sustainability Report in 2023. With the publication of this 2023 Hansol Group Sustainability Report, (hereinafter, "the Report"), we share our sustainability activities and performance in the economic, social, and environmental areas. Our goal is to engage with stakeholders and integrate their feedback into our business management

Reporting Period

The Report covers the financial and non-financial outcomes of our key sustainability activities from Jan. 1 to Dec. 31, 2022, while certain data reflect activities conducted during the first half of 2023. In order to facilitate time series analyses, some quantitative data include statistics for the three years from Jan. 1, 2020 to Dec. 31, 2022.

Reporting Scope

The reporting scope includes the sustainability management activities of Hansol Group, comprising Hansol Holdings and ten affiliates, and the outcomes of their initiatives. Financial data solely represent the performance of Hansol Holdings on a consolidated basis, following the Korean International Financial Reporting Standards (K-IFRS).

Reporting Principles and Standards

The Report adheres to the Core standards of the Global Reporting Initiative (GRI) Standards, the international guidelines for sustainability management. Hansol Holdings also complies with ISO 26000, the management system guidelines for social responsibility.

Report Assurance

The Report has been verified by a professional sustainability report verification organization to ensure its reliability. The assurance statement can be found on p. 114 of this report.

Inquiries about the Report

For more detailed information on Hansol Group's sustainability management activities and outcomes included in the Report, please contact: Hansol Holdings Communication Team

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CEO MESSAGE

Dear Respected Stakeholders,

On behalf of all Hansol Holdings employees, I would like to express my sincere gratitude to all of you for your unwavering support and interest in our company.



In 2022, the business landscape experienced rapid changes, with sustainability attracting unprecedented interest.

Despite the challenging circumstances, Hansol Group remains committed to developing a sustainable business portfolio.

Our mission is to achieve sustainable growth by leveraging our competitive advantages and collaborating with stakeholders from all walks of life to maximize value.

To achieve this, we are committed to evolving our current business activities to maintain a competitive edge while exploring customer-centric strategies, new value, and innovative approaches for promising new ventures.

Each affiliate is actively constructing a sustainable business structure by developing a future-oriented business portfolio. This includes innovating existing business models, exploring new high-growth potential ventures, and undertaking challenging innovation tasks to boost competitiveness.

Furthermore, we are focused on instilling our organizational principles of immersion, transparency, respect, and speed in all our employees to foster a sustainable corporate culture that swiftly adapts to changes.

In 2023, we introduced the ESG index management system to all affiliates, strengthening our ESG management efforts. Through systematic and accurate ESG data management, each affiliate will derive and implement strategic tasks to improve the environment, society, and governance.

Our environment management system is founded on ISO 14001, an environmental management system certification. We also pursue safety and health management based on ISO 45001, an international standard for safety and health management certification, and the International Safety Rating System (ISRS). Additionally, we take the lead in respecting and safeguarding the human rights of all stakeholders, including employees. This is achieved by implementing company-wide human rights management and developing comprehensive guidelines.

In terms of our governance structure, we are conducting compliance management assessments of all affiliates and actively pursuing governance innovation through voluntary disclosure of corporate governance reports. Furthermore, our governance system encompasses non-financial risks, ensuring comprehensive risk management across all affiliates to enhance overall management sustainability. Lastly, we strengthen stakeholder communication through the implementation of mid- to long-term shareholder return policies and the operation of the Outside Director Nomination Committee.

We appreciate your continued support and interest in our sustainable growth.

Thank you.

**CEO of Hansol Holdings
Lee Jae-hee**

HANSOL HOLDINGS AT A GLANCE

Hansol Holdings is committed to cultivating new corporate values in this era of transformation. As the holding company of the Hansol Group, we aim to strengthen competitiveness, create synergies, and establish new corporate roles to ensure the sustainable growth of our affiliates. To achieve sustainable management, we focus on enhancing Hansol's brand value, diversifying our business portfolio, and optimizing resource allocation. Embracing the importance of ESG practices, we lead by example, discovering new business opportunities and providing management consulting services to our affiliates. Hansol Holdings will pursue developing a business model that empowers Hansol Group with a unique competitive edge, fostering sustainable management and elevating corporate value.



Company Information

Date of Establishment

January 1965

Credit Rating

A- (NICE Investors Service)

ESG rating

A (Korea Institute of Corporate Governance and Sustainability [KCGS])

Headquarters

25/F, Pine Avenue Building B, 100 Eulji-ro, Jung-gu, Seoul, Republic of Korea

Business Areas

Business consulting, investment and asset management, brand management, etc.

Financial Performance in 2022

(As of December 2022, based on separate financial statements)

Total Assets

KRW 456.7 billion

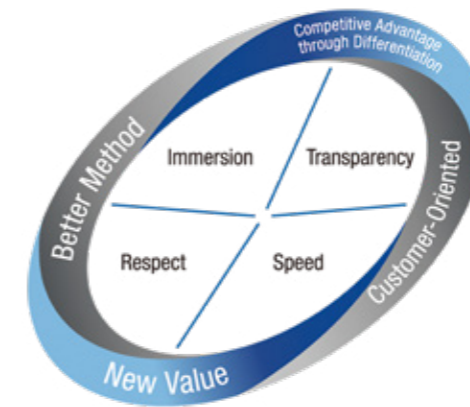
Sales

KRW 34.4 billion

Operating Income

KRW 16.3 billion

Hansol Management System (HMS)



Our Mission

To gain a competitive advantage through differentiated strategies, maximize values, and grow with customers

Our Principles

- We prioritize our customers.
- The future lies in new values.
- A better approach is our philosophy.
- Our survival depends on maintaining unparalleled competitive advantage.

Hansol Group

Holding company



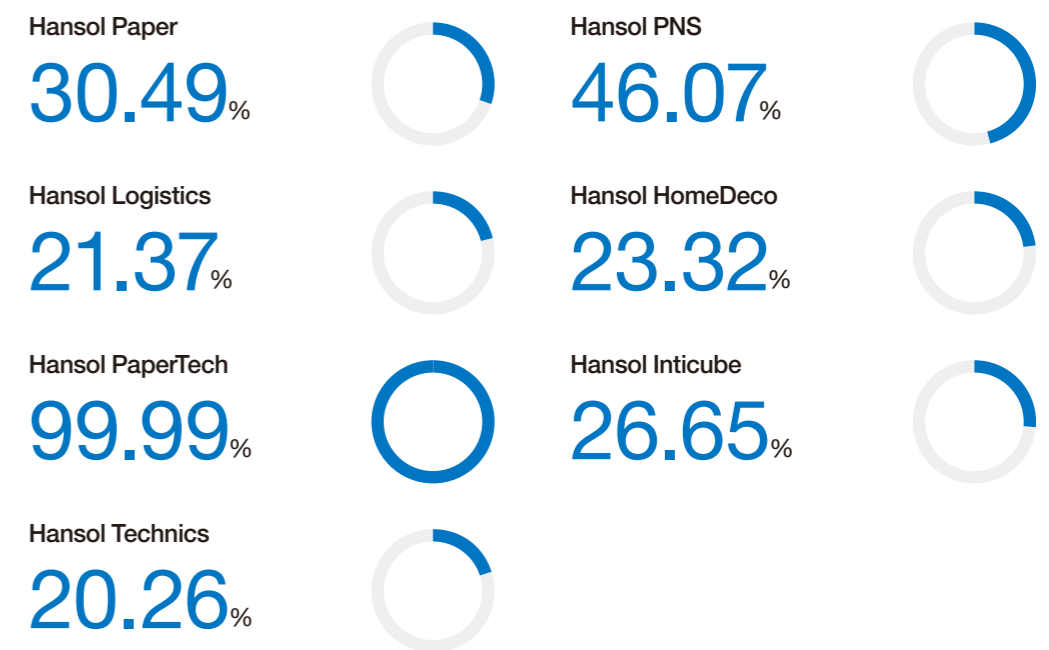
Affiliates



Subsidiaries

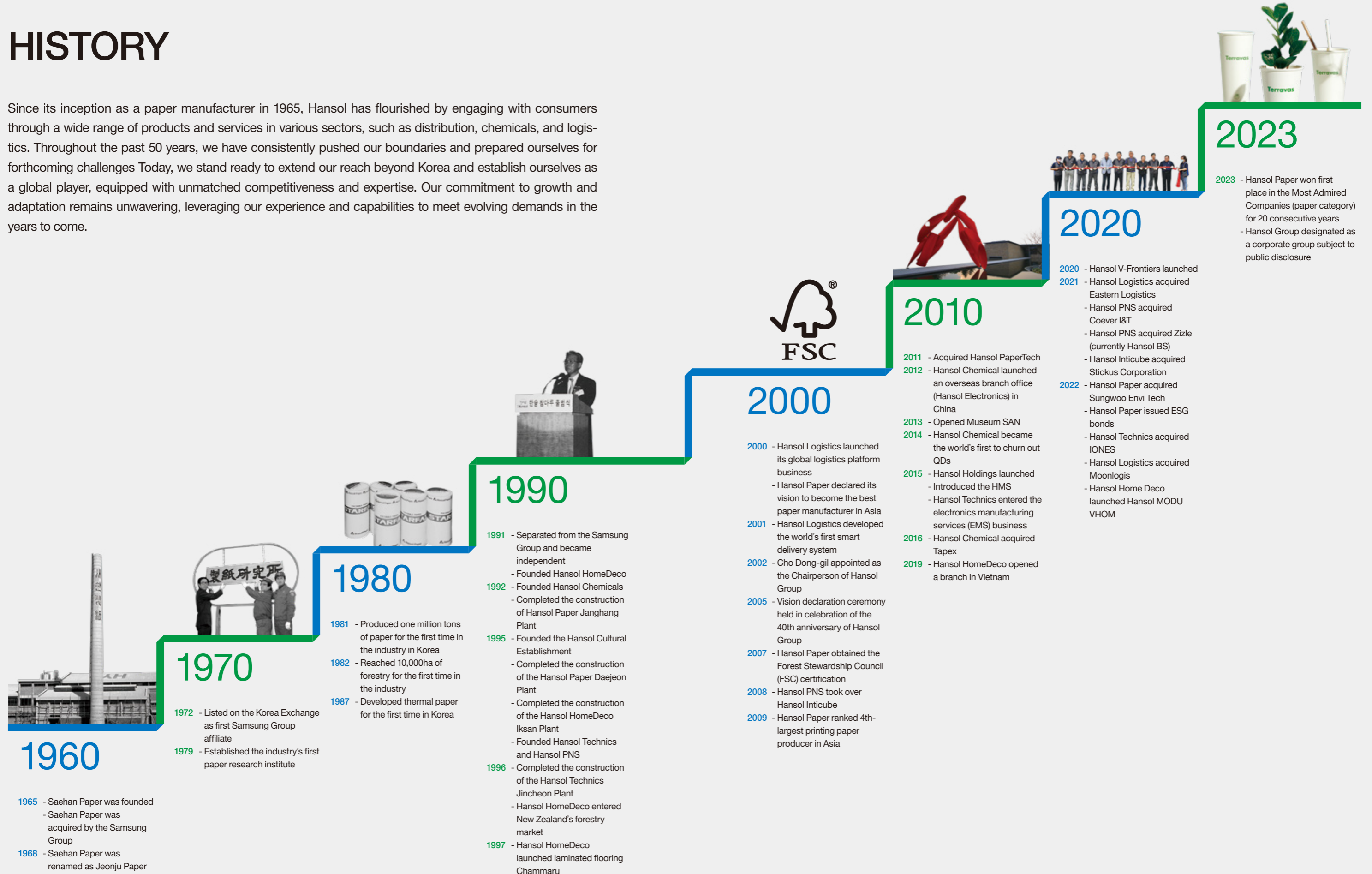


Hansol Holdings Share Structure (As of December 2022)



HISTORY

Since its inception as a paper manufacturer in 1965, Hansol has flourished by engaging with consumers through a wide range of products and services in various sectors, such as distribution, chemicals, and logistics. Throughout the past 50 years, we have consistently pushed our boundaries and prepared ourselves for forthcoming challenges. Today, we stand ready to extend our reach beyond Korea and establish ourselves as a global player, equipped with unmatched competitiveness and expertise. Our commitment to growth and adaptation remains unwavering, leveraging our experience and capabilities to meet evolving demands in the years to come.



1960

- 1965 - Saehan Paper was founded
- Saehan Paper was acquired by the Samsung Group
- 1968 - Saehan Paper was renamed as Jeonju Paper

1970

- 1972 - Listed on the Korea Exchange as first Samsung Group affiliate
- 1979 - Established the industry's first paper research institute

1980

- 1981 - Produced one million tons of paper for the first time in the industry in Korea
- 1982 - Reached 10,000ha of forestry for the first time in the industry
- 1987 - Developed thermal paper for the first time in Korea

1990

- 1991 - Separated from the Samsung Group and became independent
- Founded Hansol HomeDeco
- 1992 - Founded Hansol Chemicals
- Completed the construction of Hansol Paper Janghang Plant
- 1995 - Founded the Hansol Cultural Establishment
- Completed the construction of the Hansol Paper Daejeon Plant
- Completed the construction of the Hansol HomeDeco Iksan Plant
- Founded Hansol Technics and Hansol PNS
- 1996 - Completed the construction of the Hansol Technics Jincheon Plant
- Hansol HomeDeco entered New Zealand's forestry market
- 1997 - Hansol HomeDeco launched laminated flooring Chammaru

2000

- 2000 - Hansol Logistics launched its global logistics platform business
- Hansol Paper declared its vision to become the best paper manufacturer in Asia
- 2001 - Hansol Logistics developed the world's first smart delivery system
- 2002 - Cho Dong-gil appointed as the Chairperson of Hansol Group
- 2005 - Vision declaration ceremony held in celebration of the 40th anniversary of Hansol Group
- 2007 - Hansol Paper obtained the Forest Stewardship Council (FSC) certification
- 2008 - Hansol PNS took over Hansol Inticube
- 2009 - Hansol Paper ranked 4th-largest printing paper producer in Asia

2010

- 2011 - Acquired Hansol PaperTech
- 2012 - Hansol Chemical launched an overseas branch office (Hansol Electronics) in China
- 2013 - Opened Museum SAN
- 2014 - Hansol Chemical became the world's first to churn out QDs
- 2015 - Hansol Holdings launched
- Introduced the HMS
- Hansol Technics entered the electronics manufacturing services (EMS) business
- 2016 - Hansol Chemical acquired Tapex
- 2019 - Hansol HomeDeco opened a branch in Vietnam

2020

- 2020 - Hansol V-Frontiers launched
- 2021 - Hansol Logistics acquired Eastern Logistics
- Hansol PNS acquired Coever I&T
- Hansol PNS acquired Zizle (currently Hansol BS)
- Hansol Inticube acquired Stickus Corporation
- 2022 - Hansol Paper acquired Sungwoo Envi Tech
- Hansol Paper issued ESG bonds
- Hansol Technics acquired IONES
- Hansol Logistics acquired Moonlogis
- Hansol Home Deco launched Hansol MODU VHOM

2023

- 2023 - Hansol Paper won first place in the Most Admired Companies (paper category) for 20 consecutive years
- Hansol Group designated as a corporate group subject to public disclosure

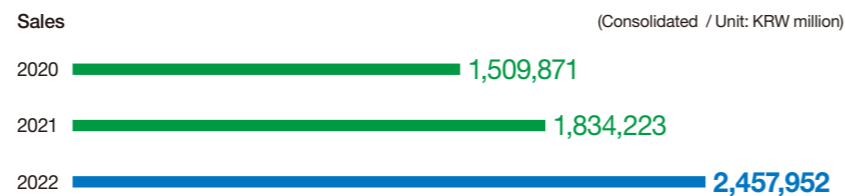
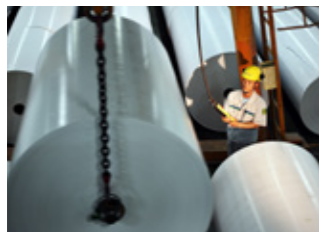
GROUP BUSINESS PORTFOLIO



Hansol Paper

Date of Establishment January 2015
Headquarters 23 ~ 24/F, Pine Avenue Building B, 100 Eulji-ro, Jung-gu, Seoul, Republic of Korea
Business Areas Paper: Manufacturing of printing paper, industrial paper, specialty paper, and thermal paper
 Environment: EPC (Engineering, Procurement, Construction), O&M (Operation and Management)
Credit Rating A (NICE Investors Service, unless specified otherwise)
Credit Rating B+ (KCGS, unless specified otherwise)

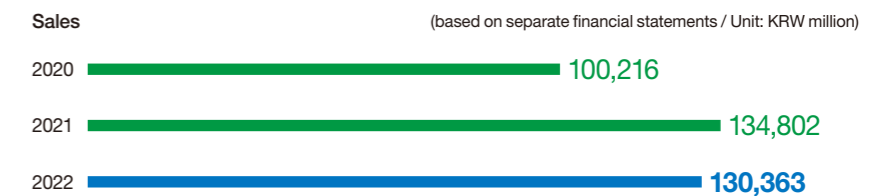
Since its establishment in 1965, Hansol Paper has emerged as the largest paper company in Korea, playing a crucial role in the cultural and industrial development of the nation through its diverse range of paper products. As the sole comprehensive paper manufacturer in Korea, operating four base factories in Janghang, Daejeon, Cheonan, and Shintanjin, respectively, Hansol Paper is dedicated to enhancing brand value through rigorous quality control, continuous research and development, and exceptional customer service. Recently, the company has been focusing on eco-friendly, high-value-added, and technology-intensive high-tech paper materials, propelling it toward becoming a global paper company with a strong presence in the USA and Europe. Moreover, the merger with Hansol EME has laid the groundwork for diversifying its business activities in the environmental domain, particularly in resource recycling.



Hansol Papertech

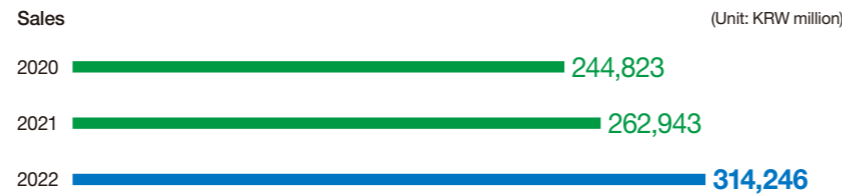
Date of Establishment February 2000
Headquarters 80 Daechi 7-gil, Daejeon-myeon, Damyang-gun, Jeollanam-do, Republic of Korea
Business Areas Manufacturing of corrugated cardboard sheets
Credit Rating B1

Hansol PaperTech is a leading manufacturer of corrugated sheets, producing both outer and inner layers as well as the flute, and selling them domestically and internationally. Corrugated cardboard has exceptional buffering and shock-absorbent properties. As a result, it is extensively used in crafting boxes for industrial or agricultural products, electronic items, and general industrial packaging. Hansol PaperTech maintains stable materials supply and sales through sustainable partnerships with its subcontractors. Moving forward, the company remains dedicated to developing new technologies to produce green and high-quality products for stable business management.



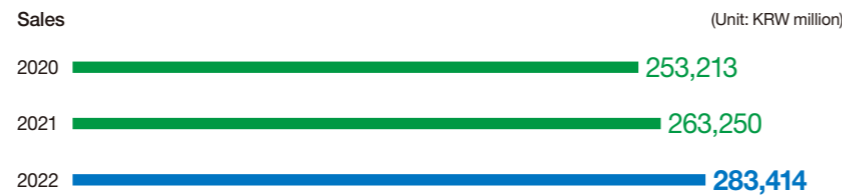
Date of Establishment February 1975
Headquarters 5/F, Ilheung Building, 213 Toegye-ro, Jung-gu, Seoul, Republic of Korea
Business Areas Paper distribution, IT service
Credit Rating A3
Credit Rating B

Hansol PNS, Korea's largest paper distributor, not only distributes paper products but also offers IT services. Recently, the paper distribution division has enhanced its competitiveness by launching an online mall as part of its digital conversion project, securing a strong position in the future distribution industry. Additionally, the division is gearing up to venture into the platform industry through the establishment of a mobile system in the second phase. On the other hand, the IT service division is involved in designing corporate information systems, as well as developing hardware, application software, and customized solutions. One of its crucial divisions is the smart factory division, which plays a significant role in driving the digital transformation of the domestic small and medium business ecosystem and contributing to ESG integration.



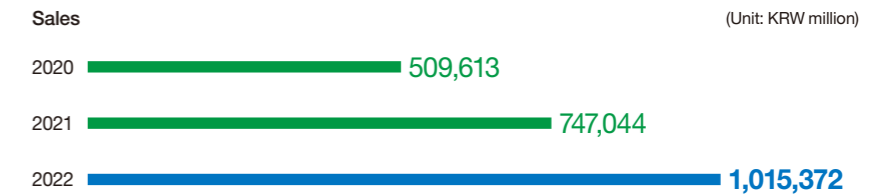
Date of Establishment December 1991
Headquarters 27/F, Jeonmun Geonseol Hoegwan, 15 Boramae 5-gil, Dongjak-gu, Seoul, Republic of Korea
Business Areas Wood: Manufacturing and distribution of boards (MDF), flooring, and interior products
 Combined Heat and Power (CHP) Generation: Biomass renewable energy (power and steam production)
 Afforestation: Investment in overseas afforestation business through an overseas corporation in New Zealand
Credit Rating BBB
ESG rating B

Hansol HomeDeco specializes in supplying building materials, including MDFs and other eco-friendly materials for interior design. Hansol HomeDeco has developed a forest-product circulation system by leveraging its expertise in wood and forestry overseas, including lumber, furniture components, flooring, interior material distribution, and renewable energy. Additionally, the company has successfully completed the value chain in the timber business, generating new added value through the utilization of MDF and lumber by-products. In 2022, Hansol HomeDeco launched the direct interior platform VHOM as an online website and mobile app, establishing a customer-friendly sales network. To further expand and enhance the online total interior business capacity, the total interior business was physically separated, and Hansol MODU VHOM was established.



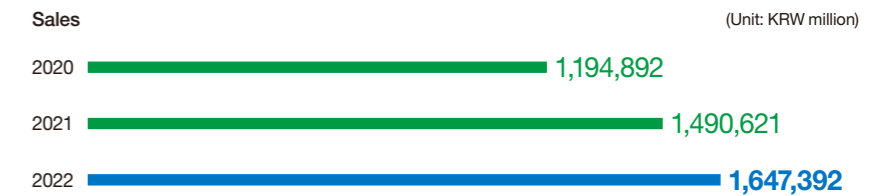
Date of Establishment June 1994
Headquarters 22/F, Pine Avenue Building B, 100 Eulji-ro, Jung-gu, Seoul, Republic of Korea
Business Areas International logistics, container transport, truck transport, W&D, logistics consulting
Credit Rating A3

Since its establishment in 1994, Hansol Logistics has been striving to become the best SCM solution provider, providing unmatched services in global logistics, encompassing air and sea freight forwarding, container transport, truck and rail freight transport, W&D, and logistics consulting. The company practices ESG management, ensuring safe workplaces, ethical management, and shareholder value, while offering differentiated global logistics services through its overseas network of 20 branches in seven countries in the Americas and Asia.



Date of Establishment August 1966
Headquarters 5/F, Pine Avenue Building B, 100 Eulji-ro, Jung-gu, Seoul, Republic of Korea
Business Areas Electric/electronic product power modules, wireless charging modules, solar power generation modules, LED material processing, and mobile phone components and EMS
Credit Rating BBB+
ESG Rating B+

Hansol Technics is committed to delivering excellence through the highest quality standards, best-product development practices, and innovative cost competitiveness. Guided by a management philosophy that values human resources, technology, and a future-oriented approach, the company specializes in power module device (PMD) business, in the manufacturing of digital power, mobile phones, wireless charging modules, and automotive electronics. Simultaneously, it is actively engaged in the Energy Solution (ES) business, producing solar power modules and LED wafers. The company's relentless pursuit of continuous new business development has fueled its growth as a prominent electronic parts and energy solution company. As a key player in the national export core industry, the company is dedicated to systematizing ESG management within its operations and fostering the growth of SMEs to contribute to broader economic development.



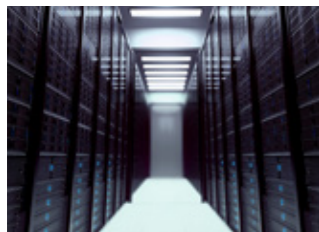
Date of Establishment March 1993 (formerly Dong-A Engineering)
Headquarters 2061 Anseong-daero, Gosam-myeon, Anseong-si, Gyeonggi-do, Republic of Korea
Business Areas Precision manufacturing and cleaning/coating services for semiconductor and display manufacturing equipment parts
Credit Rating BBB (E Credible)

Hansol IONES is a forward-thinking, innovative company offering ultra-precision special parts in the semiconductor and display industries. It provides a comprehensive one-stop service, encompassing design, processing, measurement, cleaning, coating, and analysis, fostering collaborative growth with customers through the best technology and quality competitiveness. With a proven track record of delivering precision parts and semiconductor consumable cleaning/coating services to top-tier semiconductor equipment companies and general semiconductor firms worldwide, Hansol IONES has established itself in the market with a distinct competitive edge. Fearlessly embracing challenges and changes, it is committed to continuous innovation, and aspires to become a global comprehensive parts company that focuses on new material development, nano-coating, and surface treatment technologies for the development of the industry.



Date of Establishment December 2003
Headquarters 14/F, Nuri Dream Square Business Tower, 396 Worldcupbuk-ro, Mapo-gu, Seoul, Republic of Korea
Business Areas Digital contact center, AI communication, communication cloud, and mobile solutions
Credit Rating BB+(E Credible)

Hansol Inticube is a leading company in business communication solutions, specializing in the next-generation AI contact center. Utilizing extensive expertise in building various digital contact centers, it offers integrated solutions, encompassing construction of customer-centered contact center infrastructure, consulting, and maintenance. A notable achievement is the launch of ISAC-AI, an artificial intelligence (AI) communication platform that utilizes cutting-edge IT technologies such as AI, cloud, and big data — the core components of the 4th industrial revolution. With ISAC-AI, even small and medium-sized enterprises can easily adopt AI consulting services. The company is committed to contributing to digital innovation across the corporate ecosystem, fostering growth with clients.



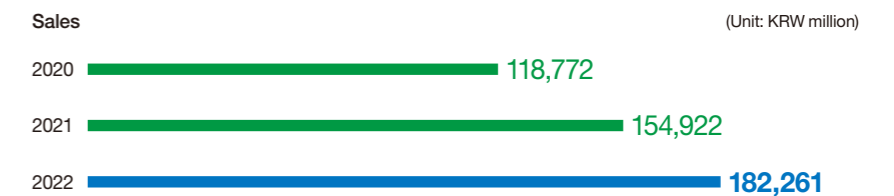
Date of Establishment March 1980
Headquarters 7-8/F, K-Tower, 513 Teheran-ro, Gangnam-gu, Seoul, Republic of Korea
Business Areas Precision chemicals, display materials, semiconductor materials, and secondary battery materials
Credit Rating A+ (Korea Investors Service)
ESG Rating B

Since its establishment in 1980, Hansol Chemical has emerged as a prominent high-tech fine chemicals company, renowned for its constant innovation and production of top-notch chemical products. The company boasts large-scale production facilities in Jeonju, Ulsan, and Xian, China, covering a wide spectrum of business areas, from fine chemicals to electronic materials. Hansol Chemical is committed to achieving sustainable growth by enhancing its competitiveness in semiconductors, advanced displays, and secondary battery materials. This objective is pursued by maximizing global capabilities through the implementation of ESG management strategies and the exploration of new business opportunities.



Date of Establishment April 1994
Headquarters #812 & 813, 8/F, Daehak 4-ro, Yeongtong-gu (Ace Gwanggyo Tower 1, Iui-dong), Suwon, Gyeonggi-do, Republic of Korea
Business Areas Functional adhesive tapes for electronic materials, plastic wraps for food packaging, consumer goods
Credit Rating A- (Korea Investors Service)
ESG Rating B+

Established in 1994, Tapex specializes in the manufacture of industrial adhesive tapes. The company has expanded its business areas to include the production of essential tapes for secondary batteries, display, and semiconductor manufacturing processes, as well as packaging wraps and green consumer products. Tapex's core competencies are in addressing global climate change and adapting to environmental policy changes. This strategic focus has earned the company a leading position in providing eco-friendly functional tapes for electric vehicles. Tapex has also laid the Establishment for sustainable management, contributing to the preservation of the global environment while achieving business growth.



Hansol is dedicated to creating new values that contribute to a better future for its customers. Hansol Group has been actively involved in the development of green products and the expansion of the green product certification system. By prioritizing climate-related risk management, we aim to not only seize business opportunities but also gain an unparalleled competitive advantage in the market.



Sustainability Essentials

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SUSTAINABILITY KEY FIGURES 2022

Hansol Group is committed to sustainability management, through which we intend to build customer trust, enhance corporate value, and foster sustainable growth. Our dedication to sustainability principles is evident in our continuous pursuit of new technologies and innovative solutions, which can be observed through our data reflecting major sustainability management performance.



SUSTAINABILITY MANAGEMENT SYSTEM

Hansol Group has embraced the Hansol Management System (HMS) as a guiding vision to secure a distinctive competitive business advantage, and to foster sustainable growth. This system stands as core values shared and practiced by all executives and employees. In line with this vision, we have implemented environmental management, human rights management, ethical management, and safety and health management systems to embody sustainable practices throughout our operations. In 2022, while revising the HMS, we focused on advancing ethical management principles.

Hansol Management System (HMS)

As a result, we integrated four new organizational principles: immersion, transparency, speed, and respect. This integration aims to instill a culture and management approach that places high value on mutual respect among all members of the organization.

Principles

Immersion: Focus and sense of unity for better results

At Hansol, we understand that achieving excellent results goes beyond mere effort; it demands full immersion. We strive for continuous growth both on organizational and individual levels by creating an environment where all our members can fully immerse themselves in their work, fostering a culture where both individuals and the organization continuously challenge themselves to reach new heights.

Transparency: Sharing of procedures and results

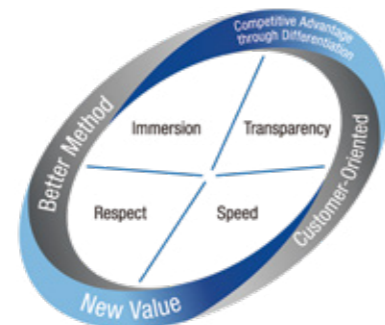
Transparency is a fundamental value that every member of Hansol must uphold. Through the practice of ethical business principles, responsible attitudes, and open communication, we fortify a transparent culture that benefits our customers, shareholders, employees, and local communities.

Speed: Agility based on simplicity and substantiality

Speed is powered by simplicity. It is driven by a keen focus on what truly matters in the present moment. The key lies in focusing on the essence and core of the matter. When communicating with our customers, we achieve impactful results by promptly identifying their needs and delivering the necessary services.

Respect: Hearts that Cherish One Another

Organizations that have cultivated a culture of respect honor the uniqueness and diversity of each individual by first embracing self-respect and then valuing one another. At Hansol, we are committed to providing fair opportunities for all our members to showcase their capabilities and realize their potential.



Environmental Management System (EMS)

Hansol Group ensures compliance with environmental laws at all business sites through an internationally standardized environmental management system (EMS). Each affiliate implements tailored environmental management, including afforestation and renewable energy businesses. Moreover, we prioritize continuous R&D on eco-friendly products for a safer environment and people.

Environmental management

Hansol Group has established an ESG indicator management system, centered on the group's holding company, Hansol Holdings, to efficiently and systematically manage ESG data across all affiliates. Environmental goals are planned by the Environmental Management Promotion Committee, involving major departments and the communication team. All affiliates communicate and implement these goals, fostering active information-sharing among working-level employees. Using our ESG indicator management system, we continuously monitor environmental data, such as management system certification, climate change responses, GHG emissions, energy- and water-consumption, and pollutant and waste management. This approach helps us assess targets and improve environmental management effectively.

Hansol Holdings' Environmental Policies

Efficient Resource-Use and Environmental Protection

We take the lead in environmental protection by preventing environmental pollution through efficient use of resources and energy and minimization of waste.

EMS Operation and Continuous Improvement

All our employees are aware of our environmental policy and participate in setting goals and taking action to consistently improve our environmental performance. We continuously upgrade our EMS through revisions for further enhancement.

Communication with Stakeholders and Compliance Obligations

We maintain active communication with stakeholders, regularly reviewing our environmental goals and directions. We inform stakeholders of the environmental requirements and management standards that align with their needs, thereby ensuring compliance.

Transparent Environmental Management Practices

We disclose our environmental policy and information on environmental management to encourage stakeholders to actively join the company's efforts. We also adhere to transparent environmental management practices.

Affiliates equipped with ISO 14001 certification, the international environmental management system

19 business sites

Hansol Paper, Hansol PaperTech, Hansol PNS, Hansol Technics, Hansol IONES, Hansol Logistics, Hansol HomeDeco, Hansol Chemical, Tapex (Refer to "Affiliates with Certifications" on p. 118.)

Human Rights in Business

Hansol Group has enacted a policy to protect and promote the human rights of all stakeholders, including executives and employees, in accordance with Article 25, Paragraph 2 of the National Human Rights Commission Act. We have also published the Human Rights Management Guidelines, which detail the necessary steps for implementation. Aligned with international human rights standards and regulations like the Universal Declaration of Human Rights, and the Declaration of Fundamental Principles and Rights at Work, we prioritize the dignity and value of every individual. We ensure a non-discriminatory working environment, strictly prohibit forced labor and child labor, and prioritize industrial safety and environmental rights.

Hansol Holdings' Human Rights Management Guidelines:

With the expanding impact of corporations on society and the environment, the responsibility to uphold human rights has become an important societal trend. In line with the UNGC's principle that states, "Businesses should support and respect the protection of internationally proclaimed human rights," Hansol Group proactively prevents labor rights violations.

In May 2022, Hansol Holdings introduced comprehensive human rights management guidelines, thoroughly educating staffs and disseminating it throughout the group. These guidelines encompass standards for human rights violations, response procedures, prevention programs, and representative cases of violations. They also provide a clear reporting mechanism for Hansol Holdings' employees and stakeholders who may encounter human rights violations.

Guidelines on Human Rights in Business:

Human Rights Statement

At Hansol, we are committed to upholding human dignity and value in all our business activities. Both our executives and employees embody this declaration as the guiding code of conduct for human rights management and the standard for making value judgments.

Human Rights Manager

- Hansol shall appoint a human rights manager to systematically implement regulatory procedures and education to promote human rights in business.
- The duties and responsibilities of the human rights manager include:
 - Overseeing the establishment and execution of human rights plans;
 - Managing human rights education initiatives;
 - Addressing remedies for any instances of human rights violations; and
 - Deliberating on other relevant matters related to human rights management, as necessary.

Human Rights Education

To promote awareness of human rights, regular human rights-related education shall be conducted at least once a year for all executives and employees at a time and in a manner that is deemed most appropriate.

Human Rights Activities and Support

Hansol is dedicated to advocating human rights protection and promoting their values. As part of this commitment, it may extend support to human rights-related organizations, entities, and stakeholders.

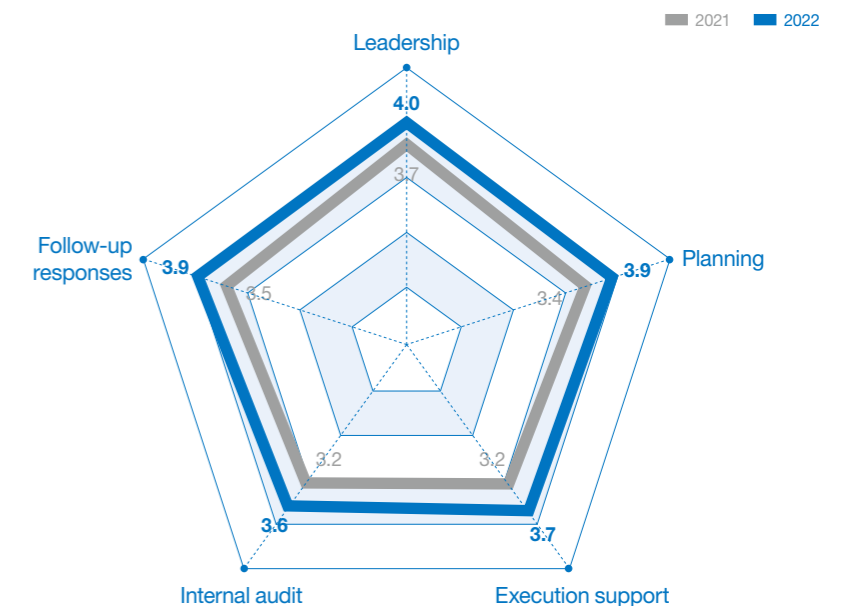
Compliance Management

The growing social demand for companies to follow the law and take responsibility for their management activities is becoming increasingly prominent. Compliance management is seen as the most basic requirement in ESG management for businesses. Recognizing its growing importance, Hansol evaluated compliance management at the group level in 2022, aiming to enhance systematization and address vulnerabilities within each affiliate.

Compliance Management Assessment

Since 2021, Hansol Group has been conducting compliance-management assessments. In 2022, the compliance-management status of Hansol Paper, Hansol Technics, Hansol HomeDeco, Hansol Logistics, Hansol PNS, and Hansol Inticube was diagnosed in five aspects: leadership, planning, execution support, internal audit, and follow-up response. The overall level of compliance management for the six companies averaged 3.8 points (out of 5 points), showing a 0.4-point increase from the previous year. The compliance management assessment helped spread awareness and commitment to compliance throughout the Hansol Group. Using the assessment results, the six companies will strengthen the group's compliance-management procedures, focusing on a compliance-management system and enhancing field operations' execution power.

Average Compliance-Management Level within the Group



Strengthening the Compliance-Management Process

The six affiliates — Hansol Paper, Hansol Technics, Hansol HomeDeco, Hansol Logistics, Hansol PNS, and Hansol Inticube — have promptly selected compliance-management tasks, prioritizing areas that require immediate attention.

HANSOL FOCUS ISSUES

ISSUE

1

Development of Green Products and Technologies

BACKGROUND

The global adoption of carbon tax and the activation of the carbon-trading market are driving efforts toward achieving carbon neutrality. In Korea, various entities, including the government, businesses, and the local communities, are working toward the goal of becoming carbon neutral by 2050. On the business front, the focus is on leveraging capabilities for product and technological innovation to transform climate change risks into opportunities.

OUR APPROACH

Hansol is actively developing green materials and resource recycling technology across its business areas to minimize environmental impact. By promoting environmental values and encouraging stakeholders to embrace carbon neutrality, the company is achieving sustainable growth in its corporate ecosystem.

MANAGEMENT BRIEFING

Oh Sang-won, Group Leader of Eco Packaging Team, Hansol Paper

With the strengthening of corporate ESG management, the demand for eco-friendly packaging is expected to rise. As consumers embrace green consumption and prioritize environmental values, the eco-friendly packaging sector holds promising potential. Hansol Paper aims to continually expand its range of sustainable products as alternatives to plastic, catering to the eco-friendly needs of both corporate customers and consumers. For instance, for the food and beverage industry, we are developing a diverse range of eco-friendly paper containers to replace plastic-based ones. Additionally, the eco-friendly and flexible packaging paper, Protego, is set to undergo horizontal expansion by exploring new applications based on existing product references.

OUR PERFORMANCE

1 Development of Green Products

Hansol Paper

Hansol Paper is actively embracing the eco-friendly trend by developing innovative application technologies to advance nano-cellulose manufacturing (product name: Duracle) as a cutting-edge eco-friendly material and expanding its usage. We offer eco-friendly packaging alternatives like Terravas, water-based barrier-coated paper containers, and Protego, an eco-friendly and flexible packaging paper, to reduce plastic usage in the market, supporting environmental sustainability and promoting eco-friendly applications in materials. Notably, Protego has earned prestigious recognition — receiving the Asia Star Awards 2020 from the Asian Packaging Federation; the Minister of Trade, Industry, and Energy Award at the Korea Packaging Competition; and the esteemed 2021 World Star Packaging Award by the World Packaging Organization (WPO).

Hansol HomeDeco

Our commitment to providing trustworthy products to consumers includes obtaining credible eco-friendly product certifications. We are exploring the development of low-carbon products and working on establishing our eco-friendly product standards. In December 2022, our flagship product, SB Maru Ultra Steel, received the Low Carbon Product Environmental Product Declaration Certificate from the Korea Environmental Industry and Technology Institute. Going forward, we will monitor low-carbon product management plans, sales, and GHG reduction data to further enhance our eco-friendly initiatives.

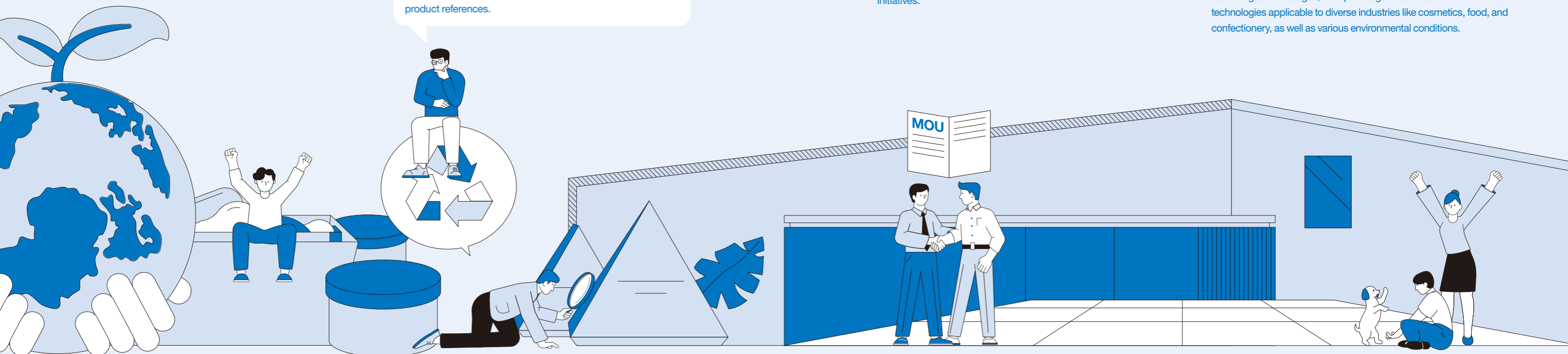
Hansol Technics

Hansol Technics develops and delivers highly reliable and competitive solar modules that meet KS certification and the carbon verification system. Our range of solar products includes media PV, high-output solar modules, and water-type solar modules, all certified under KS for the first time in Korea. Media PV combines solar modules and LED media, allowing them to generate solar power during the day and function as LED media at night with a maximum output of 470 watts (W). These modules can be easily installed on buildings and structures, making them ideal for use in zero-energy buildings. With twice the resolution of the previous model, these solar modules are ideal for landscape lighting and road noise barriers in confined spaces. With the adoption of these solar modules, we have taken a significant step toward achieving RE100 by generating energy from renewable sources.

2 MOU for Sustainable Packaging Development

Hansol Paper

Since 2020, Hansol Paper has signed MOUs with 10 leading domestic companies in various sectors including cosmetics, food, pharmaceuticals, confectionery, coffee franchises, health supplements, etc. to strengthen ESG management and promote sustainable packaging solutions. These companies are committed to adopting eco-friendly packaging to enhance their long-term corporate value and achieve sustainable management. They also possess strong research capabilities and experience in this area. Leveraging Hansol Paper's expertise in developing eco-friendly paper materials, the collaboration has resulted in the successful implementation of eco-friendly packaging with complex requirements. Through technological exchanges, both parties gained valuable know-how and technologies applicable to diverse industries like cosmetics, food, and confectionery, as well as various environmental conditions.



ISSUE

2

Safety and Health Management

BACKGROUND

The heightened social awareness of safety and health accidents has increased vigilance and interest in prevention. Since the implementation of the Serious Accidents Punishment Act on January 27, 2022, a crucial emphasis was placed on management personnel on prioritizing safety and health obligations. Therefore, industrial sites must allocate budgets, create manuals, and conduct inspections to address major industrial accidents and ensure worker health and safety.

OUR APPROACH

To establish a safety management system, Hansol Group introduced the International Sustainability Rating System (ISRS) in 2019. We have further strengthened our safety and health management by adopting the HSRS (Hansol Safety Rating System), customized to our business characteristics — based on effectiveness verification and performance measurement. With these initiatives, our aim is to reinforce and strengthen Hansol's safety culture.

MANAGEMENT BRIEFING

Hansol Technics Yeon Je-jin (Team Leader of Safety Support Team), Lee Chung-hwa (Manager in Safety Management Team)

Hansol Technics prioritizes safety and health activities that involve direct participation by supervisors and workers. First, we identify near-miss accidents and potential risks through worker input and conduct 5S activities to eliminate risk factors. Secondly, we engage in safety, health, and firefighting slogan contests. Lastly, we place A QR code at the workplace entrances and exits, allowing all personnel to easily submit safety and health concerns and suggestions. The CEO recognizes and rewards employees participating in these activities during the monthly EHS Day.

Moreover, Hansol Technics looks to industry leaders like Samsung Electronics for safety and health best practices. By benchmarking their inspection processes for 22 key areas, we selected 15 themes most relevant to our business and carry out regular intensive inspections. The insights gained from monitoring major EHS trends are integrated into our work processes to bolster safety measures. Additionally, the sharing of significant incidents by the Ministry of Labor helps raise safety awareness among our employees.

OUR PERFORMANCE

1 Establishing a Safety Rating System

Hansol Holdings

To enhance safety and health evaluation efficiency and establish a field-oriented management system, Hansol Group embarked on its ISRS journey in 2019, validated its effectiveness in 2020, and completed the second performance measurement in 2021. Then in 2022, the Hansol Safety Rating System (HSRS) was developed, reflecting the unique business characteristics. The HSRS not only verified the field performance but also bolstered compliance with domestic laws and regulations. In 2022, the effectiveness of the HSRS was affirmed through evaluation by a certified safety and health professional institute, driving the establishment of an advanced IT-based integrated safety system to enhance field work efficiency. Currently, the HSRS is implemented across nine business sites, encompassing Hansol HomeDeco, Hansol PaperTech, Hansol Logistics, and Hansol Technics, alongside the four sites of Hansol Paper and the Environmental Business Headquarters. The ultimate goal is for all business sites to achieve and sustain Level 5 in the HSRS, thereby fortifying a robust safety and health practice system throughout the entire group.

2 Obtaining S-Grade in Process Safety Management System

Tapex

Process Safety Management (PSM) is a vital system implemented to avert severe industrial accidents resulting from hazardous substance leakage, fires, or explosions in workplaces and nearby areas. It applies to seven industries that deal with hazardous or dangerous facilities prescribed by Presidential Decree, and equipment and related process facilities that manufacture, handle, and store one or more of 51 hazardous substances in excess of the prescribed amount. In August 2022, Tapex achieved a significant milestone with the Yanggam Factory obtaining an S (Good) grade in the new evaluation. This reflects the company's dedication to strengthening the workplace safety management system and compliance with the Serious Accidents Punishment Act. The achievement further bolstered the company's credibility and standing in safety management, solidified safety and health standards, and established a periodic education and training system. Moreover, in 2022, Tapex expanded the safety campaign to include partners, specifically in-house subcontractors. A substantial investment of KRW 814 million was allocated to safety and health-related facilities, marking a 52% increase compared to the previous year's KRW 535 million.

3 Acquisition of Safety and Health Management Certification and SMT Activities

Hansol Paper

The Daejeon and Janghang plants of Hansol Paper hold the ISO 45001 and KOSHA-MS certifications. Additionally, the company implements the Safety Management Tour (SMT) and Care Observe Change (COC) activities across all business sites and partner companies across all business sites under the supervision of the CEO and CSO. Through SMT, the company helps boost employee motivation and participation, identifies issues through discussions, and establishes action plans with implementation strategies for tracking and management. The progress and effectiveness of plan execution, actions taken, and their appropriateness are continuously monitored and evaluated.



Customer-Satisfaction and Product Responsibility

BACKGROUND

Customer-centered management entails identifying customer needs through their feedback and even providing solutions to unidentified problems. Businesses endeavor to capitalize on this approach to generate new possibilities. Thus, systematic data analysis and discovering insight are essential for gaining competitiveness in the global market.

OUR APPROACH

Hansol Group enhances its ability to understand voice of the customer (VOC) and true needs, crafting strategies to secure a unique competitive advantage and achieve remarkable outcomes. By doing so, we aim to deliver maximum value and foster mutual growth with our customers. To facilitate this customer analysis, we employ diverse diagnostic and measurement systems and systematize strategy implementation, process management, and performance creation at all stages.

MANAGEMENT BRIEFING

Kang Gil-jae, Senior Manager in Marketing Team at Hansol Paper

Since 1997, Hansol Paper has been conducting biannual Customer Satisfaction Index (CSI) surveys, gathering feedback on sales, quality, customer service, delivery, price, and brand image. In 2004, we expanded the surveys to include the export sector, transitioning it into an annual assessment. Furthermore, in 2010, we introduced the Net Promoter Score (NPS) in parallel with the CSI. As of 2020, we have embraced the digital age by shifting the domestic sector survey online, prioritizing customer convenience and responsiveness to changing trends. Through the survey, we gain clear insights into areas of customer dissatisfaction and non-recommendation, which enables us to craft tailored improvement plans that enhance product and service competitiveness in each sector. In 2022, the CSI increased across all fields and reached 76 points, a four-point increase from the previous year. We remain committed to elevating customer satisfaction through rigorous customer analysis and continuous improvement efforts.

OUR PERFORMANCE

1 Hansol Group Hosts Innovation Olympics

Hansol Holdings

Hansol Holdings organizes the annual Innovation Olympics for all its affiliates. This event comprehensively assesses each affiliate's execution of various tasks over the year, recognizing and encouraging the achievements that have led to meaningful results. Since 2013, the Innovation Olympics has been a driving force behind Hansol's continuous growth, promoting a spirit of relentless innovation among its people. Originally initiated for major affiliates, it has expanded across the entire group in 2014. The latest event took place on December 16, 2022. At Hansol, innovation involves systematically executing key initiatives derived from portfolio and mid-term strategies and setting clear targets. Our aim is to institutionalize this systematic problem-solving method as a fundamental approach to our work culture and behavior. The innovation-promotion system acknowledges the challenges associated with these tasks, and supports and motivates task leaders to overcome obstacles effectively.

2 Achieving KRW 500 Billion in Global Sales

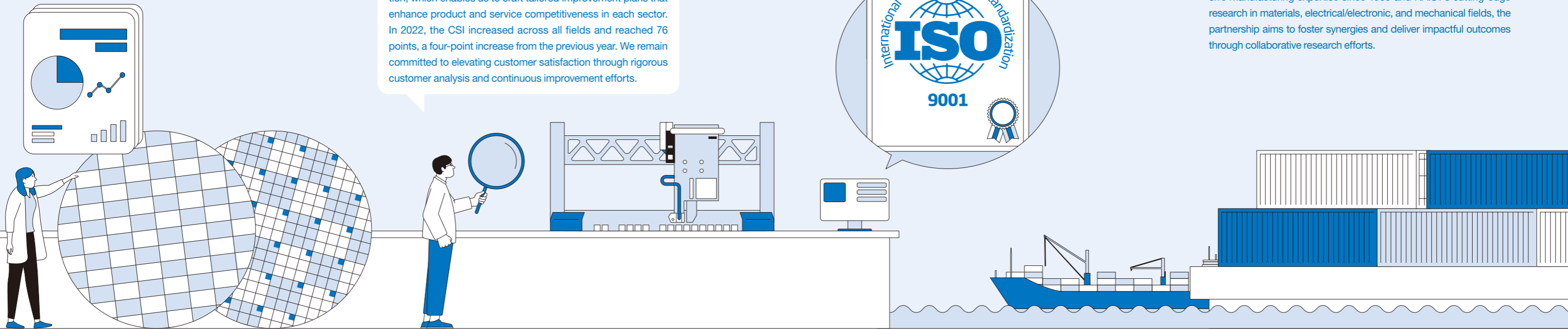
Hansol Logistics

Hansol Logistics is thriving globally, especially in the secondary battery industry in Asia. To ensure sustainable growth, the company is now strategically targeting the European market, capitalizing on its strengths in secondary battery operations. As a result, we achieved a major milestone by securing a long-term contract with company S, a new entrant in Europe, and obtaining a new facility transportation order from company H, a local secondary battery manufacturer. This success was recognized with the Gold Medal at the Innovation Olympics. In the Asian market, especially China, we are a leading secondary battery logistics specialist, serving major manufacturers and suppliers and establishing a strong presence in the global supply chain for electric vehicle production. To dominate the electric vehicle parts logistics market, including secondary batteries, we're expanding our global presence with new bases in Poland and the eastern United States, solidifying our position as a top global leader in EV supply chain services.

3 Hansol Group-KAIST New Technology Development Business Agreement

Hansol holdings

Hansol Group and KAIST join forces for customer-centric technology development in materials, parts, and equipment. The main focus of this collaboration is the establishment of the KAIST-Hansol Materials & Parts Innovation Research Center with an annual budget of KRW 500 million, effective until August 31, 2025. The joint research center will bring together key Hansol Group affiliates, including Hansol Paper, Hansol Technics, and Hansol IONES, alongside researchers from KAIST specializing in materials and AI. Drawing on Hansol's extensive manufacturing expertise since 1965 and KAIST's cutting-edge research in materials, electrical/electronic, and mechanical fields, the partnership aims to foster synergies and deliver impactful outcomes through collaborative research efforts.



BACKGROUND

Pursuing short-term profit maximization by conglomerates and SMEs can weaken the establishment for SMEs' survival and threaten the corporate ecosystem. Additionally, with the EU Directive on Corporate Sustainability Due Diligence coming into effect in 2024, Korean companies reliant on exports will face supply-chain due diligence requirements. As a result, supply-chain management has become essential for ensuring sustainable global competitiveness.

OUR APPROACH

Hansol Group actively establishes and effectively manages a shared growth system with its suppliers. We prioritize fair and transparent evaluations to manage supplier risks and engage in various activities, including safety and health consulting and meetings, to educate suppliers and practice ESG management together.

MANAGEMENT BRIEFING

Park Yeong-soo, Senior Manager in Environmental Safety Team at Hansol HomeDeco

At Hansol HomeDeco, the safety and health of partner business sites is of utmost importance. Since 2012, we have actively participated in the Mutual Growth Partnership, forging business agreements to establish robust safety and health systems with our partners. Our goal is to consistently strengthen this system through cultivating an organic and cooperative relationships, instigating a change in mindset among partners' representatives, and inspiring their employees while enhancing the overall work environment. In light of the expanded scope of the Serious Accidents Punishment Act, which becomes effective from January 2024 and applies to workplaces with five to 50 full-time workers, we have promptly notified our partners and taken the necessary steps to establish the required system in collaboration with them. We maintain regular communication through monthly consultative meetings with our partners' representatives and engage in meaningful discussions with their managers and supervisors on a quarterly basis. Looking ahead, our commitment extends to supporting safety campaigns and encouraging our partners to develop their own safety activities.

OUR PERFORMANCE

1 Partner Mutual Growth Program

Hansol Paper

Hansol Paper prioritizes mutual growth with partners by enhancing ESG management capabilities and overall competitiveness in the supply chain, alongside cost and quality competitiveness. As a win-win partner, we engage in various cooperation and support activities to foster mutual growth with our suppliers. These initiatives include leadership support in technology cooperation and education, the operation of a KRW 6 billion win-win fund, assistance with 6 Sigma and Hansol cyber education, safety management support, environmental initiatives, and improved communication through meetings with representatives and working-level staff.

2 Safety and Health Management System Consultation for Partners

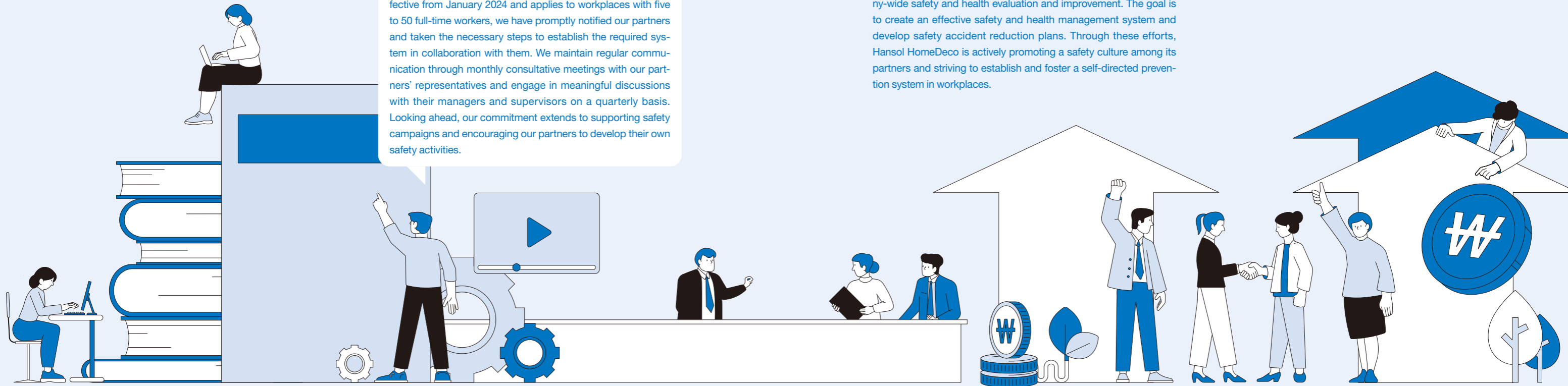
Hansol HomeDeco

In April 2023, Hansol HomeDeco initiated a safety and health management consultation for its partners, with a strong focus on risk assessment. The consulting program, which is aligned with the guidelines of the Korea Occupational Safety and Health Agency, aims to help seven Hansol HomeDeco partners mitigate safety risks and prevent accidents. The comprehensive consulting process involves visiting partner business sites five times over four months in 2023. Key elements of the consultation include risk identification, risk elimination and control, management leadership, worker participation, emergency procedures, subcontracting, and company-wide safety and health evaluation and improvement. The goal is to create an effective safety and health management system and develop safety accident reduction plans. Through these efforts, Hansol HomeDeco is actively promoting a safety culture among its partners and striving to establish and foster a self-directed prevention system in workplaces.

3 Mutual Cooperation Day for Partners

Hansol Technics

Hansol Technics places great importance on fair trade principles and processes, ensuring harmonious coexistence with its partners. As part of its shared-growth program, the company provides comprehensive management-support programs, including education, quality consulting, technology protection, and benefit sharing. Employees also benefit from welfare programs and long-term employee support. To foster mutual growth, Hansol Technics hosts the annual Mutual Cooperation Day. During this event, 15 mutual growth programs are introduced, the latest management trends are shared, and education sessions on various topics, such as the Extended Producer Responsibility (EPR) for recycling and SME technology protection support, are conducted. Additionally, future purchase strategies by the business division are disclosed and individual purchase consultations are provided to partner companies. In November 2022, this event saw the participation of 100 executives and employees from partner companies, with 10 partners engaging in individual purchase consultations.



Ethics and Compliance Management

BACKGROUND

In today's responsible era, meeting legal and ethical standards is vital. Severe management crises can arise from non-compliant actions, dealing fatal blows to subsequent corporate operations.

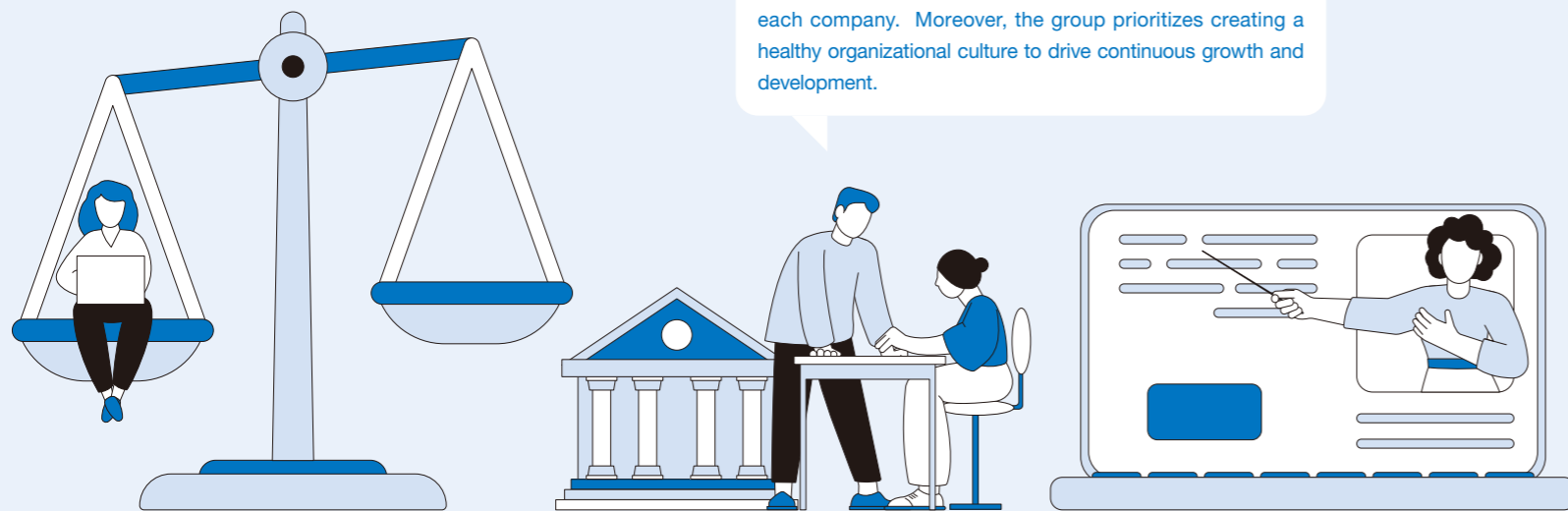
OUR APPROACH

At Hansol Group, ethics and compliance management are our top priorities. We prioritize transparency by disclosing our management principles to external stakeholders, including suppliers, customers, and investors. Since 2021, we have been conducting a company-wide assessment of compliance status, identifying improvement tasks, to strengthen our ethics- and compliance-management.

MANAGEMENT BRIEFING

Kim Jeong-un, Team Leader of Compliance Team at Hansol Holdings

Hansol Holdings has implemented a Compliance Risk Management System to ensure that all departments and employees adhere to the required laws during their work. Regular self-assessments are conducted to prevent any violations, and the results are monitored and managed by the Board of Directors and executives. Since 2021, we have been conducting annual compliance assessments across Hansol Group's affiliates, identifying areas for improvement. Hansol Paper, Hansol Technics, Hansol PNS, Hansol Inticube, Hansol Logistics, and Hansol HomeDeco implement strategies to strengthen their compliance-management systems and reduce the risk of violations and fraudulent acts. Hansol Group takes proactive measures to reduce the risk of law violations, fraud, and irregularities, implementing specific strategies for each company. Moreover, the group prioritizes creating a healthy organizational culture to drive continuous growth and development.



OUR PERFORMANCE

1 Conducting the Group's Compliance Assessment

Hansol Holdings

Hansol Holdings assesses compliance management in terms of leadership, planning, execution, support, internal audit, and improvement measures. To assess the level of each area in each affiliate, we conducted interviews from management to field personnel and analyzed relevant data. Based on the 2021 diagnosis results, we proceeded with tasks to strengthen the compliance-management system for each affiliate. After one year of implementation and comparing the results between 2021 and 2022, we found improvements in the planning, execution, and support areas. Hansol Holdings will implement ESG management by emphasizing practical task design, continuous management, and active communication for compliance across its companies' headquarters, business sites, and departments. This will expand awareness and consensus on compliance management throughout the group.

2 Establishing the ESG-Indicator Management System

Hansol Holdings

Hansol Holdings officially launched the ESG-Indicator Management System to systematically and efficiently oversee non-financial performance across the company and its affiliates. The system incorporates around 300 indicators, allowing for preemptive responses to both domestic and international ESG disclosures. Detailed guidance is provided to ESG personnel, who facilitate accurate and systematic management of these indicators. The system emphasizes environmental data management, which was challenging for some affiliates. To address this, Hansol Holdings collaborated with the Korean Standards Association to establish precise measurement guidelines. Hansol's commitment extends to advancing the overall ESG management of the Hansol Group.

3 The Group's Risk-Management System Assessment

In 2022, Hansol Group conducted a comprehensive risk assessment of all affiliates to evaluate the status of financial and non-financial risk management. Financial risk assessments covered markets, customers, equity investments, project orders, exchange rates, interest rates, liquidity, taxes, and credit ratings. Non-financial risk evaluation included compliance areas (environment, safety, and compliance), operational areas (information security, personnel/labor, and supply chain), and external communication areas (crisis response, brand value, and investor relations). To ensure sustainable management across all affiliates, regular risk inspections will be conducted every January, allowing for proactive risk mitigation and comprehensive oversight.



Hansol swiftly embraced the evolving landscape, venturing into critical energy and semiconductor industries. Our focus on customer feedback has driven enhanced competitiveness. Our commitment to innovation shapes a brighter future.



Hansol Sustainability Action

- 38 Consumer | Management for customer satisfaction
- 48 Environment | Product development considering the environment and climate strategies
- 60 Social | Sustainable growth for all
- 72 Governance | Transparent governance and shareholder-friendly management

Hansol Group takes the lead in the market by persistently innovating products with distinctive technology and reliable production capacity. Our focus on enhancing core competencies and seizing future business prospects drives us to restructure and engage in mergers and acquisitions to adapt to evolving business landscapes.

For the Sustainability

Hansol Group prioritizes sustainability management as the core of corporate operations, integrating it with product and service development. We focus on improving product- quality and identifying future growth opportunities, especially in core technologies for secondary batteries and semiconductors. Through mergers and acquisitions, we integrate ESG values into our business strategies. Notably, Tapex's flagship product, functional tape for secondary batteries, has witnessed increased sales and global reach due to the growing popularity of eco-friendly electric vehicles. As a response, we have expanded quality management system certifications and business areas. Moreover, Hansol Technics' acquisition of IONES, a specialist in semiconductor equipment parts manufacturing and cleaning/coating, further reinforces our commitment to growth and innovation.

Hansol Holdings hosts the annual Innovation Olympics for all affiliates, showcasing the "Hansol people's tireless spirit of challenge for innovation" to boost our group's differentiated competitiveness. Additionally, Hansol V Frontiers, a program by Hansol Holdings to nurture promising startups, has enabled 15 companies across three cycles to increase their corporate value by an average of six-fold. To enhance the marketing of competitive products, Hansol Paper, Hansol Technics, and Hansol HomeDeco actively engage in diverse energy and green expo events, forging closer connections with consumers.

Key Sustainability Issues

Key Performance

1 Market Expansion and Diversification

Hansol Logistics expanded a global business based on secondary battery logistics and achieved sales of

KRW **1** trillion

- Hansol Technics entered the semiconductor industry with the acquisition of IONES
- Hansol HomeDeco developed a business strategy for Vietnam
- Hansol Holdings launched the startup development program, "Hansol V Frontiers."
- Hansol PNS launched an online mall "Grouop" for paper distribution
- Hansol PNS continued to promote open innovation in the IT service sector

2 Customer Satisfaction and Marketing Excellence

Seven affiliates obtained international certification

ISO 9001

Hansol Paper, Hansol Technics, Hansol IONES, Hansol Logistics, Hansol HomeDeco, Hansol Chemical, Tapex

- Hansol Paper, Hansol Technics, and Hansol HomeDeco participated in domestic and international exhibitions
- Hansol Paper entered business agreement with ten green packaging companies
- Hansol IONES achieved a 60% higher customer rating in the AGS Score (as of March 2023)

3 Digital Transformation

Hansol PNS applied 100% of smart factory safety management solutions

6 affiliates

- Hansol Inticube accelerated the AICC project with a global AI platform, Kore.ai
- Hansol Logistics established digital truck transportation system through a subsidiary, Logismile

1. Market Expansion and Diversification

Introducing a Smart Online Paper Mall, "Grouop"



Paper Distribution Division, Hasol PNS

Grouop (www.grouop.co.kr) is an online paper mall that has been developed with a strong focus on meeting customer needs and preferences. It offers a wide range of papers, including Hansol Paper. At Grouop, customer convenience is a top priority with features like the advanced search function for easy product search, real-time delivery updates through SNS notifications, and a cart reorder feature for streamlined repurchases. To cater to individual preferences, Grouop has partnered with a PG company to offer a variety of payment methods. Grouop regularly updates its platform based on customer feedback to enhance functionality and user experience.

Securing New Growth Engines by Building a Global Network

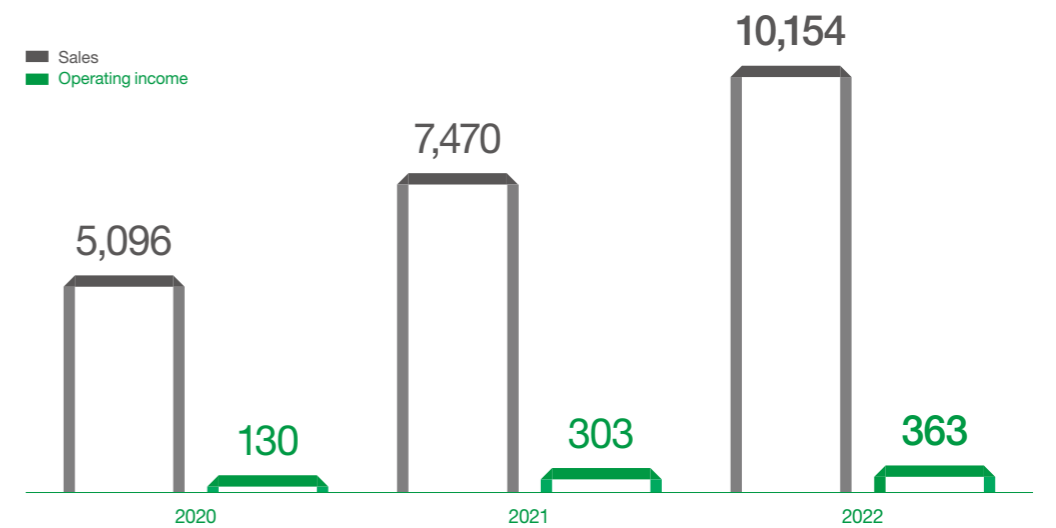


Hansol Logistics

Hansol Logistics has built 19 logistics networks in seven countries, focusing on secondary batteries to strengthen its competitiveness in industries like electronics, chemicals, and automobile parts. The company's customer spectrum now includes both large global firms and medium-sized manufacturers, especially in the booming electric vehicle (EV) market. Hansol Logistics has become a dominant player in the Asian secondary battery logistics market, serving major manufacturers and vendors, especially in China, with over ten years of successful operation. Additionally, the company has strategically expanded into the thriving EV market by establishing new bases in Poland, the United States, and India to boost its EV parts logistics business, including secondary batteries. This successful approach led to Hansol Logistics achieving a record-breaking KRW 1 trillion in sales in 2022.

Hansol Logistics' Profit Trend through Diversification of Global Customers

(Unit: KRW 100 million, consolidated basis)



Vietnam Market Consulting and Strategy Development

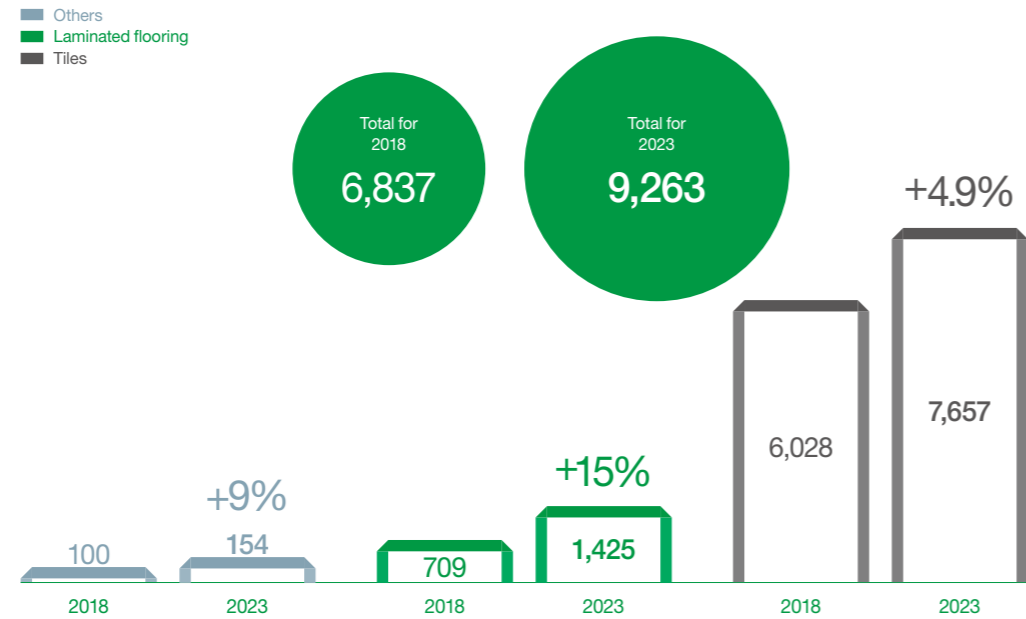
Hansol HomeDeco

Hansol HomeDeco conducted a comprehensive market analysis in Vietnam, which is emerging as a rapidly growing market. The strategic consulting is aimed to expand performance possibilities for laminate flooring in the Vietnamese market, identify growth potential, and establish a strategic direction for overseas exports from the Hansol Vietnam base. The analysis revealed long-term growth potential in the Vietnamese market, particularly in high-end buildings, and highlighted opportunities for exports from Vietnam to the United States. This insight provided a clear direction for future business opportunities.

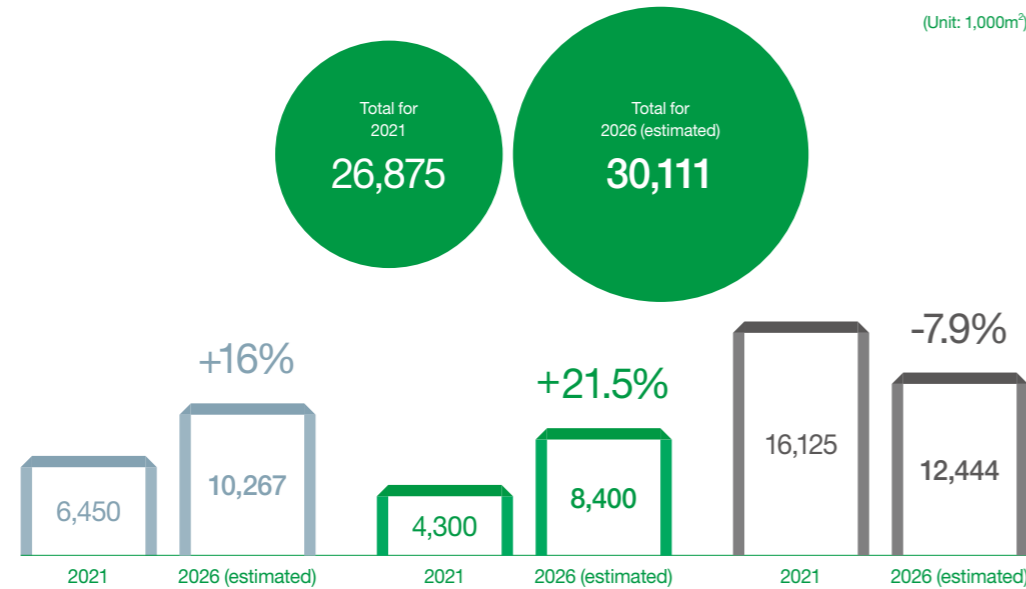
Analysis of the Vietnamese Flooring Material Market

Size and Composition of the Vietnamese Flooring Material Market

(Unit: KRW 100 million)



(Unit: 1,000m³)



Venturing into Semiconductors and Advancing in LiDAR Sensor Investments

Hansol Technics

In January 2022, Hansol Technics strategically entered the semiconductor industry by acquiring IONES, a company specializing in semiconductor parts processing, cleaning, and coating. The acquisition amounted to KRW 127.5 billion, securing 34.47% of the shares to gain management control. This was intended to strengthen the profit structure and tap into the high-growth and high-value semiconductor industry. Additionally, in May 2022, the company invested in SOS LAB, a leading LiDAR sensor specialist with global competitiveness. This investment grants priority access to SOS LAB's mass-production and opens new possibilities for joint product development to internalize LiDAR technology and pursue ODM roles in the future.

Hansol Holdings

Hansol V Frontiers is an open innovation program operated by accelerator Blue Point Partners and Hansol Group since 2020. In September 2022, the 3rd cycle was successfully completed, and in 2023, the 4th cycle will be operated. Open innovation refers to the innovative strategy that allows businesses to outsource technology, ideas, and services to create value. As part of Hansol Holdings' corporate responsibility and ESG commitment, Hansol V Frontiers aims to foster a robust industrial ecosystem by supporting promising startups. The participating startups from the 1st to the 3rd cycles experienced remarkable growth, with their value increasing approximately six-fold as of December 2022, amounting to a total of KRW 99.55 billion. Notably, all five teams selected for the 3rd cycle successfully attracted follow-up investment.

Successful Implementation of PoC with Startups

IT Service Division, Hansol PNS

Hansol PNS's IT Service Division also embraces open innovation to enhance the value chain and cultivate a various collaboration ecosystem. In 2022, Hansol hosted a contest in collaboration with startup incubators like the Incheon Center for Creative Economy & Innovation and SeongNam Industry Promotion Agency. The result was the emergence of two successful startups in big data, AI, and MSA. The PoCs with these startups were successful and their solutions were validated through field testing. Building on these accomplishments, the division aims to further improve and expand its endeavors in 2023 by establishing cooperative relationships with venture capitalists (VCs) and accelerators (ACs) with various startup portfolios. Through open innovation, Hansol PNS seeks to share technology with external institutions and startups, fostering a customer-oriented approach and enhancing service competitiveness.

2. Customer Satisfaction and Marketing Excellence

Quality-Management System Certification

Hansol Paper, Hansol HomeDeco, Hansol Technics, Hansol IONES, Hansol Logistics, Hansol Chemical, Tapex

Hansol Paper operates an integrated marketing system (Enterprise Resource Planning) that connects overseas marketing bases with production, distribution, and sales both domestically and internationally. We ensure quality throughout the entire product distribution process and have acquired ISO 9001 certification through strict quality-control, from production to delivery.

To remain responsive to customer needs and market dynamics, we consistently monitor and stay updated on international quality standards, ensuring our certification status. Additionally, we have established a standardized quality-control process for consistent quality across domestic and overseas products in accordance with the ISO 9001 certification. All certifications are subject to annual evaluation and renewed every three years.

Automotive Quality-Management System Certification

Tapex

Tapex's flagship product — functional tape for secondary batteries — has seen increased sales and global reach due to the growing popularity of eco-friendly electric vehicles. As a response, we have expanded quality management system certification for automotive, IATF 16949, to all business sites that produce the functional tape for secondary batteries. IATF 16949 is a globally recognized standard co-established by the International Automobile Task Force (IATF) and the International Organization for Standardization (ISO) to unify automotive quality-management systems across the supply chain, thereby ensuring standardized and authenticated quality practices. Certification validates the automotive company's robust quality management system for promotion of continual improvement in defect prevention and waste reduction. The Yanggam Plant of Tapex obtained this certification in September 2022, and the Hwaseong Plant acquired it in 2016.

Quality-Certification Status of Major Affiliates

Affiliates	Business Sites	Certification
Hansol Paper	Daejeon · Janghang · Shintanjin · Cheonan Plants	ISO 9001
Hansol HomeDeco	Seoul Headquarters, Iksan Plant	ISO 9001
Hansol Technics	Jincheon · Ochang Plants	ISO 9001
Hansol IONES	Anseong Head Office, Baran Plant	ISO 9001, AS 9100
Hansol Logistics	Headquarters	ISO 9001
Hansol Chemical	Jeonju · Ulsan Plants	ISO 9001
Tapex	Yanggam · Hwaseong · Uniwrap Plants	ISO 9001, IATF 16949 (Automotive quality management system, Yanggam and Hwaseong Plants)

Improving the Customer-Satisfaction Index

Hansol Paper and Hansol IONES

Hansol Paper conducts annual customer satisfaction surveys around August-September. The survey is divided by sector (printing paper, industrial paper, and special paper), to comply with the ISO 9001 requirements. The surveys help identify customer needs and facilitate immediate improvement activities. Despite price increases and reduced services in 2022, customer-satisfaction increased across all categories, reaching a score of 76, which was a four-point rise from the previous year.

Hansol IONES excels in customer satisfaction through prompt and accurate responses. According to the AGS Score published by Applied Materials, a leading company in the global semiconductor equipment industry, the customer's satisfaction index related to delivery performance for Hansol IONES significantly improved from 43 points in 2022 to 69 points as of March 2023, representing a remarkable 60% increase compared to the previous year.

Hansol Paper Customer Satisfaction Survey System

Step 01

Quality evaluation by paper type
INSPER M Rough, fancy paper, sublimation paper, Hansol thermal paper, Ensemble E-Class, Glassine, etc.

Step 02

Specific criteria by item
① White paper quality
② Printability
③ Workability
④ Finish
⑤ Color characteristics
⑥ Suitability for labeling
⑦ Foreign matter

Step 03

Interview
Receive VOCs beyond evaluation surveys

Step 04

Reflection of results

**Advancing
Brand Image
through
Exhibition
Engagements**

Hansol Paper, Hansol Technics, and Hansol HomeDeco

Hansol Group actively participates in various expos and exhibitions to showcase high-quality new products, enhancing the brand value in both domestic and international markets.

Hansol Paper's exhibition engagements include prestigious events like the Chicago Label Expo in 2014, Brussels Label Expo in 2019, LUXE PACK Shanghai, and FESPA — drawing keen attention from designers and competitors. The participation helped solidify the company's position as a leading paper company. Additionally, Hansol Paper showcased its plastic-free, high-quality, green products to domestic customers at the Korea ESG Exhibition in November 2022.

Hansol HomeDeco participated in the 2023 Hotel Fair as an eco-friendly building materials and interior company, introducing a range of products with innovative construction methods that prioritize safety and sustainability. The "Web 3.0 hotel lounge & space trend" concept hall received high praise from hotel-related architecture and interior buyers. Additionally, it earned the Outstanding Space Award at the Seoul Living Design Fair, boosting its brand image externally. Hansol Technics participated as a platinum and official sponsor of the International Green Energy Expo from April 12 to 14, 2023. It showcased a range of solar products including media PV, high-output solar modules, and water-type solar modules, all certified under KS for the first time in Korea.



Hansol HomeDeco at the 2023 Hotel Fair

**Establishing
Green
Packaging
MOUs**

Hansol Paper

Hansol Paper has signed MOUs with leading domestic companies in various sectors, including cosmetics, food, pharmaceuticals, confectionery, coffee franchises, and health functional foods for implementation of paper-based packaging materials. As it strengthens ESG management to build a sustainable future with its corporate customers, Hansol Paper is actively introducing eco-friendly paper packaging materials in various industries. This aims to encourage general consumers to practice environmental protection in their daily lives.

3. Digital Transformation

**Smart Energy-
Management
System CoEMS**

Hansol PNS

The Coever Energy-Management System (CoEMS) is Hansol PNS IT Service Division's smart energy management solution, focusing on efficient energy management and distribution to reduce GHG emissions and energy consumption in plants. This product facilitates customers in enhancing their ESG management through digitalization of the production process. Currently, it is utilized in Hansol HomeDeco's digital cluster business among affiliates and adopted by other manufacturers like Zian Wood and MS Chem Korea. The goal for 2023 is to advance ESG management in the manufacturing industry by expanding the smart factory business.

**Accelerating
AICC Business
through MOU
with Kore.ai,
a Global AI
Platform**

Hansol Inticube

In March 2023, Hansol Inticube forged a strategic partnership with Kore.ai, a leading global interactive artificial intelligence platform. Kore.ai is renowned for providing conversational AI and digital UX technology to top Global 2,000 companies. Headquartered in Orlando, USA, Kore.ai was established in 2015 and has become the trusted provider of AI solutions to over a hundred Fortune 500 companies, including the top-four global banks. By utilizing Kore.ai's large language model (LLM) and generative AI technology, Hansol Inticube aims to enhance its conversational AI services, like ChatGPT, to significantly improve cost- and operational-efficiency, while eliminating manual work in creating conversation scenarios and learning natural language processing.



Ryu Chang-sung, CEO of Hansol Inticube, and Sreeni Unnamatla, Executive Vice President of APJ at Kore.ai

**Becoming the
Top Digital
Trucking Freight
Forwarder with
Innovative IT
Technology
Application**

Hansol Logistics

Logismile, a subsidiary of Hansol Logistics, has launched an app-based digital truck transportation system. Through the integration of digital trucking solutions with the company's nationwide direct dispatch service capabilities, it is enhancing its competitive edge in the trucking market. Having achieved successful digitization of the traditional truck transportation market through the Transportation Management System (TMS) and robotics technology, the company's focus has now shifted to integrating AI algorithms and other advanced solutions into the system.

ENVIRONMENT

Product Development Considering the Environment and Climate Strategies

In response to the urgent climate crisis, both domestic and foreign companies are striving to achieve carbon neutrality by 2050. Hansol Group is also joining this global effort by actively reducing greenhouse gas emissions, transitioning to new and renewable energy sources, and innovating eco-friendly technologies and products.

For the Sustainability

Hansol Group's market development and business expansion strategy revolve around eco-friendly technology development. By focusing on R&D efforts in eco-friendly technologies and products, the company aims to secure new growth engines for the future and achieve sustainable growth. The development of eco-friendly products by Hansol Paper and Hansol HomeDeco are central to this strategy. Additionally, the utilization of new and renewable energy by Hansol Technics and Tapex is gaining attention. With generous investments in eco-friendly R&D, Hansol is committed to leading the way in responding to climate change and creating a greener business ecosystem.

Key Sustainability Issues

Key Performance

1 **Development of Eco-Friendly Technologies and Product Certifications**

Hansol Paper's eco-friendly certified product sales reached
 KRW
1.4647 trillion

- Hansol HomeDeco's green flooring and MDF products accounted for 30% of sales
- Hansol PNS developed paper made from 100% sugarcane
- Sales of Tapex's paper straws and multi-use cups increased by 22% and 120%, respectively
- Hansol Technics developed low-carbon products

2 **GHG Emissions Reduction and Energy Conservation**

Hansol HomeDeco's New Zealand Reforestation Project absorbs 149,000 tons of carbon dioxide per year
149,000 tonnes

- Hansol Chemical upgraded facilities for energy efficiency
- Hansol Technics cut GHG emissions through facility upgrades

3 **Pollutant and Waste Management**

Hansol Chemical Ulsan Plant reduced wastewater discharge by
15%

- Hansol HomeDeco established a heavy-metal reduction facility for incinerator fly ashes
- Hansol PaperTech increased recycling of waste sludge

4 **Global Initiatives & Environmental Management Certifications**

For the Tapex Uniwrap Plant, acquired a new certificate,
ISO 14001

- Hansol Paper continued to adhere to the TCFD recommendations
- Hansol Paper named as a green company
- Hansol HomeDeco joined the UNGC
- Hansol IONES established the Environmental Council

1. Development of Eco-Friendly Technologies and Product Certifications

Expanding the Eco-Friendly Material Market for Duracle

Hansol Paper's "Duracle" brand offers an eco-friendly solution containing nanocellulose and microfibril cellulose. This versatile material finds applications not only in batteries and paints but also in cosmetics, urethane foam, rubber, and packaging. Collaborating with leading companies in various industries, we are actively developing application technologies for Duracle material. With its benefits for carbon neutrality and circular economy, the market demand for this material is expected to make a significant impact. Furthermore, our environmentally certified products have been well-received in the market, including "Protego," eco-friendly paper packaging; "Terravas," nature-friendly containers; and the "Whale-saving Wet tissue," made from natural pulp and plant-derived rayon fabric without generating microplastics.



November 2022, Hansol Paper at the Korea ESG-ECO Expo (left), Hansol HomeDeco's eco-friendly SB flooring (right)

Green-Certified Products by Hansol Paper

Certification	Production Location	Paper Type	Product Name	
FSC	Daejeon Plant	Industrial paper	Hi-Q AB Light, Hi-Q AB Premium, Hi-Q AB Plus, Hi-Q FSB, Hi-Q ACB, Hi-Q SC, Hi-Q FAB, etc.	
	Janghang Plant	Printing paper	Ensemble E Class, Cloud, colored wood free paper, new wood free paper, Hi Plus, premium paper for textbooks, fine coated paper, Hi-Q Duomatt, Hi-Q Millenium Art, etc.	
		Thermal paper	Green, Green HS, Green AFH, CL, EL, SL, HB, HL, PF, Pro, etc.	
	Shintanjin Plant	Printing paper	Campus paper (S, J), New Classic, New Wood Free Paper, New Plus, Green Textbook Paper, Premium Textbook Paper, Hi-Q Matt Premium, Hi-Q Mystic, Hi-Q Semi-kraft, Hi-Q Duomatt, Hi-Q Millenium Art, etc	
		Thermal paper	Green HS, Green AFH, SL, EL, Slim, Green EL, Green HB, Green, CL, etc.	
		Fancy paper	Fancy papers, green products, outsourced products, etc.	
	Cheonan Plant	Thermal paper	Green, Pro, etc.	
		Inkjet paper	Inkjet sublimation papers	
	UL ECV 2485	Cheonan Plant & Daejeon Plant		Protego S(EB Smart) 70g, Terravas Cup
	GR Certification (Good Recycled)	Shintanjin Plant		Green Textbook Paper
Green Seal	Cheonan Plant		INSPER Smooth Shopping (E) PCW30·90	
Eco-label Certified Products	Janghang Plant		New Wood Free Blue, New Plus Blue, Hi-Duo Matt Blue	
	Cheonan Plant		INSPER Signature Eco, AHC Willow, INSPER Aloe, INSPER Magic Comma, Dr. G Cica Paper, INSPER Eco	
	Shintanjin Plant		Hi-Q Millennium Art, Premium Textbook Paper Blue	

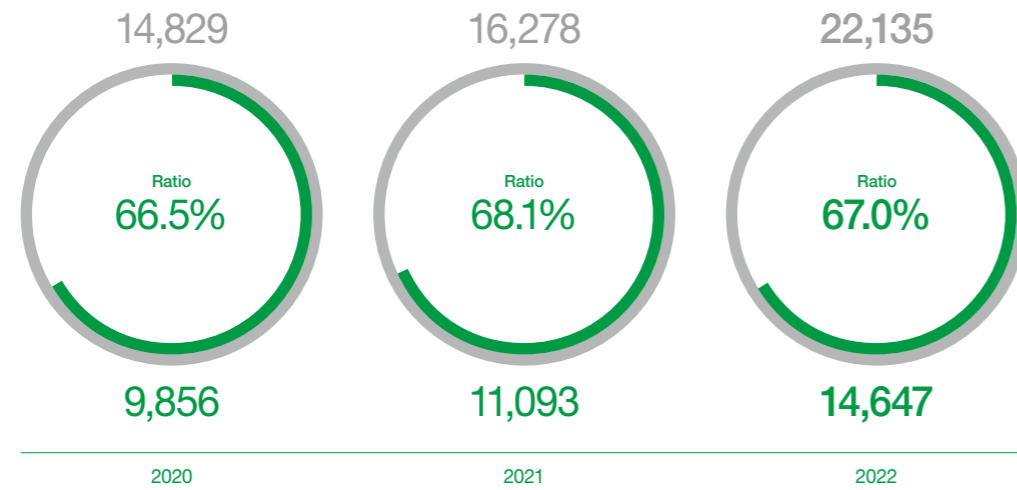
Green-Certified Products by Hansol HomeDeco

Certified Products	Certification	Product Description
E0 MDF 35	Eco-label	Constructed from selected wood waste recovered from construction sites (flexural strength of 35Mpa or more)
E0 MDF 30	Eco-label	Constructed from selected wood waste recovered from construction sites (flexural strength of 30Mpa or more)
SPB	Eco-label	Designed to replace particle boards with fiberboards, in line with the trend of increasing domestic imports of particle boards (flexural strength of 20Mpa or more)
Laminated flooring	Eco-label, HB mark	7.5mm-thick, E0 grade non-glued flooring produced by bonding LPL to HDF and reinforcing for durability
Ultra	Eco-label, HB mark, Low-carbon	7.5mm-thick, E0 grade flooring made by bonding HPL to plywood
Story Wall	Eco-label, HB mark	9mm-thick, E0 grade flame retardant wall made by bonding LPL to HDF
SB General (Edge/Stone)	Eco-label, HB mark, EPD	6mm-thick, SE0 grade flooring made by bonding PP to SB core that is resistant to water and moisture
SB HPL (Edge/Stone)	Eco-label, HB mark, EPD	6mm-thick, SE0 grade flooring made by bonding HPL to SB core that is resistant to water and moisture
SB Embo	Eco-Label	6mm-thick, SE0 grade flooring made by bonding HPL to SB core that is resistant to water and moisture (texturized)
Ultra HPL	Eco-label, HB mark, Low-carbon	7.5mm-thick, SE0 grade flooring made by bonding HPL to SB core that is resistant to water and moisture
Well Stone	HB mark	Non-combustible product with excellent dimensional stability, water resistance and processability through the bonding of LPL to inorganic mineral wool material
Prium	HB mark	10mm-thick SE0 grade hardwood flooring, crafted with UV coating on plywood

Hansol Paper Eco-Friendly Product Sales

(Unit: KRW 100 million)

■ Sales of Eco-Friendly Products
■ Total Sales (Separate)



Sales of eco-friendly products by each affiliate

(Unit: KRW 100 million)

Affiliates	Green-Certified Products (As of 2023)	2020	2021	2022
Tapex	1 (Hanji oil absorbing paper_Eco-label)	2	2	2
Hansol HomeDeco	3; MDF 30, 35, and flooring products (20 models)	830	793	842
Hansol PaperTech	11; scratch paper and corrugated cardboard sheets including outer layers and flutes	814	1,014	1,237
Cumulative total number of carbon-certified models: 188				
Breakdown by carbon emissions level				
Hansol Technics	Carbon level	Number of certifications (ea.)	CO ₂ emissions (kgCO ₂ /kW)	
	Level 1	42	Under 630	1,296
	Level 2	39	630~670	1,426
	Level 3	24	670~730	2,304
	Level 4	83	730 or above	

Development of Low-Carbon Products

Hansol Technics

Hansol Technics is dedicated to reducing greenhouse gas emissions through mid- to long-term plans. As of 2018, our GHG emissions amounted to 27,652 tCO₂eq. With a goal of reducing emissions by 25% compared to 2018 levels by 2030, we are investing in high-efficiency energy facilities and equipment, introducing solar energy, and transforming our manufacturing processes to lower carbon emissions. Moreover, as part of our long-term vision, we are continuously researching and implementing measures to achieve carbon neutrality by 2050. We already have successfully developed low-carbon grade 1-3 products and have plans to continue providing green and sustainable solutions through ongoing product development and production.

Introducing “Sugar Pack”: Paper Packaging Made 100% from Sugar Cane

Hansol PNS

Sugar Pack is a non-wood paper made 100% from sugar cane, thus ensuring no trees are cut down. The raw material, sugarcane, is one of the most cultivated crops worldwide, and the paper is made by recycling sugarcane by-products left over from the sugar manufacturing process. This eco-friendly product is free from harmful chemical treatment or artificial bleaching, making it a nature-friendly option for food packaging.

Expanding supply of paper straws and reusable cups

Tapex

Tapex’s paper straws and reusable cups have gained significant popularity due to the government’s regulations on plastic disposable products. With the plastic straw regulation in effect from November 2022, sales have risen by 22% in the same year. Additionally, the reusable cups, serving as an alternative to disposable ones, experienced a remarkable 120% sales increase, reaching KRW 800 million in 2022 compared to the previous year. These eco-friendly products have contributed to an estimated 145 tons of carbon reduction. Furthermore, to reinforce the company’s commitment to sustainability, Tapex has joined the Habit Eco Alliance, collaborating with SK Telecom, SK Happiness Connect, Starbucks, and local governments in eco-friendly initiatives.

Implementing the lifecycle assessment of secondary battery tapes

Tapex

In a significant move toward environmental sustainability, Tapex has implemented Life Cycle Assessment (LCA) for its flagship products. LCA evaluates the environmental impact, particularly GHG emissions, throughout the entire lifecycle of a product. During the first half of 2022, a dedicated LCA Task Force team was established to assess the secondary battery tape used in battery production. Looking ahead, Tapex will expand the application of LCA to other products for global expansion.



2. GHG Emissions Reduction and Energy Conservation

Upgrading to high energy-efficiency facility

Hansol Chemical

Hansol Chemical's Jeonju Plant implements multi-faceted improvement efforts to curtail power and steam consumption, amid expanding business operations that cause escalating energy-usage each year. Our recent initiatives involve replacing conventional lights and refrigerators with high-efficiency LED lights and refrigeration machines to reduce power consumption (approx. 2,700 MW), and optimizing flare stack operations, while recovering steam in the process to reduce steam consumption (approx. 5,000 tons). As a result, we not only achieve significant energy-savings, but also reduce greenhouse gas emissions.

Investing in carbon-emission reduction facilities

Hansol Technics

Hansol Technics is taking proactive steps to reduce GHG emissions, starting with the replacement of an aging 200HP air compressor at the Jincheon Plant. The old compressor was replaced with a new 100HP compressor to prevent energy-losses resulting from reduced plant-operation rates and excess capacity. This investment is expected to yield annual energy savings of KRW 10.5 million. At the Ochang plant, the boiler was upgraded to a high-efficiency, low-NOx boiler, and the discharge method was changed to an individual discharge approach, thereby ensuring stable boiler operation. We improved energy efficiency by resolving issues related to pipe corrosion, ignition problems, and boiler temperature management caused by condensation resulting from the temperature drop (140°C→75°C).

New Zealand afforestation business and carbon-credit sales

Hansol HomeDeco

Since 1991, Hansol HomeDeco has been the pioneering Korean company in overseas afforestation, securing a stable source of wood resources. Since 1996, we have been involved in the afforestation business in New Zealand, annually absorbing 149,000 tCO₂ of carbon dioxide and generating profits through the carbon-credit business.

Increase use of recycled raw materials

World's No. 1 in use of recycled raw materials for MDF production

80%

Increase use of recycled raw materials to 100%

Increase share of green products

Share of green products in total sales

30%

Expand recycled products in MDF and flooring

Reduce GHG emissions and energy consumption

Annual CO₂ reduction

2,000_t

Reduce power usage by 5% every year

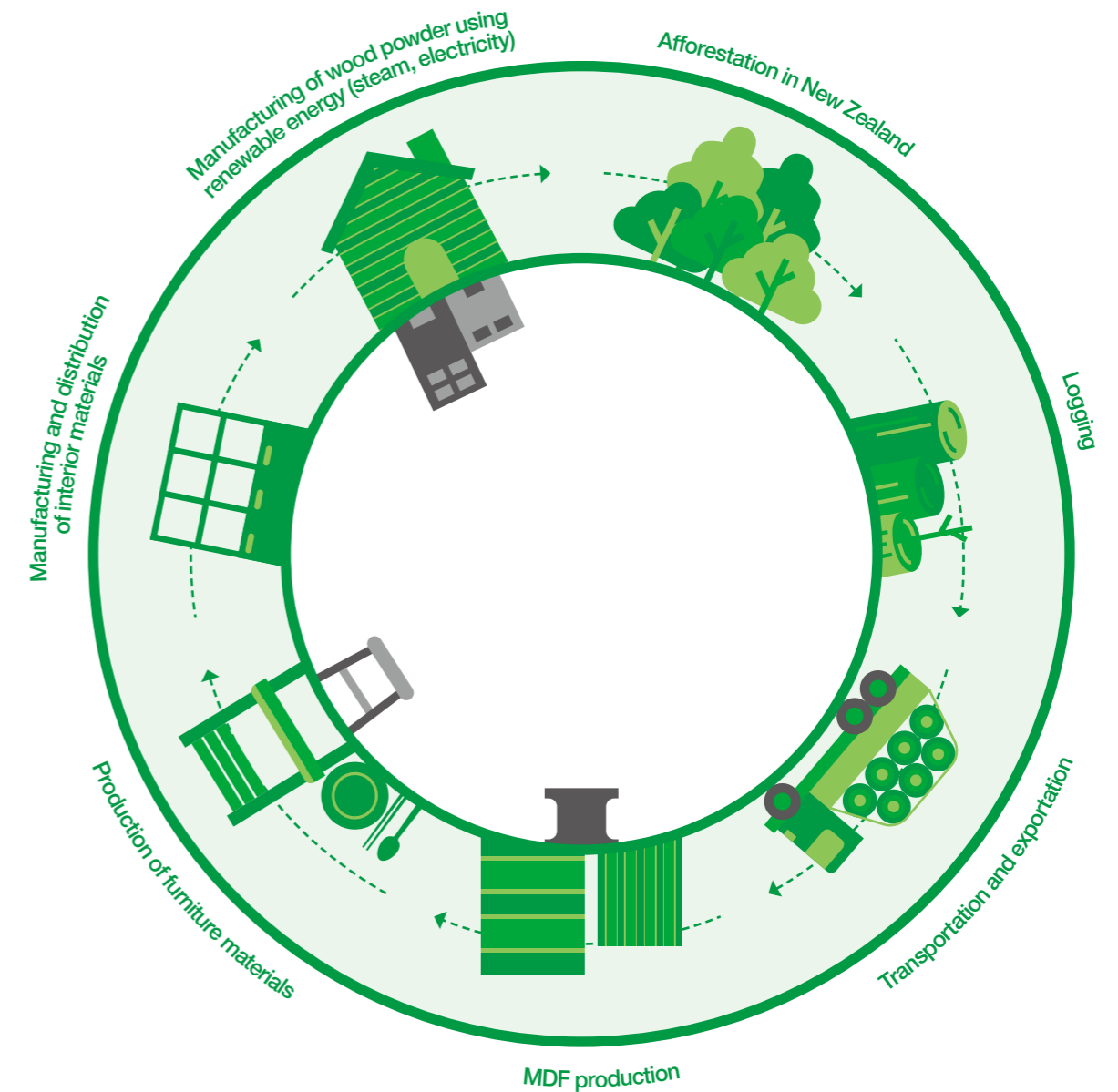
Overseas afforestation business and securing carbon credits

Overseas afforestation area

10,000_{ha}

Annual CO₂ reduction of 149,000 tons

Hansol HomeDeco's Timber Business Sustainable Value Chain



3. Pollutant and Waste Management

Reducing wastewater by 30,000 tons

Hansol Chemical

In 2022, despite business expansion, the Ulsan Plant of Hansol Chemical achieved a significant reduction in water usage and water pollutant emissions. The total discharged wastewater was 160,151 tons (440 tons/day), marking a 15% decrease from 2021's discharges of 189,823 tons (520 tons/day). This accomplishment was made possible by enhancing product-manufacturing process efficiency, and investing in facilities to increase wastewater reuse rate.

Exceeding wastewater discharge standards

Hansol PaperTech

At Hansol PaperTech, we adhere to stringent wastewater-discharge requirements, which are set and managed internally to exceed the legal standards.

	Legal requirement	Internal standard
TOC	25	20
COD	32	25
SS	30	22
PH	8.6	8
TN	30	23
TP	4	3.5

Investing in environmental facilities

Hansol Paper

Hansol Paper strives to minimize resource-waste and pollutant discharges by increasing the waste-recycling rate and investing in facilities. The company aims to achieve zero marine waste discharge and promote eco-friendly resource circulation. Over the past three years, Hansol Paper has invested KRW 5.6 billion in 2020, KRW 6 billion in 2021, and KRW 1.5 billion in 2022, respectively, in environmental facilities — furthering its commitment to reducing air and water pollutants.

Hansol HomeDeco

Hansol HomeDeco invested in constructing heavy-metal reduction facilities for incinerator fly ash. Previously, the fly ash contained excessive levels of heavy metals, classifying it as designated waste and incurring high disposal costs. To address this, the company introduced heavy-metal elution inhibitor chemicals to the incinerator, converting the fly ash into general waste and facilitating recycling. This improved waste treatment processes, resulting in cost reductions.

Hansol PaperTech

Hansol PaperTech actively prepares and implements a waste recycling plan, specifically targeting the waste (sludge) generated during production, to transform it into valuable resources. Emphasizing the importance of waste treatment stability, the company invests in advanced facilities for this purpose. To ensure compliance with the Waste Control Act, all waste-related changes are promptly reported to local authorities and carefully managed. This performance, along with report certificates and third-party contracts, is registered in the Allbaro system for comprehensive management.

Hansol Technics

Hansol Technics conducted effective dredging of sludge from collection and discharge tanks to ensure efficient wastewater treatment and maintain concentrations below legal limits. This proactive measure prevents the accumulation of wastewater sludge, which can lead to increased water-pollution levels and impact equipment like pumps and piping. As a result of the dredging process, significant reductions were achieved in wastewater contamination levels, including BOD (78%), TOC (19%), SS (52%), and T-P (85%).

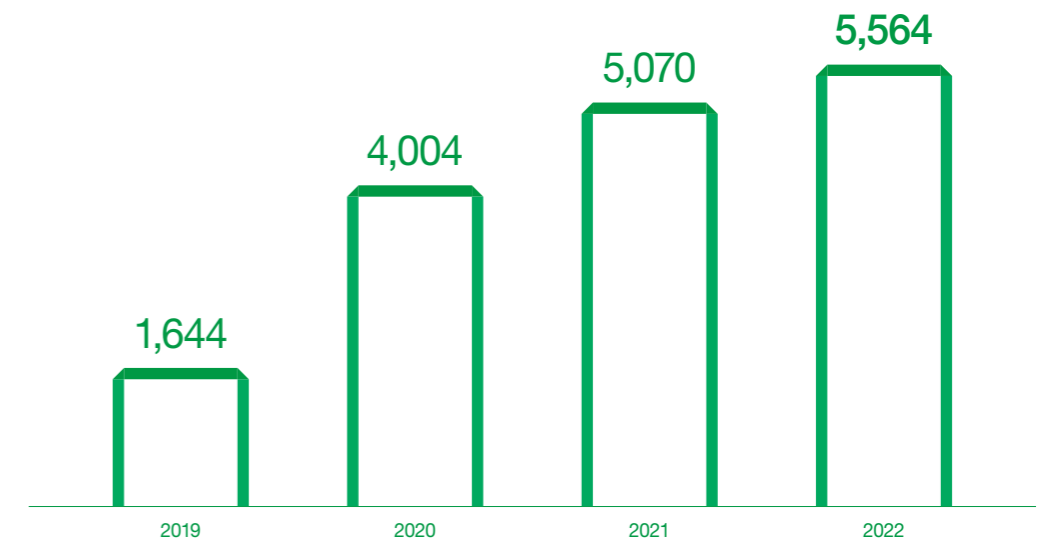
Hansol PaperTech's Environmental Facility Investment in 2022-2023

(Unit: KRW million)

Facility improvement	Investment amount
Replacement of water quality TMS (TOC)	62
Upper SDR replacement	82
Installation of spare turbo blower for aeration tanks and piping	91.5
Additional installation of advanced water-quality treatment (corresponding to TOC regulations)	618
Bag filter hopper replacement	140
Bag filter valve replacement	49
Spare aeration tank submersible pump replacement	31
Nano filter installation	563

Trend of Increasing Sludge Recycling Amount at Hansol PaperTech

(Unit: Tons)



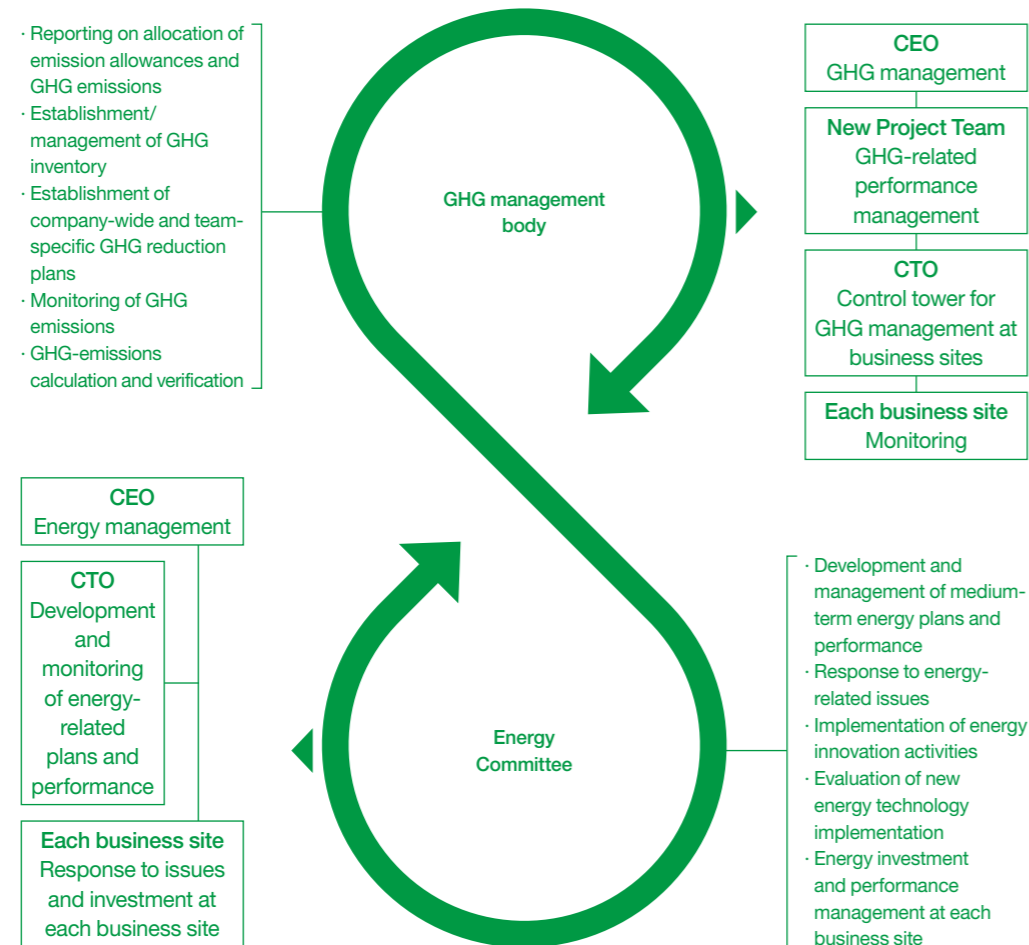
4. Global Initiative & Environmental Management Certification

Compliance with the TCFD recommendations and designation as green company

Hansol Paper

The Task Force on Climate-related Financial Disclosures (TCFD) recommendations, established by the International Financial Stability Board (FSB), serves as standards for disclosing governance, risk management, and metrics and targets related to climate change response. Hansol Paper strengthens its climate-change response system and facilitates informed decision-making of key stakeholders by adhering to the TCFD recommendations and disclosing climate-related information. Moreover, Hansol Paper has earned the designation of a green company, approved by the Ministry of Environment and the Geumgang River Basin Environmental Office, reaffirming its commitment to eco-friendly management practices.

Hansol Paper's Governance for Climate Action



Joining the UN Global Compact

Hansol HomeDeco

Hansol HomeDeco has joined the United Nations Global Compact (UNGC), thereby reaffirming its commitment to upholding global standards of ESG management and social responsibility. The UNGC is the world's largest voluntary corporate citizenship initiative, launched in New York, USA, in 2000, with the goal of promoting corporate social responsibility. With approximately 20,000 member companies from 162 countries worldwide, the UNGC emphasizes the importance of adhering to its ten principles in the areas of human rights, labor, environment, and anti-corruption. Participating companies are required to report on their progress toward achieving the Sustainable Development Goals (SDGs) through an annual Communication on Progress (COP). Hansol HomeDeco's membership of the UNGC signifies its dedication to being a responsible corporate citizen and upholding the principles of sustainability and social responsibility.

Newly certified business site for the ISO 14001 certification

Tapex

Tapex's Uniwrap Plant established a systematic environmental management system, and acquired the international environmental management system (ISO 14001) certification in 2022. This marks the complete certification of all three domestic business sites of Tapex.



Establishment of the Environmental Council and improvement plans

Hansol IONES

In 2023, Hansol IONES took a significant step forward by creating an Environmental Council, conducting meetings at both the Anseong headquarters and Baran campus. This council will be holding quarterly meetings to address internal and external environmental issues, evaluating risks, and setting specific goals. Hansol IONES is committed to prioritizing environmental management, and responding proactively to environmental challenges.

Sustainable Growth for All

Respect for and protection of human rights in business are becoming increasingly critical on a global scale. Companies that prioritize human rights and take into account the well-being of all stakeholders, including employees, suppliers, and local communities, are best positioned for sustainable growth. At Hansol, we uphold the UN's Universal Declaration of Human Rights and the United Nations Guiding Principles on Business and Human Rights (UNGP), actively promoting their principles.

For the Sustainability

Hansol Group is dedicated to upholding ESG values in collaboration with its employees, business partners, and local communities. In line with this commitment, we prepared and distributed human rights management operation guidelines across the organization to ensure proper training. We continuously strive to establish a safe and enjoyable workplace by bolstering our capabilities through educational support programs. Many of our major affiliates have already achieved ISO 45001 certification, a renowned international safety- and health-management system. To further strengthen safety measures, we have established the Hansol Safety Rating System in 2022, specifically designed in consideration of business characteristics. To achieve this goal, we provided consistent support through regular meetings, training, and consulting services, ensuring the safety and health of our employees in each affiliate and partner company. Hansol's labor-management council actively seeks input from both executives and employees, enabling constructive discussions and negotiations for determining compensation and annual salary increase rates. We are committed to fostering diversity within our workforce and promoting a culture of open communication, cultivating a pleasant work environment and attracting and retaining top talent.

Key Sustainability Issues

Key Performance

1 Growth with Employees

Certified as a family- friendly company

3 affiliates

Hansol Paper, Hansol Chemical, Tapex

- Hansol Holdings developed an online education curation system utilizing competency diagnosis.
- HSRS was implemented by Hansol Holdings.
- Hansol Group expanded employment opportunities for individuals with disabilities.

2 Shared Growth with Partners

Hansol Technics Shared Growth Programs

15

- Hansol Technics hosted a Mutual Cooperation Day where 10 companies participated in individual purchase consultations.
- Hansol Paper implemented sustainability management evaluations for its partner companies.
- Hansol Paper manages the Mutual Growth Fund
- Hansol Inticube newly developed Fair Subcontracting Guidebook

3 Communication and Engagement with Local Communities

Cumulative number of visitors at Hansol Cultural Foundation Museum SAN

1,631,922

persons
(2013-2022)

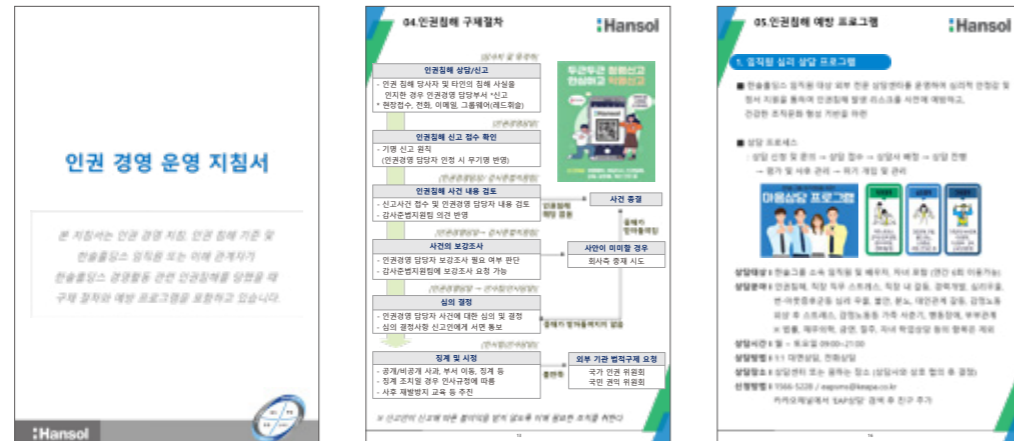
- Employees' volunteer activities at Hansol Holdings
- Solar module donation to local communities by Hansol Technics
- Regular cleaning activities to remove odors by Hansol PaperTech
- ESG campaigns, such as beach cleaning and waste electrical/electronic recovery, by Tapex

1. Growth with Employees

Establishing the Group human rights management operation guidelines and operating counseling programs for employees

Hansol Holdings

Hansol Holdings has announced its commitment to human rights management, introducing the Human Rights Management Guidelines. These guidelines provide clear definitions of human rights and human rights management, identify various human rights violations, and establish procedures for addressing these concerns. The scope of application for the human rights management system includes the holding company, its affiliates, members, customers, and partners, among others, and is delivered through multiple communication channels, including Red Whistle (anonymous reporting channel), website, postal mail, email, and phone. Looking ahead to 2023, our plan is to expand human rights management to major affiliates and conduct annual training sessions. We are committed to fostering a culture of respect for human rights among all Hansol employees and upholding our Human Rights Management Declaration. In 2023, we are introducing a comprehensive counseling program to provide all our employees with access to professional counseling services through an external counseling center. This program aims to offer support for various personal challenges, including work-related stress, workplace conflicts, burnout syndrome, interpersonal conflicts, and human rights concerns.



Specific human rights violation relief procedures and prevention program included in the Human Rights Management Operation Guidelines

Employee growth support programs

Free agent (FA) system: The Flexible Assignment (FA) system, introduced in 2020, enables employees to apply for different job positions after a certain period. Eligible employees are given priority through regular job postings, promoting internal mobility and career growth opportunities. MBA support program: Each affiliate selects candidates internally to nurture them as executives every year. Top performers are awarded with full scholarships to complete MBA programs.

Mentoring program: Various mentoring programs aid new hires in adapting and growing within the organization. Hansol nurturing program: Our comprehensive training approach provides employees with essential education, encompassing online courses, free telemarketing, and outsourced programs, fostering their professional growth and development.

Respect leadership: We foster a corporate culture where employees respect one another and thrive under "respect leadership," a core value of the HMS, instilled in all Hansol leaders.

Absolute evaluation: Our performance management system prioritizes cooperation over internal competition, rewarding the achievement of shared goals and mutual growth.

Ground rules for teams: Hansol Group implements the "ground rules for teams" program, allowing teams to create a customized work environment that reflects their unique characteristics and culture.

Development of an online education curation system, LMS

Hansol Holdings

Hansol Group introduces its newly established Learning Management System (LMS), an online learning curation system connecting "Da Vinci," the Group's HR system, and an online education system, "H-Campus." The integrated learning curation platform includes a personal competency test to create Individual Development Plans (IDPs) and Career Development Plans (CDP). Utilizing AI technology, the LMS suggests relevant learning resources, such as contents, videos, and YouTube, based on the test results and keeps track of learning support and history. With this educational infrastructure, Hansol Group fosters a voluntary learning culture, actively supporting the self-development of every employee.

- Self-directed course search and individual learning plan creation by employees.
- Manual input of competency, goals, and curriculum by employees.

Previous employee learning system



- Employees receive personalized course recommendations and curated curricula for targeted areas of improvement.
- Courses organized by job roles and levels for easy access and selection.
- Detailed information provided for each course.

New online learning curation system, LMS



Establishment of Hansol Safety Rating System for safety and health management

Hansol Holdings

Since the first ISRS evaluation in 2019, Hansol Group has developed its own safety and health work standards and evaluation system, tailored to the unique characteristics of its business. In 2022, we introduced the Hansol Safety Rating System (HSRS) after verifying the effectiveness and performance. The evaluation ratings range from level 1 to 5, and our affiliates in manufacturing businesses, Hansol Paper and Hansol HomeDeco, are working to attain and maintain HSRS Level 5, which is comparable to ISRS Level 7. This initiative aims to enhance our safety and health competitiveness, foster a safety culture within the organization, and extend it to our suppliers.

Hansol Paper’s Janghang Plant received an L5 rating in the HSRS evaluation



Average score **91.4** | Lowest score **89.0** | Rating **L5**

Strengthening occupational safety and health education

Hansol PaperTech

Under the Serious Accidents Punishment Act, occupational safety and health education has been significantly reinforced. The annual safety and health education now requires evaluation of job-related competencies through KSA competency assessment for satisfactory completion. Safety and health managers must undergo regular training of at least six hours per quarter. Special safety and health education is mandatory for full-time employees, requiring 16 hours or more, and daily contract workers, requiring at least two hours. These measures aim to ensure safety at worksites engaged in operating one-ton or larger cranes, confined space operations, and workplaces with five or more pieces of material-handling equipment.

ISO 45001-certified business sites

12

Protecting employees’ health through health checkups and safety and health policies

Hansol PaperTech

When recruiting and assigning new workers to positions requiring special health examinations, Hansol PaperTech requires those employees to receive health checkups prior to starting work, informs them about any potential hazards in their workplace, and follows up with annual health checkups. Workplaces with hazardous conditions, such as excessive noise, dust, and potential exposure to radiation, sulfuric acid, and welding work, require special health examinations. Employees involved in processes like noise, dust, solvent handling, hazardous substance use, and night work, as specified in the Occupational Safety and Health Act, undergo specific health examinations tailored to the risks they encounter.

To review adequacy of the policies, Hansol PaperTech regularly evaluates and updates its safety and health policies through active communication with members and stakeholders. Feedback is gathered through various channels, such as emails, official letters, meetings, and internal postings. The safety and health organization reports safety performance to the CEO semi-annually and actively works on improvement plans to address any pending issues.

Introducing a telecommuting employment platform for persons with disability

Hansol Group

Hansol Group is proactively enhancing the employment of people with disabilities through a partnership with VDream, a specialized company in this field. Several major affiliates, including Hansol Logistics, Hansol PNS IT Service Division, Hansol Inticube, Hansol Chemical, Hansol Technics, and Tapex, have adopted and implemented the VDream platform. This initiative enables the employment of individuals with disabilities in support functions, encompassing responsibilities like document and data management and article processing. These employees receive equitable benefits, including education assistance, medical coverage, and regular health assessments, on par with their colleagues.

Tapex has taken a significant step toward diversity in employment by extensively utilizing the platform since 2022. In 2020, Tapex hired four additional individuals with disabilities, making the total number six. The company has carefully placed them in roles that offer telecommuting options, such as customer service, design, and general affairs, to ensure work convenience and accessibility.



Vdream allows individuals with disabilities to select the job field they want to apply for. (vdream.co.kr)

Certified family-friendly businesses

Hansol Paper, Hansol Chemical, Tapex

Hansol Paper, Hansol Chemical, and Tapex have successfully applied for and obtained family-friendly management certification from the Ministry of Gender Equality and Family. Our certification was granted based on positive evaluations of our childbirth and childcare support systems, flexible working hours, early leave on Fridays, family-friendly programs, family-care leave, and overall family-friendly workplace culture.



Break room for pregnant employees and a remodeled female employee lounge at Tapex

Designated as a youth-friendly small giant

Hansol Coever

Hansol Coever, a subsidiary of Hansol PNS, was chosen as a youth-friendly small giant in 2023. Since 2016, the Ministry of Employment and Labor has been recognizing companies that offer excellent wages, compensation, work-life balance, and employment stability for young workers. As a result, Hansol Coever, acknowledged as a great workplace for young professionals, has been granted benefits such as recruitment support services, financial incentives, preferential treatment in tax audits, and additional points in screening for alternative military service companies.

Strengthening intergenerational communication culture through meetings

Tapex

Tapex has been dedicated to fostering a harmonious corporate culture that embraces various generations as the number of employees rapidly increases in line with the company's recent growth. As part of this initiative, meetings have been conducted by position since 2022 to address and resolve employee grievances. These meetings are held regularly, at least once per year, with participants from the same level of position, under the supervision of each plant manager or head of the Managing Director. In 2022, a total of 264 individuals participated in the meetings, resulting in 211 complaints received, and the formulation of improvement plans.

Hansol Technics

Hansol Technics promotes effective communication with millennial and Generation Z (collectively known in Korea as MZ Generation) employees through various initiatives. The company provides monthly support for activity expenses and conducts video conferences with relevant departments to gather and share opinions on support, human resources, and general affairs. Additionally, the company operates a Junior Board and organizes meetings as intergenerational communication events between different positions. These meetings offer employees the chance to interact with the CEO in open and candid discussions, fostering better understanding and bridging generational gaps. Currently, there are six Junior Board members, with two representing each workplace.

Hansol IONES

In 2023, Hansol IONES organized company-wide meetings with the CEO, specifically by job category. The meeting aimed to prioritize the input and perspectives of working-level employees, excluding executives and managers, to ensure it was a platform for open communication and idea sharing. By fostering this culture of communication and engagement among different ranks and generations, Hansol IONES is committed to internalizing the social value of ESG principles.

Operating a flexible work system, "For Me"

Hansol PNS

Hansol PNS Paper Distribution Division operates the "For Me System" as part of its flexible work system, which can be described as "Friday for Me." Under the system, employees can enjoy a refreshing period with a three-day break after four days of work. In addition to the 16 days of annual paid holidays, an additional eight days are granted, providing a total of 24 days of rest. This allows employees to take every other Friday off. The second and fourth Fridays of each week are designated as default holidays, but they can be distributed and used at the discretion of teams and individuals.

Introducing an internal referral system

Tapex

At Tapex, we continuously strive to enhance corporate competitiveness by expanding recruitment channels. As part of these efforts, we introduced an internal referral system for our employees starting in 2022. When an employee referred through this system completes one year of service, the recommender receives incentives ranging from KRW 500,000 to KRW 2 million. Furthermore, in 2022, we resumed the open recruitment of college graduates, which had been suspended since the second half of 2013. This allowed us to hire 10 new talents across various fields.

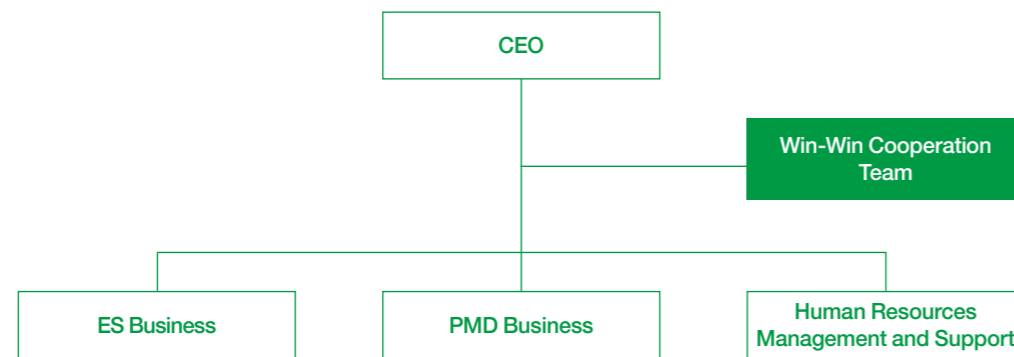
2. Shared Growth with Partners

Shared-growth program

Hansol Technics

Hansol Technics has taken a significant step toward promoting fair trade and shared growth with its partners by elevating the Win-Win Cooperation Team to a department directly under the CEO's supervision. Recognizing that mutual growth with partners is of paramount importance, we are committed to dismantling elements of unfair trade practices that may have persisted in the past. To foster a collaborative environment, we actively support technology exchanges, provide consulting and education, and share welfare systems to address the specific needs of our partners. By doing so, we aim to boost the job satisfaction of our partners' employees. This has led to a marked improvement in the quality of partners and facilitated the recruitment of exceptional talent, which has now become a distinctive competitive advantage for Hansol.

Hansol Technics Shared-Growth Promotion System



Major Activities in 2022

1. Patent application support
2. 2 patent training sessions
3. Technical data escrow system support
4. Early payment
5. Purchase consulting meetings
6. Profit sharing system
7. In-house venture support
8. Support for solar equipment supply
9. Safety and energy conservation consulting
10. Support for manufacturing process improvement
11. Leisure and holiday assistance
12. Long-term service support for key persons
13. Introduction of new policies and laws
14. Cultural activity support

* Starting in 2023, the list of programs will expand to include language learning programs alongside the existing offerings.

Hosting Mutual Cooperation Day

Hansol Technics

Hansol Technics' annual Mutual Cooperation Day is a flagship initiative aimed at fostering mutually beneficial growth with partners. During this event, we present shared growth activities conducted throughout the year and action plans for the upcoming year. Moreover, we take the opportunity to share the latest management trends and upcoming regulatory changes. Last year's Mutual Cooperation Day featured detailed purchasing strategies for each division for 2023 and purchase consultations to ensure business stability for our valued partners.

Supply-chain management of 180 partners

Hansol PaperTech

Hansol PaperTech's corrugated cardboard business is poised for significant expansion due to increasing demand, driven by environmental concerns, in the sectors of agricultural, marine packaging, and online shopping. Currently, Hansol PaperTech manages approximately 180 partners within its supply chain — comprising outsourcing-type partners like Logismile for logistics; Jeongjin Development for labor contracts; supplier-type partners with 35 raw material manufacturers; two incineration fuel companies; seven waste-treatment companies; and 15 subsidiary material companies — as well as 120 network-type partners.

Development of Fair-Subcontracting Guidebook

Hansol Inticube

Hansol Inticube has published and shared the Fair Subcontracting Guidebook to ensure compliance with fair and transparent subcontracting regulations. This guidebook offers practical guidelines and business support for subcontracting transactions in accordance with the Fair Transactions in Subcontracting Act, covering key aspects like definitions, requirements, and obligations of main contractors. Additionally, it includes detailed Q&A sections to clarify complex matters for practitioners, such as transaction requirements and exceptions.



3. Communication and Engagement with Local Communities

Museum SAN, a Space for Healing and Artistic Expression

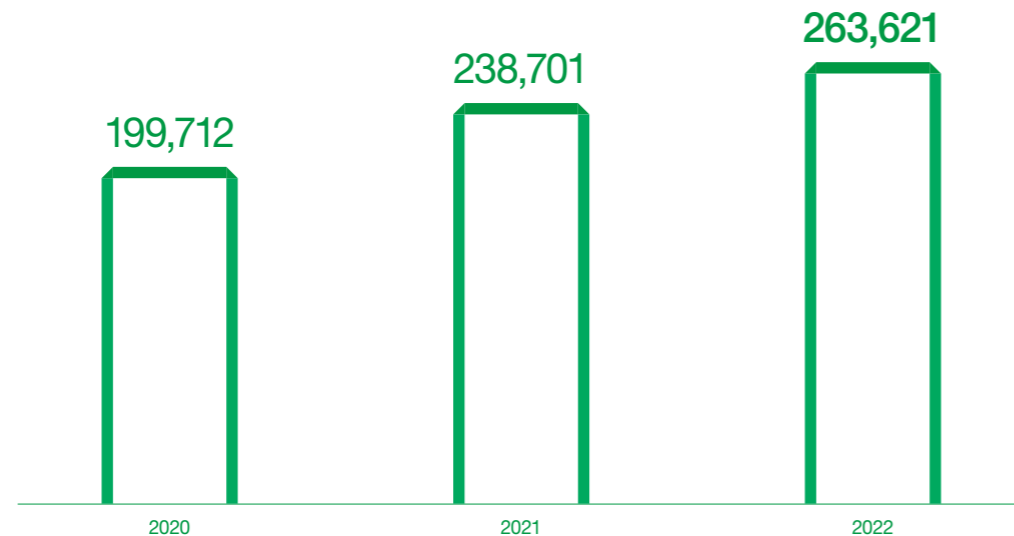


Hansol Cultural Foundation

Since its establishment in 2013, Museum SAN, operated by the Hansol Cultural Foundation, has become a prominent cultural and artistic space in Korea, offering a unique experience of healing through art amidst nature. With over 1.63 million visitors in the past decade and attracting more than 200,000 people annually, it has played a vital role in boosting the local economy. Museum SAN gained popularity with its minimalist architecture by Tadao Ando, featuring exposed concrete, and exhibition of James Turrell's art on an unprecedented scale in Asia. As the museum grew in prominence, it evolved into a more meaningful and cherished space. In 2023, Museum SAN celebrated its 10th anniversary with the exhibition "Tadao Ando-Youth," exploring Tadao Ando's architectural challenges and showcasing his remarkable world of architecture. This event reignited public interest in art and architectural culture.

Visitor Trends at Museum SAN: 2020-2023

(Unit: Persons)



Donation of solar power modules to local communities and social contribution activities

Hansol Technics

Hansol Technics is actively fulfilling its social responsibility by providing support for solar products, particularly in rural areas. In 2017, Hansol Technics became the first private company to contribute to the Rural Community Win-Win Cooperation Fund. They actively provide solar panels to improve residents' lives through projects like KEPCO KPS's "Sharing Light Panel" initiative, scholarship support in Incheon City, and Iksan Community Pension's solar power generation project. Moreover, the annual Oriental medicine sharing event in Deoksan-eup, Jincheon-gun, continues to provide support to local communities.

Hansol Technics Local Community Support Details

(Unit: KRW 1,000)

Support Program	Support Amount	
	Non-cash donation	Cash donation
Local farmer support (purchasing agricultural products: Shine Muscat)	2,500	131
Korea Electrical Safety Corporation - solar cell module donation	8,344	439
Donation of solar modules to the city of Iksan	11,757	618
KEPCO KPS: solar cell module donation	15,549	818
Assistance for the elderly living alone	1,000	-
Offering aid to children in unstable households	-	400
Oriental medicine sharing for residents in Deoksan-eup	-	20,000

ESG campaign for environmental preservation, beach cleaning, and waste electrical/electronic product recovery

Tapex

Acknowledging the gravity of marine pollution and plastic waste in oceans, we organized beach cleaning initiatives aimed at preserving the environment and safeguarding biodiversity, with active employee involvement. Beach cleaning involves picking up sea flotsam and garbage, akin to "combing" the beach for debris. In collaboration with Hwaseong City, home to the Tapax factory, 62 executives and employees took part in three organized sessions at Gungpyeong Port, demonstrating our commitment to preserving the coastal environment. Furthermore, we collaborated with the Korea Electronics Recycling Cooperative (KERC) to conduct a resource-recycling awareness campaign, through which we collected and donated waste electrical and electronic products, including used mobile phones. Both Tapex and Hansol Chemical participated in this campaign, aiming to amplify the positive impact and raise awareness about ESG practices.

Community engagement through regular volunteering

Hansol Holdings

Every fourth Friday of the month, approximately 15 employees from Hansol Holdings visit the Eunpyeong Rehabilitation Center in Seoul's Eunpyeong-gu to engage in volunteer activities. These activities include repairing facilities, managing donation items, and visiting nearby cafes and hair salons with the center's residents. Hansol Holdings is committed to maintaining these volunteer initiatives to foster community connections, uphold corporate social responsibilities, and embody the spirit of corporate sharing.

GOVERNANCE

Transparent Governance and Shareholder-Friendly Management

A robust governance structure sets the foundation for practicing environmental and social values in ESG management. Therefore, a strong and transparent governance structure is key to the company's sustained growth and future preparedness. The BOD must prioritize independence, expertise, and diversity to ensure balanced decisions for all stakeholders, including customers, shareholders, and suppliers.

For the Sustainability

Composed of various skilled directors, Hansol Group's Board of Directors plays a crucial role in transparent and independent decision-making, fostering efficient management through checks and balances. In line with the 2023 shareholder return policy, Hansol Holdings, Hansol Paper, Hansol Chemical, Hansol PNS, Hansol Technics, and Tapex distributed cash dividends. This was a significant milestone for Hansol Technics, achieving shareholder return for the first time in 12 years. Hansol actively addresses ESG information disclosure. While Hansol Paper is the only affiliate obligated to publish corporate governance reports, six other affiliates (Hansol Holdings, Hansol Technics, Hansol Chemical, Hansol Logistics, Hansol HomeDeco, and Hansol PNS) voluntarily disclose their ESG efforts. Furthermore, Hansol Holdings has established an ESG index management system for all affiliates, conducting comprehensive risk assessments and compliance management checks. A comprehensive strategy for financial and non-financial risk management was implemented to foster ESG practices across the group.

Key Sustainability Issues

Key Performance

1 A Board of Directors with Independence and Expertise

Group Corporate Governance Report Disclosure

7 affiliates

(Voluntary participation by six affiliates)

- Operation of audit committees for seven listed companies within the Group
- 42.9% outside directors at Hansol Holdings (2022)
- Hansol IONES established the "Committee for Enhanced Management Integrity and Transparency"

2 Ongoing Shareholder-Friendly Policy

Hansol Holdings 2022 dividend payout ratio

10.5%

(Consolidated basis)

- Hansol Holdings paid cash dividends of KRW 120 per share (dividend rate of 3.5%)
- Dividend payout achieved by Hansol Holdings · Hansol Paper · Hansol Chemical · Hansol PNS · Hansol Technics · Tapex
- Hansol Paper announced a year-end dividend plan for 2023

3 Enhanced Risk-Management System and Crisis-Response Capabilities

Hansol Group's ESG Management Indicators

Approximately **300**

(as of May 2023)

- Hansol Holdings reviewed risk management system of all affiliates and came up with an improvement plan
- Hansol Holdings conducted compliance management review for all affiliates
- Hansol Paper identified seven non-financial risks related to ESG

1. A Board of Directors with Independence and Expertise

Establishment of sound governance

The Board of Directors of Hansol Holdings possesses the authority to manage and oversee major company matters in compliance with relevant laws and articles of incorporation. It comprises a total of seven directors, consisting of four inside directors and three outside directors. Together, they perform essential functions in management decision-making and supervision. To adhere to regulations, no outside director serves for more than six years. The CEO of Hansol Holdings serves as the chair of the Board, streamlining decision-making processes and enhancing overall corporate competitiveness. Commencing from August 2023, the Board will report the process of materiality evaluation to the CEO, further bolstering the company's responsible ESG management practices. Furthermore, to ensure the establishment and efficient operation of the internal accounting management system, the head of the finance team, who serves as the internal accounting manager, participates in the Board meetings as an inside director.

BOD Composition

Category	Name	Gender	Term of office	Career highlights
Inside Directors	Lee Jae-hui	Male	2015. 1. 2 ~ 2024. 3. 30	CEO of Hansol Holdings (present)
	Jo Dong-gil	Male	1997. 2. 26 ~ 2024. 3. 30	Chair of Hansol Group (present)
	Jeon Hun	Male	2019. 3. 26 ~ 2025. 3. 29	Chief of Financial RM Team of Hansol Holdings
	Go Min-hyeok	Male	2020. 3. 30 ~ 2023. 3. 29	Chief of Human Resources Team of Hansol Holdings
Outside Directors	Son Il-tae	Male	2018. 3. 29 ~ 2024. 3. 30	Honorary Professor of Trade at Kyung Hee University
	Lee Nam-wu	Male	2020. 3. 30 ~ 2023. 3. 29	Visiting Professor of Yonsei University Graduate School of International Studies; Advisor at the Career Development Center
	Won Chang-yeon	Male	2023. 3. 29 ~ 2026. 3. 29	Lawyer at DongIn Law Group

Ensuring diversity and expertise of the BOD

Hansol Holdings selects inside directors for their expertise, ensuring a varied skill-set on the Board. Outside directors follow relevant laws and guidelines set by the Korea Institute of Corporate Sustainability. The company avoids candidates who could compromise shareholder value or hinder independence, and instead recommends individuals who can contribute to growth, offer valuable management advice, and support compliance efforts.

BOD meetings held in 2022

6 times in total

BOD attendance

100%

Board evaluation and remuneration system

Directors' remuneration budget is set at the general shareholders' meeting, but the actual operation is delegated to the Board of Directors. At the 2022 general shareholders' meeting, the approved remuneration budget was KRW 4 billion, and the total payment made to directors was KRW 2.46 billion.

(Unit: KRW million)

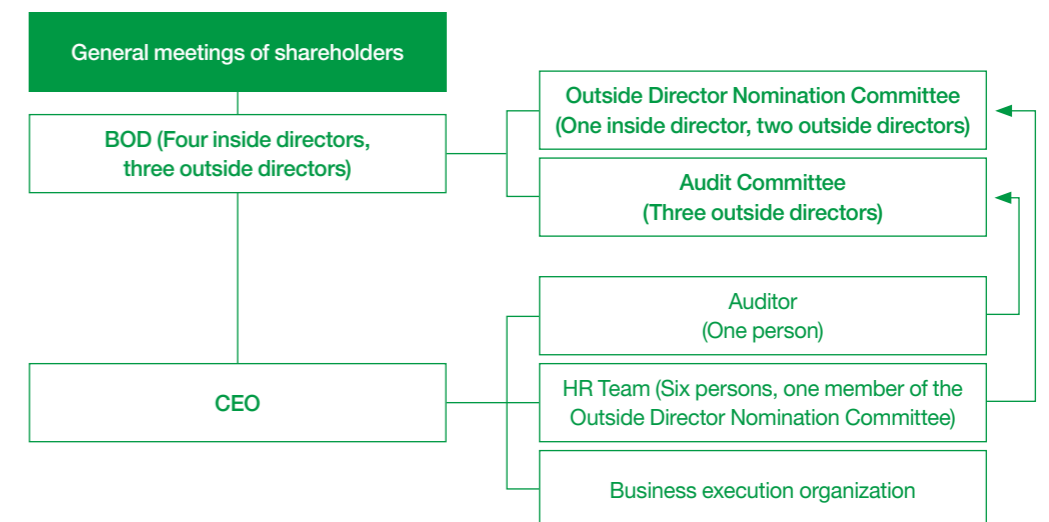
Category	Number of persons	Remuneration total	Average remuneration per person	Remarks
Registered directors (Excl. outside directors and audit committee members)	4	2,301	575	Four inside directors
Outside Directors (Excl. audit committee members)	-	-	-	-
Audit committee members	3	162	54	Three outside directors
Auditor	-	-	-	-

Operation of Audit Committee and Outside Director Nomination Committee

Hansol Holdings has set up and is currently operating the Audit Committee and Outside Director Nomination Committee within the Board of Directors. The Audit Committee comprises three outside directors, ensuring transparency and independence in the audit process while overseeing the BOD and management. The committees have supporting bodies in order to effectively fulfill their duties. An HR person is assigned to assist the Outside Director Nomination Committee and an audit team member assists the Audit Committee in fulfilling their respective duties.

BOD and Committee Organizational Chart

(as of May 2023)



Establishing the Committee for Enhanced Management Integrity and Transparency

Hansol IONES

Hansol IONES established the Committee for Enhanced Management Integrity and Transparency to ensure jeong-do (“right way”) management and transparent governance. Comprising two or more external experts and one or more outside directors, the committee meets quarterly to review the adequacy of executives’ corporate card details, monthly remuneration, and transaction history with stakeholders. By operating this committee, Hansol IONES aims to enhance management transparency and promote sustainable development.

Corporate Governance Report Disclosure

Since 2022, listed companies with assets of KRW 1 trillion or more are required by law to disclose corporate governance reports to stock exchanges. Hansol Paper is the only company meeting this requirement in the Hansol Group. Nevertheless, six companies within the Group — namely, Hansol Holdings; Hansol Technics; Hansol Chemical; Hansol Logistics; Hansol HomeDeco; and Hansol PNS — which are not required to disclose, have proactively chosen to voluntarily publish corporate governance reports, bringing the total to seven companies adhering to the disclosure standard. This reflects Hansol’s commitment to enhancing corporate transparency and preparing for upcoming changes, extending to listed companies with assets over KRW 500 billion starting in 2024. The voluntary disclosure efforts since 2018 have earned positive feedback in external ESG management evaluations for the Hansol Group.

2. Ongoing Shareholder-Friendly Policy

Implementation of mid- to long-term shareholder return policy

Hansol Holdings consistently discloses the details of its shareholder return policy, including cash dividends, on its website. In addition, information related to the shareholder return policy is provided in the IR materials issued quarterly and posted on the website, ensuring regular communication with shareholders. On May 13, 2022, the Board of Directors of Hansol Holdings resolved to maintain the existing shareholder return policy (2019-2021) until 2024 and made a fair disclosure of the information. Moving forward, the company aims to further improve the predictability of its dividend policy and enhance shareholder value.

Three-Year Dividend Data: 2020-2022

Category	Unit	2020	2021	2022
Dividend per share-common shares	KRW	120	120	120
Dividend rate per share-common shares	%	3.3	3.4	3.5
Total dividends	KRW 100 million	50	50	50
Dividend payout ratio	%	7.1	23.3	10.5

Returning to shareholders through end-of-year dividends

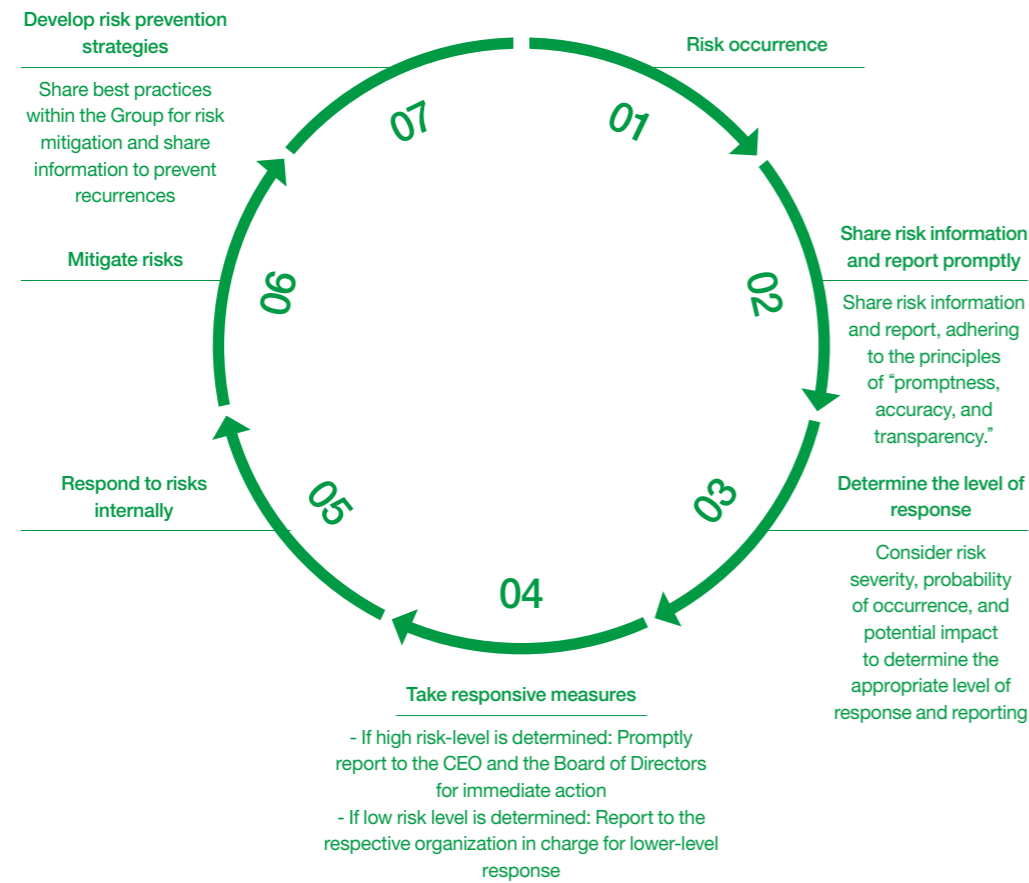
Hansol Paper

In its business report released in March 2021, Hansol Paper revealed its plan to utilize approximately 25-35% of its consolidated net profit as part of its shareholder return policy. Regarding the consolidated cash dividend trend, it recorded 28.1% in 2020 and 104.3% in 2021. Furthermore, Hansol Paper disclosed its dividend settlement plan at the end of November, around when the fiscal year concludes. The company announced a year-end dividend plan of KRW 500 per share for the end of 2022, considering the expected annual performance for the year. Subsequently, during the general shareholders’ meeting in March 2023, it confirmed a year-end dividend of KRW 500 and a mid-year dividend of KRW 200 per common stock.

3. Enhanced Risk-Management System and Crisis-Response Capabilities

Hansol Group's risk-response process

Hansol Group maintains a proactive approach to risk management, continuously monitoring and responding to potential risks. To ensure swift and effective responses, we have implemented a risk-response process, facilitating internal communication and information sharing. Additionally, we focus on identifying and managing risks that could significantly impact our business operations. We have also developed risk-recurrence prevention strategies for more effective responses to potential risks. As the Group's holding company, Hansol Holdings takes a comprehensive approach to risk management by conducting thorough assessments of risk across all affiliates. Through active collaboration, we address areas that require improvement.



Risk-assessment process

Hansol PaperTech

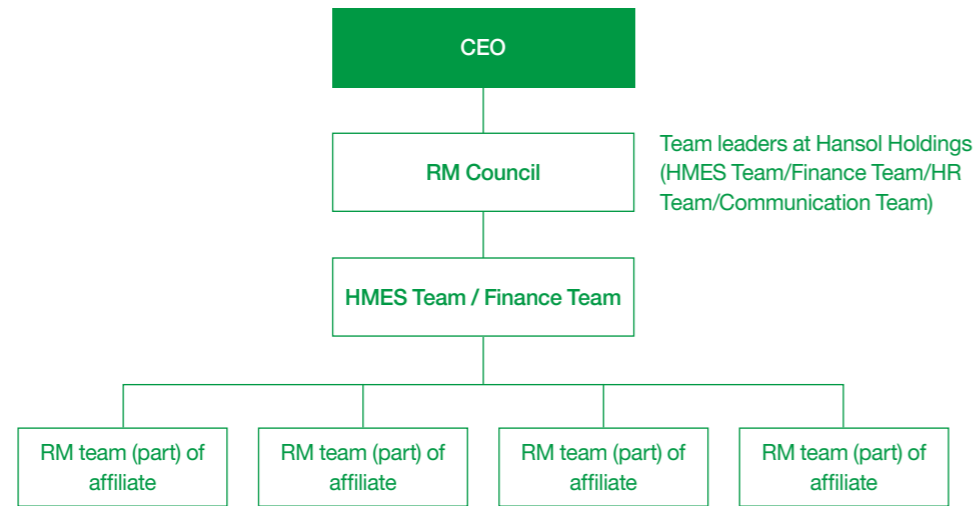
Hansol PaperTech prioritizes safety and a pleasant work environment by effectively managing major hazardous risk factors and minimizing the likelihood of accidents. This responsibility extends to key managers, including the CEO, CSO, and plant manager, along with the safety team leader, safety manager, and team leader (management supervisor). All employees are actively involved in risk assessments and contribute to establishing effective risk-reduction measures.

Category	Responsible body	Frequency	Major tasks
Identification and review of risk areas	Each team	Annual	Identification of risk factors that may affect safety and health, and identification of critical tasks
Implementation of risk assessment	Each team	Initial: Introduction of equipment Regular: Annual Irregular: Ongoing	Conduct risk assessment based on identified risk factors
Review of risk assessment results	Safety team	Annual	Confirmation of the adequacy of risk assessment results
Risk monitoring	Each team	Ongoing	Developing and executing improvement plans for critical risk-related tasks and risk factors rated at level 8 or above
Evaluation and improvement	Each team	Initial: Introduction of equipment Regular: Annual Irregular: Ongoing	Sharing of risk-assessment results with all members

Group's risk-reporting system

Hansol Holdings, as a holding company, effectively responds to changes in the internal and external business environment by establishing a risk-management council, which includes the CEO and executives. Through this structure, we conduct periodic risk inspections and respond rapidly to risks.

Reporting structure



Management process

01

Integrated Risk-Management Implementation

- Periodic evaluation of risk management status (Risk Monthly)
- Annual updates such as addition, improvement, and deletion of the risk classification system
- Joint inspection with affiliates on risks that may occur in case of investments and orders exceeding a certain size or with high risks

02

Reporting material issues to the BOD by the RM Council

Reporting material issues to the BOD by the RM Council

03

Risk-management targets and areas

- Targets: All affiliates (including subsidiaries)
- Areas: All areas with potential risks, including business, external communication, finance, compliance, and operation

* (Affiliates) Monitoring changes in the internal and external business environment and regular/ongoing risk assessments

Group's Risk-Classification System

Category	Level 1	Level 2	Level 3	
Financial risks	Market/customer	Trends (PESTEL)	Political/legal	
			Economic	
			Social	
			Technological	
			Environmental	
	Business	Investment in shares	Business model	Business model verification
				Scalability and vision
				Laws and regulations
				Project structure
				Complaints
Financial	Orders	Project	Exclusion clauses in contracts	
			Construction and delivery period	
			Quality/performance assurance	
			Patents/trademarks	
			-	
	Market	Exchange rates	-	
			Interest rates	-
			Financing	-
			Profit and loss	-
			Tax	-
Liquidity	Tax	-		
		Credit Rating	-	
		Environment	Climate change, carbon emissions	
		Environment/safety	Safety	Safety accidents
				Laws
Compliance	Compliance	Anti-corruption	-	
		Disclosure	-	
		Unethical conducts	-	
		Security	-	
Non-financial risks	Operation	HR, labor	-	
		Supply chain	-	
		Quality/certifications	-	
		Bonds management	-	
		External communication	Crisis response	Brand
Brand	Brand	Undermining the value of brand equity	Misuse of CI	
		Market/shareholders	IR	-

Risk-management system review and improvement plans

In 2022, Hansol Group conducted a comprehensive risk survey across all affiliates using the Group Risk Classification System to identify areas needing improvement. The Hansol Holdings' HMES team and the Financial RM team, in collaboration with affiliates, will be reviewing investment and order receipts that could pose risks or require discussion. In March 2023, the progress of improvement measures for incomplete items was monitored and reported on. To enhance management sustainability and prevent risk occurrence, annual inspections will be conducted in January each year to update the risk items that need attention.

Implementation of compliance assessment

Since 2021, Hansol Group has been assessing the compliance-management status of each affiliate. The evaluation covers five key areas: compliance leadership; planning; execution and support; internal audit; and improvement. Based on interviews with executives and employees, along with data analysis, specific action tasks are derived for each affiliate. The Group aims to make compliance management the foundation of sustainability, increase awareness of it among employees, reduce legal and regulatory risks, and enhance overall compliance management.

Enhancing compliance management: Key tasks for affiliates

Hansol Paper <ul style="list-style-type: none"> · Raise risk awareness of field workers and encourage them to actively lead improvement activities (direct management, partners, and all subsidiaries) · Establish a subsidiary compliance system and stabilize operation 	Hansol Technics <ul style="list-style-type: none"> · Establish and operate compliance management system for overseas corporations and subsidiaries · Enhance the environmental risk management system · Reinforce on-site safety and environmental accident-prevention capabilities 	Hansol Home Deco <ul style="list-style-type: none"> · Reinforce risk management for fair trade, subcontracting, internal control, etc.
Hansol Logistics <ul style="list-style-type: none"> · Reinforce compliance system and self-audit for subsidiaries · Improve accident-prevention management for transportation companies and partners 	Paper Distribution Division, Hansol PNS <ul style="list-style-type: none"> · Reinforce education and communication to strengthen organizational participation in compliance management 	Hansol PNS IT Service Division / Hansol Inticube <ul style="list-style-type: none"> · Strengthen organizational participation in compliance management through education and communication · Establish a subsidiary compliance system and stabilize operation

Establishing the ESG Indicator Management System

Hansol Group has established the ESG Indicator Management System to implement more systematic and efficient sustainability management. Since January 2023, all affiliates have been utilizing the system. Accurate measurement guidelines for environmental data, essential for risk management in the industry, were established in collaboration with the Korean Standards Association. The company's integrated ESG data management aims to position Hansol as a leading force in sustainable management practices.

ESG Indicator Management System Details

Main menu	Submenu	Summary
ESG indicator management	Indicator pool search	Out of 1,000 evaluation items from global disclosure guidelines (GRI, TCFD, and SASB) and domestic and overseas ESG evaluation agencies (KCGS, DJSI, MSCI), indicators are selected and managed based on importance, usability, representativeness, clarity, and urgency.
	Indicator classification and management	
ESG indicator selection	Indicator selection by industry group	Utilize 2 ESG inspection processes <ul style="list-style-type: none"> · Review and assess about 60 common indicators for all affiliates · Use industry-specific indicators according to operating businesses of each affiliate
	Affiliate industry classification	
	Affiliate ESG-indicator management	
ESG inspection	Measurement plan establishment	<ul style="list-style-type: none"> · Provide a comprehensive overview of indicators for all affiliates for easy monitoring. · Implement continuous data management by defining data-management cycles and assigning responsible personnel.
	Indicator inspection	
	Approval of measurement results	
ESG data	Three-Year data	<ul style="list-style-type: none"> · Compare and manage ESG data entered by each company for up to three years for each indicator
	Indicator performance by company	
Bulletin board	Notifications	<ul style="list-style-type: none"> · Share notifications and facilitate information-sharing among ESG working-level staff
	Q&A	



Appendix

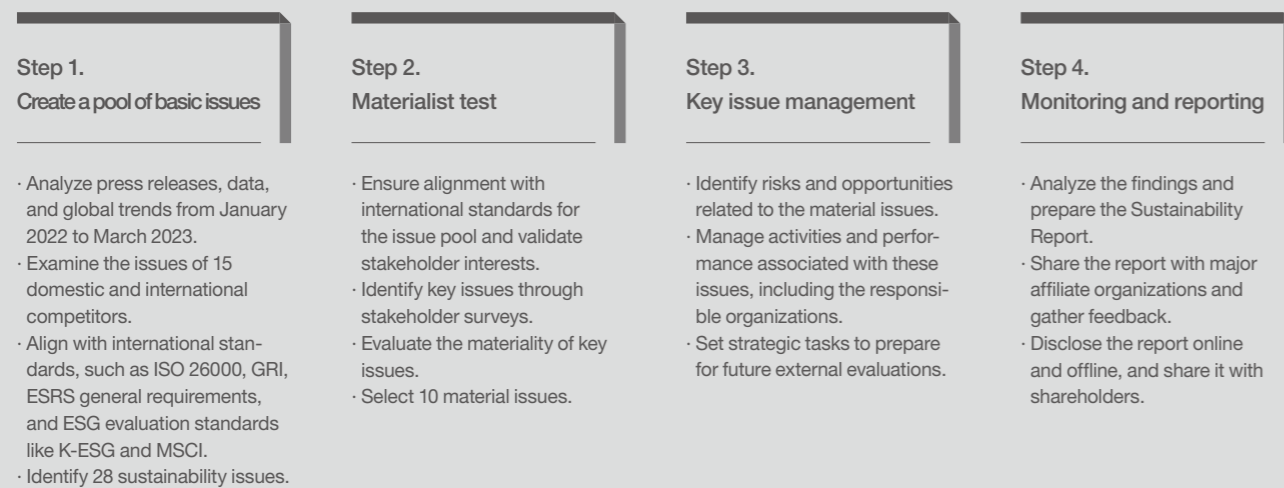
86	Materiality Test	118	Affiliates with Certifications
88	Data Center	119	Awards
112	GRI Content Index	120	Local Business Sites
115	UN Sustainable Development Goals	121	Membership of Associations
116	Independent Assurance Statement		

MATERIALITY TEST

Hansol Group selects key issues by analyzing the interests of stakeholders, at home and abroad, and their impact on business. The materiality tests are conducted by comprehensively considering international sustainability-management standards, such as GRI Standards, UN SDGs, and ISO26000; social issues exposed to the media; and sustainable management trends in the same industry. In 2023, we identified and disclosed 10 key issues, along with our management approach and achievements in this report.

Materiality-Test Process

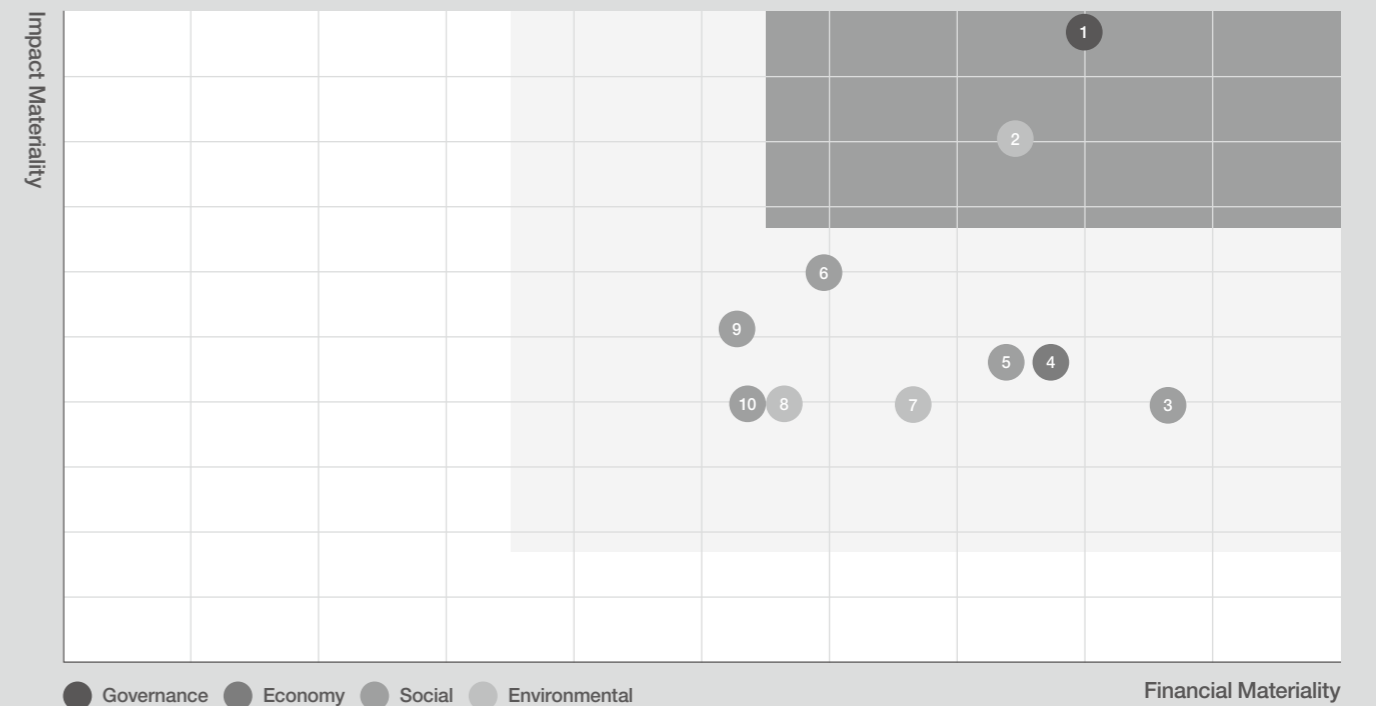
To establish the core reporting content of the sustainability report and prioritize sustainability-management issues, we conducted a materiality test following the Global Reporting Initiative (GRI) guidelines. The test consisted of the following four steps:



Channels of communication with stakeholders

Stakeholders	Channels of communication	Issues of interest
Employees	<ul style="list-style-type: none"> Communication board Investor presentation Communication with management In-house broadcasting Employee-satisfaction survey 	<ul style="list-style-type: none"> Labor-management council Employee portal Employee training Workshop
Partner companies	<ul style="list-style-type: none"> Meetings Mutual growth workshops Mutual growth council 	<ul style="list-style-type: none"> Surveys Mutual growth day
Shareholders and investors	<ul style="list-style-type: none"> General meetings of shareholders Marketing brochures Investor meetings Calls for outside director candidates 	<ul style="list-style-type: none"> Disclosure, business performance presentation Business reports Sustainability Report Corporate governance reports
Government and local governments	<ul style="list-style-type: none"> Ministry of Environment Participation in policy research 	<ul style="list-style-type: none"> Ministry of Economy and Finance FSC, ISO Collaborative program
Customers	<ul style="list-style-type: none"> Website YouTube Customer satisfaction surveys 	<ul style="list-style-type: none"> Blog Brochures Customer events Facebook Marketing videos Exhibitions and fairs
Local community / NGO	<ul style="list-style-type: none"> CSR activities Communication with local communities near business sites Sustainability Reports 	<ul style="list-style-type: none"> Reduction of waste water and waste, pollutant management in worksites, job creation and maintenance, CSR activities, development of the local economy

Materiality-Test Results



Reports on key issues as a result of the materiality tests

Category	Key issues	GRI Content Index	Report details	Page no.
Governance	1 Ethical management and anti-corruption	GRI 3-3, GRI 205-2	Ethics and compliance management	p.22-24, 34, 81-83
Environmental	2 Management of air pollutants in the manufacturing process	GRI 3-3, GRI 305-8	Environmental pollutants and waste management	p.44, 56
Social	3 Creation of a safe work environment	GRI 3-3, GRI 403	Safety and health management	p.25, 28, 29, 64
Economy	4 Enhancing product responsibility and customer satisfaction	GRI 3-3, GRI 416	Management for customer satisfaction	p.30, 31, 44
Social	5 Promotion of work-life balance	GRI 3-3, GRI 401-3	Growth with employees	p.20, 64, 66, 67
Social	6 Supporting employee capacity-building	GRI 3-3, GRI 404	Growth with employees	p.62, 63
Environmental	7 Minimizing raw material consumption and promoting recycling	GRI 3-3, GRI 306-4	GHG-emissions reduction and energy conservation	p.21, 54, 58, 59
Environmental	8 Safe waste, wastewater, and chemical discharge management	GRI 3-3, GRI 303-2	Environmental pollutants and waste management	p.21, 56
Social	9 Fostering an agile organizational culture	-	Growth with employees	p.65-67
Social	10 In-house human rights policy and education	-	Human rights in business	p.62

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Hansol Holdings

Economy

Category	Unit	2020	2021	2022
Income statement	Sales	26,323	29,323	34,361
	Selling, general, and administrative expenses	15,360	16,019	18,082
	Operating income	10,963	13,304	16,279
	Financial income	412	964	1,470
	Financial expenses	367	406	1,036
	Other income	10,194	2,233	248
	Other expenses	30	63	2,769
	Net income before the deduction of corporate tax expenses	21,171	16,031	14,190
Balance sheet	Assets	56,289	64,779	73,919
	Current assets	381,185	386,883	382,738
	Non-current assets	9,160	9,394	10,299
	Liabilities	1,279	7,373	6,566
	Current liabilities	427,035	434,896	439,792
	Non-current liabilities			

(Based on the separate financial statements)

Social

Category	Unit	2020	2021	2022	
Total number of employees	Persons	47	50	46	
Current employees (by employment type)	Executives	11	10	8	
	Female	0	0	0	
	Male	11	10	8	
	Total	35	39	36	
	Permanent	6	9	10	
	Female	29	30	26	
	Male	1	1	2	
	Total	0	0	1	
	Non-permanent	0	0	1	
	Female	1	1	1	
Male					
Outsourced workers	Persons	0	0	0	
Current employees (by work schedule)	Full-time	44	47	44	
	Part-time	3	3	2	
Current employees (by location)	Domestic	45	47	44	
	Overseas	2	3	0	
No. of male employees	Persons	41	41	35	
Ratio of male employees	%	64	66	65	
No. of female employees	Persons	6	9	11	
Ratio of female employees	%	13	18	24	
No. of male executives	Persons	11	10	8	
Ratio of male executives	%	23	20	17	
No. of female executives	Persons	0	0	0	
Ratio of female executives	%	0	0	0	
No. of female managers (manager level or higher)	Persons	1	1	3	
Ratio of female managers (manager level or higher)	%	2	2	6.5	
Employee diversity	No. of employees with disabilities	Persons	0	0	0
	Ratio of employees with disabilities	%	0	0	0
	No. of senior employees (Over 55 years old, excluding executives)	Persons	0	0	5
	Ratio of senior employees	%	0	0	11
	Hiring of the socially disadvantaged	Persons	2	3	2
	Ratio of foreign employees	%	4	6	4
	No. of employees with high school degree	Persons	1	1	2
	Ratio of employees with high school degree	%	2	2	4
	No. of veterans	Persons	0	0	0
	Ratio of veterans	%	0	0	0

Category	Unit	2020	2021	2022		
Employee diversity	Persons in the age group (Under 30 years of age)	Persons	0	0	1	
	Percentage (Under 30 years old)	%	0	0	2	
	Persons in the age group (30 ~ 50 years of age)	Persons	35	36	35	
	Percentage (30 ~ 50 years of age)	%	74	72	76	
	Persons in the age group (Above 50 years of age)	Persons	12	14	10	
	Percentage (Above 50 years of age)	%	26	28	22	
	Male		9	11	6	
	female		2	3	2	
	New hires	Under 30	Persons	0	0	1
		30 ~ 50		10	13	7
Above 50			1	1	0	
Average male salary		KRW million	135	139	196.1	
Average female salary		million	55	75	67.6	
Ratio of base salaries of female to male		%	40	53	34	
Average male executive salary		KRW million	-	-	446.43	
Average female executive salary		million	-	-	0	
Ratio of base salary of female executive to male executive		%	-	-	0	
Average male permanent employee salary		KRW million	-	-	117.21	
Average female permanent employee salary	million	-	-	71.88		
Ratio of base salary of female permanent employee to male permanent employee	%	-	-	61		
Average male non-permanent employee salary	KRW million	-	-	82.54		
Average female non-permanent employee salary	million	-	-	24.7		
Ratio of base salary of female non-permanent employee to male non-permanent employee	%	-	-	30		
Job security	Average years of service	Years	9.5	9	9.7	
	Total number of employee turnovers	Persons	-	-	13	
	Voluntary turnover	%	-	-	69.2	
	Non-voluntary turnover	%	-	-	30.8	
Talent development	No. of beneficiaries of training/education	Persons	47	50	46	
	Total budget for employee training/education	KRW million	29	17	19.9	
	Training expenses per employee	KRW 1,000	627	358	433	
	Total no. of hours of training	Hours	2,947	1,794	1,098	
Average training hours per employee	Hours	54	49	23.87		
Industrial accidents	No. of industrial accidents occurred	Ea.	0	0	0	
	Industrial accident rate	%	0	0	0	
	No. of deaths	Persons	0	0	0	
	No. of injuries	Persons	0	0	0	
Fair trade	Duration of work-hour loss	Hours	0	0	0	
	No. of violations of fair trade laws	Ea.	0	0	0	
	Fines imposed	KRW million	0	0	0	

Category	Unit	2020	2021	2022	
Information-security breaches	Customer-data leakage, theft, and loss	Ea.	0	0	0
Workplace discrimination	No. of complaints filed in relation to workplace discrimination	Ea.	0	0	0
Incidents of non-compliance with regulations and internal codes	No. of violations that resulted in sanctions		0	0	0
	No. of warnings from non-compliance	Ea.	0	0	0
Work losses	No. of violations of internal codes		0	0	0
	No. of work-loss cases in partner companies	Ea.	-	-	0
Parental leave	Employees who have taken parental leave	Total	-	-	0
	Male		-	-	0
	Female		-	-	0
	No. of employees who have returned to work after parental leave	Total	-	-	1
Male		-	-	0	
Female		-	-	1	
Human rights policies and procedures	Return rate of employees who have taken parental leave	%	-	-	100
	No. of employees who have worked over 12 months after returning from parental leave	Total	-	-	0
	Male		-	-	0
	Female		-	-	0
CSR	Ratio of employees who have worked over 12 months after returning from parental leave	%	-	-	0
	Duration of human rights training	Hours	43	50	46
	Duration of education for prevention of workplace bullying	Total hours (Per employee)	43(1)	49(1)	46(1)
	Duration of education for sexual harassment prevention	43(1)	49(1)	46(1)	
Other education (Human rights education for people with disabilities, etc.)	43(1)	49(1)	46(1)		
Investment in CSR (incl. donation)	Cash donations	KRW million	20	10	10
	Non-cash donations		0	0	0
	Total volunteer hours	Hours	-	480	564
	Average volunteer hours per employee		-	9.6	12
Direct beneficiaries of the support programs	Persons	-	250	406	

*Industrial-accident rate: (number of injured workers / number of workers subject to industrial accidents) × 100, applies to all affiliates

* Base salary ratio: Calculated based on average remuneration, applies to all affiliates

* Parental leave: Data for 2020 and 2021 were not collected; new disclosures in 2022

Governance

Category	Unit	2020	2021	2022	
Board of Directors	No. of Board meetings	Times	9	7	6
	No. of agendas	Ea.	22	15	13
	Preliminary deliberation	%	100	100	100
	Decisions on revised agenda	Ea.	0	0	0
	Reported agenda		10	8	8
	BOD attendance rate	%	98.4	100	100
	Non-executive attendance rate	%	100	100	100
	Male	Persons	7	7	7
Female		0	0	0	
Board diversity	Ratio of female directors in the BOD	%	0	0	0
	Under 30 years		-	-	0
	30 ~ 50 years	Persons	-	-	0
	Above 50 years		-	-	7
	No. of outside directors		-	-	3
	Ratio of outside directors	%	-	-	43
	No. of Board members who received ethics training	Persons	7	7	7
	Ratio of Board members who received ethics training	%	100	100	100
Anti-corruption policies and procedures	Total no. of employees who received ethics training	Persons	47	50	46
	Ratio of employees who received ethics training	%	100	100	100
	Total no. of Board members who have signed the ethics pledge	Persons	7	7	7
	Ratio of Board members who have signed the ethics pledge	%	100	100	100
	Total no. of employees who have signed the ethics pledge	Persons	45	47	46
	Ratio of employees who have signed the ethics pledge	%	96	94	100
	No. of anti-corruption violations	Ea. (persons)	0	0	0

* Newly disclosed indicators for 2022: Age-based classification of Board members used by Hansol Holdings is uniformly applied across all affiliates.

Economy

Category	Unit	2020	2021	2022	
Income statement	Sales	1,509,871	1,834,224	2,457,953	
	Gross profit	300,684	361,179	572,466	
	Selling, general, and administrative expenses	206,123	300,451	442,241	
	Operating income	94,561	60,728	130,226	
	Financial income	10,165	4,090	12,561	
	Financial expenses	26,282	28,022	45,852	
	Other income	13,530	16,429	48,250	
	Other expenses	19,784	24,479	49,357	
	Net income before the deduction of corporate tax expenses	72,189	28,746	95,828	
	Balance sheet	Assets			
		Current assets	567,002	663,678	1,007,797
Non-current assets		1,173,433	1,224,155	1,202,219	
Liabilities					
Current liabilities		618,262	727,426	1,082,342	
Non-current liabilities		487,310	481,074	385,130	
Shareholders' equity in the parent company		634,821	679,292	742,419	
Shareholders' equity in the non-controlling company		41	41	125	
R&D		Total R&D expenses for the current period	5,870	6,321	8,769
		R&D expenses/sales	0.52	0.48	0.36
	No. of R&D personnel	33	49	55	

(Based on the consolidated financial statements)

Environment

Category	Unit	2020	2021	2022		
Consumption of raw materials	Raw materials consumed	Tons	1,165,645	1,222,487	1,211,504	
Consumption of materials that contain recycled materials	Amount of recycled materials (reused raw materials) consumed	Tons	579,830	587,022	562,309	
	Ratio of recycled materials (reused raw materials) consumed	%	49.7	48.0	46.4	
	Total energy consumed		15,753	16,488	16,968	
Energy consumption	Total energy consumed	TJ	2,358	2,347	2,176	
	Scope 1 energy consumption		13,395	14,141	14,792	
	Scope 2 energy consumption		23,735,541	26,733,756	30,530,836	
Water consumption (amount, based on domestic data)	Total amount of water consumed	Tons	6,076,727	7,276,014	6,181,350	
	Amount of water consumed		280,915	199,624	253,947	
	Amount of underground water consumed		9,098,761	9,923,582	10,866,778	
	Recycled water		11,585,858	9,334,536	13,228,761	
	Amount of water reused		8,279,138	9,346,482	9,780,699	
	Ratio of water reused	%	35	35	32	
	GHG emissions	Direct emissions (Scope 1)	TCO ₂ eq	341,087	296,456	303,070
Indirect emissions (Scope 2)			587,461	626,738	725,892	
SO _x		Tons	2.3	0.8	15	
Air pollutants	NO _x		89.9	73.7	8,982	
	HCl		5.4	5.4	520	
	PM		8.4	14.7	184	
	BOD		9	8	27	
Water pollutants	COD	ppm	32	31	74	
	SS		13	11	95	
	Waste	Total amount of waste (amount treated in Korea)	Tons	250,523	235,754	346,280
		Waste discharged at business sites		235,648	220,428	323,015
Designated waste			2,332	2,172	5,317	
Domestic waste			12,543	13,154	17,947	
Waste recycling rate	Recycled amount		134,457	122,424	134,559	
	Waste recycling ratio	%	37.3	40.0	40.0	

Category	Unit	2020	2021	2022	
Violations of environmental laws and regulations	Amount of fines	KRW million	3	2	0
Environmental expenses and investments	Environmental investments	KRW million	5,600	6,000	1,488
Sales of green products	Sales of green products and services	KRW million	-	-	146,470
	Total sales		-	-	207,801
	Ratio of sales related to green products	%	-	-	70.5

* Total energy consumed in 2021: Discrepancies in statistics due to the difference between the report publication date and data collection period.
 * Amount of water pollutants discharged: Units extracted from Hansol Paper's Sustainability Report
 * Emissions increased due to the incorporation into the Environmental Business Headquarters in 2022.

Social

Category	Unit	2020	2021	2022		
Total number of employees	Persons	1,186	1,202	1,657		
Current employees (by employment type)	Total		27	24	24	
	Executives		0	0	0	
	Female		27	24	24	
	Male		1,168	1,186	1,575	
	Permanent	Persons	101	99	129	
	Male		1,067	1,077	1,464	
Non-permanent	Total		18	16	64	
	Female		6	4	14	
	Male		12	12	50	
	Outsourced workers	Persons	0	0	0	
Current employees (by work schedule)	Full-time	Persons	1,168	1,186	1,575	
	Part-time		0	0	0	
	Current employees (by location)	Domestic	Persons	1,178	1,192	1,639
		Overseas		8	10	18
	Employee diversity	No. of male employees	Persons	1,078	1,089	1,514
		Ratio of male employees	%	90.4	90.6	91.4
No. of female employees		Persons	107	113	143	
Ratio of female employees		%	9.6	9.4	8.6	
No. of male executives		Persons	27	24	24	
Ratio of male executives		%	2.2	1.9	1.7	
No. of female executives		Persons	0	0	0	
Ratio of female executives		%	0	0	0	
No. of male managers (manager-level or higher)		Persons	180	197	288	
Ratio of male managers (manager-level or higher)		%	15.1	16.3	17.3	
Employee composition	No. of female managers (manager-level or higher)	Persons	3	5	8	
	Percentage of female managers (manager-level or higher)	%	0.3	0.4	0.4	
	No. of employees with disabilities	Persons	30	34	43	
	Ratio of employees with disabilities	%	2.5	2.8	2.9	
	No. of veterans	Persons	21	25	24	
	Ratio of veterans	%	1.8	2.1	1.5	
	Persons in the age group (Under 30 years of age)	Persons	162	176	254	
	Percentage (Under 30 years of age)	%	14	15	15	
	Persons in the age group (30 ~ 50 years of age)	Persons	763	702	917	
	Percentage (30 ~ 50 years of age)	%	64	58	55	
New hires	Persons in the age group (Above 50 years of age)	Persons	251	324	486	
	Percentage (Above 50 years of age)	%	21	27	29	
	Male		73	114	211	
	female		15	14	26	
	By age	Under 30 years	Persons	51	89	124
		30 ~ 50 years		32	43	75
		Above 50 years		4	2	0

Category	Unit	2020	2021	2022		
Employee compensation	Average male salary	KRW million	75	73	90	
	Average female salary		49	49	64	
	Ratio of base salary of female to male	%	65	67	72	
	Average male executive salary	KRW million	-	-	338	
	Average female executive salary		-	-	0	
	Ratio of base salary of female executive to male executive	%	-	-	0	
	Average male permanent employee salary	KRW million	-	-	61	
	Average female permanent employee salary		-	-	48	
	Ratio of base salary of female permanent employee to male permanent employee	%	-	-	78	
	Average male non-permanent employee salary	KRW million	-	-	43	
Job security	Average female non-permanent employee salary		-	-	26	
	Ratio of base salary of female non-permanent employee to male non-permanent employee	%	-	-	61	
	Average years of service	Years	17.6	17.5	15.8	
	Total number of employee turnover	Persons	74	111	182	
	Voluntary turnover	%	3.4	6.0	8.7	
	No. of beneficiaries of training/education	Persons	1,186	1,202	1,657	
	Total budget for employee training/education	KRW million	542	986	1,226	
	Training expenses per employee	KRW 1,000	476	820	740	
	Average training hours per employee	Hours	61	53	51	
	Industrial accidents	No. of industrial accidents occurred	Ea.	7	5	3
Industrial accident rate		%	0.82	0.57	0.28	
No. of deaths		Persons	0	0	0	
Mutual growth	No. of injuries		7	5	3	
	Duration of work-hour loss	Hours	878	2,096	9,336	
	Total no. of partner companies	Ea.	1,001	1,027	1,226	
	Total purchase from partners	KRW million	173,727	193,016	246,200	
	No. of violations of fair trade laws	Ea.	0	0	0	
Fair trade	Fines imposed	KRW million	0	0	0	
	Customer-data leakages, theft, and losses	Ea.	0	0	0	
Workplace discrimination	No. of complaints filed in relation to workplace discrimination	Ea.	0	0	0	
	Incidents of non-compliance with regulations and internal codes		1	0	0	
Work losses	No. of warnings due to non-compliance	Ea.	0	1	0	
	No. of violations of internal codes		0	0	0	
Parental leave	No. of work-loss cases in partner companies	Ea.	-	-	0	
	Employees who have taken parental leave	Total		1	2	4
		Male		0	1	0
		Female		1	1	4
	No. of employees who have returned to work after parental leave	Total	Persons	1	6	4
Female			0	1	0	
	Male		1	5	4	

Category	Unit	2020	2021	2022		
Parental leave	Return rate of employees who have taken parental leave	%	100	100	80	
	No. of employees who have worked over 12 months after returning from parental leave	Total		10	6	4
		Male	Persons	2	1	0
		Female		8	5	4
	Ratio of employees who have worked over 12 months after returning from parental leave	%	100	100	100	
Human rights policies and procedures	Human rights training (per person)	Hours	3.08	5.82	3.33	
	Duration of education for prevention of workplace bullying	Total hours (Per employee)	1,185(1)	1,202(1)	1,788	
	Duration of education for sexual harassment prevention		1,185(1)	1,202(1)	1,732	
	Other education (Human rights education for people with disabilities, etc.)		1,185(1)	1,202(1)	1,620	
	Investment in CSR (incl. cash donation)	Cash donation KRW million	307	336	328	
CSR	Total volunteer hours	Hours	3,000	115	230	
	No. of participants	Persons	906	40	57	
	Direct beneficiaries of the support programs	Persons	491	360	700	

Incidents of non-compliance with regulations and internal codes
 1. Judicial agency sanctions in 2020: KRW 17 million
 2. Tax authorities sanctions in 2021: KRW 3,814 million

Governance

Category	Unit	2020	2021	2022	
Board of Directors	No. of Board meetings	Times	13	8	11
	Preliminary deliberation	%	100	100	100
	BOD attendance rate		97.80	100	100
Board diversity	Male	Persons	7	8	8
	Female		0	0	0
	Ratio of female directors in the BOD	%	0	0	0
	Under 30 years	Persons	-	-	0
	Above 50 years		-	-	8
Anti-corruption	No. of outside directors		3	3	5
	Ratio of outside directors	%	11	12.5	20.8
	Total no. of business sites		6	6	6
	No. of business sites that conducted anti-corruption risk assessment	Ea.	6	6	6
	Ratio of business sites that conducted anti-corruption risk assessment	%	100	100	100
	No. of Board members who received ethics training	Persons	7	8	8
Anti-corruption policies and procedures	Ratio of Board members who received ethics training	%	100	100	100
	Total no. of employees who received ethics training	Persons	1,185	1,202	1,661
	Ratio of employees who received ethics training	%	100	100	100
	Total no. of Board members who have signed the ethics pledge	Persons	7	8	8
	Ratio of Board members who have signed the ethics pledge	%	100	100	100
Anti-corruption violations	Total no. of employees who have signed the ethics pledge	Persons	-	1,139	1,657
	Ratio of employees who have signed the ethics pledge	%	-	94.7	98.9
	No. of anti-corruption violations	Ea. (persons)	0	0	0

Economy

Category	Unit	2020	2021	2022
Income statement	Sales	100,216	134,802	130,363
	Gross profit	11,406	15,954	16,222
	Selling, general, and administrative expenses	9,005	9,840	10,814
	Operating income	2,401	6,113	5,408
	Financial income	221	127	194
	Financial expenses	777	359	336
	Other income	98	322	1,011
	Other expenses	968	854	526
	Net income before the deduction of corporate tax expenses	975	5,350	5,751
	Balance sheet			
Assets	Current assets	22,734	27,362	29,294
	Non-current assets	48,116	48,115	49,235
Liabilities	Current liabilities	24,582	25,948	22,512
	Non-current liabilities	3,417	2,170	1,726
Capital		43,461	47,358	54,290

(Based on the separate financial statements)

Environment

Category	Unit	2020	2021	2022
Consumption of raw materials	Tons	303,368	333,932	292,719
Consumption of materials that contain recycled materials	Amount of recycled materials (reused raw materials) consumed	300,017	332,722	270,925
	Ratio of recycled materials (reused raw materials) consumed	98.9	99.6	92.6
	Ratio of recycled materials (reused raw materials) consumed	%	98.9	99.6
Energy consumption	Total energy consumed	1,168	1,235	1,449
	Scope 1 energy consumption	380	450	352
	Scope 2 energy consumption	788	785	1,097
Water consumption (amount, based on domestic data)	Total amount of water consumed	2,218,918	1,969,116	1,433,016
	Amount of water consumed	6,503	5,475	9,227
	Amount of underground water consumed	512,483	230,372	1,152,055
	Amount of stream water consumed	1,352,722	1,458,720	271,734
	Amount of water reused	347,210	274,549	38,449
	Ratio of water reused	15.6	13.9	2.7
GHG emissions	Direct emissions (Scope 1)	68,949	38,275	75,061
	Indirect emissions (Scope 2)	75,695	37,554	35,059
	SOx	4.07	3.9	2.16
Air pollutants	NOx	38.89	39.32	26.77
	PM	1.75	2.25	1.56
	PFC	0	0	245,736
Water pollutants	BOD	3.7	15.4	1.8
	TOC	-	-	20.2
	SS	5	5.2	4.1
	TN	8	5.5	4.5
Waste	Total amount of waste	21,749	18,902	11,665
	Waste discharged at business sites	19,563	16,772	9,935
	Designated waste	2,186	2,130	1,730
	Domestic waste	0	0	0
	Waste recycling rate	28.9	16.4	26.9
Environmental expenses and investments	Amount of environmental investments	647	543	932
	Environmental expenses	4,470	4,756	6,248

Social

Category	Unit	2020	2021	2022
Total number of employees	Persons	131	142	143
Executives	Total	4	5	4
	Female	0	0	0
	Male	4	5	4
	Total	120	124	124
	Female	4	4	4
	Male	116	120	120
Current employees (by employment type)	Total	4	11	13
	Female	0	0	0
	Male	4	11	13
	Permanent	Persons	3	2
Outsourced workers	Full-time	131	142	143
	Part-time	0	0	0
Current employees (by location)	Domestic	131	142	143
	Overseas	0	0	0
Employee diversity	No. of male employees	124	136	137
	Ratio of male employees	94	95	97
	No. of female employees	7	6	4
	Ratio of female employees	6	5	3
	No. of male executives	4	5	4
	Ratio of male executives	100	100	100
	No. of female executives	0	0	0
	Ratio of female executives	0	0	0
	No. of male managers (manager-level or higher)	1	1	1
	Ratio of male managers (manager level or higher)	1	1	1
	No. of female managers (manager level or higher)	1	1	1
	Ratio of female managers (manager level or higher)	1	1	1
Employee composition	No. of employees with disabilities	3	3	3
	Ratio of employees with disabilities	2	2	2
	No. of senior employees (55 years or older, excl. executives)	16	25	30
	Ratio of senior employees	12	18	21
	No. of foreign employees	0	0	0
	Ratio of foreign employees	0	0	0
	No. of employees with high school degree	58	69	62
	Ratio of employees with high school degree	44	49	44
	No. of veterans	0	0	0
	Ratio of veterans	0	0	0
	Persons in the age group (Under 30 years of age)	-	-	19
	Percentage (Under 30 years of age)	-	-	13
Persons in the age group (30 ~ 50 years of age)	-	-	75	
Percentage (30 ~ 50 years of age)	-	-	53	
Persons in the age group (Above 50 years of age)	-	-	47	
Percentage (Above 50 years of age)	-	-	33	
New hires	Male	8	11	15
	female	0	0	0
	By age			
Under 30 years	5	5	3	
30 ~ 50 years	3	4	8	
Above 50 years	0	2	4	
Employee compensation	Average male salary	54	55	70
	Average female salary	44	47	56
	Ratio of base salaries of female to male	81	85	79

Category	Unit	2020	2021	2022	
Employee compensation	Average male executive salary	KRW million	-	-	363
	Average female executive salary	KRW million	-	-	0
	Ratio of base salary of female executive to male executive	%	-	-	0
	Average male permanent employee salary	KRW million	-	-	71
	Average female permanent employee salary	KRW million	-	-	56
	Ratio of base salary of female permanent employee to male permanent employee	%	-	-	79
	Average male non-permanent employee salary	KRW million	-	-	52
	Average female non-permanent employee salary	KRW million	-	-	0
	Ratio of base salary of female non-permanent employee to male non-permanent employee	%	-	-	0
	Average years of service	Years	11	11.5	9
Job security	Total number of employee turnovers	Persons	-	-	13
	Voluntary turnovers	%	-	-	77
	Non-voluntary turnovers	%	-	-	23
Talent development	No. of beneficiaries of training/education	Persons	130	143	141
	Total budget for employee training/education	KRW million	195	203	90
	Training expenses per employee	KRW 1,000	1,500	1,420	638
	Total no. of hours of training	Hours	-	-	9,306
Industrial accidents	Average training hours per employee	Hours	66	66	66
	No. of industrial accidents occurred	Ea.	4	1	0
	Industrial accident rate	%	3	0.7	0
	No. of deaths	Persons	0	1	0
	No. of injuries	Persons	4	0	0
	Duration of work-hour loss	Hours	960	0	0
Mutual growth	Total no. of partner companies	Ea.	1	1	181
	Total value of purchases from partners	KRW million	937	740	80,267
Fair trade	No. of violations of fair trade laws	Ea.	0	0	0
	Fines imposed	KRW million	0	0	0
Information-security breaches	Customer data leakages, theft, and losses	Ea.	0	0	0
	No. of complaints filed in relation to workplace discrimination	Ea.	0	0	0
Workplace discrimination	No. of violations that resulted in sanctions	Ea.	0	0	0
	No. of warnings from non-compliance	Ea.	0	0	0
Incidents of non-compliance with regulations and internal codes	No. of violations of internal codes	Ea.	0	0	0
	No. of work-loss cases in partner companies	Ea.	-	-	0
Work losses	Employees who have taken parental leave	Total	0	0	3
	Male	0	0	1	
	Female	0	0	2	
Parental leave	No. of employees who have returned to work after parental leave	Total	0	0	2
	Male	0	0	1	
	Female	0	0	1	
Return rate of employees who have taken parental leave	%	-	-	67	

Category	Unit	2020	2021	2022	
Parental leave	No. of employees who have worked over 12 months after returning from parental leave	Total	0	0	2
	Male	Persons	0	0	1
	Female	0	0	1	
Human rights policies and procedures	Ratio of employees who have worked over 12 months after returning from parental leave	%	-	-	67
	Duration of education for prevention of workplace bullying	Total hours (Per employee)	0	0	0
	Duration of education for sexual harassment prevention	262(1)	284(1)	286(2)	
	Other education (Human rights education for persons with disabilities, etc.)	262(1)	284(1)	286(2)	
CSR	Investment in CSR (incl. donation)	Cash donation	14	12	23
	Non-cash donation	KRW million	0	1	33
	Total volunteer hours	Hours	0	301	1,716
	Average volunteer hours per employee	0	2	12	
Direct beneficiaries of the support programs	Persons	140	140	-	

* Mutual growth: Due to the changes in disclosure indicator standards, the total purchases in this report are from all suppliers and partners in 2022.

Governance

Category	Unit	2020	2021	2022	
Board of Directors	No. of Board meetings	Times	-	-	7
	No. of agendas	Ea.	-	-	16
	Preliminary deliberation	%	-	-	100
	Decisions on revised agenda	Ea.	-	-	0
	Reported agenda	-	-	-	6
	BOD attendance rate	%	-	-	95
Board diversity	Non-executive attendance rate	%	-	-	57
	Male	Persons	-	-	5
	Female	Persons	-	-	0
	Ratio of female directors in the BOD	%	-	-	0
	Under 30 years	-	-	-	0
	30 ~ 50 years	Persons	-	-	0
Anti-corruption in business sites	Above 50 years	-	-	5	
	No. of outside directors	-	-	1	
	Ratio of outside directors	%	-	-	20
	Total no. of business sites	-	-	1	
	No. of business sites that conducted anti-corruption risk assessments	Ea.	-	-	1
	Ratio of business sites that conducted anti-corruption risk assessments	%	-	-	100
Anti-corruption policies and procedures	No. of Board members who received ethics training	Persons	-	-	5
	Ratio of Board members who received ethics training	%	-	-	100
	Total no. of employees who received ethics training	Persons	131	142	143
	Ratio of employees who received ethics training	%	100	100	100
	Total no. of Board members who have signed the ethics pledge	Persons	-	-	5
	Ratio of Board members who have signed the ethics pledge	%	-	-	100
Anti-corruption violations	Total no. of employees who have signed the ethics pledge	Persons	106	131	107
	Ratio of employees who have signed the ethics pledge	%	80	92	78
	No. of anti-corruption violations	Ea. (persons)	0	0	0

* Ratio of employees who have signed the ethics pledge in 2022: The region's water scarcity posed challenges to normal production operations, leading to a decline in the ratio of employees who signed the ethical pledge.

Hansol PNS_Paper Distribution Division

Economy_Hansol PNS, comprehensive

Category	Unit	2020	2021	2022
Income statement	Sales	244,823	262,943	314,246
	Gross profit	20,436	24,039	28,474
	Selling, general, and administrative expenses	16,545	19,487	25,787
	Operating income	3,891	4,551	2,686
	Financial income	448	860	453
	Financial expenses	322	298	1,005
	Other income	536	367	1,400
	Other expenses	28	131	601
	Affiliates' profits and losses	0	83	-63
	Net income before the deduction of corporate tax expenses	4,523	5,432	2,870
Assets	Current assets	89,360	73,580	98,702
	Non-current assets	17,766	36,130	36,241
	Current liabilities	60,301	53,430	78,697
	Non-current liabilities	3,168	6,236	5,145
	Shareholders' equity in the parent company	43,656	46,577	47,355
	Capital	0	3,466	3,746

(Based on the consolidated financial statements)

Environment

Category	Unit	2020	2021	2022
Consumption of raw materials	Tons	240,900	229,400	225,100
Energy consumption	Total energy consumed	7.3	6.6	6.8
	Scope 1 energy consumption	1.9	1.8	1.8
	Scope 2 energy consumption	5.3	4.7	5.0
GHG emissions	Direct emissions (Scope 1)	126	123	162
	Indirect emissions (Scope 2)	255	225	239
Waste	Total amount of waste	1,202	1,220	1,490
	Waste discharged at business sites	1,202	1,220	1,490
	Designated waste	-	-	0
	Domestic waste	-	-	0
	Recycled amount	1,188	1,220	1,489
Waste recycling rate	%	99	100	100
Environmental expenses and investments	Amount of environmental investments	3	4.5	3.7
	Environmental expenses	-	5	-
Sales of green products	Sales of green products and services	-	-	298
	Ratio of sales related to green products	%	-	-

Social

Category	Unit	2020	2021	2022
Total number of employees	Persons	79	86	95
Current employees (by employment type)	Executives	1	2	5
	Female	0	0	0
	Male	1	2	5
	Permanent	76	85	88
	Female	16	20	20
	Male	60	65	68
Non-permanent	Total	2	1	2
	Female	1	0	1
	Male	1	1	1
Outsourced workers	Persons	0	0	0

Category	Unit	2020	2021	2022	
Current employees (by work schedule)	Full-time	79	86	95	
	Part-time	0	0	0	
Current employees (by job location)	Domestic	79	86	95	
	Overseas	0	0	0	
Employee diversity	No. of male employees	62	68	74	
	Ratio of male employees	%	78	77	78
	No. of female employees	17	20	21	
	Ratio of female employees	%	22	23	22
	No. of male executives	1	2	5	
	Ratio of male executives	%	1	2	5
	No. of female executives	0	0	0	
	Ratio of female executives	%	0	0	0
	No. of male managers (manager level or higher)	0	0	2	
	Ratio of male managers (manager level or higher)	%	0	0	2
Employee composition	No. of employees with disabilities	1	1	1	
	Ratio of employees with disabilities	%	1	1	1
	No. of senior employees (55 years or older, excl. executives)	2	1	8	
	Ratio of senior employees	%	3	1	8
	No. of foreign employees	0	0	0	
	Ratio of foreign employees	%	0	0	0
	No. of employees with high school degrees	21	24	31	
	Ratio of employees with high school degrees	%	16	16	18
	No. of veterans	0	0	0	
	Ratio of veterans	%	0	0	0
New hires	Persons in the age group (Under 30 years of age)	-	-	17	
	Percentage (Under 30 years of age)	%	-	-	18
	Persons in the age group (30 ~ 50 years of age)	-	-	60	
	Percentage (30 ~ 50 years of age)	%	-	-	63
	Persons in the age group (Above 50 years of age)	-	-	18	
	Percentage (Above 50 years of age)	%	-	-	19
	Male	6	19	12	
	female	4	3	2	
	By age	Under 30 years	3	7	7
	30 ~ 50 years	7	15	7	
Above 50 years	0	0	0		
Employee compensation	Average male salary	KRW million	48	65	73
	Average female salary	KRW million	32	46	44
	Ratio of base salary of female to male	%	66	70	60
	Average male executive salary	KRW million	-	-	190
	Average female executive salary	KRW million	-	-	0
	Ratio of base salary of female executive to male executive	%	-	-	100

Category	Unit	2020	2021	2022	
Employee compensation	Average male permanent employee salary	KRW million	-	-	66
	Average female permanent employee salary	KRW million	-	-	47
	Ratio of base salary of female permanent employees to male permanent employees	%	-	-	71
Job security	Average years of service	Years	8.1	7.2	6
	Total number of employee turnovers	Persons	3	5	10
	Voluntary turnovers	%	-	-	100
Talent development	Non-voluntary turnovers	%	-	-	0
	No. of beneficiaries of training/education	Persons	79	86	95
	Total budget for employee training/education	KRW million	42	35	40
Industrial accidents	Training expenses per employee	KRW 1,000	532	407	422
	Total no. of hours of training	Hours	-	-	1,235
	Average training hours per employee	Hours	11	11	13
Mutual growth	No. of industrial accidents	Ea.	0	1	0
	No. of deaths	Persons	0	0	0
	No. of injuries	Persons	0	1	0
Fair trade	Industrial accident rate	%	0	1.2	0
	Duration of work-hour losses	Hours	0	9	0
	Total no. of partner companies	Ea.	-	-	-
Information-security breaches	Total purchases from partners	KRW million	-	-	-
	No. of violations of fair trade laws	Incidents	0	0	0
	Fines imposed	KRW million	0	0	0
Workplace discrimination	Customer-data leakages, theft, and losses	Ea.	0	0	0
	No. of complaints filed in relation to workplace discrimination	Ea.	0	0	0
	No. of violations that resulted in sanctions	Persons	0	0	0
Incidents of non-compliance with regulations and internal codes	No. of warnings for non-compliance	Ea.	0	0	0
	No. of violations of internal codes	Persons	0	0	0
	No. of work-loss cases in partner companies	Ea.	-	-	0
Work loss	Employees who have taken parental leave	Persons	2	3	2
	Male	0	0	0	
	Female	2	3	2	
Parental leave	No. of employees who have returned to work after parental leave	Persons	0	1	1
	Male	0	0	0	
	Female	0	1	1	
Anti-corruption	Return rate of employees who have taken parental leave	%	0	53	33
	No. of employees who have worked over 12 months after returning from parental leave	Persons	0	0	1
	Male	0	0	0	
Anti-corruption violations	Female	0	0	1	
	Ratio of employees who have worked over 12 months after returning from parental leave	%	0	0	50

Category	Unit	2020	2021	2022	
Human rights policies and procedures	Duration of education for human rights	Hours	237	252	348
	No. of employees who completed human rights training	Persons	79	84	89
	Ratio of employees who completed human rights training	%	100	100	100
	Duration of education for prevention of workplace bullying	Total hours (Per employee)	79(1)	86(1)	89
	Duration of education for sexual harassment prevention	Total hours (Per employee)	79(1)	86(1)	89
	Other education (Human rights education for persons with disabilities, etc.)	Total hours (Per employee)	79(1)	86(1)	89
CSR	Investment in CSR (incl. donation)	KRW million	-	-	133
	Cash donation	KRW million	-	-	-

Governance

Category	Unit	2020	2021	2022	
BOD operation*	No. of Board meetings	Times	-	-	13
	No. of agendas	Ea.	-	-	24
	BOD attendance rate	%	-	-	95
Board diversity*	Male	Persons	-	-	6
	Female	Persons	-	-	0
	Ratio of female directors in the BOD	%	-	-	0
	Under 30 years	Persons	-	-	-
	30 ~ 50 years	Persons	-	-	2
Anti-corruption	Above 50 years	Persons	-	-	4
	No. of outside directors	Persons	-	-	2
	Ratio of outside directors	%	-	-	29
	Total no. of business sites	Persons	-	-	4
	No. of business sites that conducted anti-corruption risk assessment	Ea.	-	-	0
Anti-corruption policies and procedures	Ratio of business sites that conducted anti-corruption risk assessment	%	-	-	0
	No. of Board members who received ethics training*	Persons	-	-	7
	Ratio of Board members who received ethics training*	%	-	-	100
	Total no. of employees who received ethics training	Persons	79	86	95
	Ratio of employees who received ethics training	%	100	100	100
Anti-corruption violations	Total no. of Board members who have signed the ethics pledge*	Persons	-	-	7
	Ratio of Board members who have signed the ethics pledge*	%	-	-	100
	Total no. of employees who have signed the ethics pledge	Persons	79	86	95
	Ratio of employees who have signed the ethics pledge	%	100	100	100
	No. of anti-corruption violations	Ea. (persons)	0	0	0

* Total number for Hansol PNS

Hansol PNS_IT Service Division

Social

Category	Unit	2020	2021	2022	
Total number of employees	Persons	134	146	176	
Executives	Total	1	2	1	
	Female	0	0	0	
	Male	1	2	1	
Current employees (by employment type)	Total	133	143	175	
	Permanent	37	39	47	
	Male	96	104	128	
	Total	1	1	0	
	Non-permanent	1	1	0	
Outsourced workers	Female	0	0	0	
	Male	0	0	0	
Current employees (by work schedule)	Persons	0	0	0	
	Full-time	134	146	176	
Current employees (by location)	Persons	0	0	0	
	Part-time	0	0	0	
Domestic	Persons	132	144	173	
	Overseas	2	2	3	
No. of male employees	Persons	97	106	129	
Ratio of male employees	%	72	73	73	
No. of female employees	Persons	38	40	47	
Ratio of female employees	%	28	27	27	
No. of male executives	Persons	1	2	1	
Ratio of male executives	%	1	1	1	
No. of female executives	Persons	0	0	0	
Ratio of female executives	%	0	0	0	
No. of male managers (manager level or higher)	Persons	-	-	41	
Ratio of male managers (manager level or higher)	%	-	-	23	
No. of female managers (manager level or higher)	Persons	16	16	5	
Ratio of female managers (manager level or higher)	%	12	11	3	
No. of employees with disabilities	Persons	0	0	0	
Ratio of employees with disabilities	%	0	0	0	
No. of senior employees (55 years or older, excl. executives)	Persons	1	1	2	
Ratio of senior employees	%	1	1	1	
No. of foreign employees	Persons	1	1	0	
Ratio of foreign employees	%	1	1	0	
No. of employees with high school degrees	Persons	3	2	3	
Ratio of employees with high school degrees	%	3	2	2	
No. of veterans	Persons	0	0	0	
Ratio of veterans	%	0	0	0	
Persons in the age group (Under 30 years of age)	Persons	-	-	30	
Percentage (Under 30 years of age)	%	-	-	17	
Persons in the age group (30 ~ 50 years of age)	Persons	-	-	124	
Percentage (30 ~ 50 years of age)	%	-	-	70	
Persons in the age group (Above 50 years of age)	Persons	-	-	22	
Percentage (Above 50 years of age)	%	-	-	13	
Male		11	26	42	
female		3	10	17	
New hires	Under 30 years	Persons	4	6	12
	30 ~ 50 years	Persons	10	14	43
	Above 50 years	Persons	0	0	4

Category	Unit	2020	2021	2022
Average male salary	KRW million	61	60	62
Average female salary	KRW million	46	47	48
Ratio of base salary of female to male	%	75	78	77
Average male executive salary	KRW million	-	-	16
Average female executive salary	KRW million	-	-	0
Ratio of base salary of female executive to male executive	%	-	-	100
Average male permanent employee salary	KRW million	-	-	61
Average female permanent employee salary	KRW million	-	-	48
Ratio of base salary of female permanent employee to male permanent employee	%	-	-	79
Average male non-permanent employee salary	KRW million	-	-	0
Average female non-permanent employee salary	KRW million	-	-	0
Ratio of base salary of female non-permanent employee to male non-permanent employee	%	-	-	0
Average years of service	Years	15.3	7	6
Total number of employee turnover	Persons	14	7	25
Voluntary turnover	%	-	-	100
Non-voluntary turnover	%	-	-	0
No. of beneficiaries of training/education	Persons	133	143	171
Total budget for employee training/education	KRW million	148	128	170
Training expenses per employee	KRW 1,000	716	776	994
Total no. of hours of training		-	-	7,592
Average training hours per employee	Hours	82	44	43.1
No. of industrial accidents	Ea.	0	0	0
Industrial accident rate	%	0	0	0
No. of deaths	Persons	0	0	0
No. of injuries	Persons	0	0	0
Duration of work-hour loss	Hours	0	0	0
Total no. of partner companies	Ea.	46	35	97
Total purchase from partners	KRW million	5,200	4,427	12,900
No. of violations of fair trade laws	Ea.	0	0	0
Fines imposed	KRW million	0	0	0
Customer data leakages, theft, and losses	Ea.	0	0	0
No. of complaints filed in relation to workplace discrimination	Ea.	0	0	0
No. of violations that resulted in sanctions		0	0	0
No. of warnings for non-compliance	Ea.	0	0	0
No. of violations of internal codes		0	0	0
No. of work-loss cases in partner companies	Ea.	-	-	0

Category	Unit	2020	2021	2022
Employees who have taken parental leave	Total	1	1	3
	Male	0	0	1
No. of employees who have returned to work after parental leave	Total	1	1	2
	Male	0	0	0
Return rate of employees who have taken parental leave	Persons	2	0	0
	Female	0	0	0
No. of employees who have worked over 12 months after returning from parental leave	Total	2	0	0
	Male	0	0	0
Ratio of employees who have worked over 12 months after returning from parental leave	Persons	2	0	0
	Female	0	0	0
Duration of education for human rights	Hours	402	429	507
No. of employees who completed human rights training	Persons	134	143	169
Ratio of employees who completed human rights training	%	100	100	96
Duration of education for prevention of workplace bullying	Total hours	134(1)	145(1)	169(1)
	(Per employee)	134(1)	145(1)	169(1)
Duration of education for sexual harassment prevention	Total hours	134(1)	145(1)	169(1)
	(Per employee)	134(1)	145(1)	169(1)
Other education (Human rights education for people with disabilities, etc.)	Total hours	134(1)	145(1)	169(1)
	(Per employee)	134(1)	145(1)	169(1)
Investment in CSR (incl. donation)	Cash donation	KRW million	8.8	6.2
	Non-cash donations	KRW million	-	-

Governance

Category	Unit	2020	2021	2022	
BOD operation*	No. of Board meetings	Times	-	-	13
	No. of agendas	Ea.	-	-	24
	BOD attendance rate	%	-	-	95
Board diversity*	Male	Persons	-	-	6
	Female	Persons	-	-	0
Anti-corruption	Ratio of female directors in the BOD	%	-	-	0
	Under 30 years	Persons	-	-	-
	30 ~ 50 years	Persons	-	-	2
	Above 50 years	Persons	-	-	4
	No. of outside directors	Persons	-	-	2
Total no. of business sites	Ratio of outside directors	%	-	-	28.57
	Total no. of business sites		-	-	1
	No. of business sites that conducted anti-corruption risk assessments	Ea.	-	-	1
Anti-corruption policies and procedures	Ratio of business sites that conducted anti-corruption risk assessments	%	-	-	100
	No. of Board members that received ethics training*	Persons	-	-	7
	Ratio of Board members who received ethics training*	%	-	-	100
Anti-corruption violations	Total no. of employees who received ethics training	Persons	134	145	176
	Ratio of employees who received ethics training	%	100	100	100
	Total no. of Board members who have signed the ethics pledge*	Persons	-	-	7
	Ratio of Board members who have signed the ethics pledge*	%	-	-	100
	Total no. of employees who have signed the ethics pledge	Persons	134	145	176
Ratio of employees who have signed the ethics pledge	%	100	100	100	
No. of anti-corruption violations	Ea. (persons)	0	0	0	

* Total number for Hansol PNS

Economy

Category	Unit	2020	2021	2022
Income statement	Sales	253,213	263,249	283,414
	Gross profit	35,776	46,174	48,665
	Selling, general, and administrative expenses	33,037	37,555	45,950
	Operating income	2,739	8,619	2,714
	Financial income	2,100	3,470	1,240
	Financial expenses	4,105	2,994	4,883
	Other income	3,572	1,518	3,787
	Other expenses	3,655	2,706	9,016
	Net income before the deduction of corporate tax expenses	650	7,905	(6,157)
	Current assets	78,680	98,188	108,300
Balance sheet	Assets			
	Non-current assets	216,309	216,472	211,195
	Current liabilities	76,068	101,751	118,712
	Liabilities			
	Non-current liabilities	64,380	53,062	47,361
	Shareholders' equity in the parent company	154,542	159,847	153,347
	Shareholders' equity in the non-controlling company	0	0	74
	Total R&D expenses for the current period	160	482	160
	R&D expenses/sales	0.06	0.18	0.06
	No. of R&D personnel	0	0	0

(Based on the consolidated financial statements)

Environment

Category	Unit	2020	2021	2022
Consumption of raw materials	Raw materials consumed	177,118	185,605	160,316
	Amount of recycled materials (reused raw materials) consumed	84,723	96,985	87,323
Consumption of materials that contain recycled materials	Ratio of recycled materials (reused raw materials) consumed	48	52	54
	Total energy consumed	2,862	2,974	1,987
Energy consumption	Total energy consumed	-	-	965
	Scope 2 energy consumption	-	-	1,022
Water consumption (amount, based on domestic data)	Total amount of water consumed	610,228	592,392	617,044
	Amount of water consumed	359,632	346,584	409,892
	Amount of underground water consumed	250,596	245,808	207,152
	Water reuse			
	Ratio of water reused	10.4	10.2	2.2
GHG emissions	Direct emissions (Scope 1)	13,621	12,905	9,316
	Indirect emissions (Scope 2)	48,180	48,865	46,088
	SOx	587	586	750
Air pollutants	Emissions			
	NOx	80,846	72,073	72,750
	HAP	2,863	1,896	2,641
	PM	21,786	12,378	33,320
Water pollutants	Emissions			
	BOD	11	14	9
	COD	49	38	28
	SS	7	6	2
Waste	Total amount of waste (amount treated in Korea)	28,414	31,863	28,812
	Waste discharged at business sites	25,983	29,291	28,251
	Designated waste	2,430	2,570	561
	Waste recycling rate	73	79	76

Category	Unit	2020	2021	2022	
Violation of environmental laws and regulations	Amount of fines	KRW million	0	3	5
Environmental expenses and investments	Amount of environmental investments	KRW million	2.5	48.1	1,866
	Environmental expenses		1,755	2,132	1,887
	Sales of green products and services	KRW million	-	-	84,155
Sales of green products	Total sales		-	-	283,414
	Ratio of sales related to green products	%	-	-	29.7

* Energy consumption: Because GHG emissions and steam are measured in units of energy, it is impossible to distinguish between Scope 1 and Scope 2.

Social

Category	Unit	2020	2021	2022	
Total number of employees					
	Persons	267	305	303	
Current employees (by employment type)	Total	13	13	7	
	Executives				
	Female	0	0	0	
	Male	13	13	7	
	Total	242	273	289	
	Permanent	Persons	20	31	30
Non-permanent	Male	222	242	259	
	Total	12	19	7	
	Female	7	14	6	
	Male	5	5	1	
	Outsourced workers	Persons	0	0	0
	Current employees (by work schedule)				
Full-time	Persons	267	305	303	
Part-time	Persons	0	0	0	
Current employees (by location)					
Domestic	Persons	263	301	298	
Overseas	Persons	4	4	5	
No. of male employees	Persons	240	260	267	
Ratio of male employees	%	89	85	88	
No. of female employees	Persons	27	45	36	
Ratio of female employees	%	11	15	12	
No. of male executives	Persons	13	13	7	
Ratio of male executives	%	5	4	2	
No. of female executives	Persons	0	0	0	
Ratio of female executives	%	0	0	0	
No. of male managers (manager level or higher)	Persons	-	-	46	
Ratio of male managers (manager level or higher)	%	-	-	15	
No. of female managers (manager level or higher)	Persons	2	3	1	
Ratio of female managers (manager level or higher)	%	2	4	0.3	
Employee diversity	No. of employees with disabilities	Persons	6	6	6
	Ratio of employees with disabilities	%	2	2	2
	No. of senior employees (55 years or older, excl. executives)	Persons	9	7	13
	Ratio of senior employees	%	3	2	4
Hiring of the socially disadvantaged	No. of foreign employees	Persons	0	0	0
	Ratio of foreign employees	%	0	0	0.0
	No. of employees with high school degree	Persons	103	109	122
	Ratio of employees with high school degree	%	39	36	40
No. of veterans	Persons	1	2	1	
Ratio of veterans	%	0.4	0.7	0.3	

Category	Unit	2020	2021	2022		
Employee diversity	Persons in the age group (Under 30 years of age)	Persons	-	-	78	
	Percentage (Under 30 years of age)	%	-	-	26	
	Persons in the age group (30 ~ 50 years of age)	Persons	-	-	158	
	Percentage (30 ~ 50 years of age)	%	-	-	52	
	Persons in the age group (Above 50 years of age)	Persons	-	-	54	
	Percentage (Above 50 years of age)	%	-	-	18	
	Male		21	37	31	
	female		10	21	2	
	New hires	Under 30 years	Persons	21	28	15
		30 ~ 50 years		10	30	17
Above 50 years			0	0	1	
Average male salary		KRW million	6	33	47	
Average female salary		25	25	35		
Ratio of base salary of female to male	%	59	66.8	75		
Average male executive salary		36	37	194		
Average male permanent employee salary	KRW million	59	67	44		
Average female permanent employee salary		36	37	38		
Employee compensation	Ratio of base salary of female permanent employee to male permanent employee	%	-	-	86	
	Average male non-permanent employee salary	KRW million	-	-	24	
	Average female non-permanent employee salary		-	-	20	
	Ratio of base salary of female non-permanent employee to male non-permanent employee	%	-	-	83	
	Average years of service	Years	9.5	8	10.3	
	Total number of employee turnover	Persons	-	-	42	
	Voluntary turnover	%	-	-	100	
	Non-voluntary turnover		-	-	0	
	Talent development	No. of beneficiaries of training/education	Persons	267	305	296
		Total budget for employee training/education	KRW million	250	210	29.6
Training expenses per employee		KRW 1,000	936	688	100	
Total no. of hours of training			-	-	6,216	
Average training hours per employee	Hours	29	22	21		
Industrial accidents	No. of industrial accidents	Ea.	0	2	3	
	Industrial-accident rate	%	0	0.65	0.96	
	No. of deaths	Persons	0	0	0	
	No. of injuries		0	0	3	
Duration of work-hour loss	Hours	0	224	3,400		
Mutual growth	Total no. of partner companies	Ea.	4	5	6	
	Total value of purchases from partners	KRW million	6,244	6,606	7,498	
Fair trade	No. of violations of fair trade laws	Ea.	0	0	0	
	Fines imposed	KRW million	0	0	0	
Information-security breaches	Customer-data leakages, theft, and losses	Ea.	0	0	0	

Category	Unit	2020	2021	2022	
Workplace discrimination	No. of complaints filed in relation to workplace discrimination	Ea.	0	0	0
	No. of violations that resulted in sanctions		0	0	0
Incidents of non-compliance to regulations and internal codes	No. of warnings from non-compliance	Ea.	0	0	0
	No. of violations of internal codes		0	0	0
Work loss	No. of work-loss cases in partner companies	Ea.	-	-	0
	Employees who have taken parental leave		3	4	2
Parental leave	Male		0	1	0
	Female		2	3	2
	No. of employees who have returned to work after parental leave	Persons	1	2	1
	Male		0	1	1
Female		1	1	0	
Return rate of employees who have taken parental leave	%	0	66	25	
Human rights policies and procedures	No. of employees who have worked over 12 months after returning from parental leave		0	1	1
	Male	Persons	0	0	1
	Female		0	1	0
	Ratio of employees who have worked over 12 months after returning from parental leave	%	0	100	50
CSR	Duration of education for prevention of workplace bullying	Total hours (per employee)	267(1)	305(1)	303(1)
	Duration of education for sexual-harassment prevention		267(1)	305(1)	303(1)
	Other education (Human rights education for people with disabilities, etc.)		267(1)	305(1)	303(1)
Investment in CSR (incl. donation)	Cash donation	KRW million	-	-	33

Governance

Category	Unit	2020	2021	2022	
Board of Directors	No. of Board meetings	Times	-	-	23
	No. of agendas	Ea.	-	-	32
	Preliminary deliberation	%	-	-	100
	Decisions on revised agenda		-	-	0
	Reported agenda	Ea.	-	-	9
	BOD attendance rate	%	-	-	100
	Non-executive attendance rate		-	-	100
	Male	Persons	-	-	7
	Female		-	-	0
	Ratio of female directors in the BOD	%	-	-	0
Board diversity	Under 30 years		-	-	0
	30 ~ 50 years	Persons	-	-	0
	Above 50 years		-	-	7
	No. of outside directors		-	-	2
Ratio of outside directors	%	-	-	29	
Anti-corruption policies and procedures	No. of Board members who received ethics training	Persons	-	-	7
	Ratio of Board members who received ethics training	%	-	-	100
	Total no. of employees who received ethics training	Persons	267	305	303
	Ratio of employees who received ethics training	%	100	100	100
	Total no. of Board members who have signed the ethics pledge	Persons	-	-	7
	Ratio of Board members who have signed the ethics pledge	%	-	-	100
	Total no. of employees who have signed the ethics pledge	Persons	267	305	303
	Ratio of employees who have signed the ethics pledge	%	100	100	100
	No. of anti-corruption violations	Ea. (persons)	0	0	0

Economy

Category	Unit	2020	2021	2022
Sales		509,613	747,044	1,015,371
Gross profit		42,351	64,134	78,680
Selling, general, and administrative expenses		29,274	33,830	42,330
Operating income		13,076	30,304	36,349
Financial income		1,354	8,148	3,047
Financial expenses		3,060	2,959	8,403
Other income		3,615	4,996	17,568
Other expenses		4,075	7,501	18,317
Net income before the deduction of corporate tax expenses		11,895	33,509	30,450
Gains or losses using equity method		984	520	204
Assets		120,770	178,348	178,162
Current assets		75,201	88,279	96,334
Non-current assets		111,820	166,532	156,801
Liabilities		29,501	21,506	15,189
Non-current liabilities		54,649	78,525	102,344
Shareholders' equity in the parent company		0	63	162
Shareholders' equity in the non-controlling company				

(Based on the consolidated financial statements)

Social

Category	Unit	2020	2021	2022
Total number of employees	Persons	359	382	323
Executives		6	5	4
Female		0	0	0
Male		6	5	4
Total		330	355	292
Permanent		54	64	79
Female		276	291	213
Male		23	22	31
Non-permanent		14	15	20
Female		9	7	11
Male		3	3	3
Outsourced workers		359	382	323
Full-time		0	0	0
Part-time		347	369	308
Domestic		12	13	15
Overseas		276	291	224
No. of male employees		81	79	69
Ratio of male employees	%	54	64	99
No. of female employees		19	21	31
Ratio of female employees	%	6	5	4
No. of male executives		2	1	1
Ratio of male executives	%	0	0	0
No. of female executives		0	0	0
Ratio of female executives	%	0	0	0
No. of male managers (manager level or higher)		-	-	104
Ratio of male managers (manager level or higher)	%	-	-	35
No. of female managers (manager level or higher)		15	14	15
Ratio of female managers (manager level or higher)	%	4	4	5

Category	Unit	2020	2021	2022
No. of employees with disabilities	Persons	5	5	1
Ratio of employees with disabilities	%	1	1	0.3
No. of senior employees (55 years or older, excl. executives)	Persons	17	19	11
Ratio of senior employees	%	5	5	4
No. of foreign employees	Persons	0	0	0
Ratio of foreign employees	%	0	0	0
No. of employees with high school degree	Persons	93	80	40
Ratio of employees with high school degree	%	26	21	14
No. of veterans	Persons	0	0	2
Ratio of veterans	%	0	0	1
Persons in the age group (Under 30 years of age)	Persons	-	-	67
Percentage (Under 30 years of age)	%	-	-	23
Persons in the age group (30 ~ 50 years of age)	Persons	-	-	195
Percentage (30 ~ 50 years of age)	%	-	-	66
Persons in the age group (Above 50 years of age)	Persons	-	-	34
Percentage (Above 50 years of age)	%	-	-	11
Male		25	38	33
female		7	12	6
By age		18	23	14
Under 30 years		11	26	25
30 ~ 50 years		3	1	0
Above 50 years		-	-	69
Average male salary	KRW million	-	-	53
Average female salary	KRW million	-	-	77
Ratio of base salary of female to male	%	-	-	1,153
Average male executive salary	KRW million	-	-	0
Average female executive salary	KRW million	-	-	0
Ratio of base salary of female executive to male executive	%	-	-	63
Average male permanent employee salary	KRW million	-	-	46
Average female permanent employee salary	KRW million	-	-	73
Ratio of base salary of female permanent employee to male permanent employee	%	-	-	22
Average male non-permanent employee salary	KRW million	-	-	31
Average female non-permanent employee salary	KRW million	-	-	139
Ratio of base salary of female non-permanent employee to male non-permanent employee	%	-	-	7
Average years of service	Years	8.6	8.6	33
Total number of employee turnover	Persons	28	31	100
Voluntary turnover	%	-	-	0
Non-voluntary turnover	%	-	-	

Category	Unit	2020	2021	2022
No. of beneficiaries of training/education	Persons	337	358	296
Total budget for employee training/education	KRW million	90	200	179
Training expenses per employee	KRW 1,000	268	558	604
Average training hours per employee	Hours	49	75	30
No. of industrial accidents occurred	Ea.	0	0	0
Industrial-accident rate	%	0	0	0
No. of deaths	Persons	0	0	0
No. of injuries	Persons	0	0	0
Duration of work-hour loss	Hours	0	0	0
Total no. of partner companies	Ea.	942	997	798
Suppliers		278,950	431,781	605,023
Total purchase from partners	KRW million	0	0	0
SME support		0	0	0
Total purchases from SME	KRW million	0	0	0
No. of violations of fair trade laws	Incidents	0	0	0
Fines imposed	KRW million	0	0	0
Customer data leakages, theft, and losses	Ea.	0	0	0
No. of complaints filed related to workplace discrimination	Ea.	0	0	0
No. of violations that resulted in sanctions		0	0	0
No. of warnings for non-compliance	Ea.	0	0	0
No. of violations of internal codes		0	0	0
No. of work loss cases in partner companies	Ea.	-	-	0
Employees who have taken parental leave		1	7	41
Total		0	3	4
Male		1	4	37
Female		1	2	43
Male		0	0	1
Female		1	2	33
Return rate of employees who have taken parental leave	%	17	25	80
No. of employees who have worked over 12 months after returning from parental leave		1	0	27
Total		0	0	1
Male		1	0	26
Female		14	0	62
Duration of education for human rights	Hours	1,348	1,432	1,116
No. of employees who completed human rights training	Persons	337	358	279
Ratio of employees who completed human rights training	%	93	93	93
Duration of education for prevention of workplace bullying	Hours	0	0	0
Duration of education for sexual harassment prevention	Hours	674(2)	716(2)	558(2)
Other education (Human rights education for people with disabilities, etc.)	Hours	674(2)	716(2)	558(2)

Governance

Category	Unit	2020	2021	2022
No. of Board meetings	Times	-	-	23
No. of agendas		-	-	41
Reported agenda	Ea.	-	-	0
BOD attendance rate	%	-	-	94
Non-executive attendance rate	%	-	-	87
Male	Persons	-	-	7
Female	Persons	-	-	0
Ratio of female directors in the BOD	%	-	-	0
Under 30 years		-	-	0
30 ~ 50 years	Persons	-	-	0
Above 50 years	Persons	-	-	7
No. of outside directors		-	-	2
Ratio of outside directors	%	-	-	29
No. of Board members who received ethics training	Persons	-	-	7
Ratio of Board members who received ethics training	%	-	-	100
Total no. of employees who received ethics training	Persons	362	385	363
Ratio of employees who received ethics training	%	100	100	100
Total no. of Board members who have signed the ethics pledge	Persons	-	-	7
Ratio of Board members who have signed the ethics pledge	%	-	-	100
Total no. of employees who have signed the ethics pledge	Persons	362	385	363
Ratio of employees who have signed the ethics pledge	%	100	100	100
No. of anti-corruption violations	Ea. (persons)	0	0	0

* Total no. of employees who have signed the ethics pledge in 2022: Inconsistencies in the number of employees who signed the ethics pledge can be attributed to changes in staffing due to new hires and resignations.

Economy

Category	Unit	2020	2021	2022	
Income statement	Sales	1,194,892	1,490,620	1,647,391	
	Gross profit	150,987	103,451	183,094	
	Selling, general, and administrative expenses	118,526	107,707	127,989	
	Operating income	32,460	(4,255)	55,104	
	Financial income	28,970	24,449	60,831	
	Financial expenses	29,996	28,594	72,822	
	Other income	1,571	2,810	2,683	
	Other expenses	7,649	979	9,448	
	Net income before the deduction of corporate tax expenses	25,357	(6,570)	36,348	
	Balance sheet	Assets	Current assets	311,128	467,995
Non-current assets			280,264	320,674	562,506
Liabilities		Current liabilities	234,267	333,270	424,708
		Non-current liabilities	78,022	177,123	207,186
Capital		Shareholders' equity in the parent company	278,804	277,992	306,289
		Shareholders' equity in the non-controlling company	298	284	133,736
R&D		Total R&D expenses for the current period	19,721	18,199	22,275
		R&D expenses/sales	1.65	1.22	1.35
		No. of R&D personnel	131	138	153

(Based on the consolidated financial statements)

Environment

Category	Unit	2020	2021	2022	
Consumption of raw materials	Raw materials consumed	22	75	30.3	
	Total energy consumed	236	241	225.02	
Energy consumption	Total energy consumed	Scope 1 energy consumption	15.4	14.3	13.97
		Scope 2 energy consumption	220.1	226.5	211.05
	Total amount of water consumed	65,372	65,977	52,081	
Water consumption (amount, based on domestic data)	Total amount of water consumed	Amount of water consumed	33,602	32,048	29,855
		Amount of underground water consumed	25,711	26,864	22,226
	Direct emissions (Scope 1)	775	726	709.19	
GHG emissions	Emissions	10,691	10,867	10,099.7	
	Indirect emissions (Scope 2)	0	0	0	
Air pollutants	Emissions	SOx	158	149	230
		NOx	202	217	240
		BOD	8	14	14.1
Water pollutants	Emissions	COD	10	12	20.8
		SS	8	7	6.9
		Total amount of waste	972	779	1,154
Waste	Total amount of waste (amount treated in Korea)	Waste discharged at business sites	778	660	917
		Designated waste	9	17	31
	Waste recycling rate	Domestic waste	24	29	31
		Recycled amount	802	689	979
Environmental expenses and investments	Environmental investments	Waste recycling rate	83	88	85
		Amount of environmental investments	33	19	65
	Environmental expenses	290	312	299	
Sales of green products	Sales of green products and services	Environmental investments	-	-	230,438
		Total sales	-	-	1,647,391
	Ratio of sales related to green products	%	-	-	14

Social

Category	Unit	2020	2021	2022		
Total number of employees	Total		662	656	635	
	Executives	Total	11	11	11	
		Female	0	0	0	
	Permanent	Male	11	11	11	
		Total	628	620	589	
	Non-permanent	Female	141	123	120	
		Male	487	497	469	
	Outsourced workers	Total	34	36	35	
		Female	8	9	12	
	Current employees (by employment type)	Male	26	27	23	
Total		0	0	0		
Current employees (by work schedule)	Full-time	662	656	635		
	Part-time	2	0	0		
Current employees (by location)	Domestic	662	656	608		
	Overseas	0	0	27		
Employee diversity	No. of male employees		513	524	503	
	Ratio of male employees		%	77	80	79
	No. of female employees		149	132	132	
	Ratio of female employees		%	23	20	21
	No. of male executives		11	11	11	
	Ratio of male executives		%	1.6	1.6	1.7
	No. of female executives		0	0	0	
	Ratio of female executives		%	0	0	0
	No. of male managers (manager level or higher)		-	-	227	
	Ratio of male managers (manager level or higher)		%	-	-	35.1
No. of female managers (manager level or higher)		5	6	6		
Ratio of female managers (manager level or higher)		%	2	3	4	
No. of employees with disabilities		4	3	5		
Ratio of employees with disabilities		%	1	1	1	
No. of senior employees (55 years or older, excl. executives)		27	25	33		
Ratio of senior employees		%	4	4	5	
No. of foreign employees		0	0	0		
Ratio of foreign employees		%	0	0	0	
No. of employees with high school degree		192	175	172		
Ratio of employees with high school degree		%	29	27	27	
No. of veterans		2	2	2		
Ratio of veterans		%	0.3	0.3	0.3	
Persons in the age group (Under 30 years of age)		-	-	71		
Percentage (Under 30 years of age)		%	-	-	11	
Persons in the age group (30 ~ 50 years of age)		-	-	482		
Percentage (30 ~ 50 years of age)		%	-	-	75	
Persons in the age group (Above 50 years of age)		-	-	93		
Percentage (Above 50 years of age)		%	-	-	14	
New hires	Male		70	49	85	
	female		10	9	15	
	By age	Under 30 years	43	25	45	
		30 ~ 50 years	34	31	50	
	Above 50 years		3	2	5	

Category	Unit	2020	2021	2022	
Compensation of Employee	Average male salary	KRW million	65	60	56
		Average female salary	50	43	45
	Ratio of base salary of female to male	%	76	71	80
		Average male executive salary	-	-	316
	Average male permanent employee salary	KRW million	-	-	57
		Average female permanent employee salary	-	-	47
	Ratio of base salary of female permanent employee to male permanent employee	%	-	-	82
		Average male non-permanent employee salary	-	-	41
	Average female non-permanent employee salary	KRW million	-	-	29
		Ratio of base salary of female non-permanent employee to male non-permanent employee	%	-	-
Talent development	No. of beneficiaries of training/education	662	607	615	
	Total budget for employee training/education	270	271	294	
	Training expenses per employee	436	442	478	
Industrial accidents	Total no. of hours of training	-	-	28,126	
	Average training hours per employee	65	62	46	
	Ratio of wages to training expenses	%	1	1	
Mutual growth	No. of industrial accidents occurred	1	0	0	
	Industrial accident rate	0	0	0	
	No. of deaths	0	0	0	
Fair trade	No. of injuries	0	1	0	
	Duration of work-hour loss	960	0	0	
	Total no. of partner companies	429	394	646	
Information security breaches	Suppliers	565,361	657,792	661,770	
	SME support	54,038	134,336	81,299	
	No. of violations of fair trade laws	0	0	0	
Workplace discrimination	Fines imposed	0	0	0	
	Customer data leakage, theft, and loss	0	0	0	
	No. of complaints filed in relation to workplace discrimination	0	0	0	
Incidents of non-compliance to regulations and internal codes	No. of violations that resulted in sanctions	0	0	0	
	No. of warnings from non-compliance	0	0	0	
	No. of violations of internal codes	0	0	0	
Work loss	No. of work loss cases in partner companies		-	-	0

Category	Unit	2020	2021	2022	
Parental leave	Employees who have taken parental leave	Total	14	16	13
		Female	4	5	5
	No. of employees who have returned to work after parental leave	10	11	8	
Human rights policies and procedures	Return rate of employees who have taken parental leave	Persons	6	12	6
		Male	1	5	5
	Female	5	7	1	
CSR	No. of employees who have worked over 12 months after returning from parental leave	%	43	75	46
	Duration of education for prevention of workplace bullying	Total	6	12	5
	Duration of education for sexual harassment prevention	Male	1	5	4
Governance	Other education (Human rights education for people with disabilities, etc.)	Female	5	7	1
		Ratio of employees who have worked over 12 months after returning from parental leave	%	100	100
	Investment in CSR (incl. donation)	Total hours (per employee)	662(1)	607(1)	710(1)
Board of Directors	Cash donation	662(1)	607(1)	670(1)	
		Non-cash donation	0.4	0.4	2
	Direct beneficiaries of the support programs	32.5	73.5	38	

Governance

Category	Unit	2020	2021	2022	
Board of Directors	No. of Board meetings	-	-	7	
	No. of agendas	-	-	23	
	Preliminary deliberation	%	-	100	
	Decisions on revised agenda	Ea.	-	-	0
	Reported agenda	%	-	-	11
	BOD attendance rate	%	-	-	86.3
Board diversity	Non-executive attendance rate	%	-	-	100
	Male	7	-	-	
	Female	0	-	-	
Anti-corruption	Ratio of female directors in the BOD	%	-	-	0
	Under 30 years	-	-	0	
	30 ~ 50 years	1	-	-	
Anti-corruption policies and procedures	Above 50 years	6	-	-	
	No. of outside directors	-	-	2	
	Ratio of outside directors	%	-	-	29
Anti-corruption	Total no. of business sites	-	-	7	
	No. of business sites that conducted anti-corruption risk assessment	Ea.	-	-	0
	Ratio of business sites that conducted anti-corruption risk assessment	%	-	-	0
Anti-corruption	No. of Board members who received ethics training	Persons	-	-	7
	Ratio of Board members who received ethics training	%	-	-	100
	Total no. of employees who received ethics training	Persons	663	657	646
Anti-corruption	Ratio of employees who received ethics training	%	100	100	100
	Total no. of Board members who have signed the ethics pledge	Persons	-	-	7
	Ratio of Board members who have signed the ethics pledge	%	-	-	100
Anti-corruption	Total no. of employees who have signed the ethics pledge	Persons	663	657	646
	Ratio of employees who have signed the ethics pledge	%	100	100	100

Economy

Category	Unit	2020	2021	2022		
Income statement	Sales	-	-	163,912		
	Gross profit	-	-	57,959		
	Selling, general, and administrative expenses	-	-	21,886		
	Operating income	-	-	36,072		
	Financial income	KRW million	-	-	1,809	
	Financial expenses	-	-	(1,022)		
	Other income	-	-	668		
	Other expenses	-	-	(3,741)		
	Net income before the deduction of corporate tax expenses	-	-	36,741		
	Balance sheet	Assets	Current assets	-	-	99,779
Non-current assets			-	-	127,588	
Liabilities		Current liabilities	-	-	70,826	
		Non-current liabilities	-	-	5,725	
Capital		Shareholders' equity in the parent company	KRW million	-	-	150,815
		Shareholders' equity in the non-controlling company	-	-	0	
R&D		Total R&D expenses for the current period	KRW million	-	-	109
		R&D expenses/sales	%	-	-	0.61
		No. of R&D personnel	Persons	-	-	13

(Based on the consolidated financial statements)

Environment

Category	Unit	2020	2021	2022	
Consumption of raw materials	Raw materials consumed	Tons	-	-	1,640
Consumption of materials that contain recycled materials	Amount of recycled materials (reused raw materials) consumed	Tons	-	-	166
	Ratio of recycled materials (reused raw materials) consumed	%	-	-	10
	Total amount of water consumed	-	-	-	123,103
Water consumption (amount, based on domestic data)	Total amount of water consumed	Amount of water consumed	-	-	123,103
		Amount of underground water consumed	Tons	-	-
	Water reuse	Amount of seawater consumed	-	-	0
		Amount of water reused	-	-	0
GHG emissions	Emissions	Direct emissions (Scope 1)	-	-	159
		Indirect emissions (Scope 2)	-	-	10,741
Air pollutants	Emissions	SOx	-	-	0.09
		NOx	-	-	6.98
		PM	-	-	15.99
Waste	Total amount of waste (amount treated in Korea)	Total amount of waste	-	-	561
		Waste discharged at business sites	-	-	421
	Waste recycling rate	Designated waste	-	-	140
		Domestic waste	-	-	0
		Recycled amount	-	-	445
Waste recycling ratio	%	-	-	79	

Social

Category	Unit	2020	2021	2022		
Total number of employees	Persons	-	-	588		
Executives	Total	-	-	7		
		-	-	0		
	Female	-	-	7		
		Male	-	-	7	
			-	-	7	
Current employees (by employment type)	Total	-	-	567		
		Permanent	Female	Persons	-	-
	Male		-	-	480	
	Total		-	-	14	
	Non-permanent	Female	-	-	2	
Male		-	-	12		
Outsourced workers	Persons	-	-	-		
Current employees (by work schedule)	Full-time	-	-	588		
	Part-time	-	-	-		
Current employees (by location)	Domestic	-	-	588		
	Overseas	-	-	-		
No. of male employees	Persons	-	-	499		
	Ratio of male employees	%	-	-	85	
	No. of female employees	Persons	-	-	87	
		Ratio of female employees	%	-	-	15
	No. of male executives	Persons	-	-	10	
		Ratio of male executives	%	-	-	2
	No. of female executives	Persons	-	-	0	
		Ratio of female executives	%	-	-	0
	No. of male managers (manager level or higher)	Persons	-	-	27	
		Ratio of male managers (manager level or higher)	%	-	-	5
No. of female managers (manager level or higher)	Persons	-	-	0		
	Ratio of female managers (manager level or higher)	%	-	-	0	
Employee diversity	No. of employees with disabilities	Persons	-	-	11	
		Ratio of employees with disabilities	%	-	-	2
	No. of senior employees (55 years or older, excl. executives)	Persons	-	-	11	
		Ratio of senior employees	%	-	-	2
	Hiring of the socially disadvantaged	No. of foreign employees	Persons	-	-	11
		Ratio of foreign employees	%	-	-	2
	No. of employees with high school degrees	Persons	-	-	233	
		Ratio of employees with high school degrees	%	-	-	40
		No. of veterans	Persons	-	-	0
		Ratio of veterans	%	-	-	0
Employee composition	Persons in the age group (Under 30 years of age)	Persons	-	-	182	
		Percentage (Under 30 years of age)	%	-	-	31
	Persons in the age group (30 ~ 50 years of age)	Persons	-	-	380	
		Percentage (30 ~ 50 years of age)	%	-	-	64
New hires	Persons in the age group (Above 50 years of age)	Persons	-	-	24	
		Percentage (Above 50 years of age)	%	-	-	4
	Male	Persons	-	-	149	
		female	-	-	35	
By age	Under 30 years	Persons	-	-	78	
	30 ~ 50 years	-	-	99		
	Above 50 years	-	-	7		

Category	Unit	2020	2021	2022
Average male salary	KRW million	-	-	47
		-	-	36
Average female salary	KRW million	-	-	125
		-	-	0
Ratio of base salary of female to male	%	-	-	76
		-	-	0
Average male executive salary	KRW million	-	-	47
		-	-	36
Average female executive salary	KRW million	-	-	76
		-	-	10
Ratio of base salary of female executive to male executive	%	-	-	8
		-	-	80
Employee compensation by gender	KRW million	-	-	3.5
		-	-	157
		-	-	92
Job security	Persons	-	-	8
		-	-	38
Talent development	KRW 1,000	-	-	66
		-	-	3,029
		-	-	5.19
Industrial accidents	Agendas	-	-	1
		-	-	0.17
		-	-	0
		-	-	12
Duration of work-hour loss	Hours	-	-	880
		-	-	70
Mutual growth	Suppliers	-	-	49,004
		-	-	41,869
Fair trade	SME support	-	-	0
		-	-	0
Information-security breaches	Customer-data leakages, theft, and losses	-	-	0
		-	-	0
Workplace discrimination	No. of complaints filed related to workplace discrimination	-	-	0
		-	-	0
Incidents of non-compliance to regulations and internal codes	No. of violations that resulted in sanctions	-	-	0
		-	-	0
Work loss	No. of violations of internal codes	-	-	0
		-	-	0

Category	Unit	2020	2021	2022	
Employees who have taken parental leave	Total	-	-	6	
		-	-	0	
No. of employees who have returned to work after parental leave	Total	-	-	6	
		-	-	3	
Return rate of employees who have taken parental leave	Male	Persons	-	-	0
		Female	-	-	3
No. of employees who have worked over 12 months after returning from parental leave	Total	-	-	50	
		-	-	1	
Ratio of employees who have worked over 12 months after returning from parental leave	Male	Persons	-	-	0
		Female	-	-	1
Duration of education for prevention of workplace bullying	Total hours (per employee)	-	-	17	
		-	-	1	
Duration of education for sexual harassment prevention	Total hours (per employee)	-	-	1	
		-	-	1	
Other education (Human rights education for people with disabilities, etc.)	Cash donations	-	-	15	
		-	-	0	
Investment in CSR (incl. donation)	Non-cash donations	-	-	0	
		-	-	0	
Business expenses	-	-	-	0	

Governance

Category	Unit	2020	2021	2022	
Board of Directors	No. of Board meetings	Times	-	-	11
	No. of agendas	Ea.	-	-	23
	Preliminary deliberation	%	-	-	100
	Decisions on revised agenda	Ea.	-	-	0
Board diversity	Reported agenda	-	-	13	
	BOD attendance rate	%	-	-	99
	Non-executive attendance rate	%	-	-	97
	Male	Persons	-	-	8
Anti-corruption	Female	Persons	-	-	0
	Ratio of female directors in the BOD	%	-	-	0
	Under 30 years	-	-	-	
	30 ~ 50 years	Persons	-	-	2
Anti-corruption policies and procedures	Above 50 years	Persons	-	-	6
	No. of outside directors	-	-	3	
	Ratio of outside directors	%	-	-	38
	Total no. of business sites	-	-	4	
Anti-corruption violations	No. of business sites that conducted anti-corruption risk assessments	Ea.	-	-	0
	Ratio of business sites that conducted anti-corruption risk assessments	%	-	-	0
	No. of Board members who received ethics training	Persons	-	-	8
	Ratio of Board members who received ethics training	%	-	-	100
Anti-corruption policies and procedures	Total no. of employees who received ethics training	Persons	-	-	588
	Ratio of employees who received ethics training	%	-	-	100
	Total no. of Board members who have signed the ethics pledge	Persons	-	-	8
	Ratio of Board members who have signed the ethics pledge	%	-	-	100
Anti-corruption policies and procedures	Total no. of employees who have signed the ethics pledge	Persons	-	-	588
	Ratio of employees who have signed the ethics pledge	%	-	-	100
Anti-corruption violations	No. of anti-corruption violations	Ea. (Persons)	-	-	1

Economy

Category	Unit	2020	2021	2022
Income statement	Sales	52,588	59,462	59,146
	Gross profit	5,979	11,767	12,319
	Selling, general, and administrative expenses	11,499	12,011	16,292
	Operating income	(5,520)	(243)	(3,972)
	Financial income	181	203	244
	Financial expenses	151	110	131
	Other income	348	132	413
	Other expenses	792	86	2,806
	Affiliates' profits and losses	8,655	0	0
	Net income before the deduction of corporate tax expenses	2,721	(105)	(6,253)
Balance sheet	Assets			
	Current assets	34,199	32,455	25,186
	Non-current assets	7,587	16,339	14,630
	Current liabilities	13,433	18,248	14,138
	Liabilities			
	Non-current liabilities	2,124	1,760	2,413
Capital	Shareholders' equity in the parent company	26,229	26,376	21,932
	Shareholders' equity in the non-controlling company	-	2,409	1,333
R&D	Total R&D expenses for the current period	1,765	1,818	1,426
	R&D expenses/sales	3	3	3
	No. of R&D personnel	7	5	0

(Based on the consolidated financial statements)

Social

Category	Unit	2020	2021	2022
Total number of employees	Persons	227	224	253
Current employees (by employment type)	Total	3	3	6
	Executives			
	Female	0	0	0
	Male	3	3	6
	Total	219	212	247
	Permanent			
Female	54	53	67	
Male	165	159	180	
Total	5	9	0	
Non-permanent				
Female	2	2	0	
Male	3	7	0	
Outsourced workers	Persons	2	0	0
Current employees (by work schedule)	Full-time	227	224	253
	Part-time	0	0	0
Current employees (by location)	Domestic	227	224	253
	Overseas	0	0	0
Employee diversity	No. of male employees	171	169	186
	Ratio of male employees	75	75	74
	No. of female employees	56	55	67
	Ratio of female employees	25	25	26
	No. of male executives	3	3	6
	Ratio of male executives	1	1	2
	No. of female executives	0	0	0
	Ratio of female executives	0	0	0
	No. of male managers (manager level or higher)	-	-	128
	Ratio of male managers (manager level or higher)	-	-	51
No. of female managers (manager level or higher)	20	18	23	
Ratio of female managers (manager level or higher)	9	8	9	

Category	Unit	2020	2021	2022		
Employee diversity	No. of employees with disabilities	Persons	3	2	2	
	Ratio of employees with disabilities	%	1	1	1	
	No. of senior employees (55 years or older, excl. executives)	Persons	2	2	4	
	Ratio of senior employees	%	1	1	2	
	No. of foreign employees	Persons	0	0	0	
	Ratio of foreign employees	%	0	0	0	
	No. of employees with high school degree	Persons	4	5	9	
	Ratio of employees with high school degree	%	2	2	4	
	No. of veterans	Persons	2	2	2	
	Ratio of veterans	%	1	1	1	
Employee composition	Persons in the age group (Under 30 years of age)	Persons	-	-	53	
	Percentage (Under 30 years of age)	%	-	-	21	
	Persons in the age group (30 ~ 50 years of age)	Persons	-	-	166	
	Percentage (30 ~ 50 years of age)	%	-	-	66	
	Persons in the age group (Above 50 years of age)	Persons	-	-	34	
	Percentage (Above 50 years of age)	%	-	-	13	
	Male		14	31	53	
	female		5	9	21	
	New hires	Under 30 years	Persons	13	11	24
		30 ~ 50 years		6	29	45
Above 50 years			0	0	5	
Average male salary		KRW million	48	48	58	
Average female salary			40	41	42	
Ratio of base salary of female to male		%	83	85	74	
Employee compensation	Average male executive salary	KRW million	-	-	110	
	Average female executive salary		-	-	0	
	Ratio of base salary of female executive to male executive	%	-	-	0	
	Average male permanent employee salary	KRW million	-	-	56	
	Average female permanent employee salary		-	-	42	
	Ratio of base salary of female permanent employee to male permanent employee	%	-	-	76	
	Average male non-permanent employee salary	KRW million	-	-	0	
	Average female non-permanent employee salary		-	-	0	
	Ratio of base salary of female non-permanent employee to male non-permanent employee	%	-	-	0	

Category	Unit	2020	2021	2022	
Job security	Average years of service	Years	7.5	8	7.5
	Total number of employee turnover	Persons	-	-	41
	Voluntary turnover		-	-	88
Talent development	Non-voluntary turnover	%	-	-	12
	No. of beneficiaries of training/education	Persons	222	220	253
	Total budget for employee training/education	KRW million	252	170	238
Industrial accidents	Training expenses per employee	KRW 1,000	1,135	775	960
	Total no. of hours of training		13,947	7,213	7,169
	Average training hours per employee	Hours	26	28	29
Mutual growth	No. of industrial accidents	Ea.	0	0	0
	Industrial accident rate	%	0	0	0
	No. of deaths	Persons	0	0	0
Fair trade	No. of injuries	Persons	0	0	0
	Duration of work-hour loss	Hours	0	0	0
	Suppliers	Total no. of partner companies	Ea.	226	200
Information security breaches	Total purchases from partners	KRW million	23,005	29,684	30,434
	SME support	Total purchases from SME	18,499	20,613	20,159
	No. of violations of fair trade laws	Ea.	0	0	0
Workplace discrimination	Fines imposed	KRW million	0	0	0
	Customer data leakages, theft, and losses	Ea.	0	0	0
	No. of complaints filed regarding workplace discrimination	Ea.	0	0	0
Incidents of non-compliance to regulations and internal codes	No. of violations that resulted in sanctions		0	0	0
	No. of warnings for non-compliance	Ea.	0	0	0
	No. of violations of internal codes		0	0	0
Work loss	No. of work-loss cases in partner companies	Ea.	-	-	0
	Employees who have taken parental leave		4	1	4
	Male		1	0	2
Parental leave	Female		3	1	2
	Total	Persons	4	1	0
	Male		1	0	0
Human rights policies and procedures	Female		3	1	0
	Return rate of employees who have taken parental leave	%	100	100	0
	No. of employees who have worked over 12 months after returning from parental leave		4	1	3
Human rights policies and procedures	Male	Persons	1	0	1
	Female		3	1	2
	Ratio of employees who have worked over 12 months after returning from parental leave	%	100	100	75
Human rights policies and procedures	Duration of human rights training	Hours	1,135	1,100	771
	No. of employees who completed human rights training	Persons	227	220	257
	Ratio of employees who completed human rights training	%	100.00	98.20	100
Human rights policies and procedures	Duration of education for prevention of workplace bullying	Total hours (per employee)	227(1)	224(1)	257(1)
	Duration of education for sexual harassment prevention		340(1.5)	336(1.5)	257(1)
	Other education (Human rights education for people with disabilities, etc.)		340(1.5)	336(1.5)	257(1)

Category	Unit	2020	2021	2022	
CSR	Cash donation		8.1	7.3	7.7
	Investment in CSR (incl. donation)	KRW million	1.5	3.2	0
	Non-cash donations		0	0	0
	Business expenses		0	0	0
	Total volunteer hours	Hours	0	0	0
Average volunteer hours per employee		0	0	0	

Governance

Category	Unit	2020	2021	2022	
Board of Directors	No. of Board meetings	Times	-	-	10
	No. of agendas		-	-	20
	Reported agenda	Ea.	-	-	12
	BOD attendance rate	%	-	-	100
	Male	Persons	-	-	7
Board diversity	Female	Persons	-	-	0
	Ratio of female directors in the BOD	%	-	-	0
	Under 30 years		-	-	0
	30 ~ 50 years	Persons	-	-	2
	Above 50 years		-	-	5
Anti-corruption	No. of outside directors		-	-	3
	Ratio of outside directors	%	-	-	43
	Total no. of business sites		-	-	1
	No. of business sites that conducted anti-corruption risk assessment	Ea.	-	-	1
	Ratio of business sites that conducted anti-corruption risk assessment	%	-	-	100
Anti-corruption policies and procedures	No. of Board members who received ethics training	Persons	-	-	7
	Ratio of Board members who received ethics training	%	-	-	100
	Total no. of employees who received ethics training	Persons	227	224	253
	Ratio of employees who received ethics training	%	100	100	100
	Total no. of Board members who have signed the ethics pledge	Persons	-	-	7
Anti-corruption violations	Ratio of Board members who have signed the ethics pledge	%	-	-	100
	Total no. of employees who have signed the ethics pledge	Persons	227	224	253
	Ratio of employees who have signed the ethics pledge	%	100	100	100
	No. of anti-corruption violations	Ea. (Persons)	0	0	0

Economy

Category	Unit	2020	2021	2022	
Income statement	Gross profit	619,277	768,688	885,470	
	Selling, general, and administrative expenses	213,876	267,971	265,682	
	Operating income	61,942	70,287	79,691	
	Financial income	151,933	197,684	185,990	
	Financial expenses	4,033	4,204	9,227	
	Other income	10,044	6,176	7,518	
	Other expenses	6,915	6,631	9,009	
	Affiliates' profit and loss	4,719	6,999	10,742	
	Net income before the deduction of corporate tax expenses	12,693	13,356	8,271	
	Net income before the deduction of corporate tax Expenses	160,812	208,702	194,237	
	Balance sheet	Assets	Current assets	307,726	411,301
Non-current assets			691,474	785,873	867,190
Liabilities		Current liabilities	171,630	199,711	153,669
		Non-current liabilities	205,299	229,593	247,144
Capital		Shareholders' equity in the parent company	553,201	689,239	763,481
		Shareholders' equity in the non-controlling company	69,069	78,630	89,014
R&D		Total R&D expenses for the current period	13,004	13,640	18,955
		R&D expenses/sales	2	2	3
		No. of R&D personnel	107	120	127

(Based on the consolidated financial statements)

Environment

Category	Unit	2020	2021	2022
Consumption of raw materials	Tons	150,967	151,701	147,161
Consumption of materials that contain recycled materials	Amount of recycled materials (reused raw materials) consumed	0	0	0
	Ratio of recycled materials (reused raw materials) consumed	0.0	0.0	0
Energy consumption	Total energy consumed	2,628	3,119	3,395
	Scope 1 energy consumption	320	502	559
	Scope 2 energy consumption	2,308	2,617	2,836
Energy intensity	GJ/KRW billion	4,243.7	4,057.6	3,834.1
Water consumption (amount, based on domestic data)	Total amount of water consumed	2,148,690	2,214,557	2,557,065
	Amount of water consumed	28,933	40,407	46,267
	Amount of underground water consumed	0	0	0
	Amount of seawater consumed	0	0	0
Water reuse	Amount of water reused	0	0	0
	Ratio of water reused	0	0	0
GHG emissions	Direct emissions (Scope 1)	70,687	84,466	87,066
	Indirect emissions (Scope 2)	66,989	77,153	82,266
Air pollutants	SOx	96	5,960	1,110
	NOx	46	16,316	19,499
	PM	441	983	674
Water pollutants	BOD	9.9	14.1	14.3
	COD	31.3	28.5	33.9
	SS	15.3	23.2	12.5
	TN	18.4	8.1	7.2
Waste	Total amount of waste	6,439	8,526	10,202
	Waste discharged at business sites	3,552	4,327	4,817
	Designated waste	2,887	4,199	5,385
	Domestic waste	0	0	0
	Recycled amount	4,537	6,299	7,907
Waste recycling rate	70	74	78	

Category	Unit	2020	2021	2022
Hazardous (chemical) substance spills	No. of chemical spills	0	3	0
	Amount of chemicals spilled	0	5.1	0
Environmental expenses and investments	Amount of environmental investments	5,129	3,069	4,232
	Environmental expenses	1,981	2,717	2,922

* Consumption of materials that contain recycled materials: Error in the previous disclosure; Hansol Chemical did not use recycled raw materials
* SOx emissions: Decrease in emission due to differences in measurement methods

Social

Category	Unit	2020	2021	2022
Total number of employees	Total	563	632	658
	Executives	13	14	16
	Female	1	1	1
	Male	12	13	15
	Permanent	508	520	548
	Female	65	76	80
	Male	443	444	468
	Non-permanent	42	98	94
	Female	0	0	2
	Male	42	98	92
	Outsourced workers	0	0	0
Current employees (by work schedule)	Full-time	563	632	658
	Part-time	0	0	0
	Domestic	560	629	653
Current employees (by location)	Overseas	3	3	5
	No. of male employees	497	555	575
	Ratio of male employees	88	87	87
No. of female employees	66	77	83	
Ratio of female employees	12	12	13	
No. of male executives	12	13	15	
Ratio of male executives	2	2	2	
No. of female executives	1	1	1	
Ratio of female executives	0.2	0.2	0.2	
No. of male managers (manager level or higher)	-	-	116	
Ratio of male managers (manager level or higher)	-	-	18	
No. of female managers (manager level or higher)	11	12	16	
Ratio of female managers (manager level or higher)	11	12	12	
Employee diversity	No. of employees with disabilities	5	4	5
	Ratio of employees with disabilities	1	1	1
	No. of senior employees (55 years or older, excl. executives)	24	13	23
	Ratio of senior employees	4	2	4
	Hiring of the socially disadvantaged	0	0	0
	Ratio of foreign employees	0	0	0
	No. of employees with high school degree	146	135	153
	Ratio of employees with high school degree	26	21	23
	No. of veterans	4	4	4
	Ratio of veterans	1	1	1
	Persons in the age group (Under 30 years of age)	-	-	220
Percentage (Under 30 years of age)	-	-	34	
Persons in the age group (30 ~ 50 years of age)	-	-	360	
Percentage (30 ~ 50 years of age)	-	-	55	
Persons in the age group (Above 50 years of age)	-	-	72	
Percentage (Above 50 years of age)	-	-	11	

Category	Unit	2020	2021	2022	
New hires	Male	54	123	79	
	female	11	15	20	
	By age	Under 30 years	49	116	71
		30 ~ 50 years	13	20	27
		Above 50 years	3	2	1
	Average male salary	KRW million	90	88	101
	Average female salary	KRW million	60	64	103
	Ratio of base salary of female to male	%	66	72	103
	Average male executive salary	KRW million	-	-	914
	Average female executive salary	KRW million	-	-	2,940
	Ratio of base salary of female executive to male executive	%	-	-	322
Employee compensation	Average male permanent employee salary	KRW million	-	-	106
	Average female permanent employee salary	KRW million	-	-	69
	Ratio of base salary of female permanent employee to male permanent employee	%	-	-	65
	Average male non-permanent employee salary	KRW million	-	-	58
	Average female non-permanent employee salary	KRW million	-	-	0
	Ratio of base salary of female non-permanent employee to male non-permanent employee	%	-	-	0
	Average years of service	Years	7	6	7.6
	Total number of employee turnover	Persons	-	-	67
	Voluntary turnover	%	-	-	91
	Non-voluntary turnover	%	-	-	9
	Talent development	No. of beneficiaries of training/education	485	553	652
Total budget for employee training/education		KRW million	868	859	329
Training expenses per employee		KRW 1,000	451	522	504
Industrial accidents	Average training hours per employee	Hours	17	19	79
	No. of industrial accidents occurred	Ea.	2	2	0
	Industrial accident rate	%	0	0	0
	No. of deaths	Persons	1	0	0
Mutual growth	No. of injuries	Persons	1	2	0
	Duration of work-hour loss	Hours	0	0	0
Fair trade	Total no. of partner companies	Ea.	147	148	206
	Total purchase from partners	KRW million	105,929	144,366	262,609
	Total purchases from SME	KRW million	32,615	43,876	56,506
Information security breaches	No. of violations of fair trade laws	Ea.	0	0	0
	Fines imposed	KRW million	0	0	0
Workplace discrimination	Customer data leakage, theft, and loss	Ea.	0	0	0
	No. of complaints filed in relation to workplace discrimination	Ea.	0	0	0
Incidents of non-compliance to regulations and internal codes	No. of violations that resulted in sanctions	Ea.	0	0	0
	No. of warnings from non-compliance	Ea.	0	0	0
Work loss	No. of violations of internal codes	Ea.	0	0	0
	No. of work loss cases in partner companies	Ea.	-	-	0

Category	Unit	2020	2021	2022	
Parental leave	Employees who have taken parental leave	Total	1	2	8
	Male	1	0	4	
	Female	0	2	4	
	No. of employees who have returned to work after parental leave	Total	1	1	7
Human rights policies and procedures	Male	1	0	4	
	Female	0	1	3	
	Return rate of employees who have taken parental leave	%	100	50	88
	No. of employees who have worked over 12 months after returning from parental leave	Total	1	0	4
	Male	1	0	3	
	Female	0	0	1	
	Ratio of employees who have worked over 12 months after returning from parental leave	%	100	0	50
	Duration of education for human rights	Hours	1	1	1
	No. of employees who completed human rights training	Persons	496	617	625
	Ratio of employees who completed human rights training	%	88	98	100
	Duration of education for prevention of workplace bullying	Total hours (per employee)	388(1)	132(1)	625(1)
Duration of education for sexual harassment prevention	Total hours (per employee)	451(1)	609(1)	625(1)	
Other education (Human rights education for people with disabilities, etc.)	Total hours (per employee)	461(1)	630(1)	625(1)	
CSR	Investment in CSR (incl. donation)	Cash donation	296	212	214
	Non-cash donation	0	0	1	
	Business expenses	0	0	0	
	Total volunteer hours	Hours	480	420	513
Average volunteer hours per employee	Hours	0.9	0.7	0.84	
Direct beneficiaries of the support programs	Persons	500	500	700	

Governance

Category	Unit	2020	2021	2022	
Board of Directors	No. of Board meetings	Times	-	-	8
	No. of agendas	Ea.	-	-	14
	Preliminary deliberation	%	-	-	0
	Decisions on revised agenda	Ea.	-	-	0
	Reported agenda	Ea.	-	-	3
Board diversity	BOD attendance rate	%	-	-	100
	Male	Persons	-	-	5
	Female	Persons	-	-	1
	Ratio of female directors in the BOD	%	-	-	16.7
Anti-corruption	Under 30 years	Persons	-	-	0
	30 ~ 50 years	Persons	-	-	2
	Above 50 years	Persons	-	-	4
	No. of outside directors	Persons	-	-	3
	Ratio of outside directors	%	-	-	50
Anti-corruption policies and procedures	Total no. of business sites	Ea.	-	-	4
	No. of business sites that conducted anti-corruption risk assessment	Ea.	-	-	0
	Ratio of business sites that conducted anti-corruption risk assessment	%	-	-	0
	No. of Board members that received ethics training	Persons	-	-	6
Anti-corruption violations	Ratio of Board members that received ethics training	%	-	-	100
	Total no. of employees that received ethics training	Persons	563	632	652
	Ratio of employees that received ethics training	%	100	100	100
	Total no. of Board members who have signed the ethics pledge	Persons	-	-	6
Anti-corruption violations	Ratio of Board members who have signed the ethics pledge	%	-	-	100
	Total no. of employees who have signed the ethics pledge	Persons	522	593	614
	Ratio of employees who have signed the ethics pledge	%	93	94	93
	No. of anti-corruption violations	Ea. (Persons)	0	0	0

GRI CONTENT INDEX

Hansol Holdings reported in accordance with GRI standards from January 1, 2022 to December 31, 2022.
GRI 1: Foundation 2021 applied

UNIVERSAL STANDARDS

General Disclosures 2021

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	2-12		The company has not delegated responsibility for managing impact.
	2-13		74
	2-14	6.2/7.4.3/7.7.5	74
	2-15		There is no process to prevent conflicts of interest
	2-16		Insufficient data (No information)
	2-17		Annual education schedule starting 2023
	2-18		Insufficient data (No information)
	2-19		Confidential; not to be disclosed
2-20		Insufficient data (No information)	
2-21		Confidential; not to be disclosed	

Index	Description	ISO 26000	Page no.
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Topic Specific Standards Environmental Performance





















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	404-3	Percentage of employees receiving regular performance and career development reviews	88-107
Diversity and equal opportunity	3-3	Management of material topics	87
	405-1	Diversity of governance bodies and employees	6.2.3/6.3.7/6.3.10/
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Local communities	413-1	Operations with local community engagement, impact assessments, and development programs	6.3.9/6.5.1-6.5.3/6.8
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Customer health and safety	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	33
Marketing and labeling	417-1	Requirements for product and service information and labeling	87
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	417-1	Requirements for product and service information and labeling	50, 51

UN SUSTAINABLE DEVELOPMENT GOALS

The UN Sustainable Development Goals, (hereinafter referred to as SDGs), which replace the Millennium Development Goals (MDGs), are the common goals the United Nations and the international community aim to achieve from 2016 to 2030. The SDGs consist of 17 goals and 169 specific tasks for the sustainable development of all nations around the world, such as reduction of poverty and inequality and responses to climate change, as well as economic growth and job creation. Hansol Group's key issues for sustainable management align with the UN SDGs. This commitment is transparently shared in the Sustainability Report to ensure responsible task execution.

Key issues	UN SDGs	Activities
1 Ethical management and anti-corruption	 	- All affiliates conducted compliance management assessment. - All affiliates reviewed risk management system. - All affiliates established the ESG Indicator Management System.
2 Management of air pollutants in the manufacturing process	 	- Hansol Chemical upgraded facilities for energy efficiency. - Hansol Technics cut GHG emissions through facility upgrades.
3 Creation of a safe work environment	 	- All affiliates established the Hansol Safety Rating System (HSRS) to manage health and safety. - ISO 45001 certification obtained by Hansol Paper, Hansol Logistics, Hansol PaperTech, Hansol Chemical, Hansol Technics, and Tapex.
4 Enhancing product-responsibility and customer satisfaction	 	- Hansol Holdings hosted Group Innovation Olympics. - Hansol Group and KAIST established a joint research center in the field of materials, parts, and equipment. - 7 affiliates of Hansol Group obtained ISO 9001 for quality management.
5 Promotion of work-life balance		- Hansol Paper, Hansol Chemical, and Tapex certified as family-friendly companies. - A telecommuting employment platform introduced for persons with disability.
6 Supporting employee capacity building		- All affiliates developed an online education curation system utilizing competency diagnosis. - Tapex introduced an internal referral system.
7 Minimizing raw material consumption and promoting recycling	    	- Hansol Paper and Hansol HomeDeco increased share of green products. - Hansol HomeDeco increased use of recycled raw materials.
8 Safe waste, wastewater, and chemical discharge management	 	- Hansol Chemical reduced waste water discharge by 30,000 tons. - Hansol Paper, Hansol HomeDeco, Hansol PaperTech, and Hansol Technics invested in environmental facilities.
9 Fostering an agile organizational culture	 	- Hansol Technics, Tapex, and Hansol IONES hosted meetings to enhance intergenerational communication. - Hansol PNS operates flexible working system.
10 In-house human rights policy and education		- Hansol Holdings established Group Human Rights Management Policy. - Operation of Group Employee Mental Health Promotion Program.

INDEPENDENT ASSURANCE STATEMENT

To: Executives and Stakeholders of Hansol Holdings

Introduction

Korean Standards Association (KSA, hereinafter, the "Assurer") was commissioned by Hansol Holdings to conduct an independent assurance of the 2023 Hansol Group Sustainability Report hereinafter (the "Report"). The Assurer reviewed the validity of the data contained in the report prepared by Hansol Holdings and presented an independent assurance opinion. The data and presentation in the Report are solely the responsibility of Hansol Holdings.

Independence

The Assurer, as an independent assurance agency, is solely dedicated to providing third-party assurance on the Report, with no vested interests or affiliations in Hansol Holdings' business activities that could compromise their independence or financial gains.

Assurance Standards and Level

In accordance with the assurance standard of AA1000AS v3, the Assurer verified compliance with the principles of comprehensiveness, materiality, responsiveness, and impact. The evaluation has determined a "moderate" level of reliability for the information presented in the Report. Furthermore, compliance with the GRI Standards 2021 was verified, covering both the universal standards and topic-specific standards.

Assurance-Type and Scope

The Assurer conducted a Type 1 assurance, confirming adherence to the four principles of AA1000AP (AccountAbility Principles) 2018. The scope of assurance covered the period from January 1, 2022, to December 31, 2022, with a particular focus on Hansol Group's sustainability-management policies, objectives, initiatives, standards, and accomplishments, including those of Hansol Holdings and its affiliates during the reporting period. Verification encompassed environmental and social data as well as broader financial data related to economic performance. However, verification of stakeholder engagement was limited to a review of the materiality test process.

Methodology

To collect the information, data and evidence for assurance, the Assurer performed the following activities;

- Examination of stakeholder-engagement and materiality test process of Hansol Holdings by sustainability management experts;
- Assessment of the media-research results that pertained to Hansol Holdings' sustainability management and the overall balance of reporting;
- Verification of the consistency in financial performance data, undertaken by a certified public accountant, including a review of the financial statement and disclosed data;
- Review of conformity with the environmental information disclosure data by the Greenhouse Gas Assurer; and
- Review of other pertinent performance documents and data.

Conclusion and Opinion

The Assurer examined the initial draft of the Report and offered insights, leading to subsequent revisions that incorporated these suggestions. No major errors or improper statements were identified within the Report's contents. The Assurer's assessment of the 2023 Hansol Group Sustainability Report can be summarized as follows.

Inclusivity

Has Hansol Holdings actively involved stakeholders in shaping its strategic response to sustainability?

It is confirmed that Hansol Holdings acknowledges the significance of engaging with stakeholders in advancing sustainable practices and is actively working to establish a participatory framework. The company has specifically identified employees, partners, shareholders/investors, government/local authorities, customers, and local communities/NGOs as essential stakeholder groups and maintains dedicated communication channels for each group to gather a wide range of perspectives and valuable input.

Materiality

Has Hansol Holdings provided crucial information in the report to empower stakeholders' informed decision-making?

Our assessment indicates that Hansol Holdings has diligently included all pertinent information for stakeholders. Moreover, we verified that a comprehensive materiality test was conducted, encompassing the key issues identified through an exhaustive analysis of both the internal and external factors affecting Hansol Holdings, and these findings were reported.

Responsiveness

Has Hansol Holdings adequately responded to the needs and concerns of stakeholders?

Our review did not uncover any indications of misreported or inadequate response activities by Hansol Holdings.

Impact

Has Hansol Holdings effectively monitored its influence on stakeholders?

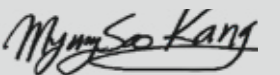
Our assessment confirmed that Hansol Holdings is diligently monitoring and comprehending the impact of its business operations on stakeholders. Furthermore, we verified that this information has been accurately incorporated into the Report.

GRI Standards Disclosure Review

The Assurer confirms that the Report adheres to the GRI Standards. The sections pertaining to both Universal Standards and Topic Standards indicators are presented based on data supplied by Hansol Holdings. Our review of the data substantiates the accuracy of these representations.

June 2023

Chair of Korean Standards Association,
Kang Myeong-Soo



The Korean Standards Association is a special corporation established according to the Industrial Standardization Act in 1962. It is a knowledge service institution that supplies and spreads industrial standardization, quality management, sustainable management, and KS and ISO certifications, etc. It contributes to the sustainable development of Korean society as an ISO 26000 Korean agency, GRI designated education institution, AA1000 assurance institution, Korea Sustainability Index (KSI), UN CDM operation organization, and institution of greenhouse gas and energy management system assurance.

AFFILIATES WITH CERTIFICATIONS

(*As of June 2022)

Company name	Certification				
	Environment	Quality	Safety and health	Family-friendly certification	Other
Hansol Paper	ISO 14001 Green Business (Janghang Plant)	ISO 9001 (Daejeon, Janghang, Shintanjin, Cheonan Plants)	ISO 45001 (Daejeon, Janghang Plants)	Family- friendly business	Gold-certified in the Ecovadis sustainability evaluation
Hansol PaperTech	ISO 14001 (Headquarters)		ISO 45001 (Headquarters)		
Hansol PNS	ISO 14001 (Paper distribution division)				ISMS (information security management, IT service) (Subsidiary) Hansol Coever Youth-friendly small giant
Hansol HomeDeco	ISO 14001 (Headquarters, Iksan Plant)	ISO 9001 (Iksan Plant)	KOSHA-MS		
Hansol Logistics	ISO 14001 (Headquarters)	ISO 9001 (Headquarters)	ISO 45001 (Headquarters)		AEO certification (Excellent company for export/import safety management) Outstanding logistics provider General logistics service, international freight forwarding, and trucking)
Hansol Technics	ISO 14001 (Jincheon, Ochang Plants)	ISO 9001 (Jincheon, Ochang Plants) IATF 16949 (Automobile quality management system) certification	ISO 45001 (Jincheon, Ochang Plants)		
Hansol IONES	ISO 14001 (Headquarters, Baran Plant)	ISO 9001 (Headquarters, Baran Plant) AS 9100	ISO 45001 (Headquarters) KOSHA-MS (Headquarters, Baran Plant)		ISO 22301 (Business continuity management system) ISO 27001 (Information security management system)
Hansol Chemical	ISO 14001 (Jeonju, Ulsan Plants) Green business	ISO 9001 (Jeonju, Ulsan Plants) IATF 16949	ISO 45001 (Jeonju, Ulsan Plants)	Family- friendly business	Materials and parts specialist (Ministry of Trade, Industry and Energy)
Tapex	ISO 14001 (Yanggam, Hwaseong, Uniwrap Plants)	ISO 9001 (Yanggam, Hwaseong, Uniwrap Plants) IATF 16949 (Yanggam, Hwaseong Plants)	ISO 45001 (Yanggam, Hwaseong Plants)	Family- friendly business	Materials/parts/equipment specialist (Korea Evaluation Institute of Industrial Technology)

AWARDS

(2022- March 2023)

Affiliates	Awards	Awarded by
Hansol Paper	The most respected company in Korea: ranked top in the paper sector for 20 consecutive years	Korea Management Association Consulting (KMAC)
Hansol HomeDeco	Best Space Award	Seoul Living Design Fair
Hansol Logistics	2022 AEO Sharing Contest: Recognition Award (Lee Jin-seok)	Korea Customs Service
	Certificate of Commendation from Seoul Regional Customs (Lee Jin-seok)	Seoul Regional Customs
	2022 DX Sector Environmental Safety Innovation Contest Partner Day: Excellence Award	Samsung Electronics
Hansol Technics	2021 Agricultural and Fishing Villages Collaborative Cooperation Fund: Honorary Award	Ministry of Trade, Industry and Energy
	Certificate of Commendation (No. 125758, Choi Jong-ik)	Ministry of Agriculture, Food and Rural Affairs
Hansol IONES	The Anseong City Entrepreneur Awards: Harmonious Labor-Management Award (Corporate)	Anseong Chamber of Commerce
	Selected as the top three company in materials, parts and equipment in 2022 Beacon Company Tower of 300 Million Dollar Export	Ministry of Trade, Industry and Energy
	2022 Outstanding Innovation Partners: Grand Prize	Samsung Electronics
Hansol Chemical	Fire Safety Management Practical Ability Contest: Grand Prize (Joo Hyungang)	
	Commendation on Firefighting Day (Joo Hyungang)	Jeollabuk-do
	Industrial Complex Disaster Monitoring: Certificate of Commendation (Kim Seong-jin)	
Tapex	Excellence Award in Materials, Parts, and Equipment Manufacturing: Minister's Award	Ministry of Trade, Industry and Energy
	Tower of 50 Million Dollar Export	Korea International Trade Association

LOCAL BUSINESS SITES

Company name	Business site	Address
Hansol Holdings	Headquarters	25/F, Pine Avenue Building B, 100 Eulji-ro, Jung-gu, Seoul, Republic of Korea
	Headquarters	23 ~ 24/F, Pine Avenue Building B, 100 Eulji-ro, Jung-gu, Seoul, Republic of Korea
Hansol Paper	Janghang Plant	149 Jangsan-ro, Janghang-eup, Seocheon-gun, Chungcheongnam-do, Republic of Korea
	Daejeon Plant	Daejeon Plant 50 Sinilseo-ro 68 beon-gil, Daedeok-gu, Daejeon, Republic of Korea
	Cheonan Plant	4186 Sejong-ro, Gwangdeok-myeon, Dongnam-gu, Cheonan-si, Chungcheongnam-do, Republic of Korea
	Sintanjin Plant	60 Sinilseo-ro 126 beon-gil, Daedeok-gu, Daejeon, Republic of Korea
Hansol PaperTech	Environmental Business Headquarters	3/F, Ubiquitous Building, 68 Pangyo-ro 255 beon-gil (616 Sampyeong-dong), Bundang-gu, Seongnam, Gyeonggi-do, Republic of Korea
	Headquarters	80 Daechi 7-gil, Daejeon-myeon, Damyang-gun, Jeollanam-do, Republic of Korea
Hansol PNS	Headquarters (Paper Distribution Division)	5/F, Ilheung Building, 213 Toegye-ro, Jung-gu, Seoul, Republic of Korea
	Headquarters (IT Service Division)	13/F and 14/F, Nuritkum Square Business Tower, 396 Worldcupbuk-ro, Mapo-gu, Seoul, Republic of Korea
	Chungmuro Center	120-1 Family Building, Pildong 2-ga, Jung-gu, Seoul, Republic of Korea
	Paju Converting Center	108 Jikji-gil, Paju-si, Gyeonggi-do, Republic of Korea
Hansol HomeDeco	Paju Integration Center	96 Jikji-gil, Paju-si, Gyeonggi-do, Republic of Korea
	Headquarters	27/F, Jeonmun Geonseol Hoegwan, 15 Boramae 5-gil, Dongjak-gu, Seoul, Republic of Korea
	TI Business Division	15/F, Jaram Building, 78 Mapo-daero, Mapo-gu, Seoul, Republic of Korea
	Iksan Plant	54 Seogam-ro 17-gil, Iksan-si, Jeollabuk-do, Republic of Korea
	Headquarters	22/F, Pine Avenue Building B, 100 Eulji-ro, Jung-gu, Seoul, Republic of Korea
	Icheon Center	#202, 288 Cheonggachang-ro, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea
	Gunsan CY Center	Gunsan Station, 197 Naeheung 2-gil (Naeheung-dong), Gunsan-si, Jeollabuk-do, Republic of Korea
	Gunsan Branch	Pier 5, Gunsan Port, 194 Seohae-ro (Soryong-dong), Gunsan-si, Jeollabuk-do, Republic of Korea
	Damyang Center	Hansol PaperTech, 80 Daechi 7-gil, Daejeon-myeon, Damyang-gun, Jeollanam-do, Republic of Korea
	Daejeon Center	Hansol Paper Daejeon Plant, 50 Sinilseo-ro 68 beon-gil (Sinil-dong), Daedeok-gu, Daejeon, Republic of Korea
Hansol Logistics	Busan Center	11/F, Jungang Building, 89 Haegwan-ro (Daechang-dong 1-ga), Jung-gu, Busan, Republic of Korea
	Busan New Port Center	#202 Jian Square, 6 Hwajeonsandan 4-ro 30beon-gil, Gangseo-gu, Busan, Republic of Korea
	Samsung C&T Fashion Business Team	M1 Floor, Kendall Square Bucheon Logistics Park, 80 Sinheung-ro 511beon-gil, Bucheon, Gyeonggi-do, Republic of Korea
	Metropolitan Area Business Team	M2 Floor, Kendall Square Bucheon Logistics Park, 80 Sinheung-ro 511beon-gil, Bucheon, Gyeonggi-do, Republic of Korea
	Shintanjin CY Center	Shintanjin CY, 24-3 Pyeongchon-dong, Daedeok-gu, Daejeon, Republic of Korea
	Sintanjin Center	Hansol Paper Shintanjin Plant, 60 Sinilseo-ro 126beon-gil (Sinil-dong), Daedeok-gu, Daejeon, Republic of Korea
	Opo Center	Hansol REF, 34-16 Jangji 9-gil (Jangji-dong), Gwangju, Gyeonggi-do, Republic of Korea
	Suwon Center	4/F, Hansol REF, 55 Omokcheon-ro 132beon-gil (Gosaek-dong), Gwonseon-gu, Suwon, Republic of Korea
	Iksan Center	Hansol HomeDeco Iksan Plant, 54 Seogam-ro 17-gil, Iksan, Jeollabuk-do, Republic of Korea
	Cheonan Center	Hansol Paper Cheonan Plant, 4186 Sejong-ro, Gwangdeok-myeon, Cheonan-si, Chungcheongnam-do, Republic of Korea

Company name	Business site	Address
Hansol Technics	Headquarters	5/F, Pine Avenue Building B, 100 Eulji-ro, Jung-gu, Seoul, Republic of Korea
	Jincheon Plant	55 Hansam-ro, Deoksan-myeon, Jincheon-gun, Chungcheongbuk-do, Republic of Korea
	Ochang Plant	140 Gwahaksaneop 1-ro, Oksan-myeon, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, Republic of Korea
	Suwon Research Center	#801, Building C, Digital Empire Building, 16, Deokyeong-daero 1556beon-gil, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea
Hansol IONES	Headquarters	2061 Anseong-daero, Gosam-myeon, Anseong-si, Gyeonggi-do, Republic of Korea
	Balan Campus	71-29, Balangongdan-ro 4-gil, Hyangnam-eup, Hwaseong-si, Gyeonggi-do, Republic of Korea
	Dongtan R&D Center	7, Dongtansandan 7-gil, Hwaseong-si, Gyeonggi-do, Republic of Korea
Hansol Inticube	Headquarters	13/F and 14/F, Nuritkum Square Business Tower, 396 Worldcupbuk-ro, Mapo-gu, Seoul, Republic of Korea
	Headquarters	7-8/F, K Tower, 513, Teheran-ro, Gangnam-gu, Seoul, Republic of Korea
Hansol Chemical	Jeonju Plant	873 Gwahang-ro, Bongdong-eup, Wanju-gun, Jeollabuk-do, Republic of Korea
	Ulsan Plant	116 Napdo-ro, Nam-gu, Ulsan, Republic of Korea
	Iksan Plant	1101, Oryong-ri, Samgi-myeon, Iksan-si, Jeollabuk-do, Republic of Korea
Tapex	Headquarters	#812-813, 8th Floor, 17 Daehak4-ro, Yeongtong-gu (lui-dong, Ace Gwanggyo Tower 1-cha), Suwon, Gyeonggi-do, Republic of Korea
	Yanggam Plant	62-16 Chorok-ro 532beon-gil, Yanggam-myeon, Hwaseong-si, Gyeonggi-do, Republic of Korea
	Hwaseong Plant	95-4 Goju-ri, Paltan-myeon, Hwaseong-si, Gyeonggi-do, Republic of Korea
	Uniwrap Plant	108 Mannyeong-ro, Hyangnam-eup, Hwaseong-si, Gyeonggi-do, Republic of Korea
	Gunsan Plant	San 38-3, Saemangeum National Industrial Complex, Osikdo-dong, Gunsan-si, Jeollabuk-do (to be completed in October 2023)

MEMBERSHIP OF ASSOCIATIONS

Hansol Holdings
Korea Listed Companies Association
Korea Investor Relations Service
The Korea Employers Federation

Hansol Paper
Korean Federation of Design Industry Associations
Korean Standards Association
Korea Personnel Improvement Association
Korea International Trade Association
Korea Electric Engineers Association
The Institute of Internal Auditors
Seoul Chamber of Commerce and Industry
Daedeok Association

Hansol PaperTech
Korea Paper Industry Cooperative
Korea Fire Safety Institute
Gwangju Jeonnam Jeju Area PSM Council
Korea International Trade Association

Hansol PNS
Korea Software Industry Association
Korea International Trade Association
Korean Information & Communication Contractors Association
Korea Listed Companies Association

Hansol HomeDeco
Korea Industrial Safety Association
Korean Industrial Health Association
Korean Standards Association
Korea Electric Engineers Association
Jeonbuk Environmental Managers Council
Jeonbuk Branch of Korea Safety Association
Hansol Honam Council
Hansol Safety and Health Council
Korea Specialty Contractors Association Seoul Metropolitan City Council
Korea Wood Panel Association

Hansol Logistics
Korea Trucking Association
Korea Freight Forwarders Association
Korea Railroad Logistics Association
Korea Customs Logistics Association
Korea International Logistics Association
Korea International Trade Association
International Air Transport Association (IATA)
Korea Port Logistics Association
AEO Promotion Association
Korea Chamber of Commerce and Industry
Korea Listed Companies Association

Hansol Chemical
Korea Chamber of Commerce and Industry
Korea International Trade Association
International Semiconductor Equipment and Materials Association
Korea Industrial Safety Association
Korea Fire Safety Association
Ulsan Environmental Engineers Association
Korea Energy Engineers Association
Jeonbuk Environmental Engineers Association
Wanju Environmental Engineers Association
Jeonbuk Chemical Plant Council
Jeonju Wanju Industrial Complex Fire Council
Jeonju Industrial Complex Safety and Health Managers Council
Jeonbuk Green Business Council
Jeonbuk Business Environment Council

Hansol Technics
Korean Industrial Health Association
Korea Industrial Safety Association
Environmental Preservation Association
Korea Fire Safety Institute
Korean Nurses Association
Korea Photovoltaic Industry Association
Chungbuk Environmental Engineers Association
Chungbuk Sejong Environmental Preservation Association
Korea Personnel Improvement Association

Hansol IONES
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Fire Safety Institute
Anseong Managers Association
Korea International Trade Association
Korea World Class Enterprise Association
Anseong Chamber of Commerce
KOSDAQ Listed Companies Association

Hansol Inticube
Information & Communication Contractors Association
Korea Software Financial Cooperative
Korea International Trade Association
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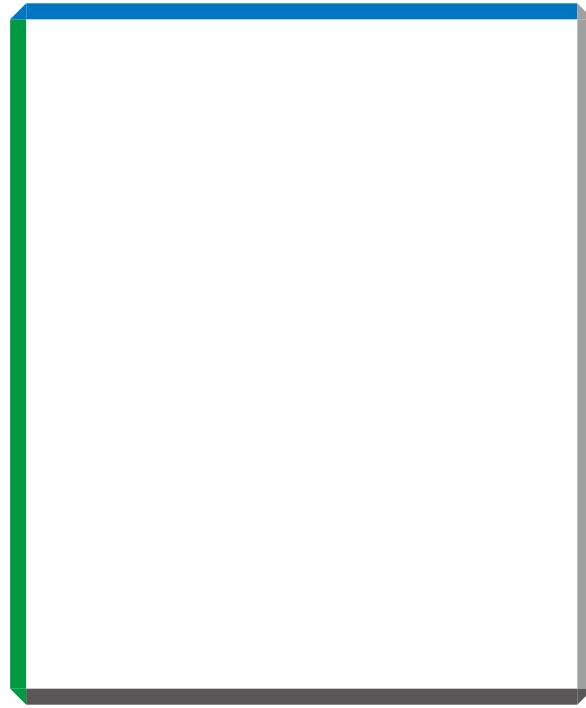
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Soy ink printing
We used soy ink for the printing of this report, which contains a significant portion of vegetable oil derived from soybeans. Due to the high concentration of vegetable oil, soy ink is highly biodegradable and low in volatile organic compounds (VOCs).



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