



**2023
HANSOL GROUP
SUSTAINABILITY
REPORT**

About this Report

Hansol Group published its first Sustainability Report back in 2020 and this one will be our third Sustainability Report. The purpose of this report is to disclose information about the company's involvement and performance in regard to the economic, social, and environmental factors. Additionally, keeping in mind stakeholders' values and integrating it within our business model.

Reporting Time Period

This report will present both financial and non-financial performance of Hansol Group's sustainability related activities from January 1 to December 31, 2022. However, there will also be data included from the first half of 2023 and for growth measurement and comparison purposes it will also include information from the past three years from January 1, 2020, to December 31, 2022.

Report Scope

This report covers the sustainability related activities and achievements that are initiated by Hansol Group also in recognition of Hansol Holdings and its 10 subsidiaries' involvement throughout. In the case of financial information, it is limited to the consolidated financial statements in accordance with the Korean International Financial Reporting Standards (K-IFRS).

Reporting Principles and Standards

This report was generated in respect to the GRI (Global Reporting Initiative) standards in accordance with their core principles and criteria's. Besides that, in relation to corporate social responsibility, Hansol Holdings also complies with ISO 26000.

Report Verification

In order to assure reliability of the information provided in the report, it has been verified by an official sustainability report assurance provider and this can be shown on p.114 of this report.

Contact Information regarding the Report

If you desire more information on Hansol Group's sustainability activities or performance, please reach out to the contact information provided below.

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CEO MESSAGE

Dear our Stakeholders,

We would like to express our deepest gratitude for your continued support and encouragement to Hansol Holdings.



2022 was a year full of changes especially for businesses and their external surroundings within the economy and the interest on sustainability has never been greater.

Despite the rapid changes and therefore, difficulties in the business world, Hansol Group is striving to build a sustainable business model.

Hansol Holdings aims to secure competitive advantage through differentiation and deliver maximum value in order to generate sustainable growth with our customers and stakeholders.

In addition, our business principles of being customer-oriented, willingness of adhering new values, acknowledging progressive methods, and creating differentiation, increases our corporate value and allows continuous recognition for new businesses that help us grow.

Evidently, each affiliate is challenged to maximize their performance and competitiveness, executing innovative tasks. We are creating a sustainable business structure by building a future-oriented business model.

Moreover, we have established four organizational principles which are commitment, transparency, respect, and speed, a foundation for the mindset of our employees. We contribute to the creation of a sustainable organizational structure by actively practicing these four principles throughout all our business activities.

Particularly in 2023, we developed the ESG Indicator Management System in efforts to enhance our ESG performance. Through standardized and accurate ESG data management, we will continue to help each of our affiliates to generate growth to strengthen our ESG per-

formance by identifying and implementing ESG focused strategies that will further solidify our ESG management system.

In addition, Hansol Group's affiliates attain certifications such as the international environmental management system (ISO) certifications like ISO 14001 and ISO 45001 and the International Safety Rating System (ISRS). Besides that, we also declared a company-wide human rights management and guidelines to ensure respect between all stakeholders and employees.

Meanwhile, we are conducting a compliance management diagnostics for all affiliates to improve governance practices with active engagement through voluntary corporate governance report disclosures for both financial and non-financial aspects. Moreover, we have implemented a mid-to long-term shareholder return policy and operated the external director candidate recommendation committee to strengthen communication with our stakeholders.

We look forward to your continued interest and support for Hansol Holdings' sustainable growth.

Thank you.

Hansol Holdings' CEO
Jae Hee Lee

HANSOL HOLDINGS AT A GLANCE

Hansol Holdings also realizes the importance of the responsibility 'Hansol' group holds in terms of brand reputation, building a diversified business portfolio, and efficiently allocating resources and the impact this has on sustainable management. Hansol Holdings will continue to construct our business model focusing on Hansol Group's competitive advantage and differentiation in order to further enhance our corporate value through sustainable management.



Company's Status

Founded

Jan. 1965

Headquarters

25th Floor, Pine Avenue Building B
Seoul, Jung-gu, Euljiro 100

Credit score

A-
(NICE Investors Service)

ESG rating

A
(Korean ESG Report Standard 2022 Composite Rating)

Key business

Management advisory and consulting, investment asset management, brand management, etc.

2022 Financial Results

(Based on separate financial statements, as of Dec. 2022)

Total Assets

KRW **4,567** billion
(equivalent to \$358 million USD)

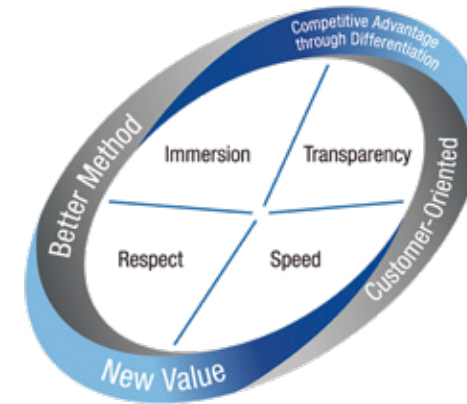
Sales

KRW **344** billion
(equivalent to \$27 million USD)

Operating Profit

KRW **163** billion
(equivalent to \$12.7 million USD)

Hansol Management System (HMS)



Our Mission

We thrive to deliver maximum value as a company by gaining competitive advantage through differentiation and continuously grow with our company

Our Principles

- Put our customers first
- The future depends on new values
- The better approach is our way of doing business
- Differentiated competitive advantage is our way of leading the market

Group Status

Holding company

Hansol Holdings' Companies

Major Subsidiaries

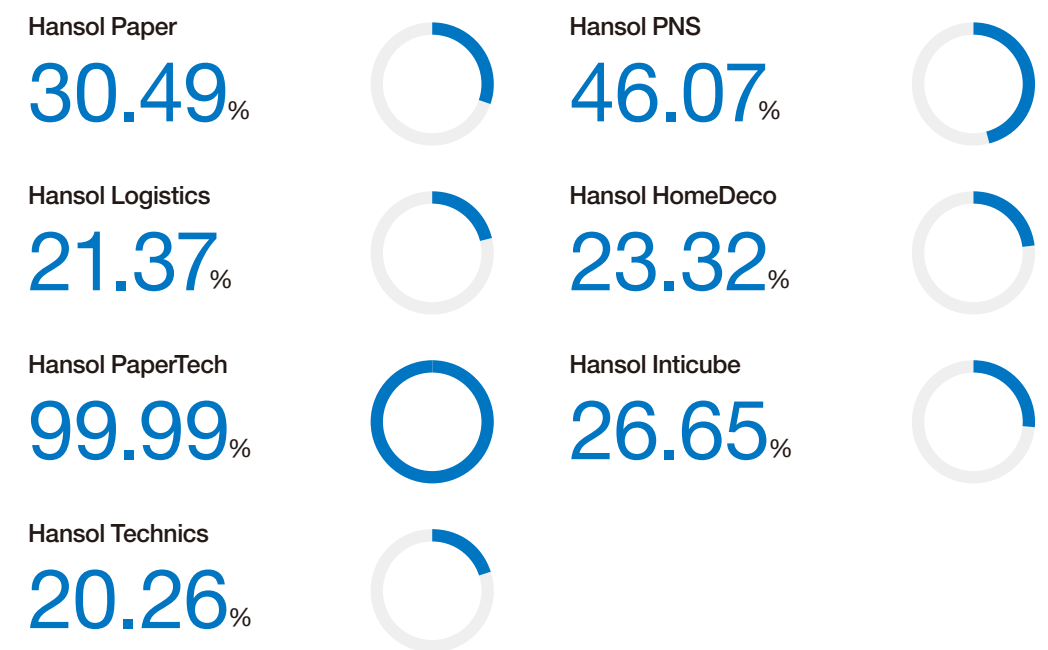
- | | | | |
|--------------|------------------|-----------------|-----------------|
| Hansol Paper | Hansol PaperTech | Hansol PNS | Hansol Technics |
| Hansol IONES | Hansol Logistics | Hansol HomeDeco | Hansol Inticube |

Major Affiliates

- | | |
|-----------------|-------|
| Hansol Chemical | Tapex |
|-----------------|-------|

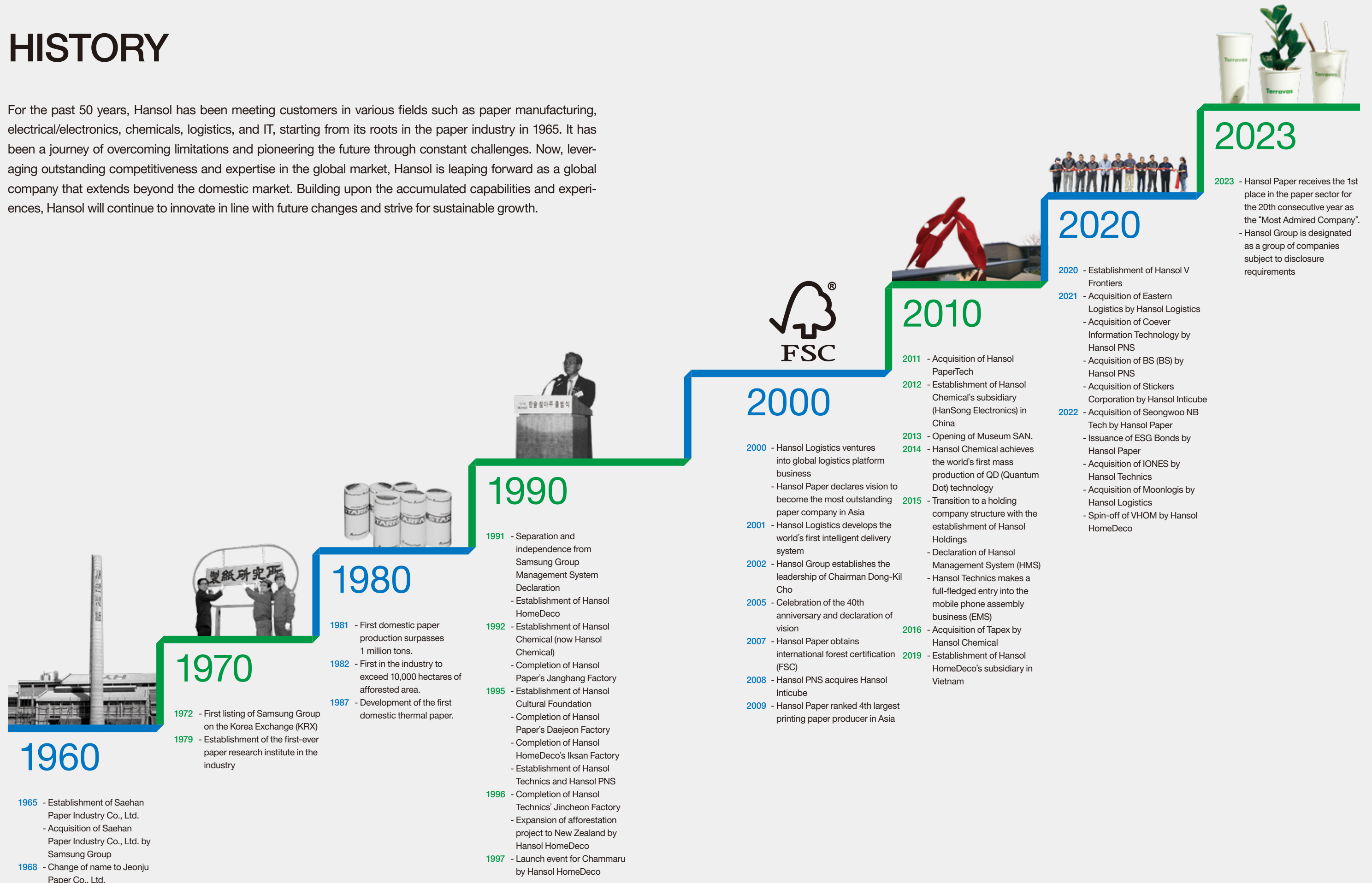
Hansol Holdings Shareholding Structure

(as of December 2022)



HISTORY

For the past 50 years, Hansol has been meeting customers in various fields such as paper manufacturing, electrical/electronics, chemicals, logistics, and IT, starting from its roots in the paper industry in 1965. It has been a journey of overcoming limitations and pioneering the future through constant challenges. Now, leveraging outstanding competitiveness and expertise in the global market, Hansol is leaping forward as a global company that extends beyond the domestic market. Building upon the accumulated capabilities and experiences, Hansol will continue to innovate in line with future changes and strive for sustainable growth.



1960

- 1965 - Establishment of Saehan Paper Industry Co., Ltd.
- Acquisition of Saehan Paper Industry Co., Ltd. by Samsung Group
- 1968 - Change of name to Jeonju Paper Co., Ltd.

1970

- 1972 - First listing of Samsung Group on the Korea Exchange (KRX)
- 1979 - Establishment of the first-ever paper research institute in the industry

1980

- 1981 - First domestic paper production surpasses 1 million tons.
- 1982 - First in the industry to exceed 10,000 hectares of afforested area.
- 1987 - Development of the first domestic thermal paper.

1990

- 1991 - Separation and independence from Samsung Group Management System Declaration
- Establishment of Hansol HomeDeco
- 1992 - Establishment of Hansol Chemical (now Hansol Chemical)
- Completion of Hansol Paper's Janghang Factory
- 1995 - Establishment of Hansol Cultural Foundation
- Completion of Hansol Paper's Daejeon Factory
- Completion of Hansol HomeDeco's Iksan Factory
- Establishment of Hansol Technics and Hansol PNS
- 1996 - Completion of Hansol Technics' Jincheon Factory
- Expansion of afforestation project to New Zealand by Hansol HomeDeco
- 1997 - Launch event for Chammaru by Hansol HomeDeco

2000

- 2000 - Hansol Logistics ventures into global logistics platform business
- Hansol Paper declares vision to become the most outstanding paper company in Asia
- 2001 - Hansol Logistics develops the world's first intelligent delivery system
- 2002 - Hansol Group establishes the leadership of Chairman Dong-Kil Cho
- 2005 - Celebration of the 40th anniversary and declaration of vision
- 2007 - Hansol Paper obtains international forest certification (FSC)
- 2008 - Hansol PNS acquires Hansol Inticube
- 2009 - Hansol Paper ranked 4th largest printing paper producer in Asia



2010

- 2011 - Acquisition of Hansol PaperTech
- 2012 - Establishment of Hansol Chemical's subsidiary (HanSong Electronics) in China
- 2013 - Opening of Museum SAN.
- 2014 - Hansol Chemical achieves the world's first mass production of QD (Quantum Dot) technology
- 2015 - Transition to a holding company structure with the establishment of Hansol Holdings
- Declaration of Hansol Management System (HMS)
- Hansol Technics makes a full-fledged entry into the mobile phone assembly business (EMS)
- 2016 - Acquisition of Tapex by Hansol Chemical
- 2019 - Establishment of Hansol HomeDeco's subsidiary in Vietnam

2020

- 2020 - Establishment of Hansol V Frontiers
- 2021 - Acquisition of Eastern Logistics by Hansol Logistics
- Acquisition of Coever Information Technology by Hansol PNS
- Acquisition of BS (BS) by Hansol PNS
- Acquisition of Stickers Corporation by Hansol Inticube
- 2022 - Acquisition of Seongwoo NB Tech by Hansol Paper
- Issuance of ESG Bonds by Hansol Paper
- Acquisition of IONES by Hansol Technics
- Acquisition of Moonlogis by Hansol Logistics
- Spin-off of VHOM by Hansol HomeDeco

2023

- 2023 - Hansol Paper receives the 1st place in the paper sector for the 20th consecutive year as the "Most Admired Company".
- Hansol Group is designated as a group of companies subject to disclosure requirements

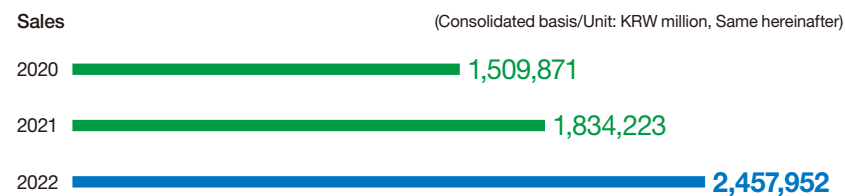
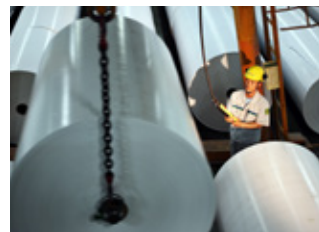
GROUP BUSINESS PORTFOLIO



Hansol Paper

Founded January 2015
Headquarters 100 Euljiro, Jung-gu, Seoul, Korea, Pine Avenue Building B Floor 23&24
Key business Business sector: production of printing paper, industrial paper, specialty paper, thermal paper
 Environment sector: EPC (engineering, procurement, construction) and O&M (Operations and Maintenance)
Credit score A (rated by NICE credit)
ESG rating B+ (Korea ESG Reporting Standards)

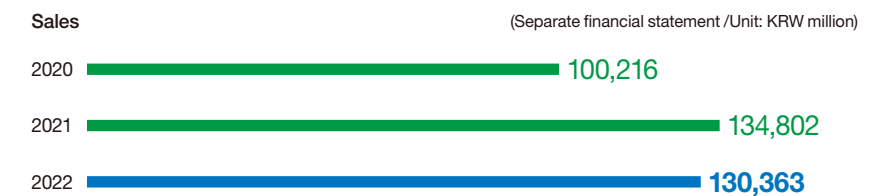
Hansol Paper was founded in 1965 and since founded they have been producing a wide range of paper products and is the largest paper company that has made major contributions to the development of Korea's culture and industry. They are the only paper mill company in Korea that produces a combination of paper products including but not limited to printing paper, industrial paper, specialty paper, and thermal paper at four different locations, Janghang, Daejeon, Cheonan, and Sintanjin. They have been building their brand value through stringent quality control, continuous research & development, and advanced customer service. Recently, the company has been heavily focusing on high-tech paper production that is eco-friendly and technology-intensive in hopes to collaboratively work and build strong connections with global companies such as in the United States and Europe. Additionally, the merger with Hansol EME has established a foundation for business diversification in the eco-friendly field of resource circulation.



Hansol Papertech

Founded February 2000
Headquarters 80, Daechi 7-gil, Daejeon-myeon, Damyang-gun, Jeollanam-do, Korea
Key business corrugated cardboard and paper production
Credit score B1

Hansol PaperTech is a company that produces and sells all types of corrugated paper such as surface paper, double-sided paper, and corrugated cardboard not only within Korea but also exports internationally. Corrugated paper is used for product packaging especially within the transportation and has an excellent cushioning effect that protects the product by absorbing external damage. Evidently, it is most commonly used to make boxes for industrial products or agricultural products for courier, electronics, and general industrial packaging. Through well-maintained partnerships Hansol PaperTech was able to continuously provide such materials and earn profitable sales. Through a strong foundation, we will continue to pursue innovativeness in making high-quality, eco-friendly products with new technologies.



Founded February 1975
Headquarters 5th floor, Ilheng Building, 213 Toegye-ro, Jung-gu, Seoul
Key business paper distribution services, IT services
Credit score A3
ESG rating B

Hansol PNS is the largest paper distribution company in Korea and also separately runs an IT service business. In order to ensure future competitiveness within the industry, they are currently working on a project in efforts of digital transformation. As a first step, they launched an online mall and as the second step of the project, they are in preparation of building a mobile system to enter the data/platform industry. As such, the IT service sector designs information systems for companies, develops hardware and application software, and creates customized solution systems for customers. In particular, the Smart Factory business plays a crucial role for small and medium-sized businesses' digital transformation within Korea and also is significant for customers' ESG management.



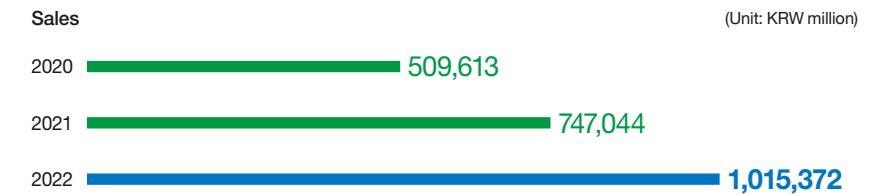
Founded December 1991
Headquarters 27th floor, Professional Construction Centre, 15 Boramae-ro 5-gil, Dongjak-gu, Seoul
Key business Forestry sector: manufacturing and distribution of panels (MDF), flooring, and interior
 Cogeneration sector: biomass renewable energy (power and steam production)
 Afforestation sector: Investment in overseas afforestation business in collaboration with a corporation in New Zealand
Credit score BBB
ESG rating B

Hansol HomeDeco is a company that specializes in furniture material MDF and eco-friendly interior material production. They have established a wood resource circulation system by getting involved in areas like international afforestation, lumber, furniture components, flooring, wall coverings, interior material distribution, renewable energy, and forestry resource recycling. Besides this, they have created a value chain within the forestry business by utilizing by-products of MDF and lumber delivering additional value. In 2022, we released a direct interior platform called 'VHOM' that functions both as a web browser and an app which is customer-friendly targeting a broader consumer base. Moreover, in order to create competitive advantage and grow the market for their online 'Total Interior', they have divided the business sector and newly established 'Hansol Everybody's Spring'.



Founded June 1994
Headquarters 22nd floor, Pine Avenue Building B, 100 Euljiro, Jung-gu, Seoul
Key business International logistics, freight forwarding services, logistics consulting, W&D
Credit score A3

Hansol Logistics was founded in 1994 and is a comprehensive logistics company that is globally active providing all types of freight forwarding services such as ground, air, sea, and railway, and also consultation services thriving to be the best SCM Solution Provider delivering utmost customer satisfaction. They also embrace ESG management within their business by creating a safe workplace, practicing ethical management, and enhancing stakeholders' value. Overall, Hansol Logistics is successfully operating in seven different countries and 20 individual overseas networks by providing such logistics services.



Founded August 1966
Headquarters 5th floor, Pine Avenue Building B, 100 Euljiro, Jung-gu, Seoul
Key business electrical and electronic power modules, wireless chargers, photovoltaic modules, LED material processing, mobile phone EMS
Credit score BBB+
ESG rating B+

Hansol Technics operates a PMD (Power Module Device) business manufacturing digital power, mobile phones, wireless charging modules, and automotive electronics and also an ES (energy solution) business that produces solar modules and LED wafers, all under the management philosophy of talent and technology oriented and futuristic approaches. Through this they are able to deliver high quality, advanced product development capabilities, and cost efficiency. Furthermore, they are growing into one of the leading companies within the electronic energy solutions industry through successful commercialization through continuous innovative business development. Additionally, recognizing that we are a key player in the export industry within Korea, we strive to embed ESG management and promote SMEs.



Founded March 1993 (formerly Dong-A Engineering)
Headquarters 2061 Anseong-daero, Gosam-myeon, Anseong-si, Gyeonggi-do
Key business semiconductor front-end processing, precision processing, cleaning, and coating of display manufacturing equipment parts
Credit score BBB (rated by Ecredible)

Hansol IONES is a future-oriented, innovative company that provides ultra-precision specialized components for semiconductors and displays from designing to processing, measuring, cleaning, coating, and analyzing, essentially being a one-stop service provider that prospers growth with our customers through high quality and advanced technology. We have proven our differentiated competitiveness and advantage in the market by supplying precision parts and also cleaning and coating services for semiconductor consumables to the global top-tier semiconductor companies. Moving forward Hansol IONES aims to grow into a global company that specializes in parts used within the industrial field and contribute to industrial development as a whole with the foundation of new material development, nano coating, and surface treatment technology, welcoming change and challenge for growth.



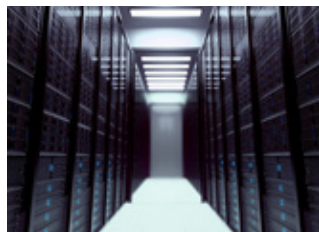
Founded March 1980
Headquarters 7&8th floor, K-Tower, 513 Teheran-ro, Gangnam-gu, Seoul
Key Business fine chemicals, display materials, semiconductor materials, secondary battery materials
Credit score A+ (rated by Moody's Investor Service KR)
ESG rating B

Hansol Chemical was founded in 1980 and has been a leader in the market by producing excellent chemical products through continuous innovation. With large-scale production facilities in Jeonju, Ulsan, and Xi'an, China, the company has secured a wide range of business areas from fine chemicals to electronic materials. Hansol Chemical will demonstrate sustainable growth by gaining advantage in the market for semiconductor materials, advanced displays, and secondary batteries. Evidently, integrating ESG strategies to maximize our global capabilities in discovering new business opportunities.



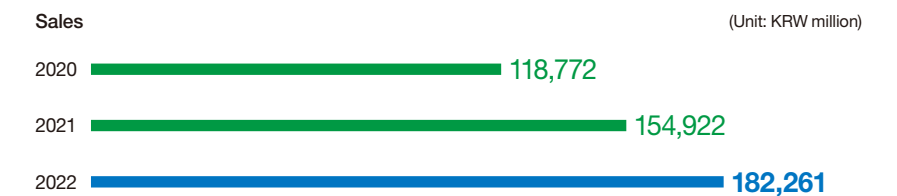
Founded December 2003
Headquarters 14th floor, Nuri Dreamsquare Business Tower, 396 WorldCup Buk-ro, Mao-gu, Seoul
Key business digital contact center, AI communications, cloud communications, mobile solutions
Credit score BB+ (rated by Ecredible on April 20, 2022)

Hansol Inticube is a leading communication solutions provider business utilizing AI contact centers. Based on abundant experience in building various digital contact centers, we confidently provide customers with integrated solutions from consulting to maintenance of optimized contact center infrastructures. Hansol Inticube launched an AI communication tool called 'ISAC-AI' that uses the core IT technologies in the next upcoming industrial revolution which are AI, cloud, and big data. In efforts to help small and medium-sized companies introduce an AI consultation service. We will continue to be a company that actively contributes to digital growth, transformation and expansion within the industry.



Founded April 1994
Headquarters 8th floor, 17 university 4-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do
Key Business industrial tape production for electronics, food packaging wraps, and consumer goods
Credit score A- (Moody's Investor Services KR)
ESG rating B+

Tapex was founded in 1994 and is a company specializing in industrial tapes, production of tapes for electronic materials used as core materials in secondary batteries, displays, and semiconductor processes, wraps for food packaging, etc., that is eco-friendly. Recognizing the urgency of the current global climate change issues and its corresponding environmental policy changes, we have diversified our business by entering the eco-friendly and renewable energy industries. As a result, we have established ourselves as a global leader in the field of functional tapes for eco-friendly electric vehicles and set a foundation for sustainable management as a material company that contributes to the preservation of the environment while also promoting business growth.



Hansol's new established values create a better future. Hansol took the initiative to produce and certify eco-friendly products. We strive to secure competitive advantage through managing climate risks and therefore, creating business opportunities.



Sustainability Essentials

- 18 Sustainability Key Figures 2022
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SUSTAINABILITY KEY FIGURES 2022

By embedding ESG principles, Hansol Group will continue to demonstrate sustainable growth, gain customers' trust, and enhance corporate value. In consequence, Hansol Group's commitment can be proven through our key ESG performance data and statistics below.



SUSTAINABILITY MANAGEMENT SYSTEM

Hansol Group has established the Hansol Management System (HMS) under the vision of attaining differentiated competitive advantages and promoting sustainable growth and utilizes it as a core value that all employees share and practice. With that said, we have established environmental management, human rights management, ethical management, and safety and health management systems to actively practice sustainable management. In 2022, we revised the HMS and focused on bettering our ethical management.

Hansol Management System (HMS)

In June 2022, Hansol Management System included an additional organizational principle, respect, to the existing three which are commitment, transparency, and speed, officially integrating four principles. By doing so, we aim to embed where mutual respect can be accomplished throughout all members of the organization both psychologically and physically.

Organizational principles

Commitment: Focus and uniformity for exceptional performance

Delivering exceptional performance not only requires execution but also requires commitment. We will work on creating an environment where it embodies individual and organizational growth actively challenging the status quo with positivity.

Transparency: open and honest sharing of processes and outcomes

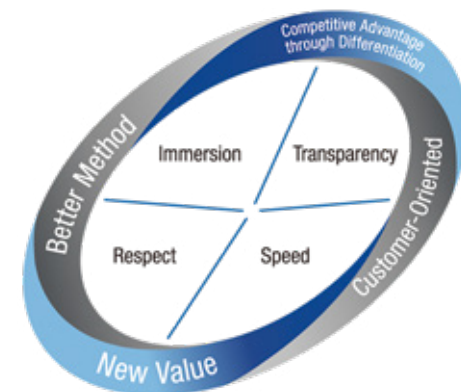
A transparent corporate culture is fundamental to Hansol. We strengthen a transparent culture for our customers, shareholders, employees, and communities by practicing ethical business conduct, accountability, and open communication.

Speed: being practical and getting straight to the point

Speed is simplicity meaning focusing your efforts on the essence and core in a way that emphasizes substance over form. When it comes to communicating with customers, it's about quickly identifying their wants and needs and having them met with the appropriate services.

Respect: valuing each other

Those who have been successful with a respectful culture within their organizations first respect themselves, then it is possible to value others and respect the individuality and diversity of others. At Hansol, we provide fair opportunities for our employees to fulfill their capabilities and potential.



Environmental Management (EMS)

Hansol has established an ESG indicator management system that enables all affiliated companies to manage ESG data systematically and efficiently, with the focus on Hansol Holdings, the holding company of the affiliates. In particular, EMS was organized by the Environmental Management Promotion Committee, which consists of practitioners in major departments and the communication team and is practiced by all affiliates allowing information sharing amongst employees much feasible. Through this ESG indicator management system, we continuously manage data on environmental management system certifications, climate change response, greenhouse gas emissions, energy and water usage, and pollutant and waste management to check target levels and improve environmental management activities.

Environmental Management

In January 2023, Hansol Group established an ESG indicator management system that is applicable to all affiliates. Hansol ESG indicator management system contains about 300 indicators that can be used to proactively respond to domestic and international ESG disclosures. It also provides detailed guidelines for those who may require a more in-depth understanding for accuracy purposes. Hansol has integrated the newly established ESG indicator management system to further strengthen company-wide ESG management and sustainable business.

Hansol Holdings Environmental Policy

Efficient use of resources and environmental stewardship

We are committed to preventing environmental pollution and protecting the environment through efficient use of resources and energy and minimizing waste.

Operationalize and continuously improve your EMS

All employees of the company shall recognize this environmental policy, target, and implement achievable goals for continuous improvement for environmental performance and to enhance the environmental management system by reflecting nonconformities and improvements that occur.

Communicate with stakeholders and meet compliance obligations

Periodically review the direction of our environmental goals and objectives through continuous communication with our stakeholders and disclose our environmental compliance obligations and management standards to reflect the needs of our stakeholders.

Transparent environmental management practices

Disclose environmental policies and environmental management information to stakeholders to encourage active participation and practice transparent environmental management

International environmental management systems - Status of ISO 14001 certification holdings

19 affiliates

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

Human Rights Management

In accordance with Article 25 (2) of the National Human Rights Commission Act, Hansol Group has published the Human Rights Management guidelines that emphasize on the protection and promotion of human rights of all stakeholders, including employees. We respect the dignity and value of human beings as recognized in the Universal Declaration of Human Rights, the Declaration on the Rights of Workers, and the international human rights standards and norms, comply with a non-discriminatory working environment, prohibition of forced and child labor, guarantee of occupational safety, and protection of environmental rights.

Hansol Holdings Human Right Management Operating Guidelines

As companies will have a bigger influence on society and the environment, the responsibility of companies to respect human rights has become mandatory. Hansol Group prevents and protects against labor rights violations in accordance with Principle 1 of the UNGC, which states that "Businesses should support and respect the protection of internationally proclaimed human rights".

In May 2022, Hansol Holdings prepared and disseminated the Human Rights Management Operational Guidelines to the entire company. The guidelines include standards for human rights violations, remedial procedures, and prevention programs when employees or stakeholders experience violation or discrimination related in regard to any Hansol Holdings' business activities or executives, and representative cases and reports of human rights violations, so that they can be applied routinely.

Human Rights Management System

Human rights management statement

Hansol declares human rights management to ensure the dignity and value of human beings in all business activities and all employees practice the declaration as a standard for behavior and value judgment in human rights management.

Human rights representative

1. Hansol has a human rights management representative to systematically implement regulatory procedures, education, etc. to promote human rights
2. The duties and functions of the human rights management representative are as follows:
 - Developing and implementing a plan to promote human rights
 - Implementation of human rights training
 - Remedies/solution to requite for human right violations
 - Other matters determined to require human rights management review

Human rights education

Conduct human rights-related training to raise the human rights awareness of all employees at least once a year and choose the method training period.

Support human rights activities

Hansol may take necessary measures to spread the protection and promoting of human rights and values, and may provide support to human rights-related institutions or organizations and stakeholders.

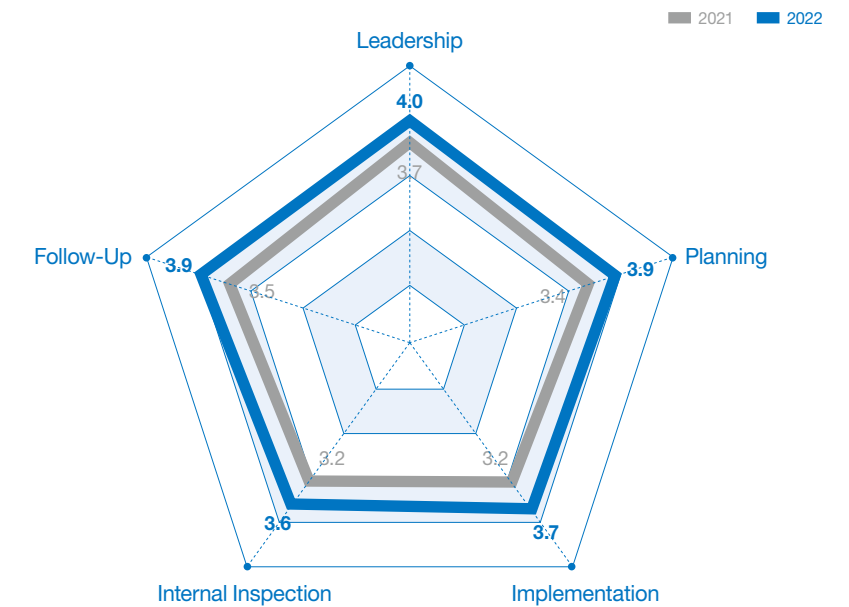
Compliance

Society is increasingly demanding that companies comply with the law and be accountable for their actions. The most basic requirement for companies in ESG management is compliance management. In order to further systematize compliance management to respond to growing pressure from society, Hansol analyzed and identified strategic tasks to tackle vulnerabilities of each affiliate for improvement purposes.

Compliance Diagnostics

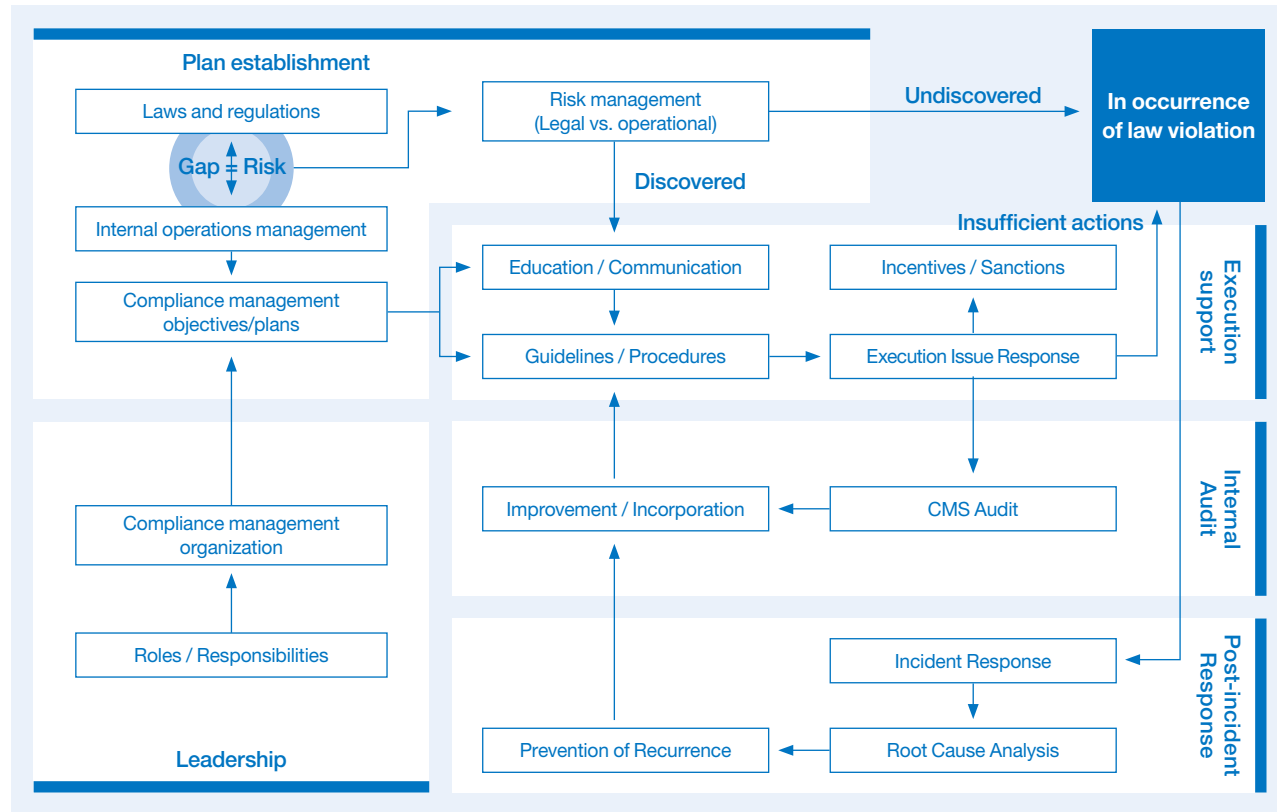
Hansol Group has been conducting compliance management diagnosis since 2021. In 2022, we diagnosed the compliance management status of six affiliates - Hansol Paper, Hansol Technics, Hansol HomeDeco, Hansol Logistics, Hansol PNS, and Hansol Inticube - regarding five aspects: leadership, planning, execution support, internal inspection, and follow-up. As a result, the overall compliance management operation level of the six companies averaged to 3.8 points (out of 5), an increase of 0.4 points compared to the previous year. Through the compliance management diagnosis, we were able to spread the importance of compliance management and the will to implement it throughout Hansol Group. With the goal of establishing a compliance risk management system and strengthening on-the-job execution, each of the six companies will derive improvement tasks based on the diagnosis results to further strengthen the group's compliance management process.

Hansol's average compliance management performance



Strengthen compliance processes

The six affiliates, Hansol Paper, Hansol Technics, Hansol HomeDeco, Hansol Logistics, Hansol PNS, and Hansol Inticube, selected compliance management tasks by considering urgent areas of legal and regulatory issues that require strengthening of all aspects of the compliance management process and risk reduction for each company.



Safety and Health Management

“There should be no work where injuries are a given” is a phrase that represents Hansol Group’s safety and health management awareness. Hansol introduced the Hansol Safety Rating System (HFRS) to address intensifying legal and regulatory risks and to complete its safety culture as a trusted company. HSRS is Hansol’s own safety and health work standards and evaluation system that optimizes the international quantitative evaluation systems ISRS system to reflect the company’s business characteristics.

Introduction of the Hansol Safety Rating System (HSRS) safety and health management evaluation system

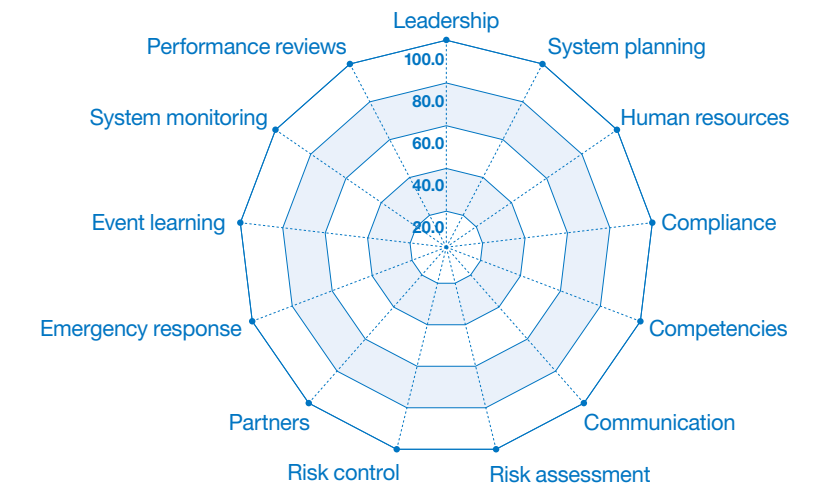
In order to be prepared and have an appropriate safety response and solution system, Hansol Group initially introduced the ISRS assessment in 2019, an international safety management assessment, to examine the current state of safety management and verified its effectiveness in 2020 and completed the second round of performance measure in 2021. Through this, we advanced the business system necessary for fundamental responses to safety management and fostered safety management personnel. In 2022, we introduced HSRS, an evaluation system that considers the characteristics of Hansol’s business.

HSRS Evaluation Metrics

Category	Level	Level description	Comparison with ISRS
L5	Progressive (80 or above)	Stage where field members voluntarily recognize the strengths and weaknesses of the organization and continuously strive for improvement	L 7
L4	Preventive (60-80 points)	Stage where necessary systems for controlling key processes are established and members participate through motivation from leaders	L 5-6
L3	Directive (50-60 points)	Stage where systems for controlling significant risks are implemented, and members participate passively under the guidance of leaders	L 4-5
L2	Reactive (40-50 points)	Stage where key processes for loss prevention are not identified, and changes are sought only when incidents occur	L 2-3
L1	Indifferent (Less than 40 points)	Stage where the importance of systems is not recognized, and no investment is made in improving member safety activities	L 1-2

Hansol Paper - Improving the purchasing process by designing and piloting subcontracting risk management processes	Hansol Technics - Proactively identify risks of violation of personal information/trade secret protection laws by designing/revising personal/business information management processes. - Design a management process to proactively identify hazardous chemical handling risks	Hansol HomeDeco - design and operate an internal compliance audit process to enhance risk proactive identification
Hansol Logistics - Secure transparency and manage subcontracting/fair trade risks by supplementing the transportation/shipping company selection process	Hansol PNS Paper Distribution Division - Identify risk factor and establish management plans to prevent safety accidents at new relocated centers	Hansol PNS IT Service / Hansol Inticube - Proactively identify key risks and enhance responsiveness through the establishment and training of IT specific industry legal compliance operational guides

HSRS process metrics



HSRS assessment and application sites

9 affiliates Hansol Paper’s four plants and the environmental business division, Hansol HomeDeco, Hansol PaperTech Hansol Logistics, and Hansol Technics

HANSOL FOCUS ISSUES

ISSUE

1

Developing Green Products and Technology

BACKGROUND

The world is integrating the importance of carbon neutrality through carbon taxes, credits, and activating the carbon trading markets. In Korea, various actors including the government, businesses, and society, are taking action to achieve carbon neutrality by 2050. On the corporate side, we need to focus on product and technology innovation that can turn climate change risks into opportunities.

OUR APPROACH

Hansol is striving to develop products and technologies that minimize environmental impact in all sectors of Hansol's business, such as making eco-friendly materials and resource recycling technologies. In addition to strengthening eco-friendly values, we also encourage all stakeholders of Hansol to practice carbon neutrality to generate sustainable growth.

MANAGEMENT BRIEFING

Sang Won Oh, Head Manager of the Eco-Packaging Team at Hansol Paper

As companies are standardizing ESG integration within their business model, the need for eco-friendly packaging is expected to rise even more than the current demand. In particular, consumers are becoming increasingly invested in eco-friendliness and are taking the lead in 'responsible consumption' to practice environmental values and therefore, the future of eco-friendly packaging is bright. We plan to continue to expand our product line with sustainable products that can replace plastic to meet the seeking demand of eco-friendliness from customers. In the case of eco-friendly paper containers, we are developing a product line that is multi-functional to replace plastic containers currently in use within the food and beverage sector. We also intend to diversify our product line with 'Protego' which is an eco-friendly packaging product that can replace the conventional plastic/aluminum packaging material.

OUR PERFORMANCE

1 Developing Green Products

Hansol Paper

In accordance with the rising demand of eco-friendly products, we have locked down the manufacturing technology and process for nanocellulose (product name: Duracle), which is a new eco-friendly material that has been gaining attention and is currently exploring ways to expand its application and use cases. Recognizing the importance of de-plasticization in the packaging market and broadening application uses for eco-friendly materials, we have produced and supplied eco-friendly paper containers with our water-based barrier coating technology (product name: Terravas) and eco-friendly paper packaging materials (product name: Protego) to various customers. In specific, Protego, an eco-friendly flexible paper packaging material, is a high-tech product that has won three domestic and international awards such as the 'Asia Star Packaging Award 2020' the 'Minister of Trade, Industry and Energy Award for Packaging Daejeon, Korea', and the 'World Star Packaging Award 2021' selected by the World Packaging Organization (WPO).

Hansol HomeDeco

We are striving to offer products that consumers can trust more by obtaining authoritative eco-friendly product certifications. Accordingly, we are reviewing the possibility of developing low-carbon emission products and preparing to establish our own standards for eco-friendly products. In December 2022, SB Flooring Ultra Steel, one of our flagship products, received the Low Carbon Product Environmental Performance Label Certificate, which is given by the head of the Korea Institute of Environmental Industry and Technology. Based on this, we plan to track data on how to manage low-carbon products, sales, and measuring the greenhouse gas emissions reduction from our products.

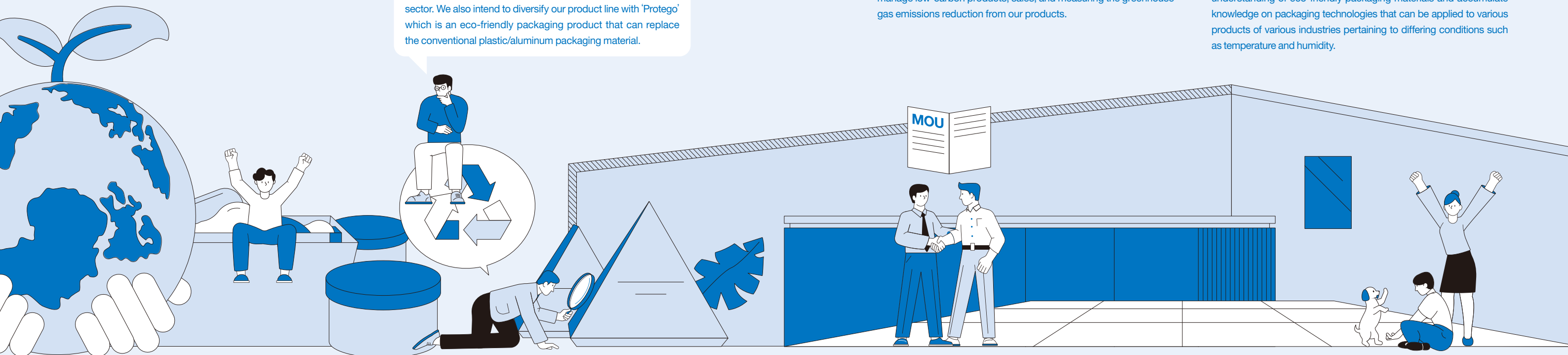
Hansol Technics

Hansol Technics develops and provides highly reliable and functional solar modules that comply with the KS certification and carbon verification system. Hansol Technics has a wide range of solar products, including media PV, high-power solar modules, and floating solar modules that have obtained KS certification for the first time in Korea. The Media PV product is a combination of solar modules and light-emitting diode (LED) media that can generate solar power with an output of up to 470 watts during the day and can also function as a LED media at night. Since multiple modules are connected to form a single screen, it is easy to install on buildings, structures, etc. where miniaturized models are required due to space constraints. By using the product, we can take a step closer to RE100 by making renewable energy.

2 MOU for Sustainable Packaging Development

Hansol Paper

Since 2020, Hansol Paper has signed MOUs with 10 leading Korean companies in various fields such as cosmetics, food, pharmaceuticals, confectionery, coffee franchises, and health supplementary foods to strengthen ESG management and develop sustainable packaging. Most of the companies that signed MOUs with Hansol Paper are eager to introduce eco-friendly packaging to enhance their corporate value and sustainable management in the long term, and already have high level research capabilities and experience. This combined with Hansol Paper's ability to develop the best eco-friendly paper materials in Korea, made it possible to introduce eco-friendly packaging which is difficult to achieve. Additionally, through these relationships and sharing of technologies, we were able to gain a broader understanding of eco-friendly packaging materials and accumulate knowledge on packaging technologies that can be applied to various products of various industries pertaining to differing conditions such as temperature and humidity.



BACKGROUND

The enforcement of the Act on the Punishment of Major Accidents on January 27, 2022, requires careful preparation for the fulfillment of the obligations of those in charge of management to ensure safety and health. As a result, industrial sites are required to make multifaceted efforts to ensure the safety and health of workers, such as appropriating management budgets and preparing manuals and inspections in case of major industrial accidents.

OUR APPROACH

In 2019, Hansol Group introduced the ISRS assessment, an international safety management assessment, for the first time and established the HSRS (Hansol Safety Rating System) safety and health management assessment optimized for Hansol's business characteristics by reflecting the results of effectiveness verification and performance measurement. Through this, Hansol aims to build a more promising safety culture.

MANAGEMENT BRIEFING

Yeon Jae Jin, Head Team Manager of Safety Support and Lee Chung Hwa from the Health Management Team of Hansol Technics

One of the key roles of Hansol Technics' safety and health management activities is the participation of supervisors and workers. Firstly, workers are continuously identifying sub-accidents and potential risks and implementing the 5S activities to eliminate risk factors. Secondly, we are participating in the creation and selection of health and management. Thirdly, we are utilizing QR codes so that everybody entering and leaving the workplace can easily communicate with each other if they have any safety and health risks or suggestions.

In addition, those employees who participate in these activities are personally recognized by the CEO at the monthly EHS meeting which encourages participation.

Hansol Technics also benchmarks the EHS best practices of other companies, including our customer Samsung Electronics. Notably, we've benchmarked the inspection of Samsung Electronics' 22 themes and selected 15 themes that correspond to our own and periodically conduct intensive inspections, reflecting them in our own work by referring to major trends in EHS, and also share use cases. Furthermore, we disclose information on major accidents with the Ministry of Labor to raise safety awareness among our employees.

OUR PERFORMANCE

1 Establishing HSRS (Hansol Safety Rating System) safety and health management evaluation system

Hansol Holdings

In order to improve efficiency of the Group's safety and health assessment and to establish a field-centered safety and health management system, Hansol Group introduced the HSRS in 2022, a unique assessment system that actively reflects the characteristics of Hansol's business, starting with the initial assessment of ISRS in 2019, followed by the effectiveness verification in 2020 and the secondary performance measurement in 2021. In particular, the HSRS was developed to include verification of execution capabilities in the field and enhanced compliance on domestic laws and regulations. In 2022, we completed the effectiveness verification of HSRS through trained assessors specializing in safety and health. Based on this, we established an advanced IT integrated safety system to streamline field work. The HSRS is currently being applied to nine business sites, including Hansol HomeDeco, Hansol PaperTech, Hansol Logistics, and Hansol Technics, in addition to Hansol Paper's four facilities and their Environmental Business sector. The ultimate goal of HSRS is for work sites to achieve and maintain Level 5, creating a stronger safety and health implementation system for the entire group.

2 PSM (Process Safety Management) Achieved S-grade for Process Safety Management System

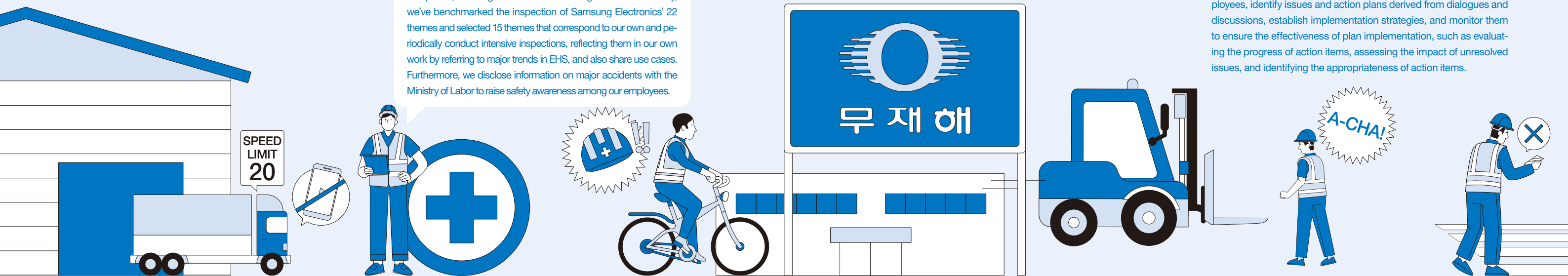
Tapex

The PSM is a system designed to prevent major industrial accidents for workers and incidents regarding leakage of hazardous substances from dangerous facilities, fires, and explosions. The PSM targets seven industries that have hazardous and dangerous facilities designated by the President, as well as facilities that manufacture, handle, or store one or more of the 51 hazardous and dangerous substances more than the prescribed amount, and related process facilities. In August 2022, Tapex obtained an S (good) rating in the first new assessment of its audited workplaces. This was the result of strengthening its workplace safety management system in various ways in conjunction with the implementation of the Serious Accident Punishment Act. Acquiring the S rating enhanced the credibility and image of workplace safety management and was recognized for strengthening safety and health levels and establishing a periodic education and training system. Furthermore, in 2022, we expanded participation in the safety campaign to partners (in-house contractors) instead of only employees and invested 814 million KRW in safety and health-related facilities, which is a 52% increase from 535 million KRW in the previous years.

3 Safety and Health Management System and SMT Management activities

Hansol Paper

Hansol Paper has the international safety and health management system certification ISO 45001 and KOSHA MS at the Daejeon and Jang airfields. In addition, we implement SMT (Safety Management Tour) and COC (Care Observe Change) activities at all business sites and suppliers to prevent industrial accidents and implement SMT (Safety Management Tour) safety activities led by the CEO and CSO. Through SMT, we promote the motivation and participation of employees, identify issues and action plans derived from dialogues and discussions, establish implementation strategies, and monitor them to ensure the effectiveness of plan implementation, such as evaluating the progress of action items, assessing the impact of unresolved issues, and identifying the appropriateness of action items.



Customer Satisfaction and Product Liability

BACKGROUND

Customer-centric management means recognizing customers' needs and providing solutions to their problems customers didn't even know they had themselves. Furthermore, companies aim to create new opportunities by reflecting this from a business perspective. Therefore, it is necessary to gain competitive advantage in overseas markets through systematic data analysis and insight discovery.

OUR APPROACH

Hansol Group seeks to identify customers' VOC and needs and create strategies to secure differentiability and competitive advantages. In order to realize maximum value and continuously grow together with our customers, we apply various diagnostic/measurement analysis systems to systematize all stages of strategy execution, process management and performance creation.

MANAGEMENT BRIEFING

Gil Jae Kang, Marketing Team Leader from Hansol Paper

Since 1997, Hansol Paper has regularized customer satisfaction (CSI) surveys twice a year, once each in the first half and the second half of the year, to identify comprehensive customer satisfaction levels in areas such as sales, quality, C/S, delivery, price, and brand image, to know what to improve by constantly checking customer needs and pain points. Since 2004, the survey has been conducted once a year, including the export sector, and in 2010, the survey was conducted in accordance with the Net Promoter Score (NPS). Since 2020, we have been conducting surveys in line with the needs of the times by boxing the domestic sector survey to online and enhancing customer convenience with immediacy. By doing so, we are aware of the causes of customer dissatisfaction, the dos and don'ts, and discover improvement measures to gain product and service competitiveness in each sector. In 2022, the CSI increased by 4 points in comparison to last year and we strive to continuously analyze, and review customers' wants and needs to enhance customer satisfaction.

OUR PERFORMANCE

1 Hansol Group hosts the Innovation Olympics

Hansol Holdings

Hansol Holdings holds an annual Innovation Olympics for all affiliates with the purpose to review and recognize the outcomes of various projects that were executed by each affiliate over the past year. This encourages the corporation to share lessons learned, achievements, and areas for improvements. Under the premise that the driving force for Hansol's continuous growth is the 'Hansol employees' ceaseless spirit of challenge for innovation', the Innovation Olympics was first held for only major affiliates since 2013 and to further strengthen competitiveness within the company, all affiliates participated from 2014. In 2022, it was held on December 16. At Hansol, innovation is something that is mandated and is derived from the portfolio strategy, mid-term strategy, etc. and further aim to embed this matter of attitude throughout the company. Hansol's innovation promotion system recognizes that carrying out innovativeness is a difficult task and encourages task leaders to guide through with their problem-solving skills.

2 Diversified customer base by entering the European market, reached \$500 billion KRW in global revenue.

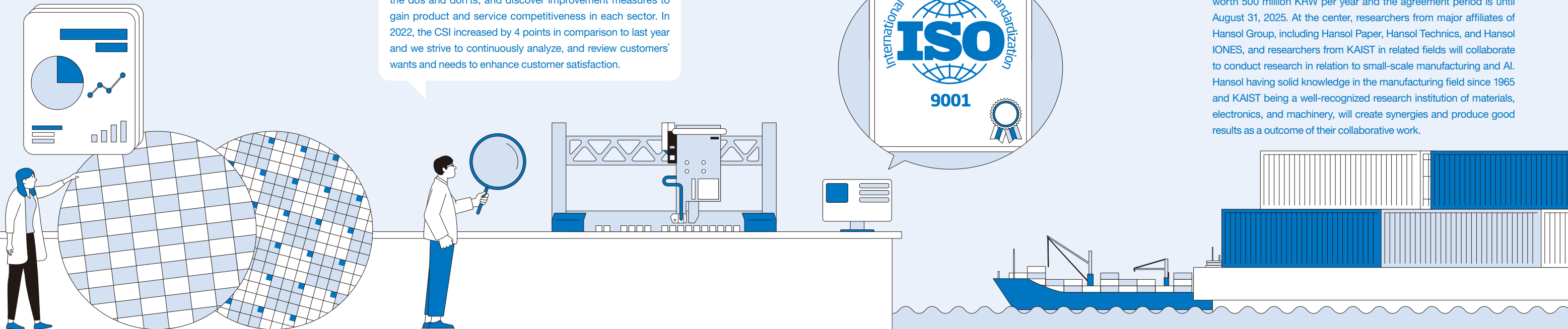
Hansol Logistics

Hansol Logistics' global business was mainly focused in Asian markets with a specific customer target within the secondary battery industry, however, in order to achieve sustainable growth and competitiveness, we also entered the European markets. As a result, we were able to successfully sign a large-scale long-term contract with company S, a major company in Europe and secured new orders for equipment transportation from company H which is a local secondary battery equipment manufacturer. In recognition of this result, we won the gold medal at the Innovation Olympics. In addition, we established major secondary battery manufacturers and medium/large vendors in the Asian market, mainly in China, while also securing our position as a global secondary battery logistics company. Based on our differentiated capabilities with secondary battery logistics, we are building the foundation of a global supply chain service leader for electric vehicle production by focusing out company-wide capabilities, such as setting up new bases in Poland and the eastern United States, to pioneer the logistics market for electric vehicle parts including secondary batteries.

3 Hansol Group-KAIST established a joint research center for small businesses.

Hansol holdings

To enhance customer value, Hansol Group signed a business agreement with KAIST to develop new technologies in the field of small parts like materials, components, and equipment production. The KAIST-Hansol Material Parts Innovation Research Center will be established and conduct cooperative research on material parts worth 500 million KRW per year and the agreement period is until August 31, 2025. At the center, researchers from major affiliates of Hansol Group, including Hansol Paper, Hansol Technics, and Hansol IONES, and researchers from KAIST in related fields will collaborate to conduct research in relation to small-scale manufacturing and AI. Hansol having solid knowledge in the manufacturing field since 1965 and KAIST being a well-recognized research institution of materials, electronics, and machinery, will create synergies and produce good results as a outcome of their collaborative work.



BACKGROUND

When large companies and SMEs pursue short-term profit maximization, it weakens the ability of SMEs to survive and causes disruption within the business. Moreover, when the 'EU Corporate Sustainability Due Diligence Act', that was released by the European Union (EU) is implemented in 2024, many export companies in Korea will be subjected to it. Subsequently, supply chain management has become crucial for companies to secure sustainable global competitiveness.

OUR APPROACH

Hansol Group establishes and systematically manages a shared growth promotion system to coexist with suppliers. Consequently, we are conducting fair and transparent assessments to manage supplier risks, and involve educating and practicing ESG in numerous ways such as providing safety and health consultations and conducting supplier meetings.

MANAGEMENT BRIEFING

Young Soo Park, from the Hansol HomeDeco Environmental Safety team

Hansol HomeDeco incorporates safety and health management at business sites of its suppliers as a top priority. To continuously improve our safety and health management system with our suppliers, we have created an organic cooperation system that promotes awareness among representatives of our suppliers and made efforts to motivate and improve the environment for the employees of our suppliers. For instance, we announced in advance that the Serious Accident Punishment Act will be applied starting January of 2024 at workplaces where there are up to 50 employees with 5 or more full-time workers for them to be aware and for pre-demonstration purposes. We regularly meet with representatives of our suppliers every month and also on a quarterly basis with supervisors to share updates. In the future, we plan to support activities such as safety campaigns so that suppliers can initiate their own safety activities.

OUR PERFORMANCE

1 Supplier shared growth support program.

Hansol Paper

In addition to cost and quality competitiveness with suppliers, Hansol Paper seeks to realize shared growth by strengthening ESG management capabilities and enhancing competitiveness throughout our supply chain. As a win-win outcome, we are engaged in various cooperation and support activities to secure sustainable growth with our suppliers. We provide leadership to help our suppliers grow in various aspects such as cooperation in technology and education support, operation of a 6 billion KRW fund, support for Six Sigma and Hansol cyber education, safety management support, environmental support, and enhanced communication through representative/practitioner meetings.

2 Consulting on establishing a safety and health management system for suppliers.

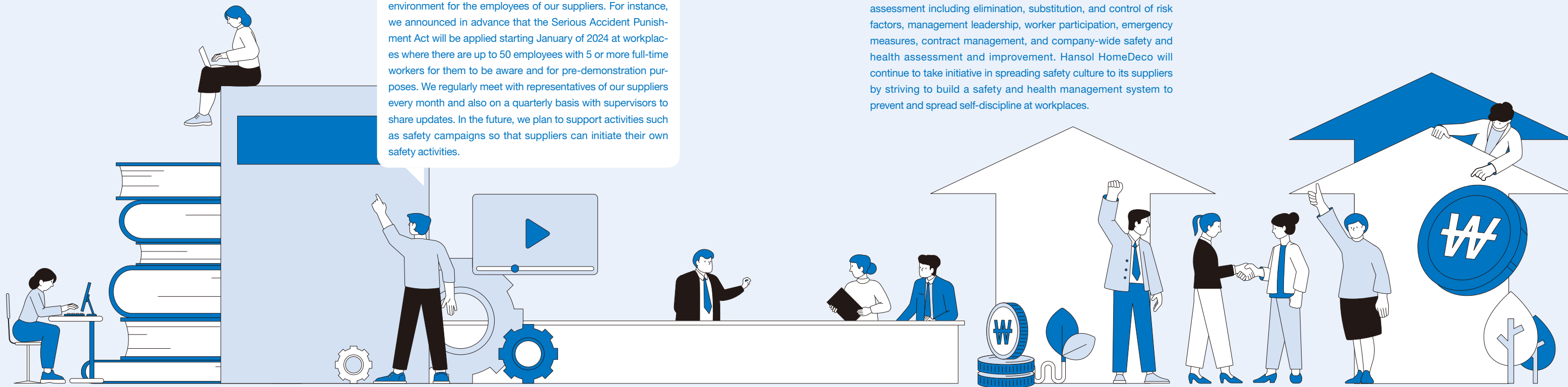
Hansol HomeDeco

In April 2023, Hansol HomeDeco began consultation on the safety and health management system for its suppliers, centered on risk assessment. The consulting, which is currently getting reviewed by the Korea Occupational Safety and Health Agency, is expected to help a total of seven Hansol HomeDeco suppliers resolve the risk of safety accidents. The consultation will be conducted over a four-month period in 2023 with a total of five visits to business facilities and will cover the seven core elements of establishing a safety and health management system: risk identification, risk assessment including elimination, substitution, and control of risk factors, management leadership, worker participation, emergency measures, contract management, and company-wide safety and health assessment and improvement. Hansol HomeDeco will continue to take initiative in spreading safety culture to its suppliers by striving to build a safety and health management system to prevent and spread self-discipline at workplaces.

3 Hosted a Supplier Win-Win Cooperation Day

Hansol Technics

Hansol Technics stipulates and complies with the principles for fair trade to coexist with suppliers and provide welfare for employees through management support programs such as education, management and quality consulting, technology protection support, performance sharing system, and recreation facilities for long-term employees. We also hold 'Win-Win Cooperation Day' events to introduce 15 shared growth programs and promote fair and transparent trade practices by disseminating the latest management trends, providing training (Producer Responsibility Recycling System, SME Technology Protection Support System), disclosing future purchasing strategies for each business sectors, and holding purchasing consultations. In November 2022, 100 employees of suppliers participated in the event and 10 suppliers participated in individual purchase counseling sessions.



Ethics and Compliance

BACKGROUND

The world is increasingly demanding that companies adhere to the law and be socially responsible within their operations. A company failing to do so can be called out deteriorating the company's reputation and can often result in a business crisis having a serious impact on the company's future operations.

OUR APPROACH

Hansol Group's number one management principle is compliance with the law and ethics. Hansol Group discloses its management principles to external stakeholders, including suppliers, customers, and investors. To strengthen our ethics and compliance management, Hansol has systematized efforts to diagnose the current status of compliance management across the company, identify issues, and improve them since 2021.

MANAGEMENT BRIEFING

Jeong Woon Kim, Compliance Team Leader of Hansol Holdings

Hansol Holdings has implemented a Compliance Risk Management System to proactively inspect the entire company and all employees to ensure that they do not violate laws and regulations in the course of their work and monitor results of the inspection and report them regularly to the board of directors (BOD) and other executives. Since 2021, we have conducted a compliance management diagnosis once a year to determine the level of compliance of each affiliate and derive individual tasks to further strengthen the act of compliance. The current status of Hansol Paper, Hansol Technics, Hansol PNS, Hansol Inticube, Hansol Logistics, and Hansol HomeDeco was analyzed to identify weaknesses and implement strategies for improvement. Hansol Group aims to reduce the risk of legal and regulatory violations and eradicate various irregularities through the application of supplementary and improvement measures for each company. We will also continue to grow and develop by creating a healthy organizational structure.



OUR PERFORMANCE

1 Group compliance audits

Hansol Holdings

The elements required for compliance management are leadership, planning, execution, support, internal monitorization, and supplementation/improvement. To determine the level of each element at each affiliate, we conducted interviews from executives to those in charge, analyzed relevant data, and affiliate specific tasks to strengthen the compliance management system based on the results of the 2021 diagnosis. After a year of implementation, we compared 2021 and 2022 and found that the planning and execution/support areas were the most well performed. In the future, Hansol Holdings will continue to practice ESG management by designing and continuously managing practical tasks and inducing active compliance management communication between each company's headquarters and business facilities to expand compliance management awareness and consensus throughout all of Hansol Holdings.

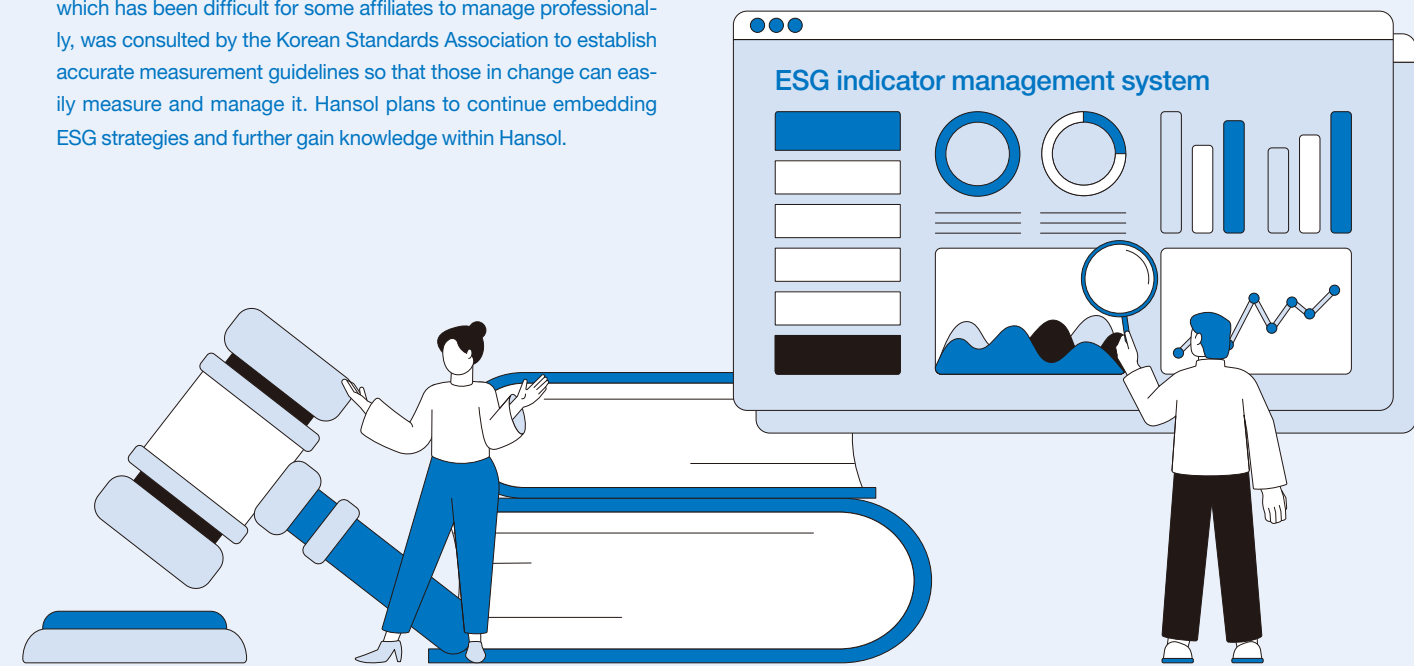
2 Establish an ESG indicator management system

Hansol Holdings

Hansol Holdings established the 'ESG Indicator Management System' to help affiliates, including the holding company, manage non-financial performance systematically and efficiently with common standards, and officially opened in January 2023. The ESG Indicator Management System contains about 300 indicators that can be used to proactively respond to domestic and international ESG disclosures and provides detailed guidance for ESG practitioners to manage them with more accuracy. In particular, environmental data, which has been difficult for some affiliates to manage professionally, was consulted by the Korean Standards Association to establish accurate measurement guidelines so that those in charge can easily measure and manage it. Hansol plans to continue embedding ESG strategies and further gain knowledge within Hansol.

3 Review your group risk management framework

In 2022, Hansol Group conducted a risk transfer survey for all affiliates to comprehensively review the status of financial and non-financial risk management. Financial risk examines business areas such as markets, customers, equity investments, and project inquiries, while financial areas such as exchange rates, interest rates, liquidity, taxes, and credit ratings are also reviewed. Under non-financial risks, we examine compliance areas such as environment, safety, operational areas such as information security, human resources, and supply chains, and external communication areas such as crisis response, brand value, and investor relations. Going forward, Hansol Group will continue to conduct regular inspections every January to address and resolve risks of all affiliates, prevent risks from occurring in advance, and practice sustainable management.



Hansol adapts fast to the ever-changing environment and stepped foot in the energy and semiconductor industry which are crucial for mankind. Additionally, we incorporate our customers' wants and needs to further enhance competitiveness and prosper growth. Hansol's innovativeness creates a better tomorrow.



Hansol Sustainability Action

- 38 Consumer | Management for Customer Satisfaction
- 48 Environment | Eco-friendly Product Development and Climate Change Strategy
- 60 Social | Achieving Sustainable Growth Together
- 72 Governance | Transparent Governance and Shareholder-friendly Management

Hansol Group strives to lead the market by continuously developing innovative products based on differentiated technologies and stable production capabilities. In particular, we are making efforts to enhance core competencies and seize future business opportunities through business area restructuring and mergers and acquisitions in response to changes in the business environment.

For the Sustainability

Hansol Group recognizes sustainable management as the essence and core element of corporate governance and strives to integrate it into its products and services. In order to achieve this, we focus on improving product quality and devote ourselves to exploring future growth drivers. Firstly, we actively concentrate on our core technologies for the secondary battery and semiconductor industries while realizing ESG values through mergers and acquisitions. The flagship product of Tapex, functional tapes for secondary batteries, has been experiencing steady growth in sales and global customers, in line with the expansion of environmentally friendly electric vehicles. As a result, we have expanded the quality management system certification in the automotive sector to include all manufacturing facilities producing tapes for secondary batteries. Hansol Technics expanded its business area by acquiring Hansol IONES, a specialized company in the manufacturing of semiconductor equipment parts and cleaning/coating. Hansol Holdings strives to enhance the group's distinctive competitiveness under the proposition of 'Hansol employees' ceaseless spirit of challenge for innovation' by annually hosting the Innovation Olympics for all affiliates. Furthermore, the program "Hansol V Frontiers", organized by Hansol Holdings to foster promising startups, has been successful in increasing the average enterprise value by six times for a total of 15 companies from the 1st to the 3rd cohort. Additionally, Hansol Paper, Hansol Technics, Hansol HomeDeco, and other companies have made efforts to strengthen the marketing of competitive products by actively participating in diverse energy and eco-friendly expos, aiming to bring themselves closer to consumers.

Key Sustainability Issues

Key Performance

1 New Business and Market Expansion

Hansol Logistics' global market expansion with secondary battery sector generates

1 trillion KRW

- Hansol Group enters the semiconductor industry for the first time through the acquisition of Hansol IONES System.
- Hansol HomeDeco develops business strategies for its operations in Vietnam.
- Hansol Holdings fosters startups through the 'Hansol V Frontiers' program.
- Hansol PNS opens the online mall 'Grooup' for its paper distribution division.
- Hansol PNS opens the Innovation Center in its IT services division.

2 Improving Customer Satisfaction & Strengthening Marketing

Seven companies within the Hansol Group have achieved international certification

ISO 9001

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

- Hansol Paper, Hansol Technics, and Hansol HomeDeco participate in domestic and international trade shows and exhibitions.
- Hansol Paper has entered into business agreements with 10 companies for the development of eco-friendly packaging.
- Hansol IONES has achieved a 60% increase in the customer satisfaction index (AGS Score) as of 2023.

3 Digital Transformation

Hansol PNS's IT services division implements smart factory safety management solutions at all

6 affiliated companies

- Hansol Inticube accelerates the Core AI and AICC businesses on its global AI platform.
- Hansol Logistics subsidiary, Logismile, establishes a digital truck transportation system.

1. New Business and Market Expansion

Smart Paper
Online Mall
'Groomp'
Opening



Hansol PNS Paper Distribution Division

'Groomp' (www.groomp.co.kr) is an online mall where customers can order various papers, including Hansol Paper, and it was developed with active incorporation of customer feedback. It provides customer-centered services such as a smart 'Integrated Search' feature that allows easy and quick product search, 'Real-time Delivery Information SNS Notifications,' and 'Cart/Reorder' functionality. Furthermore, through integration with payment gateway providers, various payment methods, including card payments, are available, enabling purchases by individual customers. Even after the opening, continuous updates based on customer needs and feedback will be made to further develop the online mall into a more customer-friendly platform.

Securing
New Growth
Momentum
through Global
Network
Expansion

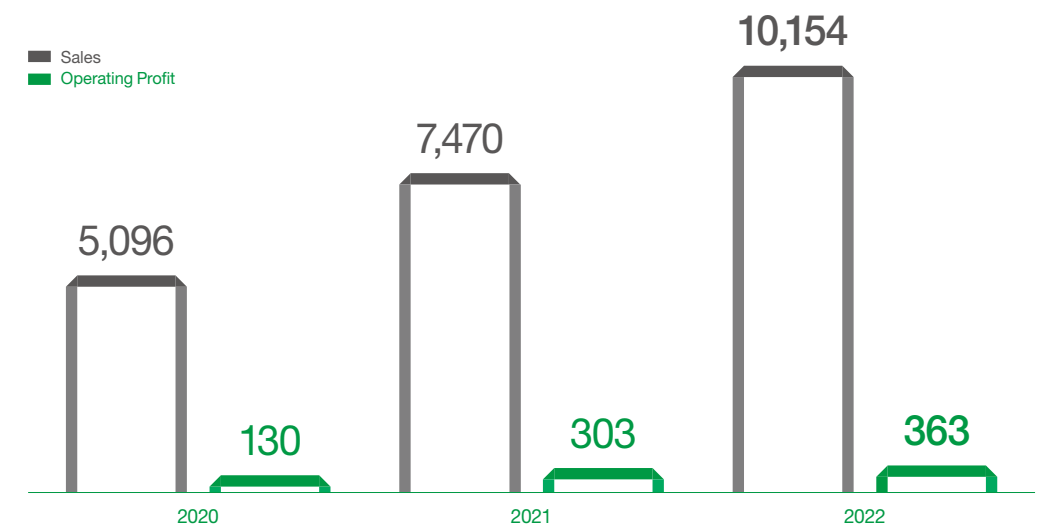


Hansol Logistics

Hansol Logistics has established a total of 19 logistics networks in seven countries worldwide, enabling it to expand its customer base from global conglomerates to medium-sized manufacturers focused on materials, components, and equipment. With its operational competitiveness in various industries such as electric/electronic, chemical, automotive parts, and a service-oriented approach tailored to local customers, Hansol Logistics has secured major second battery manufacturers and large vendors in the Asian market, particularly in China. With over 10 years of exceptional operational references, it has solidified its position as a dominant player in the second battery logistics market. Furthermore, leveraging its expertise in second battery logistics, Hansol Logistics is expanding its business into the rapidly growing market of electric vehicles. It has established new branches in Poland, the United States, India, and other countries to expand its logistics operations for electric vehicle parts, including second batteries. As a result, Hansol Logistics achieved a record-breaking revenue of 1 trillion KRW in 2022.

Hansol Logistics Profit Trend through Diversification of Global Customers

(Unit: Hundred Million KRW, Consolidated Basis)



Consulting on Development of Vietnam Business Strategy

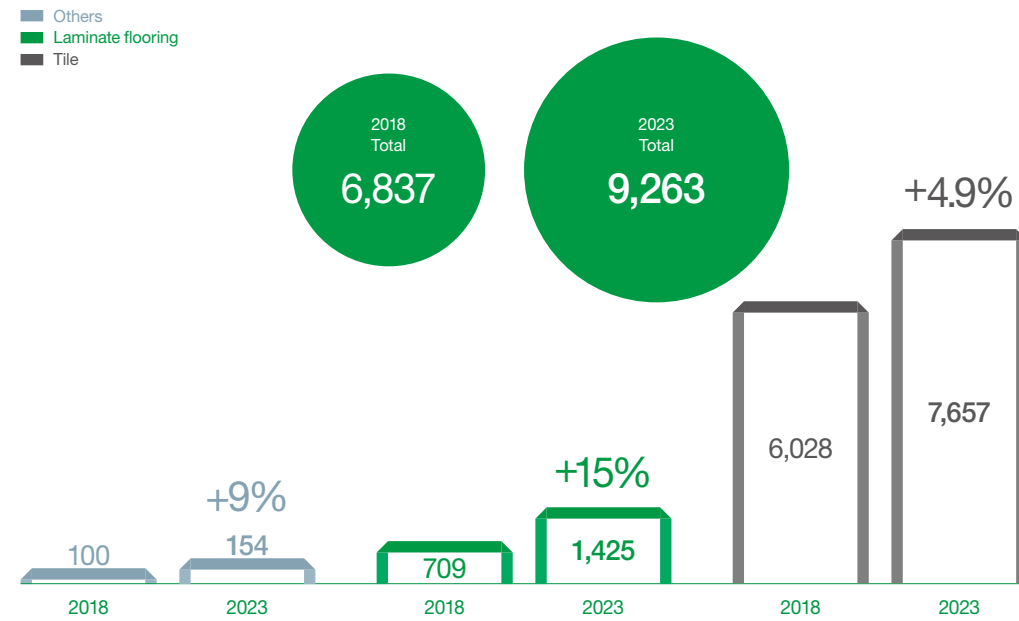
Hansol HomeDeco

Hansol HomeDeco conducted a market analysis to further systematize its business in the rapidly growing Vietnamese market. The objective was to increase the area of potential growth in the domestic market for strengthened flooring and assess the growth potential of Hansol HomeDeco's products in the domestic market of Vietnam. Additionally, the aim was to derive the strategic direction for overseas exports from the Hansol Vietnam base. The outcome of the strategic consultation revealed that the potential of the domestic market should be observed in medium to long term, focusing on securing business in high-end construction projects. Regarding the overseas export strategy, a more detailed exploration of business opportunities was established by concentrating on the Vietnamese-originated export opportunities to the United States for strengthened flooring.

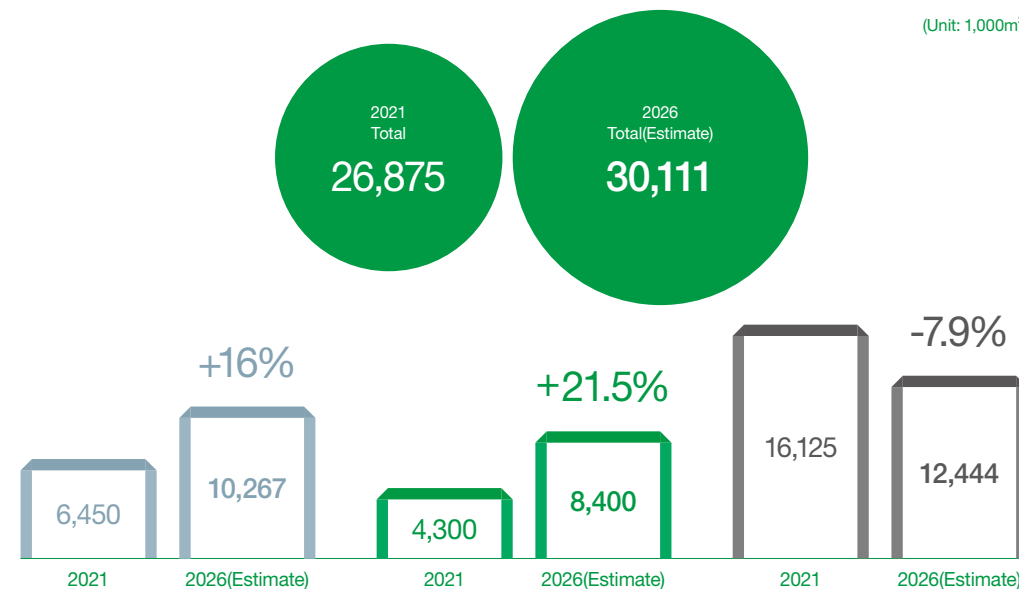
Analysis of the Vietnamese Flooring Market

Vietnam flooring market size and composition

(Unit: Hundred Million KRW)



(Unit: 1,000m²)



Entry into the Semiconductor Industry and Investment in Innovative Technology LiDAR Sensors

Hansol Technics

In January 2022, Hansol Technics made a new entry into the semiconductor industry by acquiring AI-WONs, a specialized company in semiconductor equipment component processing, cleaning, and coating. The acquisition amount was KRW 127.5 billion, securing a total stake of 34.47% and gaining management control. Through this acquisition, Hansol Technics aimed to strengthen its revenue structure by entering the high-growth and high-value-added semiconductor industry.

In May 2022, Hansol Technics made an investment in SOS LAB, a leading specialist company with global competitiveness in LiDAR sensors, a promising future technology area. Through this investment, Hansol Technics secured priority in the mass production of SOS LAB's products and is expected to gain opportunities for in-house adoption of LiDAR technology and become the exclusive ODM partner through future joint product development.

Hansol Holdings

Hansol V Frontiers is an open innovation program operated by Hansol Group in collaboration with accelerator Bluepoint Partners since 2020. The successful completion of the 3rd program took place in September 2022, and the 4th program is scheduled for 2023. Open innovation is a strategy that leverages external resources, such as external technological capabilities, ideas, and services, to create new value. Hansol V Frontiers is part of Hansol Holdings' ESG management, contributing to the establishment of a robust industrial ecosystem through support for innovative startups and fulfilling the company's social responsibilities.

The total value of the 15 startups that participated in Hansol V Frontiers from the 1st to the 3rd program has increased approximately six-fold compared to their pre-participation value, reaching a total of KRW 99.55 billion as of December 2022. Notably, all five teams selected in the 3rd program achieved success in attracting follow-up investments.

Successful PoC with Startups

Hansol PNS - IT services division

Hansol PNS, in the IT services division, is also driving open innovation to expand its value chain by establishing diverse collaboration ecosystems. In 2022, through open innovation in the form of startup support institutions (Incheon Creative Economy Innovation Center, Seongnam Industrial Promotion Agency) and competitions, we successfully conducted Proof of Concept (PoC), validating new solutions, with two startups in the fields of 'Big Data/AI' and 'Microservices Architecture (MSA)'. Building upon the achievements in 2022, we are dedicated to establishing a collaborative system with venture capital firms and accelerator programs that possess diverse startup portfolios, aiming to enhance the qualitative and quantitative improvement of our projects in 2023. Hansol PNS's IT services division actively shares technologies with external organizations and startups through open innovation, striving to enhance service competitiveness and become a customer-centric company.

2. Enhancing Customer Satisfaction & Strengthening Marketing

Quality Management Certification

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

Hansol Paper manages quality throughout the entire distribution process of its products by connecting overseas marketing hubs with domestic and international production, distribution, and sales through an integrated marketing system (Enterprise Resource Planning - ERP). Rigorous quality management from production to delivery has enabled Hansol Paper to obtain ISO9001 certification.

Hansol Group strives to promptly respond to customer demands and market changes by obtaining international quality certifications and applying and maintaining the latest updates. Through the acquired international quality system certifications, Hansol Group has established a globally standardized quality management process, ensuring stable quality for both domestic and overseas production. Annual post-audits and certification renewal every three years are conducted to maintain the certifications.

Quality Management System Certification in the Automotive Field

Tapex

Tapex, a leading manufacturer of functional tapes for secondary batteries, has been experiencing consistent growth in sales and an increasing number of global customers, driven by the expanding adoption of environmentally friendly electric vehicles. In line with this trend, Tapex has expanded its Quality Management System certification to its entire facility involved in the production of tapes for secondary batteries, following the IATF 16949 certification standard for the automotive field. The IATF certification is a quality management system used by major automotive companies, including the "BIG3" in the United States, such as GM and Ford, and it is developed by the International Automotive Task Force (IATF) in collaboration with the International Organization for Standardization (ISO). Following the initial certification of the Hwaseong factory in 2016, Tapex obtained additional certification for the Yanggam factory in September 2022.

Certification Status of Affiliates

Affiliates	Facilities	Certification
Hansol Paper	Daejeon, Janghang, Sintanjin, Cheonan factories	ISO 9001
Hansol HomeDeco	Seoul headquarters, Iksan factory	ISO 9001
Hansol Technics	Jincheon, Ochang factories	ISO 9001
Hansol IONES	Anseong headquarters, Balan factory	ISO 9001, AS 9100
Hansol Logistics	Headquarters	ISO 9001
Hansol Chemical	Jeonju, Ulsan factories	ISO 9001
Tapex	Yanggam, Hwaseong factories, UniLab factory	ISO 9001, IATF 16949 (Automotive Quality Management System, Yanggam, Hwaseong factories)

Improvement of customer satisfaction index

Hansol Paper, Hansol IONES

Hansol Paper conducts customer satisfaction surveys by sector (printing paper, industrial paper, special paper) in accordance with ISO9001 requirements every August to September, through which we identify customer needs and implement immediate improvement activities. In 2022, despite the price increase and service reduction, satisfaction rose 4 points from the previous year to 76 points in all items and rose in all items.

Hansol IONES is improving customer satisfaction with prompt and accurate responses. In particular, Applied Materials, the largest company in the global semiconductor equipment industry, evaluates the customer's satisfaction index for delivery performance and continuously announces the AGS Score. As of March), the customer satisfaction index increased by about 60% compared to the previous year.

Hansol Paper Customer Satisfaction Survey System

Step 01

Quality evaluation by paper type
Inspur M rough, fancy paper, inkjet transfer paper, Hansol thermal paper, Ensemble E Class, glassine paper, etc

Step 02

Detailed evaluation by item
① white paper quality
② Printability
③ Workability
④ Finish
⑤ Color characteristics
⑥ Label Conformity
⑦ Foreign matter

Step 03

Concurrent with interview
Evaluation questionnaire
Customer VOC convergence

Step 04

Reflect evaluation

Enhancement of brand image through exhibition participation

Hansol Paper, Hansol Technics, Hansol HomeDeco

Hansol Group promotes high-quality new Hansol products on the domestic and international stages through participation in various expos and exhibitions, enhancing its brand value in the global market.

Starting with the Chicago Label Expo in 2014, Hansol Paper participated in the Brussels Label Expo in 2019, LUXEPACK Shanghai, Asia's largest luxury packaging exhibition, and FESPA, Europe's largest graphic and textile exhibition, receiving great interest from designers and agencies. We are solidifying our status as a leading company in the paper industry. In addition, through the 'Korea ESG Eco-Friendly Exhibition' held in November 2022, domestic customers were also informed of Hansol Paper's eco-friendly, high-quality, plastic-free products.

Hansol HomeDeco participated in the '2023 Hotel Fair' held in January 2023 as an eco-friendly building materials and interior company, introducing a variety of products with new construction methods that further enhance safety and eco-friendliness. Through the planning hall with the concept of 'web 3.0 hotel lounge & space trend', it received high praise from hotel-related architecture and interior buyers. Also, at the Seoul Living Design Fair, we received the 'Award for Outstanding Space', enhancing our brand image externally.

Hansol Technics participated as a platinum sponsor and official sponsor of the 'International Green Energy Expo', an exhibition specializing in new and renewable energy held from April 12 to 14, 2023. We received attention from many buyers by introducing various solar products such as media PV, high-output solar modules, and water-type solar modules that obtained KS certification for the first time in Korea.



Participated in Hansol HomeDeco '2023 Hotel Fair'

Eco-friendly package business MOU signed.

Hansol Paper

Hansol Paper has signed MOUs with leading domestic companies in various fields such as cosmetics, food, pharmaceuticals, confectionery, coffee franchises, and health functional foods, and is actively developing and introducing eco-friendly paper packaging materials. While strengthening ESG management to create a sustainable future with each corporate customer, we are exerting a positive influence by encouraging general consumers to practice environmental protection in their daily lives by applying eco-friendly paper packaging materials in various fields.

3. Digital transformation

Intelligent Energy Management Solution CoEMS Expansion

Hansol PNS

Intelligent energy management solution CoEMS, the flagship product of Hansol PNS IT Service Division, is a factory-centered energy management system that reduces greenhouse gas emissions and energy consumption through efficient energy management and distribution. This product contributes to customers' ESG management through betterment of the production process. Currently, it is being reflected in Hansol HomeDeco's digital cluster business within affiliates, and in addition to group affiliates, various manufacturers such as JianWood and MS Chem Korea are also participating in the business. In 2023, we will contribute to the establishment of ESG management throughout the manufacturing industry by continuously expanding the smart factory business.

Global AI platform Core AI and MOU, accelerate AICC business.

Hansol Inticube

In March 2023, Hansol Inticube commenced a partnership with Core AI, a leading global interactive artificial intelligence (AI) platform, to promote AICC business. Core AI is the preferred conversational AI and digital UX technology provider for Global 2000 companies, providing solutions recognized as market and technology leaders by organizations such as Gartner and IDC. Core AI is headquartered in Orlando, USA. Since its establishment in 2015, more than 100 of the Fortune 500 companies, including the top 4 global banks, are currently using Core AI solutions. Hansol Inticube uses Core AI's LLM (Large Language Model) and generative AI technology to develop conversational AI services such as ChatGPT by eliminating the manual work of people involved in creating conversation scenarios and learning natural language processing., which will drastically improve the cost and operational efficiency involved.



CEO of Hansol Inticube, Vice President of Core AI

Incorporating IT technology into trucking, promoting growth as the No.1 digital trucking cargo transport company

Hansol Logistics

Logismile, a subsidiary of Hansol Logistics, has built an app-based digital truck transportation system. We are strengthening our differentiated competitiveness in the trucking market by adding digital trucking solutions to our nationwide direct dispatch service capabilities. In order to digitize the operating structure of the existing truck transportation market, which relied on manual methods, we completed the self-development of TMS (transportation management system) and the installation of robotics technology, which enables all tasks from dispatch to settlement online, and application of AI algorithms in the future. We will lead the digitalization of the trucking business by advancing the system.

ENVIRONMENT

Eco-friendly product development and climate change strategy

Amid heightened awareness of the climate crisis, domestic and foreign companies' movements to achieve carbon neutrality by 2050 are also active. The Hansol Group is also making efforts to minimize greenhouse gas emissions, convert to new and renewable energy, and develop eco-friendly technologies and products in order to minimize negative environmental impacts from business activities and contribute to solving the global climate crisis.

For the Sustainability

Based on the market development and business expansion strategy through eco-friendly technology development, the Hansol Group is concentrating its efforts on research and development of eco-friendly technologies and products, thereby securing new growth engines for the future and realizing sustainable growth. Hansol Paper and Hansol HomeDeco's eco-friendly product development and technology accumulated over the years have become the main pillars of business growth. In line with the expansion of the use of new and renewable energy, eco-friendly materials products such as Hansol Technics and Tapex are also in the limelight. Hansol will continue to take the lead in responding to climate change and creating an eco-friendly business ecosystem through generous R&D investments in eco-friendly products and technologies.

Key Sustainability Issues

Key Performance

1 **Eco-friendly technology development and product certification**

Hansol Paper's 2022 eco-friendly certified product sales
KRW
1,464.7 billion

- 30% of Hansol HomeDeco's eco-friendly flooring and MDF product sales
- Developed 100% sugar cane paper for Hansol P&S paper distribution division
- Sales of Tapex paper straws increased by 22% and multi-use cups by 120%
- Hansol Technics low-carbon product development

2 **GHG reduction and energy saving**

Hansol HomeDeco's 2023 CO2 absorption amount within New Zealand's afforestation business activities
149,000 tonnes

- Replacing high-efficiency facilities in Hansol Chemical Energy
- Greenhouse gas reduction by replacing old facilities at Hansol Technics

3 **Environmental pollutants and waste management**

Hansol Chemical's waste water emissions at Ulsan factory decreased by
15%

- Hansol HomeDeco incinerator fly ash heavy metal reduction facility construction
- Increased recycling of Hansol PaperTech waste sludge

4 **Global Initiative & Environmental Management Certification**

Tapex Uniwrap Plant
ISO 14001
Acquire new certification

- Compliance with Hansol Paper TCFD recommendations
- Designated as a green company by Hansol Paper
- Joined Hansol HomeDeco UNGC
- Establishment of Hansol IONES Environment Committee

1. Eco-friendly technology development and product certification

Expansion of eco-friendly material duracle market

Duracle, a brand of Hansol Paper, is an eco-friendly eco-solution material that contains not only nanocel-lulose but also microfibril cellulose. This is a material that can be applied not only to batteries and paints, but also to cosmetics, urethane foam, rubber, and packaging. Currently, we are developing application technologies in collaboration with leading companies in each field, and in terms of market demand, it is expected that the application of Duracle materials will have great market impact as they are beneficial to carbon neutrality and circular economy.

In addition, Protego, an eco-friendly paper packaging material, Thera Bath, a container containing nature, and 'Wet Wipes to Save Whales', which do not generate microplastics because they are made of natural pulp and plant-derived rayon fabric, launched in February 2022, are also very positive in the market. getting a response



left: Hansol Paper held a 'National ESG Eco-friendly Competition' in November of 2022
right: Hansol HomeDeco Eco-friendly SB Flooring

Hansol Paper Environmentally Certified Product Line

Certification	Production Plant	Species	Product Name	
FSC	Daejeon Plant	industrial paper	Hi-Q AB Lite, 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, off-white white paper, new white paper, High Plus, New Plus, Advanced Textbook, Fine Coat Paper, Hi-Q Duo Mat, Hi-Q Millennium Art, etc.	
		thermal paper	Hansol Thermal Paper Green, Hansol Thermal Paper Green HS, Hansol Thermal Paper Green AFH, Hansol Thermal Paper CL, Hansol Thermal Paper EL, Hansol Thermal Paper SL, Hansol Thermal Paper HB, Hansol Thermal Paper HL, Hansol Thermal Paper PF, Hansol Thermal Paper Pro, etc.	
	Shintanjin Plant	print	Campus magazine (S, J), New Classic, New White Paper, New Plus, Green Textbook, Advanced Textbook, Hi-Q Mat Premium, Hi-Q Mystic, Hi-Q One-sided Art, Hi-Q Duo Mat, Hi-Q Millennium Art, etc.	
		thermal paper	Hansol Thermal Paper Green HS, Hansol Thermal Paper Green AFH, Hansol Thermal Paper SL, Hansol Thermal Paper Green EL Slim, Hansol Thermal Paper Green EL, Hansol thermal paper Green HB, Hansol thermal paper Green, Hansol thermal paper CL, etc.	
	Cheonan Plant	fancy paper	Fancy paper, eco-friendly products, outsourcing products, etc.	
		Thermal Paper	Hansol Thermal Paper Green, Hansol Thermal Paper Pro, etc.	
			Inkjet type	Inkjet transfer paper
	UL ECV 2485	Cheonan, Daejeon Plant		Protego S(EB Smart) 70g, Terravas Cup
	GR (Good Recycled)	Shintanjin Plant		Green Textbook
Green Seal	Cheonan Plant		Inspur_Smooth Shopping (E) PCW30, 90	
Eco-label certified products	Janghang Plant		New Baeksang Blue, New Plus Blue, Hi-Duo Matt Blue	
	Cheonan Plant		Inspur Signature Eco, AHC Willow Paper, Inspur Aloe, Inspur Magic Comma, Dr. G_Cica Paper, Inspur Eco	
	Shintanjin Plant		Hi-Q Millennium Art, Advanced Textbook Blue	

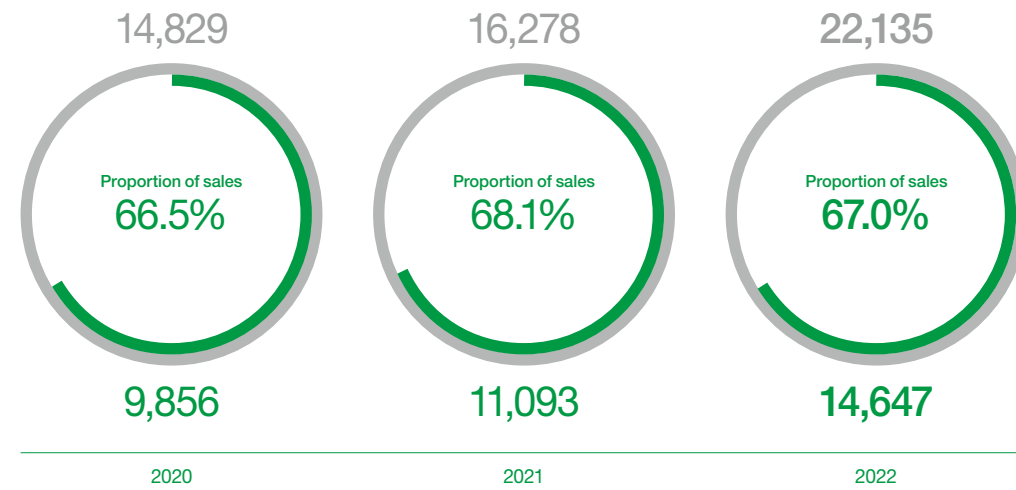
Hansol HomeDeco Environmentally Certified Products

Certified product	Certification	Product Features
E0 MDF 35 type	Eco-label	Made by only selecting wood from construction site waste. Boards made from recycled chips (more than 35Mpa in flexural strength)
E0 MDF 30 type	Eco-label	Made by only selecting wood from construction site waste. Boards made from recycled chips (more than 30Mpa in flexural strength)
SPB	Eco-label	A board made to replace it with fiberboard in line with the trend of increasing domestic particle board imports (flexural strength of 20Mpa or more)
Laminate floor	Eco-label, HB	Eco-label, HB mark 7.5mm E0 grade non-adhesive flooring made by bonding LPL to HDF and then reinforcing it
ultra	Eco-label, HB, Low-carbon plywood	7.5mm thick E0 grade flooring made by bonding HPL to low carbon plywood
story wall	Eco-label, HB	9mm thick, E0 grade flame retardant wall material made by bonding LPL to HDF
SB Normal (Edge/Stone)	Eco-Label, HB, Environmental Product Declaration	6mm thick SE0 grade flooring made by adhering PP to SB core that is resistant to water and moisture
SB Steel (Edge/Stone)	Eco-Label, HB, Environmental Product Declaration	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 (patterned texture is alive)
Ultra steel	Eco-Label, HB, Low-Carbon	7.5mm thick SE0 grade flooring made by bonding HPL to SB core that is resistant to water and moisture
Wellstone	HB	Semi-nonflammable grade product with excellent dimensional stability, water resistance and processability by bonding LPL to inorganic rock wool material
prium	HB	10mm SE0 grade hardwood flooring made by UV coating on HB mark plywood

Hansol Paper Eco-Friendly Sales Performance

(Unit: KRW 100 million)

■ Sales of eco-friendly products
■ Total sales (separate basis)



Eco-friendly Product Sales Status by Subsidiary

(Unit: KRW 100 Million)

Subsidiary	Eco-certified products (as of 2023)	2020	2021	2022
Tapex	1 piece (hanji oil paper environmental label certification)	2	2	2
Hansol HomeDeco	A total of three types of MDF 30/35 type and floor products (20 pieces)	830	793	842
Hansol PaperTech	11 types of back paper, corrugated medium and surface paper	814	1,014	1,237
Total number of cumulative carbon certified models: 188				
Enhancement level standard				
Hansol Technics	Carbon Grade	Number of certifications	Carbon emissions (kgCO ₂ /kW)	
	Grade 1	42	~ 630	1,296
	Grade 2	39	630~670	1,426
	Grade 3	24	670~730	2,304
	Grade 4	83	730 ~	

Development of low-carbon products

Hansol Technics

Hansol Technics has established and is implementing mid- to long-term plans to reduce greenhouse gas emissions. In 2018 the total amount of greenhouse gas emissions was 27,652tCO₂eq and so with the goal to reduce 25% of that by 2030, we are engaged in ESG activities such as investing in high-efficiency energy facilities and facilities, introducing photovoltaic renewable energy, and planning projects for manufacturing processes with high carbon emissions. In addition, as a long-term goal, we are constantly researching and implementing measures to achieve carbon neutrality by 2050. We have completed the development of low-carbon grade 1-3 products and will continue to provide environmentally friendly and sustainable services through the development and production of products that can approach carbon neutrality.

Launched 'Sugar Pack', 100% paper made from sugar cane.

Hansol PNS

Sugar Pack, that was launched within the paper distribution division, is paper made from 100% sugarcane that protects forests without cutting down trees. Sugarcane is used as a raw material and is one of the most cultivated crops in the world. Non-wood paper is made by recycling sugarcane by-products left over from the sugar manufacturing process. It is an eco-friendly product that has been brought back to nature without any harmful chemical treatment or artificial bleaching and can be used for food packaging.

Expand supply of paper straws and reusable cups

Tapex

Tapex paper straws and multi-use cups (reusable cups) complies with the government's plastic disposable product regulation policy and plan to expand its production. Our 2022 sales increased by 22% ever since the plastic straw regulation was officially implemented in November 2022 and the replacement of disposable cups, multi-use cups, also increased by 120% compared to the previous year to 800 million won in 2022. This is estimated at about 145 tons for carbon reduction performance. In addition, we are further strengthening the company's eco-friendly business image by signing Habit Eco Alliance (SK Telecom, SK Happiness Connect, Starbucks, Tapex, and local governments) and participating in programs.

Secondary battery tape life cycle evaluation LCA implementation

Tapex

For the first time, Tapex applied Life Cycle Assessment (LCA), which evaluates the environmental impact (greenhouse gas emissions) of a product throughout its life cycle, to its flagship products. In the first half of 2022, a LCA TF team was formed to evaluate the secondary battery tape that is used in production process of electric vehicles.



2. GHG reduction and energy saving

Replacing energy-efficient facilities

Hansol Chemical

Hansol Chemical's Jeonju Plant is making improvements in various aspects to reduce power and steam consumption as energy consumption is increasing every year due to steady business expansion. Recently, we have carried out activities to reduce power consumption (approx. 2,700MW) by replacing high-efficiency LED lights and high-efficiency refrigerators, and steam consumption (approx. 5,000 tons) by improving flare stack operation and recovering steam in the process. Through these energy consumption reduction activities, we also were able to reduce our greenhouse gas emissions.

Investment in carbon emission reduction facilities

Hansol Technics

Hansol Technics replaced an aging air compressor at the Jincheon Plant as part of its efforts to reduce greenhouse gas emissions. In the past, an old 200HP compressor was used, which is now replaced with the new 100HP compressor to prevent unnecessary energy loss caused by a decrease plant operation rate and large-capacity facilities. With this replacement of the compressor, you can expect to save KRW 10,500,000/year. In addition, the Ochang plant replaced the boiler with a high-efficiency, low-NOX boiler and changed the discharge method from a combined discharge method to an individual discharge method, enabling stable boiler operation. In the past, we improved energy use efficiency by improving pipe corrosion, ignition problems, and boiler temperature management problems caused by condensation caused by temperature drop (140→75°C).

New Zealand afforestation business and sales of carbon credits

Hansol HomeDeco

Since 1991, Hansol HomeDeco has been the first Korean company to carry out overseas afforestation. Through this, it became possible to secure a stable source of wood resources. In 1996, we entered the afforestation business in New Zealand, and now we are absorbing 149,000 tCO₂ of carbon dioxide every year and generating profits through the carbon credits business.

Increased recycled content

#1 in the world for recycled content within MDF

80%

Percentage of recycled materials to be increased to 100%

Increasing the share of green products

Green products as a percentage of total sales

30%

Will use recycled materials for MDF, living room, etc.

Reduce greenhouse gas emissions and preserve energy

Annual amount CO₂ reduction

2,000_t

5% annual decrease for overall usage

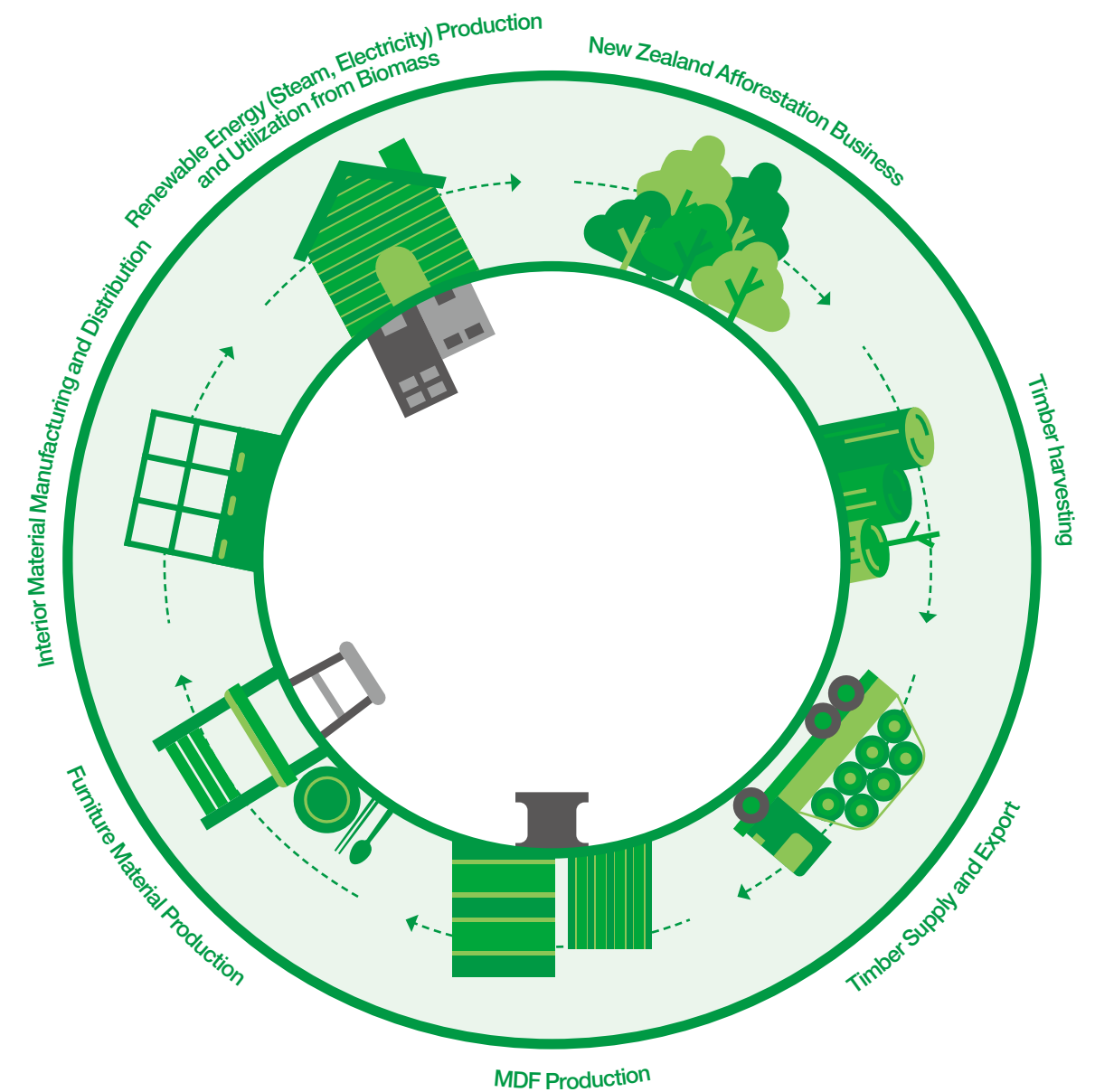
Overseas reforestation projects and carbon credits

Total area of oversea reforestation

10,000_{ha}

Annual CO₂ amount of 149,000 tons reduced

Sustainable Wood Utilization Value Chain of Hansol HomeDeco



3. Environmental pollutants and waste management

Reduced wastewater discharge by 30,000 tons

Hansol Chemical

Hansol Chemical's Ulsan Plant discharged a total of 160,151 tons (440 tons/day) of wastewater in 2022, a reduction of about 15% from 189,823 tons (520 tons/day) of wastewater discharged in 2021. Despite business expansion, Hansol Chemical Ulsan Plant made efforts to protect water resources by reducing water use and water pollutant emissions in 2022. Through efficiency in the product manufacturing process and facility investment, the reuse rate of wastewater was increased, and as a result, wastewater discharge was reduced by about 30,000 tons compared to the previous year.

Strict Wastewater Discharge Management

Hansol PaperTech

Hansol PaperTech manages waste water dischargement through their own standards which is well below the required legal standards.

	Legal Standards	Self-Standards
TOC	25	20
COD	32	25
SS	30	22
PH	8.6	8
TN	30	23
TP	4	3.5

Investment in environmental facilities

Hansol Paper

Hansol Paper thoroughly manages to minimize resource waste and pollutant discharge by increasing the waste recycling rate for eco-friendly resource circulation and investing in facilities to achieve zero marine waste discharge. Hansol Paper has been steadily investing KRW 5.6 billion in 2020, KRW 6 billion in 2021, and KRW 1.5 billion in 2022 in environment-related facilities over the past three years for resource circulation. We are reducing material.

Hansol HomeDeco

Hansol HomeDeco has invested in the construction of fly ash heavy metal reduction facilities in incinerators. In the past, the content of heavy metals in fly ash from incinerators exceeded the legal standard and was classified as designated waste, so waste was treated at high cost. In this process, by injecting heavy metal release inhibitor chemicals into the fly ash of the incinerator, the fly ash is converted into general waste and recycled, resulting in an improvement in the waste treatment process and cost reduction.

Hansol PaperTech

Hansol PaperTech prepares a recycling plan for waste (sludge) generated during production and continuously implements it to make efforts to turn waste into resources. We are also focusing on facility investment to stabilize waste disposal.

Hansol Technics

Hansol Technics carried out sludge dredging construction for collection tanks and discharge tanks for efficient wastewater treatment and discharge of concentrations below legal standards. This is because wastewater sludge accumulated in the collection tank and effluent for a long time increases the concentration of water pollution and adversely affects facility maintenance (pumps and piping). After the dredging, the concentration of wastewater contamination was noticeably reduced for each item, such as BOD 78%, TOC 19%, SS 52%, and T-P 85%.

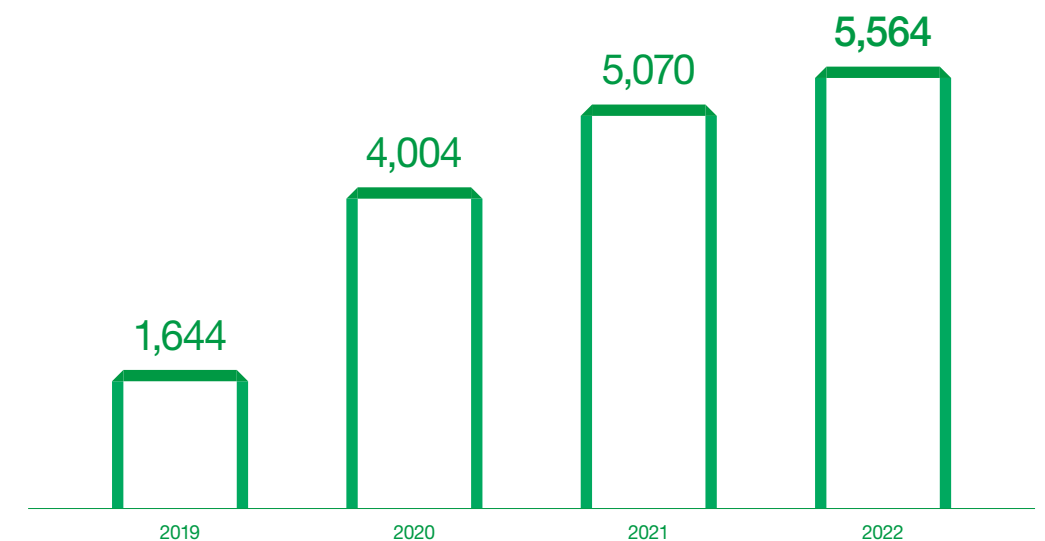
2022-2023 Hansol PaperTech Environmental Facility Investment

(Unit: KRW million)

Environment Facilities	Investment Amount
Replacement of water quality TMS (TOC)	62
SDR upper replacement	82
Aeration Tank Turbo Blower Spare and Piping Installation	91.5
Additional installation of advanced water quality treatment (corresponding to TOC regulations)	618
Replace Bag Filter Hopper	140
Replace Bag Filter Valve	49
Replacing the submersible pump in the preliminary aeration tank	31
Nano filter installation	563

Hansol PaperTech Sludge Recycling Increase Trend

(Unit: ton)



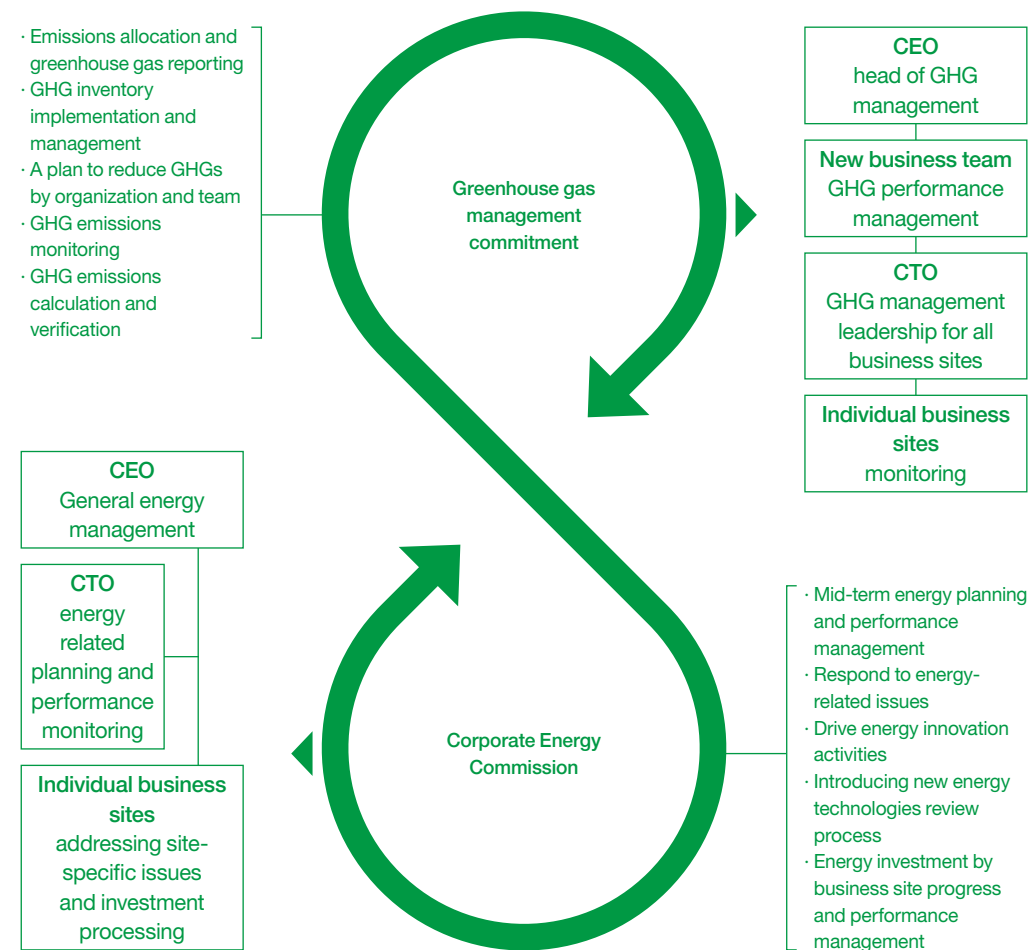
4. Global Initiative & Environmental Management Certification

Compliance with TCFD recommendations and designation as a green company

Hansol Paper

TCFD (Task Force on Climate-related Financial Disclosures) is an organization created by the International Financial Stability Board (FSB) and presents TCFD recommendations, which are standards for disclosing governance, strategies, risk management, indicators, and targets for climate change response. Hansol Paper discloses climate change-related information in accordance with TCFD recommendations to support decision-making by major internal and external stakeholders and to advance the climate change response system. In addition, it was designated as a green company qualified by the Ministry of Environment and the Geumgang River Basin Environmental Office and was again recognized for its eco-friendly management.

Hansol Paper Climate Change Response Governance



Joined the United Nations Global Compact (UNGC)

Hansol HomeDeco

Hansol HomeDeco has joined the United Nations Global Compact (UNGC) to strengthen ESG management and social responsibility practices that meet global standards. UNGC is the world's largest voluntary corporate citizenship initiative (autonomous agreement) and is an international agreement launched in New York, USA in 2000 to promote corporate social responsibility. Currently, about 20,000 member companies from 162 countries around the world are participating, and the member companies that have signed up adhere to the 10 principles in the four areas of human rights, labor, environment, and anti-corruption, which are the core values of UNGC, and report on achieving the Sustainable Development Goals (SDGs). (cop) must be submitted and disclosed annually. Hansol HomeDeco's involvement in the UNGC is a promise to faithfully fulfill its duties as a responsible corporate citizen.

Addition of new ISO 14001 acquisition sites

Tapex

Tapex's Unilab business site established a systematic environmental management system and newly acquired the international environmental management system certification (ISO 14001) in 2022, and as a result, all three domestic business sites have been certified.



Establishment of environmental committee and establishment of improvement goals

Hansol IONES

Hansol IONES established an environmental committee in 2023 and held a meeting at the Anseong headquarters and Balan campus. The committee plans to hold quarterly meetings to respond to internal and external issues related to the environment and evaluate environmental risks and has established specific goals necessary for this. In the future, Hansol IONES plans to promote management activities with a focus on environmental management, which requires the most urgent and preemptive response.

Achieving Sustainable Growth Together

The responsibility of companies regarding respecting human rights has never been so important and relevant in today's world. Sustainable is only achievable for companies that consider human rights for all stakeholders, including employees, suppliers, and local communities. Hansol promotes this by complying with the Universal Declaration of Human Rights and the United Nations Guiding Principles on Business and Human Rights (UNGP).

For the Sustainability

Hansol Group strives to demonstrate ESG values all together with our employees, suppliers, and local communities. For employee labor human rights, we have prepared the Human Rights Management Operating Guidelines and trained all employees. Furthermore, we intend to implement a safe and enjoyable workplace and strengthen competency through educational support programs. In 2022, we established the HSRS (Hansol Safety Rating System) safety and health management evaluation system tailored to the characteristics of Hansol's business, while major affiliates have already established the foundation with the ISO 45001 certification. To take initiative, we provided regular meetings, training, and consulting to ensure the safety and security of employees at each affiliate and partner company. Hansol rewards employees in the event of exceptional performance and is determined within the labor management committee after a discussion process where employees can make recommendations about annual salary increase and so forth. In addition, we are striving to promote diversity among employees and encourage interactive communication to create a pleasant workplace atmosphere and retain talented employees.

Key Sustainability Issues

Key Performance

1 **Creating growth with employees**

Certified family-friendly companies
3 affiliates
Hansol Paper, Hansol Chemical, Tapex

- Launched online education curation system based on Hansol Holdings competency evaluation
- Establishment of HSRS Health and Safety Management Evaluation System
- Employment inclusivity for people with disabilities at Tapex

2 **Shared Growth with Partners**

Number of Hansol Technics' shared growth programs
15

- Hansol Technics Win-Win Cooperation Day, 10 companies attend individual purchase consultations
- Sustainability assessment for Hansol Paper's suppliers
- Hansol Paper Win-Win Fund
- Hansol Inticube published a guidebook on Good Subcontracting Practices

3 **Community communication and engagement**

Number of visitors at the Museum Mountain for Hansol's Culture Foundation
1,631,922
(2013-2022)

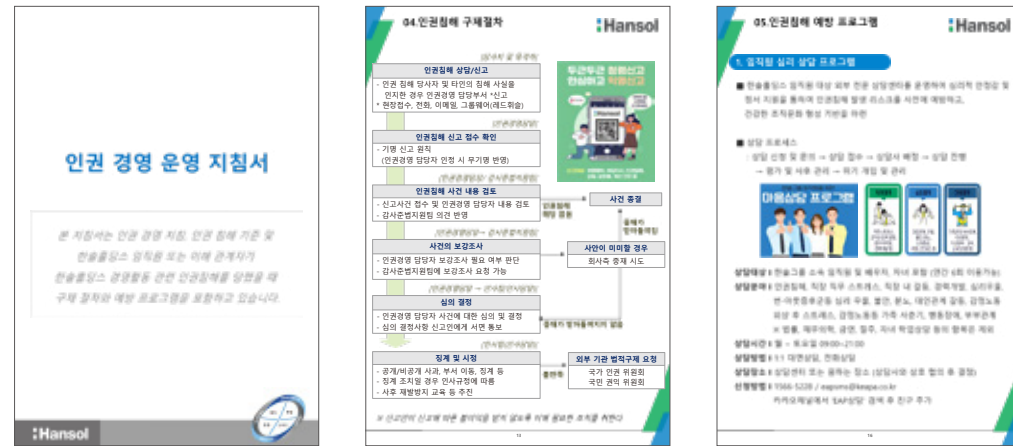
- Hansol Holdings Employee Volunteer Program
- Hansol Technics Solar PV Module Community Donation
- Regular cleaning to remove odors from Hansol PaperTech
- ESG campaigns such as Tapex Beachcombing and waste electronics collection

1. Creating growth with employees

Established human rights management operating guidelines and employee psychological counseling programs

Hansol Holdings

Hansol Holdings has established specific guidelines for practicing appropriate human rights management. The guidelines contain definitions of human rights, human rights management, types of human rights violations, and procedures for remedying human rights violations. The human rights management system is applicable to holding companies and affiliates, their employees, customers, and suppliers, operating a system that allows various stakeholders to report possible human rights violations through various channels, including the "Red Whistle" (anonymous reporting) system, website, mail, email, and telephone. In 2023, human rights management will be expanded to major affiliates and training will be done once a year for every affiliate. Through the Declaration on Human Rights Management, Hansol Holdings aims to spread human rights awareness among employees and create an environment that deeply values human rights. Moreover in 2023, we will operate a counseling program where all employees can receive psychological counseling for various problems experienced, such as work stress, workplace conflicts, burnout syndrome, and interpersonal conflicts, as well as human rights violations, through an external professional counseling center.



How to use the specific human rights violation remedy procedures and prevention programs contained in the Human Rights Management Operating Guidelines.

Employee Growth Support Program

Free Agent (FA) System: the FA system was introduced in 2020 and gives employees who had the same job for a certain amount of time, the right to apply for other jobs if they wish with priority given to those with FA qualifications through job postings from time to time.

External MBA Support: Each year, each affiliate recommends candidates for an internal MBA to nurture future executives

Mentoring System: We operate a variety of mentoring systems to help new employees to adapt to the company and prosper

Hansol Training System: We operate systematic training programs for each position level and support employee growth by providing personalized online training, phone consultations, and sales and outsourcing training

Respect Leadership: Respect and leadership are significant for leaders of the company that create organizations where members can grow through mutual respect and are also core values of the Hansol Management System (HMS)

Absolute Evaluation: We operate a performance management system that grows by achieving common goals based on the values of collaboration and never ill competition

Team Ground Rules: The team ground system is operated so that all teams of Hansol Group can create an autonomous work environment by reflecting their unique characteristics and culture

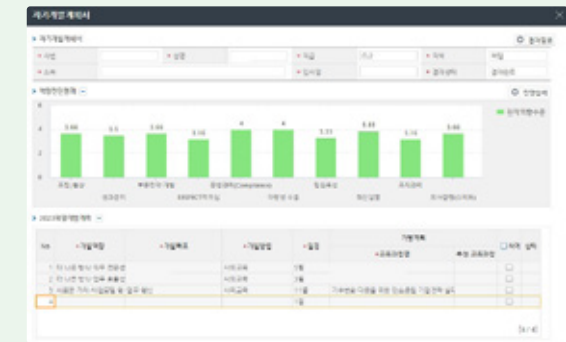
Online training curation system based on competency evaluation

Hansol Holdings

Hansol Group has newly launched an online education system for employees with 'Da Vinci', an HR software platform and 'H-Campus', an online education system. The system is an integrated education system that offers learning resources such as curriculum content, videos/YouTube, and other learning resources based on individual learning needs and learning data analysis and manages learning support and history. Through this education infrastructure, Hansol Group has internalized a culture of voluntary learning in the organization and actively supports self-development for all employees.

Existing H-Campus

- Manually find courses and create a self-development plan
- Manual entry of competencies, goals, and curriculum



New online training curation system LMS

- Provides course recommendations based on level of knowledge
- View and select recommended courses by job category
- Provides detailed course information

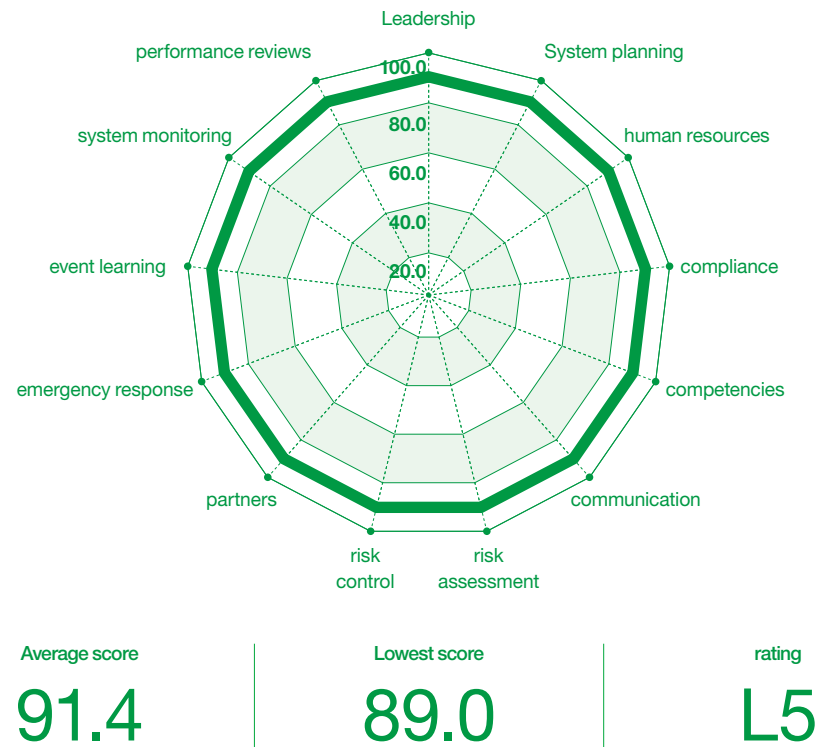


Establishment of HSRS Health and Safety Management Evaluation System

Hansol Holdings

Starting with the first evaluation of ISRS, the International Safety Rating System, in 2019, Hansol Group has been building its own safety and health working standards that are optimized to reflect the characteristics of Hansol's business. In 2022, we introduced the HSRS, an evaluation system where effectiveness and performativity has been verified. The evaluation rating is categorized into five levels from Level 1 to 5, with Hansol Paper and Hansol HomeDeco, both being manufacturing businesses, aim to achieve and maintain HSRS Level 5, which is more or less equivalent to ISRS Level 7. Through this, Hansol Holdings plans to strengthen safety and health competitiveness of the group and promote safety culture to its suppliers.

Hansol Paper's Jang Airfield rated L5 in HSRS assessment



Strengthening occupational safety and health education

Hansol PaperTech

We have further strengthened occupational safety and health training in relation to the Serious Accident Punishment Act. The annual safety and health training is conducted once a year. The competency required for the job is judged to be satisfied only when the score is 70 or more in the evaluation through the KSA competency evaluation form. Regular safety and health training is mandatory for more than six hours on a quarterly basis. Special safety and health training is required for full-time employees working 16 hours or more and day laborers. We strictly apply the standard of 16 hours or more for regular employees and more than two hours day laborers. This applies to work with cranes weighing more than 1 ton, work in confined spaces, and workplaces with five or more unloading machines for transportation.

Number of affiliates that attain ISO 45001

12 affiliates

Health Examination and Occupational Safety Policy to Protect Employees' Health

Hansol PaperTech

Hansol PaperTech conducts pre-placement health examinations and performs regular health examinations at least once a year for employees who are newly hired and assigned to tasks involving special health risks. Prior to assignment, the company informs employees about the specific health examination requirements related to hazardous factors in the assigned tasks or workplaces. In particular, for tasks involving hazardous processes such as noise, dust generation, radiation processes, sulfuric acid, and welding operations, pre-placement health examinations are conducted. Accordingly, employees engaged in hazardous risk processes, material handling, and night work, as specified in the Industrial Safety and Health Act, undergo special health examinations based on the types of hazardous factors.

In addition, the company regularly reviews the adequacy of its occupational safety and health policy to ensure the well-being of employees. After formulating the strategies for the occupational safety and health policy, the company collects feedback from members and stakeholders through communication channels such as emails, official letters, meetings, and internal notices to incorporate their opinions for revision or reestablishment. The occupational safety and health organization reports the safety and health performance to the top management semi-annually and takes steps to improve any areas that fall short of the requirements.

Introducing a specialized work-from-home employment platform for people with disabilities

Hansol Group

Hansol Group is striving to expand recruitment of people with disabilities by introducing a solution platform provided by Vdream, a support company specializing in employment of people with disabilities, at its major affiliates. Hansol Logistics, Hansol PNS IT Service Division, Hansol Inticube, Hansol Chemical, and Hansol Technics have adopted and are operating the platform, which enables people with disabilities to perform support tasks such as document data management and article clipping, while receiving the same benefits as existing employees, such as tuition and medical expenses and medical examinations. To promote diversity in employment and fulfill our corporate social responsibility, we increased number of employees with disabilities in 2022. We hired four new employees, compared to two previously, and now have six employees with disabilities. In particular, we focused on job positions where work from home is possible, such as CS, design, and general affairs, to improve work efficiency and reduce inconvenience for employees.



Vdream (vdream.co.kr) allows people with disabilities to select and apply for jobs by job title.

**Certified
Family-Friendly
Business**

Hansol Paper, Hansol Chemical, Tapex

Hansol Paper, Hansol Chemical, and Tapex are certified by the Ministry of Gender Equality and Family Affairs after they completed the Family Friendly Management Evaluation. During the family-friendly certification audit, we received good feedback for operating childbirth and child-rearing support systems, flexible work schedules, 12:00 p.m. Fridays, family-friendly programs, family care leave, and family-friendly workplace culture.



Tapex women's room remodeled to make it more comfortable with maternity breaks Break room

**Recognized as
a Young Adult
Friendly Small
Business**

Hansol Coever

Hansol Coever, a subsidiary of Hansol PNS, has been selected as a young adult friendly small business in 2023. Since 2016, the Ministry of Employment and Labor has selected outstanding companies based on wage, work-life balance, and employment stability every year and Hansol Coever was selected as a company that meets the criteria. Consequently, they are eligible to receive benefits such as recruitment support services, preferential financing, preferential treatment when selecting companies excluded from regular tax surveys, and preferential treatment for companies with special military service.

**Holding
meetings
to minimize
communication
gap between
generations.**

Tapex

As the number of employees rapidly increased in recent years, the organization is comprised of various generations, Tapex has made concrete efforts to establish a desirable corporate culture. Consequently, we have been conducting meetings to listen and resolve employees' concerns since 2022, which are held at least once a year for each level and position under the supervision of the division manager or head of management support. Through this, we aim to create a healthy workplace by strengthening communication with employees. In 2022, a total of 264 employees participated in the meetings, receiving 211 complaints and finding ways to improve.

Hansol Technics

Every month, Hansol Technics supports activities to strengthen communication with the MZ generation employees so that they can express their opinions freely with related departments such as support, HR, and general affairs. In addition, we conduct junior board discussions and meetings as an intergenerational (interdisciplinary) communication event. Through meetings with the CEO, the older generation, and the MZ generation, it eliminates pretenses and helps to understand each other through heartfelt communication. Moreover, there are a total of six junior board members, two from each business site, which are active.

Hansol IONES

In 2023, Hansol IONES held a company-wide meeting between the CEO and employees. To avoid one-sided communication where only the business executives participate, the meeting was centered on practitioners, excluding executives and directors, allowing everybody to express their thoughts and opinions without the pressure from the upper hands. Hansol IONES will practice ESG management by internalizing ESG social values through such communication across all levels of positions and generations.

**'For me', a
flexible work
arrangement
policy**

Hansol PNS

Hansol PNS's paper distribution division operates a 'for me' program that allows flexible work arrangements for employees and can simply be understood as 'Fridays are for me'. It allows employees to work four days and then take three days off for a refresher period. In addition to the 16 days per year, employees are granted eight additional days off, giving them a total of 24 days off, which basically is having Friday's off on a bi-weekly basis. We set the 2nd and 4th Fridays of each week as the default days off, which can be spread out to suit the team and individual autonomy.

**Introduce
an internal
employee
referral
program.**

Tapex

We are introducing various programs to expand our talent acquisition channels, which are essential for strengthening corporate competitiveness. In 2022, we introduced a new internal employee referral system in addition to continuation of recruiting university graduates, which was suspended in the second half of 2013. If an employee joins the company through the internal employee referral system and works for more than a year, the referrer receives an incentive worth KRW 500,000 to KRW 2 million. Moreover in 2022, we also hired 10 talented university graduates throughout various fields within our corporation.

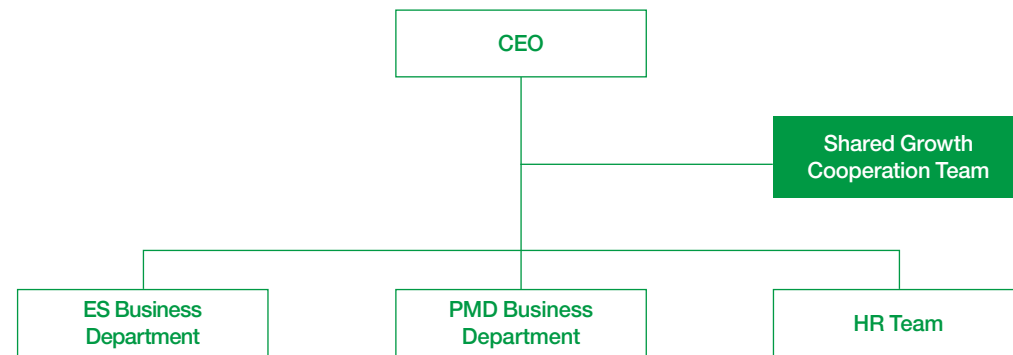
2. Shared Growth with Suppliers

Shared Growth Programs

Hansol Technics

To continuously promote fair trade and shared growth with its suppliers, Hansol Technics has moved the Shared Growth Cooperation Team to a department directly provisioned by the CEO. Understanding that shared growth with suppliers is a social value, Hansol Technics boldly overthrows unfair trade elements that have been inherited in practice, supports technology exchange, consulting, and training with the idea of filling in the gaps that suppliers lack, and enhances the working satisfaction of employees of suppliers by sharing welfare systems. As a result, improving the quality of our suppliers and securing excellent human resources are becoming Hansol's advantage and strength.

Shared growth activities provided by Hansol Technologies to suppliers



Key activities in 2022

- | | |
|---|---|
| 1. support for patent application | 8. support for solar power supply projects |
| 2. 2 patent trainings | 9. safety and energy saving consulting |
| 3. support for technology assignment system | 10. manufacturing process improvement support |
| 4. early payment | 11. recreational facility support |
| 5. procurement consultation | 12. support for long-term tenure of key personnel |
| 6. performance sharing system | 13. dissemination of new systems and laws |
| 7. support for in-house ventures | 14. support for cultural life |

* In addition to the above programs, 'Language Education Support' will be added in 2023.

Hosted a Win-Win Cooperation Day event

Hansol Technics

'Win-Win Cooperation Day' is Hansol Technics' signature shared growth project. We introduce the shared growth activities achieved during the year and disclose plans for the upcoming year. We also disseminate the latest management trends and revised laws. On the Win-Win Cooperation Day in 2022, we provided purchasing strategies for each business division and held purchasing consultations to provide business stability to our suppliers.

Management of 180 Supply Chains

Hansol PaperTech

Hansol PaperTech's corrugated cardboard manufacturing business is focused on providing for agricultural and marine products due to the increase in the freight forwarding industry and the government's growing interest on the environment. The market is expected to grow with expansions of packaging and the increased frequency of online shopping. There are currently 180 supply chains that are managed by Hansol PaperTech. Besides Logismile, which is an outsourcing supply chain logistics company, and Jeongjin Development, a human labor subcontracting company, there are 35 raw material companies, two incineration fuel companies, seven waste treatment companies, 15 subsidiary material companies, etc., consisting of 120 networked supply chain companies.

Create a guidebook for good subcontracting practices.

Hansol Inticube

Hansol Inticube has published the 'Guidebook for Desirable Subcontracting Transactions' to comply with fair and transparent subcontracting transaction orders. The guidebook contains key points of the Act on Fair Subcontracting Transactions to support accurate legal compliance and work when subcontracting with partners. It shall be utilized in practice by focusing on the definition of subcontracting, applicable requirements, and obligations of prime contractors. In particular, parts that are difficult for practitioners to interpret, such as transaction requirements and exceptions, and issues in practice were covered in more detail through Q&A to enhance practitioners' understanding.



3. Community communication and engagement

Museum Mountain diversifies culture of art and architect as a healing destination

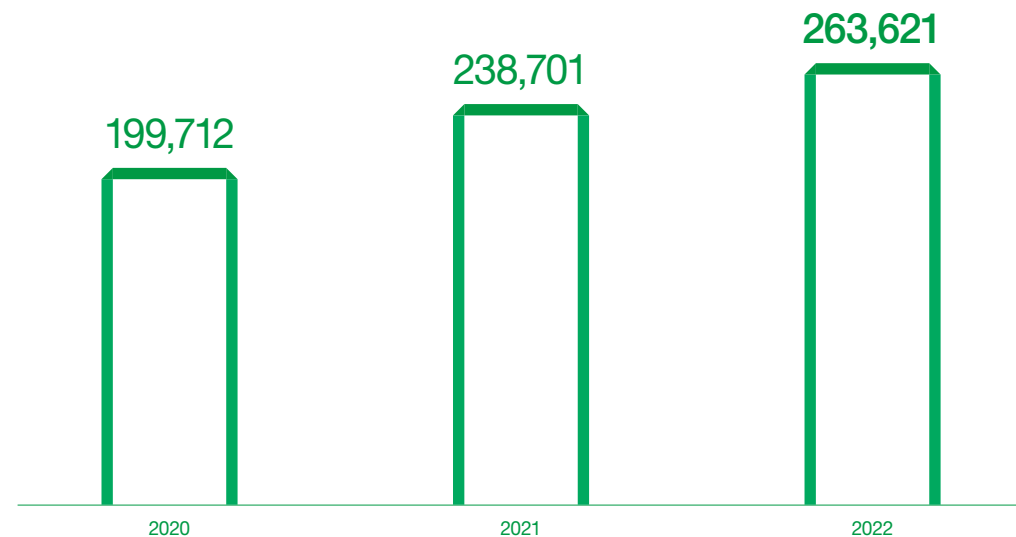


Hansol Cultural Foundation

Since the opening of Museum Mountain in 2013 that is operated by Hansol Cultural Foundation, it has established itself as a representative cultural space in Korea that lives up to its intention of providing therapy and healing through the enjoyment of art in a cultural space outdoors. It has accumulated 1,631,922 visitors over the past 10 years and is visited by more than 200,000 people annually, contributing to the revitalization of the local economy. Since its inception, Museum Mountain has been popular for its minimalist concrete architecture design of world-renowned architect Tadao Ando and is also James Turrell's largest exhibition in Asia who is an artist of light and space and has become a more meaningful and desired destination delivering inspiration to visitors. In 2023, the museum celebrated its 10th anniversary by hosting the exhibition "Tadao Ando-Young Chun", which explored the challenging work of architect Tadao Ando and the world of architecture, providing the public with another opportunity to engage with art and architecture.

Visitors to Museum Mountain in the last three years

(Unit: Employees)



Solar PV Module Community Donations and Corporate Social Responsibilities (CSR) Activities

Hansol Technics

Hansol Technologies demonstrates social value within rural areas through eco-friendliness. In 2017, we were the first private company to sign an agreement to contribute to the Rural Livelihood Fund, and we supply solar panels to KEPCO's Light Sharing Panel Project, which supports welfare organizations in Jeollanam-do, Incheon's Scholarship Support Project for Remote Islands, and Iksan City's Village Self-Governance Pension Solar Power Project to improve the lives of residents. Every year, we hold an oriental medicine health sharing event for the residents of Deoksan-eup, Jincheon-gun, and it has become an indispensable event for the local community.

Hansol Technics Community Support History

(Unit: KRW thousand)

Support History	Scale (in thousand won)	
	Spot	Cash
Supporting Local Farmers (Produce: Shine Muskat)	2,500	131
Electrical Safety Corporation Solar Module Support	8,344	439
Support for solar modules in Iksan City	11,757	618
KEPCO KPS Solar Module Support	15,549	818
Supporting seniors living alone	1,000	-
Helping disabled children (girls and boys)	-	400
Deoksan-eup Oriental Medicine Event	-	20,000

Environmental Preservation: ESG Campaigns, Beachcombing & Waste Electronics Recovery

Tapex

Recognizing the seriousness of marine pollution and marine plastic waste, we executed beachcombing to protect the local environment and biodiversity with the participation of employees. Beachcombing refers to the act of picking up and collecting sea debris and garbage as if you were to comb a beach and was held three times at Gungpyeong Port in consultation with Hwaseong City, where the Tapex facility is located, with 62 employees participating. We also conducted a campaign to raise awareness of resource recycling through an agreement with the Korea Electronics Recycling Cooperative (KEREC), collecting and donating waste electrical and electronic products such as used cell phones. The campaign not only involved Tapex, but also Hansol Chemical, raising ESG awareness.

Regular community service

Hansol Holdings

Every fourth Friday of each month, about 15 employees visit Eunpyeong Rehabilitation Center located in Eunpyeong-gu, Seoul, Korea, to take part in volunteer activities. In addition to repairing facilities and organizing donated items, Hansol Holdings employees also did face-to-face volunteer activities, such as visiting cafes and beauty salons near the rehabilitation center with residents. Hansol Holdings will continue to operate volunteer activities to interact with the local community, fulfill its social responsibilities and obligations, and practice the spirit of corporate sharing.

GOVERNANCE

Transparent Governance and Shareholder-friendly Management

The environmental and social aspects of ESG are promised, as long as exceptional governance is in place. A transparent governance is essential to a company's prosperous growth and can also prepare for the future to a certain extent. The board of directors (BOD) should show independence, professionalism, and diversity and make decisions where all stakeholders, including customers, shareholders, and suppliers are considered.

For the Sustainability

As the highest decision-making body, the BOD of Hansol Group appoints members with expertise to ensure transparent and independent decision-making. The BOD is equipped with a governance system that makes productive business possible throughout the company. Moreover in 2023, Hansol Holdings, Hansol Paper, Hansol Chemical, Hansol PNS, Hansol Technics, and Tapex paid cash dividends in accordance with the shareholder return policy. In particular, Hansol Technics was able to return cash dividends to shareholders for the first time in 12 years due to its strong performance. Hansol is also actively responding to ESG disclosure. In addition to Hansol Paper, which is obligated to disclose the Corporate Governance Report, six affiliated companies (Hansol Holdings, Hansol Technics, Hansol Chemical, Hansol Logistics, Hansol HomeDeco, and Hansol PNS) that are not obligated to also made voluntary disclosures. Meanwhile, to further enhance ESG management, Hansol Holdings established an ESG indicator management system used by all affiliates, conducted a comprehensive review and improvement of the risk management status of all affiliates through a risk survey, and implemented a holistic strategy for managing the group's financial and non-financial risks, including diagnosing compliance management, and identifying tasks.

Key Sustainability Issues

Key Performance

1 A board of directors with independence and expertise

Disclosure of corporate governance reports from **7** companies
(voluntary disclosure from six companies)

- Audit committees for seven publicly traded companies
- Hansol Holdings Outside Directors 42.9% (2022)
- Hansol IONES established a committee to strengthen management transparency

2 Continued shareholder advocacy

Hansol Holdings 2022 Dividend Yield **10.5%**
(Consolidated)

- Hansol Holdings to pay a cash dividend of 120 KRW per share (3.5% payout ratio)
- Hansol Holdings, Hansol Paper, Hansol Chemical, Hansol PNS, Hansol Technics, Tapex Cash Dividends
- Hansol Paper announces 2023 year-end dividend plan

3 Strengthen risk management systems and crisis response capabilities

Number of ESG indicators within Hansol Group **300**
(as of May 2023)

- Reviewed the risk management system of all Hansol Holdings affiliates and derived improvement plans
- Conducted compliance management diagnosis for all affiliates of Hansol Holdings
- Hansol Paper's seven areas of ESG-related non-financial risk management

1. A board of directors with independence and expertise

Establishing a Genuine and Rightful Governance Structure

The BOD of Hansol Holdings is authorized to make decisions and control major management matters of the company in accordance with relevant laws and regulations and the Articles of Incorporation. A total of seven directors, four internal directors and three external directors, perform management decision-making and management supervision functions, in accordance with the regulation that external directors cannot serve more than six years within the board. The BOD will be subjected to review and advise on the most important topics from the materiality assessment to better engage in ESG management starting from August, 2023. In addition, in order to create an efficient internal accounting management system, the head of the finance team, who is the internal accounting manager, participates in the BOD as an internal director to enhance the effectiveness of the internal accounting management system and the transparency of the governance structure.

Board composition Status

Classification	Name	Gender	Duration	Background
Corporate Directors	Jae Hee Lee	Male	2015. 1. 2 ~ 2024. 3. 30	CEO of Hansol Holdings (current)
	Dong Gil Cho	Male	1997. 2. 26 ~ 2024. 3. 30	Chairman, Hansol Group (current)
	Hoon Jeon	Male	2019. 3. 26 ~ 2025. 3. 29	Head of Finance and RM at Hansol Holdings
	Min Hyuk Go	Male	2020. 3. 30 ~ 2023. 3. 29	Head of HR, Hansol Holdings
External Directors	Il Tae Son	Male	2018. 3. 29 ~ 2024. 3. 30	Professor Emeritus, Department of Trade, Kyung Hee University
	Nam Woo Lee	Male	2020. 3. 30 ~ 2023. 3. 29	Visiting Professor at Yonsei University Graduate School of International Studies and Advisor to the Career Development Center
	Chang Yeon Won	Male	2023. 3. 29 ~ 2026. 3. 29	Dongin Law Firm, Attorney at Law

Ensure Board Diversity and Expertise

Hansol Holdings appoints internal directors with a high level of experience in related tasks to ensure expertise and diversity of the BOD and external directors are selected in accordance with relevant laws and guidelines of the corporate governance service. We exclude people who infringe on shareholder value or hinder independence and recommend candidates that are crucial for company growth, management activity advice, and compliance.

Board of Directors meeting in 2022

6 times total

Board attendance

100%

Board Evaluation, Remuneration System, and Payment

The directors' remuneration can be set within the limit approved at the general shareholders' meeting, but the final decision is delegated to the BOD. At the general shareholders' meeting in 2022, the maximum amount of remuneration for directors was approved at KRW 4 billion and the actual amount paid was KRW 2.46 billion.

(Unit: Million KRW)

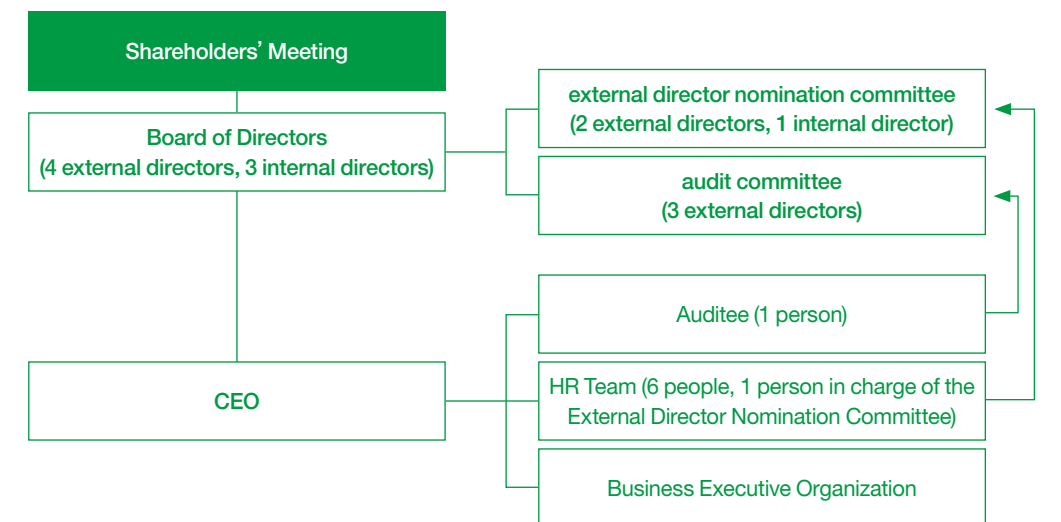
Classification	Personnel	Total Compensation	Average Compensation per Person	Remarks
Registered Directors (Excluding External Directors and Audit Committee Members)	4	2,301	575	4 Internal Directors
External Directors (Excluding Audit Committee Members)	-	-	-	-
Audit Committee Members	3	162	54	3 External Directors
Auditors	-	-	-	-

Establishment an audit committee and an external director nomination committee

Hansol Holdings has established an audit committee and an external director nomination committee within the BOD. The audit committee is composed of three external directors and supervises the BOD and management by ensuring transparency in the auditing process. The committee also has an organization that supports productive work ethics. We have one person in charge of the external director nomination committee within the HR department to carry out the committee's work, and one person in charge of the Audit Department as a support organization to assist the audit committee in carrying out its work.

Board and committee organizational chart

(as of May 2023)



Hansol IONES

Hansol IONES has established the 'Jeong-Do Management Transparency Enhancement Committee' for Jeong-Do management and transparent governance. The committee, which consists of two or more external experts and one or more independent directors, meets on a quarterly basis to review the appropriateness of executives' corporate card details, review monthly payments of executives' remuneration, and review executives' transactions with stakeholders. Hansol IONES aims to pursue sustainable development by enhancing management transparency through the operation of Jeong-Do Management Transparency Enhancement Committee.

Since 2022, disclosure of corporate governance reports has been mandatory for companies listed on the securities market with assets of KRW 1 trillion or more. Within Hansol Group, Hansol Paper falls under this category. However, Hansol Holdings, Hansol Technics, Hansol Chemical, Hansol Logistics, Hansol HomeDeco, and Hansol PNS, which are not subject to the disclosure obligation, are also voluntarily disclosing their corporate governance reports as well. This is partly in preparation for the change to be expanded to listed companies with assets of KRW 500 billion or more starting from 2024, and partly as an effort by Hansol to increase transparency in corporate management. Thanks to its efforts in voluntary disclosure since 2018, Hansol Group has also received positive feedback on ESG management.

2. Continuation of shareholder-friendly policies

Implement a mid- to long-term shareholder return policy

Hansol Holdings regularly informs shareholders that the shareholder return policy is continuously implemented by posting details regarding the shareholder return policy including cash dividends, on its website, as well as in the IR materials issued every quarter and posted on the website. On May 13, 2022, Hansol Holdings resolved the <Shareholder Return Policy for '22-'24>, which includes maintaining the existing shareholder return policy ('19-'21) until '24 and announced it through fair disclosure. In the future, Hansol Holdings plans to continuously initiate predictability and enhance shareholder value related to dividend policy.

Dividend breakdown for the last three years

Category	unit	2020	2021	2022
Dividend per share – common stock	KRW	120	120	120
Market price dividend rate – common stock	%	3.3	3.4	3.5
Dividend total	Billion KRW	50	50	50
Dividend payout ratio	%	7.1	23.3	10.5

Returning to shareholders with a year-end dividend

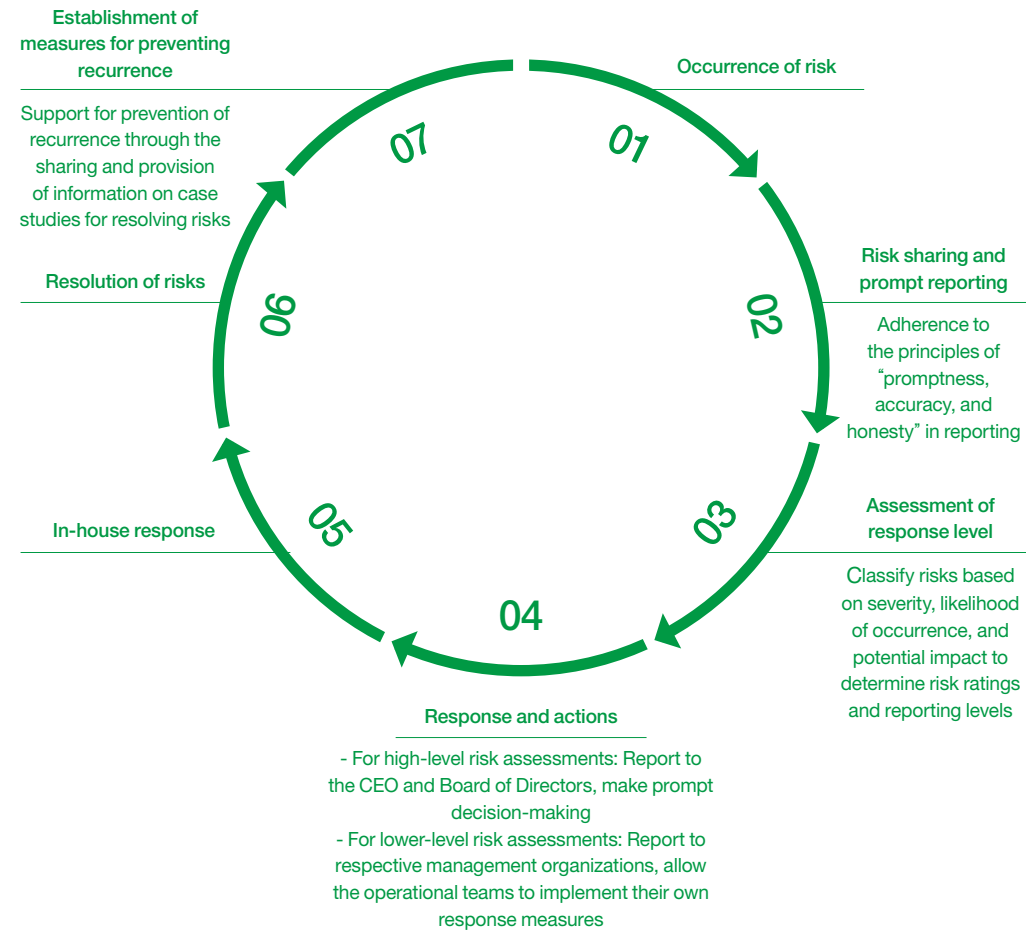
Hansol Paper

In its business report released in March 2021, Hansol Paper stated plans to utilize approximately 25-35% of its consolidated net profit towards the shareholder return policy. The consolidated cash dividend payout ratio was 29.1% in 2020 and 104.3% in 2021. Furthermore, Hansol announced its plan to pay a final dividend at the end of November, the end of the business year. At the end of 2022, the company announced a settlement dividend plan of KRW 500 per share based on the expected annual results for 2022 and confirmed a final dividend of KRW 500 and an interim dividend of KRW 200 per common share at the shareholders' meeting in March 2023.

3. Strengthen risk management systems and crisis response capabilities

Group Risk Response Process

Hansol Group always monitors the occurrence of each risk to effectively respond to major risks. In the event of an accident, we promptly and accurately share it internally to respond immediately, and we have established a risk response process to categorize and manage risks that have a significant impact on business operations. For risks that have already occurred, we consider measures to prevent recurrence and for a more effective risk response manual. In particular, as a holding company, Hansol Holdings extensively checks the status of risk management through a risk survey for all affiliates and collaborates with affiliates from time to time on areas that need improvement.



Risk Assessment Procedure

Hansol PaperTech

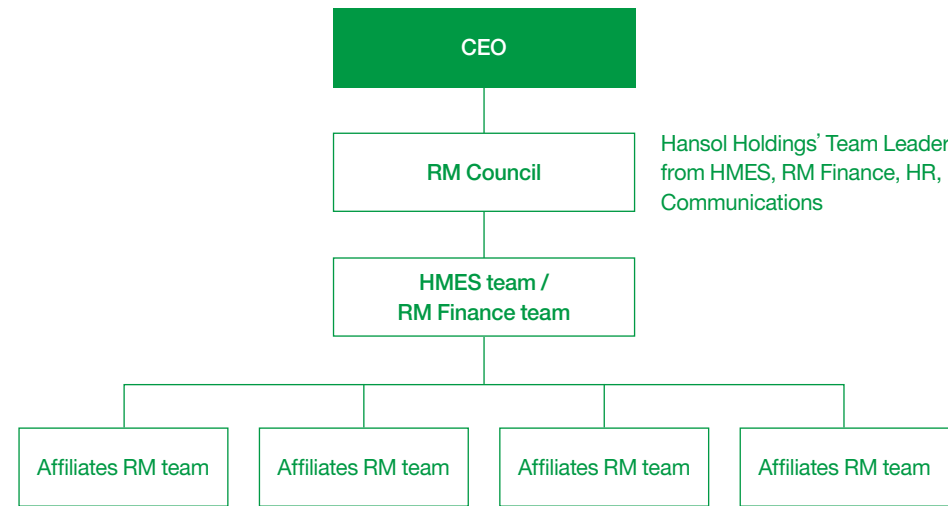
Hansol PaperTech registers, manages, and improves major harmful and hazardous factors and risks in order to minimize the possibility of accidents and maintain a safe and pleasant working environment. The CEO, CSO, factory manager, management executives, safety team leader, safety managers, and team leaders (supervisors) have responsibilities and authority for this. All employees are required to participate in risk assessments and establish measures to reduce risks.

Category	Responsible	Period	Job Duties
Review of Risk Assessment	Assignment by Team	Once a year	Identifying risk factors that may impact occupational health and safety and identifying critical tasks associated with major risks.
Risk Monitoring	Assignment by Team	Initial: Equipment Introduction Regular: Once a year Initial: Anytime	Conducting Risk Assessment based on Identified Risk Factors
Assessment and Improvement	Safety Team	Once a year	Verification of the Adequacy of Risk Assessment Results
Conducting Risk Assessment	Assignment by Team	Anytime	Establishment and Implementation of Improvement Plans for Critical Tasks and Risk Factors with a Risk Rating of 8 or above
Identification/Review of Risk Factors	Assignment by Team	Initial: Equipment Introduction Regular: Once a year Initial: Anytime	Sharing of risk assessment results with all members

Risk Reporting System

Hansol Holdings effectively responds to changes in the internal and external business environment by establishing a risk management council organization and reporting system including the CEO and executives for periodic risk inspection and rapid response.

Reporting Structure



Management Process

01

Implementation of Company-wide Integrated Risk Management

- periodic risk management status evaluation (monthly)
- continuous updates such as additions, supplementation and, deletion of risk classification system every year
- inspect possible risks in case of investments and orders exceeding a certain size or those with high risks

02

When an issue arises, the RM council reports to the BOD

03

Risk management targets and areas

- target: all affiliates
- scope: all areas where risks may occur, such as business, external communication, finance, compliance, and operation

* Regular and occasional monitoring of internal and external business environment changes (for each affiliate)

Group Risk System by Category

Category	Level 1	Level 2	Level 3				
Financials	Markets/ Customers	Trend (PESTEL)	Political/Legal				
			Economic				
			Social				
			Technological				
			Environmental				
	Business	Equity investments	Business models	Business model validation			
				Scalability and visioning			
				Drafting			
				Laws and regulations			
				Project structure			
Orders	Project	Project	Complaints				
			Contractual hidden clauses				
			Construction/Delivery Period				
			Quality/Performance Assurance				
			Patents/Trademarks				
Financials	Market	Currency exchange rates	-				
			Interest Rate	-			
			Liquidity	Funding	-		
				Profit or loss	-		
			Taxes	Taxes	-		
	Credit	Credit rating	Credit rating	-			
				Environment/ Safety	Environment	Climate Change, Carbon Emissions	
					Safety	Safety incidents	
				Compliance	Compliance	Compliance	Legal
							Negative
Disclosures	-						
Non-financial Risk	Operations	Operations	Unethical behavior				
			Security	-			
			Human Resources	-			
			Supply chain	-			
			Quality/ Certification	-			
	External Communication	Brand	Brand	Receivables Management			
				Crisis response	-		
				Brand	Image (reputation) damage		
				Harm to brand equity	CI misuse		
				Markets/ Shareholders	IR	-	

Review risk management system and implement improvements

In 2022, Hansol Group conducted a risk survey based on the 'Group Risk Classification System' for all affiliates to comprehensively check the status of risk management and define improvement processes for outstanding items. Through the survey, Hansol Holdings' HMES and Finance RM teams will review investments and orders that are subject to group investment/order consultation or have the potential to generate risks, item by item, with affiliates. In March 2023, we will check and report on the implementation of the improvement process for the items that are insufficient during the process and track the implementation status. Going forward, Hansol will update the risk items that need to be added, supplemented, or deleted through regular checks every January to prevent risks from occurring and enhance the sustainability integration.

Conduct a compliance audit

Since 2021, Hansol Group has diagnosed the compliance management status of each affiliate. The five categories of compliance leadership, planning, execution and support, internal inspection, and supplementation/improvement were measured and analyzed. Based on the results of the diagnosis through interviews with employees and analysis of relevant data, we were able to derive specific action tasks for each affiliate. With compliance management as the foundation of sustainable management, Hansol Group will strive to spread compliance awareness among employees, reduce legal and regulatory risks, and systematize compliance management.

Roadmap to strengthen compliance management by affiliate

<p>Hansol Paper</p> <ul style="list-style-type: none"> · Risk awareness/lead improvement activities of field workers (direct, partner, and subsidiary companies) · Stabilize subsidiary compliance systems and operations 	<p>Hansol Technics</p> <ul style="list-style-type: none"> · Establish/operate a compliance management system for overseas subsidiaries and affiliates · Strengthen environmental risk management · Improve safety and environmental incident prevention practices in the field 	<p>Hansol Home Deco</p> <ul style="list-style-type: none"> · Strengthen risk management for fair trade, subcontracting, internal controls, and more
<p>Hansol Logistics</p> <ul style="list-style-type: none"> · Strengthen compliance and self-checks for subsidiaries · Strengthen accident prevention management for carriers and suppliers 	<p>Hansol PNS Tributary Distribution</p> <ul style="list-style-type: none"> · Enhance education and communication to strengthen organizational commitment to compliance. 	<p>Hansol PNS IT Service Division /Hansol Inticube</p> <ul style="list-style-type: none"> · Enhance education and communication to strengthen organizational commitment to compliance. · Stabilize subsidiary compliance systems and operations

Establishment of the ESG Indicator Management System

Hansol Group has established an 'ESG Indicator Management System' to carry out a more systematic and efficient sustainability management which all affiliates are currently using since January 2023. In the case of environmental data, which is essential for risk management due to the nature of the industry, we set up accurate measurement guidelines with the advice of the Korean Standards Association. Through integrated ESG data management, Hansol aims to become a leading company in sustainability management.

ESG Indicator Management System Content

Main Content	Sub-Content	Content Summary
ESG indicator management	Indicator Pool	Select and manage indicators based on importance usability, representativeness, clarity, urgency, etc., among 1000 evaluation items from global disclosure guidelines (GRI, TCFD ASB) and domestic and other ESG institutions
	Indicator classification management	
ESG indicator selection	Selection of indicators by industry	Composed of 2 ESG inspection processes: · inspection of all affiliates on 60 common indicators · industry group index according to each affiliates' operating business
	Affiliates industry definition	
	Affiliate index management	
ESG verification	Create a measurement plan	· provide current status so that indicators of all affiliates can be compared at a glance · continuous data management through data management cycle and designation of person in charge
	Perform indicator check	
	Payment of measurement results	
ESG statistics	3 year indicator performance	· Compare and manage ESG data entered by each company for up to 3 years for each indicator
	Indicator performance by company	
Notice board	Announcements	· Announcements and sharing of information for employees within the ESG field
	Q&A	



Appendix

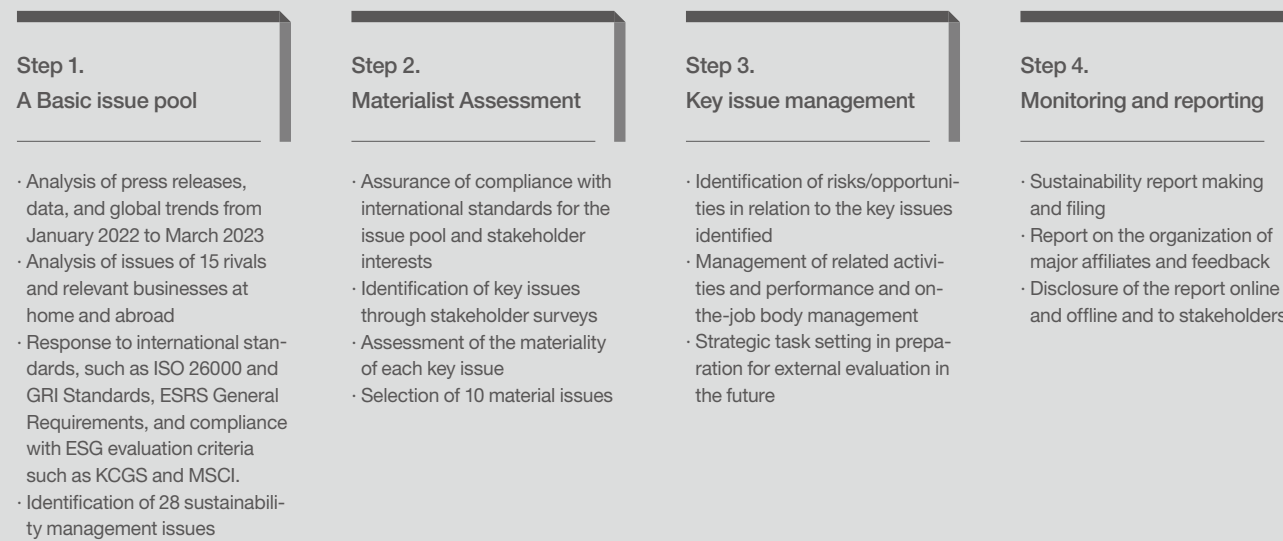
86	Materiality Assessment	118	Certification Status of Affiliates
88	Data Center	119	Award History
112	GRI Content Index	120	Domestic Business Sites
115	UN Sustainable Development Goals (SDGs)	121	Affiliation Association
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MATERIALITY ASSESSMENT

Hansol Group selects key issues by analyzing the interests of stakeholders, at home and abroad, and their impact on business. The Materiality assessment is 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 a total of 10 key issues and disclose our management approach and achievements on key issues by publishing this report.

Materiality Assessment process

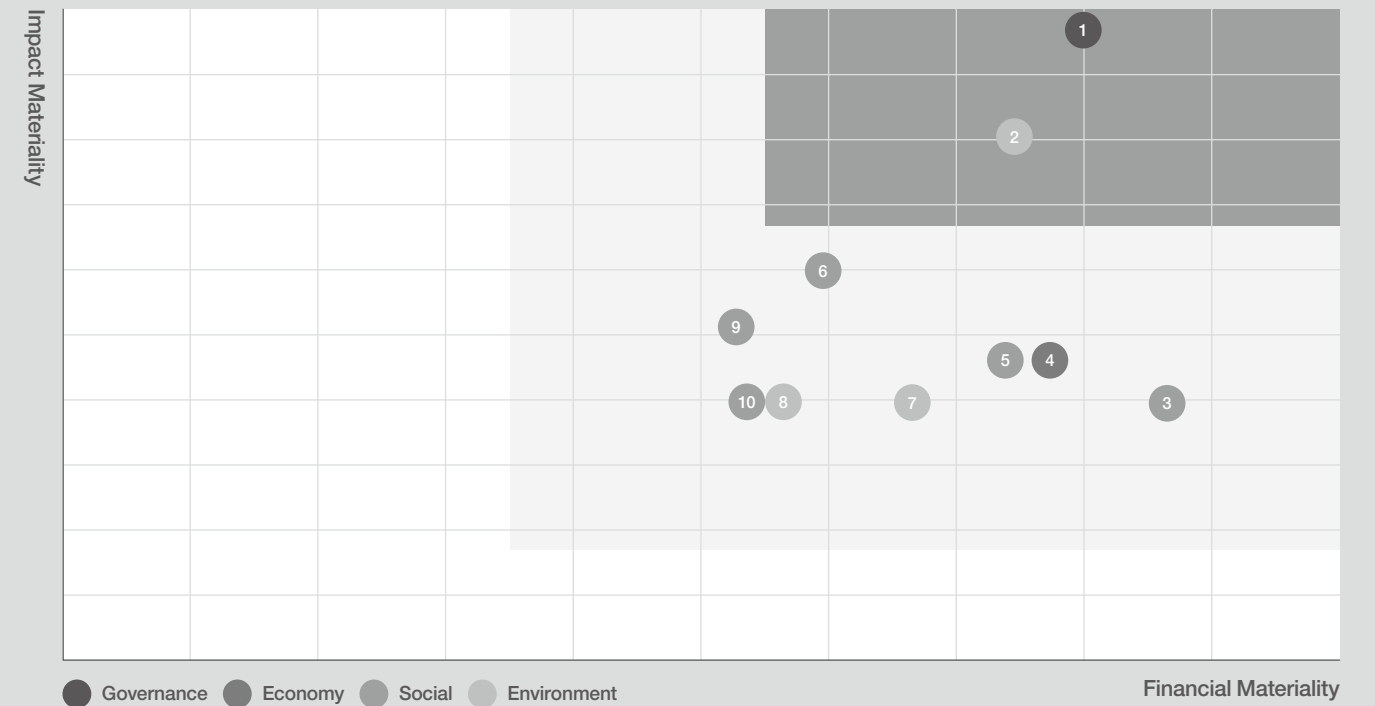
In order to determine the core reporting content of the sustainability report and identify sustainability management issues to focus on, we conducted a Materiality assessment through the following four steps in accordance with the GRI (Global Reporting Initiative), a global sustainability reporting guideline.



Channels of communication with stakeholders

Stakeholders	Channels of communication	Issues of interest
Employees	<ul style="list-style-type: none"> Communication board Communication with management Investor presentation In-house broadcasting Employee satisfaction survey 	<ul style="list-style-type: none"> Labor-management Council Employee portals Employee training Workshop
Subcontractors	<ul style="list-style-type: none"> Meetings Workshops for mutual growth Mutual growth council 	<ul style="list-style-type: none"> Surveys Mutual growth day
Shareholders and investors	<ul style="list-style-type: none"> General meetings Marketing brochure Investor meetings Calls for candidates of outside directors 	<ul style="list-style-type: none"> Disclosure, business performance presentation Investor blitz Sustainability management reports Corporate governance reports
Government and local governments	<ul style="list-style-type: none"> Ministry of Environment Participation in policy research Ministry of Economy and Finance Collaborative program FSC, ISO 	<ul style="list-style-type: none"> Job creation, tax compliance, and legal compliance for the fulfillment of corporate responsibility and contribution to the nation's sustainable development, compliance with regulations, response to climate change, response to and engagement in public policy, workplace safety compliance
Customers	<ul style="list-style-type: none"> Website YouTube Customer satisfaction surveys Blog Brochures Customer events Facebook Advertising videos Exhibitions, fairs 	<ul style="list-style-type: none"> Quality and service improvement, customer communication, brand value
Local community/ NGO	<ul style="list-style-type: none"> Corporate social responsibility (CSR) activities Communication with local communities near worksites Sustainability management reports 	<ul style="list-style-type: none"> Reduction of waste water and waste, pollutant management in the work sites, job creation and maintenance, CSR activities, development of the local economy

Materiality Assessment results



Reports on key issues as a result of the Materiality Assessment

Classification	Key issues	GRI CONTENT INDEX	Report contents	Page
Governance	1 Ethical management and anti-corruption	GRI 3-3, GRI 205-2	Ethical management	p.22-24, 34, 81-83
Environment	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 Increase of 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 Employee competency development support	GRI 3-3, GRI 404	Growth with employees	p.62, 63
Environment	7 Reduction of raw material usage and expansion of recycling	GRI 3-3, GRI 306-4	GHG-emissions reduction and energy conservation	p.21, 54, 58, 59
Environment	8 Safe waste, wastewater, and chemical discharge management	GRI 3-3, GRI 303-2	Environmental pollutants and waste management	p.21, 56
Social	9 Building a flexible organizational culture	-	Growth with employees	p.65-67
Social	10 In-house human rights policy & education	-	Human rights in business	p.62

DATA CENTER

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 profit	10,963	13,304	16,279
	Financial income	412	964	1,470
	Financial costs	367	406	1,036
	Other income	10,194	2,233	248
	Other costs	30	63	2,769
	Net income before the deduction of corporate tax Expenses	21,171	16,031	14,190
	Net income	16,031	11,811	10,421
Statement of financial position	Assets	381,185	386,883	382,738
	Current assets	56,289	64,779	73,919
	Non-current assets	324,896	322,104	308,819
	Liabilities	9,160	9,394	10,299
	Current liabilities	1,279	7,373	6,566
Non-current liabilities	7,881	1,921	3,733	
Capital	427,035	434,896	439,792	

(Based on standalone financial statements)

Social

Category	Unit	2020	2021	2022	
No. of employees	Employees	47	50	46	
Executives	Total	11	10	8	
	Female	0	0	0	
	Male	11	10	8	
	Ratio of executives	%	23	20	17
Current employees (by employment type)	Total	35	39	36	
	Full-time	6	9	10	
	Male	29	30	26	
	Ratio of full-time employees	%	83	77	72
Non-regular worker	Total	1	1	2	
	Female	0	0	1	
	Male	1	1	1	
	Ratio of non-regular workers	%	3	2	5
Outsourced human resources	Employees	0	0	0	
	Ratio of outsourced human resources	%	0	0	0
Current employees (by work type)	Full-time	44	47	44	
	Part time	3	3	2	
Current employees (by work location)	Local	45	47	44	
	Overseas	2	3	0	
Employee diversity	No. of male employees	41	41	35	
	Ratio of male employees	%	87	82	76
	No. of female employees	6	9	11	
	Ratio of female employees	%	13	18	24
	No. of male executives	11	10	8	
	Ratio of male executives	%	23	20	17
	No. of female executives	0	0	0	
	Ratio of female executives	%	0	0	0
	No. of female managers (manager level or higher)	1	1	3	
	Ratio of female managers (manager level or higher)	%	2	2	6.5
	No. of people with disabilities	Employees	0	0	0
	Ratio of employees with disabilities	%	0	0	0
	No. of senior employees (over 55 years old, excluding executives)	Employees	0	0	5
	Ratio of senior employees	%	0	0	11
Recruitment of the socially disadvantaged	No. of foreign employees	2	3	2	
	Ratio of foreign employees	%	4	6	4
	No. of high school graduates	1	1	2	
	Ratio of high school graduates	%	2	2	4
No. of national veterans	0	0	0		
Ratio of national veterans	%	0	0	0	

Category	Unit	2020	2021	2022	
Employee diversity	No. of employees (Under 30 years)	Employees	0	0	1
	Ratio of employees (Under 30 years)	%	0	0	2
	No. of employees (30-50 years)	Employees	35	36	35
	Ratio of employees (30-50 years)	%	74	72	76
	No. of employees (Over 50 years)	Employees	12	14	10
	Ratio of employees (Over 50 years)	%	26	28	22
Recruitment of new employees	Male	9	11	6	
	female	2	3	2	
By age	Under 30 years	Employees	0	0	1
	30-50 years	Employees	10	13	7
	Over 50 years	Employees	1	1	0
	Average of male earnings	KRW million	135	139	196.1
	Average of female earnings	KRW million	55	75	67.6
	the ratio of male to female's basic salary	%	40	53	34
Compensation of Employee	Average compensation of male executives	KRW million	-	-	446.43
	Average compensation of female executives	KRW million	-	-	0
	the ratio of male executive to female executive's basic salary	%	-	-	0
	Average of regular male earnings	KRW million	-	-	117.21
	Average of regular female earnings	KRW million	-	-	71.88
	the ratio of regular male to regular female's basic salary	%	-	-	61
Job security	Average of contractual male earnings	KRW million	-	-	82.54
	Average of contractual female earnings	KRW million	-	-	24.7
	the ratio of contractual male to contractual female's basic salary	%	-	-	30
	Average tenure	Years	9.5	9	9.7
	Total number of job changers	Employees	-	-	13
	Voluntary retirement rate	%	-	-	69.2
Talent development	Involuntary retirement rate	%	-	-	30.8
	No. of beneficiaries of education	Employees	47	50	46
	Total budget for employee training	KRW million	29	17	19.9
	Training expenses per employee	KRW thousand	627	358	433
Industrial accidents	Total hours for employee training	Hours	2,947	1,794	1,098
	Average training hours per employee	Hours	54	49	23.87
	No. of industrial accidents occurred	Agendas	0	0	0
	Industrial accident rate	%	0	0	0
Fair trade	No. of deaths	Employees	0	0	0
	No. of injured	Employees	0	0	0
	Duration of work-hour loss	Hours	0	0	0
	No. of fair trade law violations	Incidents	0	0	0
Information security breaches	Fines imposed	KRW million	0	0	0
	No. of customer data leak, theft, and loss	Incidents	0	0	0
Complaints on discrimination in the workplace	No. of complaints on discrimination in the workplace filed and handled	Incidents	0	0	0

Category	Unit	2020	2021	2022		
Violations of Regulations and Self-Regulatory Guidelines	No. of penalized or sanctioned for regulatory violations	0	0	0		
	No. of receiving warnings for regulatory violations	0	0	0		
	No. of violating internal self-regulatory guidelines within the company	0	0	0		
Labor losses	No. of labor losses in subcontractors	Incidents	-	-	0	
	Employees who have taken parental leave	Total	-	-	0	
	Female	Female	-	-	0	
Parental leave	No. of employees who have returned to work after parental leave	Total	-	-	1	
	Male	Male	-	-	0	
	Female	Female	-	-	1	
	Ratio of employees who have returned to work after parental leave	%	-	-	100	
	No. of employees who have worked over 12 months after returning from parental leave	Total	-	-	0	
	Female	Female	-	-	0	
Human rights policies and procedures	Ratio of employees who have worked over 12 months after returning from parental leave	%	-	-	0	
	Duration of education for human rights	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	Total hours (per employee)	43(1)	49(1)	46(1)	
CSR	Other education (Human rights education for people with disabilities, etc.)	Total hours (per employee)	43(1)	49(1)	46(1)	
	Investment in CSR (including donations)	Cash donation	KRW million	20	10	10
	In-kind donation	KRW million	0	0	0	
	Duration of volunteer work	Hours	-	480	564	
Direct and indirect beneficiaries of the support programs	Duration of volunteer work per employee	Hours	-	9.6	12	
	Direct and indirect beneficiaries of the support programs	Employees	-	250	406	

* Industrial accident rate: (Number of injured workers/ Number of workers subject to industrial accident)×100
 All affiliated companies are the same, based on Hansol Holdings
 * Base salary ratio: Calculated based on the average compensation
 All affiliated companies are the same, based on Hansol Holdings
 * Parental leave: The 2020 and 2021 data are not included as they pertain to the new disclosure starting in 2022

Governance

Category	Unit	2020	2021	2022	
BOD Structure	No. of BOD meetings	Meeting	9	7	6
	No. of agenda items	Agenda	22	15	13
	Preliminary deliberation	%	100	100	100
	Decisions on revised agenda	Agenda	0	0	0
	Report agenda	%	10	8	8
	BOD attendance rate	%	98.4	100	100
BOD Diversity	Non-executive director attendance rate	%	100	100	100
	Male	Employees	7	7	7
	Female	Employees	0	0	0
	Ratio of female directors	%	0	0	0
	Under 30 years	Employees	-	-	0
	30-50 years	Employees	-	-	0
Anticorruption policy and procedures	Over 50 years	Employees	-	-	7
	No. of external directors	%	-	-	3
	Ratio of external directors	%	-	-	43
	No. of board members who have received ethics training	Employees	7	7	7
	Ratio of board members who have received ethics training	%	100	100	100
	No. of employees who have received ethics training	Employees	47	50	46
Anticorruption violations	Ratio of employees who have received ethics training	%	100	100	100
	No. of board members who have signed the ethics pledge	Employees	7	7	7
	Ratio of board members who have signed the ethics pledge	%	100	100	100
	No. of employees who have signed the ethics pledge	Employees	45	47	46
Anticorruption violations	Ratio of employees who have signed the ethics pledge	%	96	94	100
	No. of violations of anticorruption laws	Incidents (employees)	0	0	0

* New disclosure indicators for 2022: Age distribution of board members
 All affiliated companies are the same, based on Hansol Holdings

Economy

Category	Unit	2020	2021	2022
Income statement	Sales	1,509,871	1,834,224	2,457,953
	Gross revenue	300,684	361,179	572,466
	Selling, general, and administrative expenses	206,123	300,451	442,241
	Operating profit	94,561	60,728	130,226
	Financial income	10,165	4,090	12,561
	Financial costs	26,282	28,022	45,852
	Other income	13,530	16,429	48,250
	Other costs	19,784	24,479	49,357
	Net income before the deduction of corporate tax Expenses	72,189	28,746	95,828
	Statement of financial position			
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 debt	487,310	481,074	385,130
Capital	Equity interest of parent company shareholders	634,821	679,292	742,419
	Equity interest of non-controlling shareholders	41	41	125
Research and development status	Total R&D expenses for the current period	5,870	6,321	8,769
	R&D expenses as a ratio of sales	0.52	0.48	0.36
	Number of R&D personnel	33	49	55

(Based on standalone financial statements)

Environment

Category	Unit	2020	2021	2022	
Consumption of Raw materials	Raw materials consumed	Metric Ton/year	1,165,645	1,222,487	1,211,504
Consumption of materials that contain recycled materials	Amount of recycled materials (reused raw materials) consumed	Metric Ton/year	579,830	587,022	562,309
	Ratio of recycled materials (reused materials) consumed	%	49.7	48.0	46.4
Energy consumption	Total energy consumption	TJ	15,753	16,488	16,968
	Scope 1 energy consumption		2,358	2,347	2,176
	Scope 2 energy consumption		13,395	14,141	14,792
Water consumption (Based on local use)	Total water consumption		23,735,541	26,733,756	30,530,836
	Amount of water consumed		6,076,727	7,276,014	6,181,350
	Total water consumption	Metric Ton/year	280,915	199,624	253,947
	Amount of underground water consumed		9,098,761	9,923,582	10,866,778
	Amount of Surface water		11,585,858	9,334,536	13,228,761
	Amount of Recycled water		8,279,138	9,346,482	9,780,699
Water reuse	Water reuse ratio	%	35	35	32
	Direct emissions (Scope 1)	tCO ₂ e	341,087	296,456	303,070
	Indirect emissions (Scope 2)		587,461	626,738	725,892
Green-house gas emissions	SOx		2.3	0.8	15
	NOx		89.9	73.7	8,982
	HCl		5.4	5.4	520
	PM		8.4	14.7	184
Emission of air pollutants	BOD		9	8	27
	COD		32	31	74
	SS		13	11	95
Emission of water pollutants	Total waste disposal amount (treatment amount, domestic standard)	Metric Ton/year	250,523	235,754	346,280
	Industrial waste		235,648	220,428	323,015
	Designated waste		2,332	2,172	5,317
	Municipal waste		12,543	13,154	17,947
	Recycling amount		134,457	122,424	134,559
	Waste recycling rate	%	37.3	40.0	40.0

Category	Unit	2020	2021	2022	
Violation of environmental laws and regulations	Amount of fines	KRW million	3	2	0
Environmental expenditure and investment	Environmental protection investment	KRW million	5,600	6,000	1,488
Eco-friendly product sales	Eco-friendly product sales	KRW million	-	-	146,470
	Sales		-	-	207,801
	Ratio of eco-friendly sales	%	-	-	70.5

* Total energy consumption in 2021: Discrepancies in data may occur due to differences between the reporting date and the data collection period.
 * Water pollutant emissions: retrieved from Hansol Paper's ESG Report.
 * Emissions increase due to expansion with the joining of Environment Business headquarters.

Social

Category	Unit	2020	2021	2022		
No. of employees	Unit	Employees	1,186	1,202	1,657	
	Total		27	24	24	
	Female		0	0	0	
	Male		27	24	24	
	Total	Employees	1,168	1,186	1,575	
	Female		101	99	129	
	Male		1,067	1,077	1,464	
	Total		18	16	64	
	Female		6	4	14	
	Male		12	12	50	
Outsourced human resources	Employees	0	0	0		
Current employees (by work type)	Full-time	Employees	1,168	1,186	1,575	
	Part time		0	0	0	
Current employees (by work location)	Local	Employees	1,178	1,192	1,639	
	Overseas		8	10	18	
Employee diversity	No. of male employees	Employees	1,078	1,089	1,514	
	Ratio of male employees	%	90.4	90.6	91.4	
	No. of female employees	Employees	107	113	143	
	Ratio of female employees	%	9.6	9.4	8.6	
	No. of male executives	Employees	27	24	24	
	Ratio of male executives	%	2.2	1.9	1.7	
	No. of female executives	Employees	0	0	0	
	Ratio of female executives	%	0	0	0	
	No. of Male managers (manager level or higher)	Employees	180	197	288	
	Ratio of Male managers (manager level or higher)	%	15.1	16.3	17.3	
	No. of female managers (manager level or higher)	Employees	3	5	8	
	Ratio of female managers (manager level or higher)	%	0.3	0.4	0.4	
	No. of people with disabilities	Employees	30	34	43	
Ratio of employees with disabilities	%	2.5	2.8	2.9		
Recruitment of the socially disadvantaged	No. of senior employees (over 55 years old, excluding executives)	Employees	21	25	24	
	Ratio of senior employees	%	1.8	2.1	1.5	
	No. of foreign employees	Employees	162	176	254	
	Ratio of foreign employees	%	14	15	15	
	No. of high school graduates	Employees	763	702	917	
	Ratio of high school graduates	%	64	58	55	
	No. of national veterans	Employees	251	324	486	
	Ratio of national veterans	%	21	27	29	
	Male		73	114	211	
	Female		15	14	26	
	Recruitment of new employees	Under 30 years	Employees	51	89	124
		30-50 years		32	43	75
		Over 50 years		4	2	0

Category	Unit	2020	2021	2022	
Compensation of Employee	Average of male earnings	KRW million	75	73	90
	Average of female earnings		49	49	64
	the ratio of male to female's basic salary	%	65	67	72
	Average compensation of male executives	KRW million	-	-	338
	Average compensation of female executives		-	-	0
	the ratio of male executive to female executive's basic salary	%	-	-	0
	Average of regular male earnings	KRW million	-	-	61
	Average of regular female earnings		-	-	48
	the ratio of regular male to regular female's basic salary	%	-	-	78
	Average of contractual male earnings	KRW million	-	-	43
Average of contractual female earnings		-	-	26	
the ratio of contractual male to contractual female's basic salary	%	-	-	61	
Job security	Average tenure	Years	17.6	17.5	15.8
	Total number of job changers	Employees	74	111	182
	Voluntary retirement rate	%	3.4	6.0	8.7
Talent development	No. of beneficiaries of education	Employees	1,186	1,202	1,657
	Total budget for employee training	KRW million	542	986	1,226
	Training expenses per employee	KRW thousand	476	820	740
Industrial accidents	Average training hours per employee	Hours	61	53	51
	No. of industrial accidents occurred	Agendas	7	5	3
	Industrial accident rate	%	0.82	0.57	0.28
Mutual growth	No. of deaths	Employees	0	0	0
	No. of injured		7	5	3
	Duration of work-hour loss	Hours	878	2,096	9,336
Fair trade	Total number of suppliers	Number	1,001	1,027	1,226
	Total amount of purchases from suppliers	KRW million	173,727	193,016	246,200
	No. of fair trade law violations	Incidents	0	0	0
Information security breaches	Fines imposed	KRW million	0	0	0
	No. of customer data leak, theft, and loss	Incidents	0	0	0
	No. of complaints on discrimination in the workplace filed and handled	Incidents	0	0	0
Complaints on discrimination in the workplace	No. of penalized or sanctioned for regulatory violations		1	0	0
	No. of receiving warnings for regulatory violations	Incidents	0	1	0
	No. of violating internal self-regulatory guidelines within the company		0	0	0
Violations of Regulations and Self-Regulatory Guidelines	No. of labor losses in subcontractors	Incidents	-	-	0

Category	Unit	2020	2021	2022	
Parental leave	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	1	6	4
	Male		0	1	0
	Female		1	5	4
Human rights policies and procedures	Ratio of employees who have returned to work after parental leave	%	100	100	80
	No. of employees who have worked over 12 months after returning from parental leave	Total	10	6	4
	Male	Employees	2	1	0
	Female		8	5	4
CSR	Ratio of employees who have worked over 12 months after returning from parental leave	%	100	100	100
	Duration of education for human rights(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 (including donations)	In-kind donation	KRW million	307	336	328
	Duration of volunteer work	Hours	3,000	115	230
	Duration of volunteer work per employee	Employees	906	40	57
Direct and indirect beneficiaries of the support programs		Employees	491	360	700

Cases of Violation of Regulations and Voluntary Guidelines
 1. Sanction by Judicial Authority in 2020: 17 million KRW
 2. Sanction by Tax Authorities in 2021: 3,814 million KRW

Governance

Category	Unit	2020	2021	2022	
BOD structure	No. of BOD meetings	Meeting	13	8	11
	Preliminary deliberation	%	100	100	100
	BOD attendance rate	%	97.80	100	100
BOD Diversity	Male	Employees	7	8	8
	Female		0	0	0
	Ratio of female directors	%	0	0	0
	Under 30 years		-	-	0
	30-50 years	Employees	-	-	8
Anti-corruption in business facilities	Over 50 years		-	-	5
	No. of external directors		3	3	5
	Ratio of external directors	%	11	12.5	20.8
	Total number of business facilities	Number	6	6	6
	Number of business facilities assessed for corruption risk		6	6	6
Anti-corruption policy and procedures	Ratio of business facilities assessed for corruption risk	%	100	100	100
	No. of board members who have received ethics training	Employees	7	8	8
	Ratio of board members who have received ethics training	%	100	100	100
	No. of employees who have received ethics training	Employees	1,185	1,202	1,661
	Ratio of employees who have received ethics training	%	100	100	100
Anti-corruption violations	No. of board members who have signed the ethics pledge	Employees	7	8	8
	Ratio of board members who have signed the ethics pledge	%	100	100	100
	No. of employees who have signed the ethics pledge	Employees	-	1,139	1,657
	Ratio of employees who have signed the ethics pledge	%	-	94.7	98.9
No. of violations of anticorruption laws	Incidents (employees)	0	0	0	

Economy

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

(Based on standalone financial statements)

Environment

Category	Unit	2020	2021	2022
Consumption of Raw materials	Metric Ton/year	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 materials) consumed	98.9	99.6	92.6
Energy consumption	Total energy consumption	1,168	1,235	1,449
	Scope 1 energy consumption	380	450	352
	Scope 2 energy consumption	788	785	1,097
Water consumption (Based on local use)	Total water consumption	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
Water reuse ratio	%	15.6	13.9	2.7
Green-house gas emissions	Direct emissions (Scope 1)	68,949	38,275	75,061
	Indirect emissions (Scope 2)	75,695	37,554	35,059
Emission of air pollutants	SOx	4.07	3.9	2.16
	NOx	38.89	39.32	26.77
	PM	1.75	2.25	1.56
	PFC	0	0	245,736
Emission of 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 waste disposal amount (treatment amount, domestic standard)	21,749	18,902	11,665
	Industrial waste	19,563	16,772	9,935
	Designated waste	2,186	2,130	1,730
	Municipal waste	0	0	0
	Waste recycling rate	%	28.9	16.4
Environmental expenditure and investment	Environmental protection investment cost	647	543	932
	Environmental management cost	4,470	4,756	6,248

Social

Category	Unit	2020	2021	2022	
No. of employees	Employees	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	
Full-time	Total	4	11	13	
	Female	0	0	0	
	Male	4	11	13	
Non-regular worker	Female	0	0	0	
	Male	4	11	13	
Outsourced human resources	Employees	3	2	2	
Current employees (by employment type)	Full-time	131	142	143	
	Part time	0	0	0	
Current employees (by work location)	Local	131	142	143	
	Overseas	0	0	0	
No. of male employees	Employees	124	136	137	
Ratio of male employees	%	94	95	97	
No. of female employees	Employees	7	6	4	
Ratio of female employees	%	6	5	3	
No. of male executives	Employees	4	5	4	
Ratio of male executives	%	100	100	100	
No. of female executives	Employees	0	0	0	
Ratio of female executives	%	0	0	0	
No. of Male managers (manager level or higher)	Employees	-	-	26	
Ratio of Male managers (manager level or higher)	%	-	-	18	
No. of female managers (manager level or higher)	Employees	1	1	1	
Ratio of female managers (manager level or higher)	%	1	1	1	
Employee diversity	No. of people with disabilities	Employees	3	3	3
	Ratio of employees with disabilities	%	2	2	2
	No. of senior employees (over 55 years old, excluding executives)	Employees	16	25	30
	Ratio of senior employees	%	12	18	21
	No. of foreign employees	Employees	0	0	0
	Ratio of foreign employees	%	0	0	0
	No. of high school graduates	Employees	58	69	62
	Ratio of high school graduates	%	44	49	44
	No. of national veterans	Employees	0	0	0
	Ratio of national veterans	%	0	0	0
Recruitment of new employees	No. of employees (Under 30 years)	Employees	-	-	19
	Ratio of employees (Under 30 years)	%	-	-	13
	No. of employees (30-50 years)	Employees	-	-	75
	Ratio of employees (30-50 years)	%	-	-	53
	No. of employees (Over 50 years)	Employees	-	-	47
	Ratio of employees (Over 50 years)	%	-	-	33
	Male	Employees	8	11	15
	female	Employees	0	0	0
	Under 30 years	Employees	5	5	3
	30-50 years	Employees	3	4	8
Over 50 years	Employees	0	2	4	
Compensation of Employee	Average of male earnings	KRW million	54	55	70
	Average of female earnings	KRW million	44	47	56
	the ratio of male to female's basic salary	%	81	85	79

Category	Unit	2020	2021	2022	
Compensation of Employee	Average compensation of male executives	KRW million	-	-	363
	Average compensation of female executives	KRW million	-	-	0
	the ratio of male executive to female executive's basic salary	%	-	-	0
	Average of regular male earnings	KRW million	-	-	71
	Average of regular female earnings	KRW million	-	-	56
	the ratio of regular male to regular female's basic salary	%	-	-	79
	Average of contractual male earnings	KRW million	-	-	52
	Average of contractual female earnings	KRW million	-	-	0
	the ratio of contractual male to contractual female's basic salary	%	-	-	0
Job security	Average tenure	Years	11	11.5	9
	Total number of job changers	Employees	-	-	13
	Voluntary retirement rate	%	-	-	77
Talent development	Involuntary retirement rate	%	-	-	23
	No. of beneficiaries of education	Employees	130	143	141
	Total budget for employee training	KRW million	195	203	90
	Training expenses per employee	KRW thousand	1,500	1,420	638
Industrial accidents	Total hours for employee training	Hours	-	-	9,306
	Average training hours per employee	Hours	66	66	66
	No. of industrial accidents occurred	Agendas	4	1	0
Mutual growth	Industrial accident rate	%	3	0.7	0
	No. of deaths	Employees	0	1	0
	No. of injured	Employees	4	0	0
	Duration of work-hour loss	Hours	960	0	0
Fair trade	Supplier status	Number	1	1	181
	Total amount of purchases from suppliers	KRW million	937	740	80,267
Information security breaches	No. of fair trade law violations	Incidents	0	0	0
	Fines imposed	KRW million	0	0	0
Complaints on discrimination in the workplace	No. of customer data leak, theft, and loss	Incidents	0	0	0
	No. of complaints on discrimination in the workplace filed and handled	Incidents	0	0	0
Violations of Regulations and Self-Regulatory Guidelines	No. of penalized or sanctioned for regulatory violations	Incidents	0	0	0
	No. of receiving warnings for regulatory violations	Incidents	0	0	0
	No. of violating internal self-regulatory guidelines within the company	Incidents	0	0	0
Labor losses	No. of labor losses in subcontractors	Incidents	-	-	0
	Employees who have taken parental leave	Employees	0	0	3
	Male	Employees	0	0	1
Parental leave	Female	Employees	0	0	2
	Total	Employees	0	0	2
	Male	Employees	0	0	1
Anti-corruption violations	Female	Employees	0	0	1
	Ratio of employees who have returned to work after parental leave	%	-	-	67

Category	Unit	2020	2021	2022	
Parental leave	No. of employees who have worked over 12 months after returning from parental leave	Employees	0	0	2
	Male	Employees	0	0	1
	Female	Employees	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 human rights	Total hours (per employee)	0	0	0
	Duration of education for prevention of workplace bullying	Hours	262(1)	284(1)	286(2)
	Duration of education for sexual harassment prevention	Hours	262(1)	284(1)	286(2)
CSR	Investment in CSR (including donations)	KRW million	14	12	23
	Cash donation	KRW million	0	1	33
	In-kind donation	KRW million	0	1	33
Direct and indirect beneficiaries of the support programs	Duration of volunteer work	Hours	0	301	1,716
	Duration of volunteer work per employee	Hours	0	2	12
	Direct and indirect beneficiaries of the support programs	Employees	140	140	-

* Mutual growth: Disclosure of the total amount of purchases from all suppliers and business partners supplying to our company based on revised disclosure indicators in 2022.

Governance

Category	Unit	2020	2021	2022	
BOD structure	No. of BOD meetings	Meeting	-	-	7
	No. of agenda items	Agenda	-	-	16
	Preliminary deliberation	%	-	-	100
	Decisions on revised agenda	%	-	-	0
	Report agenda	Agenda	-	-	6
	BOD attendance rate	%	-	-	95
BOD Diversity	Non-executive director attendance rate	%	-	-	57
	Male	Employees	-	-	5
	Female	Employees	-	-	0
	Ratio of female directors	%	-	-	0
	Under 30 years	Employees	-	-	0
Anti-corruption in business facilities	30-50 years	Employees	-	-	0
	Over 50 years	Employees	-	-	5
	No. of external directors	Employees	-	-	1
	Ratio of external directors	%	-	-	20
	Total number of business facilities	Number	-	-	1
	Number of business facilities assessed for corruption risk	Number	-	-	1
Anticorruption policy and procedures	Ratio of business facilities assessed for corruption risk	%	-	-	100
	No. of board members who have received ethics training	Employees	-	-	5
	Ratio of board members who have received ethics training	%	-	-	100
	No. of employees who have received ethics training	Employees	131	142	143
	Ratio of employees who have received ethics training	%	100	100	100
Anti-corruption violations	No. of board members who have signed the ethics pledge	Employees	-	-	5
	Ratio of board members who have signed the ethics pledge	%	-	-	100
	No. of employees who have signed the ethics pledge	Employees	106	131	107
	Ratio of employees who have signed the ethics pledge	%	80	92	78
No. of violations of anticorruption laws	Incidents (employees)	0	0	0	

* Ratio of employees who have signed the ethics pledge in 2022: Due to the water shortage issue in the region and the difficulties in normal work for production staff, there has been a decrease in the ratio of employees who have signed the ethics pledge.

Hansol PNS_Paper Distribution Division

Economy_Including Hansol PNS

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

(Based on standalone financial statements)

Environment

Category	Unit	2020	2021	2022		
Consumption of Raw materials	Raw materials consumed	Metric Ton/year	240,900	229,400	225,100	
	Total energy consumption		7.3	6.6	6.8	
	Scope 1 energy consumption	TJ	1.9	1.8	1.8	
Energy consumption	Scope 2 energy consumption		5.3	4.7	5.0	
	Greenhouse gas emissions	Direct emissions (Scope 1)	tCO ₂ eq	126	123	162
		Indirect emissions (Scope 2)	255	225	239	
Waste	Total waste disposal amount		1,202	1,220	1,490	
	Industrial waste	Metric Ton/year	1,202	1,220	1,490	
	Designated waste		-	-	0	
	Municipal waste		-	-	0	
	Waste recycling rate	%	99	100	100	
Environmental expenditure and investment	Environmental investment cost	KRW million	3	4.5	3.7	
	Environmental management cost		-	5		
Eco-friendly product sales	Eco-friendly product sales	KRW million	-	-	298	
	Sales		-	-	260,802	
	Ratio of eco-friendly sales	%	-	-	0.11	

Social

Category	Unit	2020	2021	2022	
Current employees (by employment type)	No. of employees	Employees	79	86	95
	Executives	Total	1	2	5
		Female	0	0	0
		Male	1	2	5
		Total	76	85	88
		Female	16	20	20
	Full-time	Male	60	65	68
		Total	2	1	2
		Female	1	0	1
		Male	1	1	1
Non-regular worker		Employees	0	0	0
Outsourced human resources	Full-time	Employees	79	86	95
	Part time	0	0	0	
Current employees (by work location)	Local	Employees	79	86	95
	Overseas	0	0	0	

Category	Unit	2020	2021	2022		
Employee diversity	No. of male employees	Employees	62	68	74	
	Ratio of male employees	%	78	77	78	
	No. of female employees	Employees	17	20	21	
	Ratio of female employees	%	22	23	22	
	No. of male executives	Employees	1	2	5	
	Ratio of male executives	%	1	2	5	
	No. of female executives	Employees	0	0	0	
	Ratio of female executives	%	0	0	0	
	No. of Male managers (manager level or higher)	Employees	-	-	28	
	Ratio of Male managers (manager level or higher)	%	-	-	29	
	No. of female managers (manager level or higher)	Employees	0	0	2	
	Ratio of female managers (manager level or higher)	%	0	0	2	
	Recruitment of the socially disadvantaged	No. of people with disabilities	Employees	1	1	1
		Ratio of employees with disabilities	%	1	1	1
		No. of senior employees (over 55 years old, excluding executives)	Employees	2	1	8
		Ratio of senior employees	%	3	1	8
		No. of foreign employees	Employees	0	0	0
		Ratio of foreign employees	%	0	0	0
		No. of high school graduates	Employees	21	24	31
		Ratio of high school graduates	%	16	16	18
No. of national veterans		Employees	0	0	0	
Ratio of national veterans		%	0	0	0	
Ratio of employees	No. of employees (Under 30 years)	Employees	-	-	17	
	Ratio of employees (Under 30 years)	%	-	-	18	
	No. of employees (30-50 years)	Employees	-	-	60	
	Ratio of employees (30-50 years)	%	-	-	63	
	No. of employees (Over 50 years)	Employees	-	-	18	
	Ratio of employees (Over 50 years)	%	-	-	19	
	Recruitment of new employees	Male	6	19	12	
		female	4	3	2	
	Gender-based base salary and compensation	Under 30 years	Employees	3	7	7
		30-50 years	7	15	7	
Over 50 years		0	0	0		
Average of male earnings		KRW million	48	65	73	
Average of female earnings		32	46	44		
the ratio of male to female's basic salary		%	66	70	60	
Average compensation of male executives		KRW million	-	-	190	
Average compensation of female executives		-	-	0		
the ratio of male executive to female executive's basic salary		%	-	-	100	
Average of regular male earnings		KRW million	-	-	66	
Average of regular female earnings	-	-	47			
the ratio of regular male to regular female's basic salary	%	-	-	71		

Category	Unit	2020	2021	2022	
Job security	Average tenure	Years	8.1	7.2	6
	Total number of job changers	Employees	3	5	10
	Voluntary retirement rate	%	-	-	100
	Involuntary retirement rate	%	-	-	0
	No. of beneficiaries of education	Employees	79	86	95
Talent development	Total budget for employee training	KRW million	42	35	40
	Training expenses per employee	KRW thousand	532	407	422
	Total hours for employee training	Hours	-	-	1,235
	Average training hours per employee	Hours	11	11	13
	No. of industrial accidents occurred	Agendas	0	1	0
Industrial accidents	Industrial accident rate	%	0	1.2	0
	No. of deaths	Employees	0	0	0
	No. of injured	0	1	0	
	Duration of work-hour loss	Hours	0	9	0
	Mutual growth	Supplier status	Number	-	-
Total number of suppliers			-	-	-
Total amount of purchases from suppliers		KRW million	-	-	-
Fair trade	No. of fair trade law violations	Incidents	0	0	0
	Fines imposed	KRW million	0	0	0
Information security breaches	No. of customer data leak, theft, and loss	Incidents	0	0	0
	No. of complaints on discrimination in the workplace	Incidents	0	0	0
Complaints on discrimination in the workplace	No. of complaints on discrimination in the workplace filed and handled	0	0	0	
	No. of penalized or sanctioned for regulatory violations	0	0	0	
Violations of Regulations and Self-Regulatory Guidelines	No. of receiving warnings for regulatory violations	Incidents	0	0	0
	No. of violating internal self-regulatory guidelines within the company	0	0	0	
Labor losses	No. of labor losses in subcontractors	Incidents	-	-	0
	Employees who have taken parental leave	Total	2	3	2
Parental leave	Male	0	0	0	
	Female	2	3	2	
	No. of employees who have returned to work after parental leave	Total	0	1	1
	Male	0	0	0	
	Female	0	1	1	
	Ratio of employees who have returned to work after parental leave	%	0	53	33
	No. of employees who have worked over 12 months after returning from parental leave	Total	0	0	1
	Male	0	0	0	
	Female	0	0	1	
	Ratio of employees who have worked over 12 months after returning from parental leave	%	0	0	50
Human rights policies and procedures	Duration of education for human rights	Hours	237	252	348
	Number of participants in human rights education	Employees	79	84	89
	Percentage of participants in human rights education	%	100	100	100
	Duration of education for prevention of workplace bullying	Total	79(1)	86(1)	89
	Duration of education for sexual harassment prevention	Hours (per employee)	79(1)	86(1)	89
CSR	Other education programs (such as disability rights education)	79(1)	86(1)	89	
	Investment in CSR (including donations)	Cash donation	KRW million	-	-
	In-kind donation	-	-	-	

Governance

Category	Unit	2020	2021	2022	
BOD Structure*	No. of BOD meetings	Meeting	-	-	13
	No. of agenda items	Agenda	-	-	24
	BOD attendance rate	%	-	-	95
BOD Diversity*	Male	Employees	-	-	6
	Female	-	-	0	
	Ratio of female directors	%	-	-	0
	Under 30 years	-	-	-	
	30-50 years	Employees	-	-	2
Anti-corruption in business facilities	Over 50 years	-	-	4	
	No. of external directors	-	-	2	
	Ratio of external directors	%	-	-	29
	Total number of business facilities assessed for corruption risk	Number	-	-	4
	Number of business facilities assessed for corruption risk	-	-	0	
Anti-corruption policy and procedures	Ratio of business facilities assessed for corruption risk	%	-	-	0
	No. of board members who have received ethics training*	Employees	-	-	7
	Ratio of board members who have received ethics training*	%	-	-	100
	No. of employees who have received ethics training	Employees	79	86	95
	Ratio of employees who have received ethics training	%	100	100	100
Anti-corruption violations	No. of board members who have signed the ethics pledge*	Employees	-	-	7
	Ratio of board members who have signed the ethics pledge*	%	-	-	100
	No. of employees who have signed the ethics pledge	Employees	79	86	95
	Ratio of employees who have signed the ethics pledge	%	100	100	100
	No. of violations of anticorruption laws	Incidents (employees)	0	0	0

* Including Hansol PNS numerical value

Social

Category	Unit	2020	2021	2022	
No. of employees	Unit	134	146	176	
Current employees (by employment type)	Executives	Total	1	2	1
		Female	0	0	0
		Male	1	2	1
	Full-time	Total	133	143	175
		Female	37	39	47
		Male	96	104	128
	Non-regular worker	Total	1	1	0
		Female	1	1	0
		Male	0	0	0
	Outsourced human resources	Employees	0	0	0
Current employees (by work type)	Full-time	134	146	176	
	Part time	0	0	0	
Current employees (by work location)	Local	132	144	173	
	Overseas	2	2	3	
No. of male employees	Employees	97	106	129	
Ratio of male employees	%	72	73	73	
No. of female employees	Employees	38	40	47	
Ratio of female employees	%	28	27	27	
No. of male executives	Employees	1	2	1	
Ratio of male executives	%	1	1	1	
No. of female executives	Employees	0	0	0	
Ratio of female executives	%	0	0	0	
No. of Male managers (manager level or higher)	Employees	-	-	41	
Ratio of Male managers (manager level or higher)	%	-	-	23	
No. of female managers (manager level or higher)	Employees	16	16	5	
Ratio of female managers (manager level or higher)	%	12	11	3	
Employee diversity	No. of people with disabilities	Employees	0	0	0
		Ratio of employees with disabilities	%	0	0
	No. of senior employees (over 55 years old, excluding executives)	Employees	1	1	2
		Ratio of senior employees	%	1	1
	No. of foreign employees	Employees	1	1	0
		Ratio of foreign employees	%	1	1
	No. of high school graduates	Employees	3	2	3
		Ratio of high school graduates	%	3	2
	No. of national veterans	Employees	0	0	0
		Ratio of national veterans	%	0	0
No. of employees (Under 30 years)	Employees	-	-	30	
	Ratio of employees (Under 30 years)	%	-	-	17
No. of employees (30-50 years)	Employees	-	-	124	
	Ratio of employees (30-50 years)	%	-	-	70
No. of employees (Over 50 years)	Employees	-	-	22	
	Ratio of employees (Over 50 years)	%	-	-	13
Recruitment of new employees	Male		11	26	42
		female	3	10	17
	By age	Under 30 years	4	6	12
		30-50 years	10	14	43
Over 50 years	0	0	4		

Category	Unit	2020	2021	2022	
Compensation of Employee	Average of male earnings	KRW million	61	60	62
		Average of female earnings	46	47	48
	the ratio of male to female's basic salary	%	75	78	77
		Average compensation of male executives	KRW million	-	-
	Average compensation of female executives	KRW million	-	-	0
		the ratio of male executive to female executive's basic salary	%	-	-
	Average of regular male earnings	KRW million	-	-	61
		Average of regular female earnings	KRW million	-	-
	the ratio of regular male to regular female's basic salary	%	-	-	79
		Average of contractual male earnings	KRW million	-	-
Average of contractual female earnings	KRW million	-	-	0	
	the ratio of contractual male to contractual female's basic salary	%	-	-	0
Job security	Average tenure	Years	15.3	7	6
	Total number of job changers	Employees	14	7	25
	Voluntary retirement rate	%	-	-	100
Talent development	Involuntary retirement rate	%	-	-	0
	No. of beneficiaries of education	Employees	133	143	171
	Total budget for employee training	KRW million	148	128	170
Industrial accidents	Training expenses per employee	KRW thousand	716	776	994
	Total hours for employee training	Hours	-	-	7,592
	Average training hours per employee	Hours	82	44	43.1
Mutual growth	No. of industrial accidents occurred	Agendas	0	0	0
	Industrial accident rate	%	0	0	0
	No. of deaths	Employees	0	0	0
Fair trade	No. of injured	Employees	0	0	0
	Duration of work-hour loss	Hours	0	0	0
	Total number of suppliers	Number	46	35	97
Supplier status	Total amount of purchases from suppliers	KRW million	5,200	4,427	12,900
	No. of fair trade law violations	Incidents	0	0	0
Information security breaches	Fines imposed	KRW million	0	0	0
	No. of customer data leak, theft, and loss	Incidents	0	0	0
Complaints on discrimination in the workplace	No. of complaints on discrimination in the workplace filed and handled	Incidents	0	0	0
	No. of penalized or sanctioned for regulatory violations	Incidents	0	0	0
Violations of Regulations and Self-Regulatory Guidelines	No. of receiving warnings for regulatory violations	Incidents	0	0	0
	No. of violating internal self-regulatory guidelines within the company	Incidents	0	0	0
Labor losses	No. of labor losses in subcontractors	Incidents	-	-	0

Category	Unit	2020	2021	2022		
Parental leave	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	Female	1	1	2	
		Total	Employees	2	0	0
	Ratio of employees who have returned to work after parental leave	Male	0	0	0	
		Female	2	0	0	
	No. of employees who have worked over 12 months after returning from parental leave	Total	%	100	0	0
		Male	Employees	2	0	0
	Ratio of employees who have worked over 12 months after returning from parental leave	Female	0	0	0	
		Total	%	100	0	0
Human rights policies and procedures	Duration of education for human rights	Hours	402	429	507	
	Number of participants in human rights education	Employees	134	143	169	
	Percentage of participants in human rights education	%	100	100	96	
	Duration of education for prevention of workplace bullying	Total hours (per employee)	134(1)	145(1)	169(1)	
CSR	Duration of education for sexual harassment prevention	134(1)	145(1)	169(1)		
	Other education programs (such as disability rights education)	134(1)	145(1)	169(1)		
Investment in CSR (including donations)	Cash donation	KRW million	8.8	6.2	-	
	In-kind donation				-	

Governance

Category	Unit	2020	2021	2022	
BOD Structure*	No. of BOD meetings	회	-	-	13
	No. of agenda items	건	-	-	24
	BOD attendance rate	%	-	-	95
BOD Diversity*	Male	Employees	-	-	6
	Female	0	0	0	
	Ratio of female directors	%	-	-	0
Anti-corruption in business facilities	Under 30 years	Employees	-	-	-
	30-50 years	2	2	4	
	Over 50 years	2	2	2	
Anti-corruption policy and procedures	No. of external directors	%	-	-	28.57
	Ratio of external directors	1	1	1	
	Total number of business facilities assessed for corruption risk	Number	-	-	1
Anti-corruption violations	Ratio of business facilities assessed for corruption risk	%	-	-	100
	No. of board members who have received ethics training*	Employees	-	-	7
	Ratio of board members who have received ethics training*	%	-	-	100
Anti-corruption violations	No. of employees who have received ethics training	Employees	134	145	176
	Ratio of employees who have received ethics training	%	100	100	100
	No. of board members who have signed the ethics pledge*	Employees	-	-	7
Anti-corruption violations	Ratio of board members who have signed the ethics pledge*	%	-	-	100
	No. of employees who have signed the ethics pledge	Employees	134	145	176
	Ratio of employees who have signed the ethics pledge	%	100	100	100
No. of violations of anticorruption laws	Incidents (employees)	0	0	0	

* Including Hansol PNS numerical value

Economy

Category	Unit	2020	2021	2022
Income statement	Sales	253,213	263,249	283,414
	Gross revenue	35,776	46,174	48,665
	Selling, general, and administrative expenses	33,037	37,555	45,950
	Operating profit	2,739	8,619	2,714
	Financial income	2,100	3,470	1,240
	Financial costs	4,105	2,994	4,883
	Other income	3,572	1,518	3,787
	Other costs	3,655	2,706	9,016
	Net income before the deduction of corporate tax Expenses	650	7,905	(6,157)
	Assets		78,680	98,188
Current assets		216,309	216,472	211,195
Non-current assets		76,068	101,751	118,712
Liabilities		64,380	53,062	47,361
Current liabilities		154,542	159,847	153,347
Non-current debt		0	0	74
Equity interest of parent company shareholders				
Equity interest of non-controlling shareholders				
Research and development status				
Total R&D expenses for the current period	KRW million	160	482	160
R&D expenses as a ratio of sales	%	0.06	0.18	0.06
Number of R&D personnel	Employees	0	0	0

(Based on standalone financial statements)

Environment

Category	Unit	2020	2021	2022
Consumption of Raw materials	Metric Ton/year	177,118	185,605	160,316
Consumption of materials that contain recycled materials	Amount of recycled raw materials (reused raw materials) consumed	84,723	96,985	87,323
	Ratio of recycled materials (reused materials) consumed	48	52	54
	%			
Energy consumption	Total energy consumption	2,862	2,974	1,987
	Scope 1 energy consumption	-	-	965
	Scope 2 energy consumption	-	-	1,022
Water consumption (Based on local use)	Total water consumption	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	Amount of water reused	63,714	60,462	13,472
	Water reuse ratio	10.4	10.2	2.2
	%			
Green-house gas emissions	Direct emissions (Scope 1)	13,621	12,905	9,316
	Indirect emissions (Scope 2)	48,180	48,865	46,088
	CO ₂ eq			
Emission of air pollutants	SOx	587	586	750
	NOx	80,846	72,073	72,750
	HAP	2,863	1,896	2,641
	PM	21,786	12,378	33,320
Emission of water pollutants	BOD	11	14	9
	COD	49	38	28
	SS	7	6	2
	ppm			
Waste	Total waste disposal amount (treatment amount, domestic standard)	28,414	31,863	28,812
	Total waste disposal amount	25,983	29,291	28,251
	Industrial waste	2,430	2,570	561
	Designated waste	20,770	25,299	21,792
	Recycling amount	73	79	76
Waste recycling rate	%			

Category	Unit	2020	2021	2022	
Violation of environmental laws and regulations	Amount of fines	KRW million	0	3	5
Environmental expenditure and investment	Environmental investment cost	KRW million	2.5	48.1	1,866
	Environmental protection investment	KRW million	1,755	2,132	1,887
	Environmental management cost	KRW million	-	-	84,155
Eco-friendly product sales	Eco-friendly product sales	KRW million	-	-	283,414
	Sales	KRW million	-	-	283,414
	Ratio of eco-friendly sales	%	-	-	29.7

* Energy consumption: Since greenhouse gas emissions and steam are measured as energy conversions, the distinction between Scope 1 and Scope 2 is not applicable.

Social

Category	Unit	2020	2021	2022	
No. of employees	Unit	Employees	267	305	303
Executives	Total	Employees	13	13	7
	Female	Employees	0	0	0
	Male	Employees	13	13	7
Full-time	Total	Employees	242	273	289
	Female	Employees	20	31	30
	Male	Employees	222	242	259
Non-regular worker	Total	Employees	12	19	7
	Female	Employees	7	14	6
	Male	Employees	5	5	1
Outsourced human resources	Employees	0	0	0	
Current employees (by work type)	Full-time	Employees	267	305	303
	Part time	Employees	0	0	0
Current employees (by work location)	Local	Employees	263	301	298
	Overseas	Employees	4	4	5
	Employees	Employees	240	260	267
Ratio of male employees	%	89	85	88	
No. of female employees	Employees	27	45	36	
Ratio of female employees	%	11	15	12	
No. of male executives	Employees	13	13	7	
Ratio of male executives	%	5	4	2	
No. of female executives	Employees	0	0	0	
Ratio of female executives	%	0	0	0	
No. of Male managers (manager level or higher)	Employees	-	-	46	
Ratio of Male managers (manager level or higher)	%	-	-	15	
No. of female managers (manager level or higher)	Employees	2	3	1	
Ratio of female managers (manager level or higher)	%	2	4	0.3	
Employee diversity	No. of people with disabilities	Employees	6	6	6
	Ratio of employees with disabilities	%	2	2	2
Recruitment of the socially disadvantaged	No. of senior employees (over 55 years old, excluding executives)	Employees	9	7	13
	Ratio of senior employees	%	3	2	4
	No. of foreign employees	Employees	0	0	0
Ratio of foreign employees	%	0	0	0.0	
No. of high school graduates	Employees	103	109	122	
Ratio of high school graduates	%	39	36	40	
No. of national veterans	Employees	1	2	1	
Ratio of national veterans	%	0.4	0.7	0.3	

Category	Unit	2020	2021	2022	
Employee diversity	No. of employees (Under 30 years)	Employees	-	-	78
	Ratio of employees (Under 30 years)	%	-	-	26
	No. of employees (30-50 years)	Employees	-	-	158
	Ratio of employees (30-50 years)	%	-	-	52
	No. of employees (Over 50 years)	Employees	-	-	54
	Ratio of employees (Over 50 years)	%	-	-	18
Recruitment of new employees	Male	Employees	21	37	31
	female	Employees	10	21	2
	By age	Employees	21	28	15
Compensation of Employee	Under 30 years	Employees	10	30	17
	30-50 years	Employees	0	0	1
	Over 50 years	Employees	6	33	47
	Average of male earnings	KRW million	25	25	35
	Average of female earnings	KRW million	36	37	194
	the ratio of male to female's basic salary	%	59	66.8	75
	Average compensation of male executives	KRW million	59	67	44
	Average of regular male earnings	KRW million	36	37	38
	Average of regular female earnings	KRW million	36	37	38
	the ratio of regular male to regular female's basic salary	%	-	-	86
Job security	Average tenure	Years	9.5	8	10.3
	Total number of job changers	Employees	-	-	42
	Voluntary retirement rate	%	-	-	100
Talent development	Involuntary retirement rate	%	-	-	0
	No. of beneficiaries of education	Employees	267	305	296
	Total budget for employee training	KRW million	250	210	29.6
Industrial accidents	Training expenses per employee	KRW thousand	936	688	100
	Total hours for employee training	Hours	-	-	6,216
	Average training hours per employee	Hours	29	22	21
Mutual growth	No. of industrial accidents occurred	Incidents	0	2	3
	Industrial accident rate	%	0	0.65	0.96
	No. of deaths	Employees	0	0	0
Fair trade	No. of injured	Employees	0	0	3
	Duration of work-hour loss	Hours	0	224	3,400
	Total number of suppliers	Number	4	5	6
Information security breaches	Total amount of purchases from suppliers	KRW million	6,244	6,606	7,498
	No. of fair trade law violations	Incidents	0	0	0
	Fines imposed	KRW million	0	0	0
Complaints on discrimination in the workplace	No. of customer data leak, theft, and loss	Incidents	0	0	0
	No. of complaints on discrimination in the workplace filed and handled	Incidents	0	0	0

Category	Unit	2020	2021	2022	
Violations of Regulations and Self-Regulatory Guidelines	No. of penalized or sanctioned for regulatory violations	Incidents	0	0	0
	No. of receiving warnings for regulatory violations	Incidents	0	0	0
	No. of violating internal self-regulatory guidelines within the company	Incidents	0	0	0
Labor losses	No. of labor losses in subcontractors	Incidents	-	-	0
	Employees who have taken parental leave	Total	3	4	2
		Male	0	1	0
Parental leave	Female	2	3	2	
	No. of employees who have returned to work after parental leave	Employees	1	2	1
	Male	0	1	1	
Human rights policies and procedures	Female	1	1	0	
	Ratio of employees who have returned to work after parental leave	%	0	66	25
	No. of employees who have worked over 12 months after returning from parental leave	Employees	0	1	1
CSR (including donations)	Male	0	0	1	
	Female	0	1	0	
	Ratio of employees who have worked over 12 months after returning from parental leave	%	0	100	50
Investment in CSR (including donations)	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	Total hours (per employee)	267(1)	305(1)	303(1)
	Other education programs (such as disability rights education)	Total hours (per employee)	267(1)	305(1)	303(1)
Cash donation	Investment in CSR (including donations)	KRW million	-	-	33

Governance

Category	Unit	2020	2021	2022	
BOD Structure	No. of BOD meetings	Meeting	-	-	23
	No. of agenda items	Agenda	-	-	32
	Preliminary deliberation	%	-	-	100
	Decisions on revised agenda	Agenda	-	-	0
	Report agenda	Agenda	-	-	9
BOD Diversity	BOD attendance rate	%	-	-	100
	Non-executive director attendance rate	%	-	-	100
	Male	Employees	-	-	7
	Female	Employees	-	-	0
	Ratio of female directors	%	-	-	0
Anticorruption policy and procedures	Under 30 years	Employees	-	-	0
	30-50 years	Employees	-	-	0
	Over 50 years	Employees	-	-	7
	No. of external directors	Employees	-	-	2
	Ratio of external directors	%	-	-	29
Fair trade	No. of board members who have received ethics training	Employees	-	-	7
	Ratio of board members who have received ethics training	%	-	-	100
	No. of employees who have received ethics training	Employees	267	305	303
	Ratio of employees who have received ethics training	%	100	100	100
	No. of board members who have signed the ethics pledge	Employees	-	-	7
Anticorruption violations	Ratio of board members who have signed the ethics pledge	%	-	-	100
	No. of employees who have signed the ethics pledge	Employees	267	305	303
	Ratio of employees who have signed the ethics pledge	%	100	100	100
	No. of violations of anticorruption laws	Incidents (employees)	0	0	0

Economy

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

(Based on standalone financial statements)

Social

Category	Unit	2020	2021	2022	
No. of employees	Unit	359	382	323	
Current employees (by employment type)	Total	6	5	4	
	Executives	0	0	0	
	Female	6	5	4	
	Male	330	355	292	
	Full-time	54	64	79	
	Female	276	291	213	
	Male	23	22	31	
	Non-regular worker	14	15	20	
	Female	9	7	11	
	Male	3	3	3	
Outsourced human resources	Employees	3	3	3	
Current employees (by work type)	Full-time	359	382	323	
	Part time	0	0	0	
Current employees (by work location)	Local	347	369	308	
	Overseas	12	13	15	
Employee diversity	No. of male employees	276	291	224	
	Ratio of male employees	%	81	79	69
	No. of female employees	Employees	54	64	99
	Ratio of female employees	%	19	21	31
	No. of male executives	Employees	6	5	4
	Ratio of male executives	%	2	1	1
	No. of female executives	Employees	0	0	0
	Ratio of female executives	%	0	0	0
	No. of Male managers (manager level or higher)	Employees	-	-	104
	Ratio of Male managers (manager level or higher)	%	-	-	35
	No. of female managers (manager level or higher)	Employees	15	14	15
	Ratio of female managers (manager level or higher)	%	4	4	5

Category	Unit	2020	2021	2022		
Employee diversity	No. of people with disabilities	Employees	5	5	1	
	Ratio of employees with disabilities	%	1	1	0.3	
	No. of senior employees (over 55 years old, excluding executives)	Employees	17	19	11	
	Ratio of senior employees	%	5	5	4	
	No. of foreign employees	Employees	0	0	0	
	Ratio of foreign employees	%	0	0	0	
	No. of high school graduates	Employees	93	80	40	
	Ratio of high school graduates	%	26	21	14	
	No. of national veterans	Employees	0	0	2	
	Ratio of national veterans	%	0	0	1	
	Recruitment of the socially disadvantaged	No. of employees (Under 30 years)	Employees	-	-	67
Ratio of employees (Under 30 years)		%	-	-	23	
No. of employees (30-50 years)		Employees	-	-	195	
Ratio of employees (30-50 years)		%	-	-	66	
No. of employees (Over 50 years)		Employees	-	-	34	
Ratio of employees (Over 50 years)		%	-	-	11	
Ratio of employees		Male		25	38	33
		female		7	12	6
		Total		18	23	14
Recruitment of new employees		By age	Employees	11	26	25
		Under 30 years		3	1	0
	30-50 years		-	-	69	
	Over 50 years		-	-	53	
Compensation of Employee	Average of male earnings	KRW million	-	-	69	
	Average of female earnings	KRW million	-	-	53	
	the ratio of male to female's basic salary	%	-	-	77	
	Average compensation of male executives	KRW million	-	-	1,153	
	Average compensation of female executives	KRW million	-	-	0	
	the ratio of male executive to female executive's basic salary	%	-	-	0	
	Average of regular male earnings	KRW million	-	-	63	
	Average of regular female earnings	KRW million	-	-	46	
	the ratio of regular male to regular female's basic salary	%	-	-	73	
	Average of contractual male earnings	KRW million	-	-	22	
	Average of contractual female earnings	KRW million	-	-	31	
the ratio of contractual male to contractual female's basic salary	%	-	-	139		
Job security	Average tenure	Years	8.6	8.6	7	
	Total number of job changers	Employees	28	31	33	
	Voluntary retirement rate	%	-	-	100	
	Involuntary retirement rate	%	-	-	0	

Category	Unit	2020	2021	2022	
Talent development	No. of beneficiaries of education	Employees	337	358	296
	Total budget for employee training	KRW million	90	200	179
	Training expenses per employee	KRW thousand	268	558	604
	Average training hours per employee	Hours	49	75	30
Industrial accidents	No. of industrial accidents occurred	Agendas	0	0	0
	Industrial accident rate	%	0	0	0
	No. of deaths	Employees	0	0	0
	No. of injured	Employees	0	0	0
Mutual growth	Duration of work-hour loss	Hours	0	0	0
	Supplier status	Number	942	997	798
	Total number of suppliers		278,950	431,781	605,023
	Total amount of purchases from suppliers	KRW million	0	0	0
Fair trade	Support for Small and Medium Enterprises	KRW million	0	0	0
	Total purchase amount from small and medium enterprises		0	0	0
Information security breaches	No. of fair trade law violations	Incidents	0	0	0
	Fines imposed	KRW million	0	0	0
Complaints on discrimination in the workplace	No. of customer data leak, theft, and loss	Incidents	0	0	0
	No. of complaints on discrimination in the workplace filed and handled	Incidents	0	0	0
Violations of Regulations and Self-Regulatory Guidelines	No. of penalized or sanctioned for regulatory violations		0	0	0
	No. of receiving warnings for regulatory violations	Incidents	0	0	0
Labor losses	No. of violating internal self-regulatory guidelines within the company		0	0	0
	No. of labor losses in subcontractors	Incidents	-	-	0
Parental leave	Employees who have returned to work after parental leave	Employees	1	7	41
	Total		0	3	4
	Male		1	4	37
	Female		1	2	43
	Male		0	0	1
	Female		1	2	33
Human rights policies and procedures	Ratio of employees who have returned to work after parental leave	%	17	25	80
	No. of employees who have worked over 12 months after returning from parental leave	Employees	1	0	27
	Total		0	0	1
	Male		1	0	26
Duration of education for human rights	Female		1	0	62
	Ratio of employees who have worked over 12 months after returning from parental leave	%	14	0	62
	Duration of education for human rights	Hours	1,348	1,432	1,116
	Number of participants in human rights education	Employees	337	358	279
Other education programs (such as disability rights education)	Percentage of participants in human rights education	%	93	93	93
	Duration of education for prevention of workplace bullying	Total hours (per employee)	0	0	0
	Duration of education for sexual harassment prevention		674(2)	716(2)	558(2)
	Other education programs (such as disability rights education)		674(2)	716(2)	558(2)

Governance

Category	Unit	2020	2021	2022	
BOD Structure	No. of BOD meetings	Meeting	-	-	23
	No. of agenda items		-	-	41
	Report agenda	Agenda	-	-	0
	BOD attendance rate		-	-	94
	Non-executive director attendance rate	%	-	-	87
BOD Diversity	Male	Employees	-	-	7
	Female		-	-	0
	Ratio of female directors	%	-	-	0
	Under 30 years		-	-	0
	30-50 years	Employees	-	-	0
	Over 50 years		-	-	7
	No. of external directors		-	-	2
Ratio of external directors	%	-	-	29	
Anticorruption policy and procedures	No. of board members who have received ethics training	Employees	-	-	7
	Ratio of board members who have received ethics training	%	-	-	100
	No. of employees who have received ethics training	Employees	362	385	363
	Ratio of employees who have received ethics training	%	100	100	100
	No. of board members who have signed the ethics pledge	Employees	-	-	7
Anticorruption violations	Ratio of board members who have signed the ethics pledge	%	-	-	100
	No. of employees who have signed the ethics pledge	Employees	362	385	363
	Ratio of employees who have signed the ethics pledge	%	100	100	100
	No. of violations of anticorruption laws	Incidents (employees)	0	0	0

* Total number of employees who signed the ethical pledge in 2022: There may be variations in the number of employees who signed the ethical pledge due to new hires and departures.

Economy

Category	Unit	2020	2021	2022
Income statement	Sales	1,194,892	1,490,620	1,647,391
	Gross revenue	150,987	103,451	183,094
	Selling, general, and administrative expenses	118,526	107,707	127,989
	Operating profit	32,460	(4,255)	55,104
	Financial income	28,970	24,449	60,831
	Financial costs	29,996	28,594	72,822
	Other income	1,571	2,810	2,683
	Other costs	7,649	979	9,448
	Net income before the deduction of corporate tax Expenses	25,357	(6,570)	36,348
	Statement of financial position			
Assets	Current assets	311,128	467,995	509,415
	Non-current assets	280,264	320,674	562,506
	Liabilities			
	Current liabilities	234,267	333,270	424,708
	Non-current debt	78,022	177,123	207,186
	Equity interest of parent company shareholders	278,804	277,992	306,289
Capital	Equity interest of non-controlling shareholders	298	284	133,736
	Research and development status			
Total R&D expenses for the current period	KRW million	19,721	18,199	22,275
R&D expenses as a ratio of sales	%	1.65	1.22	1.35
Number of R&D personnel	Employees	131	138	153

(Based on standalone financial statements)

Environment

Category	Unit	2020	2021	2022	
Consumption of Raw materials					
Raw materials consumed	Metric Ton/year	22	75	30.3	
Energy consumption	Total energy consumption	236	241	225.02	
	Scope 1 energy consumption	TJ	15.4	14.3	13.97
	Scope 2 energy consumption		220.1	226.5	211.05
Water consumption (Based on local use)	Total water consumption	65,372	65,977	52,081	
	Amount of water consumed	Metric Ton/year	33,602	32,048	29,855
	Amount of underground water consumed		25,711	26,864	22,226
Green-house gas emissions	Emission amount				
	Direct emissions (Scope 1)	tCO ₂ eq	775	726	709.19
Emission of air pollutants	SOx		0	0	
	NOx	kg	158	149	230
Emission of water pollutants	BOD		8	14	
	COD	ppm	10	12	20.8
Waste	Total waste disposal amount		972	779	
	Industrial waste	Metric Ton/year	778	660	917
	Designated waste		9	17	31
Waste recycling rate	Municipal waste		24	29	
	Recycling amount		802	689	979
Environmental expenditure and investment	Waste recycling rate	%	83	88	85
	Environmental investment cost	KRW million	33	19	65
Eco-friendly product sales	Environmental protection investment		290	312	299
	Eco-friendly product sales	KRW million	-	-	230,438
Sales		-	-	1,647,391	
Ratio of eco-friendly sales	%	-	-	14	

Social

Category	Unit	2020	2021	2022		
No. of employees	Unit	Employees	662	656	635	
Current employees (by employment type)	Total		11	11	11	
	Executives		0	0	0	
	Female		11	11	11	
	Total	Employees	628	620	589	
	Full-time		141	123	120	
	Female		487	497	469	
	Total		34	36	35	
	Non-regular worker		8	9	12	
	Female		26	27	23	
	Male		0	0	0	
Outsourced human resources	Employees	0	0	0		
Current employees (by work type)	Full-time	Employees	662	656	635	
	Part time	Employees	2	0	0	
Current employees (by work location)	Local	Employees	662	656	608	
	Overseas	Employees	0	0	27	
No. of male employees	Employees	513	524	503		
Ratio of male employees	%	77	80	79		
No. of female employees	Employees	149	132	132		
Ratio of female employees	%	23	20	21		
No. of male executives	Employees	11	11	11		
Ratio of male executives	%	1.6	1.6	1.7		
No. of female executives	Employees	0	0	0		
Ratio of female executives	%	0	0	0		
No. of Male managers (manager level or higher)	Employees	-	-	227		
Ratio of Male managers (manager level or higher)	%	-	-	35.1		
No. of female managers (manager level or higher)	Employees	5	6	6		
Ratio of female managers (manager level or higher)	%	2	3	4		
Employee diversity	No. of people with disabilities	Employees	4	3	5	
	Ratio of employees with disabilities	%	1	1	1	
	No. of senior employees (over 55 years old, excluding executives)	Employees	27	25	33	
	Ratio of senior employees	%	4	4	5	
	No. of foreign employees	Employees	0	0	0	
	Ratio of foreign employees	%	0	0	0	
	No. of high school graduates	Employees	192	175	172	
	Ratio of high school graduates	%	29	27	27	
	No. of national veterans	Employees	2	2	2	
	Ratio of national veterans	%	0.3	0.3	0.3	
Ratio of employees	No. of employees (Under 30 years)	Employees	-	-	71	
	Ratio of employees (Under 30 years)	%	-	-	11	
	No. of employees (30-50 years)	Employees	-	-	482	
	Ratio of employees (30-50 years)	%	-	-	75	
	No. of employees (Over 50 years)	Employees	-	-	93	
	Ratio of employees (Over 50 years)	%	-	-	14	
	Male		70	49	85	
	female		10	9	15	
	Recruitment of new employees	Under 30 years	Employees	43	25	45
		30-50 years		34	31	50
Over 50 years			3	2	5	

Category	Unit	2020	2021	2022	
Compensation of Employee	Average of male earnings	KRW million	65	60	56
	Average of female earnings		50	43	45
	the ratio of male to female's basic salary	%	76	71	80
	Average compensation of male executives	KRW million	-	-	316
	Average of regular male earnings		-	-	57
	the ratio of regular male to regular female's basic salary	%	-	-	82
	Average of contractual male earnings	KRW million	-	-	41
	Average of contractual female earnings		-	-	29
	Ratio of contractual male to contractual female's basic salary	%	-	-	70
	No. of beneficiaries of education	Employees	662	607	615
Total budget for employee training	KRW million	270	271	294	
Training expenses per employee	KRW thousand	436	442	478	
Total hours for employee training				28,126	
Average training hours per employee	Hours	65	62	46	
Ratio of training cost to labor cost	%	1	1		
Industrial accidents	No. of industrial accidents occurred	Agendas	1	0	0
	Industrial accident rate	%	0	0	0
	No. of deaths	Employees	0	0	0
	No. of injured		0	1	0
Duration of work-hour loss	Hours	960	0	0	
Mutual growth	Total number of suppliers	Number	429	394	646
	Supplier status				
	Total amount of purchases from suppliers	KRW million	565,361	657,792	661,770
Support for Small and Medium Enterprises					
Total purchase amount from small and medium enterprises	KRW million	54,038	134,336	81,299	
Fair trade	No. of fair trade law violations	Incidents	0	0	0
	Fines imposed	KRW million	0	0	0
Information security breaches					
No. of customer data leak, theft, and loss	Incidents	0	0	0	
Complaints on discrimination in the workplace	No. of complaints on discrimination in the workplace filed and handled	Incidents	0	0	0
	No. of penalized or sanctioned for regulatory violations		0	0	0
Violations of Regulations and Self-Regulatory Guidelines	No. of receiving warnings for regulatory violations	Incidents	0	0	0
	No. of violating internal self-regulatory guidelines within the company		0	0	0
Labor losses					
No. of labor losses in subcontractors	Incidents	-	-	0	

Category	Unit	2020	2021	2022		
Parental leave	Employees who have taken parental leave		14	16	13	
	Male		4	5	5	
	Female		10	11	8	
	No. of employees who have returned to work after parental leave	Employees	6	12	6	
	Male		1	5	5	
	Female		5	7	1	
	Ratio of employees who have returned to work after parental leave	%	43	75	46	
	No. of employees who have worked over 12 months after returning from parental leave	Total	6	12	5	
	Male	Employees	1	5	4	
	Female		5	7	1	
Human rights policies and procedures	Ratio of employees who have worked over 12 months after returning from parental leave	%	100	100	100	
	Duration of education for prevention of workplace bullying	Total hours (per employee)	-	25(1)	681(1)	
	Duration of education for sexual harassment prevention		662(1)	607(1)	710(1)	
CSR	Other education programs (such as disability rights education)		662(1)	607(1)	670(1)	
	Investment in CSR (including donations)	Cash donation	KRW million	0.4	0.4	2
	In-kind donation		32.5	73.5	38	
Direct and indirect beneficiaries of the support programs	Employees	262	814	36		

Governance

Category	Unit	2020	2021	2022	
BOD Structure	No. of BOD meetings	Meeting	-	-	7
	No. of agenda items	Agenda	-	-	23
	Preliminary deliberation	%	-	-	100
	Decisions on revised agenda		-	-	0
	Report agenda	Agenda	-	-	11
BOD Diversity	BOD attendance rate		-	-	86.3
	Non-executive director attendance rate	%	-	-	100
	Male	Employees	-	-	7
	Female		-	-	0
	Ratio of female directors	%	-	-	0
Anti-corruption in business facilities	Under 30 years	Employees	-	-	0
	30-50 years		-	-	1
	Over 50 years		-	-	6
	No. of external directors		-	-	2
	Ratio of external directors	%	-	-	29
Anti-corruption policy and procedures	Total number of business facilities		-	-	7
	Number of business facilities assessed for corruption risk	Number	-	-	0
	Ratio of business facilities assessed for corruption risk	%	-	-	0
	No. of board members who have received ethics training	Employees	-	-	7
	Ratio of board members who have received ethics training	%	-	-	100
Anti-corruption policy and procedures	No. of employees who have received ethics training	Employees	663	657	646
	Ratio of employees who have received ethics training	%	100	100	100
	No. of board members who have signed the ethics pledge	Employees	-	-	7
	Ratio of board members who have signed the ethics pledge	%	-	-	100
	No. of employees who have signed the ethics pledge	Employees	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 revenue	-	-	57,959	
	Selling, general, and administrative expenses	-	-	21,886	
	Operating profit	-	-	36,072	
	Financial income	KRW million	-	-	1,809
	Financial costs	-	-	(1,022)	
	Other income	-	-	668	
	Other costs	-	-	(3,741)	
	Net income before the deduction of corporate tax Expenses	-	-	36,741	
	Statement of financial position	Assets			
Current assets		-	-	99,779	
Non-current assets		-	-	127,588	
Liabilities					
Current liabilities		-	-	70,826	
Non-current debt		-	-	5,725	
Equity interest of parent company shareholders		KRW million	-	-	150,815
Capital					
Equity interest of non-controlling shareholders		-	-	0	
Research and development status					
Total R&D expenses for the current period	KRW million	-	-	109	
R&D expenses as a ratio of sales	%	-	-	0.61	
Number of R&D personnel	Employees	-	-	13	

(Based on standalone financial statements)

Environment

Category	Unit	2020	2021	2022	
Consumption of Raw materials	Raw materials consumed	Metric Ton/year	-	-	1,640
Consumption of materials that contain recycled materials	Amount of recycled materials (reused raw materials) consumed	Metric Ton/year	-	-	166
	Ratio of recycled materials (reused materials) consumed	%	-	-	10
	Total water consumption	-	-	123,103	
Water consumption (Based on local use)	Total water consumption	-	-	123,103	
	Amount of underground water consumed	Metric Ton/year	-	-	0
	Amount of sea water consumed	-	-	0	
	Amount of water reused	-	-	0	
Water reuse	Water reuse ratio	%	-	-	0
	Green-house gas emissions	Emission amount	CO2eq	-	-
Indirect emissions (Scope 2)		-	-	10,741	
Emission of air pollutants	Emission amount				
	SOx	-	-	0.09	
	NOx	kg	-	-	6.98
Waste	Total waste disposal amount (treatment amount, domestic standard)	PM	-	-	15.99
		Total waste disposal amount	-	-	561
		Industrial waste	-	-	421
	Designated waste	Metric Ton/year	-	-	140
	Municipal waste	-	-	0	
Waste recycling rate	Recycling amount	-	-	445	
Waste recycling rate	%	-	-	79	

Social

Category	Unit	2020	2021	2022		
No. of employees	Unit	Employees	-	-	588	
Executives	Total	-	-	7		
	Female	-	-	0		
	Male	-	-	7		
	Total	-	-	567		
	Female	Employees	-	-	87	
	Male	-	-	480		
Current employees (by employment type)	Total	-	-	14		
	Female	-	-	2		
	Male	-	-	12		
Outsourced human resources	Employees	-	-	-		
Current employees (by work type)	Full-time	Employees	-	-	588	
	Part time	Employees	-	-	-	
Current employees (by work location)	Local	Employees	-	-	588	
	Overseas	Employees	-	-	-	
No. of male employees	Employees	-	-	499		
Ratio of male employees	%	-	-	85		
No. of female employees	Employees	-	-	87		
Ratio of female employees	%	-	-	15		
No. of male executives	Employees	-	-	10		
Ratio of male executives	%	-	-	2		
No. of female executives	Employees	-	-	0		
Ratio of female executives	%	-	-	0		
No. of Male managers (manager level or higher)	Employees	-	-	27		
Ratio of Male managers (manager level or higher)	%	-	-	5		
No. of female managers (manager level or higher)	Employees	-	-	0		
Ratio of female managers (manager level or higher)	%	-	-	0		
Employee diversity	No. of people with disabilities	Employees	-	-	11	
	Ratio of employees with disabilities	%	-	-	2	
	No. of senior employees (over 55 years old, excluding executives)	Employees	-	-	11	
	Ratio of senior employees	%	-	-	2	
	No. of foreign employees	Employees	-	-	11	
	Ratio of foreign employees	%	-	-	2	
	No. of high school graduates	Employees	-	-	233	
	Ratio of high school graduates	%	-	-	40	
	No. of national veterans	Employees	-	-	0	
	Ratio of national veterans	%	-	-	0	
Ratio of employees	No. of employees (Under 30 years)	Employees	-	-	182	
	Ratio of employees (Under 30 years)	%	-	-	31	
	No. of employees (30-50 years)	Employees	-	-	380	
	Ratio of employees (30-50 years)	%	-	-	64	
	No. of employees (Over 50 years)	Employees	-	-	24	
	Ratio of employees (Over 50 years)	%	-	-	4	
	Male	-	-	149		
	female	-	-	35		
	Recruitment of new employees	Under 30 years	Employees	-	-	78
		30-50 years	-	-	99	
Over 50 years		-	-	7		

Category	Unit	2020	2021	2022		
Compensation of Employee	Average of male earnings	KRW million	-	-	47	
	Average of female earnings	-	-	36		
	the ratio of male to female's basic salary	%	-	-	76	
	Average compensation of male executives	KRW million	-	-	125	
	Average compensation of female executives	-	-	0		
	the ratio of male executive to female executive's basic salary	%	-	-	0	
	Average of regular male earnings	KRW million	-	-	47	
	Average of regular female earnings	-	-	36		
	the ratio of regular male to regular female's basic salary	%	-	-	76	
	Average of contractual male earnings	KRW million	-	-	10	
Average of contractual female earnings	-	-	8			
the ratio of contractual male to contractual female's basic salary	%	-	-	80		
Job security	Average tenure	Years	-	-	3.5	
	Total number of job changers	Employees	-	-	157	
	Voluntary retirement rate	%	-	-	92	
Talent development	Involuntary retirement rate	%	-	-	8	
	No. of beneficiaries of education	KRW million	-	-	38	
	Total budget for employee training	KRW thousand	-	-	66	
Industrial accidents	Total hours for employee training	Hours	-	-	3,029	
	Average training hours per employee	Hours	-	-	5.19	
	No. of industrial accidents occurred	Agendas	-	-	1	
Mutual growth	Industrial accident rate	%	-	-	0.17	
	No. of deaths	Employees	-	-	0	
	No. of injured	Employees	-	-	12	
Fair trade	Duration of work-hour loss	Hours	-	-	880	
	Supplier status	Total number of suppliers	-	-	70	
	Total amount of purchases from suppliers	Number	-	-	49,004	
Information security breaches	Support for Small and Medium Enterprises	Total purchase amount from small and medium enterprises	KRW million	-	-	41,869
	No. of fair trade law violations	Incidents	-	-	0	
	Fines imposed	KRW million	-	-	0	
Complaints on discrimination in the workplace	No. of customer data leak, theft, and loss	Incidents	-	-	0	
	No. of complaints on discrimination in the workplace filed and handled	Incidents	-	-	0	
	No. of penalized or sanctioned for regulatory violations	Incidents	-	-	0	
Violations of Regulations and Self-Regulatory Guidelines	No. of receiving warnings for regulatory violations	Incidents	-	-	0	
	No. of violating internal self-regulatory guidelines within the company	Incidents	-	-	0	
	No. of labor losses in subcontractors	Incidents	-	-	0	

Category	Unit	2020	2021	2022		
Parental leave	Employees who have taken parental leave	Total	-	-	6	
	Male	-	-	0		
	Female	-	-	6		
	No. of employees who have returned to work after parental leave	Total	Employees	-	-	3
	Male	-	-	0		
	Female	-	-	3		
Human rights policies and procedures	Ratio of employees who have returned to work after parental leave	%	-	-	50	
	No. of employees who have worked over 12 months after returning from parental leave	Total	-	-	1	
	Male	Employees	-	-	0	
CSR	Female	-	-	1		
	Ratio of employees who have worked over 12 months after returning from parental leave	%	-	-	17	
	Duration of education for prevention of workplace bullying	Total hours (per employee)	-	-	1	
CSR	Duration of education for sexual harassment prevention	-	-	1		
	Other education programs (such as disability rights education)	-	-	1		
	Investment in CSR (including donations)	Cash donation	-	-	15	
Governance	In-kind donation	KRW million	-	-	0	
	Business expenses	-	-	0		

Governance

Category	Unit	2020	2021	2022	
BOD Structure	No. of BOD meetings	Meeting	-	-	11
	No. of agenda items	Agenda	-	-	23
	Preliminary deliberation	%	-	-	100
	Decisions on revised agenda	Agenda	-	-	0
	Report agenda	-	-	13	
	BOD attendance rate	-	-	99	
	Non-executive director attendance rate	%	-	-	97
	Male	Employees	-	-	8
	Female	-	-	0	
	BOD Diversity	Ratio of female directors	%	-	-
Under 30 years		-	-	-	
30-50 years		Employees	-	-	2
Over 50 years		-	-	6	
No. of external directors		-	-	3	
Anti-corruption in business facilities	Ratio of external directors	%	-	-	38
	Total number of business facilities	Number	-	-	4
	Number of business facilities assessed for corruption risk	Number	-	-	0
Anticorruption policy and procedures	Ratio of business facilities assessed for corruption risk	%	-	-	0
	No. of board members who have received ethics training	Employees	-	-	8
	Ratio of board members who have received ethics training	%	-	-	100
	No. of employees who have received ethics training	Employees	-	-	588
	Ratio of employees who have received ethics training	%	-	-	100
Anticorruption violations	No. of board members who have signed the ethics pledge	Employees	-	-	8
	Ratio of board members who have signed the ethics pledge	%	-	-	100
	No. of employees who have signed the ethics pledge	Employees	-	-	588
Anticorruption violations	Ratio of employees who have signed the ethics pledge	%	-	-	100
	No. of violations of anticorruption laws	Incidents (employees)	-	-	1

Economy

Category	Unit	2020	2021	2022
Income statement	Sales	52,588	59,462	59,146
	Gross revenue	5,979	11,767	12,319
	Selling, general, and administrative expenses	11,499	12,011	16,292
	Operating profit	(5,520)	(243)	(3,972)
	Financial income	181	203	244
	Financial costs	151	110	131
	Other income	348	132	413
	Other costs	792	86	2,806
	Profit of affiliated companies	8,655	0	0
	Net income before the deduction of corporate tax Expenses	2,721	(105)	(6,253)
Statement of financial position	Assets	34,199	32,455	25,186
	Non-current assets	7,587	16,339	14,630
	Liabilities	13,433	18,248	14,138
	Non-current debt	2,124	1,760	2,413
	Capital	26,229	26,376	21,932
	Equity interest of non-controlling shareholders	-	2,409	1,333
Research and development status	Total R&D expenses for the current period	1,765	1,818	1,426
	R&D expenses as a ratio of sales	3	3	3
	Number of R&D personnel	7	5	0

(Based on standalone financial statements)

Social

Category	Unit	2020	2021	2022
No. of employees	Unit	227	224	253
Current employees (by employment type)	Total	3	3	6
	Executives	0	0	0
	Female	3	3	6
	Male	219	212	247
	Full-time	54	53	67
	Female	165	159	180
	Male	5	9	0
	Non-regular worker	2	2	0
	Female	3	7	0
	Male	2	0	0
Outsourced human resources	Full-time	227	224	253
	Part time	0	0	0
Current employees (by work location)	Local	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		
Recruitment of the socially disadvantaged	No. of people with disabilities	Employees	3	2	2	
	Ratio of employees with disabilities	%	1	1	1	
	No. of senior employees (over 55 years old, excluding executives)	Employees	2	2	4	
	Ratio of senior employees	%	1	1	2	
	No. of foreign employees	Employees	0	0	0	
	Ratio of foreign employees	%	0	0	0	
	No. of high school graduates	Employees	4	5	9	
	Ratio of high school graduates	%	2	2	4	
	No. of national veterans	Employees	2	2	2	
	Ratio of national veterans	%	1	1	1	
Employee diversity	No. of employees (Under 30 years)	Employees	-	-	53	
	Ratio of employees (Under 30 years)	%	-	-	21	
	No. of employees (30-50 years)	Employees	-	-	166	
	Ratio of employees (30-50 years)	%	-	-	66	
	No. of employees (Over 50 years)	Employees	-	-	34	
	Ratio of employees (Over 50 years)	%	-	-	13	
	Male		14	31	53	
	female		5	9	21	
	Recruitment of new employees	By age	Employees	13	11	24
		30-50 years		6	29	45
Over 50 years			0	0	5	
Average of male earnings		KRW million	48	48	58	
Compensation of Employee	Average of female earnings	KRW million	40	41	42	
	the ratio of male to female's basic salary	%	83	85	74	
	Average compensation of male executives	KRW million	-	-	110	
	Average compensation of female executives		-	-	0	
	the ratio of male executive to female executive's basic salary	%	-	-	0	
	Average of regular male earnings	KRW million	-	-	56	
	Average of regular female earnings		-	-	42	
	the ratio of regular male to regular female's basic salary	%	-	-	76	
	Average of contractual male earnings	KRW million	-	-	0	
	Average of contractual female earnings		-	-	0	
the ratio of contractual male to contractual female's basic salary	%	-	-	0		
Job security	Average tenure	Years	7.5	8	7.5	
	Total number of job changers	Employees	-	-	41	
	Voluntary retirement rate	%	-	-	88	
	Involuntary retirement rate		-	-	12	

Category	Unit	2020	2021	2022	
Talent development	No. of beneficiaries of education	Employees	222	220	253
	Total budget for employee training	KRW million	252	170	238
	Training expenses per employee	KRW thousand	1,135	775	960
	Total hours for employee training		13,947	7,213	7,169
	Average training hours per employee	Hours	26	28	29
Industrial accidents	No. of industrial accidents occurred	Agendas	0	0	0
	Industrial accident rate	%	0	0	0
	No. of deaths	Employees	0	0	0
	No. of injured		0	0	0
Mutual growth	Supplier status	Number	226	200	209
	Total number of suppliers		23,005	29,684	30,434
	Total amount of purchases from suppliers	KRW million	18,499	20,613	20,159
Fair trade	Support for Small and Medium Enterprises		18,499	20,613	20,159
	No. of fair trade law violations	Incidents	0	0	0
Information security breaches	Fines imposed	KRW million	0	0	0
	No. of customer data leak, theft, and loss	Incidents	0	0	0
Complaints on discrimination in the workplace	No. of complaints on discrimination in the workplace filed and handled	Incidents	0	0	0
	No. of penalized or sanctioned for regulatory violations		0	0	0
Violations of Regulations and Self-Regulatory Guidelines	No. of receiving warnings for regulatory violations	Incidents	0	0	0
	No. of violating internal self-regulatory guidelines within the company		0	0	0
Labor losses	No. of labor losses in subcontractors	Incidents	-	-	0
	Employees who have taken parental leave		4	1	4
Parental leave	Male		1	0	2
	Female		3	1	2
	Total	Employees	4	1	0
	Male		1	0	0
	Female		3	1	0
	Ratio of employees who have returned to work after parental leave	%	100	100	0
Human rights policies and procedures	No. of employees who have worked over 12 months after returning from parental leave		4	1	3
	Male	Employees	1	0	1
	Female		3	1	2
	Ratio of employees who have worked over 12 months after returning from parental leave	%	100	100	75
	Duration of education for human rights	Hours	1,135	1,100	771
	Number of participants in human rights education	Employees	227	220	257
Other education programs (such as disability rights education)	Percentage of participants in human rights education	%	100.00	98.20	100
	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 programs (such as disability rights education)		340(1.5)	336(1.5)	257(1)

Category	Unit	2020	2021	2022	
CSR	Investment in CSR (including donations)	Cash donation	8.1	7.3	7.7
	In-kind donation	KRW million	1.5	3.2	0
	Business expenses		0	0	0
	Duration of volunteer work per employee	Hours	0	0	0
	Direct and indirect beneficiaries of the support programs		0	0	0

Governance

Category	Unit	2020	2021	2022	
BOD structure	No. of BOD meetings	Meeting	-	-	10
	No. of agenda items		-	-	20
	Report agenda	Agenda	-	-	12
	BOD attendance rate	%	-	-	100
BOD Diversity	Male	Employees	-	-	7
	Female		-	-	0
	Ratio of female directors	%	-	-	0
	Under 30 years		-	-	0
	30-50 years	Employees	-	-	2
Anti-corruption in business facilities	Over 50 years		-	-	5
	No. of external directors		-	-	3
	Ratio of external directors	%	-	-	43
	Total number of business facilities		-	-	1
	Number of business facilities assessed for corruption risk	Number	-	-	1
Anticorruption policy and procedures	Ratio of business facilities assessed for corruption risk	%	-	-	100
	No. of board members who have received ethics training	Employees	-	-	7
	Ratio of board members who have received ethics training	%	-	-	100
	No. of employees who have received ethics training	Employees	227	224	253
	Ratio of employees who have received ethics training	%	100	100	100
Anticorruption violations	No. of board members who have signed the ethics pledge	Employees	-	-	7
	Ratio of board members who have signed the ethics pledge	%	-	-	100
	No. of employees who have signed the ethics pledge	Employees	227	224	253
	Ratio of employees who have signed the ethics pledge	%	100	100	100
	No. of violations of anticorruption laws	Incidents (employees)	0	0	0

Economy

Category	Unit	2020	2021	2022
Income statement	Sales	619,277	768,688	885,470
	Gross revenue	213,876	267,971	265,682
	Selling, general, and administrative expenses	61,942	70,287	79,691
	Operating profit	151,933	197,684	185,990
	Financial income	4,033	4,204	9,227
	Financial costs	10,044	6,176	7,518
	Other income	6,915	6,631	9,009
	Other costs	4,719	6,999	10,742
	Profit of affiliated companies	12,693	13,356	8,271
	Net income before the deduction of corporate tax Expenses	160,812	208,702	194,237
	Statement of financial position	Assets		
Current assets		307,726	411,301	386,120
Non-current assets		691,474	785,873	867,190
Liabilities				
Current liabilities		171,630	199,711	153,669
Non-current debt		205,299	229,593	247,144
Capital				
Equity interest of parent company shareholders		553,201	689,239	763,481
Equity interest of non-controlling shareholders		69,069	78,630	89,014
Research and development status				
Total R&D expenses for the current period	KRW million	13,004	13,640	18,955
R&D expenses as a ratio of sales	%	2	2	3
Number of R&D personnel	Employees	107	120	127

(Based on standalone financial statements)

Environment

Category	Unit	2020	2021	2022	
Consumption of Raw materials	Raw materials consumed	Metric Ton/year	150,967	151,701	147,161
	Amount of recycled materials (reused raw materials) consumed	Metric Ton/year	0	0	0
Consumption of materials that contain recycled materials	Ratio of recycled materials (reused materials) consumed	%	0.0	0.0	0
	Total energy consumption		2,628	3,119	3,395
Energy consumption	Scope 1 energy consumption	TJ	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 (Based on local use)	Total water consumption		2,148,690	2,214,557	2,557,065
	Amount of water consumed		28,933	40,407	46,267
	Amount of underground water consumed	Metric Ton/year	0	0	0
	Amount of sea water consumed		0	0	0
Water reuse	Amount of water reused		0	0	0
	Water reuse ratio	%	0	0	0
Green-house gas emissions	Direct emissions (Scope 1)	TCO ₂ eq	70,687	84,466	87,066
	Indirect emissions (Scope 2)		66,989	77,153	82,266
Emission of air pollutants	SOx	kg	96	5,960	1,110
	NOx		46	16,316	19,499
	PM		441	983	674
	BOD		9.9	14.1	14.3
Emission of water pollutants	COD	ppm	31.3	28.5	33.9
	SS		15.3	23.2	12.5
	TN		18.4	8.1	7.2
	Total waste disposal amount (treatment amount, domestic standard)		6,439	8,526	10,202
Waste	Industrial waste	Metric Ton/year	3,552	4,327	4,817
	Designated waste		2,887	4,199	5,385
	Municipal waste		0	0	0
	Recycling amount		4,537	6,299	7,907
	Waste recycling rate	%	70	74	78

Category	Unit	2020	2021	2022	
Significant hazardous (chemical) substance spills	Number of incidents	Cases	0	3	0
	Volume of spills	Metric Ton/year	0	5.1	0
Environmental expenditure and investment	Environmental investment cost	KRW million	5,129	3,069	4,232
	Environmental protection investment		1,981	2,717	2,922

* Usage of recycled input materials: Due to a past reporting error, Hansol Chemical does not have any usage of recycled input materials.
 * SOx emissions: There is a decrease in emissions due to differences in measurement methods.

Social

Category	Unit	2020	2021	2022	
No. of employees	Total	Employees	563	632	658
	Executives		13	14	16
	Female		1	1	1
	Male		12	13	15
	Total	Employees	508	520	548
	Full-time		65	76	80
	Male		443	444	468
	Total		42	98	94
	Female		0	0	2
	Male		42	98	92
Outsourced human resources	Total	Employees	0	0	0
	Full-time		563	632	658
	Part time		0	0	0
Current employees (by employment type)	Local	Employees	560	629	653
	Overseas		3	3	5
	Total		497	555	575
Ratio of employees	Ratio of male employees	%	88	87	87
	No. of female employees	Employees	66	77	83
	Ratio of female employees	%	12	12	13
	No. of male executives	Employees	12	13	15
	Ratio of male executives	%	2	2	2
	No. of female executives	Employees	1	1	1
	Ratio of female executives	%	0.2	0.2	0.2
	No. of Male managers (manager level or higher)	Employees	-	-	116
	Ratio of Male managers (manager level or higher)	%	-	-	18
	No. of female managers (manager level or higher)	Employees	11	12	16
Employee diversity	Ratio of female managers (manager level or higher)	%	11	12	12
	No. of people with disabilities	Employees	5	4	5
	Ratio of employees with disabilities	%	1	1	1
	No. of senior employees (over 55 years old, excluding executives)	Employees	24	13	23
	Ratio of senior employees	%	4	2	4
	No. of foreign employees	Employees	0	0	0
	Ratio of foreign employees	%	0	0	0
	No. of high school graduates	Employees	146	135	153
	Ratio of high school graduates	%	26	21	23
	No. of national veterans	Employees	4	4	4
Recruitment of the socially disadvantaged	Ratio of national veterans	%	1	1	1
	No. of employees (Under 30 years)	Employees	-	-	220
	Ratio of employees (Under 30 years)	%	-	-	34
	No. of employees (30-50 years)	Employees	-	-	360
	Ratio of employees (30-50 years)	%	-	-	55
	No. of employees (Over 50 years)	Employees	-	-	72
	Ratio of employees (Over 50 years)	%	-	-	11

Category	Unit	2020	2021	2022	
Recruitment of new employees	Male		54	123	79
	female		11	15	20
	Under 30 years	Employees	49	116	71
	30-50 years		13	20	27
	Over 50 years		3	2	1
	Average of male earnings	KRW million	90	88	101
	Average of female earnings		60	64	103
	the ratio of male to female's basic salary	%	66	72	103
	Average compensation of male executives	KRW million	-	-	914
	Average compensation of female executives		-	-	2,940
Compensation of Employee	the ratio of male executive to female executive's basic salary	%	-	-	322
	Average of regular male earnings	KRW million	-	-	106
	Average of regular female earnings		-	-	69
	the ratio of regular male to regular female's basic salary	%	-	-	65
	Average of contractual male earnings	KRW million	-	-	58
	Average of contractual female earnings		-	-	0
	the ratio of contractual male to contractual female's basic salary	%	-	-	0
	Average tenure	Years	7	6	7.6
	Total number of job changers	Employees	-	-	67
	Voluntary retirement rate	%	-	-	91
Job security	Involuntary retirement rate	%	-	-	9
	No. of beneficiaries of education	Employees	485	553	652
	Total budget for employee training	KRW million	868	859	329
	Training expenses per employee	KRW thousand	451	522	504
	Average training hours per employee	Hours	17	19	79
	No. of industrial accidents occurred	Agendas	2	2	0
	Industrial accident rate	%	0	0	0
	No. of deaths	Employees	1	0	0
	No. of injured		1	2	0
	Duration of work-hour loss	Hours	0	0	0
Industrial accidents	Total number of suppliers	Number	147	148	206
	Supplier status		105,929	144,366	262,609
	Total amount of purchases from suppliers	KRW million	32,615	43,876	56,506
Mutual growth	Support for Small and Medium Enterprises		0	0	0
	No. of fair trade law violations	Incidents	0	0	0
Fair trade	Fines imposed	KRW million	0	0	0
	No. of customer data leak, theft, and loss	Incidents	0	0	0
Information security breaches	No. of complaints on discrimination in the workplace filed and handled	Incidents	0	0	0
	No. of penalized or sanctioned for regulatory violations		0	0	0
Complaints on discrimination in the workplace	No. of receiving warnings for regulatory violations	Incidents	0	0	0
	No. of violating internal self-regulatory guidelines within the company		0	0	0
	No. of labor losses in subcontractors	Incidents	-	-	0

Category	Unit	2020	2021	2022		
Parental leave	Employees who have taken parental leave		1	2	8	
	Male		1	0	4	
	Female		0	2	4	
	No. of employees who have returned to work after parental leave	Total	Employees	1	1	7
	Male		1	0	4	
	Female		0	1	3	
	Ratio of employees who have returned to work after parental leave	%	100	50	88	
	No. of employees who have worked over 12 months after returning from parental leave	Total		1	0	4
	Male	Employees	1	0	3	
	Female		0	0	1	
Human rights policies and procedures	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	
	Number of participants in human rights education	Employees	496	617	625	
	Percentage of participants in human rights education	%	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		451(1)	609(1)	625(1)	
	Other education programs (such as disability rights education)		461(1)	630(1)	625(1)	
	Investment in CSR (including donations)	Cash donation	KRW million	296	212	214
	In-kind donation		0	0	1	
	Business expenses		0	0	0	
CSR	Duration of volunteer work	Hours	480	420	513	
	Duration of volunteer work per employee		0.9	0.7	0.84	
	Direct and indirect beneficiaries of the support programs	Employees	500	500	700	

Governance

Category	Unit	2020	2021	2022	
BOD Structure	No. of BOD meetings	Meeting	-	-	8
	No. of agenda items	Agenda	-	-	14
	Preliminary deliberation	%	-	-	0
	Decisions on revised agenda		-	-	0
	Report agenda	Agenda	-	-	3
	BOD attendance rate	%	-	-	100
	Male	Employees	-	-	5
	Female		-	-	1
	Ratio of female directors	%	-	-	16.7
	Under 30 years		-	-	0
BOD Diversity	30-50 years	Employees	-	-	2
	Over 50 years		-	-	4
	No. of external directors		-	-	3
	Ratio of external directors	%	-	-	50
	Total number of business facilities	Number	-	-	4
Anti-corruption in business facilities	Number of business facilities assessed for corruption risk		-	-	0
	Ratio of business facilities assessed for corruption risk	%	-	-	0
Anti-corruption policy and procedures	No. of board members who have received ethics training	Employees	-	-	6
	Ratio of board members who have received ethics training	%	-	-	100
	No. of employees who have received ethics training	Employees	563	632	652
Anti-corruption violations	Ratio of employees who have received ethics training	%	100	100	100
	No. of board members who have signed the ethics pledge	Employees	-	-	6
	Ratio of board members who have signed the ethics pledge	%	-	-	100
	No. of employees who have signed the ethics pledge	Employees	522	593	614
	Ratio of employees who have signed the ethics pledge	%	93	94	93
No. of violations of anticorruption laws	Incidents (employees)	0	0	0	

GRI CONTENT INDEX

From 2022 January 1st to 2022 December 31st,
Hansol Holdings has published its report based on
the GRI standards.
Application of GRI 1: Foundation 2021

UNIVERSAL STANDARDS

General Disclosures 2021

Topic	Description	ISO 26000	Page	
Organizational and reporting practices	2-1	Detailed organizational information	6, 7	
	2-2	The list of companies included in the sustainability report	2, 6~15	
	2-3	Reporting period, reporting frequency, reporting contact	2	
	2-4	Recomposition of information	6.3.10/6.4.1~6.4.5/6.8.5	X
	2-5	External verification		114
Activities and employees	2-6	Activities, value chain, and other business relationships	6~15	
	2-7	Employees	88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110	
	2-8	Non-employee workers	110	
Governance	2-9	Governance structure and composition	72~75	
	2-10	Appointment and selection of the top governance body	74, 75	
	2-11	The chairperson of the top governance body	6.2/7.4.3/7.7.5	74
	2-12	The role of the top governance body in overseeing impact management		Not delegating responsibility for impact management
	2-13	Delegation of responsibility for impact management		
	2-14	The role of the top governance body in sustainable management reporting	6.2/7.4.3/7.7.5	74
	2-15	Conflict of interest		No conflict prevention process in place
	2-16	Communication regarding critical matters		Insufficient information (no relevant content)
	2-17	The comprehensive knowledge of the top governance body		Scheduled for education at least once per year starting from 2023
	2-18	The performance evaluation of the top governance body		Insufficient information (no relevant content)
	2-19	Compensation policy		Not disclosed due to confidential information
2-20	Compensation determination process		Insufficient information (no relevant content)	
2-21	Annual total compensation ratio		Not disclosed due to confidential information	

Topic	Description	ISO 26000	Page	
Strategies, policies, and practices	2-22	Statement on sustainable development strategy	4.7/6.2/7.4.2	5
	2-23	Policy commitment		22~24, 62
	2-24	Policy commitment integration		
	2-25	Procedure for mitigating negative impacts		Insufficient information (no relevant content)
	2-26	Mechanism for raising concerns and seeking advice	6.6.3	62
	2-27	Legal and regulatory compliance (compliance)		88~111
	2-28	Membership in associations	7.8	121
	2-29	Stakeholder engagement approach	5.3	86
	2-30	Collective agreement		Insufficient information (no relevant content)

Material Topics 2021

Topic	Description	ISO 26000	Page	
Key topics	3-1	Major issue decision-making process	5.2/7.3.2~7.3.4	86
	3-2	List of major topics		87
	3-3	Evaluation of the approach to managing key topics	7.5.3/7.6.2	87

Topic Specific Standards Economic Performance

Topic	Description	ISO 26000	Page	
Economic performance	201-1	Direct creation and distribution of economic value	6.8.1~	6~15, 88~107
	201-2	Financial impact of climate change and risks and opportunities for business activities	6.8.3/6.8.7/6.8.9	50~53
Indirect economic effects	203-1	Investment in and support for social infrastructure	6.3.9/6.6.6/6.6.7/6.7.8/6.8.1~	70, 71
	203-2	Significant indirect economic ripple effects and impacts	6.8.2/6.8.5/6.8.7/6.8.9	26~71
Anti-corruption	3-3	Evaluation of the approach to managing important topics		87
	205-2	Announcement and training on anti-corruption policies and procedures	6.6.1~6.6.3	88~107

Topic Specific Standards Environmental Performance





















Topic	Description	ISO 26000	Page
Energy	3-3	Assessment of the approach to managing important topics	87
	302-1	Energy consumption within the organization	88-107
	302-5	Reductions in energy requirements of products and services	6.5.4 53, 54
Water	303-2	Management of water discharge-related impacts	56, 57
	303-3	Water withdrawal	6.5.4 88-107
Discharge	3-3	Assessment of the approach to managing important topics	87
	305-1	Direct emissions (Scope 1)	
	305-2	Indirect emissions (Scope 2)	6.5.5 88-107
Waste	305-7	Nox, Sox, and Other significant air emissions	
	3-3	Assessment of the approach to managing important topics	87
	306-2	Management of material impacts related to waste	56, 57
	306-3	Total weight of waste and type	6.5.6 31, 64
	306-4	Recycling	26, 54

Topic Specific Standards Social Performance

Topic	Description	ISO 26000	Page
Employment	3-3	Assessment of the approach to managing important topics	87
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	6.4.4/6.8.7 62, 63
	401-3	Parental leave	6.4.4 88-107
Occupational health and safety	3-3	Assessment of the approach to managing important topics	87
	403-1	Occupational health and management system	25, 64
	403-4	Worker participation, consultation, and communication on occupational health and safety	6.4.6/6.8.8 65
	403-5	Worker-training on occupational health and safety	64
	403-9	Occupational accident rate	88-107
Training and education	3-3	Assessment of the approach to managing important topics	87
	404-2	Programs for upgrading employees skills and transition assistance programs	6.4.7/6.8.5 62, 63
	404-3	Percentage of employees receiving regular performance and career development reviews	88-107
Diversity and equal opportunity	3-3	Assessment of the approach to managing important topics	87
	405-1	Diversity of governance bodies and employees	6.2.3/6.3.7/ 6.3.10/ 6.4.3/6.4.4 88-107
	405-2	Ratio of basic salary and remuneration of women to men	
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 70, 71
Supplier social assessment	414-2	Negative social impacts in the supply chain and actions taken	33
Customer safety and health	3-3	Assessment of the approach to managing important topics	87
	416-2	Instances of non-compliance with regulations regarding the health and safety impact of products and services	해당 위반 사례 없음
Marketing and labeling	417-1	Requirements for product and service information and labeling	6.7.3 50, 51

UN SUSTAINABLE DEVELOPMENT GOALS (UN SDG)

The UN 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. For the responsible fulfillment of our tasks, we disclose our sustainability report.

Core issues	UN SDGs	Activities
1 Ethical management and anti-corruption	 	- Conducting compliance management assessments for all affiliated companies - Checking the risk management system of all affiliated companies - Establishing an ESG performance management system for all affiliated companies
2 Management of air pollutants in the manufacturing process	 	- Hansol Chemical replacing energy-efficient facilities. - Hansol Technics reducing greenhouse gas emissions through the replacement of aging facilities.
3 Creation of a safe work environment	 	- Establishment of the HSRS (Hansol Safety Rating System) for safety and health management assessment across all affiliates. - Hansol Paper, Hansol Logistics, Hansol PaperTech, Hansol Chemical, Hansol Technics, and Tapex obtaining ISO 45001 certification.
4 Increase of product responsibility and customersatisfaction	 	- Hansol Holdings to host the Group Innovation Olympic - Hansol Group - KAIST Establishment of Joint Research Center in the field of small department heads - ISO 9001 certification of international quality management system by 7 Hansol Group companies
5 Promotion of work-life balance		- Hansol Paper, Hansol Chemical, and Tapex have been certified as family-friendly companies - Introduction of a specialized telecommuting employment platform for the disabled
6 Employee competency development support		- Establishing an online education curation system based on the competency diagnosis of executives and employees of all affiliates - Tapex Introduces In-house Recommendation System for Employees
7 Reduction of raw material usage and expansion of recycling	    	- Hansol Paper, Hansol HomeDeco Increase the Percentage of Eco-friendly Products - Hansol HomeDeco Expands Percentage of Recycled Raw Materials
8 Safe waste, wastewater, and chemical discharge management	 	- Hansol Chemical to reduce wastewater emissions by 30,000 tons - Hansol Paper, Hansol HomeDeco, Hansol PaperTech, Hansol Technics, and Environmental Facility Investment
9 Building a flexible organizational culture	 	- Hansol Technics, Tapex, Hansol IONES holds intergenerational meeting - Hansol PNS operates flexible work system
10 In-house human rights policy & education		- Hansol Holdings prepares guidelines for Human Rights Management Operations - Operation of psychological counseling programs for group executives and employees

THIRD-PARTY ASSURANCE STATEMENT

Dear Management and Stakeholders of
HANSOL HOLDINGS

Introduction

The Korean Standards Association ("KSA") was commissioned by HANSOL HOLDINGS to perform a third-party Assurance Engagement of '2023 HANSOL GROUP SUSTAINABILITY REPORT' (the "Report"). KSA presents independent opinions as follows as a result of feasibility of the data contained in this Report. HANSOL HOLDINGS has sole responsibility for content and performance contained in this Report.

Independence

As an independent assurance agency, KSA does not have any kinds of commercial interest in businesses of HANSOL HOLDINGS apart from undertaking a third-party assurance on the Report. We have no other contract with HANSOL HOLDINGS that may undermine credibility and integrity as an independent assurance agency.

Assurance Standards and Level

This Assurance Engagement followed the AA1000AS v3 assurance standards to provide Moderate Level assurance. We checked the four principles of inclusivity, materiality, responsiveness and impact in combination with information credibility of the Report. We also reviewed Universal Standard and Topic Specific Standard whether the Report content was created in accordance with the GRI Standards.

Assurance Type and Scope

.Assurance Provider performed Type1 assurance that assessed compliance with four principles of AA1000AP (AccountAbility Principles) 2018, as well as the accuracy and reliability of performance information contained in the report.

The assurance scope is from January 1 2022 to December 31 2022 and the assurance focused on systems and activities including policies and goals, businesses and programs, standards, and achievements of HANSOL GROUP's sustainability management, including HANSOL HOLDINGS and its affiliates. While the company's environmental and social data as well as financial data was verified, the scope of review concerning stakeholder engagement was limited to the materiality assessment process.

Assurance Methodology

We used the following methods to gather information, documents and evidence with respect to the assurance scope.

- Confirmation of HANSOL HOLDINGS's stakeholder participation and materiality assessment process by sustainability expert.
- Analyses of articles related to HANSOL HOLDINGS's sustainability management published by domestic media outlets
- Review of the consistency between the financial performance data and the company's audit report/publicly announced data by Certified Public Accountant.
- Verification of consistency between environmental information disclosure data and information provided by greenhouse gas verification inspector.
- Examination of internal documents and basic materials

Assurance Results and Opinions

KSA reviewed the draft version of this Report to present our opinions as an assurance provider. Modifications were made of the Report content if deemed necessary. We were not aware of any significant errors or inappropriate descriptions in this Report as a result of our Assurance Engagement. As such, we present our opinions of the 2023 HANSOL GROUP SUSTAINABILITY REPORT as follows.

Inclusivity

Has HANSOL HOLDINGS engaged its stakeholders in strategically responding to sustainability?

KSA believe HANSOL HOLDINGS is aware of the importance of stakeholder participation and is making an all-out effort to establish a process that will increase their participation. HANSOL HOLDINGS has selected stakeholders including Employees, Executives, partners, shareholders and investors, governments and local governments, customers, communities and NGOs and has communication channels for each group to receive diverse feedbacks and opinions.

Materiality

Has HANSOL HOLDINGS included material information in the Report to help stakeholders make informed decisions?

We are not aware of any significant omissions or exclusions of data that is material to stakeholders. We verified that HANSOL HOLDINGS conducted materiality assessment with issues identified from analyses of internal and external environments and reported according to the result.

Responsiveness

Has HANSOL HOLDINGS appropriately responded to stakeholder requirements and interest in this Report?

We verified that HANSOL HOLDINGS responded stakeholders' needs and interests through reflecting stakeholders' opinions in the Report. We are not aware of any evidence that HANSOL HOLDINGS's response to significant issues of stakeholders was reported inappropriately.

Impact

Has HANSOL HOLDINGS appropriately monitored its impact on the stakeholders?

We verified that the Company is monitoring and assessing its impact on the stakeholders by conducting an enhanced verification of its standard business activities. Furthermore, it has been verified that the Company appropriately publishes its findings in the Report.

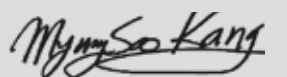
GRI Standards Disclosure

We confirmed that this Report was prepared in accordance with GRI Standards. Based on data HANSOL HOLDINGS provided, we also confirmed a validity of the contents related to Universal Standards and Topic Standards.

June 2023

Myung-Soo Kang

KSA Chairman & CEO



The Korean Standards Association (KSA), established as a special corporation in accordance with the Law for Industrial Standardization in 1962, serves as a knowledge service provider that distributes and disseminates such services as industrial standardization, quality management, sustainability management, KS certification and ISO certification. The KSA is committed to the sustainable development of Korean society as an ISO 26000 national secretary, certified GRI training partner, AA1000 assurance provider, KSI (Korea Sustainability Index) operator, and UN CDM DOE (development operational entity), and as an assurance provider of the Korean government's greenhouse gas energy target management system.

AFFILIATES WITH CERTIFICATIONS

(*as of June 2022)

Affiliate	Certification				
	Environment	Quality	Safety and health	Family-friendly company certification	Others
Hansol Paper	ISO 14001 Green company (Janghang)	ISO 9001 (Daejeon/Janghang/Sintanjin/Cheonan Plants)	ISO 45001 (Daejeon/Janghang/Sintanjin/Cheonan Plants)	Certified as a family-friendly company	Gold-certified in the EcoVadis sustainability evaluation
Hansol PaperTech	ISO 14001 (Headquarters)		ISO 45001 (Headquarters)		
Hansol PNS	ISO 14001 (Paper distribution Division headquarters, Paju converting center)				ISMS (Information Security Management System certification, IT service sector Subsidiary Hansol Coever, Youth-friendly Small and Medium-sized Enterprise)
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 area, international freight forwarding areas, trucking area)
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 Plants)	ISO 9001 (Headquarters/Baran Plants) AS 9100	ISO 45001 (Headquarters) KOSHA-MS (Headquarters/Baran Plants)		ISO 22301 (Business Continuity Management System) ISO 27001 (Information Protection Management System)
Hansol Chemical	ISO 14001 (Jeonju/Ulsan Plants) Green company	ISO 9001 (Jeonju/Ulsan Plants) IATF 16949	ISO 45001 (Jeonju/Ulsan Plants)	Certified as a family-friendly company	A company specializing in materials and parts (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)	Certified as a family-friendly company	Materials/parts/equipment business (Korea Evaluation Institute of Industrial Technology)

AWARDS

(2022-Mar. 2023)

Affiliates	Award Title	Awarding Organization
Hansol Paper	In 2023, Hansol Paper has once again secured the top spot for 20 consecutive years as the "Most Admired Company" in the paper sector in South Korea	KMAC
Hansol HomeDeco	Eye-catching exhibition space	The Seoul Living Design Fair
Hansol Logistics	AEO Utilization Case Sharing Competition (Presented to Mr. Jinseok Lee)	The Korea Customs Service
	Commendation Certificate from Seoul Main Customs Office (Presented to Mr. Jinseok Lee)	The Seoul Main Customs Office
	"DX Sector Environmental Safety Innovation Competition Cooperation Company Day" in 2022	Samsung Electronics
Hansol Technics	Contributions to rural community cooperation fund in 2021	Ministry of Trade, Industry and Energy
	Commendation Certificate (No. 125758, Presented to Senior Executive Mr. Jongik Choi)	Ministry of Agriculture, Food and Rural Affairs
Hansol IONES	"Businessperson Award" in the labor-management harmony (corporate) category at the Anseong City	The Anseong Chamber of Commerce and Industry
	Top company for "Materials, Components, and Equipment in 2022" and a leading exporter with \$300 million in exports	The Ministry of Trade, Industry, and Energy
	2022 Innovation Excellent Cooperative Company	Samsung Electronics
Hansol Chemical	Won the "Outstanding Award" at the "Fire Safety Management Practical Skills Competition" (presented to Employee Ju Hyeon Kang)	
	commendation certificate on Fire Service Day (presented to Employee Ju Hyeon Kang)	Jeollabuk-do
	commendation certificate for "Disaster Safety Inspection Activities in Industrial Complexes" (presented to Employee Seongjin Kim)	
Tapex	The Minister's Award in the "Outstanding Company in Materials, Components, and Equipment"	The Ministry of Trade, Industry, and Energy
	Top Exporter with \$50 million in Export	The Korea International Trade Association

LOCAL BUSINESS SITES

Company	Facilities	Address
Hansol Holdings	Headquarters	25th Floor, Pine Avenue Building B, 100 Eulji-ro, Jung-gu, Seoul, Republic of Korea
	Headquarters	23rd-24th Floors, 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	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
	Environmental Business Headquarters	3rd Floor, Ubiquitous Building, 68 Pangyo-ro 255 beon-gil (616 Sampyeong-dong), Bundang-gu, Seongnam, Gyeonggi-do, Republic of Korea
Hansol PaperTech	Headquarters	80 Daechi 7-gil, Daejeon-myeon, Damyang-gun, Jeollanam-do, Republic of Korea
	Headquarters (paper distribution division)	5th Floor, Ilheung Building, 213 Toegyero, Jung-gu, Seoul, Republic of Korea
Hansol PNS	Headquarters (IT Service Division)	13th-14th Floors, Business Tower, Nuritkum Square Building, 396 Worldcupbuk-ro, Mapo-gu, Seoul, Republic of Korea
	Chungmuro Center	1st-2nd Floors, 22 Changgyeonggung-ro 1-gil, Jung-gu, Seoul, Republic of Korea
	Paju Converting Center	108 Jikji-gil, Paju-si, Gyeonggi-do, Republic of Korea
	Paju IntegRation Center	96 Jikji-gil, Paju-si, Gyeonggi-do, Republic of Korea
Hansol HomeDeco	Headquarters	27th Floor, Specialty Contractors Hall, 15 Boramae-ro 5-gil, Dongjak-gu, Seoul, Republic of Korea
	TI Business Division	15th Floor, 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	22nd Floor, 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 68beon-gil, Daedeok-gu, Daejeon, Republic of Korea
	Busan Center	11 Floor, Jungang Building, 89 Haegwan-ro (Daechang-dong 1-ga), Jung-gu, Busan, Republic of Korea
Hansol Logistics	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
	Sintanjin CY Center	Sintanjin CY, 24-3 Pyeongchon-dong, Daedeok-gu, Daejeon, Republic of Korea
	Sintanjin Center	Hansol Paper Sintanjin 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	4th Floor, 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
	Janghang Center	Hansol Paper Janghang Plant, 149 Jangsan-ro, Janghang-eup, Seocheon-gun, Chungcheongnam-do, Republic of Korea
	Cheonan Center	Hansol Paper Cheonan Plant, 4186 Sejong-ro, Gwangdeok-myeon, Cheonan-si, Chungcheongnam-do, Republic of Korea

Company	Facilities	Address
Hansol Technics	Headquarters	5th Floor, 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
Hansol IONES	Suwon Research Center	801, Digital Empire Building C, 16, Dukyeong-daero 1556beon-gil, Yeongtong-gu, Suwon-si, Gyeonggi-do, South Korea
	Headquarters	2061 Anseong-daero, Gosam-myeon, Anseong-si, Gyeonggi-do, South Korea
Hansol Inticube	Balan Campus	71-29 Balan Gongdan-ro 4-gil, Hwaseong-si, Gyeonggi-do, South Korea
	Headquarters	7 Dongtan Sandan 7-gil, Hwaseong-si, Gyeonggi-do, South Korea
Hansol Chemical	Headquarters	13th-14th Floors, Business Tower, Nuritkum Square Building, 396 Worldcupbuk-ro, Mapo-gu, Seoul, Republic of Korea
	Jeonju Plant	873 Gwahang-ro, Bongdong-eup, Wanju-gun, Jeollabuk-do, Republic of Korea
Tapex	Ulsan Plant	116 Napdo-ro, Nam-gu, Ulsan, Republic of Korea
	Iksan Plant	1101 Yoryong-ri, Samgi-myeon, Iksan-si, Jeollabuk-do, Republic of Korea
	Headquarters	8th Floor, Ace Gwanggyo Tower 1st, 17 Daehak 4-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, South Korea
	Yanggam Plant	62-16 Chorok-ro 532beon-gil, Yanggam-myeon, Hwaseong-si, Gyeonggi-do, South Korea
	Hwaseong Plant	95-4 Goju-ri, Paltan-myeon, Hwaseong-si, Gyeonggi-do, South Korea
Kunsan Plant	Unilab Plant	108 Manyeong-ro, Hyangnam-eup, Hwaseong-si, Gyeonggi-do, South Korea
	Headquarters	38-3 San, Saeman-gukgasu-up, Gunsan-si, Jeollabuk-do, South Korea (Scheduled to be completed in October 2023)

MEMBERSHIP OF ASSOCIATION

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

Hansol Paper
Korea Design Industry Association
Korean Standards Association (KSA)
Korea HR Management Association
Korea Trade Association
Korea Electrical Engineering & Science Association
Korea Audit Association
Seoul Chamber of Commerce and Industry
Daejeon Industrial Association

Hansol PaperTech
Korea Paper Industry Cooperative
Korea Fire Institute
Gwangju, Jeonnam, Jeju PSM Council
Korea Trade Association

Hansol PNS
Korea Software Industry Association
Korea Trade Association
Korea Information and Communication Technology Corporation Association
Korea Listed Companies Association

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Korea Industrial Health Association
Korea Standards Association
Korea Electrical Engineering and Technology Association
Jeonbuk Environmental Management Association
Korea Safety Association Jeonbuk Branch
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Hansol Safety and Health Council
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2023 Hansol Group Sustainability Management Report

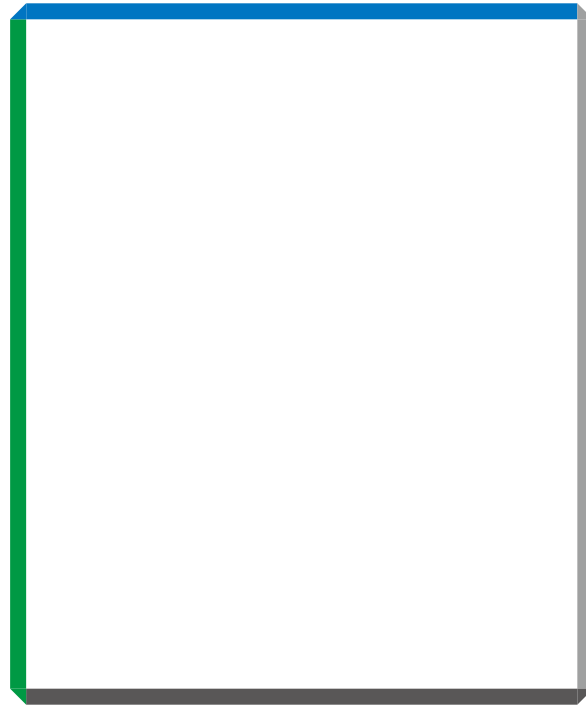
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