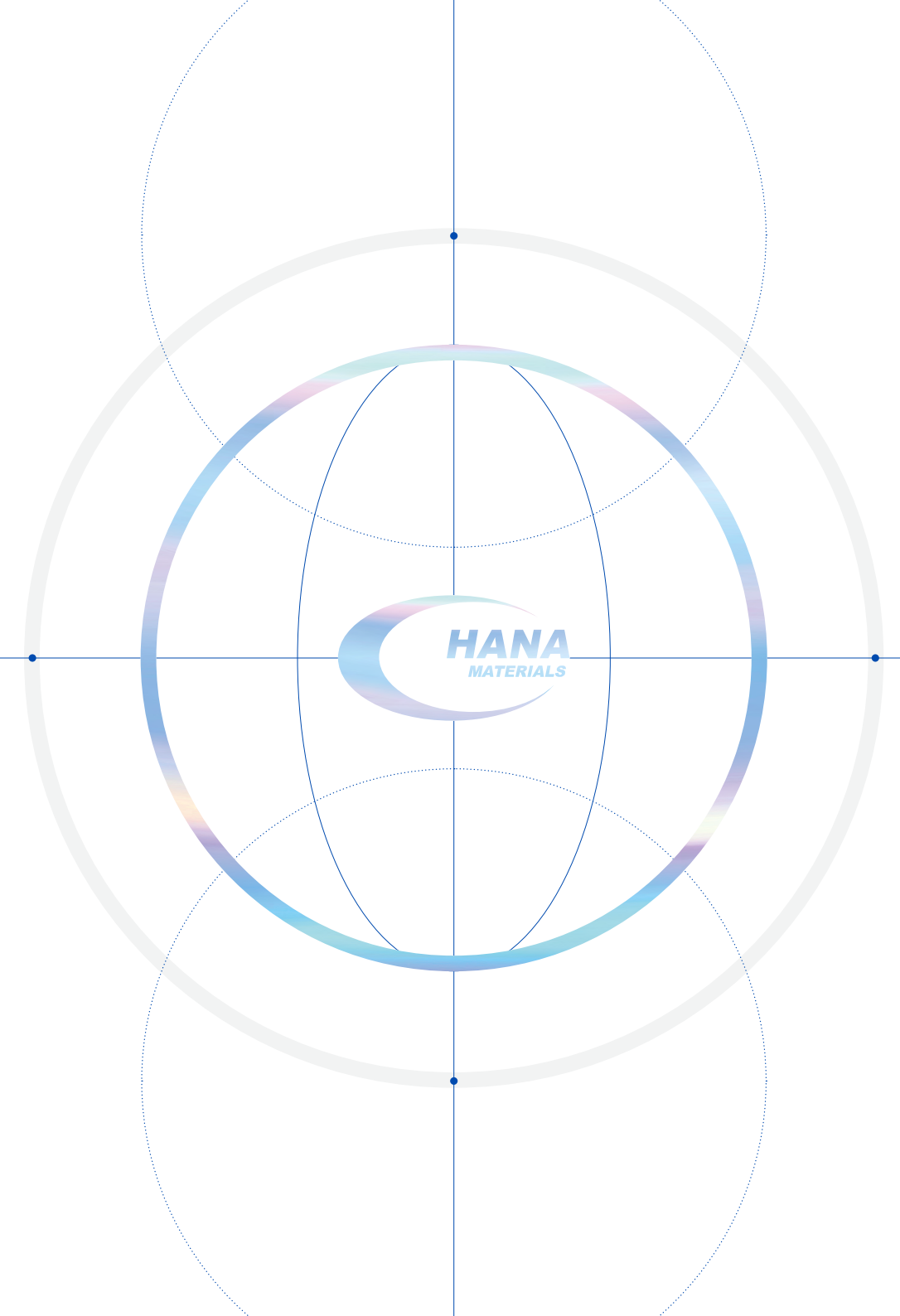


GROWING THE FUTURE WITH HANA MATERIALS

HANA Materials Sustainability Report 2024





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About this report

Report Overview

HANA Materials publishes an annual sustainability report to transparently disclose activities and achievements related to economics, management, society, and the environment to stakeholders.

Reporting Principles

This report follows the GRI(Global Reporting Initiative) Standards 2021. The financial data included in this report adheres to the Korean International Financial Reporting Standards (K-IFRS) and it has been compiled according to separate financial statement standards.

Reporting Period

The reporting period for this report is from January 1, 2024, to December 31, 2024. Important performance outside this period includes some information from before 2024 or the first half of 2025. For quantitative performance, data from the most recent three years (2022–2024) are provided to enhance comparability.

Reporting Scope

The reporting scope of this report includes HANA Materials' domestic business locations on a separate basis. Subsidiaries within the consolidated disclosure scope are excluded from the reporting scope to focus on activities and performance disclosures related to the semiconductor parts business. Financial information is prepared according to K-IFRS separate standards, and any differences in scope and boundaries are separately noted in the footnotes.

Report Assurance

This report has been verified by a third-party auditing firm, British Standards Institution (BSI). The verification statement can be found on page 85 of this report

Report Publication Date

HANA Materials publishes the Sustainability Management Report once annually. The publication date of the 2024 Sustainability Management Report is June 30, 2025.

Inquiries

If you have any questions regarding this report, please contact us using the details below:

Support Team, Hana Materials Inc.

Email hanaesg@hanamts.com

Phone 041-410-1015



Interactive User Guide

The 2024 HANA Materials Sustainability Report was published as an interactive PDF to enable users to move to specific page and/or an associated website. Please use following icons and table of contents on the right side of each page to move to the respective pages.

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“ Step by Step ”

Dear respected stakeholders,
This is Kim Hyun-joo, CEO of HANA Materials.

We deeply thank all interested parties who continuously show interest and support for HANA Materials.

To transparently share the progress and achievements of ESG management, HANA Materials has published its third sustainability report this year. This report sincerely reflects the challenges faced by HANA Materials in realizing ESG values and the strategic efforts made to address them. Starting with the launch of the ESG Committee in 2023, in 2024 we established the 2050 Net Zero Goal in response to international demands and further advanced our climate change response system. Despite the complex management environment marked by ongoing geopolitical risks and global economic uncertainties, we are pursuing ESG management centered on three core values to achieve sustainable growth while simultaneously enhancing profitability and quality.

Practicing responsible management through sound governance and ethical leadership.

HANA Materials aims to realize sustainability management through responsible corporate operations based on ethics and transparency. We systematically manage key issues through the ESG Committee and Human Rights Impact Assessment Committee, strengthening internal controls with the goal of achieving a 100% ethics training completion rate for all employees. Moreover, we are establishing a culture that respects human rights and diversity, and advancing a governance system based on fairness and responsibility to grow into a trusted enterprise.

Pursuing sustainable growth through mutual prosperity.

HANA Materials achieves sustainable growth through mutual prosperity with diverse interested parties including employees, suppliers, and local communities. Externally, we promote co-growth based on close communication with suppliers, and continue substantial social contributions through job creation in local communities, expansion of disabled employment, and revitalization of the regional economy. Internally, we foster an inclusive organizational culture where members from diverse backgrounds such as rank, gender, and age are respected. Under the labor-management relations vision of “Zero Conflict,” we build trust-based labor-management relations and facilitate smooth communication. Additionally, we enhance employee satisfaction and engagement through improved working conditions for work-life balance and employee participation-centered programs.

Realizing ESG values through EHS Management.

Based on ISO 14001 and ISO 45001 certifications, HANA Materials is promoting systematic Environment, Health and Safety (EHS) Management. From the environmental perspectives, we conduct environmental assessments for each department and continue company-wide efforts to minimize waste and hazardous substance generation. Additionally, by operating a real-time waste management system and recycling water resources, we are establishing a resource circulation structure and actively practicing environmental protection.

Furthermore, regarding safety, we prioritize EHS in all manufacturing processes by strengthening accident prevention-focused work procedures. Through regular safety training, emergency response drills, and a mobile safety management system, we strive to create a work environment where everyone can work with peace of mind.

Dear interested parties, HANA Materials' challenge to create a better world is just beginning. We ask for your continued interest and support in our journey toward sustainable growth and responsible management.

Kim Hyun-joo
CEO of HANA Materials Inc.

HYUN JOO KIM
PRESIDENT / HANA Materials

Company Overview

“ HANA Materials prioritizes customer value and continually challenges itself and conducts research to provide diverse services to its customers. ”

Since its establishment in 2007, HANA Materials, a specialist in semiconductor parts and materials, has contributed to the growth of the domestic semiconductor industry through technological advancements and localization efforts. Amidst numerous changes and challenges, HANA Materials has strengthened its competitiveness and secured future growth drivers through quality improvement, investment in innovative technologies, and the initiation of new businesses, moving towards becoming the world’s leading semiconductor parts and materials solutions company. We are committed to providing quality and service that meet our customers’ needs and fulfilling our social responsibilities as a member of the global community to prepare for a sustainable future.

Company Overview

Company Name	HANA Materials Inc.
CEO	Kim Hyun Joo
Date of Establishment	January 23, 2007
Headquarters Address	42, 3gongdan 3-ro, Seobuk-gu, Cheonan-si, Chungcheongnam-do, Republic of Korea
Main Business	Semiconductor materials and parts business
Main Products	Silicon Parts(Ring/Electrode) Silicon Carbide Part(Ring)
Website	www.hanamts.com



Number of Employees^{1,2)}
754



Total Assets¹⁾
KRW 573.9 billion



Credit Rating¹⁾
BBB

1) As of December 2024
2) Including full-time, contract employees, and executives

Management Philosophy

Vision

The top global semiconductor parts /
material solution provider

Mission

The leading material and parts company pursuing the best with
customers and outstanding technologies

Core Values



World Wide
Customer-Centric



World Best
Quality



World First
Technology Innova-
tion

Strategic
Direction

Reinforce existing
businesses

- ① Reinforcement of capacity leader-ship
- ② Diversifying of new materials and parts
- ③ Securing competitiveness in manufacturing/quality

Diversifying products/
markets

- ④ Expand internal market share of customers
- ⑤ Reinforce R&D and sales com-petency
- ⑥ Secure overseas production/sales bases

Secure the foundation for
future growth

- ⑦ Early commercialize of W-PJT
- ⑧ Securing expertise in all areas/fields
- ⑨ Promote new business (diversification of buseinsses)

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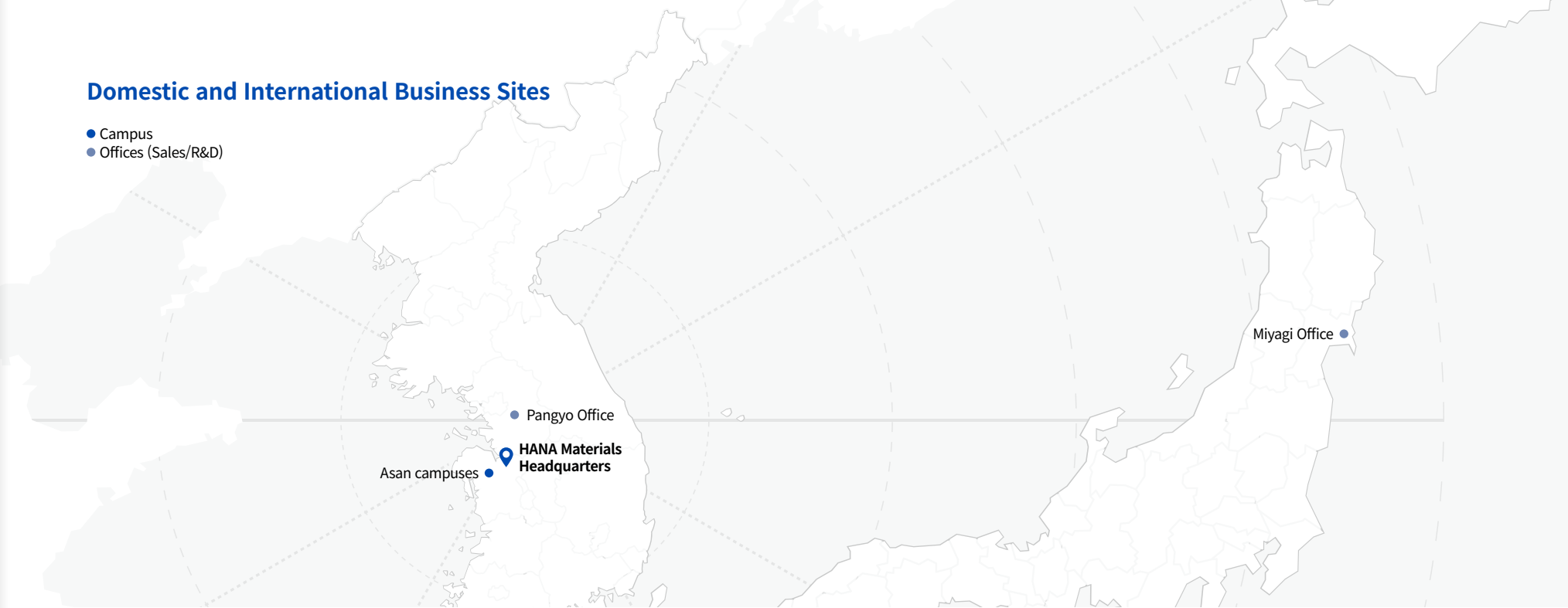
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회사소개

Domestic and International Business Sites

- Campus

● Offices (Sales/R&D)





Headquarters (Cheonan Campus)






42, 3gongdan 3-ro, Seobuk-gu, Cheonan-si, Chungnam Province
Main Business: Parts Manufacturing, R&D, etc.

Asan campuses





77-50, Yeonam Yulgeum-ro, Eumbong-myeon, Asan-si, Chungnam Province
Main Business: Parts Manufacturing

Offices

Pangyo Office

35, Pangyo-ro 255beon-gil, Bundang-gu, Seongnam-si, Gyeonggi Province
Main Business: Planning, R&D, Sales, CS, etc.

Miyagi Office

12-25, Futsukamachi, Aoba-ku, Sendai-shi, Miyagi Prefecture
Main Business: Sales, CS, etc.

※HANA S&B Sobujang No.1 New Technology Association and HANA S&B Investment Ltd., which are consolidated subsidiaries, are excluded from this reporting scope.

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History

2013

- Apr. Renamed from HANA Silicon Inc. to HANA Materials Inc.

2011

- Jun. Acquired ISO 14001 Environmental Management System certification



2008

- Nov. Selected as a Clean Workplace by the Ministry of Employment and Labor

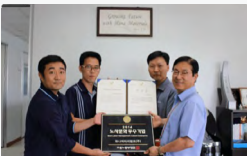
2007

- Jan. Established HANA Silicon Co., Ltd.
- Nov. Acquired ISO 9001 Quality Management System certification



2014

- Dec. Presidential Commendation for Labor Management Win-Win Cooperation
- Aug. Selected as a Best Labor-Management Culture Enterprise by the Ministry of Employment and Labor



2015

- Dec. Awarded the Commendation for Contributions to Job Creation by the Minister of Employment and Labor
- Mar. Awarded the Minister of Economy and Finance's Commendation on Taxpayers'



2017

- Dec. Awarded \$20 Million Export Tower
- Apr. Listed on KOSDAQ



2021

- Nov. Awarded Presidential Citation at the National Productivity Competition
- May Production of 600mm Single Crystal

2020

- Jul. Awarded Minister of Employment and Labor Citation for Contribution to Job Creation
- Feb. Selected as Youth-Friendly Small Giant Company (Ministry of Employment and Labor)



2019

- Dec. Awarded the Commendation for Contributions to Job Creation by the Minister of Employment and Labor
- Aug. Selected as a Best Labor-Management Culture Enterprise by the Ministry of Employment and Labor
- Jun. Won the Best Next-Generation Company Award at the Korea KOSDAQ Awards
- Apr. Received Korea Employment Agency for Persons with Disabilities President's Award and Cheonan City Mayor's Award for outstanding employment of persons with disabilities
- Jan. Completed construction of Asan Campus 1



2022

- Oct. Certified as an Excellent Employer for Persons with Disabilities
- Jun. Acquired ISO 45001 EHS management system



2023

- Sep. Selected for Top Companies in Environment Jobs by the Ministry of Employment and Labor



2024

- Mar. Awarded Presidential Citation as Exemplary Taxpayer on the 28th Taxpayer's Day
- Nov. Completed construction of Asan Campus 2



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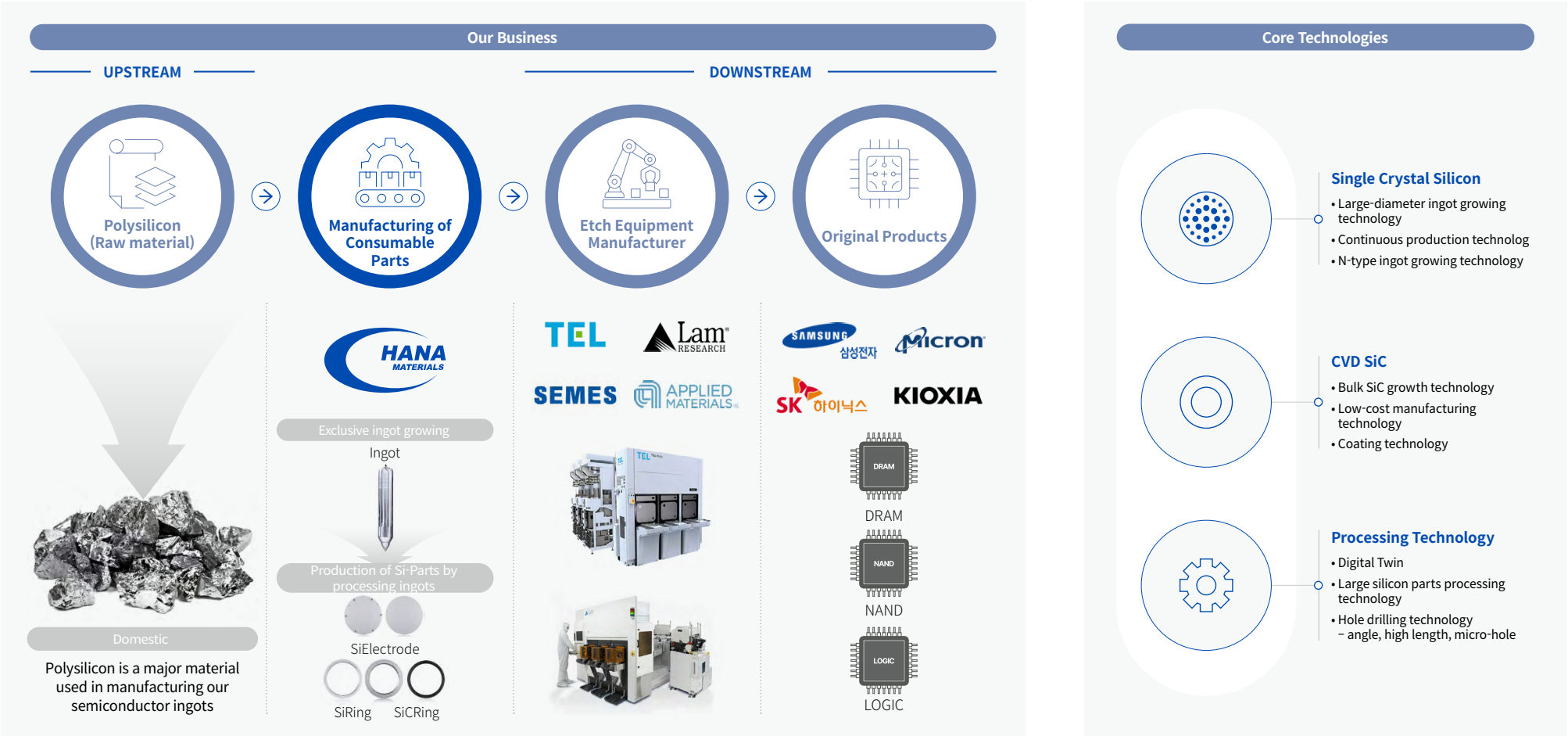
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Main Business Areas

HANA Materials operates primarily in the semiconductor parts business, which produces silicon parts (Si-Parts) and silicon carbide parts (SiC-Parts) used in semiconductor manufacturing processes. The products are crucial for the etching process, a core manufacturing step in semiconductors, especially with the introduction of high-density plasma environments and the spread of Dry Etching processes to accommodate high integration and finer line widths in recent semiconductor processes. We have established an integrated production system from material production to processing and maintain a competitive advantage through technological partnerships and transactions with major semiconductor equipment companies worldwide.



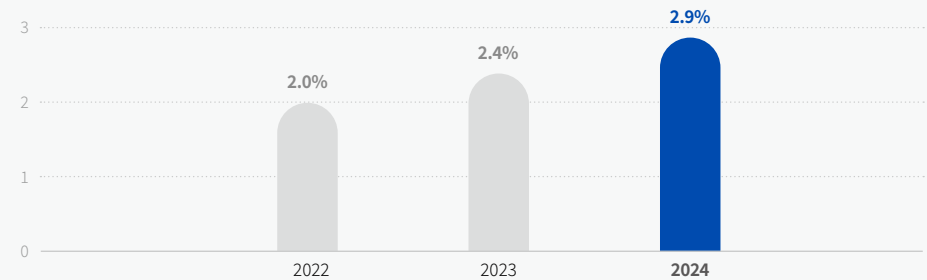
Business Overview

R&D and Product Competitiveness

The quality of the products we produce significantly impacts the productivity and yield of semiconductor processes. Research and development and technological innovation are critical to our product competitiveness and the sustainable growth of our company. We have secured optimal ingot growth capabilities and precision parts processing capacity through continuous R&D investment. We are expanding our research and development in the silicon carbide business (SiC) to manage the high temperatures and precise processes in semiconductor manufacturing. Additionally, by developing technology for dual material bonding and utilizing patents, we have introduced a new product to the market, the Hybrid Ring, which combines Si and SiC. This effort aims to diversify our semiconductor parts materials, enabling us to flexibly adapt to changes in manufacturing processes and continue providing high-quality products to our customers.



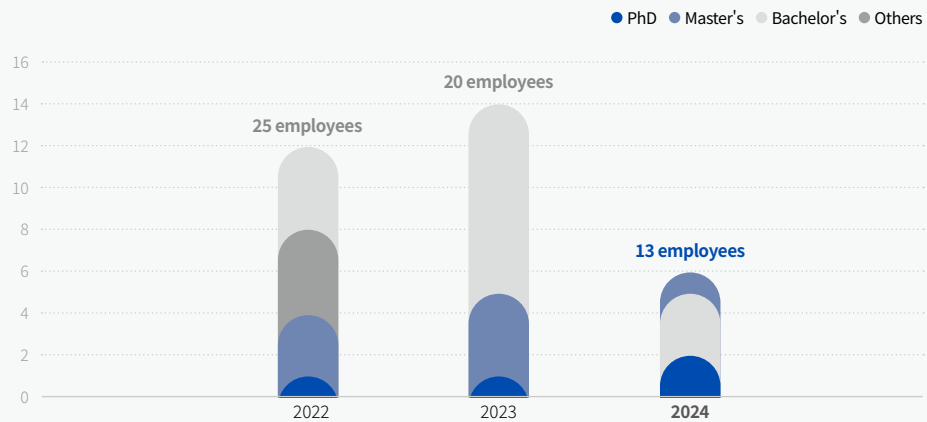
R&D Expense Ratio to Sales



Patent Status

Category	Before 2020	2020	2021	2022	2023	2024
Registered	33	3	3	0	3	6
Total					48	

Research Personnel Status





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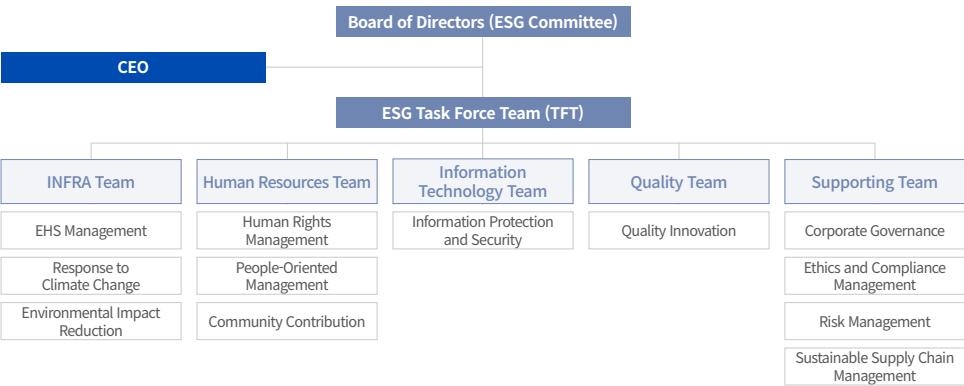


ESG Management System

ESG Governance

HANA Materials has established and operates a company-wide ESG governance system that extends from the ESG Committee to the operational departments to systematically promote sustainability management. The ESG Committee under the Board of Directors serves as the highest decision-making body, reviewing significant ESG issues annually, identifying and managing the impact of each issue. Furthermore, it deliberates and approves mid-to long-term goals and strategies linked to significant issues, as well as major investment proposals. In 2024, the ESG Committee convened twice to resolve matters related to ESG improvements and Carbon Neutrality strategies, among other Sustainability Management topics. In the first half of 2025, it conducted a review of significant issues and their respective impacts. The CEO regularly monitors performance related to the implementation of ESG strategies, manages and supervises execution activities, and submits agenda items to the ESG Committee to support appropriate decision-making. The ESG Task Force Team (TFT) is the operational department responsible for establishing and executing detailed action plans, thereby strengthening ESG execution capabilities. Each operational department identifies improvement areas related to Environmental, Social, and Governance aspects and implements tasks accordingly; major matters among these are submitted as agenda items to the ESG Committee for final approval.

ESG Promotion Organization



ESG Committee Resolutions

Date	Category	Agenda
2024.02.05	Approved	• 2024 ESG Improvements
2024.12.18	Approved	• Carbon Neutrality Strategy
2025.05.14	Reported	• ESG Materiality Assessment Report

ESG Management Strategy

HANA Materials continuously develops its ESG management activities by establishing promotion strategies for each area of Environment, Social, and Governance and deriving detailed action plans.



1) As of 2022, reduce emissions by 40% compared to Business As Usual (BAU) levels by 2030.
2) Achieve an 80% recycling rate by 2030 based on the three-year average unit recycling amount from 2022 to 2024.
3) Pursue a 5% annual reduction in water usage per unit based on the three-year average from 2022 to 2024 until 2030.

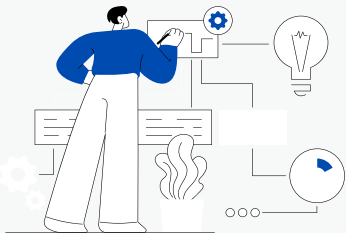
Double Materiality Assessment

Double Materiality Assessment Process

The materiality assessment process evaluates both the external environmental and social factors that impact our financial status and the impact our management activities have on the external environment. This dual-perspective assessment helps identify material issues that significantly affect our sustainability. This materiality assessment was designed based on the European Sustainability Reporting Standards (ESRS) methodology and proceeded through four stages: ① ESG Topic Selection ② Identification of Impact, Risk, and Opportunity ③ Evaluation of Impact, Risk, and Opportunity, and ④ Selection of Material Issues.

Double Materiality Assessment Process

Step01.

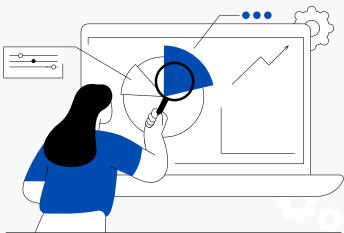


ESG Topic Selection

A total pool of 96 issues was composed by incorporating industry characteristics on the 92 subtopics presented by ESRS, and based on ESRS's subject classification table, 22 long-lists covering all issues were selected.

Conducted an assessment based on five criteria: internal company agenda, global disclosure standards, benchmarking of key issues in the same industry, value chain analysis, and media article analysis, and then calculated the relevance of each issue and selected nine short-lists.

Step02.



Identification of Impact, Risk, and Opportunity

Based on internal and external environmental analysis, short-list issues were derived, and environmental and social impacts as well as financial risks and opportunities for each issue were identified. Disclosure materials such as relevant laws and regulations, media, website, and sustainability management reports were reviewed for each issue. The identification of impact, risk, and opportunity was grounded in reflecting the demands of interested parties including customers, investors, and suppliers, as well as external factors. Through this process, the impacts of HANA Materials' activities on the environment and society and the financial impacts of external environments were derived.

Step03.



Evaluation of Impact, Risk, and Opportunity

To evaluate the impact, risk, and opportunity of issues selected in the short-list, an evaluation scale was designed, and an online survey was conducted targeting 138 internal and external interested parties including HANA Materials employees, customers, suppliers, investors, and community members.

*The survey incorporates perspectives on financial materiality and environmental/social impact for key issues.
- Survey period: March 12, 2025 to March 25, 2025
- Number of respondents: 138 (98 internal employees; 40 external interested parties including customers, suppliers, investors, community, etc.)

Step04.



Selection of Material Issues

The environmental and social impact materiality and financial materiality of key ESG issues were comprehensively analyzed to prioritize the nine short-lists.

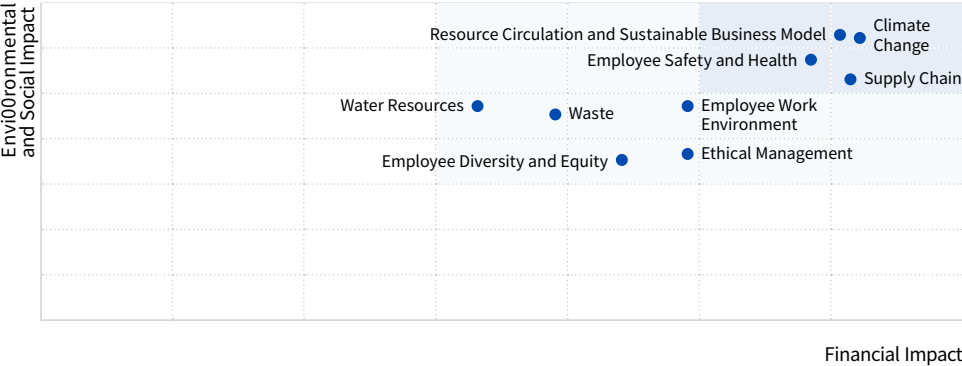
By integrating quantitative analysis results from surveys of internal and external interested parties with qualitative analysis results, four material issues were selected.

The material subjects are reviewed by management and finally reported to the ESG Committee, where they are incorporated into the company-wide ESG promotion strategy. The management and promotion direction of the derived core subjects, key achievements, and future plans are included in the sustainability report.

Double Materiality Assessment

Double Materiality Assessment Results

In 2024, the materiality assessment at HANA Materials identified material issues through stakeholder surveys, 'climate change,' 'supply chain,' 'resource circulation and sustainable business model,' and 'employee safety and health' issues were rated highest in terms of impact. We disclose detailed evaluation results, including the scale of impact for each issue.



Comparison of Material Issues from Previous Year

Comparing the material issues of 2023 and 2024, the issue of 'Resource Circulation and Sustainable Business Model' replaced 'Waste Emissions Management and Minimization' among the top issues. This change indicates an increased importance of not only waste generated during business operations but also efficient resource use and the establishment of resource circulation systems. Additionally, the higher ranking of the climate change issue compared to the previous year reflects the growing environmental, social, and economic impacts of climate change worldwide, reinforcing the materiality of the climate crisis faced by the company.

Category	2023 Material Issues	Category	2024 Material Issues
E	Enhancement of Energy Efficiency and Use of Renewable Energy	E	Climate Change
G	Strengthening Ethical Management and Compliance	S	Supply Chain
E	Management and Reduction of Greenhouse Gas Emissions	E	Resource Circulation and Sustainable Business Model
E	Management and Minimization of Waste Emissions	E	Resource Circulation and Sustainable Business Model
S	Diversification and Stabilization of the Supply Chain	S	Employee Safety and Health
S	Strengthening Safety and Health Management Systems	S	Employee Safety and Health

Impact Analysis of Material Issues in 2024

No.	Material Issue	Social and Environmental Impact	Negative/Positive	Impact Level	Financial Impact	Risk / Opportunity	Impact Level	GRI	Reporting Location
1	Climate Change	• Use of energy such as diesel, gasoline, electricity, and city gas in manufacturing processes leads to greenhouse gas emissions causing climate change effects including abnormal weather, natural disasters, changes in precipitation, sea level rise, desertification, water shortages, spread of tropical diseases, and loss of biodiversity.	Negative Impact	●●●	• Strengthened greenhouse gas emission regulations increase costs for purchasing emission allowances and ESG disclosure compliance; climate change drives up energy prices, raising transportation and manufacturing costs.	Risk	●●●	GRI 302 GRI 305	34-37
2	Supply Chain	• To prevent risks arising from suppliers, we operate supplier management and evaluation processes and engage in shared growth activities to build a cooperative system that enhances supply chain sustainability and reliability.	Positive Impact	●●●	• Human rights violations or legal non-compliance within suppliers can lead to legal fees, trust recovery costs, sales decline, stock price drops, and additional costs such as liquidated damages due to supply disruptions from contract termination.	Risk	●●○	GRI 308	48-50
3	Resource Circulation and Sustainable Business Model	• Reducing waste generation throughout all manufacturing activities from raw material use to disposal, increasing recycling rates by reusing residual Ingots, enhancing resource efficiency by using recycled raw materials, and minimizing environmental pollution.	Positive Impact	●●●	• Recycling raw materials in reusable processes and using recycled raw materials improve operational efficiency and reduce operating costs.	Opportunity	●●●	GRI 306	27
4	Employee Safety and Health	• Safety accidents can cause injury, illness, or death to employees within the supply chain, deteriorate supply chain stability, threaten employee health, and reduce quality of life for employees' families.	Negative Impact	●●○	• In case of safety accidents or serious disasters, fines, penalties, and compensation costs may arise due to violations of laws such as the Serious Accident Punishment Act; expenditures for safety and health activities and trust recovery costs may also occur.	Risk	●●○	GRI 403	18-26, 32-33



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Stakeholder Engagement

Stakeholder Communication Channels

HANA Materials considers communication with stakeholders with mutual influences crucial in promoting ESG (Environmental, Social, and Governance) management. We manage stakeholders' interests through various communication channels, including customers, employees, shareholders and investors, partners, local communities, and the government. This helps to reduce negative impacts, enhance positive impacts, and incorporate stakeholder opinions into overall management activities. Additionally, we actively participate as members of the Korea International Trade Association, KOSDAQ Association, Korea Electric Engineers Association, Chungnam-Bukbu Branch, Korea Industrial Safety Association, Korea Fire Safety Association, Eumbong-myeon Development Council, Korea Productivity Center, and Federation of Middle Market Enterprises of Korea, building industry networks. We share and communicate new information and best practices with other companies through this.

Category	Main Communication Channels	Key issues	HANA Materials Communication Status
Shareholders/Investors 	<ul style="list-style-type: none">• Corporate presentations (NDR), corporate visits	<ul style="list-style-type: none">• Business performance and growth drivers• Shareholder return policies	<ul style="list-style-type: none">• Quarterly NDR (Economic performance and operating status)• Establishment and disclosure of dividend policy
Customers 	<ul style="list-style-type: none">• Customer satisfaction surveys• Customer visits• VOC (Vocie of Customer) surveys	<ul style="list-style-type: none">• Product quality• Customer satisfaction• Strengthening technological competitiveness	<ul style="list-style-type: none">• Regular customer satisfaction surveys and identification of improvement areas• Research to improve product quality and enhance competitiveness
Employees 	<ul style="list-style-type: none">• Joint labor-management conference• Internal newsletters and broadcasts• Online bulletin boards• Online communication channels	<ul style="list-style-type: none">• Employees' rights• Work-life balance and welfare• Talent development and capacity building	<ul style="list-style-type: none">• Operation of capacity-building programs• Protection of labor-management negotiation rights
Partners 	<ul style="list-style-type: none">• Technical meetings• Online communication channels	<ul style="list-style-type: none">• Employees' rights• Work-life balance and welfare• Talent development and capacity building	<ul style="list-style-type: none">• Support for stable contractual relationships• Partner quality control
Local Communities 	<ul style="list-style-type: none">• Social contribution activities• Meetings• MOUs (Memorandum of Understanding)	<ul style="list-style-type: none">• Social contribution activities• Activation of local communities• Minimizing negative impacts around business sites	<ul style="list-style-type: none">• Operate CSR program for vulnerable groups
Government 	<ul style="list-style-type: none">• Conferences• Meetings• Telephone communication with department officials	<ul style="list-style-type: none">• Anti-corruption• Compliance• Taxation	<ul style="list-style-type: none">• Efforts to prevent unfair practices and corruption• Transparent accounting disclosure and tax payments• Compliance with regulations/laws



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EHS Management

EHS Management System

EHS Management Policy

HANA Materials has established an EHS Management Policy to minimize environmental pollution and ensure that all employees work in a safe environment. This policy consists of five key elements designed to minimize negative impacts across all business activities and the entire value chain. To ensure strict adherence, we undertake various activities such as establishing internal processes, identifying and implementing improvement activities, and expanding stakeholder communication, thereby enhancing the value of EHS Management.

EHS Management Strategy

ESG Management Strategy	Detailed Implementation Tasks	
Advanced EHS System	Utilization of Mobile App	Digitalization of EHS System
Establishment of EHS Culture	Strengthening EHS Communication	Employee Engagement
Zero Safety Accidents	Hi-Five Zero Activities	Enhancement of Safety Design
Strengthened ESG Management	Response to Climate Change	ESG Campaign

EHS Management Policy

Hana Materials Inc. recognizes that the establishment of an environment, safety, and health management system is a key factor for the company’s sustainable growth, and actively implements improvement activities.

- ❶ Consider environment, safety and health as top priorities in all stages of product manufacturing.
- ❷ Identify laws related to safety and health and requirements of stakeholders and comply with regulations.
- ❸ Minimize environmental pollution and impacts arising from production activities.
- ❹ Faithfully disclose the performance of environment, safety and health management activities to stakeholders.
- ❺ Create safe and healthy working environment to improve the health of employees.

Kim Hyun-joo, CEO of HANA Materials Inc.

Our Efforts for EHS Management Policy

- ❶ We conduct environmental impact and risk assessments at all manufacturing stages and carry out continuous improvement activities.
- ❷ We have established and operated an internal process to strictly comply with the laws and requirements of stakeholder.
- ❸ We are conducting monitoring and improvement activities to minimize the impact on the environment.
- ❹ By publishing the ESG report, we aim to communicate with stakeholders by disclosing environmental management performance and details of activities.
- ❺ We strive to create a healthy working environment for our employees and partners.

EHS Management

EHS Management System

EHS Management Organization

Organization and Reporting System

To facilitate systematic and prompt decision-making regarding the environment and safety, we have appointed a Chief Safety Officer (CSO) directly under the CEO. The CSO oversees the dedicated EHS organization and reports directly to the CEO on related issues. The EHS organization regularly inspects compliance with EHS regulations and associated laws. We have appointed responsible managers for each business sites to strengthen EHS issue response and integrated management at each site.

Operational Activities

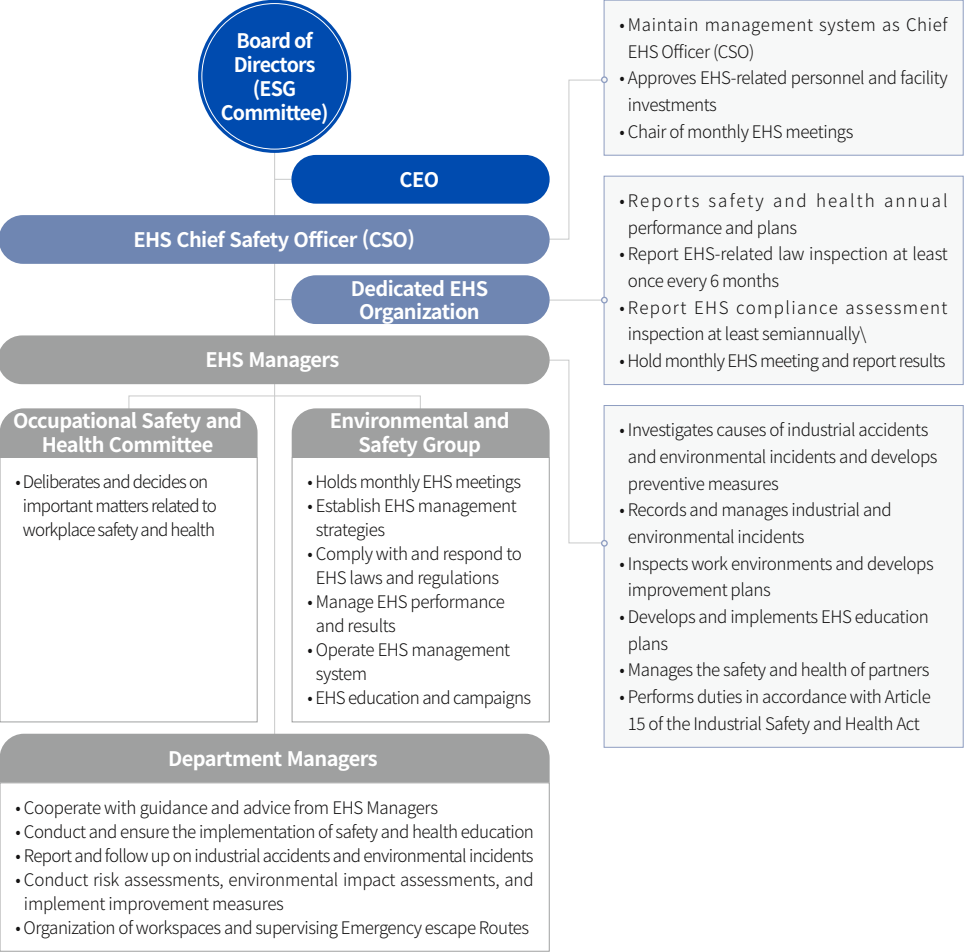
We hold monthly EHS meetings for discussion. To gather opinions on safety and health, deliberate, and make decisions on related matters, each campuses operates the Industrial Safety and Health Committee quarterly. Additionally, we have formed a separate cooperative council with partners to ensure the safety and health of partner employees in accordance with relevant laws, such as the Industrial Safety and Serious Accidents Punishment Act.

EHS Regular Reporting

We regularly report key strategies and performance related to significant EHS issues to executive level and the Board of Directors. The dedicated EHS organization provides the Board with an annual report on performance and plans once a year and submits interim reports twice a year to top management. For employees, EHS-related performance and issues are reported monthly, with discussions on improvement measures.

Category	Reporting Timing and Agenda
Board of Directors	Regular report once a year, reporting annual performance and plans
Executive Level	Regular report twice a year, dierectly report to CSO
Employees	Regular report once a month, sharing environment management progress and issues

EHS Organization



EHS Management

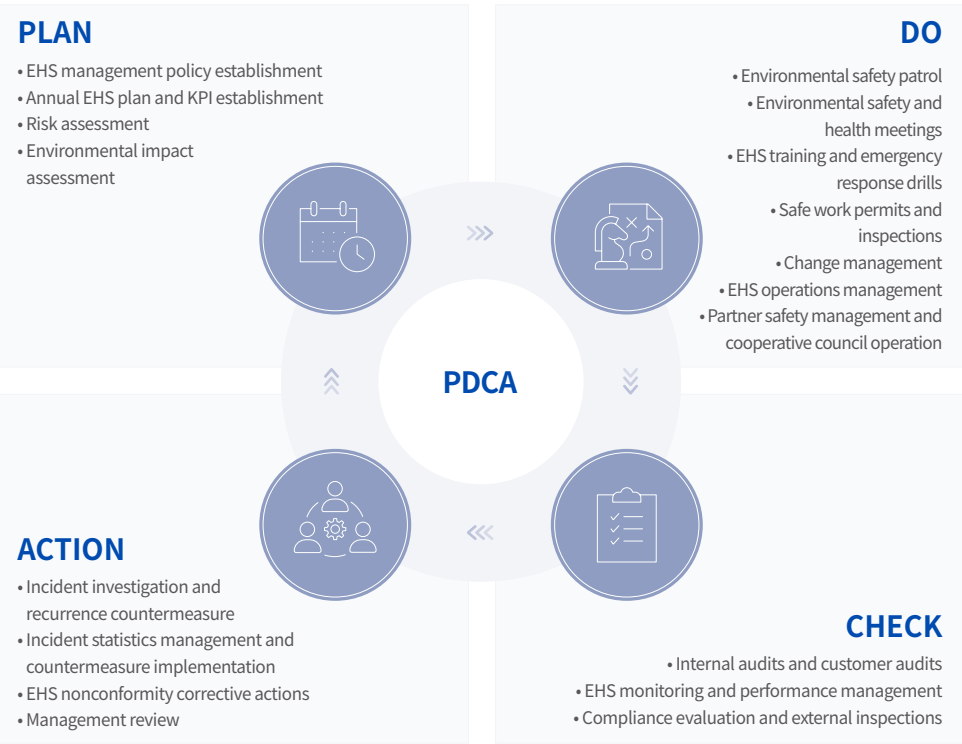
EHS Management System

Operation of the EHS Management System

Operation Process

To manage environmental impacts across our business and protect employee safety and health, we operate the Environmental Safety and Health Management System according to the PDCA (Plan-Do-Check-Action) cycle. We set goals through annual Environmental, Health, and Safety (EHS) plans and implement activities to reduce negative environmental impacts and to maintain safety and health within the workplace, such as EHS meetings. These activities are regularly monitored, and corrective actions are taken to resolve any issues. To prevent recurrence, we include the identified issues in the annual EHS plan and continuously improving the status.

EHS PDCA Cycle



Operational and Management Indicators

To strengthen the execution of EHS management, we set annual EHS goals based on TRIR* and department-specific KPI management indicators and link environmental management performance with employee rewards. The KPI management indicators are comprised of preventive and post-management indicators, allowing for a comprehensive evaluation of EHS activities.

*TRIR: Total recordable incident rate = Total recordable injuries X 200,000 / Total work hours

EHS KPI Management Indicators

Category		Content	Evaluation Frequency
Preventive Indicators	Safety Education	Regular safety and health education	Quarterly
		Special safety education	Quarterly
		Education for new employees	Quarterly
		Education according to assigned work change	Quarterly
	Continuous Improvement	Addressing issues from environmental safety patrols	Semiannually
		Proposals for stability improvement, near-miss cases	Quarterly
		Identifying/improving risk assessments	Monthly
Post-management Indicators	EHS Meetings	Identifying/improving environmental impact assessments	Monthly
		Operating EHS meetings	Monthly
	Emergency Response Training	Group-level emergency training	Semiannually
		Plant-level emergency training	Semiannually
	Incident Response and Recurrence Prevention	Establishment of accident response and recurrence prevention countermeasures	As needed
	Legal Compliance	Regulatory/compliance nonconformity inspection	As needed

EHS Goal Management Awards

We award groups that achieve excellent performance in EHS-related KPIs. Awards are given not only to the overall top and excellent departments that directly contributed to KPI achievements but also to the top departments that indirectly contributed.



EHS Management

EHS Management System

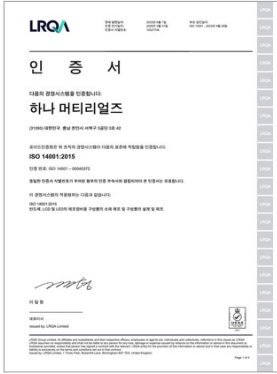
EHS Management System Certification

ISO 14001 Certification

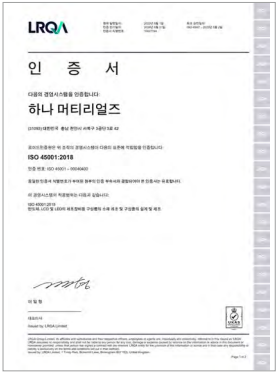
ISO 14001 specifies the requirements for an environmental management system that enables an organization to minimize its environmental impact through the establishment of environmental policies and objectives. We first obtained ISO 14001 certification in 2011 and have maintained and managed it through annual third-party audits. To ensure systematic operation of the environmental management system, we have established processes for environmental impact assessment and management, EHS (Environmental, Health, and Safety) legal review and compliance, and emergency preparedness and response. Additionally, we have enhanced our chemical substance management system. We will continue to promote systematic environmental management based on ISO 14001, striving to minimize environmental impacts across all stages of business operations, from product development and production to disposal.

ISO 45001 Certification

ISO 45001 certification is an international standard for occupational health and safety management systems, focusing on setting and achieving safety and health objectives for workplace safety. We have obtained and maintained this certification for our Cheonan and Asan campuses, undergoing regular internal audits and third-party audits annually. We have obtained and maintained ISO 45001 certification for our Cheonan and Asan Campuses, undergoing regular internal audits and third-party audits annually. Through this, we provide a safe working environment for our employees and workers from other organizations, continually improving the workplace environment and systematically establishing and operating an integrated Environmental Safety and Health Management system.

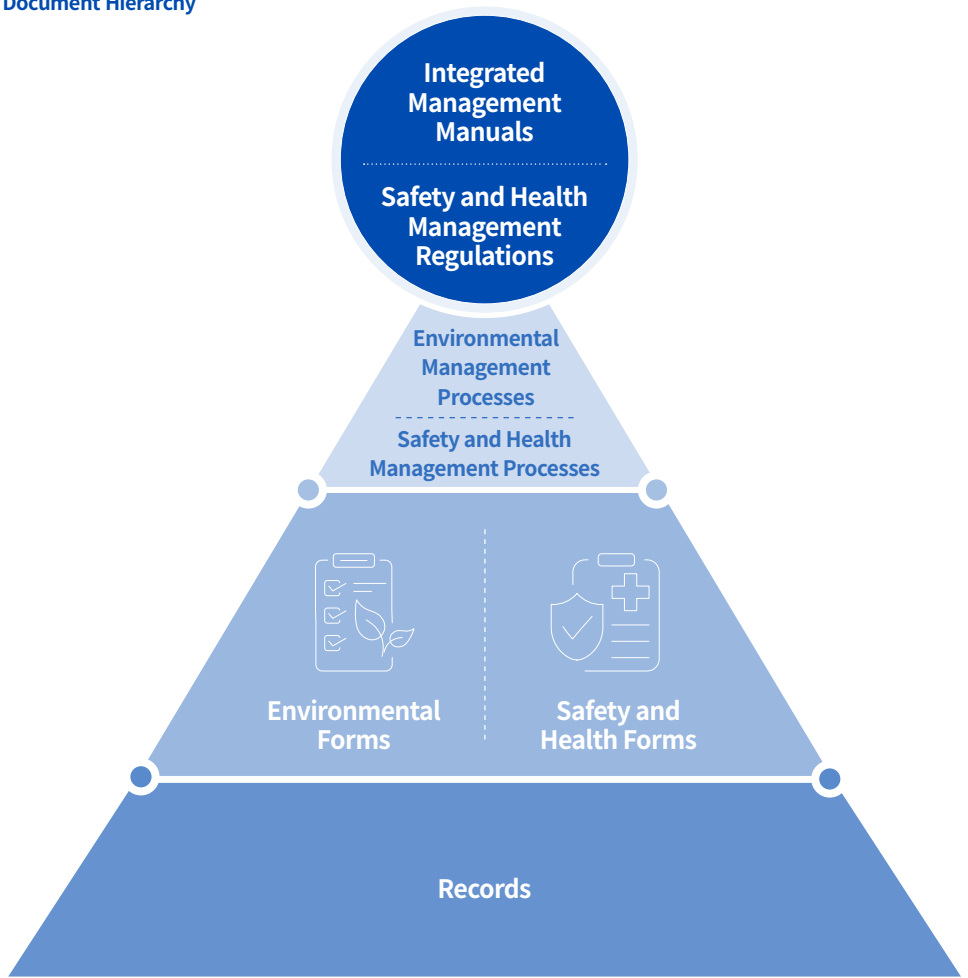


ISO 14001



ISO 45001 Certification

Document Hierarchy

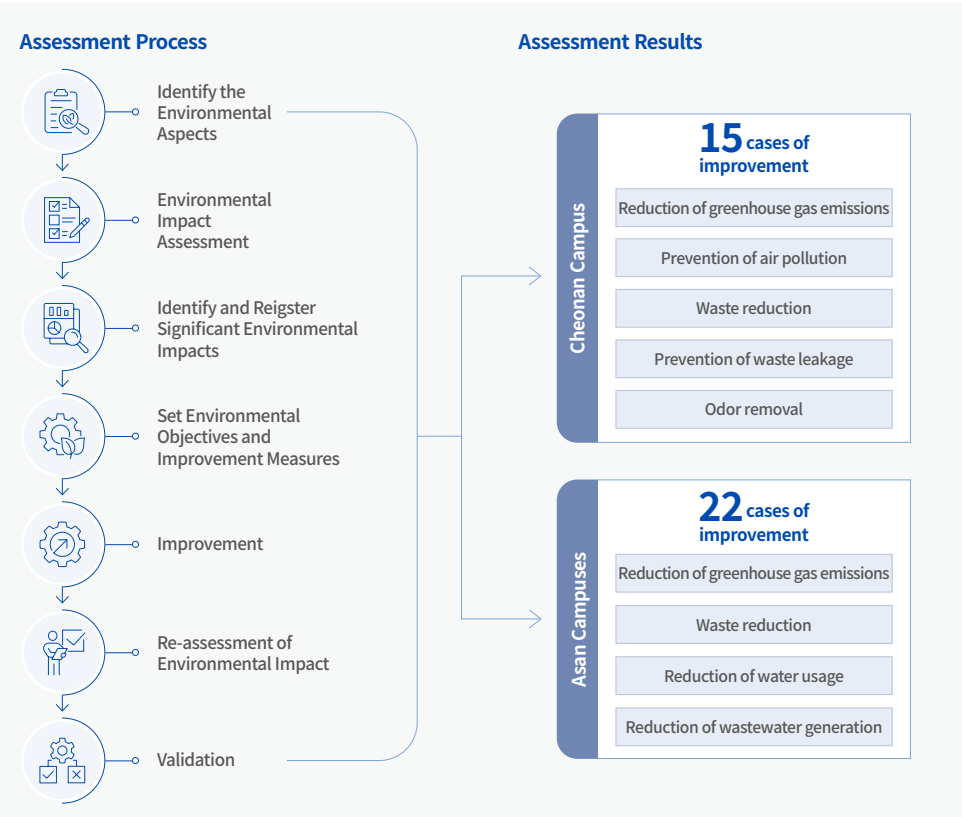


EHS Management

EHS Management Risk Management

Environmental Impact Assessment

HANA Materials conducts annual environmental impact assessments, comprehensively reviewing internal and external issues and stakeholder requirements to identify and mitigate environmental management risks. In 2024, 15 cases of the Cheonan Campus and 22 cases of the Asan Campuses were improved. Each department reflects the results of the environmental impact assessments and the rate of improvement implementation as bonus items for EHS management KPIs. Additionally, the results of the environmental impact assessments are reviewed as a priority before investment deliberations.



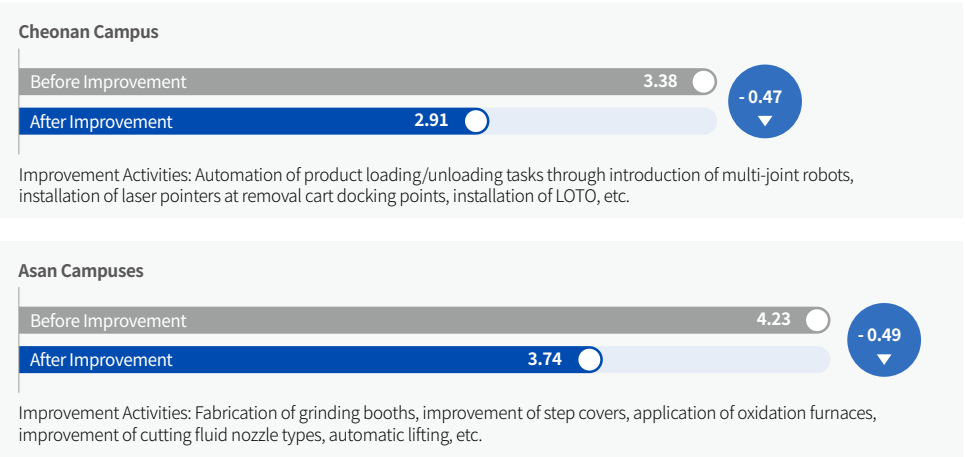
Work Risk Assessment

HANA Materials conducts quantitative risk assessments to enhance the safety capabilities of field operators and to identify potential hazards during operations. The significant risk factors identified through these assessments are eliminated in advance, and the improvements are reflected in our safety and health-related Key Performance Indicators (KPIs) to ensure practical implementation. In 2024, we identified a total of 139 risk factors at the Cheonan and Asan Campuses. We implemented improvement activities such as installing protective facilities and modifying equipment to safeguard workers.

Risk Assessment Process



Risk Improvement Results

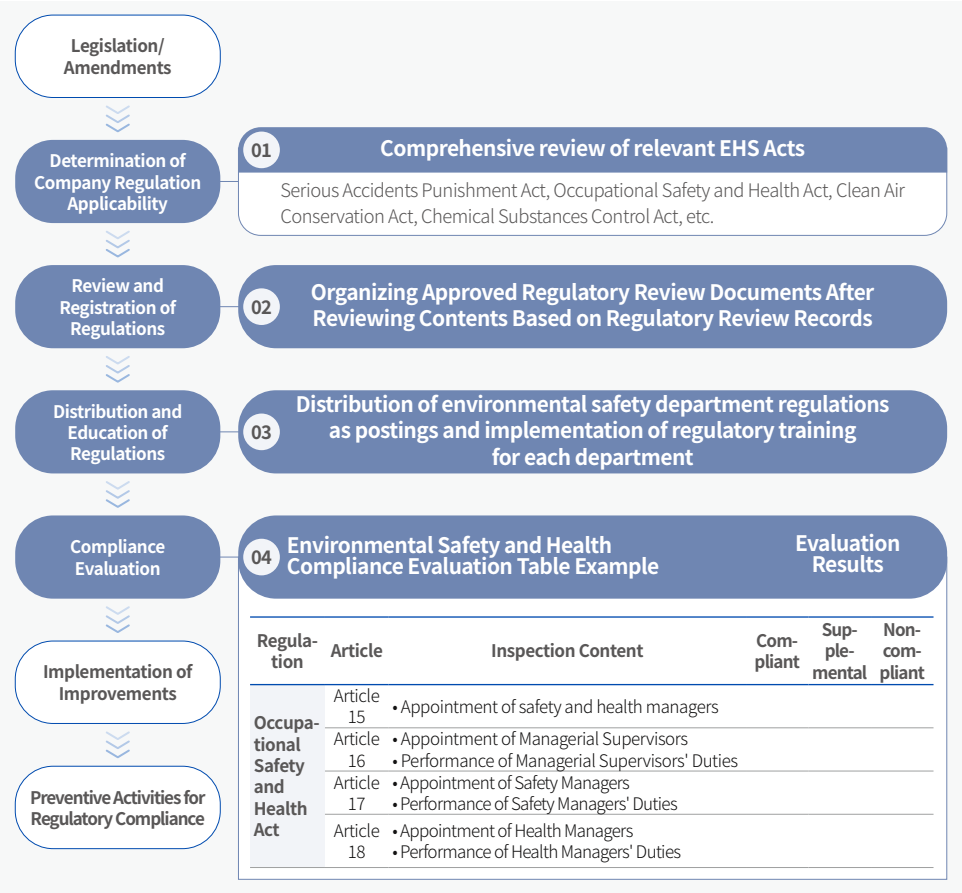


EHS Management

EHS Management Risk Management

EHS Regulations Management System

We continuously monitor key environmental safety and health (EHS) regulation that significantly impact our campuses. We have developed our own environmental safety compliance evaluation checklist based on these laws, conducting detailed evaluations in three stages: compliance, complementary, non-compliance. As a result, there have been no instances of environmental law violations since 2020.



EHS Regulations Response Strategy

To effectively respond to EHS regulations, we continuously monitor relevant laws and regulatory trends and conduct pre-compliance assessments to minimize risks. Furthermore, detailed strategies are developed and implemented for each regulation to ensure effective response. Going forward, we will continue to improve the EHS system through the operation of the EHS management system and regulatory response strategies.

Regulation Name	Key Response Strategies
Common	• Continuous Monitoring of EHS Regulations
	• Identifying Regulatory Trends through Seminars and Communities
	• Conducting Pre-Assessment of Regulatory Risks
	• Operating Related Training and Campaigns
Chemical Substances Control Act	• Participating as a Member of the Chemical Safety Community
	• Establishing and Implementing Chemical Accident Prevention Management Plans
	• Conducting Chemical Spill Response Training
Clean Air Conservation Act	• Monthly Self-Monitoring Conducted
	• Operating IoT-Based Real-Time Air Monitoring System
Water Environment Conservation Act	• Annual Measurement of All Water Quality Pollutants
	• Promoting Expansion of Water Reuse
Occupational Safety and Health Act	• Monthly Operation of EHS Patrols
	• Conducting HI-FIVE Zero Activities
	• Operating Supplier Contract Consortium
Serious Accidents Punishment Act	• Operating Dedicated Response Organization
	• Conducting Biannual Regulatory Compliance Assessments

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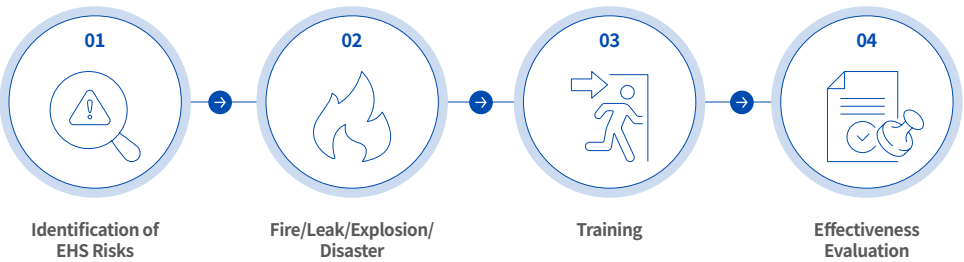
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EHS Management Risk Management

Emergency Preparedness and Response Process

We have established an internal risk management process to respond to possible emergencies. We proactively identify and evaluate potential emergencies and accidents, prepare emergency reports and evacuation procedures, and conduct emergency evacuation drills and related training to prevent them. Based on a systematic process, we minimize risks from emergencies.



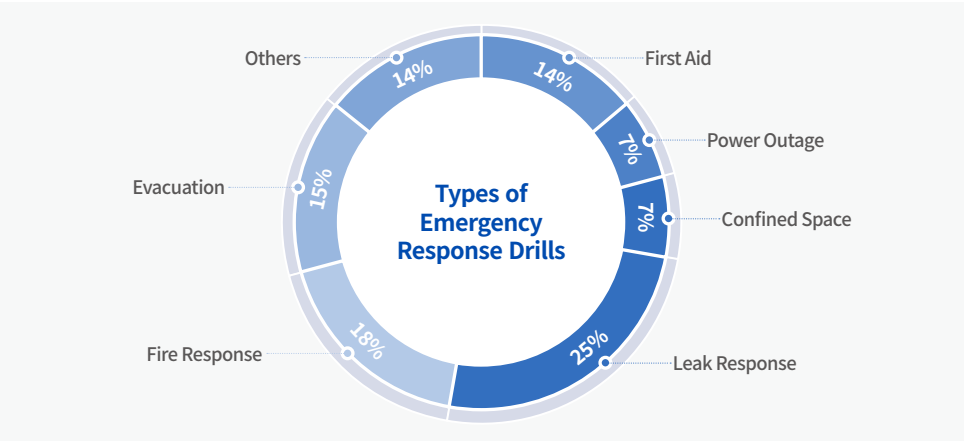
Accident Investigation Process

In accordance with the Occupational Safety and Health Act and internal safety management regulations, we operate a systematic and effective accident investigation process. Upon any safety accident, an accident investigation team is promptly formed to comprehensively analyze the circumstances and causes, identifying the root cause. Based on the investigation results, effective recurrence prevention measures are established, reviewed, and approved by the head of the EHS department, followed by immediate implementation of related corrective actions. Throughout the investigation process, close collaboration among relevant departments ensures objectivity, expertise, and reliability of the findings, contributing to the creation of a safe work environment company-wide.



Emergency Response Drills

To prevent accidents in the workplace and ensure a rapid response in case of emergencies, we have established an Emergency Committee and regularly conduct emergency response drills to train professional disaster response personnel and familiarize them with preparedness procedures. These drills include comprehensive leak response exercises and fire drills to simulate various types of potential workplace incidents, enabling quick responses to minimize casualties. We also perform regular inspections according to established processes to prevent hazardous incidents. Additionally, we conduct environmental safety patrols, regular risk assessments, and periodic environmental impact assessments to enhance employees' safety awareness and build a robust safety culture in the workplace.



Spill Response



Fire Drill



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Internalization of EHS Management

HANA Materials operates various training programs to enhance employees' EHS awareness. We provide effective training programs through qualified professional instructors, qualifying for statutory education requirements, risk assessment results, and interested parties' demands.

Environmental Education

Environmental education is focused on practical contents such as hazardous chemical manager training and environmental process education, contributing to raising employees' environmental awareness and enhancing practical response capabilities.

Internal Environmental Education

Category	Training Name	Target	Total Training Hours
Chemical Substances	Hazardous Chemicals Handler Safety Training	Handlers in charge	90.5
	Suppliers Chemical Substance Practical Training	Hazardous Chemical Substance Manager	8
	Chemical Accident Prevention Management Plan Understanding Training	Chemical Safety Office Personnel	17
	Disaster Prevention Personnel Training	Disaster Prevention Personnel	32
Environmental	Environmental Facility Operation Group Training	Facility Manager	1
	Environmental Process Training	Facility Manager	14

Statutory Education

Category	Training Name	Training Cycle	Total Training Hours
Chemical Substances	Worker Training	2 hours/year	1,350
	Handler Training	16 hours/2 years	720
	Hazardous Chemical Substance Manager Training	16 hours/2 years	80
	Chemical Accident Prevention Management Plan Specialized Training	16 hours/once	16
Environmental	Environmental Technician Training	14 hours/3 years	28
	Integrated Environmental Manager Training	40 hours/2 years	40

Safety Awareness Enhancement Education

Safety and health training is conducted to prevent accidents and protect health at the workplace in accordance with the Occupational Safety and Health Act and related laws. Beyond mandatory statutory education, we design effective curricula including risk assessments and accident case analyses to raise safety awareness, continuously improving training quality through effectiveness evaluations.

Internal Safety and Health Education

Training Name	Target	Total Training Hours
5-minute Safety Training + National Gymnastics	All Employees	20,498
Risk Assessment Training	Department Practitioners	16
Weaving Supervisor Safety Training	On-site Supervisors	86
Fire and Explosion Safety Training	Department Practitioners	9
Explanation Training on Occupational Safety and Health Standards Regulations	Environmental Safety Practitioners	24

Statutory Education

Training Name	Training Cycle	Total Training Hours
Regular Safety and Health Education	6 hours / Semiannual	15,322
Special Safety and Health Education	18 hours / Before work execution ~ within 3 months	2,176
Orientation Training	8 hours / Upon hiring	1,176
Training for Job Changes	2 hours / Before work execution	46
Safety and Health Management Responsible Persons Training	Once / 2 years	6
Managerial Supervisors Training	Once / Yearly	944
Safety Managers Training	Once / 2 years	48
Health Managers Training	Once / 2 years	24
Nurses Training	Once / Yearly	8
Automated External Defibrillator Manager Training	Once / 2 years	4
High-Pressure Gas Safety Managers Training	Once / 3 years	4
Hazardous Materials Safety Managers Training	Once / 2 years	4
Hazardous Materials Handling Qualification Training	Once / Before handling work	24

EHS Management

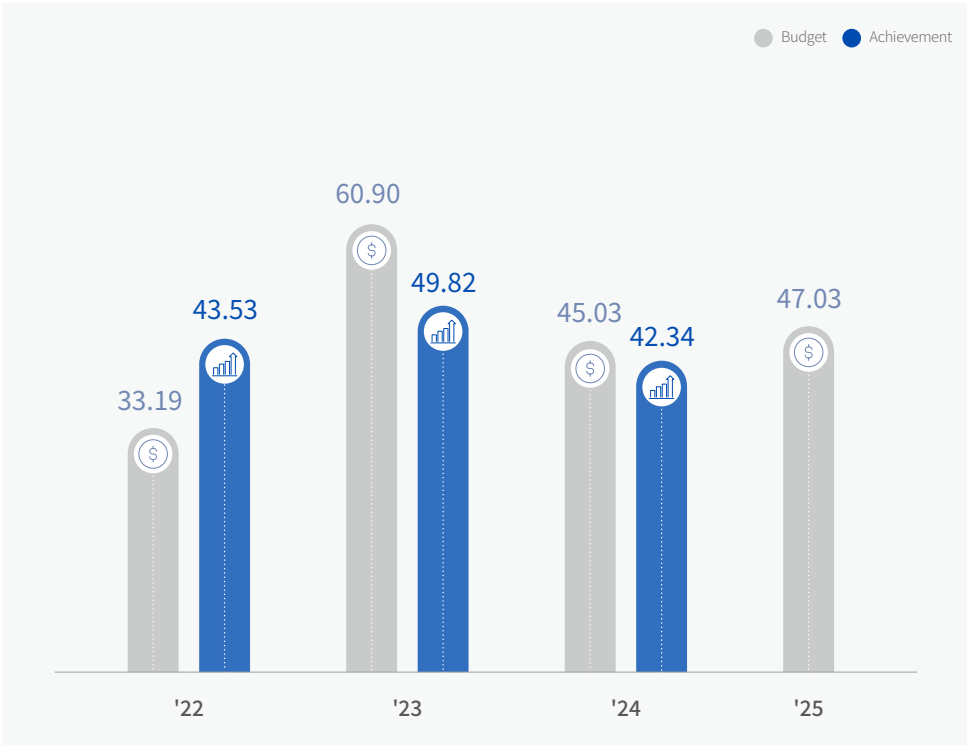
Internalization of EHS Management

EHS Investments

HANA Materials continuously invests in the EHS field. In particular, investments have been made in facility improvements such as waste reduction activities using filter presses and prevention of musculoskeletal disorders through the DIW Automatic Replenishment System. Additionally, appropriate personnel are secured in the EHS field, and capabilities are strengthened through continuous education and training. Furthermore, active investments are made to support medical expenses to promote the health of employees.

EHS Investment Achievement

Unit: KRW 100 million



EHS System Establishment

We have established an integrated EHS Integrated Management Information System (IMIS) for systematic EHS management at the company-wide level and are promoting phased digitalization. The EHS system functions as a core infrastructure for building a foundation for sustainability management, beyond simple work support, including proactive identification of risks at each business location and enhancement of response capabilities to major laws. Starting in 2022, functions are being expanded step-by-step, with plans to complete the establishment of key functions by 2026. Going forward, the system will be continuously developed through advancement of system functions, integration with AI technology, and enhancement of on-site usability based on mobile apps.

Phased EHS System Establishment Plan

Category	Completed in 2022	Completed in 2023	Completed in 2024	Scheduled for 2025	Scheduled thereafter
Common	• Regulatory Register	• Correction/ • Corrective Action • EHS Sign Request	• EHS Education/ Training Log		• EHS KPI • TRIR
Environment (E)	• Hazardous Chemicals	• Environmental Impact Assessment • Chemical Substances		• Water Quality • Air Quality • Waste • Greenhouse Gas/Energy • Hazardous Materials	
Safety (S)	• Safety Work Permit		• Risk Assessment • Patrol • Management of Machines Subject to Safety Inspection	• Safety and Health Information Board	
Health (H)		• My Health Management • Health Consultation • Health Checkup		• Work Environment Measurement	• Job Transfer Management • Musculoskeletal Hazard Investigation

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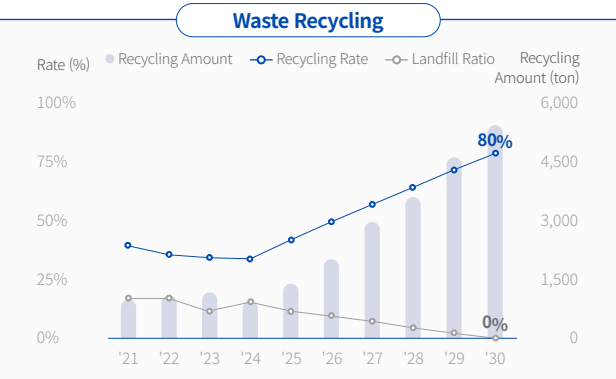
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Maximizing Resource Circulation

Key Goals and Achievements



2024 Waste Emission Targets (Unit: Ton)

Target	3,005
Actual	2,861

Mid- to Long-Term Waste Goals

To create a sustainable environment, we have established mid- to long-term goals to manage waste emissions and increase the waste recycling rate. The target is to achieve an 80% recycling rate by 2030, implementing three detailed action plans to accomplish this.

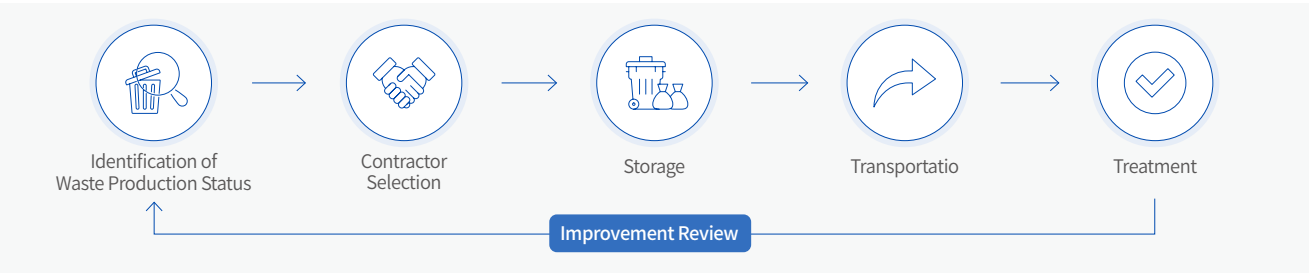
Detailed Mid- to Long-Term Action Plans

Key Initiatives	Execution Plans
Zero Landfill Waste	- Application of Waste Emission Method Changes by Process - Review of Process Sludge Recycling
Achieved 10% Incineration Rate	Expanded Recycling by Minimizing Sludge in Cutting Oil → Switched operation from centrifuge to filter press → Applied changes in cutting oil removal method from filter press cutting oil tank
Achieved 10% Neutralization Rate	- Continuous recycling treatment through categorized storage according to waste liquid characteristics - Reduced waste alkali generation by introducing ammonia stripping facility

Waste Management System

The main wastes at HANA Materials include waste cutting oil, waste acid, and waste alkali, which possess characteristics such as flammability, corrosiveness, and toxicity. These wastes primarily arise from machining processes using cutting oil and etching or cleaning processes using acids and alkalis. To minimize the environmental impact of all generated waste, we manage the waste treatment process through the Ministry of Environment's online waste management system, "Allbaro," and systematically operate the waste management process according to regulations on waste generation registration and ledger management. Within the facility, we ensure proper transportation, and final disposal through certified contractors. The priority consideration when selecting a waste consignment company is the recycling rate rather than landfill and incineration, and the legality and speed of response are also considered comprehensively.

Waste Management System



Expansion of Waste Recycling

To minimize the increase in waste due to higher production volumes, we monitor waste generation throughout all manufacturing activities, from raw material use to disposal. We recycle residual ingots during production, achieving a recycled raw material usage rate of over 25%. Notably, by converting landfill and incineration wastes to recyclable materials, we increased our recycling rate from 31% in 2022 to over 46% in 2024. Additionally, we introduced ammonia stripping equipment at the Cheonan campus to concentrate ammonia, further reducing waste emissions effectively.

2024 Waste Emission Improvement Activities		
Process Efficiency Improvement To reduce consumable waste generated in production processes, work methods are improved and tool usage efficiency is enhanced. This minimizes the use of auxiliary materials and consumables, thereby reducing waste generation.	Reuse System Operation To reduce environmental burden through resource circulation, reuse infrastructure is being strengthened. By introducing filter press and Oil Recycle equipment, waste oil generated during processes is reused, minimizing both resource waste and waste generation simultaneously.	Operation and Management Improvement Waste generation is prevented by enhancing equipment operation efficiency and maintaining maintenance systems. Through battery integration and equipment overhaul management, unnecessary consumable replacements and waste generation are reduced.

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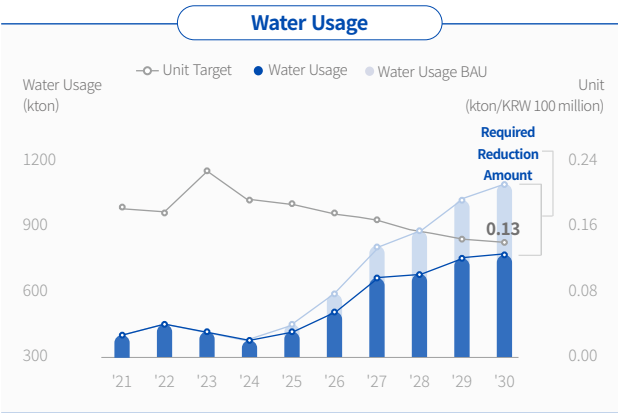
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Water Resource Management

Key Goals and Achievements



Mid- to Long-Term Water Usage Goals

HANA Materials has set mid- to long-term goals to optimize water usage for sustainable development. The target is to reduce water usage by 5% annually until 2030. To achieve this, efficient water use will be promoted at all process stages, and systematic detailed implementation tasks will be executed through facility optimization and management improvements to save 139 kton of water annually.

Detailed Mid- to Long-Term Goal Implementation Plan

Key Initiatives	Implementation Plan
DI Concentrate Reuse	Application of DI concentrate to DSG process
Scrubber Wastewater Reuse	Reuse of scrubber drain wastewater through filter press installation
Installation of Flow Meters for Water Usage Optimization	Flow meters installed at high water usage facilities to optimize water input volume

Expansion of Water Reuse

At the Cheonan campus, we store R/O (Reverse Osmosis) concentrate generated during the ultrapure water process in reservoirs, subsequently using it in scrubbers or other reusable processes, thereby saving costs. The Asan campuses implemented the same RO concentrate recycling system in April 2023, reducing water usage by a total of 23,167 tons. Additionally, we introduced a "filter press" in our processes to filter and reuse waste cutting oil used in cooling and lubrication during machining, thus reducing wastewater discharge and increasing reuse rates. We also conduct a "water-saving campaign" among employees, attaching stickers to raise awareness and encourage voluntary water conservation in daily activities.



Water Recycling through Filter Press

Filter Press

Equipment that filters waste cutting oil through a filter press, allowing the cutting oil to be reused

Effectiveness

The replacement cycle of cutting oil is extended, and the amount of waste discharged is reduced by increasing the efficiency of sludge (impurity) removal

Filter Press Operating Process

High pressure on the wasted cutting oil → Separation of sludge (impurities) → Filtering the purified cutting oil

Passing through the filtration medium

Asan campuses	Total Annual By-products Reduction:	Cheonan campus	Total Annual By-products Reduction:
	Reduction 582.62 ton		Reduction 260.15 ton
Total Annual By-products Reduction: Approximately 843 tons			

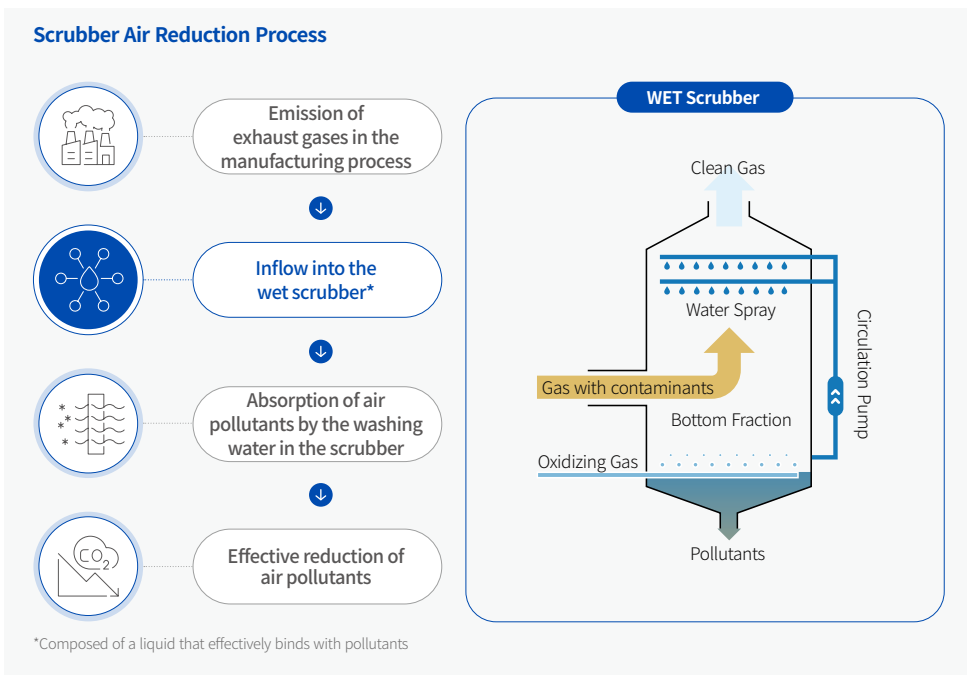
2024 Water Usage/Wastewater Emission Improvement Activities		
Improvement of Equipment Operation Standards We are reducing unnecessary water waste by enhancing the efficiency of equipment operation methods. At the Asan campuses, we have redefined the DIW (Deionized Water) supply standards for cleanroom facilities and improved the operating conditions of PCW (Pure Cooling Water) systems and pumps, thereby effectively reducing excessive water usage in the process.	Reduction Through Process Optimization By adjusting the discharge cycle and volume of PCW blowdown water, we are preventing excessive discharge. Additionally, by tailoring water usage to the operating conditions of cleaning processes, we are reducing the amount of wastewater generated. These efforts enable the recirculation and efficient use of cooling water while minimizing unnecessary discharge.	Operational Restructuring and Expansion of Control Measures At the Cheonan campus, we are reducing water consumption in processes by adjusting the replacement cycle of chemical substances. Optimization of related operating conditions also contributes to reducing process-related waste and operational inefficiencies. Furthermore, by expanding the reuse of idle water generated at each campus for use at other campuses, we are enhancing both resource circulation and water management efficiency.

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Pollutant Management

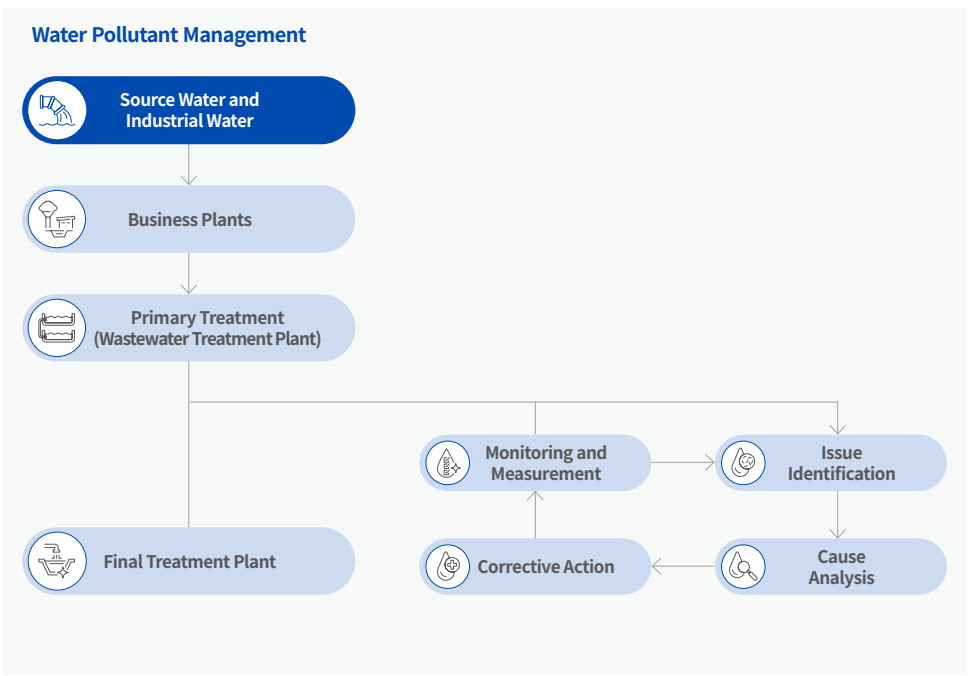
Air Pollutant Management System

We regularly measure and monitor air pollutants to manage emissions effectively. To reduce air pollutants emitted from our facilities, we have installed IoT (Internet of Things) measurement devices that allow for remote inspection by legal authorities and management agencies. Additionally, we have implemented various measures, including installing scrubbers, filters, electrostatic precipitators, and operating low-NOx boilers.



Water Pollutant Management System

We conduct regular self-measurements through a system to manage water pollutants generated at our campuses. Efforts are made to identify and measure water pollutants at each campus and to reduce them. We also strengthen the periodic measurement and management of wastewater pollutants to minimize the environmental impact of discharged wastewater.

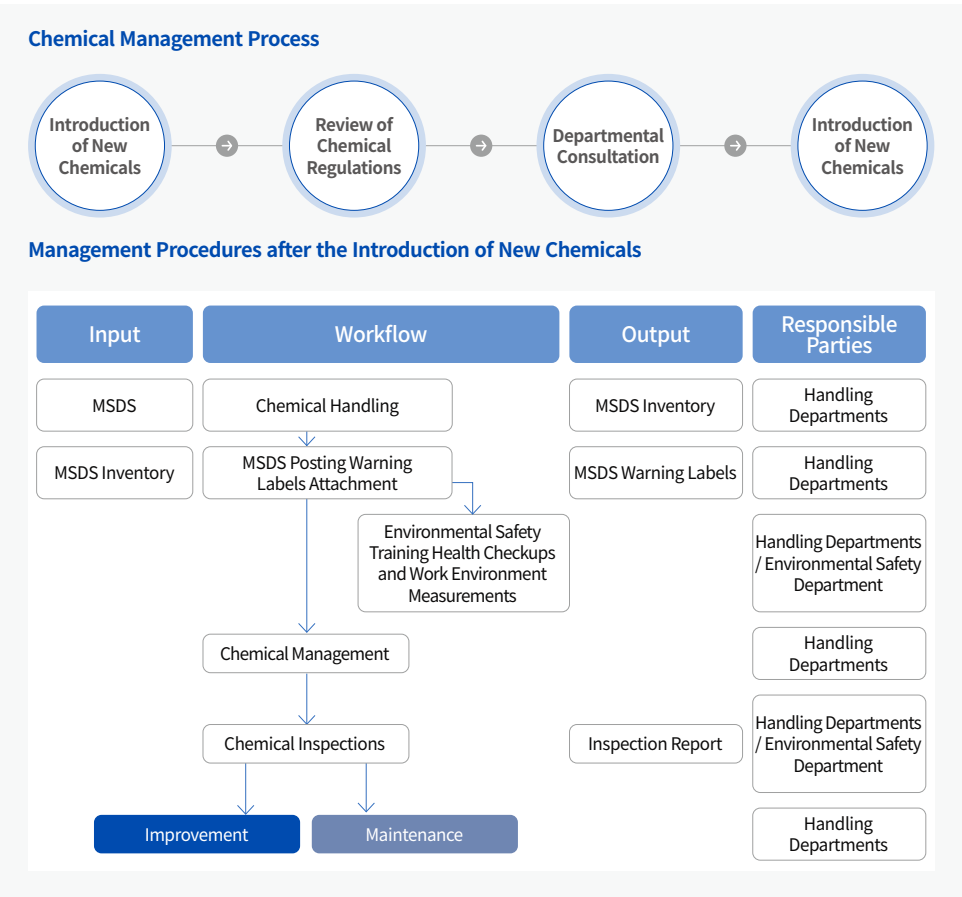


EHS Management

Hazardous Chemicals Management

Chemical Management System

To enhance the management of chemical substances used within our facilities, we operate internal and external audit systems. We systematically manage both existing and new chemicals through internal processes. We also conduct regular inspections and training to prepare for emergencies.



Chemical Spill Response Training

Hazardous Chemicals Reduction Activities

We actively comply with domestic and international chemical regulations and systematically manage chemicals to prevent accidents. When introducing new chemicals, we proactively review their risks and Material Safety Data Sheets (MSDS) in advance to mitigate any potential risks associated with their introduction. Additionally, throughout all corporate activities including purchasing, production, and disposal, we continuously assess environmental impacts and strive to reduce the use of hazardous chemicals or replace them with less harmful substances.

Hazardous Chemicals Reduction Performance

Hazardous Chemical Name	Boric	TMAH
Reduction/Replacement Start Date	2020.11	2023.02
Reduction/Replacement Completion Date	2021.06	2024.01

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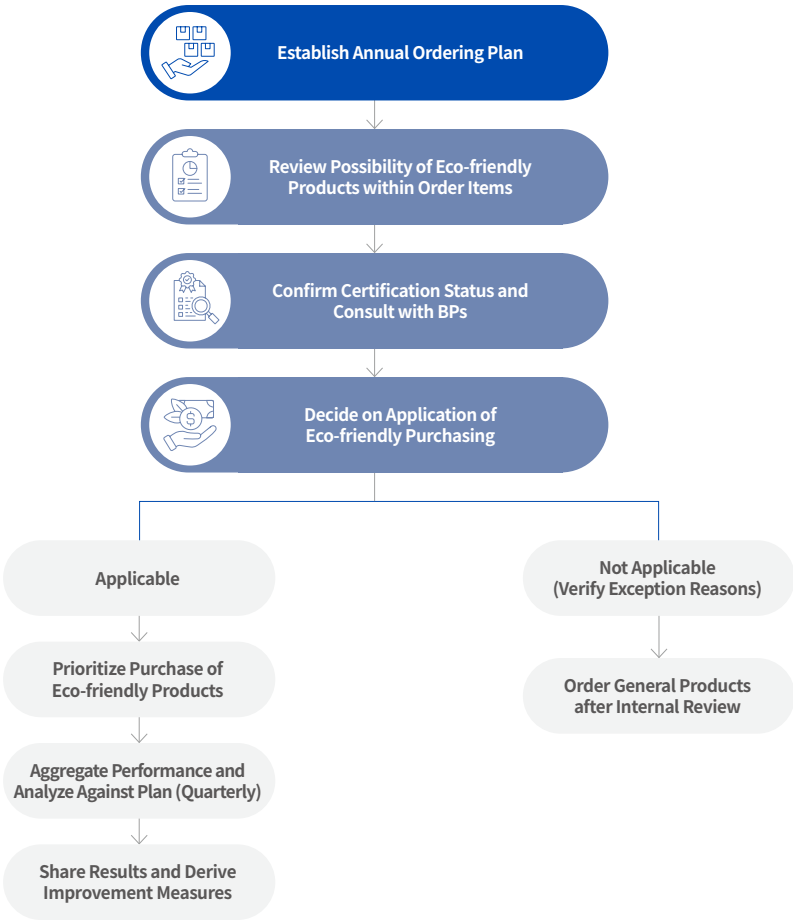
Green Purchasing

As part of HANA Materials' ESG strategy to address the climate crisis and strengthen resource circulation, we have established an 'Eco-friendly Purchasing Policy' to systematically promote company-wide green product procurement. This policy defines priority purchasing targets as certified eco-friendly product groups such as environmental label certified products, environmental product declaration certified products, and recycled products, in accordance with the Framework Act on Carbon Neutrality and Green Growth and the Act on the Promotion of Purchase of Green Products. The Purchasing Group leads the overall performance management and planning across the company. In 2024, we pre-reviewed planned order items to define items eligible for eco-friendly purchasing and set green product purchasing targets. We linked planning and implementation through collaboration with relevant departments. Additionally, we regularly check the eco-friendly certification status of registered business partners (BPs) and operate an incentive system to encourage expansion of new certifications, thereby enhancing eco-friendly capabilities throughout the supply chain. In cases where green products are unavailable or general products are unavoidable due to supply stability, quality, or price competitiveness, exceptions are reviewed internally based on criteria and transparently recorded and managed. HANA Materials plans to continue quarterly quantitative reviews of eco-friendly purchasing activities and expand the scope of green purchasing through continuous improvement and supplier collaboration.

Definition of Green Products

1. Products certified as environmental labels under Article 17(1) of the Environmental Technology and Industry Support Act, or products that meet the certification standards for each target product prescribed and announced by the Minister of the Ministry of Environment under Article 17(3) of the same Act.
2. Products certified with environmental performance labels under Article 18(1) of the Environmental Technology and Industry Support Act, which reduce greenhouse gas emissions as defined in Article 2(5) of the Framework Act on Carbon Neutrality and Green Growth in response to the climate crisis, according to standards prescribed and announced by the Minister of the Ministry of Environment.
3. Products certified or meeting certification standards as quality-certified recycled products designated and announced by the Minister of Trade, Industry and Energy under Article 33 of the Act on the Promotion of Saving and Recycling of Resources and Article 15 of the Industrial Technology Innovation Promotion Act.
4. Other green products that meet the judgment criteria for each target item prescribed and announced by the Minister of the Ministry of Environment in consultation with relevant ministers.

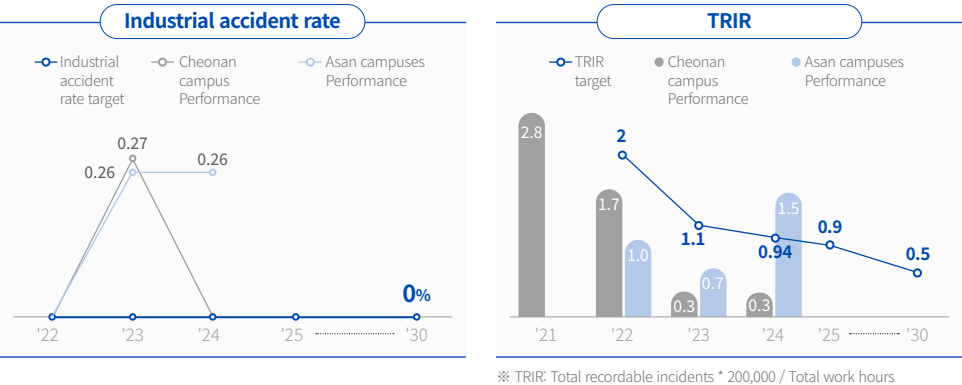
Green Purchasing Process Flowchart



EHS Management

Safety and Health Goal Management

Key Goals and Achievements



※ TRIR: Total recordable incidents * 200,000 / Total work hours

Mid- to Long-Term Safety and Health Goals

HANA Materials prioritizes the life and health of employees and has established mid- to long-term goals to prevent major accidents and create a safe work environment. Our target is to achieve a company-wide accident rate of zero and a TRIR of 0.5 by 2030. To this end, we plan to systematically implement detailed action plans focused on accident prevention, establishment of safety culture, and enhanced monitoring.

Detailed Mid- to Long-Term Goal Implementation Plan

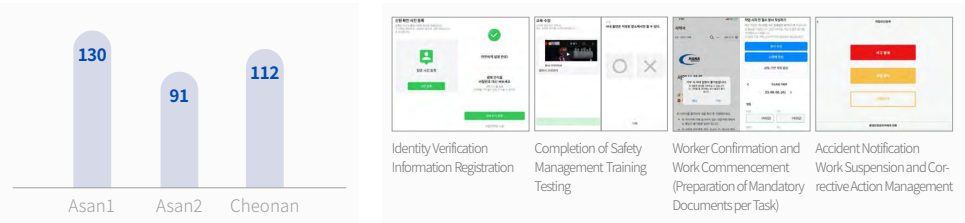
Strategic Areas	Key Initiatives	Implementation Plans
Accident Prevention	Advancing Risk Assessment	AI/IoT-based Data Collection and Focused Improvement on High-Risk Processes
	Equipment Safety Improvement	Replacement of Aging Equipment and 100% Installation of Mechanical Protective Devices
Culture Establishment	Strengthening Safety Leadership	Management-led Safety Walks and Enhanced Leader Safety Training
Monitoring	KPI-based Management System	Regular Inspection of Key Indicators such as TRIR, Industrial Accident Rate, and Worker Safety Culture Awareness
	Strengthening Internal Audit System	Conducting Safety Internal Audits More Than Twice a Year

Zero Safety Accidents

Operation of Safety Work Permit System

Through the Safety Work Permit System, we prepare safety work permits before tasks and assess the risks involved. We have significantly improved accessibility for employees and suppliers by establishing the existing system on a mobile platform, and strengthened the preventive system by adding a function to immediately report hazardous situations. Additionally, using the Mobile ONE System, we conduct safety training and corrective action management, while monitoring work progress in real time to ensure safe operations.

Number of ONE Registered Work Cases ONE Safety Work Management System



EHS Patrol

EHS Patrol involves checking compliance with EHS laws and regulations and identifying hazards on site. Each month, EHS personnel patrol the site to inspect compliance and promptly propose corrective measures for identified risks. Results of regular safety patrols are uploaded to the company intranet, allowing all departments to access improvements in real time and prioritize actions on regulatory violations and safety enhancements.

Safety Inspection Day

‘Safety Inspection Day’ is designated monthly for on-site employees to conduct safety inspections. Employees voluntarily participate to identify and improve risk factors. This initiative raises safety awareness among all employees and helps prevent potential hazards in advance.

Safety and Health Improvement Proposal Activities

We encourage employees to proactively identify potential hazards and propose improvements. We also detect 'near-miss' incidents during work to prevent safety accidents. Proposed ideas are reviewed through the EHS System and reflected in actual site improvements, promoting active participation from field workers and fostering a safer work environment.



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Safety and Health Culture Expansion

Strengthening Safety Design

HANA Materials has implemented an innovative 'Safety Design' project to create a safe work environment for employees. This project goes beyond simply installing safety signs; it aims to enhance workers' safety awareness through intuitive and visual safety guidelines. Key improvements include installing fluorescent green guidelines on the floor to clearly mark safe walking paths, drawing yellow boundary lines around equipment to visually distinguish hazardous zones, and placing large safety signs and warning marks in chemical substance storage areas to enable early recognition of risks. Through this safety design, potential hazards at the worksite are minimized, providing a foundation for employees to focus on their tasks in a safer and more comfortable environment. HANA Materials will continue its efforts toward achieving a zero-accident workplace through ongoing safety innovations.



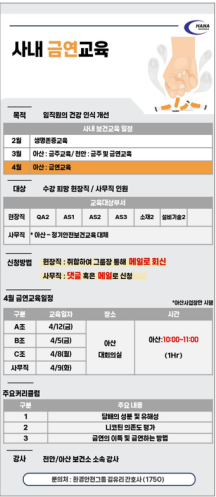
Ma-eum Bom Workplace Designation

As part of efforts to promote workers' psychological well-being and establish a healthy work environment, we have been designated as a 'Ma-eum Bom Workplace.' Various activities such as psychological counseling support and mental health promotion programs are continuously implemented for employees' emotional stability. We plan to further expand and operate diverse programs to support employees' mental health and emotional well-being.

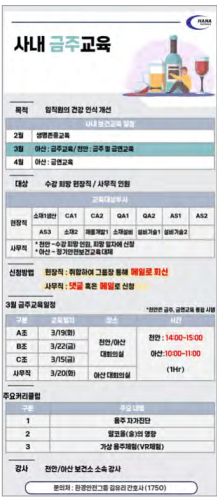


Promoting Employee Health

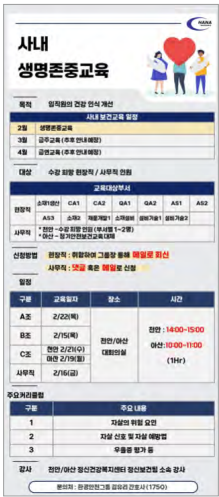
Hana Materials conducts various activities to prevent diseases and support a healthy lifestyle for employees. In collaboration with local health centers, continuous education and counseling are provided for employees wishing to quit smoking or drinking. Additionally, a Life Respect Program is conducted to manage employees' mental depression, contributing to the creation of a healthy work environment.



Smoking Cessation Program



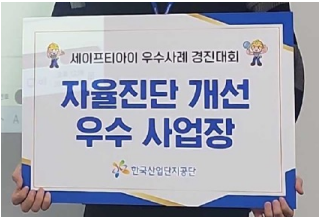
Alcohol Abstinence Program



Life Respect Program

Selected as an Excellent Business Location in the Safe TI Excellent Case Competition

We were selected as an excellent business location in the Safe TI Excellent Case Competition hosted by the Korea Industrial Complex Corporation. The competition is composed of four assessment items: safety diagnosis, improvement plan, improvement efforts, and performance outcomes. We conducted a self-diagnosis to derive safety diagnosis results, established detailed safety improvement plans, and implemented improvements, leading to its selection as an excellent business location.



Selected as an Excellent Business Location for Self-Diagnosis Improvement



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Response to Climate Change

Climate Change Response Governance

HANA Materials has established and operates a management organization for company-wide climate change response. An ESG Committee is established under the Board of Directors to make decisions on climate change response. The CEO reviews the implementation status of climate change response strategies and policies and monitors performance to support the ESG Committee in making appropriate decisions. The CSO establishes execution tasks and manages the performance of the working organization. The ESG Working TFT appoints the CSO as the representative manager to identify and execute environmental management tasks by each department and discusses major environmental risks and opportunities related to climate change response.

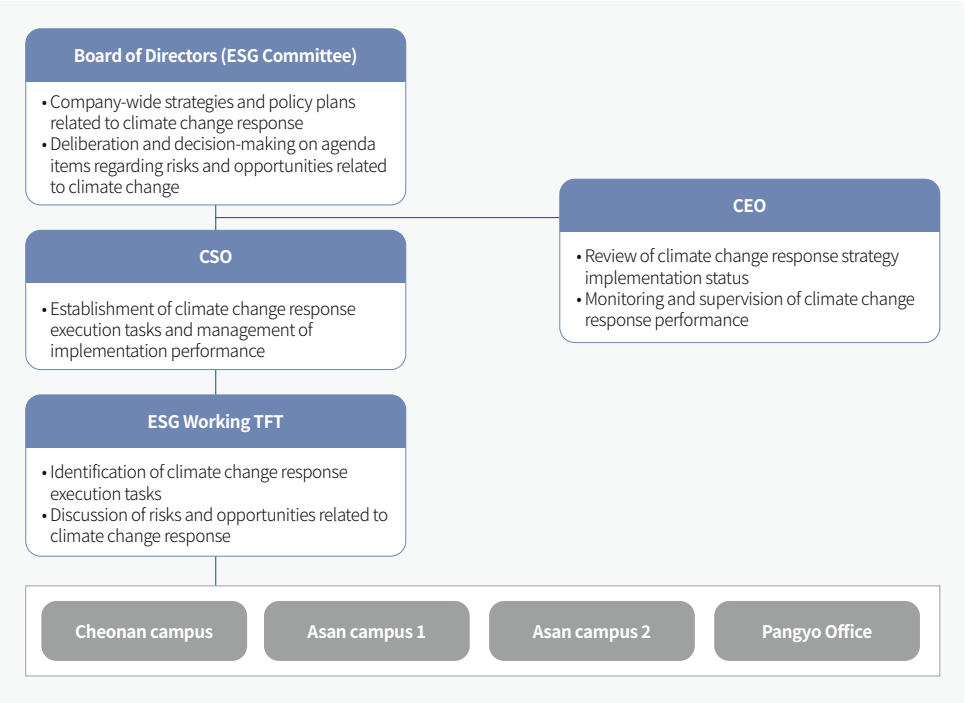
Roles and Responsibilities of the ESG Committee

HANA Materials has established an ESG Committee under the Board of Directors to efficiently respond to climate change risks and opportunities, discussing key ESG-related decisions including climate change. The ESG Committee consists of two executive directors and one independent director, with the chairperson being an internal director. The ESG Committee is the highest decision-making body that establishes the company's mid- to long-term strategies and annual management plans related to climate change, and deliberates/approves important matters including climate change response. In 2024, it was held twice, resolving agenda items related to climate change and carbon neutrality.

Roles and Responsibilities of Management

The CEO supports the ESG Committee to make appropriate decisions and manages and supervises climate change response projects. The CSO oversees the ESG Working TFT for climate change response, establishes execution tasks, manages performance, and monitors the activities of the working organization.

Climate Change Management Organization Chart and Roles



Response to Climate Change

Climate Change Response Strategy

Energy Use Reduction Activities and Goals

Due to the nature of its processes, HANA Materials' greenhouse gas emissions from Scope 2 electricity consumption account for over 90%, so we focus on reducing energy use in manufacturing processes through inverter installation and use of high-efficiency products. As a result, in 2024, we achieved an energy use reduction target of 7.332 TJ, saving approximately KRW 150 million. In 2025, we aim to reduce electricity consumption by about 13.775 TJ through process optimization, expecting cost savings of approximately KRW 130 million.

Energy Reduction Performance Compared to 2024 Target

Business locations	Contents	Energy Reduction Target	Energy Reduction Performance	Greenhouse Gas Emissions Reduction Performance
		(TJ)	(TJ)	(tCO ₂ eq)
Asan	LNG reduction through reuse of cooling water waste heat	3.455	3.455	175.095
Asan	Power reduction through UT equipment operation optimization (Scrubber, Pump)	2.054	2.054	98.314
Cheonan	Conversion to high-efficiency pumps for cooling water	0.633	0.633	30.321
Cheonan	Installation of inverter for air compressor	1.190	1.190	56.967
Total		7.332	7.332	360.697

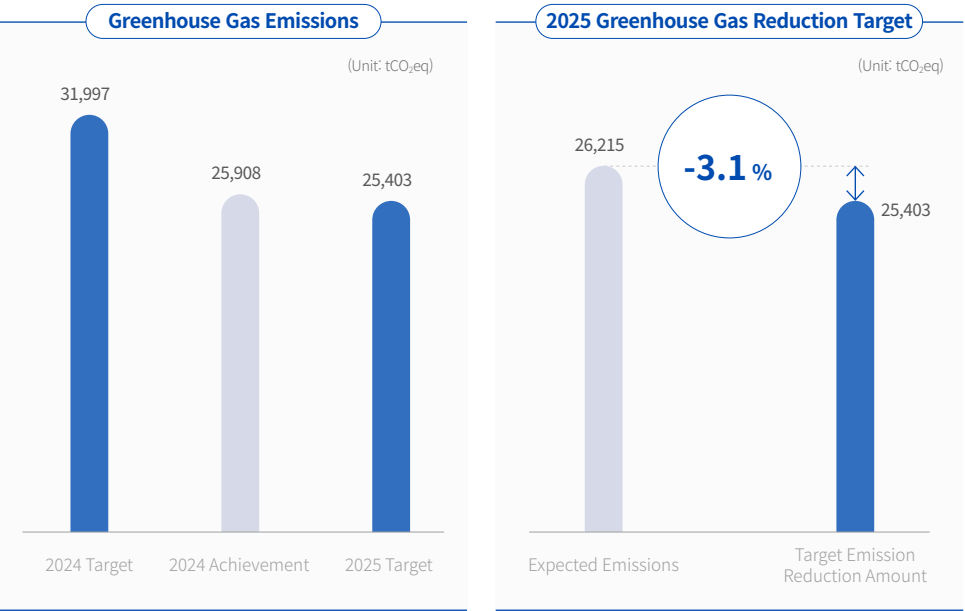
2025 Energy Reduction Targets

Business locations	Contents	Amount	Energy Reduction Target	Greenhouse Gas Emissions Reduction Target
		(KRW 1,000)	(TJ)	(tCO ₂ eq)
Cheonan	Power reduction through UT equipment operation optimization (Pump)	87,053	5.26	251.757
Asan	Power reduction through UT equipment operation optimization (Scrubber, PCW)	49,882	8.515	407.497
Total		136,935	13.775	659.254

Greenhouse Gas Reduction Activities and Goals

The Cheonan campus is included in the national greenhouse gas target management system, setting annual reduction goals and reporting them to the government. In the case of the Cheonan campus, the target was 31,997tCO2eq, which reduced 3.24% compared to the expected emission, based on the greenhouse gas emissions in the base year (2018, 2019, 2020 three years), and actually emitted 25,908tCO2eq of greenhouse gas. In 2025, we set an active goal of reducing the expected emission by 3.1% compared to the expected emission.

Key Goals and Achievements¹⁾



1) Targets and achievement of the Cheonan campus.

Response to Climate Change

Climate Change Response Strategy

Energy Efficiency Improvement

As part of its climate change response strategy, HANA Materials is proactively leading efforts to improve energy efficiency. Based on risks identified through environmental impact assessments, improvement measures are actively discussed, and each operational department identifies climate change response tasks to derive and apply energy efficiency improvements. The improvements identified through this process are applied at business locations to optimize energy use and establish concrete action plans to reduce carbon emissions.

2024 Energy Efficiency Improvement Activities

Introduction of High-Efficiency Equipment

To increase equipment efficiency and reduce unnecessary energy waste, outdated equipment has been replaced or high-efficiency equipment has been introduced. By replacing power cables, Dip Power usage was reduced, and power operation efficiency was improved through conversion to high-efficiency pumps.

Equipment Operation Optimization

Energy consumption is reduced by minimizing unnecessary equipment operation and improving operating methods. The operation methods of various equipment such as pumps, pH adjustment tanks, and scrubbers have been improved to reduce electricity usage, and seasonal energy waste is minimized by adjusting the operation of non-operating equipment and substations.

Energy Recovery and Recycling

Waste heat generated during processes is recovered and utilized in other processes to enhance energy utilization. At the Asan campus, waste heat from cooling water is applied to raise the temperature of R/O supply water, realizing energy recycling.

Expansion of Renewable Energy Use

In January 2023, we installed a 200kW solar power generation facility on the roof of the Asan campus 1 and have been using the self-generated electricity. The average daily power generation from the campus's solar panels is 690kWh, and since operation began, a total of 3.966TJ of electricity has been self-produced through December 2024. In 2025, solar power facilities will be installed at the Cheonan campus to further expand the use of renewable energy.



Asan campus 1 Solar Power Generation Facility

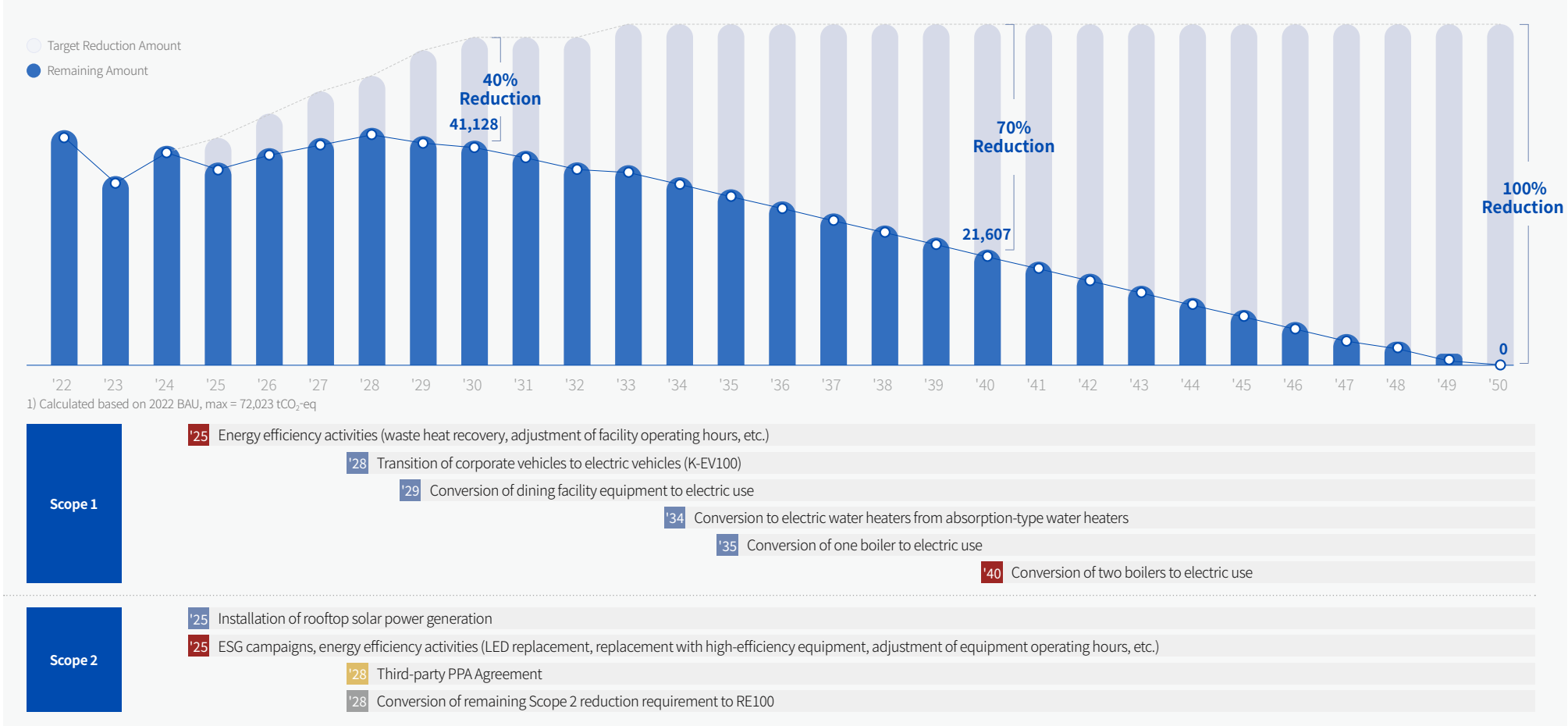


Response to Climate Change

Metrics and Targets

2050 Carbon Neutrality Roadmap Plan

HANA Materials is implementing a mid- to long-term roadmap and detailed strategies to achieve carbon neutrality by 2050. Due to the nature of its processes, over 90% of greenhouse gas emissions stem from Scope 2 electricity consumption. Therefore, we are focusing on reducing energy usage through measures such as inverter installation and the use of high-efficiency products. From 2025, energy efficiency activities including operational efficiency improvements and replacement with high-efficiency equipment will be carried out. Starting in 2028, we aim to achieve carbon neutrality by actively transitioning to renewable energy and making renewable energy investments.



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Human Rights Management

Advancement of Human Rights Management

Human Rights Policy

HANA Materials consistently emphasizes a management philosophy that respects human rights, striving to honor the dignity and value of all stakeholders, including employees, customers, partners, and the local community, thereby fostering happiness. We have established a Human Rights Management Declaration as a guideline, prohibiting discrimination based on gender, race, nationality, religion, age, disability, pregnancy, marital status, and social status in all business activities, including recruitment and promotion. Furthermore, to prevent any human rights violations that may occur during business operations, we have developed a human rights management policy covering ten areas and established processes for preventing and addressing human rights violations. We are committed to upholding human rights and labor regulations for all stakeholders.

Human Rights Management Regulations

Human Rights Management Declaration

- 1. Prioritize human dignity and value in all business activities.
- 1. Prohibit discrimination based on gender, race, nationality, religion, age, disability, birthplace, political views, etc., for all stakeholders, including employees.
- 1. Guarantee the freedom of association and collective bargaining, fostering a culture of trust between labor and management.
- 1. Prohibit all forms of forced labor and child labor.
- 1. Create a safe and hygienic working environment to ensure industrial safety and health rights.
- 1. Engage in transparent and fair transactions with all stakeholders, supporting and cooperating with them to practice human rights management.
- 1. Respect and protect the human rights of local residents in areas where we operate.
- 1. Comply with domestic and international environmental regulations, striving to protect the environment and prevent pollution.
- 1. Ensure public safety in business activities, protect personal information collected during work, and guarantee consumers' right to access information.
- 1. Provide prompt and appropriate remedial measures for human rights violations arising from business activities.

March 25th, 2024

Kim Hyun-joo, CEO of HANA Materials Inc.

Principle on Human Rights Management




Our human rights management principles encompass ten key human rights elements identified as the most critical. These principles include prohibitions against discrimination, forced labor, child labor, workplace harassment, and ensuring fair wages and benefits, freedom of association, safety, personal data protection, and management of partner companies' human rights practices. We diligently adhere to these principles to prevent human rights violations and conduct human rights-friendly business activities.

10 Principles of Human Rights Management

- | | |
|---|---|
| ① Prohibition of Discrimination | ⑥ Compliance with Working Hours |
| ② Prohibition of Forced Labor | ⑦ Freedom of Association |
| ③ Prohibition of Child Labor | ⑧ Workplace Safety |
| ④ Prohibition of Workplace Sexual Harassment and Bullying | ⑨ Personal Data Protection |
| ⑤ Fair Wages and Benefits | ⑩ Management of Partner Companies' Human Rights Practices |

Mid- to Long-Term Goals

We align our management policies with the human rights protection direction of domestic and international human rights organizations. To this end, we have established mid- to long-term human rights management goals and are implementing them step by step, expanding our business and management activities based on human rights protection.

	Step1. Establishment of Human Rights Management System	Declaration and dissemination of human rights management	Completed
		Establishment of a human rights management system (formulation of human rights management regulations)	Completed
		Implementation of human rights education and training	Completed
	Step2. Conducting Human Rights Impact Assessments	Formation of the Human Rights Management Committee	May 2025
		Human rights impact assessment	By 2026
	Step3. Public Disclosure of Human Rights Management	Disclosure of human rights management implementation and the entire process	By 2027
	Step4. Acquisition of Human Rights Management Certification	Acquisition of Human Rights Management System Certification	By 2027
		Evaluation and improvement of procedures	By 2028

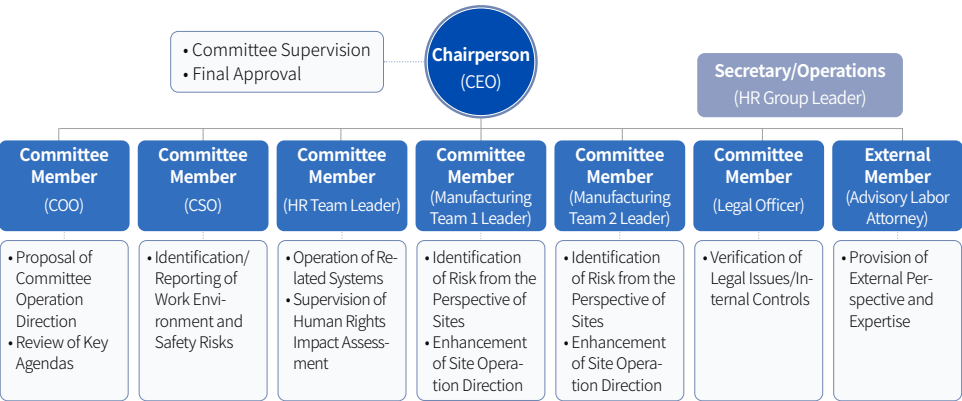
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Human Rights Management

Organization and Duties of the Human Rights Impact Assessment Committee

Purpose of the Human Rights Impact Assessment Committee Composition

HANA Materials established the Human Rights Impact Assessment Committee in May 2025 to identify human rights risks across all company management activities and recommend improvements. This organization is responsible for implementing and reviewing the results of the Human Rights Impact Assessment and strengthening sustainability in human rights management activities. It consists of a Chairperson (CEO), six internal committee members, and one external expert member (labor attorney).



Human Rights Impact Assessment Operating Regulations

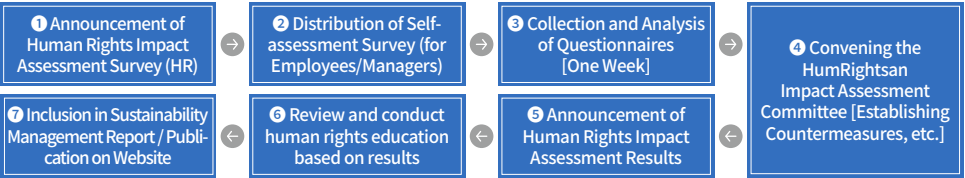
To establish the basis for operating the Human Rights Impact Assessment Committee, we enacted the Human Rights Impact Assessment Operating Regulations in May 2025 upon the committee's inauguration. These regulations document that the Human Rights Impact Assessment is to be conducted at least once a year, with regular meetings held annually.

Article 1 (Purpose) These regulations aim to establish operational standards to ensure the fairness, consistency, and effectiveness of Hana Materials' Human Rights Impact Assessment activities.	Article 4 (Operating Method) 1) One regular meeting per year, with additional meetings as needed 2) Special meetings can be convened when human rights issues arise 3) Minutes preparation and follow-up management of implementation
Article 2 (Scope of Application) These regulations apply to all members at all Hana Materials business locations (including overseas branches).	Article 5 (Evaluation Cycle and Method) 1) At least once a year, combining self-assessment, on-site interviews, and surveys 2) Identification of all subjects including external suppliers and dispatched workers
Article 3 (Committee Functions) Identification and assessment of human rights risks, review of Human Rights Impact Assessment results,	

Selection of Human Rights Impact Assessment Targets and Evaluation Methods

The assessment targets all employees as a baseline, with additional selection of underserved populations such as high-risk job roles, junior-level employees below senior staff, female employees, persons with disabilities, and foreign workers. Risk evaluation will be conducted through surveys, review of grievance consultation reports, and on-site inspections.

Detailed Process of Human Rights Impact Assessment



Detailed Items by Human Rights Impact Assessment Target

Assessment Items (Sample)

Self-Diagnosis for Employees

Number	Item	(Yes/No)
1	Have you ever experienced or witnessed discrimination (by gender, age, origin, etc.) in the workplace?	
2	Have you ever experienced verbal abuse or harassment during work?	
3	Is there a channel available to raise grievances (HR, labor, etc.)?	
4	Do you feel that work instructions and evaluations are fair?	
5	Do you feel that your privacy and personal dignity are respected?	

Self-Diagnosis for Managers

No.	Question	(Yes/No)
1	Does your department regularly check human rights-related issues (discrimination, harassment, etc.)?	
2	Is an atmosphere created where team members can freely raise grievances?	
3	Are measures in place to prevent discrimination in personnel management such as evaluations and promotions?	
4	Are education or guidance provided to prevent discrimination against foreigners, contract workers, or dispatched workers within the department?	
5	Is there a manual or procedure in place to appropriately respond when human rights-related issues arise?	

Human Rights Risk Checklist (Employees)

Risk Item	Applicable	Risk Item	Applicable	Risk Item	Applicable
Sexual Harassment/ Sex Discrimination		Discrimination against Dispatched/Contract Workers		Forced Long Working Hours and Overtime Work	
Workplace Bullying		Discrimination against Foreign Workers		Inadequate Human Rights Grievance Handling	
Workplace Safety and Health Rights Violations		Privacy Invasion (Surveillance, Personal Information Exposure)		Lack of Human Rights Education	

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Human Rights Management

Reduction of Human Rights Risks

Grievance Reporting and Handling Process

We operate both an offline grievance box and a hotline channel managed by the HR team leader to receive and resolve various types of grievances, such as human rights violations, workplace harassment, and discrimination. Employees can freely report issues either anonymously or with their names through the grievance box located in the facility's break rooms. If reported with a name, we ensure the results are communicated back to the complainant. Additionally, complainants can post the name and contact information of the grievance handling committee member, who is required to regularly check the submissions. Our principle is to resolve issues promptly, depending on the severity of the case. We are committed to handling internal human rights issues proactively and swiftly to prevent secondary damage and to manage them thoroughly to avoid recurrence.

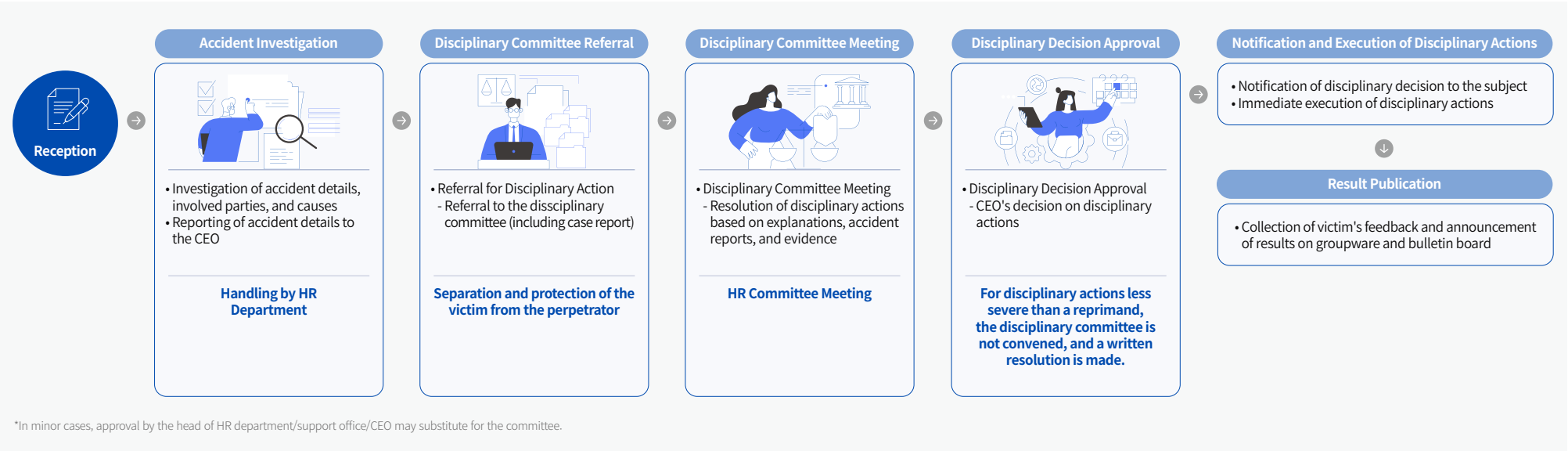
Human Rights Education

We conduct annual human rights education for all employees to raise awareness about human rights protection. In 2024, we provided one-hour sessions for each topic, including sexual harassment prevention, disability awareness improvement, and workplace harassment prevention, with full participation from all employees. We continuously improve the educational content to reflect human rights management trends and create an environment that encourages active participation from employees.

Human Rights Education Details

Category	Unit	2021	2022	2023	2024
Sexual Harassment Prevention	Hours	1	1	1	1
Disability Awareness Improvement	Hours	1	1	1	1
Workplace Harassment Prevention	Hours	1	1	1	1
Participants	Persons (%)	701(97)	750(100)	713(100)	752(100)

Grievance Reception and Handling Process



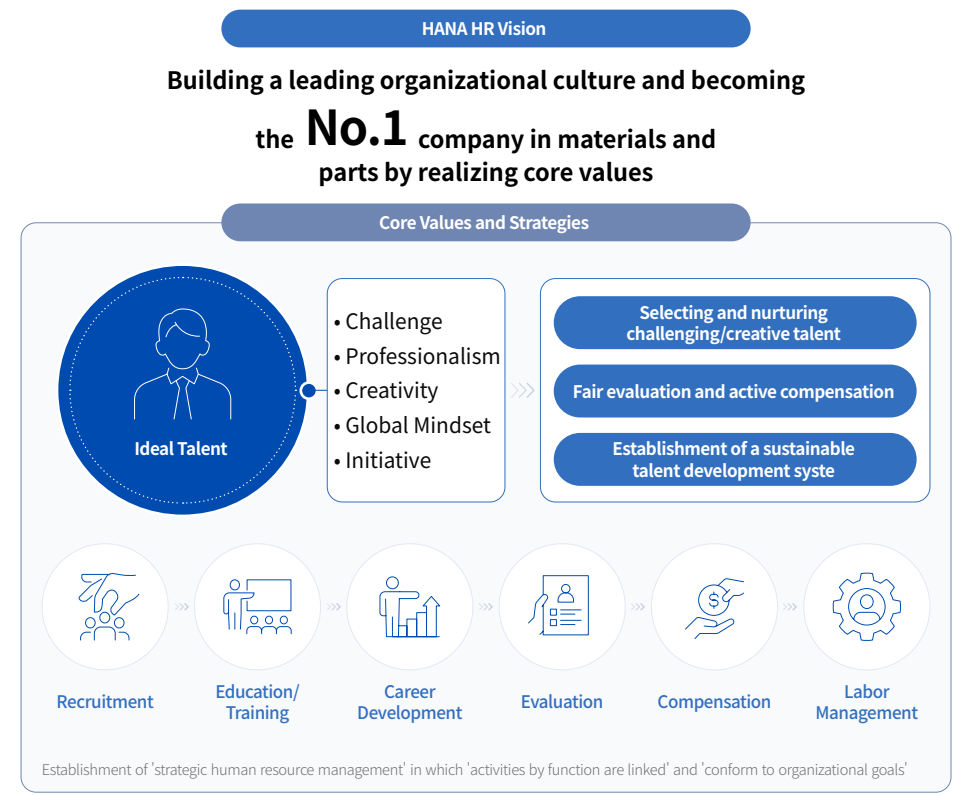
People-Oriented Management

Human Resource Management

Establishment of Talent Management System

Through a systematic talent management system, we have established a comprehensive human resource management framework that covers recruitment, education and training, evaluation, and compensation. This framework aims to enhance employee capabilities and satisfaction. Under our HR vision, "Building an Advanced Organizational Culture and Achieving Core Values to Become the Top-Tier Materials and Components Company," we recruit and develop challenging and creative talents, ensure fair evaluations and active rewards, and operate a sustainable talent development system.

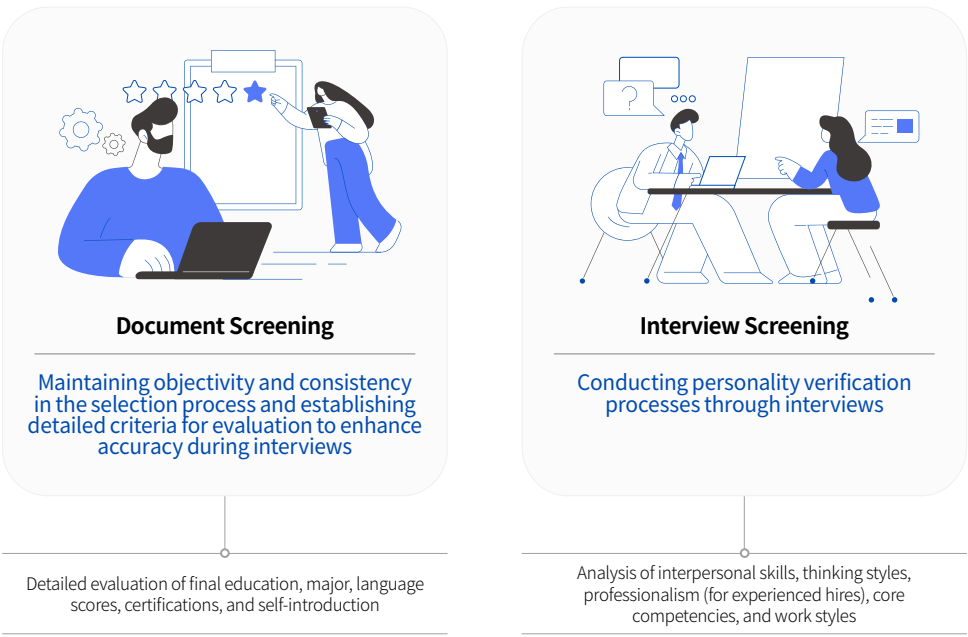
Talent Management Framework



Fair Talent Acquisition

To secure top talents amid the uncertainties of inter-industry boundaries and the sophistication of business portfolios, we revamped our recruitment system and branding in 2024. We recruit talents through various channels, including open recruitment and search firms, to secure professionals with expertise and leadership in the semiconductor market. We also actively engage in recruitment activities through multiple channels to attract top talent, such as university job fairs, partnership recruitment events, employee referrals, and internal job postings. Our recruitment process is based on the Recruitment Procedures Act, ensuring the protection of job seekers' rights and transparency, focusing solely on the candidates' competencies. During the document review stage, we establish detailed criteria for evaluation items to ensure objectivity and consistency. Interviews are conducted to verify interpersonal skills, thinking styles, work styles, and core competencies, ensuring the selection of top talent.

Strategies for Ensuring Fairness and Validity



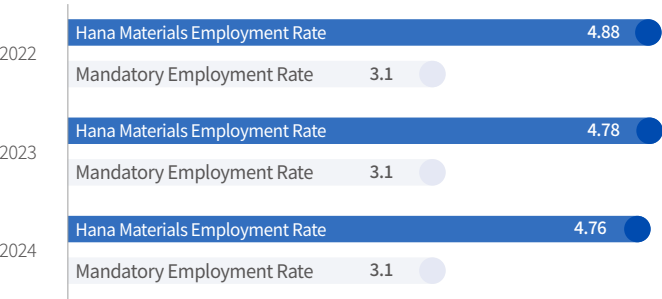
People-Oriented Management

Human Resource Management

Expansion of Employment of People with Disabilities

Based on the people-first management philosophy, we are expanding the number of employees with disabilities, hiring more than required by the law to fulfill our social responsibilities and obligations for workers in the underprivileged We organize departments with fewer technical demands around disabled workers to lower the employment barrier for them. These departments often consist of employees from the same school, fostering connections and easing the adaptation process for disabled workers. Furthermore, we actively recruit disabled workers through an MOU with Chungju Sacred Heart School and provide sign language interpreters upon request to facilitate smooth communication during recruitment interviews. As a result, our efforts to create a workplace for all have been recognized, earning us awards for being an exemplary employer of disabled workers.

Employment Rate of People with Disabilities



Selected as Excellent Company for Work Innovation

Mid- to Long-Term Goals for Female Employees/Female Managers/People with Disabilities

We have established mid- to long-term goals to enhance workforce diversity and is making gradual efforts to increase these ratios. By 2030, we aim for a female employee ratio of 16%, female managerial staff ratio of 1%, and disabled employee ratio of 5.5%.

Year	End of April 2025 (Current)	2026-2027	2028-2030
Female Employee Ratio	12%	14%	16%
Female Managerial Staff Ratio	0.1%	0.3%	1.0%
Disabled Employee Ratio	4.9%	5.0%	5.5%



Selected as Best vJob Company by Ministry of Employment and Labor

Turnover Management

To address high turnover rates due to competition for talent in the semiconductor industry, we engage in activities to prevent talent outflow and manage turnover. Through welfare programs, we enhance current employee satisfaction and conduct regular feedback sessions with vulnerable workers.

Turnover Management Activities

Category	Contents
Gathering Feedback from Female Employees	<ul style="list-style-type: none">• Selection of female representatives in the labor-management council to actively gather feedback from female employees, considering the lower ratio of female employees in the manufacturing industry• Actively collecting feedback from female senior and department managers (team leaders, group leaders, etc.) to address concerns
Expansion of Recruitment Channels	<ol style="list-style-type: none">① Internal Recruitment<ul style="list-style-type: none">• Conducting internal recruitment to enhance career development opportunities• Providing opportunities to participate in the Career Development Program (CDP)② Employee Referrals<ul style="list-style-type: none">• Utilizing employee networks to inform candidates about the internal organizational environment before joining• Minimization of recruitment imbalances and improving retention rates③ External Recruitment Agent<ul style="list-style-type: none">• Utilizing External Recruitment Agent to verify the reliability of candidates' careers and abilities for experienced hires• Adding new External Recruitment Agent annually
Turnover Improvement Activities	<ol style="list-style-type: none">① Transition from 2-shift to 3-shift system to reduce on-site fatigue (2018)② Providing 'Naeil-Chaewoom deduction system (Tomorrow's fill deduction)' in the form of a savings account to encourage long-term employment③ Reward employees who have reached certain years of tenure (3 years, 5 years, 10 years, 15 years, etc.)④ Distribution of performance incentives (in the form of PI and PS) twice a year to encourage performance and retention⑤ Implementation of various activities to promote work-life balance and focus on work<ul style="list-style-type: none">• Flexible working hours (07:00-16:00, 08:00-17:00, 09:00-18:00)• Remote work options for departments where applicable• Emergency response systems (childcare, COVID-19, etc.)
Meetings for Disabled Employees	<ol style="list-style-type: none">① Hold a meeting with the head of the department at least once every quarter with a sign language interpreter② Vocational counseling for disabled employees by HR personnel③ Collaboration with the Korea Employment Agency for Persons with Disabilities (KEAD) to provide ongoing support services, aiding the integration of disabled employees into the workplace

People-Oriented Management

Human Resource Management

Capacity Enhancement

We offer comprehensive long-term development programs for all employees. These programs include basic skills and job skills improvement training for each level, along with selective training for key personnel development. Depending on their rank, employees receive training in entry-level, promotion, and leadership to enhance their fundamental job skills. Additionally, job competency enhancement training is provided to improve the specialized knowledge and abilities needed for job performance. In 2024, 608 employees completed the training, an increase of 186 from 2023.

Training Satisfaction Management

Employees who complete training participate in a satisfaction survey where they can freely express their opinions on improvements and adjustments needed for the program. Based on their feedback we are trying to plan a helpful program for our employees.

Training Satisfaction Survey and Utilization



Category	Unit	2021	2022	2023	2024
Training Satisfaction	Points (out of 10)	8/10	8/10	8/10	8.6/10
Career Development Training Performance	-	Diversification of target participants for common training programs across employee levels	Improvement of training participation culture and designation of training coordinators within each department	Reestablishment of training for field staff within the training system, and comprehensive revision of the training attendance system	Improvement of training quality based on analysis of training satisfaction surveys to enhance satisfaction

Capacity Building Training

Basic Training

Basic skills improvement training for each level

Entity-Level Training
Promotion Training
Leadership Training

Selective Training

Job skills improvement training

Job Qualification Certification

Key personnel development training

Foreign Language Courses

Category	Basic Competency Training	Common Training for Each Level (Manufacturing/ Research/Support)	Job Training	Statutory Training
Executives	• Leadership training for executives			
Chief	• Supervisor training • Organizational management leadership training • Change management leadership training	• Value Engineering (VE) training		
Manager		• Promotion training for new managers	Common Training for Each Level (Manufacturing/ Research/Support)	• Sexual harassment prevention training • Personal information protection training • Disability awareness improvement training • Retirement pension training
Seniors	• Training for hazardous chemicals handling personnel	• Semiconductor process basics/practical training • Statistical process control (SPC) PRACTICAL TRAINING	• Mind growth training • Job competency enhancement training • Marketing staff quality training	
Staff	• Entry-level courses for new employees • New office employee process training	• OA skills enhancement courses (level1/2)		



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People-Oriented Management

Human Resource Management

Career Development Process

In addition to providing education to enhance employee capabilities, we operate a career development process. Employees who have been with the company for over a year can set career development goals and action plans, which they can then discuss with their direct department heads during career consultations. We also support career development through external training, overseas study, mentoring, degree acquisition support, and challenge assignments.

Career Development Process



Career Development Programs

Our career development programs encompass activities in three areas: education, skills, and job functions. In the education sector, we run a degree acquisition support program for employees who have been with the company for over three years, selected through a fair process. In the job sector, we support job transfers based on employees’ preferences, abilities, and characteristics. As of 2024, a total of nine employees have successfully transitioned to new roles. HANA Materials continuously improves and enhances career development activities to increase individual career satisfaction and job performance.

Educational Training Support

Eligibility	Employees recommended by their team leaders (based on recommendation letters), reviewed and approved by the HR team leader and support team leader
HR Review Criteria	Minimum of 3 years of service Performance evaluation results from the past three years
Support Details	Full admission fee + 50% of tuition (up to KRW 3 million per semester)

2024
Degree Acquisition
Beneficiaries*

35 employees

*an increase of 5 from the previous year

Job Transfer Achievements

Shift Worker to Equipment Process Engineer	⇒	Facility Process Engineer	Application of practical experience to establish internal processing, quality, and equipment standards
Quality Inspector	⇒	Quality Engineer	
Production Shift Worker	⇒	Process Improvement Engineer	
Equipment PM	⇒	Production Management	Job transfer based on personal aptitude and preferences
Process Improvement Engineer	⇒	Processing Equipment Shift Worker	

Fair Evaluation and Compensation

To ensure fair employee performance management, we set company-wide goals and action plans, aligning them with each team/group’s business plans and strategic tasks. Critical tasks are defined to achieve team/group goals, and individual goals are set and adjusted through consultations with department heads according to the SMART principles (Specific, Measurable, Action-oriented, Realistic, Timely). We comprehensively evaluate achievements, capabilities, and attitudes for organizational goal attainment. This internal evaluation forms the basis for determining evaluation grades, which are then reflected in salary adjustments and promotions. We have established a system to evaluate work performance and provide results-based rewards to improve employee engagement and satisfaction objectively and fairly.

*SMART (Specific, Measurable, Action-oriented, Realistic, Timely)

Performance Management Process



Performance Reward System



(Unit: KRW 1,000)

Award Title	Area	Reward Details
Proud Hana People	Employees who have achieved outstanding performance and contributed to company development	500
Labor Day Merit Award		300
Exemplary Employee	On-site employees with excellent work attitude and serving as role models	400
Best Practice Award	On-site employees who have made efforts in monthly production activities and work guidance	450~4,000

People-Oriented Management

Creating a Great Workplace Culture

Employee Benefits

HANA Materials offers a variety of employee benefit programs to promote work-life balance and encourage long-term employment. We provide leisure support programs to help employees relax after work, regular health checkups, and medical expense support. Additionally, we offer allowances for family events, dormitory accommodations, child education support programs, and operate commuter buses to focus on the work environment. We also support joining group accident insurance.

Key Employee Benefits

Category	Details
Dormitory	Off-site dormitories to ensure housing stability for employees
Cafeteria	Balanced meals in a pleasant environment with a professional nutritionist
Health Promotion Facilities	Membership in the Well-being Club with access to various health facilities (gym, spa, yoga, GX, etc.)
Club Activities	Support for nurturing and funding internal club activities
Awards	Awards for exemplary employees and meritorious service
Health Check-ups	Annual general check-ups for employees, comprehensive check-ups for selected individuals
Vacation Facilities	Opportunities to use vacation facilities
Commuter Bus	Operation of commuter buses for work commutes
Discount Affiliates	Agreements with various vendors (movies, hair, glasses, electronics) for discounted services

Family Welfare

Family Event Support

Child Education Support

Medical Expense Support

Other

Long-term Service Rewards

Flexible Working System

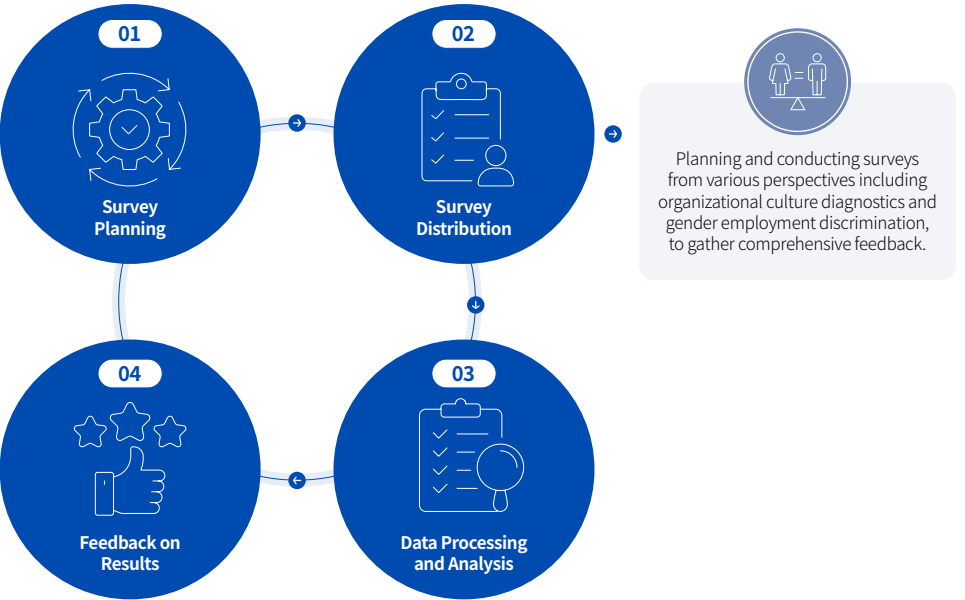
Work-Life Balance

To help employees maintain a work-life balance, we have implemented a flexible work-hour system. This allows employees to manage their work hours autonomously, enhancing work efficiency. We comply with the Labor Standards Act and make various efforts to improve working conditions.

Employee Satisfaction Survey

We conduct surveys to measure job satisfaction and organizational commitment. The collected satisfaction and commitment scores are accumulated yearly, allowing for comparative analysis to identify areas for improvement. These activities aim to enhance job satisfaction and engagement among employees, creating a positive cycle that enhances overall organizational performance and fosters a great workplace.

Employee Satisfaction Survey Process



- Human Rights Management
- People-Oriented Management
- Sustainable Supply Chain Management
- Quality Innovation
- Information Securityand Privacy Protection
- Corporate Social Responsibility

People-Oriented Management

Enhancement of Employee Communication

Labor-Management Culture Vision and Strategy

To promote and activate a friendly organizational culture among HANA Materials members, we have presented a labor-management culture vision of "ZERO Conflict" and established four detailed strategies to achieve this.

Labor-Management Culture Vision and Strategy



Joint Labor-Management Conference

To create a platform for labor-management communication and enhance employee participation and cooperation, we hold the Joint labor-management conference quarterly. The conference consists of six employer representatives and six employee representatives. All twelve members attend regular meetings to discuss and agree on issues related to wages, benefits, and working conditions. Agreed items are implemented and announced on the company bulletin board and applied company-wide.

2024 Joint Labor-Management Conference Activities

	Inaugural ceremony of 6th Labor-Management Special training for the employee representatives	Workshop Japan Company Tour, Unity Activities
	Joint Labor-Management Conference Holding quarterly Joint Labor-Management Conference	External volunteer activities Environmental cleanup at the shared garden in Asan City

2024 Joint Labor-Management Conference

Organizational Culture Revitalization Activities

As part of our strategy to execute a healthy organizational culture vision, we consistently carry out various internal activities. We hold regular Joint labor-management conference meetings, operate occasional informal meetings, and provide various communication platforms such as group chat rooms to continuously discuss labor issues and identify improvement needs. Additionally, to promote camaraderie and friendship between labor and management, we organize and conduct annual sports events, interdepartmental team-building activities, and movie days. We aim to provide more opportunities for participation by creating additional platforms for communication and team-building activities, fostering an environment where everyone can work together, socialize, and communicate effectively.

2024 Organizational Culture Revitalization Activities

HR-Marketing Exchange Meeting	Group Leader Meeting Encouraging communication between organizations and develop joint solutions through issue sharing
Site Manager Exchange Meeting Gathering employee opinions related to emergency management systems	Special Events with Employee Participation OX quizzes, lucky draws
Department Staff Exchange Meeting	Kimchi Making Volunteer Service Eumbong-myeon Happiness Sharing Kimchi Making Volunteer Service
New University Graduate Employee Exchange Meeting	



2024 Kimchi making volunteer service



Team leader exchange meeting



Group leader exchange meeting



2024 new university graduate workshop



2024 external volunteer activities



2024 anniversary event



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Sustainable Supply Chain Management

Supply Chain Management System

Code of Conduct and Code of Ethics for Partners

HANA Materials has established a Partner Code of Conduct to achieve mutual benefits and co-prosperity with all our partners based on mutual trust and cooperation. This code outlines the requirements for fair business practices across five key areas: compliance and ethics, respect for human rights, environmental management, safety management, and management systems. To ensure the dissemination of the Code of Conduct and Code of Ethics for Partners, we require all prospective partners to sign a "Partner Code of Conduct Compliance Agreement." We plan to maintain continuous communication regarding ethical and fair business practices.

Content of Code of Conduct and Code of Ethics

Hana Materials establishes the following Code of Conduct to promote mutual cooperation and shared growth with its partners. Through this initiative, we aim to ensure that our partners' employees carry out their duties fairly and proactively prevent supply chain risks.

Compliance and Ethics

Adherence to relevant laws and regulations for transparent corporate management

Respect for Human Rights

Respect for dignity and diversity based on the guarantee of individual basic rights

Environmental Management

Implementation of environmental policies and joint response to the climate crisis

Safety Management

Active cooperation in safety and health activities and management evaluations

Management System

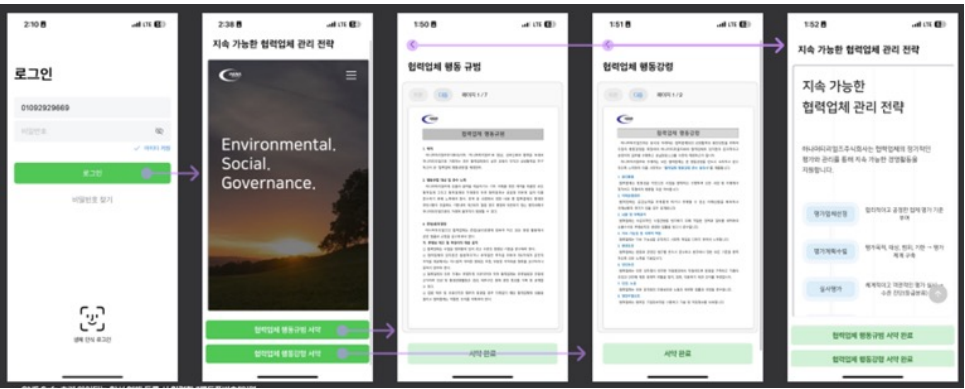
Establishment of foundations to fulfill corporate social responsibility and build a sustainable management environment



Partner Code of Conduct Partner Code of Ethics Partner Code of Conduct Compliance Agreement

Introduction of Mandatory Code of Conduct Pledge Process for Partner Registration

Starting from the second half of 2025, the process will be implemented so that Partners must complete the Code of Conduct pledge to be registered.



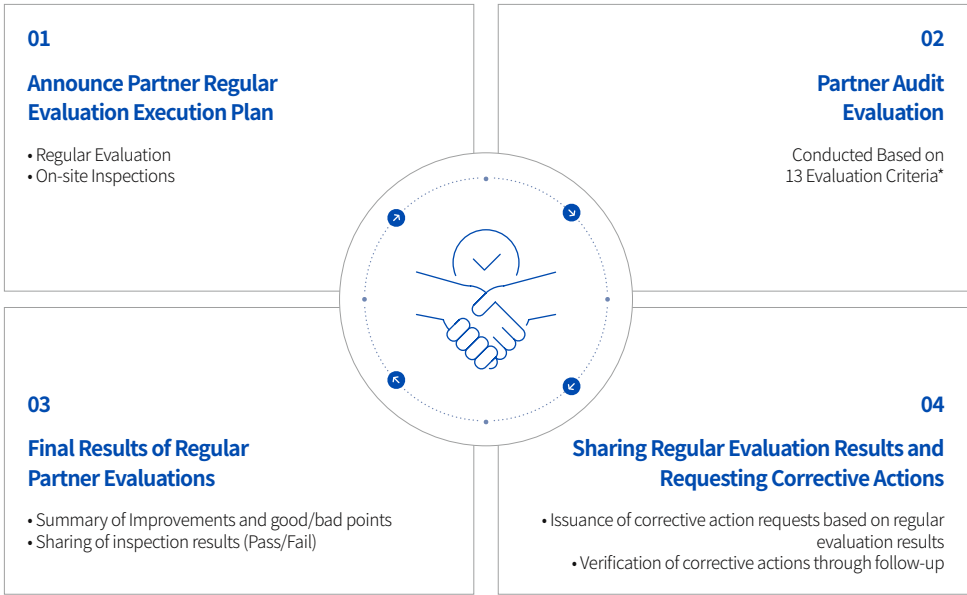
Sustainable Supply Chain Management

Supply Chain Management System

Supply Chain Sustainability Evaluation

Partner Management Process

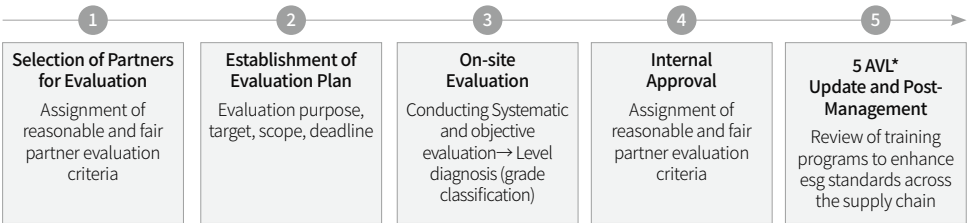
HANA Materials conducts regular evaluations of our partners based on 13 evaluation criteria*, including quality management, environmental management, and safety and health management. Based on the results of these regular evaluations, we classify findings into major non-conformities, improvement recommendations, and information requests. We then issue corrective action requests to address any deficiencies. We verify the completion of these improvements to ensure effective supply chain evaluation and management.



* ① Quality management ② Inspection management ③ Non-conformity Management ④ Material management ⑤ On-site management ⑥ Equipment management ⑦ Change management ⑧ Research and development infrastructure ⑨ Drawing/warranty management ⑩ Environmental management ⑪ Safety and health management ⑫ Purchase performance management ⑬ Partner management

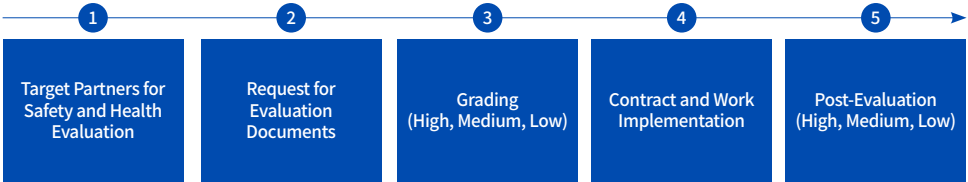
Partner Evaluation Process

We establish management goals for our partners, evaluate them using documented internal evaluation criteria, and support sustainable business activities. For partners with contracts exceeding a certain threshold, we conduct separate safety and health evaluations in addition to regular assessments to enhance the safety and health standards within the supply chain. Partners receiving low scores in on-site evaluations or safety and health ratings may be excluded from contracts or have these factors considered in future contracts. Based on the evaluation results, we require partners to take corrective actions to address improvement areas.



* Available Vendor List

Safety and Health Evaluation



Partner Evaluation Criteria

During partner evaluations, we comprehensively review management data to ensure financial stability and environmental safety data to support sustainability. We award extra points for ISO 14001 certification or require partners to sign a safety management compliance pledge to verify their EHS management systems. We plan to enhance our partner evaluation criteria by incorporating comprehensive internal and external environmental factors to build a sustainable supply chain.



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Sustainable Supply Chain Management

Supply Chain Management System

Shared Growth

Regular Outsourcing Contract

Through "regular outsourcing contracts," HANA Materials supports our partners in establishing stable cash flow and growth. We prioritize the operational capabilities of outsourcing processing companies when determining regular operational quantities. This approach ensures that we secure a stable supply route while partners build a foundation for stable financial operations, fostering a cooperative system of shared growth.

Communication Channel Operation

To build a trusting relationship with our partners, we regularly operate communication channels to listen to their difficulties and requirements. These channels target partners requiring incident/accident reporting or supply situation checks, and they are operated at least once per quarter. Through regular communication, we strive to address and resolve partners' grievances and complaints.

Partner VOC (Voice of Customer) Listening

Background	• Improvement of the existing issue of incident/cause identification only after occurrence due to irregular and one-off consultations with each partner
Target Partners	• Partners with a history of incidents/accidents • Raw material suppliers needing supply situation checks • Partners with an understanding of competitor and market conditions
Frequency	• At least once per quarter
Methods	• Business consultations, meals, informal meetings, etc.
Participants	• Partner representatives, purchasing group representatives, purchasing group leaders, etc.

Action Status of Partner VOC (Voice of Customer)

We actively address grievances and complaints in the VOC from our partners. For cases received in 2023 and 2024, we have completed 100% of the responses, and among the 11 cases received in 2025, 10 cases have been addressed while 1 case is currently being processed.

Number of VOC Cases Received and Actions by Hana Materials Purchasing Group Over the Past Three Years

Cate- gory	Group Member 1		Group Member 2		Group Member 3		Group Member 4		Total		
	Number of cases received	Number of actions	Number of cases received	Number of actions	Number of cases received	Number of actions	Number of cases received	Number of actions	Number of cases received	Number of actions	Re- sponse Rate
2023	1	1	3	3	1	1	-	-	5	5	100%
2024	2	2	3	3	2	2	4	4	11	11	100%
2025	2	2	1	1	2	1	6	6	11	10	91%
TTL	5	5	7	7	5	4	10	10	27	26	96%



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Quality Innovation

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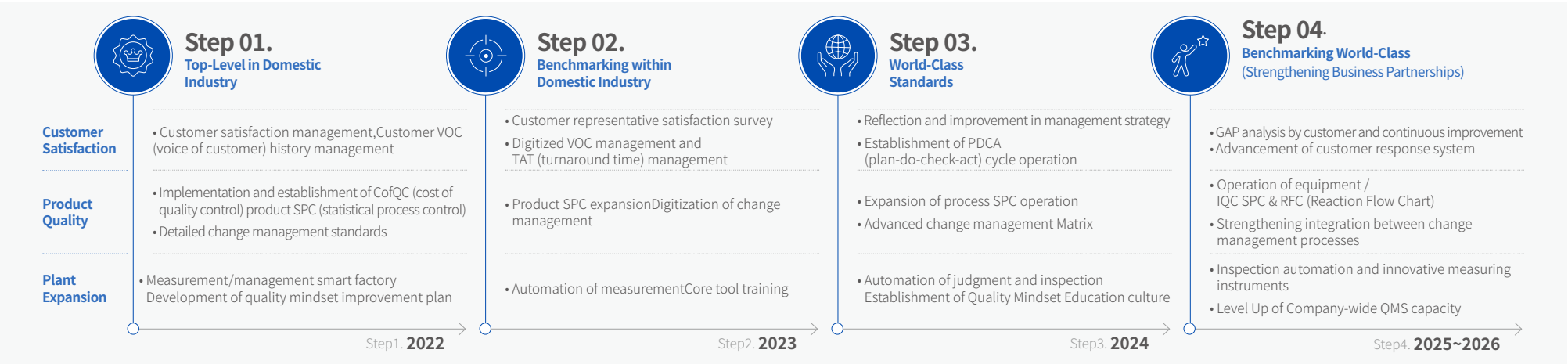
Quality Control Strategy

The quality of products and services is a key factor directly linked to a company's reliability. To this end, HANA Materials has set "Achieving Superior Quality" as a core objective, continuously striving to provide high-quality products and differentiated customer service. Additionally, we have established a mid- to long-term quality management strategy based on Digital Transformation and prioritizing customer feedback to achieve customer-centric high-quality product production.

Key Strategic Initiatives

Customer Quality Advantage			Advanced Process Quality	
Customer survey activities	Improvement of Customer Response System	Expansion of Internal Audits	Application of equipment/ IQC (Incoming Quality Control) SPC (Statistical Process Control)	Advanced Change Management
⇓	⇓	⇓	⇓	⇓
Incorporation of VOC (Voice of Customer) improvements	Improvement of response TAT (turnaround time)	Enhancement of corrective action effectiveness and product warranty	Increased preventive quality and product warranty	Advancing detection of internal variations and change impact management
Adaptation to Business Diversification and Site Variability Advantage			Company-Wide Quality Competence Enhancement	
Smart Factory	Advanced Inspector Training	Plant Diversification	Quality Mindset Education	Expansion of In-house Instructor Pool
⇓	⇓	⇓	⇓	⇓
Productivity improvement through automation of measurement	Multifunctionality and standardization of development paths for increased flexibility	Quality unification across sites	Expansion of QMS (Quality Management System) In-house Training Courses	Advanced training using on-site cases

Mid- to Long-Term Quality Management Strategy



Quality Innovation

Quality Management System

Quality Management Policy

HANA Materials continuously enhances its quality management system based on three main quality management policies to provide the highest quality and service that meet customer demands and achieve absolute quality.

Quality Management System Enhancement

We adhere to our quality management policies and continuously upgrade our quality management system. By particularly enhancing our internal audit system, we regularly perform system audits, product audits, and process audits. The improvements identified from these audits are promptly implemented to ensure continuous quality enhancement and systematic quality management based on processes. These efforts ensure that our products and services consistently maintain the highest quality standards.

3 Main Quality Management Policies



01

Provision of Flawless Quality and Reliable Service



02

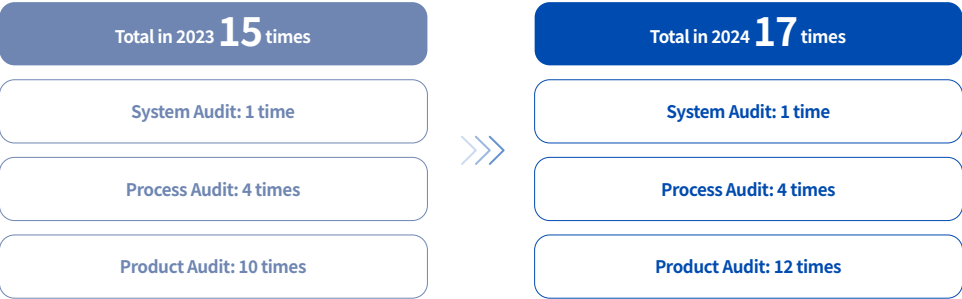
Customer Satisfaction Through Continuous Quality Innovation



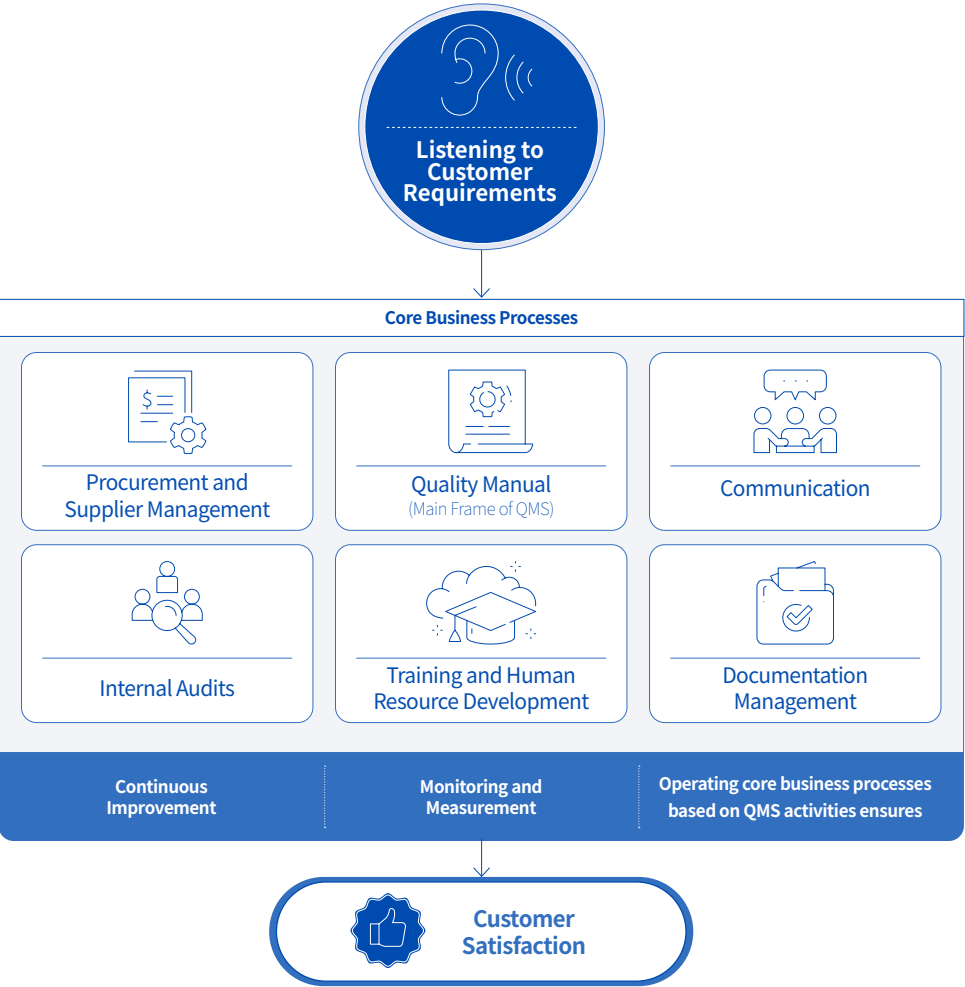
03

Strict Compliance with Quality Management System (QMS) Requirements

Internal Audit Performance



Quality Management System





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Quality Management System

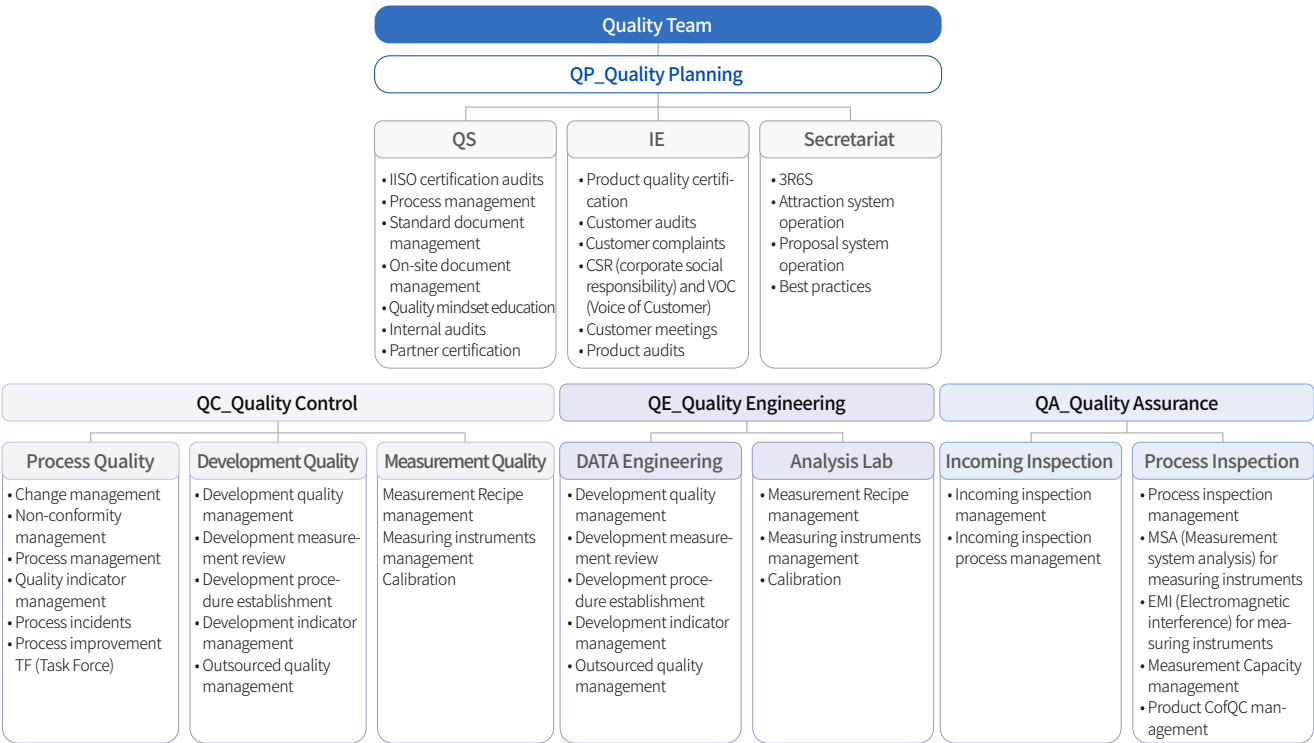
Quality Management Organization

HANA Materials performs various tasks to improve product and service quality, focusing on the QP (Quality Planning) Group, which handles external and quality innovation tasks, and the QA (Quality Assurance) Group, which is responsible for product assurance tasks. Additionally, the QC (Quality Control) and QE (Quality Engineering) Groups systematically manage quality to meet customer needs in production and strive to minimize product defects.

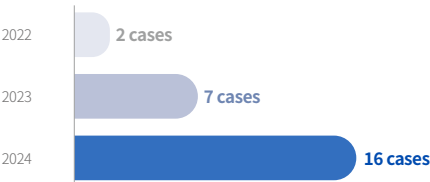
Organizational Structure Restructuring

In 2024, to advance the Quality Management System and realize Sustainability Management, we restructured the quality organization. Previously, quality organizations operated by business location, but we introduced a function-centered quality organization system covering all campuses. This strategic measure enhances work focus and efficiency while strengthening a consistent quality management system across all campuses. Through integrated functional operations, we standardized tasks between campuses, improved expertise and productivity of each function, and enhanced risk response speed and problem-solving capabilities by advancing company-wide standard quality tasks. Furthermore, by clarifying task assignments, we improved efficiency in quality management work, thereby advancing the level of quality management. This organizational restructuring represents a paradigm shift in company-wide quality management strategy. The Quality Team is fully committed to not only improving the reliability of product and service quality but also enhancing customer satisfaction and strengthening cooperation with partners, thereby positively impacting ESG value creation in the areas of 'Social' and 'Governance'.

Quality Management Organization



Quality Processes Enhancement



The Quality Team has set 'Customer Satisfaction,' 'Quality Cost Improvement,' and 'Quality Enhancement' as core keywords and continuously promotes systematic advancement of company-wide quality processes. Through this, we aim to strengthen the competitiveness of product and service quality, while simultaneously achieving efficient resource utilization and securing customer trust. To achieve substantial improvement effects, we have established annual goals since 2022 and has been progressively implementing enhancement initiatives. As a result, we achieved 2 cases in 2022, 7 cases in 2023, and a total of 16 cases in 2024.

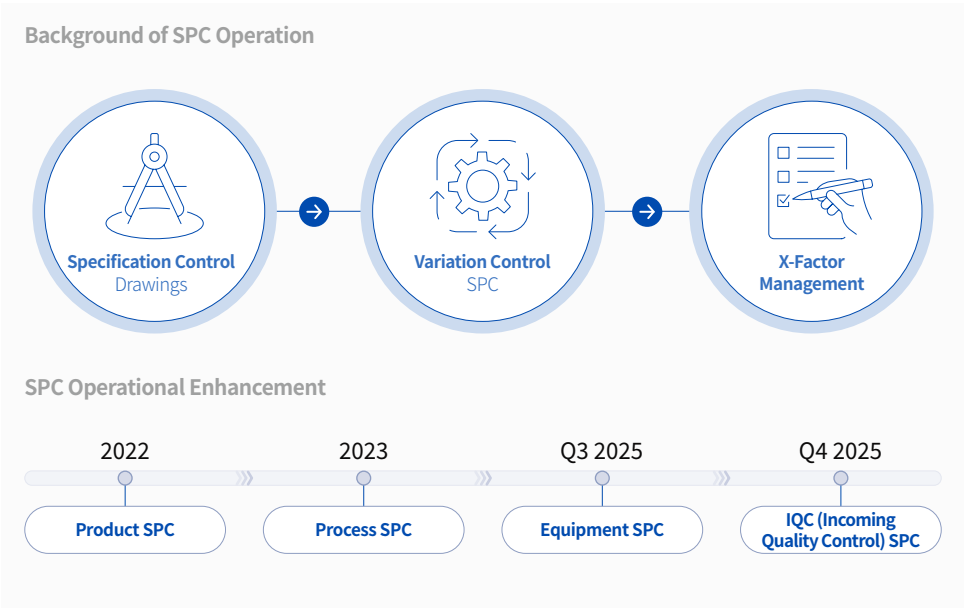
Quality Innovation

Quality Innovation Initiatives

SPC

HANA Materials has established an SPC (Statistical Process Control) operational framework in addition to our existing CIP (Continuous Improvement Plan) and PDCA (Plan-Do-Check-Act) cycle, and we are progressively enhancing our SPC operations. We are currently developing SPC charts for key parameters, allowing real-time monitoring of process variations and enabling prompt responses. Additionally, we are piloting the implementation of RFCs (Reaction Flow Charts) for key parameters, which provide immediate response plans to address process anomalies, thereby preventing and swiftly resolving quality issues. These activities form a crucial foundation for continuous quality improvement and consistent quality assurance, and we are committed to providing more reliable products and services to our customers through company-wide efforts.

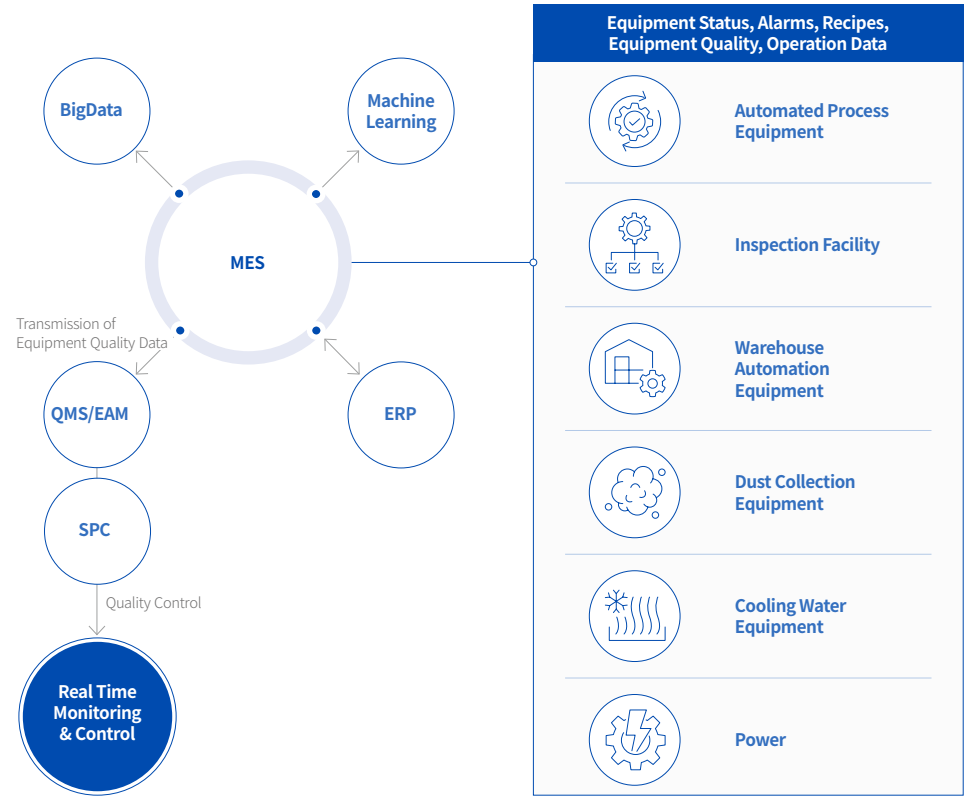
SPC Operational Management Roadmap



Digital QMS

Hana Materials has developed an SPC process for systematic quality Trend management in product quality control to improve customer satisfaction. By managing process data in real time, we quickly identify and efficiently improve defect factors. Furthermore, we are working towards realizing a Digital QMS (Quality Management System) by promoting a Smart Factory through big data analysis and machine learning.

Quality Control Based on SPC Process



Quality Innovation

Quality Innovation Initiatives

Quality Mind Growth Activities

To foster quality innovation, we conduct "Quality Mind Growth" training for all employees to enhance their quality mindset. In 2024, we completed six training courses through in-person education and plan to conduct seven courses in 2025. This training helps employees recognize the importance of quality innovation and actively participate in practical quality improvement activities. Additionally, we have developed in-house instructors and conducted training to strengthen company-wide quality competencies. As a result, we have trained twelve in-house instructors in Quality Team, and post-training evaluations showed a 170% improvement in understanding of education. We will continue to strengthen internal quality capabilities through ongoing Quality Mind Growth activities.



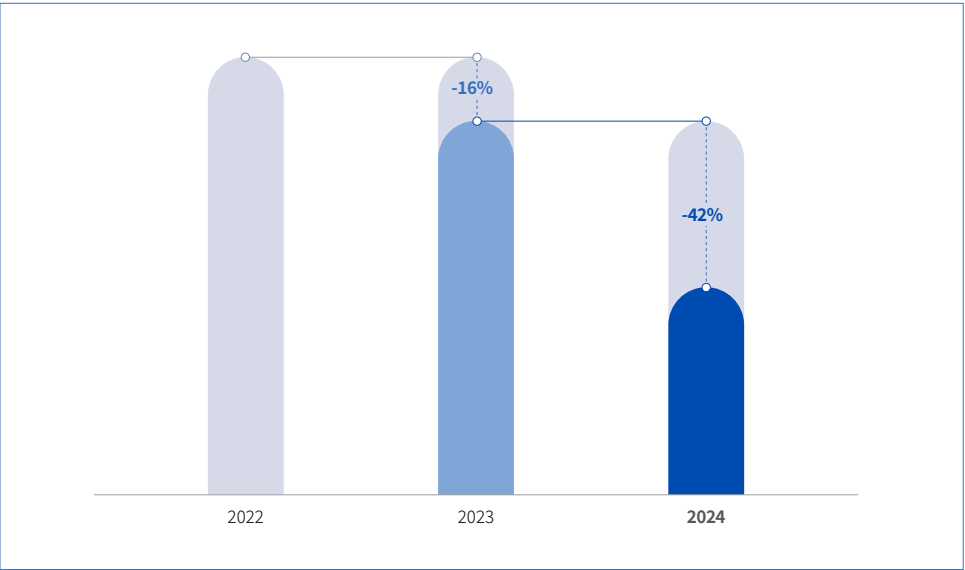
“Quality Mind Growth” Training Courses

2023 Achievements: 4 courses	2024 Achievements: 6 courses	2025 Plan: 7 courses
CopyExactly!(CEI)	CopyExactly!(CEI)	CopyExactly!(CEI)
Change Management	Change Management	Change Management
Human Error	Human Error	Human Error
SPC	SPC	SPC
	Internal Auditor Training	ISO 9001
	Standard Document Guide	Digital CofQC
	6σ Quality Management	

Quality Management Achievements

To achieve our goal of "Absolute Quality," HANA Materials identifies and addresses quality degradation factors within processes. By utilizing statistical methods, we improve process capabilities, ensure consistent quality, and have gradually reduced process defect rates over the past three years. In 2024, we achieved a 42% improvement in defect rates compared to 2023, and we are continually striving for the highest quality and absolute quality.

Process Non-conformity Index



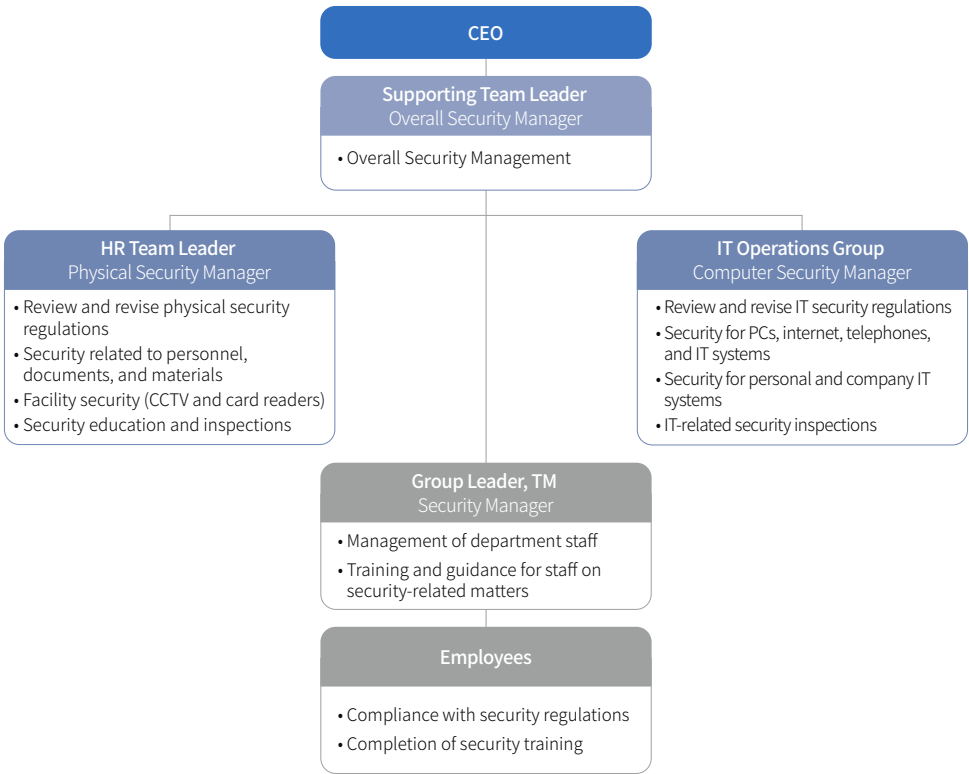
Information Security and Privacy Protection

Information Protection System

Information Protection Organization

HANA Materials systematically responds to internal and external security issues through its information protection management organization. The overall responsibility for information security lies with the support team leader. Under their comprehensive management, the HR team leader is responsible for physical security, the IT Operations Group is responsible for IT security, and the group leader and TM (Team Manager) are responsible for security management. Under systematic responsibility management, employees comply with our security regulations, complete relevant training, and enhance the overall level of information protection across the company.

Information Protection Management Organization

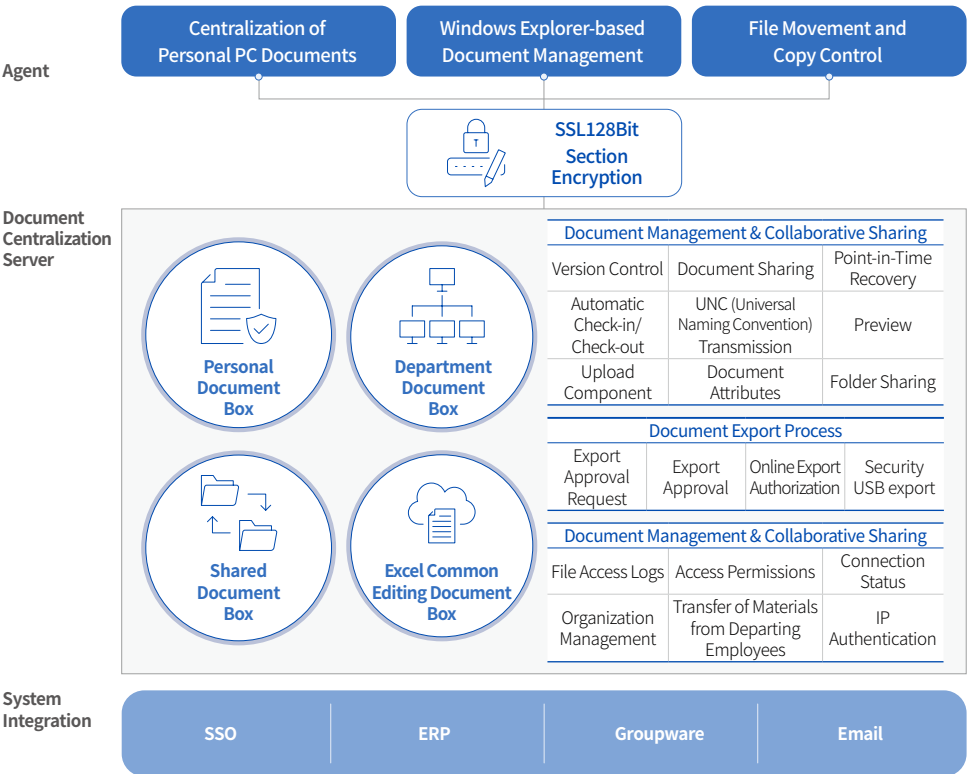


Security System

Document Centralization

To protect customer information, HANA Materials has established a management system that prevents information leakage. We have set up a VPN firewall within the internal network to restrict access by unauthorized external individuals. Additionally, we have implemented a document centralization system to prevent security breaches by ensuring that documents are not stored on individual PCs but managed through a centralized shared document system.

Document Centralization System

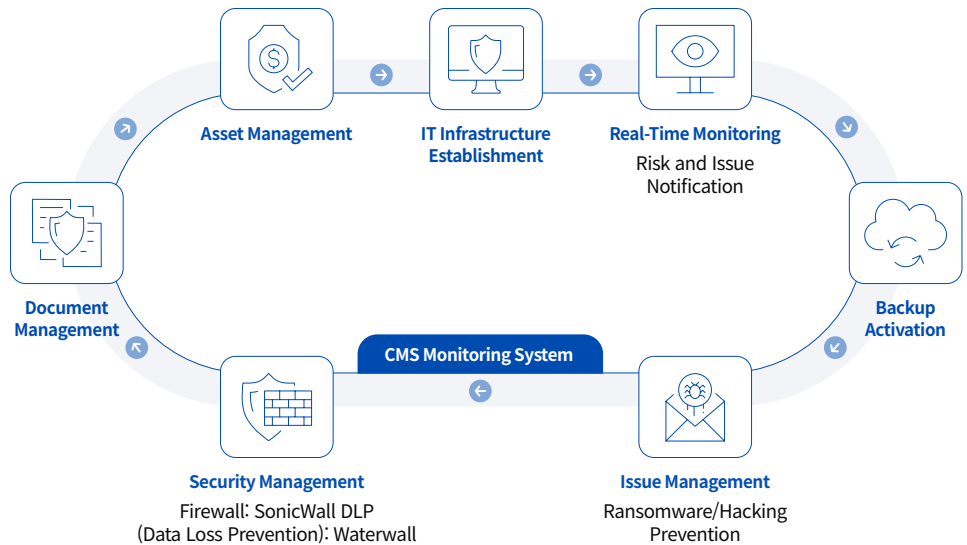


Information Security and Privacy Protection

CMS Monitoring System

HANA Materials systematically manages hardware and software through "Integrated Monitoring," which includes monitoring security solutions as well as personal information. The system enables real-time monitoring of internal system issues, allowing us to identify the precise location and extent of problems, address them quickly, and minimize damage.

CMS Monitoring System



System-based Information Management Activities

Real-Time Interface Between ERP and MES	<ul style="list-style-type: none">• Provide integrated executive information (EIS) through real-time interface between ERP and MES.• Support internal and external information systems for users, customers, and partners for information sharing and collaboration
DLP (Data Loss Prevention)	<ul style="list-style-type: none">• Protect documents stored on corporate PCs using DLP* technology• Prevent data theft, loss, or leakage caused by intentional or accidental actions of insiders. <p>* DLP (Data Loss Prevention): PC security control + personal information leakage prevention Secure USB Management (against loss) + software and hardware management</p>
Storage Device : Blocking USB, Allowing Read-Only for CD/DVD	<ul style="list-style-type: none">• Prevent unauthorized removal of data storage devices (PC, external HDD, USB, CD/DVD)• Block access to USB connections on PCs• Allow read-only access for CD/DVDs, and permit only approved storage devices
Intranet VPN Firewall Configuration and Management	<ul style="list-style-type: none">• Configure intranet (VPN) firewall settings, and block external access to the internal network.• Configure DMZ (demilitarized zone) segments to allow access only for authorized users
Document Security and Physical Security : Watermarking, Print Information, and Storage	<ul style="list-style-type: none">• Send or remove internal documents requires approval from the department head• Avoid copying sensitive documents, ensuring shredding and incineration when necessary• Introduce watermarks on printed materials to prevent duplication and trace duplication paths
MDM (Mobile Device Management) Camera Security Solution	<ul style="list-style-type: none">• Solution to prevent information leaks from smartphone camera usage (Transmission of captured data to server)• Controls of camera usage within business locations, protection of enterprise information assets, prevention of information leakage incidents

Information Security and Privacy Protection

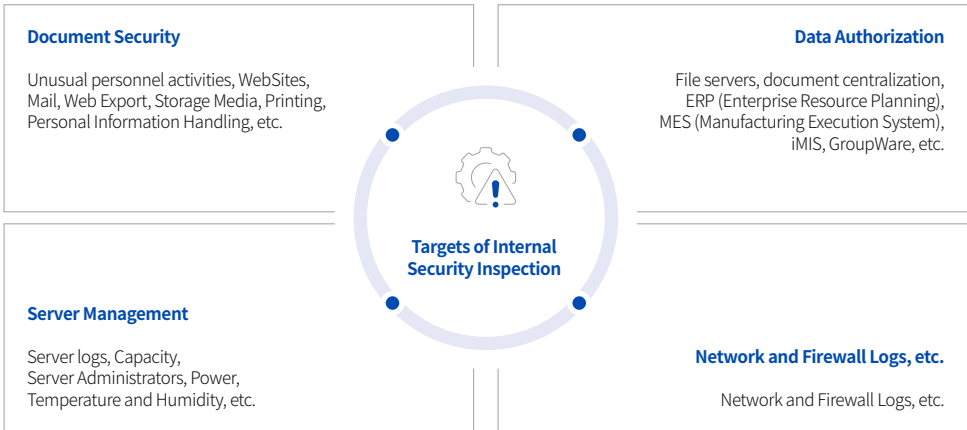
Security Enhancement

Internalization of Information Protection

Internal Security Inspection Day

To raise employee awareness of information protection, HANA Materials has designated every Thursday as "Internal Security Inspection Day." On this day, we conduct document security, facility security, server management, and network security checks throughout the workplace to promote a culture of security among our employees.

Targets of Internal Security Inspection



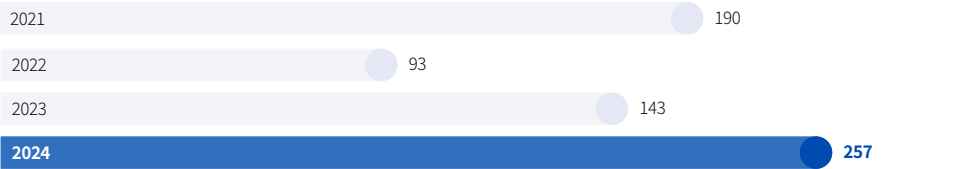
Information Security Education

In addition to physical security management activities, we conduct annual information protection training to raise employee awareness. This training includes preventing malware infections and internal information leakage through email. Through this training, we communicate the importance of information protection and methods for maintaining security. As a result of our efforts, including education, real-time integrated monitoring systems, and regular inspections, there were no cases of personal information leakage in 2024. Additionally, there were no reported cases of improvements needed or complaints following internal information protection level checks.

Information Security Investments

In 2024, we invested approximately KRW 250 million in maintaining and upgrading existing systems such as firewalls, DLP (Data Loss Prevention), document centralization, mobile security, and print security facilities, as well as introducing new systems including new firewalls and camera security solutions. This represents 15.16% of the total IT budget. We are continually investing in our systems to counter increasingly sophisticated hacking methods.

Amount of Information Protection Investment (Unit: KRW million)



Amount of Information Protection Investment

Category	Investment Equipment
Maintenance	Firewalls, SpamSniper, DLP, ESET, document centralization
New Installations	Firewall log analysis software, new firewalls, mobile security, print security
Initial Training	Mobile Security

Response to Information Security Incidents

By our internal information protection regulations, in the event of a security incident such as leakage of confidential information, loss or theft of information assets, or missing controlled products, we document the incident details (reason, time, scale, severity, etc.) and immediately report it to the management through an incident report. We also notify customers and establish measures to prevent recurrence. Furthermore, employees who disclose company secrets, neglect the management of documents or media, use the internal communication network for non-business purposes, or violate related regulations are subject to disciplinary actions, including warnings, pay cuts, suspension, or dismissal. These measures are stipulated in the Disciplinary Committee's operating regulations and are strictly enforced.

Corporate Social Responsibility

Social Contribution Activities

Social Contribution Strategy

HANA Materials, based on human-centered management philosophy, aims to realize shared value through its social contribution vision and value strategy, "Shared Value, People-oriented Management." We operate community development programs under this vision. Our social contribution activities, designed with a focus on "Balanced Growth with Society," "Workplace for All," and "Value Growth with the local Community," are systematically managed by the HR team.

Social Contribution Strategy



Shared Value, People-oriented Management



Balanced Growth with Society

Agreements with Schools

Donations

Local job creation

Customized workforce development for local SMEs



Workplace for All

Improve working conditions of vulnerable workers



Growing Value with the Community

Establishment of Eumbong Industrial Complex

Asan campuses establishment

Contribution to community economic development through value growth

Agreements for investment in promising companies

Support for Nurturing Local Human Resources

Agreements and Partnerships

- Industry-Academia Cooperation Agreement with Cheonan Girls' Commercial High School
- Pre-Employment Post-Study Agreement with Hoseo University
- Long-Term Corporate Internship Program with Korea University of Technology and Education
- Employment Promotion Agreement for the Disabled with Chungju Seongsim School

Donations

- Book Donation to PohangJecheol Technical High School
- Scholarship Fund Donation to Chungju Seongsim School
- Sports Equipment Donation to Chungju Seongsim School

Creating Local Job Opportunities

Establishment of Asan campus 1 and Eumbong Industrial Complex

Construction Start Date	February 2018
Completion Date	January 22, 2019
Investment Amount	KRW 48 billion
Employment Impact	Approximately 200 jobs (by end of 2019)



Awards Related to Job Creation and Employment

Awards	Awarding Institution	Awards	Awarding Institution
2020 Korean Best Job Company	President of the Republic of Korea	Excellent Labor- Management Culture Enterprise in 2019	Ministry of Employment and Labor
Youth-friendly Small Giants	Ministry of Employment and Labor	Excellent Company for Employment of the Disabled	Korea Employment Agency for Persons with Disabilities President's Award
Commendation for Contributions to Job Creation	Minister of Employment and Labor Award	Excellent Company for Employment of the Disabled	Cheonan City Mayor's Award

Improvement of the Treatment of Vulnerable Works

- Quarterly meetings between disabled employees and department heads with a sign language interpreter
- HR personnel performing the duties of disability employment counselors
- Continuous support services for disabled employees in cooperation with the Korea Employment Agency for the Disabled
- Expansion of facilities for disabled employees (e.g., in the cafeteria)

- Human Rights Management
- People-Oriented Management
- Sustainable Supply Chain Management
- Quality Innovation
- Information Securityand Privacy Protection
- Corporate Social Responsibility

Corporate Social Responsibility

Key Activities in 2024

Activation of Local Community Workforce Development

Corporate On-site Training for ‘Semiconductor Talent Development’

HANA Materials supports corporate on-site training at a university located in Pyeongtaek, a region specialized in semiconductors. Through professional talent development, we have addressed the shortage of semiconductor professionals in Korea and established a foundation for the industrial integration of local semiconductor talent.



A job fair in Chungnam

In order to expand the recruitment of local talent, we hold job information sessions every year for major universities in Chungnam and vocational training institutions for high school students in Gyeongbuk. Through this, we promoted explanation of the semiconductor material parts manufacturing industry and recruitment promotion activities.

Period	Frequency	Participating Universities	Description
2022	3	Dankook University, Soonchunhyang University, Korea University of Technology and Education	Company presentations, job fairs
2023	2	Korea University of Technology and Education, Daejeon University	Company presentations,
2024	1	Korea University of Technology and Education	Company presentations, job fairs



Donation to ‘Cheonan Love Scholarship Foundation’ (KRW 3 million)

We donated KRW 3 million to the Cheonan Love Scholarship Foundation to support the development of local talented individuals and assist students.



Job Support for Vulnerable Groups

Regular Support for Chungju Seongsim School

We conduct regular support activities for Chungju Seongsim School, a private special school for the hearing impaired. In addition to financial support, we assist with employment activities to overcome barriers faced by job seekers in challenging circumstances.



Major Social Contribution Activities Over the Past 3 Years

(Unit: KRW thousand)

Period	Activities	Donation Amount
2022	Community Chest of Korea Let's Walk the Campaign	10,000
	Chungju Seongsim School Development Fund	5,000
	Korea University of Technology and Education Scholarship Fund	30,000
	Donation to Asan Foundation for Arts and Culture	10,000
2023	Support for Hansun Foundation for Freedom & Happiness	50,000
	Donation to Semiconductor Display Jeju Forum	3,000
	Chungju Seongsim School Development Fund	2,000
	Donation to Cheonan Love Scholarship Foundation	3,000
2024	Chungju Seongsim School Development Fund	2,000
	Donation to Cheonan Love Foundation	3,000
	Jeju National University Industry-Academic Cooperation	3,000
	Peak Time Festival in Asan City	3,000
	One Heart Sports Festival in Eumbong-myeon	1,000



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- People-Oriented Management
- Sustainable Supply Chain Management
- Quality Innovation
- Information Securityand Privacy Protection
- Corporate Social Responsibility

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Corporate Social Responsibility

Mid- to Long-term Goals for Local Community Coexistence

HANA Materials has established mid- to long-term goals for local community coexistence to ensure realistic and sustainable local community contribution tailored to Chungnam, where the company is located.

Mid- to Long-term Plan for Local Community Coexistence (2025–2030)

Vision: “HANA Materials,” a Sustainable Partner Growing Together with the Local Community

Category	Short-term Goal (2026)	Mid-term Goal (2028)	Long-term Goal (2030)
Building Social Trust	Consultation or MOU with local institutions	Securing over 80% local community trust level	Selected as Chungnam’s leading ESG Excellent Company
Sustainable Program Operation	Expansion of participation in local events	Establishment of three core programs	Expansion of public-private partnerships in the local community
Expanding Employee Participation	Achieve 30% participation rate	Achieve 50% participation rate	Securing over 500 annual volunteer hours

Detailed Mid- to Long-term Plan for Local Community Coexistence

Category	Details
Educational Support for Talent Development	· Job mentoring, career experience, and internships linked with local specialized high schools and universities
	· Operation of ‘HANA Youth ESG Academy’ (focused on eco-friendly and semiconductor careers)
	· Scholarships and educational equipment support
Donations/Volunteering linked to Local Welfare	· Formation of regular/irregular volunteer activity councils with volunteer organizations in Cheonan and Asan
	· Employee participation donation campaigns (Matching Grant, etc.)
	· Customized support for underprivileged groups in the local community (winter heating supplies, daily necessities, etc.)
Environmental Safety Campaigns	· “Safety Guardian Experience Class” for local children
	· Donations for local environmental improvement to address fine dust (air purifiers, purification campuses)
	· Citizen-participatory environmental cleanup activities such as water source protection and plastic waste collection
Support for Local Cultural Festivals	· Sponsorship and participation in local events such as Cheonan Heungtareong Festival and Asan Ginkgo Tree Road Festival
	· Contribution to local cultural spaces through in-house club performances and exhibitions
Coexistence with the Local Economy	· Expansion of partnerships with local commercial districts
	· Expansion of in-house welfare point usage linked to local commercial districts

Operation and Evaluation System for Mid- to Long-term Plan for Local Community Coexistence

Item	Contents
Operating Organization	Social Contribution TFT under the ESG Committee (strategic review at least twice a year)
Indicator Setting	KPI setting per program (participation rate, satisfaction, number of partners, etc.)
Feedback	Annual surveys and meetings with local residents and institutions
Performance Sharing	Regular disclosure through ESG reports and website

Budget and Partnerships

- Annual social contribution budget: 0.03%–0.05% of revenue
- Establishing cooperative systems with Chungnam Provincial Government, Cheonan City Hall, Asan City Hall, Baekseok Industrial Complex Corporation, Eumbong-myeon Office, and various regional universities

Future Roadmap

Year	Key Implementation Plans
2025	Launch of three key programs, consultation or MOU with local institutions
2026	Achieve 30% participation rate, expand participation in local events
2027	500 annual volunteer hours, introduction of social contribution satisfaction survey
2028–2030	Promote certification of ESG representative regional partners and expand sustainable evaluation achievements



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Corporate Governance

Board of Directors













Board Regulations

HANA Materials aims to share and grow corporate value with various stakeholders based on fair and transparent governance. To this end, we established the Board of Directors Regulations in February 2012, which cover the principles of the board, the core of our governance structure. We continuously revise these regulations to actively reflect socio-economic changes in corporate governance. Furthermore, in strict compliance with the Board of Directors' operational regulations, we fulfill our oversight and monitoring functions, and through our responsible management processes, we strive for sustainable value growth by safeguarding the company's core values and protecting shareholders' rights. The board regulations are published on our website and shared with stakeholders.

 Board Regulations

 Chair  Member / as of March 2025)







Board of Directors Composition Status

Board Member						Committee Activities			
Category	Name (Gender, Birth Date)	Position	Key Experience	Term Expiration Date	2024 Board Attendance rate	ESG Committee	Compensation Committee	Internal Transaction Committee	Candidate Recommendation Committee
Executive Director	Kim Hyun-Joo* (Male, Jun 1965)	CEO / Chair	• B.S. in Electrical Engineering, Kwangwoon University(Vice President) • Former Head of Samsung Electronics Japan • Former VP of Sales at Samsung Display	2027.03.25	100%				
	Choi Wang-ki (Male, Mar 1969)	Vice President	• Ph.D. in Materials Science, Korea University of Technology and Education • Former Senior Researcher at MEMC	2026.03.24	100%				
	Kim Soon-young (Male, Apr 1970)	Senior Executive	• Ph.D. in Accounting Science, UNISINOS University, Brazil • Former CFO at Hana Micron Brazil	2027.03.25	100%				
Independent Director	Jung Yong-Joo (Male, May 1968)	Independent Director	• Ph.D. in Chemistry, KAIST • Professor at Korea University of Technology and Education	2026.03.24	95%				

Board of Directors Composition

The Board of Directors at HANA Materials, as the highest decision-making body, is responsible for making and supervising decisions regarding management activities, holding comprehensive authority over company operations. As of March 2025, the board consists of three executive directors and one independent director, meeting the 25% independent director appointment ratio stipulated by Korean commercial law. The board chair can be the CEO or a director elected by the board. Currently, the CEO, who has extensive knowledge and experience in the semiconductor industry, also serves as the chair, ensuring stable management activities.

Board Skills Matrix

Member	Management & HR Expertise	Accounting & Finance Expertise	Purchasing & Sales Expertise	Industrial Technology Expertise
Kim Hyun-Joo				
Choi Wang-ki				
Kim Soon-young				
Jung Yong-Joo				



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Board of Directors

Board Independence, Expertise, Diversity, and Conflict of Interest Prevention

Directors must meet the qualifications outlined in relevant laws and the company's articles of incorporation. They should possess integrity, sound ethical awareness, and a proper professional perspective, representing the long-term and balanced interests of shareholders and stakeholders. To ensure this, we established the Independent Director Nomination Committee in 2023, which rigorously verifies the qualifications of director candidates for potential harm to corporate value, shareholder rights, and operational independence. The board subsequently selects new internal director candidates, who are then presented as agenda items at the general shareholders' meeting for final appointment. At the regular general shareholders' meeting on March 25, 2024, Kim Hyun-Joo and Kim Soon-young were appointed as internal directors. The board appointed Kim Hyun-Joo as the CEO. Additionally, in compliance with Article 397-2 of the Commercial Act, we strictly prohibit all activities that may involve personal benefit or conflicts of interest for board members and all employees.

To reinforce the roles and responsibilities of directors, we have implemented a responsibility management system and subscribed to liability insurance to minimize potential damages from arising issues. To enhance the board's expertise, it is composed of individuals with specialized knowledge in various fields. We also provide necessary education to maintain and improve their expertise. In 2024, we conducted one training sessions for independent directors.

Training for Independent Directors

Training Date	Training Institution	Participants	Training Contents
2024.12.01	KOSDAQ Association	Jung Yong-Joo, Independent Director	<ul style="list-style-type: none">• Specialized training on major capital market issues for independent directors and auditors- Cautions on unfair transactions under the Capital Markets Act- Recent court cases related to director liability in listed companies- Major issues related to the Capital Market

Training for Board of Directors ESG

Training Date	Training Institution	Participants	Training Contents
2024.01.10	TEK	All Board Members	<ul style="list-style-type: none">• ESG promotion plan• ESG management requirements based on supply chain standards

Board Evaluation

We conduct a self-assessment annually on overall Board operations. All Board members participate in the evaluation. The evaluation items include: 1. Roles and responsibilities of the Board, 2. Board structure, 3. Board operations, 4. Committees within the Board, 5. Board evaluation. Each item is rated on a 5-point scale, and scores are adjusted according to weighted evaluation items to derive results. Based on this evaluation, we will gradually derive improvement measures such as systematizing the director training program, revising the committee and Board operation regulations, and advancing the Board evaluation system. We plan to establish future implementation plans to enhance the rationality and efficiency of Board operations. Through this evaluation, we will strive to operate the Board of Directors rationally and efficiently, and further improve the growth, development, and governance of the company.

2024 Board Evaluation Results

Evaluation Item	Evaluation Score	Full Score
1. Roles and Responsibilities of the Board	4.7	5
2. Board Structure	4.5	5
3. Board Operations	4.9	5
4. Committees within the Board	2.2	2.5
5. Board Evaluation	2.2	2.5

Auditor Independence

According to our articles of incorporation, an auditor with expertise in accounting and auditing is appointed through a resolution at the general shareholders' meeting. The auditor performs duties objectively in accordance with the "Duties and Obligations of the Auditor" stipulated in our articles of incorporation and regularly participates in training by external professional organizations.

Ensuring Auditor Independence

Category	Details
Articles of Incorporation, Article 50 (Duties and Obligations of the Auditor)	<ol style="list-style-type: none">1. The auditor audits the company's accounts and business operations2. The auditor can request the board of directors to convene an extraordinary general shareholders' meeting by submitting a written statement outlining the purpose and reason for the meeting.3. The auditor may request business reports from subsidiaries as needed to perform their duties. If the subsidiary fails to report promptly or if there is a need to verify the report's contents, the auditor may investigate the subsidiary's business operations and financial condition.4. Articles 39(3) and 40-2 of the articles of incorporation apply to the auditor's duties.



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Board of Directors

Board Activities

The Board of Directors at HANA Materials holds regular board meetings at least once every quarter and convenes additional extraordinary meetings as needed. These meetings review and resolve major management issues as specified by relevant laws, Articles of Incorporation, and Board Regulations. The board chair or another designated director convenes the meetings, sending out notices at least seven days in advance. If directors are unable to attend in person, they may participate via remote communication methods.

Resolutions are passed with the attendance of more than half of the directors and a majority vote of those present, unless otherwise stipulated by law. Directors with significant conflicts of interest are not allowed to exercise their voting rights. Information about the board's composition and activities, including committee structures, is transparently disclosed on the company website. Significant matters affecting shareholders and stakeholders are promptly and accurately disclosed through business reports and other required filings. In 2024, the board held 22 meetings, discussing a total of 23 agenda items. The average attendance rate for both internal and external directors was 99.1%.

Key Resolutions of the 2024 Board Meetings

Agenda Item	Approval Status	Agenda Item	Approval Status
• Contribution to an Investment Association	Approved	• Extension of KRW 20 billion Guarantee for Affiliates	Approved
• EHS Annual Plan Report	Approved	• 2024 Q2 Financial Results	Approved
• Amendment to Board Regulations (Draft)			
• Resolution on the 17th Term Settlement and Cash Dividend	Approved	• Extension of KRW 20 billion Loan from The Export-Import Bank of Korea	Approved
• Granting of Stock Options	Approved	• Exercise of Permanent CB Call by Hana Micron	Approved
• Appointment of New CEO	Approved	• 2024 Q3 Financial Results	Approved
• Exercise of Stock Options	Approved	• Resolution on Closing Shareholder Register and Record Date	Approved
• 2024 Q1 Financial Results	Approved	• Third Trust Contract for Acquisition of Treasury Shares	Approved

Board Compensation

The total compensation limit for directors is determined by the approval of the shareholders' meeting. Compensation for internal directors, external directors, and non-registered executives is paid within the approved amount, considering their responsibilities, the company's management environment, and ESG performance. Individual annual compensation and calculation criteria for key executives, including registered directors and external directors, are disclosed through business reports. The Compensation Committee ensures objectivity and transparency in determining director compensation. Additionally, the company links sustainability and compensation by granting stock options to internal directors and higher-level executives.

Compensation Payment Status

(Unit: KRW million)

Category	Number of People	Total Compensation	Average Compensation per Person
Registered Directors (excluding independent directors and audit committee members)	3	1,352	451
Independent Directors (excluding audit committee members)	1	36	36
Auditor	1	45	45

Shareholder Return Policy

To ensure shareholders have ample time to review the agenda, we provide information on the location, agenda, and date of the general meeting of shareholders three weeks in advance via written or electronic documents. Additionally, the dividend policy and historical dividend information are transparently disclosed on our website and in business reports. In January 2023, the board resolved to maintain a dividend payout ratio of at least 10% of distributable profits for the fiscal years 2022-2025, provided that the free cash flow exceeds KRW 10 billion.



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Board of Directors

Board Committees

In May 2023, the Board of Directors at HANA Materials resolved to establish and operate four committees within the board. Each committee is composed of members suited to its purpose and operates according to its specific regulations. In particular, the ESG Committee reviews and implements improvements in each ESG sector based on KCGS evaluations. In 2025, the ESG Committee plans to establish strategies and goals related to carbon emissions and develop detailed implementation plans to achieve these goals. This will help in forming a mid- to long-term ESG strategy to ensure a more stable management environment.

ESG Committee

Composition	At least 3 members, including at least one independent director
Purpose	Strengthening responsible ESG (Environmental, Social, Governance) management and creating sustainable value
Authority	Reviewing and deciding on ESG strategies, investments, issues, and initiatives
Regulations	ESG Committee Regulations
2024 Agenda Items	2024 ESG improvements (Korea Institute of Corporate Governance and Sustainability)
	Carbon Neutrality Strategy

Internal Transactions Committee

Composition	At least 3 members, including at least one independent director
Purpose	Objective review of transactions with related parties to prevent unfair transfer or support of wealth
Authority	Strengthening management transparency and independence, pre-approving insider transactions
Regulations	Internal Transaction Committee Regulations
2024 Agenda Items	-

Compensation Committee

Composition	At least 3 members, including at least one independent director
Purpose	Ensuring transparency in the compensation of the management team by determining appropriate remuneration
Authority	Reviewing and deciding on the compensation limits and structures for registered directors
Regulations	Compensation Committee Regulations
2024 Agenda Items	-

Independent Director candidate Recommendation Committee

Composition	At least 2 members, including at least one independent director
Purpose	Recommendation of candidates for independent directors in accordance with relevant laws
Authority	Verification of the suitability and qualifications of independent director candidates and exercising the right to recommend candidates
Regulations	Independent Director Nomination Committee Regulations
2024 Agenda Items	-

Ethics and Compliance Management

Ethical and Compliance Management Principles

Code of Ethics and Policy

HANA Materials has established a Code of Ethics to strengthen ethical management and fulfill our responsibilities to customers, employees, and society. To pursue mutual benefits based on trust and cooperation, we have developed and implemented an ethical management policy that serves as a guideline for the proper behavior and value judgments that all employees must adhere to. Our Code of Ethics and ethical management policies are shared with all stakeholders through our company website.

Code of Ethics

01



Value creation for customer satisfaction is the first principle.

We respect the opinions of our customers and constantly create future value to fulfill their needs.

02



Fostering a Corporate Culture Trusted by Customers

With the pride and self-esteem of Hana People, we aim to be a great company that is trusted with fair competition and the best quality

03



Realize the business ethics policy that contributes to human society.

We contribute to national and social development through job creation and clean environment preservation.

Ethical Management Policy

1

Responsibilities and Obligations to Customers

2

Fair Competition and Trade

3

Basic Employee ethics

4

Responsibility toward employee

5

Responsibility towards nation and society

Guidelines for Fair Trade

We have established an environment where anyone can participate in transactions equally and fairly according to the principles of free competition. The "Fair Competition and Transactions" section of our Code of Ethics includes guidelines for free competition and fair trade, outlining the standards and procedures that employees must follow. This fosters mutual trust and cooperation among all parties involved in transactions.

Fair Competition and Trade

1 Free-Competition

In accordance with the principle of free competition, respect the market economic order and obtain customer trust by providing the best products and services. We will compete in a good faith, without taking an unfair advantage of the competitor's weakness.

2 Regulation Compliance

All business activities, both domestic and international, should comply with the regulations and respect the tradition between transaction.

3 Equal Opportunity & Fair-trade

Hana Materials offers fair opportunities to participate in transaction and fair-trade competition, for all partners that complies with our required qualifications The registration and selection of trading partners shall be carried out in a reasonable manner, based on objective and fair screening criteria, on an equal footing, with appropriate negotiation of the terms and procedures of the transaction, and shall not involve any form of unfair practice by taking advantage of a favorable position.

4 Pursuing common good

Actively helping suppliers to grow competitively through technical support and management guidance and sharing the benefits of innovation.

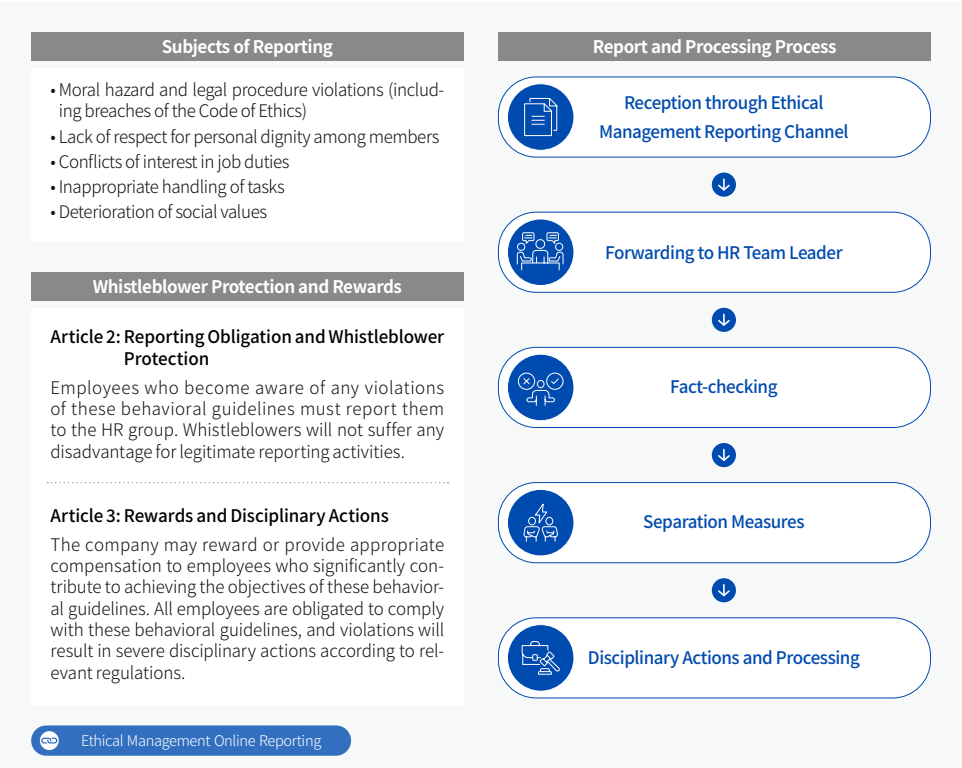
Ethics and Compliance Management

Advanced Ethical and Compliance Management

Ethical Management Consultation and Reporting Channel

HANA Materials operates an "Ethical Management Online Reporting" channel to receive opinions related to unethical issues such as human rights violations and legal violations like fair trade breaches. Reporters can submit their opinions anonymously, and all reports are kept strictly confidential to ensure no disadvantage to the whistleblower. Since September 2018, we have established and posted the "Criteria for Judgment of Misconduct and Behavioral Guidelines" on the company bulletin board, clearly stating reporting obligations, whistleblower protection, rewards, and disciplinary actions. In 2024, there were no reports received through the ethical management report channel.

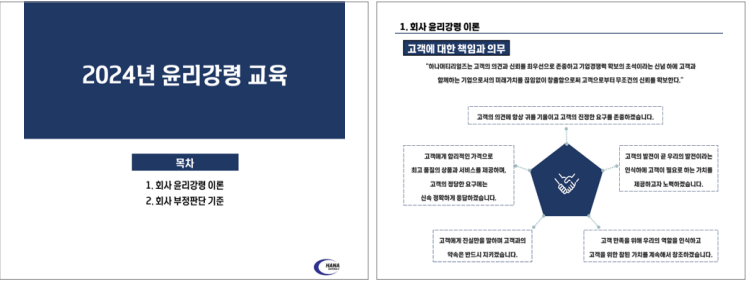
Online Reporting Reception and Processing



Ethical Management Consultation and Reporting Channel

Ethics Education

To promote ethical management, we conduct regular ethics training for all employees. An annual ethics code training session is held for all employees to internalize ethical awareness, utilizing the HANA education system to provide various ethics courses, including fair trade and misconduct criteria. Additionally, to enhance compliance awareness among all employees, we conduct anti-corruption and fair-trade training once a year.



Ethics Code Training for Employees

Compliance with the Integrity Pledge

We enhance employee responsibility through an integrity pledge. As of 2024, 93.7% of all employees (715 out of 763, excluding those on leave or about to retire) signed the Integrity Compliance Pledge. We plan to incorporate relevant items into partner management to internalize transparent transaction activities across the value chain and advance anti-corruption activities through a corruption impact assessment. Based on these efforts, there have been no fair-trade violations in the past three years.

Risk Management

Risk Management System

Types of Risk Management

HANA Materials minimizes the impact of business-related risks through comprehensive enterprise risk management. We categorize risks into six main categories and fourteen specific types, assigning a dedicated department to each risk type for proactive management. Additionally, we classify emergencies into different levels and operate tailored response procedures for each level.

Risk Types and Dedicated Departments

Category	Risk	Dedicated
Financial Stability	<div>•Exchange Rate Risk</div> <div>•Interest Rate Risk</div> <div>•Liquidity/Credit Risk</div>	Finance Group
Supply Chain Management	<div>•Risk of supply and demand of raw materials</div> <div>•Risk of raw material price rise</div> <div>•Risk of raw material/facility logistics</div> <div>•Origin Sanctions Risk</div>	Purchasing Group
Environmental / safety	<div>•Environmental/Safety Regulation Violation Risk</div> <div>•Environmental/Safety Accident Risk</div>	Environmental Safety Group
Information Management	<div>•Information Leakage Risk</div>	Information Team
Human Resource Management	<div>•Workforce supply and demand Risk</div> <div>•Human Rights Management Risk</div>	HR Team
Compliance with laws and regulations	<div>•Compliance Risk</div> <div>•Intellectual Property (IP) Risk</div>	Legal Team

Emergency Levels

Emergency Levels



Risk Management

Risk Management System

Advanced Internal Control

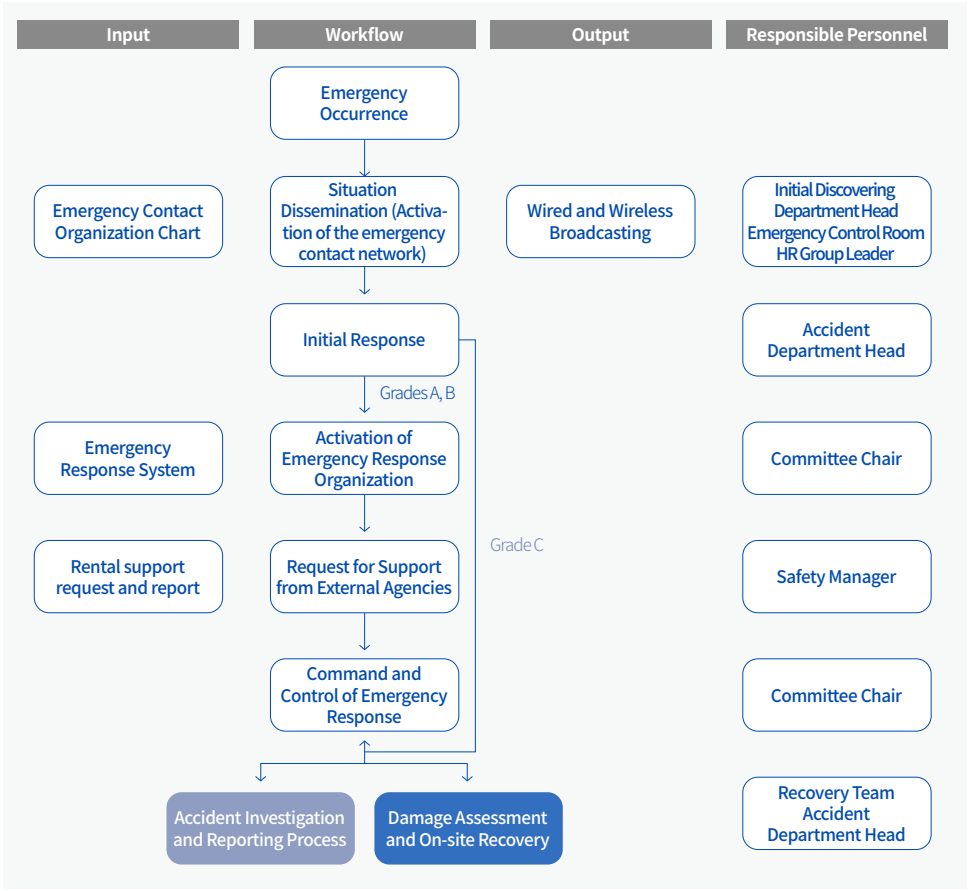
Emergency Response Process

HANA Materials has established and operates an emergency response process to prevent the spread of incidents and issues into full-scale crises and to facilitate rapid recovery. In the event of an emergency, we appoint responsible personnel for each stage of the process to ensure swift and effective responses. The severity of the incident, expected recovery time, and other factors are considered to classify the incident into different levels, and each level follows a distinct set of procedures for efficient handling.

Advanced Internal Accounting Management System

Since 2022, HANA Materials has been enhancing the accuracy of accounting information through the operation of an internal accounting management system and securing data reliability with audits by independent external auditors. Based on the design and operational status of the internal accounting management system as announced by the Internal Accounting Management System Operations Committee, we conduct annual effectiveness checks, and operational audits, and report the findings to the board of directors and the shareholders' meeting. Recent amendments to the internal accounting management system have increased the requirement from an external auditor's "review" to an "audit." To address these changes, we have completed the design of an internal accounting management system that reflects the revised best practices through consulting with external accounting experts. We have also advanced the operation of our internal control system. Through this process, we regularly evaluate and verify the company's key business processes to proactively prevent and address risk factors.

Emergency Response Process





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Separate Financial Information

(Unit: KRW million)

Category	2022	2023	2024
Current assets	147,841	131,946	132,318
Cash and cash equivalents	30,834	27,556	31,122
Trade receivable	12,429	14,362	28,351
Other bonds and financial assets	27,217	10,350	7,082
Inventories	72,892	75,729	63,600
Other current assets	4,469	3,949	2,163
Long-term assets held for sale	-	5,677	-
Long-term assets	331,785	534,754	441,298
Tangible assets	264,575	353,001	347,913
Intangible assets	5,638	6,086	6,545
Licensed assets	2,859	2,446	2,292
Financial assets at fair value through profit or loss	4,794	4,893	4,145
Other comprehensive income - fair value financial assets	44,073	138,290	59,897
Investments in associates and joint ventures	5,806	9,943	17,864
Other non-current assets	4,040	20,095	2,641
Total assets	479,626	672,377	573,616
Current liabilities	103,017	135,763	120,824
Non-current liabilities	79,037	136,920	99,010
Total liabilities	182,054	272,683	219,834
Pain in capital	9,876	9,876	9,889
Additional paid-in capital	35,953	35,953	36,496
Other components of equity	1,880	-1,009	-3,201
Other comprehensive income	7,755	65,740	-4,969
Retained earnings	261,378	289,134	315,567
Total capital	297,572	399,694	353,782
Total liabilities and capital	479,626	672,377	573,616

(Unit: KRW million)

Category	2022	2023	2024
Revenue	307,324	233,214	250,371
Operating Income	93,739	41,828	43,261
Carrying on ordinary income before tax(loss)	93,998	40,466	40,870
Net income(loss)	80,135	34,194	31,757
Other comprehensive income(loss)	-26,638	72,914	-72,128
Total comprehensive income	53,497	107,108	-40,372
Basic earnings per share(KRW won)	4,105	1,752	1,627
Diluted earnings per share(KRW won)	4,080	1,741	1,617

Stock and Dividend Status

Category	2022	2023	2024
Total cash dividends	11,712	3,904	4,870
Dividend type	Cash dividend	Cash dividend	Cash dividend
Cash dividend payout ratio	14.6	11.4	15.3
Cash dividend per share(common stock)	600	200	250
Cash dividend yield(common stock)	1.8	0.4	1.1



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Environmental

Category		Unit	2022	2023	2024
Environmental Management System					
ISO 14001	Certified sites ¹⁾	Sites	2	2	2
Environmental Management Training					
Hazardous chemical worker training		Hour	1,460	1,316	1,350
Hazardous chemical manager training		Hour	64	16	80
Hazardous chemical handler training		Hour	528	736	720
Environmental engineer training		Hour	-	64	28
Training other than required by law		Hour	-	385	163
Violation of Environmental Regulation ²⁾					
Compliance	Number of violations of environmental laws and regulations	Cases	-	-	-
	Total fine	KRW won	-	-	-
Environmental compliance assessment inspection	Number of improvements required	Cases	19	3	1
Health and safety compliance assessment inspection	Number of improvements required	Cases	53	8	14
GHG Emissions ³⁾					
Total GHG emissions(Scope 1+2) ⁴⁾		tCO ₂ eq	43,001.37	34,770.44	41,755.77
Scope 1	Total direct GHG emissions (Scope 1) ⁴⁾	tCO ₂ eq	1,234.27	1,329.40	1,236.02
	LNG ⁴⁾	tCO ₂ eq	1,052.35	1,148.85	1,084.80
	Diesel ⁴⁾	tCO ₂ eq	23.742	21.374	13.26
	Gasoline ⁵⁾	tCO ₂ eq	158.176	159.178	137.964
Scope 2	Electricity ⁵⁾	tCO ₂ eq	41,767.10	33,441.04	40,519.75
GHG emissions intensity (Based on separate revenue) ⁵⁾		tCO ₂ eq/KRW 100 million	13.993	14.91	16.676

1) The verified business sites are Cheonan and Asan.
2) Internal compliance evaluations (environmental regulatory evaluations and safety and health regulatory evaluations) started in 2022.
3) This data is the combined energy consumption data for Cheonan and Asan campuses. The Cheonan campus is managed under the GHG and Energy Target Management Scheme, while the Asan campuses is assessed based on the energy usage reporting standards of the Korea Energy Agency. The data for the Asan campuses has not been verified.
4) Due to changes in data calculation standards, the 2022 and 2023 results reported in the previous report have been recalculated.
5) Due to changes in data calculation standards, the 2022 results reported in the previous report have been recalculated.

Category		Unit	2022	2023	2024
Energy Consumption ⁶⁾					
Total energy consumption ⁷⁾		TJ	896	726	872
Diesel ⁷⁾		L	8,954	8,070	5,010
Gasoline		L	71,961	72,417	62,766
Gas(LNG)		Nm ³	481,775	525,955	496,631
Electricity ⁸⁾		MWh	90,915	72,791	88,199
Energy consumptions intensity (Based on separate revenue)		TJ/KRW 100 million	0.29	0.31	0.35
Total non-renewable energy consumption ⁷⁾		TJ	896	724	870
Total renewable energy consumption(Solar power)		TJ	-	2.042	1.924
Reduction cost for energy reduction activity		KRW won	36,164,000	172,872,460	149,618,000
Raw Material					
Raw materials input	Total raw materials	kg	792,436	402,170	600,980
Recycled raw materials	Total recycled raw materials	kg	143,603	83,177	184,843
Recycled Resources		%	22.05%	25.14%	33.00%

6) This data is the combined energy consumption data for Cheonan and Asan campuses. The Cheonan campus is managed under the GHG and Energy Target Management Scheme, while the Asan campuses is assessed based on the energy usage reporting standards of the Korea Energy Agency. The data for the Asan campuses has not been verified. Renewable energy facilities started operating in 2023.
7) Due to data calculation errors, the 2023 results reported in the previous report have been corrected.
8) Due to data calculation errors, the 2022 results reported in the previous report have been corrected.



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Category		Unit	2022	2023	2024
Waste Management					
Cheonan campus ¹⁾	Total waste ³⁾	ton	1,228	1,825	1,420
	General waste ³⁾	ton	513	373	423
	Amount of general waste landfilled ³⁾	ton	340	262	307
	Amount of general waste incinerated ³⁾	ton	34	3	-
	Amount of general waste recycled	ton	139	109	116
	Other processing amount of general waste	ton	-	-	-
	Designated waste ³⁾	ton	715	1,452	997
	Amount of designated waste landfilled ³⁾	ton	-	-	-
	Amount of designated waste incinerated ³⁾	ton	45	49	199
	Amount of designated waste recycled	ton	434	250	275
	Other processing amount of designated waste	ton	236	1,153	523
	Waste recycling rate (General waste + Designated waste)	%	42.52	34.07	46.16
Asan campuses ²⁾	Total waste	ton	1,768	1,575	1,441
	General waste	ton	439	396	324
	Amount of general waste landfilled	ton	169	132	134
	Amount of general waste incinerated	ton	19	-	-
	Amount of general waste recycled	ton	251	264	189
	Other processing amount of general waste	ton	-	-	-
	Designated waste	ton	1,419	1,156	1,118
	Amount of designated waste landfilled	ton	-	-	-
	Amount of designated waste incinerated	ton	679	86	296
	Amount of designated waste recycled	ton	285	550	401
	Other processing amount of designated waste	ton	454	521	421
	Waste recycling rate (General waste + Designated waste)	%	31.33	53.28	46.32

1) Waste (by-products) amounts include the Cheonan campus and research center, and the recycling rate of waste was calculated based on the recycling rate of resource circulation.
2) Waste amounts include the Asan campuses, and the recycling rate of waste was calculated based on the recycling rate of resource circulation.
3) Due to a data calculation error, the 2023 results reported in the previous report have been corrected.

Category		Unit	2022	2023	2024
Water Resource Management					
Cheonan campus	Total water intake	km ³	195	169	169
	Surface water	km ³	195	169	169
	Industrial water	km ³	-	-	-
	Amount of wastewater discharged	km ³	172	129	122
	Total water consumption	km ³	23	40	47
	Water reused rate	%	13%	16%	17%
	Amount of water reused	kton	30	32	34
Asan campuses	Total water intake	km ³	303	298	287
	Surface water	km ³	113	134	157
	Industrial water	km ³	190	164	130
	Amount of wastewater discharged	km ³	270	262	229
	Total water consumption	km ³	33	36	58
	Water reused rate	%	0%	7%	10%
All campuses	Amount of water reused	kton	0	23	30
	Water intensity	kton/KRW 100 million	0.16	0.20	0.18



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Category			Unit	2022	2023	2024
Pollutant Management						
Water pollutants ¹⁾	Cheonan campus	BOD	kg	299.66	725.02	465.14
		TOC	kg	1,609.88	649.05	952.51
		SS	kg	7,685.77	622.74	834.2
		T-N	kg	6,244.34	2,553.81	1,252.9
		T-P	kg	1907.63	8.13	22.4
	Asan campuses	BOD	kg	3,506.56	1,163.94	3,835.4
		TOC	kg	2,400.64	2,393.26	1,101.1
		SS	kg	5,408.19	13,182.57	7,779.6
		T-N	kg	4,539.64	6,702.45	3,598.3
		T-P	kg	39.79	82.65	129.4
	Specific ²⁾		kg	97.24	75.32	69.60
	Non-specific ³⁾		kg	31,352.33	26,950.59	19,681.70
Air pollutants	Cheonan campus	Nox	kg	1,049.84	116.04	125.92
		Sox	kg	94.27	-	-
		Dust	kg	192.62	161.12	176.89
	Asan campuses	Nox	kg	1,416.01	1,010.74	8,437.30
		Sox	kg	182.37	247.97	414.80
		Dust ⁶⁾	kg	374.79	289.01	403.20
	Specific ⁴⁾		kg	123.55	125.58	56.00
	Non-specific ^{5),6)}		kg	4,668.53	2,941.04	11,337.36
	Chemical Substances		Emissions	kg	851	197
Hazardous Chemical Substances ⁷⁾		Usage	ton	2,715	2,372	1,306

1) Measurement companies were changed in 2022.
2) Cu, chloroform, formaldehyde, dichloromethane
3) BOD, TOC, SS, N-H (light, copper), T-N, T-P, F, Fe, Zn, Mn, Ba, chlorinated compounds, sulfur compounds, perfluorooctanoic acid, perfluorooctane sulfonate, perfluorohexane sulfonate, ecological toxicity
4) Hydrogen chloride, fluoride
5) Particulate matter, sulfur oxides, nitrogen oxides, ammonia, THC, phosphorus and its compounds
6) Due to data calculation errors, the 2023 results reported in the previous report have been corrected.
7)Due to data calculation errors, the 2022 and 2023 results reported in the previous report have been corrected.

Category		Unit	2022	2023	2024
Environmental Friendly Vehicles ⁸⁾					
Total number of vehicles owned		Vehicles	-	-	32
Number of environmental friendly vehicles owned		Vehicles	-	-	6
Percentage of environmental friendly vehicles owned		%	-	-	19%

8) Aggregation started from 2024.

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Social

Category			Unit	2022	2023	2024
Employees ¹⁾						
Total number of employees			Persons	746	710	738
By employment type	Full-time employees		Persons	741	705	728
	Male		Persons	646	616	645
	Female		Persons	95	89	83
	Full-time employees rate		%	99.3	99.3	98.6
	Part-time employee ²⁾		Persons	5	5	10
	Male		Persons	4	3	7
	Female		Persons	1	2	3
	Part-time employees rate		%	0.7	0.7	1.4
By age	20s	Male	Persons	299	231	229
		Female	Persons	41	36	26
	30s	Male	Persons	246	263	293
		Female	Persons	32	32	39
	40s	Male	Persons	84	98	95
		Female	Persons	21	20	15
	50s	Male	Persons	18	24	32
		Female	Persons	2	3	6
	60s	Male	Persons	3	3	3
		Female	Persons	0	0	0
By gender	Male		Persons	650	619	652
	Female		Persons	96	91	86
Female managers ³⁾			Persons	1	1	1
			%	0.1	0.1	0.1
Service years	Male average length of service		Year	3.9	4.7	5.0
	Female average length of service		Year	4.8	5.4	6.1
Turnover and Retirement	Number of turnover and retirement		Persons	127	112	106
	Voluntary turnover rate ⁴⁾		%	16.7	15.2	14.8
New hires	Male		Persons	128	61	117
	Female		Persons	10	4	7

Category		Unit	2022	2023	2024
Human Rights					
Human rights training program	Sexual harassment prevention	Hours	1	1	1
	Improvement aware-ness of disabled	Hours	1	1	1
	Workplace harassment prevention	Hours	1	1	1
	Participants (rate) ⁵⁾	Persons (%)	746(100)	710(100)	738(100)
Grievance handling	Reported cases	Cases	19	10	5
	Grievance handled	Cases	15	7	4
Diversity and Inclusion					
Recruitment for diversity and inclusion	Disabilities	Persons	21	19	19
	Compliance with man-datory employment of the disabled	Persons	5.1	4.7	4.7
	National veteran	Persons	2	2	2
	Foreigners	Persons	17	17	15
Basic Salary and remuneration ratio by gender	Average salary per person ⁶⁾				
	Male	KRW million	76	64	63
	Female	KRW million	61	52	58

1) The number of employees for 2022 and 2023 was calculated excluding internal directors to align with the business annual report standards.
2) Includes non-regular employees responsible for logistics material management and general affairs.
3) Based on female employees with authority over personnel evaluations.
4) Based on resignations excluding forced dismissals.
5) Due to changes in the method of calculating the number of employees, the 2022 and 2023 results reported in the previous report have been recalculated.
6) Excludes registered executives.

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Category				Unit	2022	2023	2024	
Human Capital Development								
Employee training		Total trainees		Persons	370	422	608	
		Total training cost		KRW 1,000	40,170	36,408	45,017	
		Total training hours		Hours	10,504	11,428	12,426	
		Training cost per person		KRW 1,000	125	86	74	
		Training hours per person		Hours	33	27	20	
		Number of trainings courses		EA	626	962	686	
		Completion rate		%	100	100	100	
Working Environment								
Welfare	Cost	Total employee benefits cost		KRW million	6,291	6,874	6,121	
		Employee benefits cost per person		KRW million	8.39	9.64	8.27	
Long-term Leaves	Childbirth leave	Employees taking childbirth leave	Male	Persons	12	17	17	
			Female	Persons	3	2	2	
		Employees returning from childbirth leave	Male	Persons	12	17	17	
			Female	Persons	3	2	2	
	Parental leave	Employees taking parental leave	Male	Persons	3	4	4	
			Female	Persons	3	7	7	
		Employees returning from parental leave	Male	Persons	2	1	1	
			Female	Persons	2	3	3	
	Continuous working after return ¹⁾	Continuous working for 12 months among employees returning from parental leave rate				0	0	0

1) Does not reflect employees with less than 12 months of service.

Category		Unit	2022	2023	2024
Organizational Culture					
Number of activities to revitalize the organizational culture		Cases	3	1	1
Results of employee organizational culture satisfaction survey ²⁾		Points	3.37/5	-	-
Joint Labor-Management Conference ³⁾	Number of governance members	Persons	5	6	6
	Number of worker members	Persons	5	6	6
	Union membership rate	%	100	100	100
	Number of conference held	Cases	Once a quarter	4	4
	Number of items resolved	Cases	11	20	13

2) Organizational culture satisfaction survey has been conducted from 2022 and has not been conducted in 2023 and 2024.
3) The Joint labor-management conference includes non-regular employees, such as those in materials management and general affairs, as committee members, and the results apply to all employees.

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Category			Unit	2022	2023	2024	
Safety and Health							
Safety and health management system	Occupational Safety and Health Committee ¹⁾		Receipt agenda	Cases	26	23	8
			Deliberation decision	Cases	26	16	8
	Number of ISO 45001-certified sites		Sites	2	2	2	
Risk management	Improvements by EHS Patrol		Number of tasks	Tasks	145	147	169
			Number of taskscompleted	Tasks	138	146	165
	Environmental impact assessment ²⁾		Number of tasks	Tasks	21	34	41
			Number of taskscompleted	Tasks	21	29	37
	Risk assessment ³⁾		Risk before improvement	Level	3.58	5.91	3.67
			Risk after improvement	Level	3.01	2.41	3.18
EHS communication	EHS proposals		Number of proposals	Cases	518	833	462
	EHS awareness survey ⁴⁾		Participation rate	%	42.5	35	34
			Awareness survey score	Score	4.7	4.7	4.1
Occupational safety and health training	Educa-tion ⁵⁾	Safety and health (Statutory)	Education hours	Hours	33,000	19,156	19,754
		Safety and health (Non-statutory)	Education hours	Hours	-	13,579	20,633
	Training	Emergency action training	Number of training sessions	Cases	41	44	56
Health improve-ments	Number of health improvements programs		Cases	6	2	3	
	Number of employees who have medical checkups	Special checkups	Persons	582	673	619	
		General checkups	Persons	702	708	723	

1) The identical agenda items for 2022 and 2023 were aggregated as a single case, but from 2024, data calculation standard have changed to aggregate separately by business sites.

2) The identical agenda items for 2022 were aggregated as a single case, but from 2024, data calculation standard have changed to aggregate separately by business sites.

3) The risk levels for 2022 and 2023 were incorrectly recorded as cases and have been corrected.

4) Due to data calculation errors, the 2022 and 2023 results reported in the previous report have been corrected.

5) aFrom this year, existing Safety and health, and Hazardous substance education have been integrated and reclassified into 'Safety and health (Statutory)' and 'Safety and health (Non-Statutory)' education.

Category				Unit	2022	2023	2024
Safety and Health							
Occupational accidents and illness of employees	Accidents	Industrial accident rate	Cheonan campus	%	0	0.27	0
			Asan campus	%	0	0.26	0.26
		TRIR (Total Recordable Incident Rate) ⁶⁾	Employee	-	1.1	1.06	0.94
	Illness ⁷⁾	OIFR (Occupational Illness Frequency Rate) ⁸⁾	Employee	-	0	0	0
			Partners	-	0	0	0
Safety and health	Supplier Qualification Evaluation	Pre-assessment	Cases	19	9	12	
		Pass	Cases	19	9	12	
		Non-pass	Cases	0	0	0	
		Post-assessment	Cases	37	36	22	
		Pass	Cases	37	36	22	
		Non-pass	Cases	0	0	0	
Supply Chain Management							
Partner assessment	AVL evaluation	Company subject to evaluation	Companies	27	26	22	
		Company completed evaluation	Companies	27	26	22	
Partner environmental assessment	Number of new partners that have been screened for environmental criteria		Companies	2	3	2	
	Environmental Impact within the supply chain	Number of identified cases	Cases	0	0	0	
		Number of actions	Cases	0	0	0	

6) Does not include partner companies.

7) Based on cases requiring hospital treatment.

8) There are no work-related illnesses; based on cases determined to be occupational diseases.

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Category			Unit	2022	2023	2024
Social Contribution						
Donations	Total donations		KRW million	165	68	67
Product Quality Management						
Product safety and quality	Product safety	Number of recalls	Cases	0	0	0
		Total recalled products	EA	0	0	0
		Number of counterfeit parts dedicated	EA	0	0	0
	Product quality	Process non-conformity rate	%	1.9	1.6	1.1
	Customer VOC	Customer complaint processing rate	%	100	100	100
	Customer satisfaction	Customer satisfaction management	Score	89.4	92.2	95

Category			Unit	2022	2023	2024
Information Security						
Information security violation status	Number of leaks of personal information		Cases	0	0	0
	Number of improvements resulting from internal information protection inspection		Cases	1	0	0
Number of complaints	Number of complaints with proven information protection violations/losses		Cases	0	0	0
Security training	Training hours		Minutes	30	30	30
	Number of participants		Persons	746	712	714
Investments	Investment costs		KRW million	93	143	143

Non-financial Performance

Governance

Category		Unit	2022	2023	2024
Board of Directors & Operation					
Board of Directors composition	Internal directors	Persons	3	3	3
	Independent directors	Persons	1	1	1
	Ratio of Independent directors	%	33.3	33.3	33.3
	Ratio of female directors	%	0	0	0
Number of meetings		Times	25	26	22
Attendance rate	Average attendance rate	%	87	93	99
	Independent directors	%	64	73	95
	Internal directors	%	95	100	100
Number of agenda items		Cases	28	30	24
Number of agenda items objected by independent directors		Cases	0	0	0

Category			Unit	2022	2023	2024
Shareholders						
Ownership share	CEO		%	0.51	-	-
	Public entity : National Pension Service (NPS)		%	4.82	7.24	4.55
	Shareholders holding more than 5%	Hana Micron	%	32.57	32.55	32.5
		Tokyo Electron	%	13.81	13.9	13.78
		Choi Hansu	%	11.65	11.64	11.63
		National Pension Service (NPS)	%	4.08	7.24	4.55
Shareholder-friendly management	Operating system	Electronic voting system	-	Y	Y	Y

Category		Unit	2022	2023	2024
Remuneration					
Registered directors	Number of registered directors	Persons	3	3	3
	Total remuneration	KRW million	1,433	1,071	1,352
	Average remuneration per person	KRW million	478	357	451
Independent directors	Number of independent directors	Persons	1	1	1
	Total remuneration	KRW million	39	37	36
	Average remuneration per person	KRW million	39	37	36
Audit members	Number of audit members	Persons	1	1	1
	Total remuneration	KRW million	44	45	45
	Average remuneration per person	KRW million	44	45	45

Category			Unit	2022	2023	2024
Ethics and Compliance						
Internal ethics management inspection	Number of internal ethics and compliance checks		Cases	0	0	0
	Number of violations of internal ethics and compliance		Cases	0	0	0
	Ethical management related reports	Sexual harassment	Cases	1	1	0
		Anti-corruption	Cases	1	0	0
		Unfair trade	Cases	0	0	0
Ethics and compliance training	Code of ethics and conduct trainin	Training hours	Hours	1	1	1
		Participants	Persons	714	712	742
	Anti-corruption training	Training hours	Hours	1	1	1
		Participants	Persons	714	712	742
	Fair trade training	Training hours	Persons	1	1	1
		Participants	Persons	714	712	742

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GRI Standards Index

GRI 1 : Foundation 2021

Description	The 2024 Sustainability Report of Hana Materials was reported in accordance with the GRI Standards 2021 standard.
GRI 1 Usage	GRI 1 : Foundation 2021
Applicable GRI Sector Standard	Not published

GRI 2 : General Disclosure 2021

Category	Index No.	Disclosures	Page	Notes
Organization and Reporting Practices	2-1	Organization details	6, 7	In case of data changes due to the expansion of reporting scope or the advancement of standards, such changes will be separately indicated in footnotes.
	2-2	Entities included in the organization's sustainability reporting	2, 7	
	2-3	Reporting period, frequency and contact point 2 Inquiries will be added	2	
	2-4	Restatements of information	73, 74, 75, 76, 78	
	2-5	External assurance	85, 86	
Activities and Employees	2-6	Activities, value chain and other business relationships	9, 10	
	2-7	Employees	76	
	2-8	Workers who are not employees	76	
Governance	2-9	Governance structure and composition	63, 66	
	2-10	Nomination and selection of the highest governance body	64	
	2-11	Chair of the highest governance body	63, 64	
	2-12	Role of the highest governance body in overseeing the management of impacts	12, 63, 66	
	2-13	Delegation of responsibility for managing impacts	12, 63, 66	
	2-14	Role of the highest governance body in sustainability reporting	12, 63, 66	
	2-15	Conflicts of interest	64	
	2-16	Communication of critical concerns	12	
	2-17	Collective knowledge of the highest governance body	64	
	2-18	Evaluation of the performance of the highest governance body	64	
	2-19	Remuneration policies	65	
	2-20	Process to determine remuneration	65	
	2-21	Annual total compensation ratio - Information incomplete	-	



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GRI 2 : General Disclosure 2021

Category	Index No.	Disclosures	Page	Notes
Strategy, Policy and Execution	2-22	Statement on sustainable development strategy	5	
	2-23	Policy commitments	18, 39, 48, 52, 67	
	2-24	Embedding policy commitments 30, 53 Enable to check the education history data for each policy	20, 25, 39-41, 51, 54, 68	
	2-25	Processes to remediate negative impacts 56 Process retention and impact resolution (handling/discipline, etc.)	41, 50, 68	
	2-26	Mechanisms for seeking advice and raising concerns	41, 50, 68	
	2-27	Compliance with laws and regulations	73	2024 Annual report 251p
	2-28	Membership associations	15	
Stakeholder Engagement	2-29	Approach to stakeholder engagement	15	
	2-30	Collective bargaining agreements	77	

GRI 3 : Material Topics 2021

Category	Index No.	Disclosures	Page	Notes
Disclosure of Material Topics	3-1	Process to determine material topic	13	
	3-2	List of material topics	13, 14	



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Category	Index No.	Disclosures	Page
Climate Change			
GRI 3: MaterialTopics 2021	3-3	Material issue management	34-37
GRI 302: Energy2016	302-1	Energy consumption within the organization	73
	302-3	Energy intensity	73
	302-4	Reduction of energy consumption	35-36
GRI 305: Emissions2016	305-1	Direct (Scope 1) GHG emissions	73
	305-2	Energy indirect (Scope 2) GHG emissions	73
	305-4	GHG emissions intensity	73
	305-5	Reduction of GHG emissions	35
	305-7	Nitrogen Oxides (NOx), Sulfur Oxides (SOx), and other significant air emissions	75
Resource Circulation and Sustainable Business Model			
GRI 3: MaterialTopics 2021	3-3	Material issue management	27
GRI 306: Waste2020	306-1	Waste generation and significant waste-related impacts	27
	306-2	Management of significant waste-related impacts	27
	306-3	Waste generated	74
	306-4	Waste recycled	74
	306-5	Disposed waste (Incineration, Landfill, etc.)	74

Category	Index No.	Disclosures	Page
Supply Chain			
GRI 3: MaterialTopics 2021	3-3	Material issue management	48-50
GRI 308: Supplier Environmental Assessment 2016	308-1	New suppliers assessed for environmental criteria	78
Safety and Health for Employee			
GRI 305: Emissions2016	3-3	Material issue management	18-26, 32-33
GRI 403: Occupational Healthand Safety 2018	403-1	Occupational health and safety management system	21
	403-2	Hazard identification, risk assessment, and incident investigation	24
	403-3	Occupational health services	46, 78
	403-4	Worker participation, consultation, and communication on occupational health and safety	20, 22-24, 78
	403-5	Worker training on occupational health and safety	25
	403-6	Promotion of worker health	46
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	22-24
	403-8	Workers covered by an occupational health and safety management system	21
	403-9	Work-related injuries	78
	403-10	Work-related ill health	78



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Third-Party Assurance Statement

To: The Stakeholders of HANA Materials

Overview

The British Standards Institution (hereinafter referred to as the "Assurer") was requested to verify the Hana Materials' 2024 Sustainability Report (hereinafter referred to as the "Report"). The Assurer is independent to Hana Materials and has no major operational financial interest other than the assurance of the Report. This assurance opinion statement is intended to provide information related to the assurance of the Hana Materials' report relating to the environment, social and governance (ESG) to the relevant stakeholders and may not be used for any other purpose. This assurance opinion statement is prepared based on the information presented by the Hana Materials. The verification does not extend beyond such information and is solely based on it. In performing such verification, the Assurer has assumed that all such information is complete and accurate.

Hana Materials is responsible for managing the relevant information contained within the scope of assurance, operating the relevant internal control procedures, and for all information and claims contained in the Report. Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to Hana Materials only. The Assurer is responsible for providing Hana Materials' management team with an independent assurance opinion containing professional opinions derived by applying the assurance methodology to the scope specified, and to provide the information to all stakeholders of Hana Materials. The Assurer will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person or party by whom the independent assurance opinion statement may be read.

Scope

The scope of engagement agreed upon with Hana Materials includes the following:

- Report contents during the period from January 1st to December 31st 2024 included in the Report, some data of 2025 are included.
- Major assertion included in the Report, such as sustainability management policies and strategies, goals, projects, and performance, and the Report contents related to material issues determined as a result of materiality assessment.
- Appropriateness and consistency of processes and systems for data collection, analysis and review.
- Confirmation of the Report's compliance with the AA1000 Accountability Four Principles and, where applicable, the reliability of the sustainability performance information contained within the Report, based on the type of sustainability assurance performed in accordance with AA1000 AS v3.

The following contents were not included in the scope of assurance.

- Financial information in Appendix.
- Index items related to other international standards and initiatives other than the GRI.
- Other related additional information such as the website, business annual report.

Assurance Leve land Type

The assurance level and type are as follows;

- Moderate level based on AA1000 AS and Type 1 (confirmation to the four principles as described in the AA1000 Accountability Principle 2018 and quality and reliability of specific performance information published in the report.)

Description and sources of disclosures covered

Based on the scope and methodology of assurance applied, the Assurer reviewed the following disclosures based on the sampling of information and data provided by Hana Materials.

Universal Standards

2-1 to 2-5 (The organization and its reporting practices), 2-6 to 2-8 (Activities and workers), 2-9 to 2-21 (Governance), 2-22 to 2-28 (Strategy, policies and practices), 2-29 to 2-30 (Stakeholder engagement), 3-1 to 3-3 (Material Topics Disclosures)

Topic Standards

302-1,3&4, 305-1,2,4,5&7, 306-1~5, 308-1, 403-1~10

Methodology

As a part of its independent assurance, the Assurer has used the methodology developed for relevant evidence collection in order to comply with the verification criteria and to reduce errors in reporting. The Assurer has performed the following activities;

- Validation of the materiality assessment and internal analytical process for determining assurance priorities, and a top-level review of issues that may be raised by external stakeholders in the context of sustainability.
- Discussion with managers and representatives on stakeholder engagement.
- Review of the supporting evidence related to the material issues through interviews with senior managers in the responsible departments.
- Review of the system for sustainability management strategy process and implementation.
- Review of the materiality issue analysis process and prioritization and verifying the results.
- Verification of data generation, collection and reporting for each performance index and document review of relevant systems, policies, and procedures.
- An assessment of Hana Materials' reporting and management processes against the principles of Inclusivity, Materiality, Responsiveness and Impact as described in the AA1000 Accountability Principles Standard (2018).
- Visit of the Headquarters of Hana Materials to confirm the data collection processes, record management practices.

Limitations and approach used to mitigate limitations

The Assurer performed limited verification for a limited period based on the data provided by Hana Materials. It implies that the Assurer is therefore subject to limitations relating to inherent risks that may exist without the identification of material errors. The Assurer does not provide assurance on possible future impacts that cannot be predicted or verified during the verification process and any additional aspects related thereto.

Competency and Independence

British Standards Institution (BSI) is a leading global standards and assessment body founded in 1901. BSI is an independent professional institution that specializes in quality, health, safety, social and environmental management with over 120 years history in providing independent assurance services globally. No member of the assurance team has a business relationship with Hana Materials. The Assurer has conducted this verification independently, and there has been no conflict of interest. All assurers who participated in the assurance have qualifications as an AA1000AS assurer, have a lot of assurance experience, and have in-depth understanding of the BSI Group's assurance standard methodology.



COMPANY OVERVIEW

ESG FOUNDATION

ESG PERFORMANCE

ESG FACT BOOK

APPENDIX

GRI Standards Index

• Third-Party Assurance Statement

Third-Party Assurance Statement

Opinion Statement

The assurance was conducted by a team of sustainability report assurers in accordance with the AA1000 Assurance Standard v3. The Assurer planned and performed the verification and collected sufficient evidence to explain Hana Materials’ approach to the AA1000 Assurance Standard and to provide confidence in its self-declaration of compliance with the GRI Standards.

On the basis of our methodology and the activities described above, it is our opinion that the information and data included in the Report are accurate and reliable and the Assurer cannot point out any substantial aspects of material with mistake or misstatement. We believe that the economic, social and environment performance indicators are accurate and are supported by robust internal control processes.

Conclusions

The Report is prepared in accordance with the GRI Standards. (Reporting in accordance with the GRI standards). A detailed review against the AA1000 Accountability Principles of Inclusivity, Materiality, Responsiveness and Impact and the GRI Standards is set out as below.

Inclusivity: Stakeholder Engagement and Opinion

Hana Materials has identified shareholders/investors, customers, employees, partners, government agencies, and local communities as its key stakeholders. The company has established and operates various communication channels and cycles for each stakeholder group. Through its stakeholder engagement process, it gathers expectations and diverse opinions from key stakeholder groups and incorporates the identified key issues into sustainability-related decision-making. This process is transparently disclosed through the company's report.

Materiality: Identification and reporting of material sustainability topics

Hana Materials has established a strategy related to sustainable management and developed a process for deriving reporting issues. Based on the European Sustainability Reporting Standards (ESRS) methodology, the company conducted a double materiality assessment, forming a pool of 96 issues and selecting 22 key topics (Long-List). Through global evaluation/ disclosure standards, industry benchmarking, value chain analysis, and media research, a second-tier key topic list (Short-List) was derived. Based on the results of stakeholder surveys, Hana Materials conducted an impact materiality assessment (environmental and social impact) and financial materiality assessment, ultimately selecting four critical material issues, which are disclosed in the report.

Responsiveness: Responding to material sustainability topics and related impacts

Hana Materials has conducted an Impact Analysis of Key Issues in 2024, based on its materiality assessment, to evaluate the social, environmental, and financial impacts of these critical issues. The company has reported performance metrics for each material issue in its Sustainability Report. Additionally, the report transparently discloses policies, activity outcomes, improvement plans, and response measures related to key issues.

Impact: Impact of an organization's activities and material sustainability topics on the organization and stakeholders

Hana Materials has established a process to understand and evaluate the impact on organizations and stakeholders related to core issues. The results of the analysis of the impact, risks, and opportunities of core issues are used in decision-making for the establishment of response strategies for each issue, and this process is transparently disclosed through the report.

Recommendations and Opportunity for improvement

The Assurer provides the following observations to the extent that they do not affect the assurance opinion;

- Enhancing board independence is a crucial factor in improving corporate governance transparency and credibility. It is essential to increase the proportion of outside directors with diverse expertise to ensure balanced corporate operations. Additionally, establishing independent subcommittees within the board and clearly defining the roles and responsibilities of each committee while conducting regular evaluations to assess operational effectiveness can lead to more efficient governance
- Hana Materials has reported its business strategy and implementation status for key issues through the double materiality assessment process in its report. Additionally, if the report includes the goals and indicators for each key issue in the reporting year, along with performance results and achievements, as well as future response plans for any shortcomings, it can enhance sustainability and management performance while strengthening the company's long-term value.
- Hana Materials has identified the supply chain as a key issue in its report and has disclosed its performance accordingly. To strengthen ESG within the supply chain, the company can establish a resource circulation system with its suppliers, promote fair trade and mutual growth activities with partners, manage supply chain ESG risks, and regularly disclose supply chain ESG performance. By implementing these strategies, Hana Materials can enhance the sustainability of its supply chain and further reinforce its ESG management.

GRI-reporting

Hana Materials has self-declared compliance with GRI Standards. Based on the data and information provided by Hana Materials, the Assurer confirmed that the Report is prepared in accordance with the GRI Standards, and confirmed there are no errors in the disclosures related to the Universal Standards and Topic Standards Indicators. No sector standard is applied.

Issue Date: 02/06/2025
For and on behalf of British Standards Institution (BSI):

BSI representative

Sangwoo Nam, Lead Assurer(LCSAP)

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