2024 HANA MICRON SUSTAINABILITY REPORT

About This Report

Overview
HANA Micron published its second sustainability report last year to comprehensively report non-financial and financial performance and communicate with stakeholders, including sustainability management direction and activities. The 2024 Sustainability Management Report faithfully contains major issues and progress in the environmental, social, and governance sectors. We seek to realize social value by actively communicating with stakeholders through the annual publication of the report.

Reporting Standards
This report follows GRI (Global Reporting Initiative) Standards 2021, the international reporting guidelines for sustainability management, and also reflects SASB (Sustainability Accounting Standards Board) and UN SDGs (Sustainable Development Goals). Additionally, the financial information included in this report complies with K-IFRS (Korean International Financial Reporting Standards). If any, changes are separately noted in the comments.

Reporting Period
This report contains sustainability management activities and performance from January to December 2023. For major activities, data for three years (2021 to 2023) is included to improve comparability, and for some non-financial performances, the first half of 2024 is included.

Reporting Scope
The scope of this report includes Korea (HANA Micron, HANA WLS), Vietnam (HANA Micron Vietnam, HANA Micron Vina), and Brazil (HT Micron, HANA Electronics). If the reporting scope is different, it is indicated separately for reference. The financial performance includes the consolidated financial information of HANA Micron and its affiliates.

Report Verification
This report was verified by an independent third party to ensure the suitability of the reporting process and the reliability of the report contents. A detailed opinion of the verification is included in the Appendix of this report.

Inquiries
This report can be viewed or downloaded from the website. If you have any questions or comments, please contact us using the contact information below.

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Contents

Our Business

04 CEO Message

05 About HANA Micron

06 Business

07 Global Network

Approach to Sustainability

09 ESG Management Strategy

12 Double Materiality Assessment

14 Communication with Stakeholders

ESG Performance

16 2023 ESG Highlights

Environmental

18 Environmental Management

19 Environmental Goals

20 Greenhouse Gas Reduction Plan

21 Greenhouse Gas

23 Energy

24 Water

25 Waste

26 Pollutants and Chemicals

27 Environmental Engagement

Social

29 Culture of Communication and Collaboration

34 Safety and Health

37 Sustainable Supply Chain Management

40 Social Contribution

Governance

43 Responsible Management of the Board of Directors

46 Ethics and Compliance Management

48 Enterprise Risk Management

Appendix

52 ESG Data Book

67 GRI Index

71 SASB (Sustainability Accounting Standards Board)

72 Third Party Assurance Report

74 GHG Verification Statement

76 Membership Organization Status

Interactive PDF

This report has been published as an interactive PDF, which allows readers to navigate to related pages within the report.

First Page | Contents

Previous Page | Next Page

Our Business

CEO Message

We strive to practice ESG management to fulfill our responsibilities toward the environment and people and pursue coexistence with stakeholders.

I express our deepest gratitude to all stakeholders for their continued interest and support in HANA Micron's journey to create a sustainable world with next-generation technology.

Since its inception in 2001, HANA Micron has leveraged its experience in semiconductor packaging to expand into semiconductor testing and engineering. Today, it stands as a leading company in the semiconductor back-end process, solidifying its No. 1 position in Korea. Our 'Full Turn-key Solution' know-how, which encompasses packaging, testing, and module assembly, has been instrumental in this growth. We also provide cutting-edge packaging that unites various AI semiconductors, including HBM. With a focus on technology development, we are poised to become a leading global semiconductor back-end process company.

The current business environment throws many unanswered questions. As data processing speeds become faster, packaging technology for arranging and packaging semiconductors is becoming more sophisticated. As environmental, social, economic, and geopolitical risks continue for several years, uncertainty becomes increasingly challenging to control. In this context, sustainability is emphasized as a value of this era that we must all pursue. In order to meet this mission of the times, HANA Micron strives to practice ESG management to fulfill its responsibilities toward the environment and people and pursue coexistence with stakeholders. After establishing the ESG management strategy for 2023, the '2050 Greenhouse Gas Reduction Plan' was established to reduce greenhouse gases by 2050 in the environmental area. In the social area, 'safety', 'security', and 'accompaniment with partners' were established. In governance, an 'ESG Committee' was formed to lay the foundation for sustainable ESG management.

HANA Micron is committed to evolving into a fully trusted and valued company by its stakeholders. We will continue to leverage our experience and capabilities to fulfill our social and environmental responsibilities while creating economic performance. In the future, HANA Micron's executives, including myself, will remain dedicated to listening to and accepting the voices of our stakeholders to share sustainable value. We ask for your continued support for HANA Micron.

Thank you.

HANA Micron Inc.
CEO

About HANA Micron

Company Overview

Company	HANA Micron Inc.
CEO	Dong-cheol Lee
Establishment	August 23, 2001
Paid-in Capital	KRW 24 billion (As of December 31, 2023)
Sales	KRW 968 billion (based on consolidated financial statements as of December 31, 2023)
No. of Employees	820 (As of December 31, 2023)
Business Area	Semiconductor packaging and testing
Address in Korea	Head Office (Manufacturing) : 77 Yeonamyulgeum-ro, Eumbong-myeon, Asan-si, Chungcheongnam-do
	Pangyo (R&D) : 9FL, 35, Pangyo-ro 255beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do

Total assets (consolidated) KRW 17,25.1 billion

Total capital (consolidated) KRW 544.4 billion

Operating profit (consolidated) KRW 57.9 billion

Credit rating (corporate bond) BBB

Vision and Strategy

HANA Micron has achieved sustainable growth through bold investments and research and development even in a rapidly changing semiconductor market, establishing itself as a global top 10 semiconductor back-end process company.
Despite the global economic downturn and adverse conditions in 2023, we completed the construction of a second factory in our Vietnam production base, expanded our sales volume, and focused on strengthening our manufacturing competitiveness. In addition, we diversified our portfolio by expanding our non-memory product line, which focused on mobile and home appliances, to automotive, and laid the foundation for the company's sustainable growth by strengthening our testing business capabilities.
HANA Micron will invest in future growth areas to discover new growth engines and leap forward as a leading global semiconductor back-end process company.

Mission

HANA Micron, Enabling the next generation technology to the reality

Vision

Challenge the global market
Innovative technology is our top priority
People-oriented work culture

Strategic goals	Strategic tasks
Strengthen competitiveness in memory chips	・Expand high-value-added memory packaging ・Achieve economies of scale for overseas production
Expand non-memory packaging/ testing businesses	・Strengthen the competitiveness of full turnkey solutions ・Enhance technological leadership through R&D
Establish a foundation for sustainability	・Establish a response strategy to climate change ・Train technical talent ・Strengthen the organizational culture of communication and cooperation

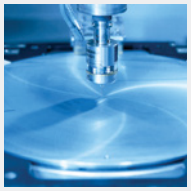
Business

HANA Micron's main businesses include semiconductor packaging and testing, which is the back-end field of the semiconductor industry. We pursue constant change and innovation based on excellent technology and talent, secure a global base by expanding our production bases in Vietnam and Brazil, and continue to grow based on strategic partnerships with the best domestic and foreign semiconductor companies. We are expanding our system semiconductor business based on our full turnkey technology encompassing memory semiconductor packaging, testing, and module assembly, and are committed to developing cutting-edge packaging technology that unites various artificial intelligence semiconductors, including high bandwidth memory (HBM). As a result, we will grow into a total solution company for the semiconductor back-end process that satisfies the needs of various customers worldwide.

Full Turnkey OSAT* Solution

Material & Part

Silicon Parts



HANA Materials

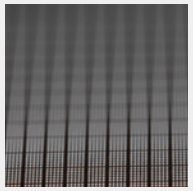
FRONT-END

Design

Fabrication

BACK-END

Bump

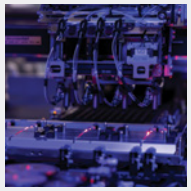


Wafer Test

HANA WLS

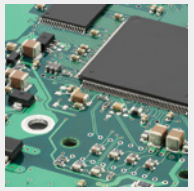
Package

Final Test



HANA Micron
HT Micron
HANA Micron Vietnam

Module

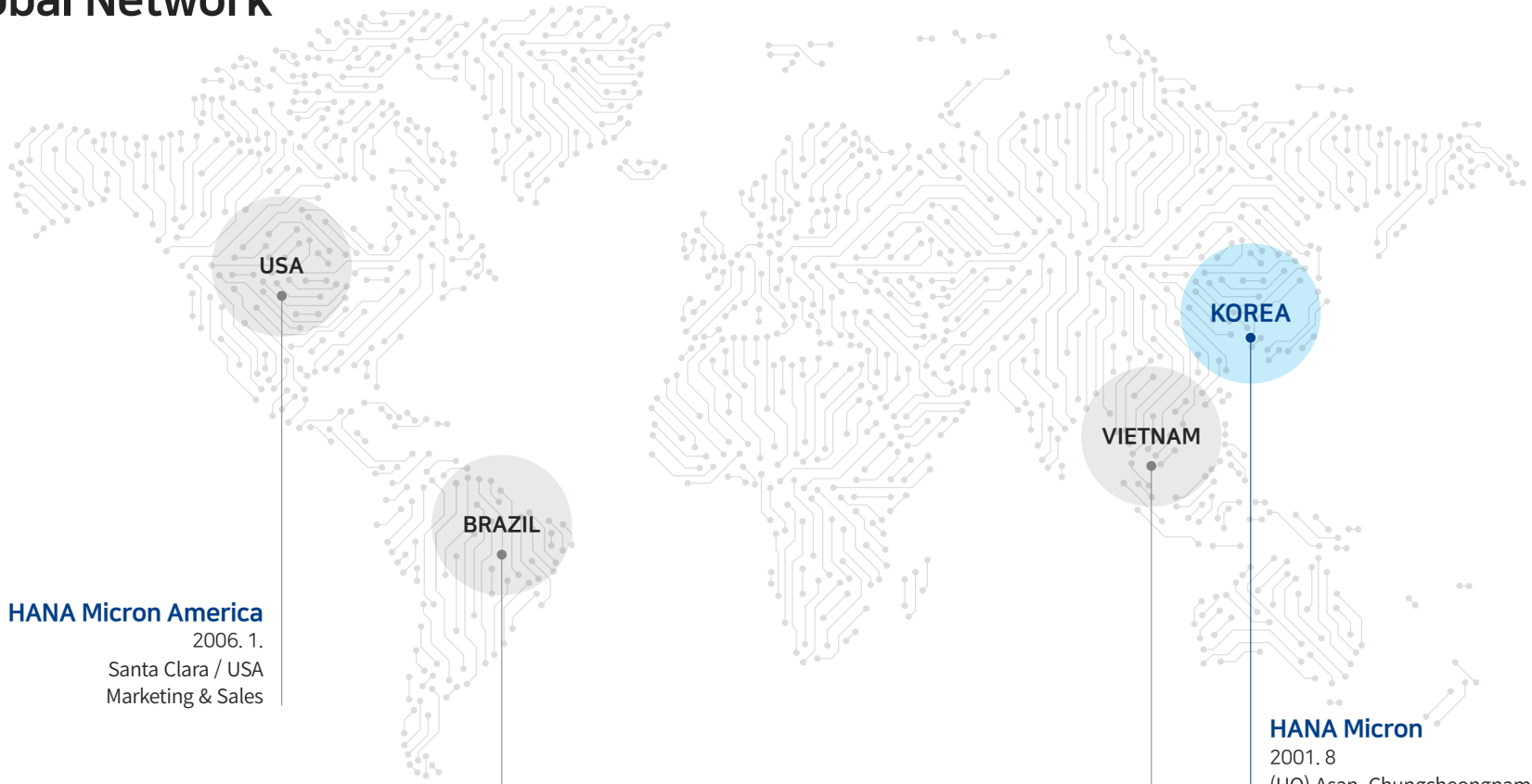


HANA Electronics

HANA Micron Vina

* OSAT : Outsourced Semiconductor Assembly & Test

Global Network



HANA Micron America
2006. 1.
Santa Clara / USA
Marketing & Sales

HT Micron
2009. 12.
Porto Alegre / Brazil
Semiconductor packaging & testing

HANA Electronics
2021. 7.
Manaus / Brazil
Module assembly, testing & sales of finished products

HANA Micron Vietnam
2016. 6.
Bac Ninh / Vietnam
Semiconductor packaging & testing

HANA Micron Vina
2019. 7.
Bac Giang / Vietnam
Semiconductor packaging & testing /
Module assembly & testing

HANA Micron
2001. 8
(HQ) Asan, Chungcheongnam-do / Korea
Semiconductor packaging & testing
(Pangyo) Seongnam, Gyeonggi / Korea
R&D and sales office

HANA Materials
2007. 1
Cheonan, Chungcheongnam-do / Korea
Semiconductor parts

HANA WLS
2021. 1.
Asan, Chungcheongnam-do / Korea
Bump & Test

Approach to Sustainability

ESG Management Strategy

ESG Vision

HANA Micron's ESG vision, 'Beyond HANA MICRON, Toward Sustainable Semiconductor', implies 'semiconductor' as its identity and 'sustainability' as its direction. The expression 'Beyond HANA MICRON' means moving beyond our company and toward the nation and the world. It also indicates continuously developing beyond the limitations of semiconductors required by the times.

ESG Strategic Approach

HANA Micron provides high-value solutions related to semiconductor packaging & testing and is making bold investments and innovations for business expansion and future growth. We have established three significant directions for ESG management : practicing eco-friendly green management, creating an inclusive and happy society, and establishing an advanced organizational system. Through this, we aim to provide a sustainable growth engine and reveal the company's management philosophy and commitment.

ESG Vision

Beyond HANA MICRON,
Toward Sustainable Semiconductor

ESG Strategic Approach

Environmental	Practicing Eco-friendly Green Management
Social	Realizing a Tolerant and Happy Society
Governance	Establishing an Advanced Organizational System

ESG Management Strategy

ESG Implementation Strategy

ESG Strategic Approach

Practicing Eco-friendly Green Management

HANA Micron recognizes global environmental issues and endeavors to create a sustainable environment for future generations. We aim to practice eco-friendly green management by minimizing the environmental impact of our business activities and actively taking the lead in environmental improvement.

Realizing a Tolerant and Happy Society

HANA Micron's commitment goes beyond economic value. We are dedicated to contributing to the happiness of humanity by pursuing social value. We actively work to minimize risks that could negatively impact the social community and the environment, playing a crucial role in creating an inclusive and happy society.

Establishing an Advanced Organizational System

HANA Micron seeks to establish an advanced organizational system based on efficiency and innovation without being bound by the past. We will strengthen compliance and ethical management, strengthen the Board of Directors' responsibility, and pursue communication with all stakeholders, including members, as our top priority, believing that communication with stakeholders ensures sustainable growth.

ESG implementation strategy	Main activities
Advancement of environmental management	• Expand environmental education • Discover and drive reduction/ control activities
Establishment of response strategy to climate change	• Establish mid-to-long-term GHG reduction strategies • Introduce new and renewable energy
Safe and happy workplaces	• Strengthen safety and health and serious accident prevention activities • Create an organizational culture of communication and cooperation
Management of supply chain sustainability	• Advance quality management • Establish a supply chain management policy
Reinforced compliance and ethical management	• Consider introducing an anti-corruption management system • Expand ethics and anti-corruption education
Internal management innovation	• Consider expanding the diversity and expertise of the Board • Internal accounting management system training

ESG Management Strategy

ESG Management System

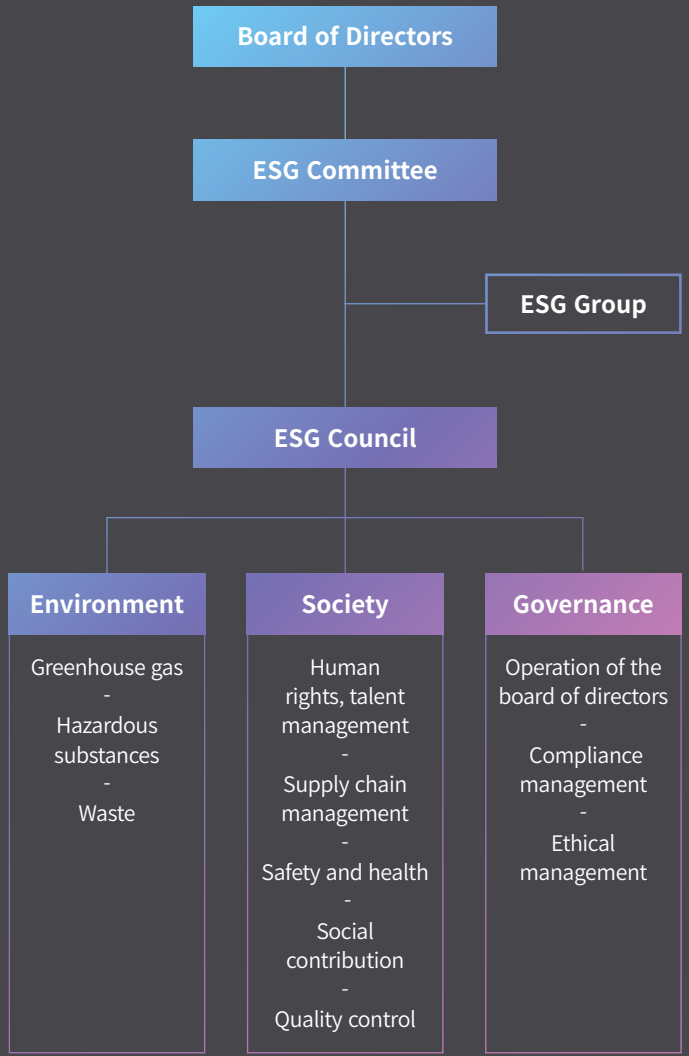
ESG Committee

HANA Micron expanded and reorganized the Safety and Health Council into the ESG Committee in April 2024 to achieve sustainable growth. The ESG Committee consists of 8 people, with the head of the management support department as the chairman and executives from the QRA (quality), facility, purchasing, and technology departments as members. We plan to run the organization as a management-centered organization that can perform a more rapid and realistic supervisory function and introduce an ESG Committee under the Board of Directors.

ESG Council

The ESG Council comprises working-level personnel in each environmental, social, and governance sector, including climate change response, hazardous substance control, talent development, supply chain management, safety and health, and ethical management. We discuss the direction and action plan for each ESG sector, carry out implementation tasks, and share current issues and performance information. The ESG Council operates regularly and frequently depending on issues such as ESG evaluation, RBA certification, and safety and health activities.

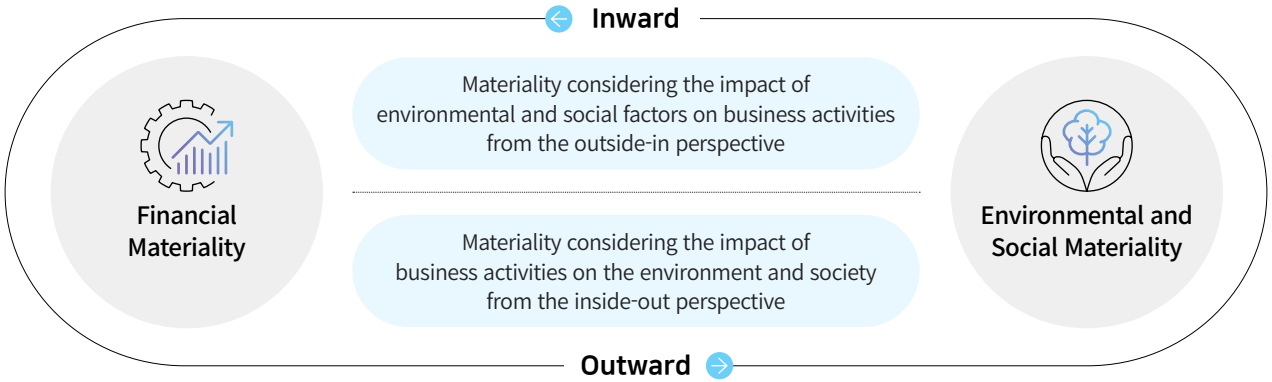
ESG governance



Double Materiality Assessment

Double Materiality Assessment

Materiality assessment is widely used to determine the economic value of a company affected by ESG. Double materiality means considering the external environmental and social impacts of corporate management activities and external environmental and social factors affecting the company's financial status, that is, both internal and external perspectives. HANA Micron introduced and analyzed the double materiality assessment, which considers environmental and social impacts and financial materiality when selecting material issues for sustainability.



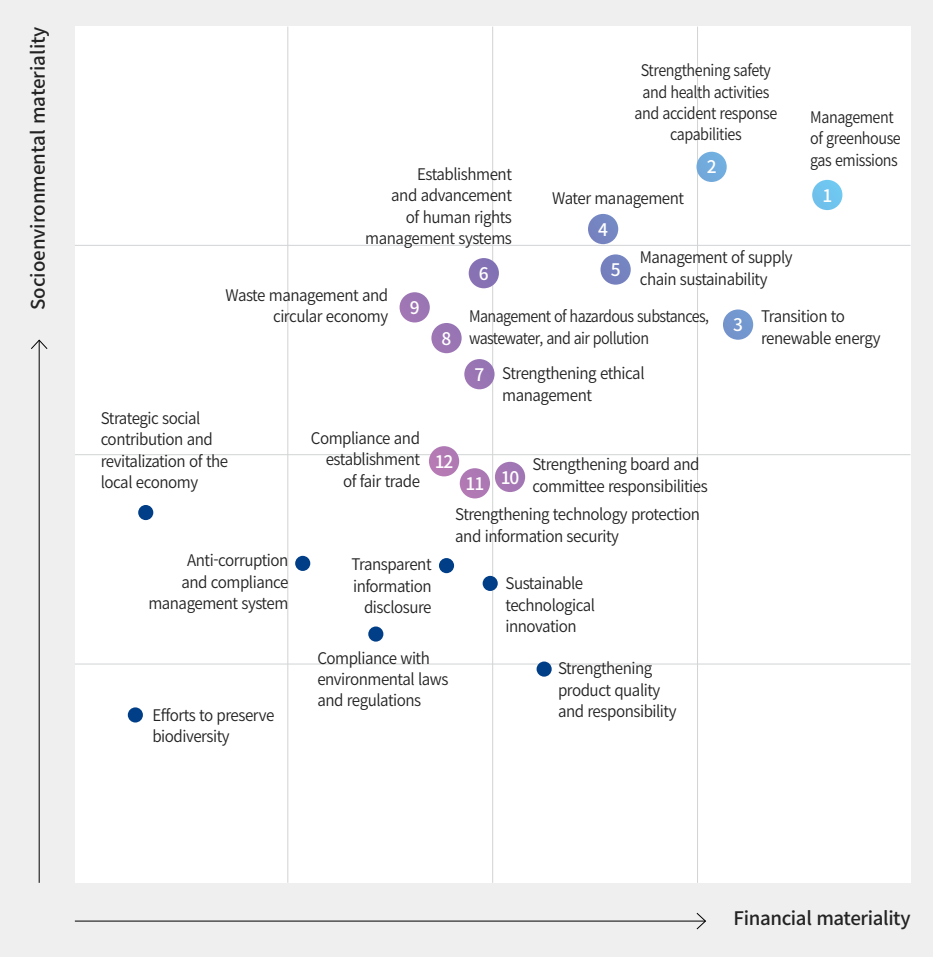
Issue Selection	Identification of Issue Impact	Impact Materiality Assessment	Financial Materiality Assessment
STEP 1	STEP 2	STEP 3	STEP 4
• Review of major issues such as GRI and SASB • Benchmarking analysis (peer group) • Analysis of internal and external management data • Media analysis and screening	• Identification of recent issues within the industry • Review of risk or reward perception levels • Identification of scope and timing • Categorization of issues by ESG area	• Design of evaluation items (influence by scale) • Possibility of occurrence • Severity of impact • Scale, scope and resilience	• Design of evaluation items (influence by scale) • Direct/measurable impact/risk • Regulations and government policies by issue • Stakeholder awareness
Composition of the issue pool : 24 issues	Derivation of candidate issue pool : 19 issues	Twelve of the candidate issues were decided as material issues.	

* Based on opinions through a stakeholder survey (May 16, 2024 ~ May 20, 2024)

Double Materiality Assessment

We analyzed the impact of financial and socioenvironmental materiality of material issues and included the main activities and achievements performed by HANA Micron in the body of this report to respond effectively to opportunity and risk factors.

Results of the materiality assessment



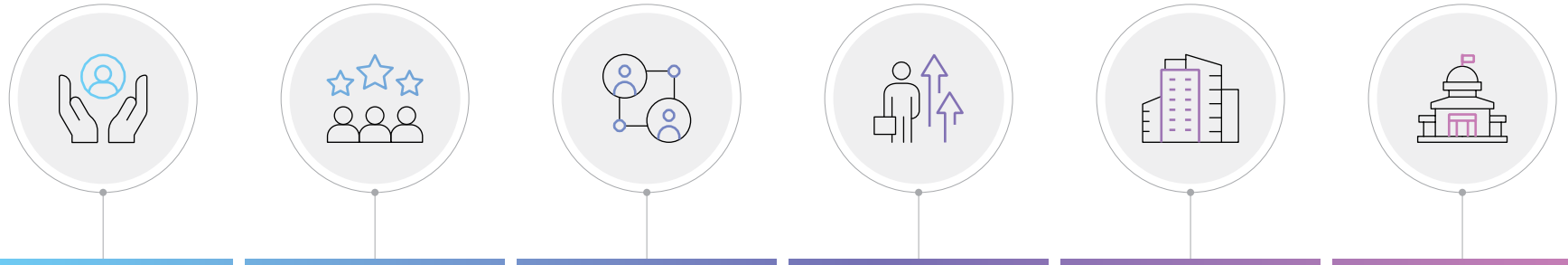
Impact of material issues

●○○ Low ●●○ Medium ●●● High

Priority	Area	Material issues	Financial materiality	Socioenvironmental materiality	page	UN SDGs
1	E	Management of greenhouse gas emissions	●●●	●●●	20-22	SDGs 7, 13
2	S	Strengthening safety and health activities and accident response capabilities	●●●	●●●	34-36	SDGs 3
3	E	Transition to renewable energy	●●●	●●●	23	SDGs 7
4	E	Water management	●●●	●●●	24	SDGs 6
5	S	Management of supply chain sustainability	●●●	●●●	37-39	SDGs 8
6	S	Establishment and advancement of human rights management systems	●●○	●●●	29-33	SDGs 3
7	G	Strengthening ethical management	●●○	●●●	46-47	SDGs 16
8	E	Management of hazardous substances, wastewater, and air pollution	●●○	●●●	26	SDGs 12, 14
9	E	Waste management and circular economy	●●○	●●○	25	SDGs 12
10	G	Strengthening board and committee responsibilities	●●○	●●○	43-45	SDGs 17
11	S	Strengthening technology protection and information security	●●○	●●○	50	SDGs 9
12	G	Compliance and establishment of fair trade	●●○	●●○	47	SDGs 16

Communication with Stakeholders

HANA Micron divides its major stakeholders into customers, employees, local communities, shareholders and investors, partners, and the government and collects and reflects their opinions through various channels.



	Customers	Employees	Local community	Shareholders and investors	Partners	Government
Main interest	・Product and service quality ・Accurate product information ・Rapid response ・Effective communication	・Organizational culture ・Welfare and benefits ・Management status	・Revitalization of the local economy ・Support for the underprivileged ・Industry-academic cooperation	・Responsible governance structure ・Enhancing shareholder value ・Financial performance ・Transparent information disclosure	・Fair trade ・Shared growth ・Improvement of environment and safety	・Indirect economic effects (tax payment, employment, etc.) ・Compliance with laws and regulations ・Realization of social responsibility
Communication channels	・Website (hanamicron.com) ・Sustainability Report ・Groupware 'Voice of Customers'	・Groupware ・Labor-Management Council (Hana Council) ・Meetings by level ・Reporting system (ethics, human rights)	・Hana Volunteer Corps ・Schools in the community ・Eumbong Development Council	・Shareholders' meetings ・Business reports ・Websites ・Investment briefing sessions	・Environment, Safety, and Health Integrated Portal, 'Listen to Opinions' ・Councils in partners	・Press release ・Association activities ・Policy meeting
Response activities	・Provision of product information through the website ・Quality control	・Regular communication between labor and management councils ・Sharing company news ・Events and activities to improve organizational culture	・Kimchi-making with love ・Environmental cleanup campaign ・MOUs with Local schools	・Quarterly performance announcement ・IR meetings	・Quality meeting with partners ・Safety meeting with partners	・Electronic disclosure ・Tax payment

ESG Performance

2023 ESG Highlights

ENVIRONMENT

Up to 2050,

Establish a greenhouse gas reduction plan

Greenhouse gas emissions in 2023

Decreased by

4.4%

compared to the previous year

In 2023

Start of transition to renewable energy

Water recycling rate in 2023

27.9%

SOCIAL

By the Ministry of Employment and Labor

Selected as Korea's Best Job Creation Company (2023)

Partners pledge to comply with the code of conduct

100%

Practice the RBA code of conduct with partners

Number of serious accidents

0 cases

0 serious accidents, including Korean, Vietnamese, and Brazilian operations

Investment in safety and health

Continuously rising

KRW 878 million in 2023 (result)
LRW 998 million in 2024 (planned)

GOVERNANCE

In April 2024,

The ESG Committee launched

Organized around management for prompt and realistic supervision

Number of employees who have completed fair trade and anti-corruption training

57 people (2023)

Conducted annually, focusing on those involved, from 2022 onwards

Common Criteria

Acquisition of CC certification (2022)

Certification for product security, safe development environment, and safe development process

Environmental

18 Environmental Management
19 Environmental Goals
20 Greenhouse Gas Reduction Plan
21 Greenhouse Gas
23 Energy
24 Water
25 Waste
26 Pollutants and Chemicals
27 Environmental Engagement

Up to 2050,

Establish a greenhouse gas reduction plan

Greenhouse gas emissions in 2023

Decreased by

4.4%

compared to the previous year

In 2023

Start of transition to renewable energy

Water recycling rate in 2023

27.9%

Environmental Management

Environmental Management Strategy

HANA Micron promotes eco-friendly management under the direction of 'practicing eco-friendly green management' of ESG management. In order to solve the climate crisis, which has become a global issue, we are carrying out activities to reduce raw material, water, and energy usage and greenhouse gases while also making every effort to reduce air and water pollutants and waste emissions. In addition, by establishing environmental policies and an environmental management promotion system based on the environmental management system (ISO 14001), we efficiently manage environmental risks and systematically identify, evaluate, and improve the organization's environmental performance. HANA Micron's environmental management strategy consists of Environmental Policy, Strategy, Strategic Tasks, and Action Tasks.

Environmental Policy

HANA Micron establishes an environment-oriented management system according to the principle of putting the environment first and carries out eco-friendly management activities throughout the entire process of corporate actions and products.

01

Reduction of greenhouse gas emissions and minimization of pollutant emissions

02

Compliance with environmental laws and requirements

03

Continuous environmental pollution prevention and improvement activities and establishment of eco-friendly workplaces

04

Implementation of environmental education and disclosure of environmental information and performance to stakeholders

Environmental management system

ESG Strategic Approach	**E** Practicing Eco-friendly Green Management	**S** Realizing a Tolerant and Happy Society	**G** Establishing an Advanced Organizational System
Environmental policy	1. Reduction	2. Compliance	3. Improvement	4. Training
Strategy	Eco-Friendly Workplace	Emissions Management	Internalization of Environmental Awareness
Strategic tasks	Establishment of Green Workplace through Environment-Friendly Process Operation	Systematic Management of Air, Water Quality, Waste, and GHG	Cultivation of Environmental Awareness and Communication with Stakeholders
Action tasks	· Introduction of new and renewable energy · Establishment of a green purchasing system · Energy efficiency improvement of main process · Discovery of green process · Expansion of external cooperation on environmental issues	· Establishment of goals by medium · Continuation of reduction activities · Compliance with environmental laws and regulations · Advancement of GHG inventory · Familiarization with the environmental manual	· Expansion and continuation of environmental education · Promotion of environmental protection activities · Execution of public disclosure of environmental information · Cultivation of internal environmental experts · Increase in environmental accident prevention activities

Environmental Goals

Four Major Environmental Goals [1~2)]

HANA Micron has established four environmental goals based on the environmental management strategy's 'Environmental Policy 1 (Reduction)' and 'Strategy (Emissions Control)' and the results of the double materiality assessment. The four environmental goals represent HANA Micron's will to solve and respond to climate change problems and consist of 'greenhouse gases', 'energy', 'water', and 'waste' in order of importance. The greenhouse gas target is linked to the '2050 Greenhouse Gas Reduction Plan' and represents mid- to long-term greenhouse gas reduction goals for 2030, 2040, and 2050. The energy goal represents the ratio of renewable energy to total energy use, that is, the renewable energy conversion rate; the water goal is the water recycling rate, and the waste goal is the incineration and landfill rate of discharged waste to zero. The four major environmental goals initially apply only to the head office and Pangyo business site but are scheduled to expand to overseas subsidiaries in the future gradually. In the future, HANA Micron will actively participate in overcoming the climate crisis by establishing specific plans to achieve goals through the ESG Committee and dedicated organizations, and inspecting and disclosing progress.

Goal	Definition	Time horizon	Tasks	Performance
GHG reduction rate	Reduce GHG emissions by 30% compared to 2023	2030	·Establish a 2050 greenhouse gas reduction plan by 2024. ·Establish a 2050 renewable energy transition plan by 2024. ·Continue to discover reduction measures, benchmarking cases within the industry, and reduce reduction activities. ·Replace with high-efficiency equipment and improve operating conditions. ·Promote membership in related initiatives (K-RE100, etc.).	· Reduce by 4.4% compared to 2022 · Establish a GHG reduction plan (draft) · Reduction of solar energy 0.3% of total emissions · Replace with a high-efficiency boiler · Optimize facility operation rates
	Reduce GHG emissions by 58% compared to 2023	2040		
	Reduce GHG gas emissions by 75% compared to 2023	2050		
Transition rate to renewable energy	Achieve a transition rate of 75% to renewable energy	2050	·Establish a 2050 GHG reduction plan by 2024. ·Establish a 2050 renewable energy transition plan by 2024. ·Build and operate renewable energy power generation facilities. ·Promote membership in related initiatives (K-RE100, etc.).	·Establish a GHG reduction plan (draft) ·Implement solar power generation ·Optimize facility operation rates
Water recycling rate	Achieve a water recycling rate of over 50%	2030	·Expand the construction of water recycling facilities. ·Continue to monitor the amount of water recycling.	·2022 : 31.1% ·2023 : 27.9%
Zero waste incinerated or landfilled	Achieve a 0% rate of waste incinerated or landfilled	2030	· Continue to comply with legal waste disposal. · Monitor the disposal method of discharged waste and inspect partner companies.	·2022 : 0.0% ·2023 : 0.0%

1) The 2030 greenhouse gas goal of the previous report, which was a 15% reduction in greenhouse gas emissions and energy use per sales (based on average emissions from 2018 to 2020), was revised to a more challenging goal in the process of establishing the 2050 greenhouse gas reduction plan.
2) The goals may be revised depending on the level of goal achievement by period and changes in the internal and external business environment.

Four Major Environmental Goals

Greenhouse gas

30%

Reduce greenhouse gases by 2030 compared to 2023 (Scope 1 & 2)

75%

Reduce greenhouse gases by 2050 compared to 2023 (Scope 1 & 2)

Energy

75%

Transition rate to renewable energy by 2050 (head office and Pangyo)

Transition

Expand the transition to renewable energy at overseas subsidiaries in Vietnam and Brazil

Water

50%↑

Water recycling rate by 2030

Waste

0%

Incineration and landfill rate of waste generated by 2030

Greenhouse Gas Reduction Plan

Greenhouse Gas Reduction Plan 2050

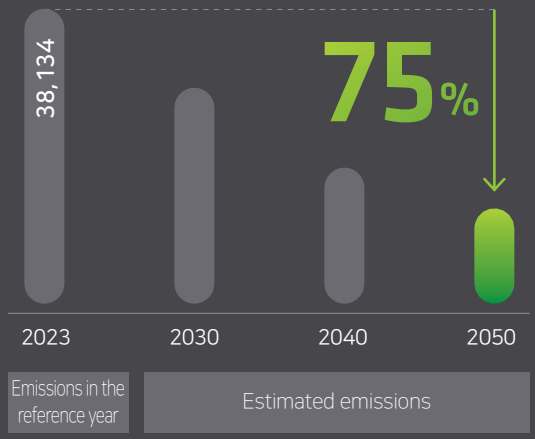
HANA Micron recognizes that carbon neutrality is a global challenge and the core of corporate management and has established a greenhouse gas reduction plan for 2050 to respond more actively. Starting with the greenhouse gas inventory (advancement), which is an essential part of carbon emissions management, we listed the utility's detailed facilities to identify factors affecting emissions and analyzed the age and operation rate of each facility. Next, we investigated reduction methods and benchmarking cases within the industry to derive candidates for reduction items, then conducted an economic feasibility analysis to determine priorities for reduction items. We ultimately established a mid- to long-term greenhouse gas reduction plan. A total of 40 reduction items, consisting of 10 in the renewable energy sector and 30 in the energy efficiency sector, were discovered and are comprised of various items such as equity investment in power generation facilities, REC[1] purchase, PPA[2], improvement of operating conditions, and introduction of high-efficiency facilities. HANA Micron plans to apply this step by step to reduce greenhouse gases by 75% compared to 2023 by 2050 (approximately a 5% reduction per year on average). It plans to continue to monitor and advance the achievement of this plan in the future.

Procedure for Establishing the 2050 Greenhouse Gas Reduction Plan

Investigate trends in reduction items	Identify candidates for reduction items	Decide on reduction items	Establish a reduction plan
・Case studies on the introduction and performance of reduction facilities by leading domestic and foreign companies ・Case studies such as benchmarking ・Research on mid-to-long-term reduction technology trends by industry at home and abroad ・Review of the possibility of introducing advanced reduction technologies (facilities)	・Enhancement of greenhouse gas inventory ・Detailed facility listing and identification of emission-influencing factors ・Selection of facilities subject to reduction ・Calculation of base year and mid-to-long-term expected emissions ・Calculation of expected reduction for each reduction item	・Setting variables for prioritizing reduction items ・Review of reduction, investment cost, and feasibility for each reduction item ・Derivation of priorities for reduction items ・Final decision on reduction items	・Distribution by period by combining reduction amount, investment cost, feasibility, etc., for each reduction item ・Reduction scenario (draft) setting by period and sector ・Scenario discussion and review of the final reduction plan

1) REC (Renewable Energy Certificates) : Renewable energy supply certificate issued by Korea Energy Agency
2) PPA (Power Purchase Agreement) : A direct purchase contract system for renewable energy between power generators and companies

Reduction goals for each time horizon



Reduction rate

Average annual reduction rate

5.0%

76% reduction through renewable energy and 24% reduction through energy efficiency improvement to achieve an average annual reduction rate of 5.0% by 2050

Greenhouse Gas

Greenhouse Gas Control

HANA Micron has participated in the Emissions Trading Scheme since its inception in 2015 and has been responding to the national carbon-neutral policy. In addition, the Company participates in the Carbon Disclosure Project (CDP)[1], one of the world's most credible platforms, to disclose GHG emissions and decision-making systems. It prepares statements on GHG emissions annually, establishes goals and action plans to reduce GHGs, and continues to carry out reduction activities.
To achieve the greenhouse gas reduction goal in 2050, the internal management system was upgraded to continuously discover reduction items, while energy use was reduced by introducing high-efficiency equipment such as low NOx boilers and inverter-type air compressors. As a result, greenhouse gas emissions in 2023 decreased by approximately 4.4% compared to 2022. Starting this year, we will also disclose the greenhouse gas emissions of some overseas subsidiaries, which are affiliated companies, through this report, and we plan to disseminate these activities in the future to encourage all affiliated companies to participate.

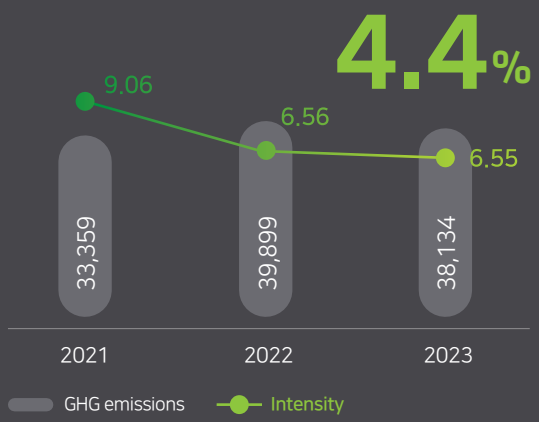
Greenhouse Gas Emission Activities

HANA Micron's greenhouse gas emission activities are divided into direct and indirect emissions. Direct emissions include stationary combustion (gas fuel combustion), mobile combustion (passenger cars, trucks), and process emissions (electronics industry - semiconductors), while indirect emissions include external electricity use and external heat use. Greenhouse gas emissions in 2023 were 38,134 tCO_2-eq, a decrease of approximately 4.4% compared to the previous year, and greenhouse gas emissions per KRW 100 million in sales remained at a similar level to the last year at 6.55 tCO_2-eq/KRW 100 million in 2023. The emission activity with the highest emissions is indirect emissions, accounting for approximately 95.6% (36,465 tCO_2-eq) of total emissions, the remainder being stationary combustion, mobile combustion, and process emissions. Process emissions occur due to using sulfur hexafluoride (SF_6) gas in semiconductor analysis labs, but their proportion of total emissions is insignificant, less than 0.01%.Meanwhile, overseas subsidiaries, which can be considered major production bases, are located in Vietnam and Brazil among HANA Micron's consolidated subsidiaries. In Vietnam, there are HANA Micron Vietnam Co., Ltd. and HANA Micron Vina Co., Ltd.. In Brazil, there are HT Micron Semicondutores S.A. and HANA Electronics Industria E Comercio Ltda., whose emission activities are similar to those of the head office. Please refer to the environmental performance section of the ESG Data Book in the Appendix for information on greenhouse gas emissions and energy usage of reporting subsidiaries, including the HANA Micron head office.

1) CDP (Carbon Disclosure Project) : A project to respond to climate change that is being carried out globally

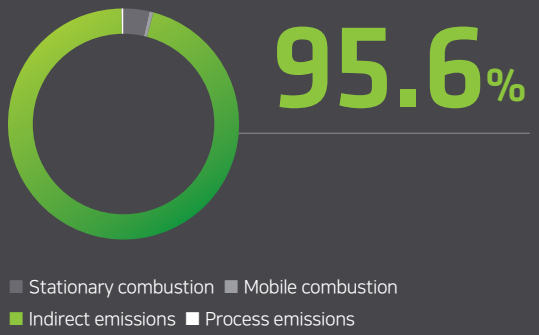
Emissions

Reduction of greenhouse gas emissions (head office and Pangyo)



Emissions activities

Indirect emissions (head office and Pangyo)



Greenhouse Gas

Greenhouse Gas Reduction Activities

HANA Micron's greenhouse gas reduction activities have continued steadily in the past. In the 2050 greenhouse gas reduction plan established independently, reduction activities are primarily divided into the renewable and energy efficiency sectors. Since the construction of renewable energy facilities within our business sites is limited, we plan to actively accept the government's system and conduct investment-oriented activities in the renewable energy sector. On the other hand, in the energy efficiency sector, indirect emissions due to external electricity use are the highest, and due to the nature of the process, the 24-hour operation must be maintained continuously, so we are focusing on optimizing and monitoring utilities. As a result of daily monitoring of the usage and trends of utility resources, we were able to reduce energy usage through the introduction of high-efficiency equipment such as low-NOX boilers and inverter-type air compressors and constructing rooftop solar power generation facilities. We are planning to implement various reduction items, such as installing a waste heat recovery heat exchanger for air compressor coolant, replacing an internally corroded once-through boiler, and replacing the cooling system of the second production line. The following table summarizes HANA Micron's major greenhouse gas reduction activities from 2022 to now.

Area	Emissions	Emission source	Reduction method	Reduction items	Annual reduction (tCO_2-eq)
Energy efficiency	Indirect	Electricity	Replace with high-efficiency equipment	Replacement with non-purge[1] air dryers	954
	Indirect	Electricity	Replace with high-efficiency equipment	Replacement with high-efficiency air compressors	601
	Indirect	Electricity	Replace with high-efficiency equipment	Introduction of 8,000 Nm^3 ring blowers	192
	Indirect	Electricity	Improve processes and operating conditions	Recovery of waste heat from air compressor coolant	80
	Direct	LNG			184
	Indirect	Electricity	Improve processes and operating conditions	Operation at low supply air temperature by introducing an external air conditioner in the air compressor room	251
	Indirect	Electricity	Improve processes and operating conditions	Installation of air volume control valve for wire bonding machine	78
	Indirect	Electricity	Replace and supplement accessories	Replacement of cooling tower fill	15
	Indirect	Electricity	Replace and supplement accessories	Replacement of cold water pump assembly	56
	Direct	LNG	Replace with high-efficiency equipment	Replacement of internally corroded once-through boilers	26
Renewable energy	Indirect	Electricity	Build solar power generation facilities	Operation of solar power generation facilities on the rooftop	101

1) Non-purge : Advantageous for energy savings as compressed air is not used to regenerate the adsorbent

Major reduction activities

Annual reduction performance

2,538 tCO_2-eq

Main reduction methods include replacing high-efficiency equipment, improving processes and operating conditions, and replacing and supplementing accessories.

Renewable energy

101 tCO_2-eq

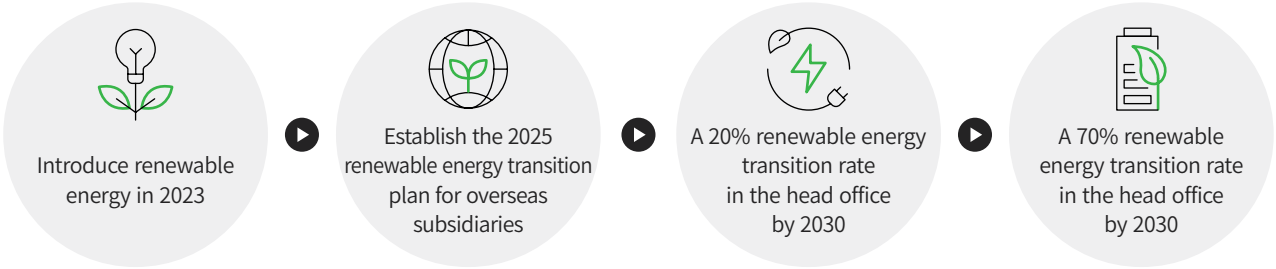
The solar power generation facility is expected to be operational in 2023 and will continue to reduce greenhouse gases by approximately 100 tCO_2-eq per year.

Energy

Transition to renewable energy[1)]

Global companies that have joined RE100[2)] are implementing RE100 by utilizing various types of renewable energy. However, expanding renewable energy in our country is challenging due to geographical limitations and poor location conditions, such as a small land area, low solar radiation, and low wind speed. In addition, the semiconductor industry consumes a lot of power because it is a large-scale device industry. Hana Micron's power consumption is expected to continue to increase as the production scale expands. Nevertheless, HANA Micron has set a more challenging goal of converting to renewable energy through its 2050 greenhouse gas reduction plan. As of 2023, the renewable energy transition rate is only 0.3%, but we plan to increase it to about 20% by 2030, about 50% by 2040, and about 75% by 2050. In particular, while implementing a plan to build additional solar power generation facilities in warehouse buildings and industrial passive buildings, after reviewing joining the K-RE100 council, which was established to support the implementation of global RE100 by domestic companies, the primary implementation means in K-RE100 We are actively reviewing measures such as expanding self-generation, promoting power purchase agreements (PPA), purchasing renewable energy supply certificates (REC), and equity investment. In the future, we will not only respond to the demand for responding to the global climate crisis but also actively participate in RE100 with our customers and establish a renewable energy conversion plan for overseas subsidiaries to contribute to the spread of new and renewable energy use and the realization of green value.

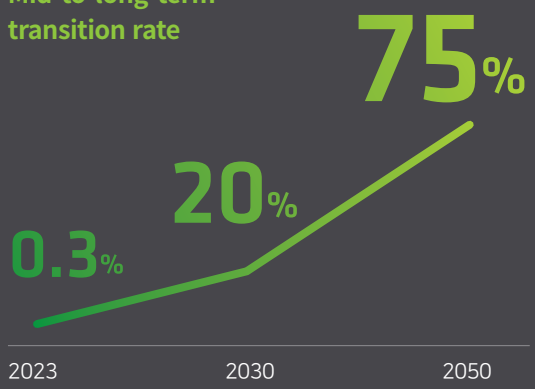
Transition plan to renewable energy



1) The previous report's renewable energy goal of more than 1,000,000 kWh per year by 2030 was revised to a more challenging goal while establishing the 2050 greenhouse gas reduction plan.
2) RE100 (Renewable Electricity 100%) : A global initiative to replace electrical energy with 100% renewable energy

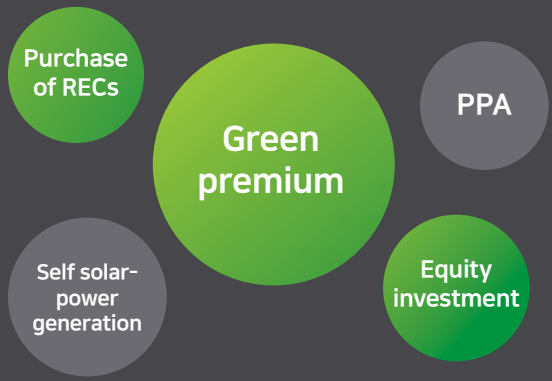
Transition to renewable energy

Mid-to-long-term transition rate



The overseas subsidiaries in Vietnam and Brazil will establish and promote renewable energy transition plans starting in 2025.

Priority of transition means



Water

Water Management [1~2)]

HANA Micron uses both industrial water and residential water. Due to the nature of the waterconsuming process, the amount of water used for industrial purposes is higher than that for living. Industrial water is classified by process and residential water by building and is monitored monthly through flow meters. The total water intake is showing a decreasing trend to 606,464m^3 in 2021, 519,910m^3 in 2022, and 490,567m^3 in 2023, and the water intake per sales in 2023 is 84.3m^3/KRW 100 million, a slight improvement compared to 2022. In addition, HANA Micron operates its water recycling facility to reduce water consumption and increase the circulation rate. The amount of water recycling (recycling rate) decreased compared to the previous year, reaching 148,045m^3 (20%) in 2021, 234,948m^3 (31%) in 2022, and 189,758m^3 (28%) in 2023. These results significantly increased compared to previous years due to activities to change the UF (ultra filter) membrane material to maximize wastewater reuse production and recovery rate within the reporting period.

Water Intake Reduction Plan

HANA Micron is building a facility that reuses 700 to 800 m^3/day of water in the ultrapure water process. The current operation rate of recycling facilities is around 70-80%, and we plan to operate the facilities at the maximum operation rate in the future. We expect to significantly contribute to reducing water usage in the future. The goal is to continuously expand the introduction of water recycling facilities step by step and achieve a more than 50% water recycling rate by 2030. By 2025, we plan to maintain the current recycling rate while ensuring operational stability. We continuously analyze and review applicable processes, operating rates, and expected water savings to increase the water recycling rate annually from 2025 onwards. Following the activities during the reporting period, the head office plans to increase the amount of wastewater separation further and UF recycled water treatment generated from the SAW process from 2024 to reduce water intake. Our Vietnam business site plans to reduce water intake by building a water recycling facility in 2024.

Water Stress Areas

HANA Micron understands the level of water stress in the area where each production site is located based on the World Resources Institute (WRI)'s 'Water Risk Atlas'. The domestic business sites (HANA Micron's head office and Hana WLS) are located in Asan, South Chungcheong Province, and the Vietnamese business site (HANA Micron Vietnam Co., Ltd. and HANA Micron Vina Co., Ltd.) is located in the 'Medium-High' area. The Brazilian business site (HT Micron Semicondutores S.A. and HANA Electronics Industria E Comercio Ltda.) is in the 'Low (<10%)' region. There are no areas within the reporting scope where water stress is high or extreme in the workplace. Nevertheless, HANA Micron will continue to monitor the level of water stress, build water recycling facilities for overseas business sites with high water intake, and strive to minimize water resource risks.

1) Refer to page 56 for water-related data for each business site
2) Data for 2021 and 2022 were revised due to changes in the calculation standards

Water

Goal

50%↑

Water recycling rate of over 50% by 2030

Water intake (head office)

5.6%

Water intake decreased compared to the previous year.

Recycling rate (head office)

27.9%

The Vietnamese subsidiary plans to build a water recycling facility in 2024.

Waste

Waste Management[1)]

HANA Micron monitors the entire process, from waste generation to transportation and treatment, by applying an environmentally legal treatment system. Supervised by the ESG Group, the Company continues to comply with the legal treatment of various wastes, observes the storage days according to the type and nature, and creates an inspection log to check periodically.

Waste synthetic resins (general) and waste organic solvents (specified) are the primary wastes from HANA Micron. Therefore, it is essential to treat both types of waste by recycling : as stable materials based on petrochemical raw materials, waste synthetic resins rarely decompose naturally and generate harmful gases when heated, whereas waste organic solvents cause various types of air pollutants when incinerated. However, since its business nature of limited direct consumption of such recycled waste, the Company focuses on water recycling and entrusts all the generated waste for treatment.

We monitor whether the consignment company recycles waste to increase the recycling rate of waste generated during consignment processing. In 2023, the rate of waste recycled after discharge increased significantly to 98.5%.

Waste reduction plan

HANA Micron is building a waste disposal process based on the PDCA[2)] Cycle of the environmental management system (ISO 14001). When selecting a consignment company from the planning stage, priority is given to companies that have the technology and licenses to recycle the waste produced. In order to achieve the 2030 goal, HANA Micron will first set the ratio of recycled waste after discharge from the business to at least 90% and seek ways to recycle some waste synthetic resins and organic solvents that are not currently being recycled. In addition, in the case of overseas subsidiaries, we will establish and implement internal regulations to take action in case the consignment company violates the laws of each country in waste disposal and to consider the possibility of recycling the raw materials and consumables purchased.

1) Refer to page 57 for waste-related data for each business site. 2) PDCA : Plan, Do, Check, Act

Waste

Goal

0%

Zero waste to be landfilled or incinerated after discharge

Waste generated (head office)

31.8%

The amount of waste generated decreased compared to the previous year

Percentage of waste recycled after discharge (head office)

93.6%

We continuously monitor waste recycling by waste disposal consignment companies.

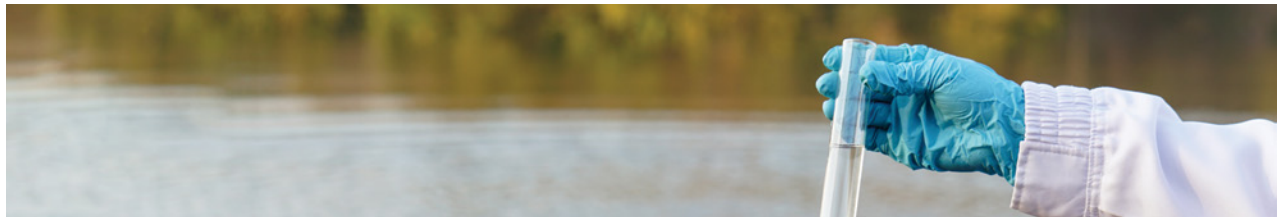
Pollutants and Chemicals

Pollutants management[1)]

Having the business site with Type 4 air emission facilities and Type 1 effluent discharge facilities, HANA Micron conducts self-measurements twice a year for dust, sulfur oxides (SOx), and nitrogen oxides (NOx) and monitors the results. Also, as for effluents, the Company regularly monitors about ten types of water pollutants, including biochemical oxygen demand (BOD), chemical oxygen demand (COD), suspended solids (SS), total phosphorus (TP), and total nitrogen (T-N). All effluents are treated by flowing into the effluent treatment facility.
Additionally, HANA Micron strives to prevent air and water pollution and ensure stable treatment. We are establishing a wastewater treatment process based on the PDCA Cycle of the environmental management system and writing an inspection log daily. In 2023, air pollutants and water pollutant emissions were 0.42 tons and 36.39 tons, respectively, down 19.5% and 15.9% from the previous year. In the case of overseas business sites, we comply with each country's laws regarding air and water pollutants, and we plan to compile and disclose each pollutant's emissions in the future.

Chemical management

As chemical regulations are strengthened worldwide and regulatory targets and standards vary by country, more specialized chemical management is required. HANA Micron regularly updates chemical substances-related laws and regulations for the head office and its Vietnamese and Brazilian subsidiaries where its manufacturing plants are located. The company also manages target substances to comply with legal requirements and minimize related risks. In addition, to minimize damage in a chemical-related accident, we conduct periodic training and environmental impact assessments (head office) in preparation for emergencies, monitor various environmental regulations, and comply with obligations. In particular, the content of hazardous substances in wafers, which are the raw materials mainly handled by HANA Micron, PCB[2)], EMC[3)], and packaging materials used in the packaging process, are strictly controlled by the customer's standards as products that have met the customer's strict inspection and requirements.



1) Refer to page 58 for data on pollutants for each business site. 2) PCB : printed circuit board
3) EMC (epoxy molding compound) : a circuit protection agent that protects semiconductor circuits from external environments such as moisture, heat, shock, and electric charges.

Pollutants

Air pollutants (head office)

19.5%

Air pollutant emissions decreased compared to the previous year.

Water pollutants (head office)

15.9%

Water pollutant emissions decreased compared to the previous year.

Environmental Engagement

Improvement of Environmental Awareness

HANA Micron enhances environmental awareness through environmental education for employees and minimizes the impact of its business activities and products on the environment. The Company establishes an annual environmental education plan, including legal education. When setting a plan, the Company divides the types of education into recruitment training, work training, special training, regular education, etc., and conducts various educational programs on environmental topics such as fine dust, environmental safety, hazardous substances, and GHGs to improve a sense of responsibility for the environment. Due to the nature of its business, HANA Micron is regulated by various environmental laws and regulations, such as the "Air Quality Conservation Act", "Water Environment Conservation Act", and "Waste Management Act". During the reporting period, there were no cases of violation of environmental laws or fines paid. Under the environmental management system, the Company has established and steadily carried out environmental policies, promotion plans, corrective actions, management reviews, and improvement activities. HANA Micron intends to expand environmental education further to achieve the goal of 'zero violation of environmental laws and regulations'. While specifying an annual environmental training plan, the Company will gradually expand the related budget. It plans to have those who have completed legal education hold in-house proliferation training and, if necessary,arrange training programs for each environmental issue from external professional institutions. In particular, we provide opportunities and encourage employees to continuously participate in education on greenhouse gases, resource circulation, and water, which are emerging as core issues in the environmental field, including ESG.

Environmental Education

HANA Micron conducts periodic environmental training at least once a year for environmental managers and hazardous chemical workers. During the reporting period, the environmental training included fine dust-related training, ISO 14001 internal auditor training, environmental improvement cases and issue dissemination training, and environmental regulation-related training.
All employees are required to participate in environmental education once a year starting in 2024.

Environmental Education Provided

Education	Subject	Training Date	No. of Participants
Understanding of ESG and practice	All relevant departments	2023. 09	6
ISO 14001 internal auditor training	Applicable person	2023. 03	38
Chemical substance training	Handlers, related workers	Frequent	28
Intensive environmental education (greenhouse gas control)	Environmental officer	2022. 10	1
Environmental education (ESG education / required)	All employees	2024. 06	820

Environmental Engagement

Violation of environmental regulations (head office)

0 cases

We plan to expand employee participation in environmental education to maintain 'no violation of environmental laws'.

Number of people who participated in environmental education

893 people

An increase of 231 people compared to the previous year

Social

29 Culture of Communication and Collaboration

34 Safety and Health

37 Sustainable Supply Chain Management

40 Social Contribution

By the Ministry of Employment and Labor

Selected as Korea's Best Job Creation Company (2023)

Partners pledge to comply with the code of conduct

100%

Practice the RBA code of conduct with partners

Number of serious accidents

0 cases

0 serious accidents, including Korean, Vietnamese, and Brazilian operations

Investment in safety and health

Continuously rising

KRW 878 million in 2023 (result)
LRW 998 million in 2024 (planned)

Culture of Communication and Collaboration

Talent Development

HR Principles

HANA Micron systematically fosters talent by providing training opportunities to improve competency for each job from a mid-to-long-term perspective. We conduct fair evaluation and differential compensation through a differentiated evaluation system according to the job group. In addition, we operate a personnel policy that provides opportunities to talented individuals through in-house universities, online campuses, and foreign language tests.

Performance Evaluation and Compensation

HANA Micron pays wages fairly according to relevant regulations, such as job duties, years of service, etc., and all employees receive the same starting salary without discrimination based on gender. The company operates a differentiated evaluation system according to job groups, such as task-oriented evaluation (MBO, KPI evaluation) and technology level evaluation, and provides differential compensation in proportion to performance through the Productive Incentive system according to the evaluation results. In addition, we operate a defined benefit retirement system. The retirement benefit provision (non-consolidated) as of the end of 2023 is KRW 28,422,726 thousand.

Leadership Training and Job Competency

HANA Micron designs and operates training programs according to the directions of nurturing self-directed leaders, nurturing field-oriented job experts, and nurturing talent with global capabilities. We have improved accessibility for employees by allowing them to check, apply for, and take courses through the curriculum site within the groupware.

Self-directed leaders	·Leadership training by level/manager ·Training for promoted employees and new employees ·Liberal arts and job knowledge education ·In-house university
Field-oriented experts	·Company-wide job competency improvement training ·Professional courses from external educational institutions ·Professional degree programs to discover key talent ·Regular learning support systems
Talent with global capabilities	·In-house and external language courses ·In-house language tests ·Autonomous language learning

In-house University Courses

HANA Micron has been operating an industry-consigned training course with Baekseok University since 2004. We provide support for educational expenses, an in-house training center, and provide opportunities to improve personal capabilities by completing the course to obtain a professional bachelor's degree.

Ideal talent in HANA Micron

Those who dream big, are not afraid of failure, and take on challenges

Those who want to learn and study thoroughly and become the best experts

Those who revitalize the organization by creating new values and ideas

Those who have a deep understanding of the global business environment and the ability to pioneer

Those who value harmony with colleagues, seniors and juniors, and actively lead by example

Culture of Communication and Collaboration

Talent Development

Technical Talent Development

HANA Micron establishes a roadmap for operating in-house technical training courses to improve professional capabilities in the semiconductor packaging field and develops programs according to step-by-step implementation plans. We plan to foster excellent talent with technical expertise for each process by operating a customized curriculum starting the following year when curriculum development is completed.

New Employee Training (HANA Future Talent Mind-Up)

HANA Micron operates a systematic and diverse training course for new employees. Through cooperation and unity among new employees, we strive to improve employees' self-satisfaction and job satisfaction by increasing their ability to adapt to the organization and establishing career views, a sense of belonging, and labor-management views. As of 2023, training for new employees was conducted eight times, and 106 new employees completed the training.

In-house university

HANA Future Talent Mind-Up

Roadmap for in-house technical training courses

Phase 1 (2023)

- Selection of experts on key topics : Experts with experience and knowledge in each manufacturing process
- Preparation of job descriptions : knowledge, capabilities, training goals, training content, etc. for each process

Phase 2 (2024)

- Development of lecture material : Teaching materials by process and job group
- Appointment of in-house instructors : A pool of instructors for each process

Phase 3 (2025)

- Operation of technical training courses
- Development of technical intensive courses

Phase 4 (2026~)

- Institutionalization of the internal mandatory curriculum
- Spread to overseas subsidiaries

Culture of Communication and Collaboration

Organizational Culture

HANA Micron pursues an organizational culture of communication and collaboration in which employees respect different ideas and can express their opinions freely.

Meetings by Level

We hold meetings by level to listen to employees' stories, encourage them, and share business direction and issues through various channels. We enhance mutual trust by directly listening to and resolving employees' difficulties and answering their questions through meetings with excellent employees, employees with disabilities, department heads, and group leaders.

Fun Life in HANA Micron

To expand communication opportunities between employees and build a vibrant organizational culture, we conducted quarterly simple games such as mini curling, drawing, and pitching. MOVIE DAY is an event in which friends, lovers, and family participate together, encouraging active communication in an environment other than a rigid company. HOF DAY was held 19 times in 2023 and received a great response, providing an opportunity for mutual communication between various levels and departments, such as employee-to-employee, employee-to-manager, and manager-to-manager.

Active Labor-Management Communication

HANA Micron does not have a labor union. Still, it has formed the Labor-Management Council to promote all workers' welfare and the company's development through cooperation between workers and employers. The Hana Council holds regular council meetings every quarter with five employer and five employee members to discuss management status, working conditions, and agendas for welfare improvement, and the decisions made are applied to all employees. In 2022, we will announce the Joint Declaration of Labor-Management Coexistence and strive to promote the joint interests of labor and management based on an organizational culture of mutual trust and harmony.

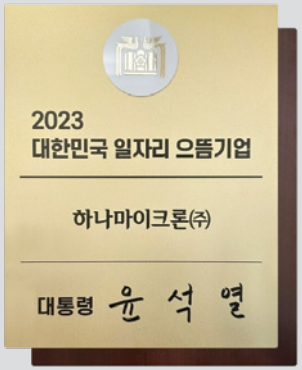
In 2023, we agreed to add a parking area for pregnant women, improve the in-house reception room, and install an in-house smoking area.

'Korea's Best Job Creation Company'

HANA Micron was selected as 'Korea's Best Job Creation Company' by the Ministry of Employment and Labor in 2023. We create jobs by hiring more than 20% of new employees compared to the previous year and support lifelong learning for our employees through our in-house university. We received the award for establishing a test support center to support system semiconductor test solutions and infrastructure and actively implementing various systems to balance work and family.

A Great Place to Work Certification, the Brazilian subsidiary

HT Micron and HANA Electronics, two Brazilian subsidiaries, have received Great Place to Work certification as companies where employees with a good organizational culture and a sense of ownership create excellent corporate performance.



Inter-departmental communication activities

Culture of Communication and Collaboration

Human Rights Management

RBA Third-party Verification

HANA Micron complies with the RBA (Responsible Business Alliance) Code of Conduct to practice ethical and responsible management. The RBA requires compliance with the Code of Conduct in five areas : labor, health and safety, environment, ethics, and management system, and it requires implementation throughout the supply chain.
HANA Micron is subject to regular inspection by an external professional agency for RBA compliance. Third-party verification evaluates workplace compliance with the RBA Code of Conduct and local laws and regulations in five areas and takes measures to improve non-compliance. In 2022, HANA Micron's domestic business site and HANA Micron VINA conducted third-party verification and received PLATINUM and SILVER ratings, respectively. In the future, we plan to expand to other overseas business sites and inspect and improve them to operate according to RBA standards. In addition, we strengthen sustainable management throughout the supply chain by evaluating and selecting partner companies based on RBA.

Human Rights Education

HANA Micron conducts human rights education for all employees to spread a culture of respect for human rights and prevent human rights risks. We provide the HANA Micron code of conduct and ethical management training once a year, as well as legally mandated training on preventing sexual harassment and bullying in the workplace and awareness training for the disabled.

Area	Key RBA Code of Conduct
Labor	Prohibition of forced labor, working hours, wages and allowances, prohibition of discrimination, freedom of association and collective bargaining
Safety and health	Industrial safety, emergency response, industrial hygiene, workers' health
Ethics	Business integrity, IP protection, fair trade, personal information protection
Environment	Environmental permits and reporting, pollution prevention, resource conservation, hazardous substances
Management system	Commitment and responsibility, compliance with legal requirements, risk assessment and management, worker training

Grievance Handling

Grievance Handling Systems

HANA Micron operates a grievance handling process that receives, handles, and takes action against human rights violations such as discrimination and either sexual or non-sexual harassment. Internal employees and external stakeholders can report ethical violations, including human rights violations, by phone or email, and all information, including the reporter's identity, is kept strictly confidential. The grievance handling procedure is operated by establishing regulations within the code of conduct, and when a grievance is received, the situation is quickly identified according to the procedure, the cause of the grievance is resolved, and measures are taken to prevent recurrence. From 2021 to the present, there have been no complaints, human rights reports, or violations of laws.

RBA third-party verification certificates


Responsible Business Alliance
Advancing Sustainability Globally

Recognition that
HANAMICRON Korea
#77 Yeonamyulgeumro Umbong-Myeon, Asan, Chung-nam, 31413
South Korea

Completed the RBA Validated Audit Process, achieving PLATINUM Status closing all Priority, Major and minor findings, earning a score of 200

Validated Audit Report: VAR-20221130-KR-01B02-1
Audit date: November 30, 2022
Certificate issue date: December 19, 2022
Expiration date: June 15, 2024

Robert F. Lederer
CEO, RBA


Responsible Business Alliance
Advancing Sustainability Globally

Recognition that
Hana Micron Vina
A part of Lot CN5G-02, Van Trung IZ, Van Trung Commune, Viet Yen, Bac Giang, 26180, Vietnam

Completed the RBA Validated Audit Process, achieving SILVER Status without any priority findings, earning a score of 186.4

Validated Audit Report: VAR-20221226-VN-01B02-2
Audit date: December 26, 2022
Certificate issue date: January 19, 2023
Expiration date: August 26, 2024

Robert F. Lederer
CEO, RBA

Culture of Communication and Collaboration

Diversity and Inclusion of Employees

In accordance with the RBA Code of Conduct, HANA Micron prohibits discrimination against race, gender, age, disability, etc., in recruitment and employment activities such as promotion, wages, and compensation. We also strive to respect diversity and increase inclusiveness, including balancing the gender ratio and recruiting socially underprivileged people.

We operate a rest area for female employees and various family-friendly systems to help employees who are pregnant, giving birth, and raising children at the same time achieve a balance between work and home. In addition, in connection with the Cheonan Asan Customized Training Center of the Korea Employment Agency for the Disabled, we provide industrial safety, semiconductor sign language terminology, and job experience training for the hearing impaired. We publish our sign language book, which includes semiconductor terminology, and we support employees in performing their work smoothly through sign language learning and communication using LED displays. Beyond providing jobs, HANA Micron will continue to strive to create an employment and work environment where people with disabilities are not discriminated against.

Work-Life Balance

Through various welfare and benefits systems, HANA Micron improves employees' quality of life and increases work satisfaction and engagement.

Childcare Support

HANA Micron operates a short-time work system during pregnancy and childcare. We create new parking areas for pregnant women, support daycare fees, pay congratulatory money for the birth and entrance of children, and support high school and university tuition. Additionally, every Thursday is designated as Family Day, allowing employees to leave work early without working overtime.

Health Support

HANA Micron supports regular health checkups for employees and their spouses every year. We also provide support for medical expenses due to illness and accidents, and we operate a healthcare center staffed by company nurses to ensure that employees receive the necessary medications and treatments.

Leisure Life Support

HANA Micron operates various support systems to help employees have refreshment time. Employees can use Sono Resort and Hanwha Resort at corporate membership prices. As members of the Wellness Club, we support various exercise and leisure facilities such as health, swimming, golf, and spa at low prices.

A sign language book used in the semiconductor field

Communication using LED electronic signs

Safety and Health

Strengthening Safety and Health Leadership

Safety and Health Management Policy

HANA Micron establishes principles and standards for safety and health and promotes continuous safety and health promotion activities to create a workplace where employees are happy and safe. We establish a mid-to-long-term safety and health roadmap and critical implementation plans and actively invest human and material resources.

HANA Micron places safety and health as the top management value. It has established and declared a safety and health management policy to create a happy and safe workplace for all employees.

1. We fulfill our social responsibilities by strictly complying with safety and health laws and related regulations.
2. We create a safe working environment by continuously discovering and improving harmful risk factors.
3. We continue conducting safety education and promotional activities to raise awareness and spread safety culture.
4. We prevent accidents by establishing a voluntary safety and health management system in which all employees participate.
5. We regularly evaluate and improve our safety and health management system to ensure efficient implementation.

Establishment of Safety and Health Goals

HANA Micron has established a mid-to-long-term roadmap for an autonomous safety and health management system. In 2023, we plan to improve from a management level dependent on others that comply with safety standards according to the presented standards. In 2024, we plan to improve to a level of personal development management that improves on-site deficiencies and complies with safety. In 2030, we plan to create a voluntary safety culture based on collaboration between colleagues and departments.

Reinforced Safety and Health Organization

HANA Micron's board of directors inspects and supervises major performance of the safety and health system operation plan and implementation status once a year. Under the general manager for safety and health, safety managers, health managers, and personnel dedicated to safety and health establish safety and health goals and action plans for each workplace and hold monthly meetings to discuss safety and health-related issues and risks. In addition, to improve the capabilities of management and supervisors, we conduct diagnosis and training on process safety and health operation levels, establish safety and health KPIs, and reflect performance in executive performance evaluations to promote active safety improvement activities among employees.

Safety and health goals

Mid-to-long term goals

Establish an autonomous safety and health management system

Implementation strategies and measures

2030

Mutually cooperative
Create a voluntary safety culture through collaboration between colleagues and departments

- Identify and improve workers' risky behavior through work method analysis
- Safety and health campaigns for each department
- Operate a smart safety management control room
- Upgrade the industrial safety and health management system

2024 ~ 2025

Personal development
Self-improve on-site shortcomings and comply with safety standards

2025
- Safety mentoring (safety managers ↔ on-site managers ↔ workers)
- Systematize the line EHS by operating safety management experts
- Introduce smart safety management protective equipment
- Spread a field-centered autonomous safety culture

2024
- Develop and implement emergency training scenarios that apply to real-life situations
- Establish/implement reward guidelines for excellent departments
- Improve the equipment purchasing process
- Strengthen the capabilities of supervisors and partners

2023

Dependent on others
Comply with safety according to presented standards

Safety and Health

Safety and Health Activities

Safety and Health Management

HANA Micron conducts on-site inspection activities by the CEO every month to manage workplace safety and health. It also operates a regular inspection system, including regular safety inspections, frequent inspections, and departmental inspections, to eliminate factors that violate laws and dangerous work. In addition, to prevent occupational diseases, we measure the work environment for harmful factors, measure noise, and conduct health checkups for employees. We also continuously provide customized health counseling to those with health conditions.

Safety and Health Education and Training

HANA Micron uses an online education platform so employees can easily and conveniently take safety and health training. Regular safety training is conducted every quarter, and we strive to provide more effective training by operating safety training programs appropriate for the target audience and job, such as special safety training, training for new employees, and training for supervisors.
We conduct fire, environmental, and serious accident drills to minimize damage through rapid response in the event of an emergency. We also conduct training by creating scenarios for various serious accidents and environmental accidents and analyze and improve any deficiencies after training.

Expansion of Safety and Health Investments

We continue to expand investments in safety and health to strengthen our safety and health management system. We plan to invest in facility safety inspections and renovations, train safety personnel, provide protective gear and health checkups, and expand the budget to support the safety management capabilities of our partners.

Partners' Safety Management

To improve the safety management level of our partners, we provide safety training and discuss safety and health issues through monthly council meetings. In particular, the companies subject to qualification screening have been expanded to include contractors, construction companies that visit more than 60 days a year, and companies that supply/work with hazardous substances. When selecting partners, contractors, construction companies, etc., we have established internal regulations to evaluate qualified suppliers and a system for regular evaluation and management. We comply with the provisions of the Serious Accident Punishment Act by establishing and implementing procedures and standards for determining eligibility according to each company's safety and health management capabilities.

Investment in safety and health

KRW **998** million
2024 plan

KRW **878** million
2023

KRW **726** million
2022

Total hours in safety and health training

Business sites in Korea (2023)

30,794 hours

Overseas business sites (2023)

38,119 hours

Safety and Health

Safety and Health Activities

Prevention of Serious Accidents

To respond to laws and regulations such as the Serious Accident Punishment Act, HANA Micron evaluates the level of implementation semiannually and carries out improvement activities for deficiencies. The data obtained by conducting workplace safety inspections is managed in an EHS system developed in-house in 2023, and based on this, a self-discipline prevention system that induces voluntary improvement is established and operated.

Spreading Safety and Health Culture

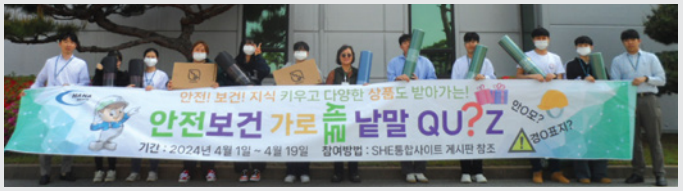
HANA Micron conducts various campaigns to raise safety awareness among employees and prevent safety accidents that may occur in the workplace. We have set up a "Listen to Employees' Opinions" channel where employees can directly find risk factors and make suggestions, and we reward excellent agenda items every quarter. In addition, we held a safety and health word quiz event as an activity to look up terms of the Occupational Safety and Health Act and safety accident cases. In addition, we strive to spread and establish a safety culture by participating in safety and health video contests, traffic safety campaigns, and safety campaigns to prevent accidents in the winter.

Certification of Safety and Health Management System (ISO 45001)

HANA Micron has acquired the safety and health management system (ISO 45001) certification, an international standard, and established and operates a safety and health management system based on this. Two manufacturing plants in Korea (Asan plant and Pangyo) and Vietnam have acquired safety and health management system certification, and the Brazilian manufacturing plant is also planning to obtain safety certification in the future.

Compliance with Safety and Health Laws and Regulations

HANA Micron conducts quarterly evaluations of compliance with safety and health laws and regulations across each process and business site. It thoroughly complies with safety and health laws and regulations by eliminating factors that violate the law through on-site safety inspections. Over the past three years, there have been no serious accidents or violations of safety and health regulations at any of our subsidiaries located in Korea, Vietnam, or Brazil.



Safety and Health Word Quiz

Winner of the Safety and Health Video Contest

Winter Safety Campaign

Sustainable Supply Chain Management

Supply Chain Management Policy

HANA Micron has established supply chain policy management standards and procedures to check compliance with the HANA Micron Partner Code of Conduct and RBA Code of Conduct, as well as matters related to partner companies' social responsibility. We plan to inspect and continuously improve the entire supply chain to ensure that our partners operate in accordance with the HANA Micron Code of Conduct for Partners.

Compliance of Code of Conduct for Partners

HANA Micron distributes the HANA Micron Code of Conduct for Partners to its partners and provides guidance on compliance with the RBA Code of Conduct, requiring them to practice compliance. Suppliers must complete and submit a pledge to comply with the HANA Micron Supply Chain Code of Conduct. The HANA Micron Code of Conduct for Partners is based on the RBA Code of Conduct and applies to all types of organizations that design, sell, manufacture, or provide parts and services used to produce HANA Micron products. The Code of Conduct for Partners comprises 35 items in 5 sectors : labor, safety and health, environmental protection, ethical management, and management system.

Evaluation of Partners

In accordance with supply chain policy management regulations, HANA Micron selects major partners among in-house partners and primary partners that supply raw materials and facilities and conducts a supply chain review once a year. The supply chain review items consist of items regarding compliance with the HANA Micron Code of Conduct for Partners and RBA Code, and a correction plan is established and executed within the deadline according to the level of nonconformity due to the review. The contract may be terminated unless action is taken within the specified deadline. Our partners are expected to cooperate when HANA Micron conducts due diligence and requests for data to assess compliance with the Code of Conduct.

Additionally, all raw material partners are evaluated once a year based on the supplier evaluation standards. The main evaluation items are quality management, environmental management system, hazardous substance management, material/product management, safety/environment, labor/human rights, etc. The evaluation is conducted based on transaction performance data and data provided by partners, ensuring a fair and transparent process. By varying the purchasing policy depending on the evaluation grade, we seek to improve our capabilities by encouraging partners to establish and implement plans to improve their grades.

Reviews of partners' supply chains

① Labor and human rights
Seven items, including voluntary work, youth work, and working hours

② Safety and health
Seven items, including industrial safety, emergency response, and industrial accidents

③ Environment
Eight items, including environmental permits and reporting, pollution prevention/resource reduction

④ Ethics
Eight items, including anti-corruption/business integrity and prohibition of unfair profits

⑤ Management system
Twelve items, including management engagement, management duties/responsibilities, legal and customer requirements

Sustainable Supply Chain Management

Partner Risk Management

Environmental Safety Risk Management for Partners

HANA Micron constructs a business council for in-house partners and holds monthly meetings to discuss environmental and safety-related status and issues. We discuss topics such as education on the Occupational Safety and Health Act, joint safety inspections, establishment of safety and health management plans, risk assessments, and improvement of emergency response systems. We also support items requiring improvement and carry out various activities to establish our partners' safety and health management systems and strengthen their safety management capabilities, including participating in system emergency training and distributing protective gear.

Quality Risk Management for Partners

HANA Micron conducts quarterly quality meetings with partners. We discuss progress in technology development according to the technology roadmap, quality issues, and improvement plans. By setting quality KPIs, we check the level of achievement, discuss and support difficulties, and ultimately expect effects such as improving quality defects and productivity.

Joint safety inspection with partners

Sustainable Supply Chain Management

Responsible Minerals

HANA Micron is seriously aware of human rights violations and environmental destruction caused by mineral mining in conflict and high-risk areas and strives to protect workers' health, human rights, and the environment. To implement a responsible mineral purchasing policy, HANA Micron has established a conflict minerals management standard and complies with and implements this policy.

Responsible Mineral Management Process

HANA Micron's quality department establishes a response strategy through analysis of domestic and international conflict mineral trends and supervises and manages the conflict mineral management system. We receive BOMs from the technology and sales groups, prepare conflict mineral reports, and continuously check risks. Through CMRT (Conflict Minerals Reporting Template) and EMRT (Extended Minerals Reporting Template) for supplier information collection provided by RMI (Responsible Mineral Initiative), we track information on mineral origins, smelters and refineries for tin, tantalum, tungsten, gold and cobalt. If the use of tantalum, gold, tin, or tungsten from a smelter in the Democratic Republic of the Congo or an adjacent country (e.g., Democratic Republic of Congo, Congo, Sudan, Rwanda, Uganda, Zambia, Angola, Tanzania, Central African Republic, Burundi) is confirmed in the supplied parts, or if the source is unclear, the partner company is required to submit a plan for phase-out of the materials in question.

We conduct surveys on the use of conflict minerals regularly, once a year, and regularly when a customer requests or when developing a new product. Based on the conflict mineral reports (CMRT, EMRT) submitted by partners, as soon as the use of conflict minerals regulated smelters is confirmed, we receive a ban on the receipt of the material and a plan for total disposal or replacement of materials from other companies. To ensure all partners can thoroughly manage conflict minerals, we listen to their difficulties and improve related risks by explaining the conflict mineral management process.

Responsible Mineral Management by Overseas Subsidiaries

HT Micron and HANA Electronics, two Brazilian subsidiaries, and HANA Micron Vietnam and HANA Micron Vina, two Vietnamese subsidiaries, also track and manage the origin of conflict minerals under conflict mineral management standards. We receive and inspect CMRT and EMRT provided by RMI from our partners to check whether tantalum, tin, tungsten, and gold collected from conflict areas are used in supplied parts and take immediate action when the use of conflict minerals regulated smelters is confirmed. In the future, we will strive to fulfill our social responsibilities in line with the standards required by the international community through activities to raise overall awareness of conflict minerals management, including with our partners.

Social Contribution

Local Talent Development

HANA Micron signed business agreements with Korea University of Technology and Education, Korea National University of Transportation, and Pyeongtaek University to foster human resources in the semiconductor back-end process field in the Chungcheong region and contributes to job creation and industry revitalization by recruiting excellent talent in the area. We signed an agreement with the Korea University of Technology and Education and the Korea National University of Transportation in November 2023 and plan to develop and operate a curriculum, donate major semiconductor packaging equipment, operate internships, and support employment-linked programs to foster professionals in the semiconductor back-end process field. In addition, we signed a joint operation agreement with Pyeongtaek University and the Semiconductor Display Equipment Management Contract Department and strive to foster excellent talent in the semiconductor industry. Moreover, we are currently pursuing industry-academic cooperation with Woosong University and Korea Polytechnic University Asan Campus.

Local talent development

Environmental Protection

HANA Micron, led by the Hana Volunteer Group, is promoting the 'One River for One Company, One Mountain for One Company Movement' to restore the ecosystem and preserve water quality in rivers and Yeonam Mountain around the business site. In addition, we regularly conduct 'Environmental Cleanup Campaigns' to protect the environment and create a pleasant atmosphere by keeping our workplace and surrounding environment clean.

Environmental cleanup campaign

Coexistence with the Local Community

Hana Volunteer Group

HANA Micron accumulates volunteer funds through employees' voluntary donations, and donations are used to fund volunteer activities such as donations to the underprivileged in the community, the supply of goods, and kimchi-making events. The Hana Volunteer Group visits welfare facilities to donate talent and volunteer work and leads kimchi-sharing events and blood donation campaigns to create a society where people live together.

Hana Volunteer Group

Social Contribution

Global Social Contribution

HANA Micron's overseas production subsidiaries also strive to fulfill their social responsibilities by discovering various social contribution activities tailored to local characteristics and needs.

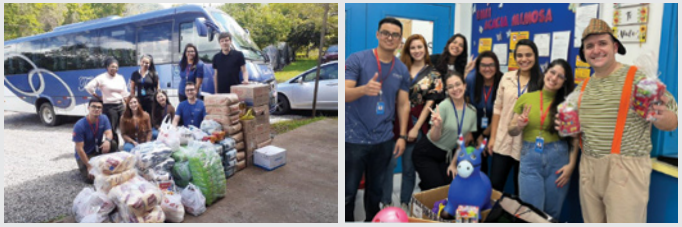
HANA Micron Vina

HANA Micron Vina provided scholarships to underprivileged students at elementary and high schools in Bac Giang, Vietnam, and attended the Kocham Vietnam CSR event to provide scholarships to college students from underprivileged backgrounds. In addition, we visited social protection facilities such as disabled protection centers and orphanages in Bac Giang to deliver gifts and carry out cleaning volunteer work. We also supported repairs to old houses for vulnerable local groups. In addition, we contribute to creating a warm society by practicing hope and sharing in the local community, such as donating support funds to the victims of the apartment fire incident in Bac Giang in September 2023.

HANA Micron Vina

HT Micron

HT Micron strives to change local communities' lives and the surrounding environment by conducting various activities with NGOs, local governments, and educational institutions. We participated in a solidarity campaign for residents affected by heavy rains in the Taquari Valley, collected donations, and received donations of items such as food, furniture, and tableware and delivered them to the affected families. In addition, we donated snacks and toys to local school students through the Children's Day donation campaign and participated in the Christmas campaign, delivering Christmas cards and gifts to children and creating memorable moments.



HT Micron

HANA Electronics

Hana Electronics delivered personal hygiene kits to improve the sanitary environment at obstetrics and gynecology hospitals in the Manaus region, helping manage hygiene for mothers and newborns. In addition, as a Christmas campaign, we are sharing our warm hearts with vulnerable people in the area by visiting the SOS Children's Village in Manaus and delivering panettone, a Christmas food.

HANA Electronics

Governance

43 Responsible Management of the Board of Directors

46 Ethics and Compliance Management

48 Enterprise Risk Management

In April 2024,

The ESG Committee launched

Organized around management for prompt and realistic supervision

Number of employees who have completed fair trade and anti-corruption training

57 people (2023)

Conducted annually, focusing on those involved, from 2022 onwards

Common Criteria

Acquisition of CC certification (2022)

Certification for product security, safe development environment, and safe development process

Responsible Management of the Board of Directors

HANA Micron seeks to establish a sound and transparent governance structure to create sustainable corporate value and build trust with stakeholders. As the company's highest decision-making body, the Board of Directors drives sustainable management based on expert knowledge and rational decision-making and strives to protect the rights and interests of various stakeholders.

Composition

HANA Micron's Board of Directors consists of three inside directors and one outside director appointed at the general shareholders' meeting by the Articles of Incorporation and related laws. Over half (75%) of internal directors with expertise in the semiconductor industry are appointed, and outside directors are appointed at the general shareholders' meeting on the recommendation of the Board of Directors from among candidates who meet the outside director qualifications outlined in relevant laws. To ensure the expertise and diversity of the Board of Directors, there is no discrimination or restriction in the selection and evaluation of directors based on age, gender, educational level, or region of origin.

Independence and Expertise

In accordance with the company's articles of incorporation, HANA Micron prevents directors with a special interest in the agenda from exercising their voting rights, thereby creating a foundation for the board of directors' independent judgment. Outside directors do not have a special relationship with major shareholders, management, or affiliates and are appointed as experts with extensive academic and industry experience. All directors comply with commercial laws, antitrust regulations, and fair trade laws to prevent conflicts of interest with the company. In order to improve the expertise and efficiency of outside directors in carrying out their duties, we provide materials in advance before the board of directors' meetings are held, hold briefing sessions when necessary, and provide information on major issues on a regular basis.

(As of March 31, 2024)

Type	Name	Gender	Position	Major career and positions	Area of expertise	Transactions with companies
Internal director	Lee Dong-cheol	Male	CEO, Chairman of the Board	Head of Business Division at Samsung Semiconductor in Japan (Executive Director) Current) CEO and President of Hana Micron	General operations (technology, management)	None
	Kim Dong Hyun	Male	COO	Ph.D. in Electrical Engineering, Stanford University Current) Vice President of Hana Micron	Technology	None
	Park Sang-muk	Male	Business management	Current) Executive Director, Business Management Team Leader, Hana Micron	Finance	None
Outside director	Jeong Seung-bu	Male	Outside director	President, Korea Microelectronics and Packaging Society Current) Professor, Department of Materials Science and Engineering, Sungkyunkwan University	Technology (semiconductor)	None

HANA Micron's Board of Directors drives sustainable management based on expert knowledge and rational decision-making and strives to protect the rights and interests of various stakeholders.

Responsible Management of the Board of Directors

Evaluation and Compensation

Executive directors conduct regular evaluations within the company, and outside directors, comprised of industry experts, conduct comprehensive internal assessments on whether they provide appropriate advice and proactiveness on significant management decisions. The re-appointment decision after the three-year term comprehensively reflects the evaluation results. Regarding the remuneration of registered directors, the company pays the base salary, holiday bonus, and performance bonus according to the company's management performance, which is decided in the delegation agreement by comprehensively considering the rank, delegated duties, and years of service based on the executive remuneration table. The compensation payment limit is determined through approval at the general shareholders' meeting to strengthen compensation transparency and meet the legitimacy requirements, and severance pay is paid in accordance with the executive severance pay payment regulations resolved at the general shareholders' meeting. The approved remuneration limit and payment status are transparently disclosed in the business report. The annual director remuneration limit of 4.5 billion won (including audit) was approved at the 2023 general shareholders' meeting. Outside directors are paid within the director remuneration limit agreed upon at the general shareholders' meeting, considering the transparency and fairness of their roles.

(In millions of Korean won)

Type	Total remuneration	Average remuneration per person	Number of people
Registered directors	1,751	584	3 people
Outside directors	27	14	2 people
Auditors	102	102	1 people

Operation

The Board of Directors holds regular board meetings every quarter and temporary board meetings when necessary. Agenda items are shared in advance so that they can be thoroughly reviewed. In particular, we promote the company's sustainable growth by deliberating and approving major issues related to the environment and society that are reviewed and submitted to the ESG Committee.

Events	Unit	2021	2022	2023
Number of meetings held	Times	21	25	35
Number of reporting agenda	Cases	4	4	5
Decisions	Cases	26	29	40
Vote in favor	%	100	100	100
Vote against	%	0	0	0

Board of Directors Training

HANA Micron provides training on various topics such as ESG management, cases of disclosure violations by listed companies, and precautions for unfair transactions to support professional capacity building.

* The number of people and total remuneration are the total number and total amount including registered directors, outside directors, and auditors who were in office or retired during the current period.

Operation of the Board of Directors in 2023

Number of board meetings held

35 times

Number of decisions

40 Cases

Number of reports

5 Cases

Director's attendance rate

100 %

Responsible Management of the Board of Directors

Composition of the ESG Committee

In April 2024, HANA Micron expanded and reorganized the Safety and Health Council into an ESG committee. We have expanded our role from the existing safety and health focus to the overall ESG encompassing the environment, human rights, and labor. The ESG Committee is chaired by the head of the management support department and consists of executives from QRA (quality), facility, purchasing, and technology departments. We plan to operate the committee as an organization that can perform a more rapid and realistic supervisory function and introduce an ESG Committee under the Board of Directors in the future.

Roles of the ESG Committee

The ESG Committee serves as a practical control tower for ESG management, managing and supervising ESG strategies, plans, and major activities. We inspect major plans and implementation matters related to safety and health and discuss climate crisis response strategies and implementation plans, human rights risks, etc. The ESG Committee reviews and approves various issues in each ESG sector, and issues that require deliberation and approval by the highest decision-making body are submitted to the board of directors' agenda. The ESG Committee seeks to continuously carry out various activities to manage ESG-related risks, seek opportunities, and achieve sustainable growth. The ESG Committee, which will be held in the future, will discuss the publication of the 2024 Sustainability Report, mid-to-long-term greenhouse gas reduction plan, and quarterly safety and health plans and performance.

Audit

HANA Micron operates a full-time audit system with total assets of less than KRW 2 trillion, and audit work is performed by one full-time auditor appointed by resolution at the general shareholders' meeting by the Articles of Incorporation. To perform audit duties, the articles of incorporation stipulate the authority to access management information necessary for audit work, and the management team assists the auditor in performing his/her duties. In addition, in November 2023, we provided training on major issues related to the capital market for outside directors of listed companies.

We will launch an ESG Committee centered on management and performing a more rapid and realistic supervisory function to manage ESG-related risks, seek opportunities, and ultimately achieve sustainable growth.

Ethics and Compliance Management

Spread of ethical management

Declaration of Ethical Management

HANA Micron has established a declaration of ethical management and conducts business based on the spirit of ethics and compliance.

We pursue a transparent and clean corporate culture by performing our duties in compliance with laws and ethics, establishing a fair trading order, and striving to fulfill our corporate roles and responsibilities.

1. We comply with the laws and customs of the local, national, and international communities based on ethical values in all business activities.
2. We eradicate corruption by establishing a transparent and fair trading order.
3. We strive to make ethical management part of our organizational culture and spread it to our partner companies.
4. We have a dedicated organization for ethical management to establish an implementation system and continuously improve it.
5. We thoroughly protect reporters and encourage anyone to report unethical behaviors.

Unethical Behavior Reporting System

In order to effectively practice ethical management, HANA Micron operates a communication channel so that members and stakeholders can report unethical behavior inside and outside the company.

We employ various reporting methods such as email and phone. The informant protection program thoroughly protects all information received through reporting channels.

Code of Ethics and its Practice Guidelines

HANA Micron declares ethical management and establishes a code of ethics so all employees use it as a standard for decision-making and business activities. To implement ethical management, we have prepared separate practice guidelines for the code of ethics and established judgment standards for ethical conflict situations in performing duties so that employees can adequately understand and practice the code of ethics.

Prevention of Unethical Behaviors

HANA Micron provides ethics training at least once a year to encourage ethical awareness among all employees and encourage them to practice ethical management voluntarily and willingly. We also support internalizing the code of ethics by complying with it and pledging to practice it. We help employees practice ethical management by allowing them to receive consultation from the ethical management department for questions related to the code of ethics and code of ethics practice guidelines. There have been no reports or violations of the code of conduct pertaining to ethical management from 2021.

HANA Micron is committed to complying with critical aspects of the RBA (Responsible Business Alliance) Code of Conduct. We promise to abide by all business laws and regulations and make continuous improvements through monitoring and inspection.

Ethics and Compliance Management

Voluntary Fair Trade Compliance

Declaration of Fair Trade Compliance

In order to promote fair and transparent management, HANA Micron declares voluntary compliance with fair trade, posts it on its website, disseminates it to all employees, and discloses it to external stakeholders.

To establish a fair trade order in the semiconductor industry, HANA Micron declares that it will voluntarily comply with all domestic and international fair trade laws and regulations and strive to practice fair and free competition.

1. The company recognizes that the voluntary practice of fair trade is its true competitiveness and considers this the highest value of corporate management.
2. The company does not engage in unfair practices to establish a fair trade order in all fields and regions and consults with its partners from a partnership perspective.
3. The company continuously trains all employees to comply with fair trade laws.
4. The company operates a self-compliance system, strives to prevent violations, detects violations, and imposes sanctions on itself.

Partners' Compliance with Fair Trade and Anti-corruption

HANA Micron strives to ensure that its employees and partners continue to engage in transparent and fair transactions by including fair competition and transactions, improper solicitation, and bribery in its code of ethics and its practice guidelines. We ask partners to sign a code of conduct and evaluate partners to check anti-corruption risks.

Compliance Support Organization

HANA Micron does not have a compliance support officer. Nonetheless, the legal department within the strategic planning team integrates legal risks and supports HANA Micron's compliance management and ethical management activities. In order to ensure that the company complies with laws and conducts appropriate company management in the future, we plan to establish compliance control regulations and policies, including standards and procedures for compliance control, that executives and employees must follow when performing their duties. As of 2021, there have been no violations of the law.

Completion rate of ethics education

100%

Number of people who completed fair trade and anti-corruption training

57 people

Violations of the code of ethics and laws

0 cases

(Business sites in Korea, 2023)

Enterprise Risk Management

Risk Management System

Risk Management Strategy

HANA Micron operates an enterprise risk management system that identifies risks, analyzes their impact, and effectively establishes response plans to respond to internal and external corporate environment changes. We divide risk management areas into finance, human resources/environment, quality/customer response, manufacturing, technology/intellectual assets, and IT systems, and check risks according to risk stage standards that reflect the characteristics of each sector. In particular, significant issues such as human rights, environment, and safety are reported to the Board of Directors. Additionally, we operate a professional risk management process by utilizing external advisory processes such as outside directors, labor attorneys, lawyers, and safety associations.

Risk Management Response System

In the event of a crisis, HANA Micron forms a Crisis Response Deliberation Committee with the CEO as the crisis management supervisor and the business management team as the crisis management department. The deliberation committee reviews the crisis and determines the direction of crisis response for each sector, and the executing department establishes response plans for each department accordingly. We pursue prompt and transparent disclosure of information to enable quick decision-making by management and prepare emergency plans and response measures to preemptively identify and eliminate risk factors that arise throughout the business.

Risk Management Process

HANA Micron manages risks using the following steps : risk definition, risk assessment, risk response and action, and risk monitoring.

Risk Definition	Analysis of internal and external trends through management indicators, etc. Defining risks by conducting business analysis
Risk Assessment	The risk management department conducts risk assessment and reports the results to the Risk Review Committee.
Risk Response	Implementation of crisis response measures by department in accordance with risk response strategies
Risk Monitoring and Reporting	Management report after taking action on risk Continuous monitoring of internal and external trends

Risk assessment quantifies the risk index according to each sector's risk impact and the difficulty of risk action, determines the risk level into four levels (concern, caution, warning, and serious), and responds by establishing response action guidelines for each level.

Risk Management Governance

Enterprise Risk Management

Management of Major Non-financial and Financial Risks

Non-financial Risks

Management of Safety and Health Risks
We establish and actively implement measures to prevent serious accidents while operating an occupational safety and health committee and a dedicated safety and health organization. In addition, we strengthen the autonomous safety and health system by supporting the improvement of supervisors' capabilities and suppliers' safety and health management levels.

Management of Quality Risks
We strengthen quality control based on ISO 9001 (quality management system), IATF 16949 (automotive quality management system), and ANSI/ESD S20.2 (antistatic) systems, and operate a quality control professional organizational system. We also regularly hold quality reporting meetings and manage quality risks by strengthening quality capabilities such as ESD (electrostatic prevention) and product quality training.

Management of Human Rights Risks
We internalize compliance with HANA Micron's code of ethics and code of conduct, improve employees' human rights awareness by conducting human rights training, and check human rights risks through RBA third-party verification. In addition, we have a human rights violation relief system in place through a grievance reporting system.

Financial Risks

Management of Internal Accounting Risks
We secure the reliability of financial information by operating an internal accounting management system and managing risks that may arise during accounting reporting. The audit evaluates the design and operation status by the best internal accounting management system standards, reports the results to the board of directors and general shareholders' meeting, and discloses them in the business report to stakeholders.

Management of Tax Risks
We manage domestic and international tax risks by identifying differences in tax laws and tax enactment intentions by country and analyzing potential disputes. We strive to comply with domestic and international tax regulations and principles and faithfully fulfill our tax obligations as taxpayers.

Management of Financial Risks
We respond to financial risks by dividing them into foreign exchange, credit, and liquidity risks. Risks due to exchange rate fluctuations are managed within the limits set by the approved policy, and credit risks are identified and managed by each customer's credit rating. Liquidity risk monitors reserves, borrowing limits, and cash flows and establishes a fund management plan by matching the maturity structure of financial assets and financial liabilities.

Rapid internal and external changes in the semiconductor industry's policies, regulations, and economy bring both opportunities and risks to HANA Micron.

We will manage economic, social, and environmental risks that may affect the company in an integrated manner and respond preemptively to ensure stable management activities.

Enterprise Risk Management

Information Protection

Information Protection Policy

HANA Micron establishes management information and technical information protection regulations and, based on those regulations, establishes and implements detailed guidelines such as physical security guidelines, information system operation guidelines, and user management guidelines. Through these activities, we strive to improve the company's information protection level and minimize the occurrence of security incidents. Through personal information protection management regulations, we clarify management and technical measures to protect the personal information of customers and employees and require employees and partners to sign an information protection pledge. As a result, we prevent unauthorized disclosure of information and improve employees' security mindset.

Quarterly Security Inspection and Training

HANA Micron conducts quarterly security inspections to check security levels, identify problems, and improve security awareness. The inspection targets include documentation logs, PC power, and neglected documents. The inspection results are shared throughout the company, and warnings and training are provided to the relevant departments. We strengthen employees' security awareness through quarterly training on security-related announcements, security incident cases, and security inspection results.

Acquisition of the Common Criteria Certificate

HANA Micron has obtained CC (Common Criteria) certification for its semiconductor packaging and testing business. CC certification proves that products intended for supply to national and public institutions meet all security requirements and were produced in a safe development environment and process.

Information Protection Pledge

As the number of cases of unauthorized leakage of technical information the company holds increases, HANA Micron requires its employees and partners to sign a 'Pledge to Protect Trade Secrets, etc.' and a 'Pledge to Protect Personal Information' once a year. This policy prevents the leakage of information assets by ensuring that all employees and partners understand the items that must be implemented for information protection.

Basic Security Compliance

The ten most basic and essential items that employees must have for information protection are designated as the 'Top 10 Security Basics' and posted within the workplace. We encourage all employees to recognize that they are responsible for information protection and to practice it.

Top 10 Security Basics

The 10 most basic and necessary items to protect the company's information are called the "Top 10 Security Basics". These are the essential virtues that all employees must adhere to in relation to security.

1. Always wear your employee ID card within the workplace and do not lend or transfer it.
2. When creating documents, classify and mark the security level.
3. Do not leave important documents unattended in the office during non-working hours.
4. When disposing of confidential documents, shred or dispose of them separately from regular tissues.
5. Lock the storage boxes of important documents and important information assets.
6. Install three PC passwords (booting, screen saver, and shared files).
7. Install a computer antivirus and update to the latest version.
8. Observe cyber etiquette.
9. Change and manage your password periodically every quarter.
10. Turn off the power When the PC is not in use.

Appendix

52 ESG Data Book

67 GRI Index

71 SASB (Sustainability Accounting Standards Board)

72 Third Party Assurance Report

74 GHG Verification Statement

76 Membership Organization Status

ESG Data Book : Economic Performance

Key Financial Performance

(In millions of Korean won)

Financial data		2021	2022	2023
Statement of financial position (Consolidated)	Total assets	1,051,040	1,409,049	1,725,090
	Total liabilities	602,628	920,833	1,180,703
	Total capital	448,412	488,216	544,387
Statement of financial position (separate)	Total assets	708,106	946,708	983,201
	Total liabilities	374,974	588,850	610,131
	Total capital	333,132	357,858	373,070
Income statement (consolidated)	Sales	669,512	894,396	967,971
	Operating profit	104,939	103,548	57,905
	Net Profit	67,158	58,231	963
Income statement (separate)	Sales	368,189	608,137	581,861
	Operating profit	29,103	52,170	16,673
	Net profit (loss)	21,705	16,538	(42,987)

Distribution of Economic Value (Consolidated)

(In millions of Korean won)

Financial data	2021	2022	2023
Total dividends (shareholders and investors)	-	2,396	2,399
Salaries (employees)	107,198	137,401	134,659
Corporate tax (government)	24,163	32,430	13,016
Donations* (community)	13	30	10

*Parent company only

Investment in Research and Development (Consolidated)

(In millions of Korean won)

Financial data	2021	2022	2023
Total R&D cost	20,179	31,877	30,099
R&D cost/sales ratio	3.01%	3.56%	3.11%
Number of IP rights held, including patents	160 cases	160 cases	170 cases

Sales of major overseas subsidiaries

(In millions of Korean won)

Subsidiaries	Location	2021	2022	2023
HANA Micron Vietnam Co., Ltd.	Vietnam	23,024	24,231	27,765
HANA Micron Vina Co., Ltd.	Vietnam	21,614	22,741	337,470
HT Micron Semicondutores S.A.	Brazil	113,045	207,603	97,858
HANA Electronics Industria E Comericio Ltda.	Brazil	5,455	59,987	69,658

Sales by region

(In millions of Korean won)

Region	2021	2022	2023
Korea	480,483	597,084	772,979
Brazil	118,500	233,471	124,921
Vietnam	44,638	12,345	12,340
USA	2,263	16,500	9,396
Others	23,629	34,995	48,336
Sum	669,512	894,396	967,971

Ownership

(As of the end of 2023)

Shareholders		Number of shares owned	Stake
Major shareholders and related entities	Choi Chang-ho and 8 others	8,688,713 shares	18.11%
	Hana Materials Co., Ltd.	4,744,083 shares	9.89%
	Subtotal	13,432,796 shares	28.00%

ESG Data Book : Environmental Performance

Energy Consumption

HANA Micron	Unit	2021	2022	2023
Total energy consumption[1-2)]	TJ	693	830	796[3)]
Intensity	TJ/KRW 100 million	0.188	0.136	0.137
Direct energy consumption	TJ	32.4	34.6	31.4
City gas (LNG)	TJ	28.4	30.7	27.5
Gasoline	TJ	1.2	1.1	1.2
Diesel	TJ	2.8	2.8	2.8
Indirect energy consumption	TJ	661	796	763
Power	TJ	658	793	760
Steam	TJ	3.2	3.1	3.3
Renewable energy consumption	TJ	-	-	2.1

1) Total energy consumption : sum of the head office and Pangyo (Pangyo was added from 2021)
2) Calculation basis and scope : Guidelines on Emissions Reporting and Certification of the Greenhouse Gas Emissions Trading System (Notice No. 2023-221, Ministry of Environment)
3) Including renewable energy

HANA WLS[1)]	Unit	2021	2022	2023
Total energy consumption[2)]	TJ	20.6	23.7	15.2
Intensity	TJ/KRW 100 million	0.283	0.792	0.391
Direct energy consumption	TJ	0.211	0.222	0.202
Gasoline	TJ	0.211	0.222	0.202
Indirect energy consumption	TJ	20.4	23.5	15.0
Power	TJ	20.4	23.5	15.0

1) Business sites excluded from verification for energy consumption and greenhouse gas emissions
2) Calculation basis and scope : Guidelines on Emissions Reporting and Certification of the Greenhouse Gas Emissions Trading System (Notice No. 2023-221, Ministry of Environment)

HANA Micron Vietnam	Unit	2021	2022	2023
Total energy consumption[1)]	TJ	29.1	25.9	37.0
Intensity	TJ/KRW 100 million	0.127	0.107	0.133
Direct energy consumption	TJ	0.639	0.593	0.638
Gasoline	TJ	-	-	0.001
Diesel	TJ	0.639	0.593	0.637
Indirect energy consumption	TJ	28.5	25.3	36.5
Power	TJ	28.5	25.3	36.5

1) Total energy consumption : The domestic standard for calorific value by fuel is applied; 3.6 MJ/kWh is applied for electricity.

HANA Micron Vina	Unit	2021	2022	2023[2)]
Total energy consumption[1)]	TJ	49.1	109	380
Intensity	TJ/KRW 100 million	0.227	0.477	0.113
Direct energy consumption	TJ	1.3	2.2	5.0
LPG	TJ	1.3	2.2	5.0
Gasoline	TJ	-	-	0.0011
Diesel	TJ	-	0.0426	0.0181
Indirect energy consumption	TJ	47.8	106	375
Power	TJ	47.8	106	375

1) Total energy consumption : The domestic standard for calorific value by fuel is applied; 3.6 MJ/kWh is applied for electricity.
2) The rapid increase in energy consumption in 2023 is due to the construction of new factories.

ESG Data Book : Environmental Performance

Energy Consumption

HT Micron	Unit	2021	2022	2023
Total energy consumption[1-2)]	TJ	64.3	65.6	69.7
Intensity	TJ/KRW 100 million	0.0569	0.0316	0.0712
Direct energy consumption	TJ	20.5	21.2	22.7
Natural gas	TJ	20.5	20.6	21.6
LPG	TJ		0.013	0.012
Gasoline	TJ		0.54	1.06
Diesel	TJ		0.023	0.018
Indirect energy consumption	TJ	43.8	44.4	47.0
Power	TJ	43.8	44.4	47.0

1) Total energy consumption : The domestic standard for calorific value by fuel is applied; 3.6 MJ/kWh is applied for electricity.
2) Some missing data were excluded in 2021.

HANA Electronics	Unit	2021	2022	2023
Total energy consumption[1-2)]	TJ		3.13	5.12
Intensity	TJ/KRW 100 million		0.005	0.007
Direct energy consumption	TJ		0.174	0.643
LPG	TJ			0.289
Gasoline	TJ		0.174	0.347
Diesel	TJ			0.007
Indirect energy consumption	TJ		2.96	4.48
Power	TJ		2.96	4.48

1) Total energy consumption : The domestic standard for calorific value by fuel is applied; 3.6 MJ/kWh is applied for electricity.
2) Some missing data were excluded in 2021 and 2022.

ESG Data Book : Environmental Performance

Greenhouse Gas Emissions

HANA Micron	Unit	2021	2022	2023
Greenhouse gas emissions[1~2)]	tCO_2-eq	33,359	39,899	38,134
Direct emissions	tCO_2-eq	1,720	1,831	1,668
Indirect emissions	tCO_2-eq	31,639	38,068	36,465
Intensity	tCO_2-eq/KRW 100 million	9.06	6.56	6.55

1) Greenhouse gas emissions : sum of the head office and Pangyo (Pangyo was added from 2021)
2) Calculation basis and scope : Guidelines on Emissions Reporting and Certification of the Greenhouse Gas Emissions Trading System (Notice No. 2023-221, Ministry of Environment)

HANA WLS[1)]	Unit	2021	2022	2023
Greenhouse gas emissions[2)]	tCO_2-eq	989	1,141	732
Direct emissions	tCO_2-eq	14.2	15.0	13.6
Indirect emissions	tCO_2-eq	975	1,126	719
Intensity	tCO_2-eq/KRW 100 million	13.6	38.1	18.8

1) Business sites excluded from verification for energy consumption and greenhouse gas emissions
2) Calculation basis and scope : Guidelines on Emissions Reporting and Certification of the Greenhouse Gas Emissions Trading System (Notice No. 2023-221, Ministry of Environment)

HANA Micron Vietnam	Unit	2021	2022	2023
Greenhouse gas emissions	tCO_2-eq	5,401	4,800	6,904
Direct emissions	tCO_2-eq	44.8	41.6	44.8
Indirect emissions[1)]	tCO_2-eq	5,356	4,758	6,859
Intensity	tCO_2-eq/KRW 100 million	23.5	19.8	24.9

1) Indirect emissions : Applied with the 2022 standard electricity emission factor announced by Vietnam's Ministry of Resources and Environment in March 2024

HANA Micron Vina	Unit	2021	2022	2023[2)]
Greenhouse gas emissions	tCO_2-eq	9,061	20,108	70,823
Direct emissions	tCO_2-eq	72.9	130	288
Indirect emissions[1)]	tCO_2-eq	8,988	19,978	70,535
Intensity	tCO_2-eq/KRW 100 million	41.9	88.4	21.0

1) Indirect emissions : Applied with the 2022 standard electricity emission factor announced by Vietnam's Ministry of Resources and Environment in March 2024
2) The rapid increase in greenhouse gas emissions in 2023 is due to the construction of new factories.

HT Micron	Unit	2021	2022	2023
Greenhouse gas emissions	tCO_2-eq	2,576	1,611	1,670
Direct emissions	tCO_2-eq	1,039	1,085	1,167
Indirect emissions[1)]	tCO_2-eq	1,537	526	503
Intensity	tCO_2-eq/KRW 100 million	2.28	0.78	1.71

1) Indirect emissions : Applied with the annual electricity emission factor announced by the Brazilian Ministry of Science, Technology and Innovation in February 2024

HANA Electronics	Unit	2021[2)]	2022	2023
Greenhouse gas emissions	tCO_2-eq		46.7	88.5
Direct emissions	tCO_2-eq		11.7	40.6
Indirect emissions[1)]	tCO_2-eq		35.0	47.9
Intensity	tCO_2-eq/KRW 100 million		0.078	0.13

1) Indirect emissions : Applied with the annual electricity emission factor announced by the Brazilian Ministry of Science, Technology and Innovation in February 2024
2) Not reported in 2021 (unavailable data)

ESG Data Book : Environmental Performance

Water Consumption[1)]

HANA Micron	Unit	2021	2022	2023
Total water intake	m^3	606,464	519,910	490,567
Household	m^3	45,851	23,320	20,766
Industrial	m^3	560,613	496,590	469,801
Intensity (total)	m^3/KRW 100 million	165	85.5	84.3
Amount of water recycled	m^3	148,045	234,948	189,758
Amount of wastewater discharged	m^3	465,375	340,293	348,447
Water recycling rate	%	19.6	31.1	27.9

1) 2021 and 2022 data were revised due to changes in calculation standards.

HANA WLS	Unit	2021	2022	2023
Total water intake	m^3	26,495	5,172	11,640
Household	m^3	956	942	1,391
Industrial	m^3	25,539	4,230	10,239
Intensity	m^3/KRW 100 million	364	173	299

HANA Micron Vietnam	Unit	2021	2022	2023
Total water intake	m^3	48,155	42,617	105,191
Intensity	m^3/KRW 100 million	209	176	379

HANA Micron Vina	Unit	2021	2022	2023[1)]
Total water intake	m^3	116,150	164,870	609,970
Household	m^3	29,200	41,518	65,700
Industrial	m^3	86,950	123,352	544,270
Intensity	m^3/KRW 100 million	537	725	181

1) The rapid increase in water intake in 2023 is due to the construction of new factories.

HT Micron	Unit	2021	2022	2023
Total water intake	m^3	38,966	43,001	42,273
Household	m^3	600	1,160	1,240
Industrial	m^3	38,366	41,841	41,033
Intensity	m^3/KRW 100 million	34	21	43

HANA Electronics	Unit	2021	2022	2023
Total water intake[1)]	m^3			492,910
Intensity	m^3			708

1) HANA Electronics began reporting in 2023.

ESG Data Book : Environmental Performance

Waste Generation

HANA Micron	Unit	2021	2022	2023
Amount of waste generated	ton	357	485	340
General waste	ton	351	481	334
Designated waste	ton	6.22	4.85	6.62
Intensity	Ton/KRW 100 million	0.0971	0.0798	0.058
Total amount of waste recycled after discharge	ton	316	312	319
Percentage of waste recycled after discharge	%	88.5	64.3	93.6

HANA WLS	Unit	2021	2022	2023
Amount of waste generated	ton	105	63.1	96.8
General waste	ton	-	-	-
Designated waste	ton	105	63.1	96.8
Intensity	Ton/KRW 100 million	1.45	2.10	2.49
Total amount of waste recycled after discharge	ton	56.6	33.1	59.4
Percentage of waste recycled after discharge	%	53.8	52.5	61.3

HANA Micron Vietnam	Unit	2021	2022	2023
Amount of waste generated[1)]	ton	24.7	24.2	92.9
General waste	ton	24.7	24.2	89.6
Hazardous waste	ton	0.020	-	3.3
Intensity	Ton/KRW 100 million	0.107	0.100	0.335
Total amount of waste recycled after discharge	ton	-	-	-
Percentage of waste recycled after discharge	%	0.00	0.00	0.00

1) The standards for distinguishing between general and hazardous waste follow Vietnamese laws and regulations.

HANA Micron Vina	Unit	2021	2022	2023[2)]
Amount of waste generated[1)]	ton	111	183	659
General waste	ton	110	180	652
Hazardous waste	ton	1.0	3.1	7.1
Intensity	Ton/KRW 100 million	0.514	0.805	0.195
Total amount of waste recycled after discharge	ton	4.6	147	270
Percentage of waste recycled after discharge	%	4.1	54.8	41.0

1) The standards for distinguishing between general and hazardous waste follow Vietnamese laws and regulations.
2) The rapid increase in waste generation in 2023 is due to the construction of new factories.

HT Micron	Unit	2021	2022	2023
Amount of waste generated[1~2)]	ton		71.9	84.5
General waste	ton		63.2	76.3
Hazardous waste	ton		8.7	8.2
Intensity	Ton/KRW 100 million		0.0346	0.0863
Total amount of waste recycled after discharge	ton			11.9
Percentage of waste recycled after discharge	%			14.1

1) The standards for distinguishing between general and hazardous waste follow relevant Brazilian laws and regulations.
2) Not reported by HT Micron in 2021 and 2022 (unavailable data)

HANA Electronics	Unit	2021	2022	2023
Amount of waste generated[1)]	ton	4.53	16.8	30.9
General waste	ton	4.5	15.9	29.2
Hazardous waste	ton	0.00	0.91	1.69
Intensity	Ton/KRW 100 million	0.0831	0.0281	0.0443
Total amount of waste recycled after discharge	ton	0.4	5.8	18.7
Percentage of waste recycled after discharge	%	8.8	34.7	60.4

1) The standards for distinguishing between general and hazardous waste follow relevant Brazilian laws and regulations.

ESG Data Book : Environmental Performance

Air Pollutants[1)]

HANA Micron	Items	Unit	2021	2022	2023
Air pollutants (Total)	Emissions	ton	0.45	0.52	0.42
	Intensity	Ton/KRW 100 million	0.000122	0.000086	0.000072
Nitrogen oxides (NOx)	Emissions	ton	0.33	0.46	0.40
	Intensity	Ton/KRW 100 million	0.000090	0.000076	0.000068
Sulfur oxides (SOx)	Emissions	ton	Not detected	0.02	Not detected
	Intensity	Ton/KRW 100 million	Not detected	0.000003	Not detected
Dust	Emissions	ton	0.12	0.03	0.02
	Intensity	Ton/KRW 100 million	0.000033	0.000005	0.000003

HANA WLS	Items	Unit	2021	2022	2023
Air pollutants (Total)	Emissions	ton	0.04	0.09	0.07
	Intensity	Ton/KRW 100 million	0.000499	0.002880	0.001753
Nitrogen oxides (NOx)	Emissions	ton	Not detected	0.06	0.04
	Intensity	Ton/KRW 100 million	Not detected	0.001887	0.000913
Sulfur oxides (SOx)	Emissions	ton	Not detected	Not detected	0.01
	Intensity	Ton/KRW 100 million	Not detected	Not detected	0.000272
Dust	Emissions	ton	0.04	0.03	0.02
	Intensity	Ton/KRW 100 million	0.000499	0.000993	0.000567

1) Emissions from overseas business sites will be calculated and reported later due to incomplete information for calculating air pollutants.

Water Pollutants[2)]

HANA Micron	Items	단위	2021	2022	2023
Water pollutants (total)	Emissions	ton	85.42	43.29	36.39
	Intensity	Ton/KRW 100 million	0.023203	0.007118	0.006255
Biochemical oxygen demand (BOD)	Emissions	ton	27.43	1.69	3.40
	Intensity	Ton/KRW 100 million	0.007450	0.000278	0.000584
Chemical oxygen demand (COD)	Emissions	ton	10.98	4.09	3.97
	Intensity	Ton/KRW 100 million	0.002982	0.000673	0.000682
Suspended solids (SS)	Emissions	ton	46.09	37.01	28.17
	Intensity	Ton/KRW 100 million	0.012518	0.006086	0.004842
Total nitrogen (T-N)	Emissions	ton	0.17	0.45	0.79
	Intensity	Ton/KRW 100 million	0.000046	0.000074	0.000136
Total phosphate (T-P)	Emissions	ton	0.76	0.05	0.06
	Intensity	Ton/KRW 100 million	0.000206	0.000008	0.000011

HANA WLS	Items	Unit	2021	2022	2023
Water pollutants (total)	Emissions	ton	2.20	0.14	0.36
	Intensity	Ton/KRW 100 million	0.030250	0.004642	0.009193
Biochemical oxygen demand (BOD)	Emissions	ton	0.58	0.01	0.05
	Intensity	Ton/KRW 100 million	0.007970	0.000362	0.001329
Chemical oxygen demand (COD)	Emissions	ton	1.52	0.12	0.14
	Intensity	Ton/KRW 100 million	0.020817	0.003897	0.003570
Suspended solids (SS)	Emissions	ton	0.01	0.00	0.13
	Intensity	Ton/KRW 100 million	0.000146	0.000103	0.003286
Total nitrogen (T-N)	Emissions	ton	0.10	0.01	0.04
	Intensity	Ton/KRW 100 million	0.001310	0.000271	0.000986
Total phosphate (T-P)	Emissions	ton	0.00	0.00	0.00
	Intensity	Ton/KRW 100 million	0.000007	0.000008	0.000022

2) Emissions from overseas business sites will be calculated and reported later due to incomplete information for calculating water pollutants.

ESG Data Book : Social Performance

Employees

(Unit : people)

HANA Micron		2021	2022	2023
Total number of employees[1]		836	825	820
Number of executives	Male	13	16	17
	Female	-	-	-
Number of management positions[2]	Male	57	54	56
	Female	13	15	15
Number of employees	Male	403	374	377
	Female	350	366	355
By age	Under 30 years old	414	400	362
	Under 30-50 years old	395	395	409
	Over 50 years old	27	30	49
By type of employment	Indefinite-term workers	836	825	820
	Fixed-term worker	0	0	0

1) Total number of employees : employees at the head office and Pangyo workplace as of the end of the year
2) Number of management positions : including group leaders, part leaders, and foremen

(Unit : people)

HANA WLS		2021	2022	2023
Total number of employees[1]		51	49	67
Number of executives	Male	2	2	3
	Female	0	0	0
Number of management positions[2]	Male	7	6	3
	Female	4	4	3
Number of employees	Male	19	20	35
	Female	19	17	23
By age	Under 30 years old	21	17	29
	Under 30-50 years old	25	27	33
	Over 50 years old	5	5	5
By type of employment	Indefinite-term workers	51	49	67
	Fixed-term worker	0	0	0

1) Total number of employees : As of the end of the year
2) Number of management positions : including group leaders, part leaders, and foremen

HANA Micron Vietnam		2021	2022	2023
Total number of employees[1]		261	219	255
Number of executives	Male	1	1	1
	Female	0	0	0
Number of management positions[2]	Male	6	8	12
	Female	1	5	4
Number of employees	Male	69	62	72
	Female	184	143	166
By age	Under 30 years old	217	166	171
	Under 30-50 years old	43	52	81
	Over 50 years old	1	1	3
By type of employment	Indefinite-term workers	25	87	86
	Fixed-term worker	236	132	169

1) Total number of employees : As of the end of the year
2) Number of management positions : expatriates, Vietnamese employees at manager levels or higher

HANA Micron Vina		2021	2022	2023
Total number of employees[1]		322	1,703	1,844
Number of executives	Male	2	7	7
	Female	0	0	0
Number of management positions[2]	Male	19	144	146
	Female	3	13	9
Number of employees	Male	136	480	638
	Female	162	1,059	1,044
By age	Under 30 years old	246	1,362	1,389
	Under 30-50 years old	72	323	430
	Over 50 years old	4	18	25
By type of employment	Indefinite-term workers	0	0	99
	Fixed-term worker	322	1,703	1,745

1) Total number of employees : As of the end of the year
2) Number of management positions : including group leaders, part leaders, and foremen

ESG Data Book : Social Performance

Employees

(Unit : people)

HT Micron		2021	2022	2023
Total number of employees[1]		227	267	239
Number of executives	Male	4	4	5
	Female	2	2	2
Number of management positions[2]	Male	14	17	21
	Female	3	3	2
Number of employees	Male	128	149	127
	Female	76	92	82
By age	Under 30 years old	92	106	82
	Under 30-50 years old	122	147	142
	Over 50 years old	13	14	15
By type of employment	Indefinite-term workers	220	257	232
	Fixed-term worker	7	10	7

1) Total number of employees : As of the end of the year
2) Number of management positions : including group leaders, part leaders, and foremen

(Unit : people)

HANA Electronics		2021	2022	2023
Total number of employees[1]		24	76	96
Number of executives	Male	0	1	1
	Female	1	0	0
Number of management positions[2]	Male	2	4	0
	Female	1	2	2
Number of employees	Male	11	38	47
	Female	9	31	46
By age	Under 30 years old	3	25	29
	Under 30-50 years old	21	48	58
	Over 50 years old	0	3	9
By type of employment	Indefinite-term workers	24	69	91
	Fixed-term worker	0	7	5

1) Total number of employees : As of the end of the year
2) Number of management positions : including group leaders, part leaders, and foremen

ESG Data Book : Social Performance

Diversity of employees

(Unit : people)

HANA Micron		2021	2022	2023
Employees with disabilities	Mandatory employment rate	3.10%	3.10%	3.10%
	Employment rate	4.12%	4.14%	4.11%
Nationality	Korea	836	825	820

HANA Micron Vietnam		2021	2022	2023
Nationality	Korea	6	6	6
	Vietnam	255	213	249

HT Micron		2021	2022	2023
Nationality	Korea	13	12	12
	Brazil	214	255	227

HANA Electronics		2021	2022	2023
Nationality	Korea	0	0	0
	Brazil	24	76	96

(Unit : people)

HANA WLS		2021	2022	2023
Employees with disabilities	Mandatory employment rate	3.10%	3.10%	3.10%
	Employment rate	0%	0%	0%
Nationality	Korea	51	49	67

HANA Micron Vina		2021	2022	2023
Nationality	Korea	15	115	105
	Vietnam	307	1,588	1,739

Sum			2021	2022	2023
Total number of employees		People	1,721	3,139	3,321
Nationality	Total number of foreign employees	People	800	2,132	2,311
	Percentage of foreign employees	%	46.5	67.9	69.6
Region	Number of employees at overseas business sites	People	834	2,265	2,434
	Percentage of employees at overseas business sites	%	48.5	72.2	73.3

ESG Data Book : Social Performance

New employment

(Unit : people)

HANA Micron		2021	2022	2023
Gender	Total	318	375	137
	Male	167(53%)	179(48%)	41(30%)
	Female	151(47%)	196(52%)	96(70%)
Age	Under 30 years old	223	285	103
	Under 30-50 years old	86	81	32
	Over 50 years old	9	9	2

(Unit : people)

HANA WLS		2021	2022	2023
Gender	Total	10	11	52
	Male	2	7	27
	Female	8	4	25
Age	Under 30 years old	9	8	38
	Under 30-50 years old	1	3	14
	Over 50 years old	0	0	0

* Calculated based on the revised recruitment criteria for 2023

HANA Micron Vietnam		2021	2022	2023
Gender	Total	73	112	139
	Male	17	34	40
	Female	56	78	99
Age	Under 30 years old	65	100	107
	Under 30-50 years old	8	12	30
	Over 50 years old	0	0	2

HANA Micron Vina		2021	2022	2023
Gender	Total	218	1,889	550
	Male	98	471	230
	Female	120	1,418	320
Age	Under 30 years old	185	1,584	456
	Under 30-50 years old	33	300	84
	Over 50 years old	0	5	10

HT Micron		2021	2022	2023
Gender	Total	45	78	23
	Male	27	45	14
	Female	18	33	9
Age	Under 30 years old	27	40	14
	Under 30-50 years old	16	37	9
	Over 50 years old	2	1	-

HANA Electronics		2021	2022	2023
Gender	Total	23	87	65
	Male	12	50	35
	Female	11	37	30
Age	Under 30 years old	3	28	23
	Under 30-50 years old	20	53	37
	Over 50 years old	0	6	5

ESG Data Book : Social Performance

Years of Service and Turnover

(Unit : year)

HANA Micron		2021	2022	2023
Years of service	Average	5.8	6	6
	Male	6.4	6.9	7.5
	Female	5	4.8	5.3
Voluntary retirement[1)]	Turnover rate	1.6%	2.2%	1.3%

1) Data for 2021 and 2022 were revised due to changes in calculation standards.

(Unit : year)

HANA WLS		2021	2022	2023
Years of service	Average	0.9	1.6	1.1
	Male	0.9	1.6	1.2
	Female	0.9	1.6	0.9
Voluntary retirement	Turnover rate	2.3%	2.3%	5.9%

HANA Micron Vietnam		2021	2022	2023
Years of service	Average	1.6	2	1.8
	Male	1.7	1.8	1.8
	Female	1.5	2.1	1.9
Voluntary retirement	Turnover rate	5.6%	5.3%	3.3%

HANA Micron Vina		2021	2022	2023
Years of service	Average	0.9	0.6	1.3
	Male	0.8	0.7	1.5
	Female	0.9	0.5	1.2
Voluntary retirement	Turnover rate	1.3%	0.9%	1.5%

HT Micron		2021	2022	2023
Years of service	Average	4.1	4.0	5.0
	Male	4.3	4.2	5.2
	Female	3.7	3.7	4.7
Voluntary retirement	Turnover rate	1.2%	0.7%	0.3%

HANA Electronics		2021	2022	2023
Years of service	Average	0.3	0.7	1.1
	Male	0.4	0.7	1.1
	Female	0.3	0.7	1.1
Voluntary retirement	Turnover rate	1.0%	0.9%	0.3%

Evaluation and Remuneration

(Unit : people, KRW million)

HANA Micron		2021	2022	2023
Performance evaluation	Total number of employees	836	825	820
	Number of employees subject to evaluation	299	294	303
	Ratio of performance evaluation	35.8%	35.6%	37.0%
Remuneration	Maximum remuneration	402	525	393
	Average annual salary per employee	48	57	56
	Ratio of the maximum remuneration to the average	8.4x	9.2x	7.0x

Education

HANA Micron		2021	2022	2023
Training hours per employee	Hours	23	38	49
Training cost per employee	KRW thousan	23	59	157

ESG Data Book : Social Performance

Parental Leave[1] and Short Work Hours during Pregnancy and Childcare

(Unit : people)

HANA Micron		2021	2022	2023
Number of employees who used parental leave	Male	2	1	3
	Female	10	13	16
Number of employees returning after parental leave	Male	1	1	2
	Female	7	10	4
Number of employees who have been employed for more than 12 months after returning from parental leave	Male	1	2	1
	Female	6	4	5
Number of employees who used short work hours during pregnancy and childcare	Pregnancy	6	7	10
	Childcare	0	0	3

1) 2022 data was revised due to changes in calculation standards.

(Unit : people)

HANA Micron Vietnam		2021	2022	2023
Number of employees who used parental leave	Male	0	0	0
	Female	0	0	0
Number of employees who used short work hours during pregnancy and childcare	Pregnancy	25	11	18
	Childcare	19	26	13

HANA Micron Vina		2021	2022	2023
Number of employees who used parental leave	Male	0	0	0
	Female	7	27	101
Number of employees returning after parental leave	Male	0	0	0
	Female	3	6	32
Number of employees who used short work hours during pregnancy and childcare	Pregnancy	7	33	122
	Childcare	3	6	32

HT Micron		2021	2022	2023
Number of employees who used parental leave	Male	8	1	8
	Female	1	0	7
Number of employees returning after parental leave	Male	8	1	8
	Female	1	0	7

HANA Electronics		2021	2022	2023
Number of employees who used parental leave	Male	0	0	2
	Female	0	0	0
Number of employees returning after parental leave	Male	0	0	2
	Female	0	0	0

ESG Data Book : Social Performance

Safety and Health Training

HANA Micron		2021	2022	2023
Number of people subject to training	People	822	734	747
Total hours of training	Hours	28,608	25,024	20,018
Completion rate	%	100	100	100

HANA Micron Vietnam		2021	2022	2023
Number of people subject to training	People	215	229	236
Total hours of training	Hours	860	916	944
Completion rate	%	100	100	100

HT Micron		2021	2022	2023
Number of people subject to training	People	93	23	34
Total hours of training	Hours	651	460	816
Completion rate	%	100	100	100

HANA WLS		2021	2022	2023
Number of people subject to training	People	52	53	54
Total hours of training	Hours	16,000	13,376	10,776
Completion rate	%	100	100	100

HANA Micron Vina		2021	2022	2023
Number of people subject to training	People	322	1,703	1,844
Total hours of training	Hours	4,871.0	31,373.5	34,319.5
Completion rate	%	100	100	100

HANA Electronics		2021	2022	2023
Number of people subject to training	People	-	42	68
Total hours of training	Hours	-	462	2,040
Completion rate	%	-	100	100

Industrial Accidents

(Unit : people)

HANA Micron		2021	2022	2023
Number of deaths	Employees	0	0	0
	Partners	0	0	0
	Subtotal	0	0	0
Accident rate		0%	0.25%	0.21%
Disease rate		0%	0%	0%

Safety and Health Certification (ISO 45001)

Subsidiaries	2021	2022	2023
HANA Micron	Acquired	Acquired	Acquired
HANA Micron Vietnam	Acquired	Acquired	Acquired
HANA Micron Vina	Acquired	Acquired	Acquired

Quality Certification

Subsidiaries	Certification	2021	2022	2023
HANA Micron	IATF 16949	Acquired	Acquired	Acquired
	ISO 9001	Acquired	Acquired	Acquired
	ANSI/ESD S20.20	Acquired	Acquired	Acquired
HANA WLS	ISO 9001	-	-	Acquired
HANA Micron Vietnam	ISO 9001	Acquired	Acquired	Acquired
HANA Micron Vina	ISO 9001	Acquired	Acquired	Acquired
HT Micron	ISO 9001	Acquired	Acquired	Acquired
HANA Electronics	ISO 9001	Acquired	Acquired	Acquired

ESG Data Book : Governance Performance

Ethical Management Education

HANA Micron		2021	2022	2023
Number of training sessions	Sessions	1	1	1
Hours of training per person	Hours	1	1	4.5
Percentage of employees who participated in training	%	100	100	100

Fair Trade/Anti-Corruption Education

HANA Micron		2021	2022	2023
Hours of training per person	Hours	-	1	3
Number of persons subject to education	People	-	58	57
Completion rate	%	-	100	100

Violations of Code of Ethics and Laws

HANA Micron		2021	2022	2023
Violation of code of ethics	Cases	0	0	0
Legal actions	Cases	0	0	0

Human Rights Education

HANA Micron			2021	2022	2023
Prevention of sexual harassment and bullying	Hours of training per person	Hours	1	2	2
	Percentage of employees participating in education	%	100	100	100
Improvement of awareness of the disabled	Hours of training per person	Hours	1	2	2
	Percentage of employees participating in education	%	100	100	100
HANA Micron's code of conduct	Hours of training per person	Hours	1	1	1
	Percentage of employees participating in education	%	100	100	100

Information Protection Education

HANA Micron		2021	2022	2023
Number of training sessions	Sessions	4	4	4
Hours of training per person	Hours	4	4	4
Percentage of employees who participated in training	%	100	100	100

GRI Index

GRI 1 : Foundation 2021

Statement of Use	HANA Micron has reported in accordance with the GRI Standards for the Period 2023. 1. 1. ~ 2023. 12. 31.
GRI 1 used	GRI 1 : Foundation 2021
Applicable GRI Sector Standard(s)	N/A

GRI 2 : General Disclosure 2021

Category	Index No.	Indicators	Reporting Location	Remark
The organization and its reporting practices	2-1	Organizational details	5-7	
	2-2	Entities included in the organization's sustainability reporting	1	
	2-3	Reporting period, frequency and contact point	1	
	2-4	Restatements of information	1	
	2-5	External assurance	72-75	
Activities and workers	2-6	Activities, value chain and other business relationships	6	
	2-7	Employees	59-63	
	2-8	Workers who are not employees	59-60	
Governance	2-9	Governance structure and composition	43	
	2-10	Nomination and selection of the highest governance body	43	
	2-11	Chair of the highest governance b	43	
	2-12	Role of the highest governance body in overseeing the management of impacts	43	
	2-13	Delegation of responsibility for managing impacts	43, 45, 48	
	2-14	Role of the highest governance body in sustainability reporting	45	
	2-15	Conflicts of interest	43	
	2-16	Communication of critical concerns	44-45	
	2-17	Collective knowledge of the highest governance body	43	
	2-18	Evaluation of the performance of the highest governance body	44	
	2-19	Remuneration policies	44	
	2-20	Process to determine remuneration	44	
	2-21	Annual total compensation ratio	72	

GRI Index

GRI 2 : General Disclosure 2021

Category	Index No.	Indicators	Reporting Location	Remark
Strategy, policies and practices	2-22	Statement on sustainable development	4	
	2-23	Policy commitments	9-10, 18-19	
	2-24	Embedding policy commitments	11, 45	
	2-25	Processes to remediate negative impacts	46-49	
	2-26	Mechanisms for seeking advice and raising concerns	48	
	2-27	Compliance with laws and regulations	27, 36, 46-47	
	2-28	Membership associations	76	
Stakeholder engagement	2-29	Approach to stakeholder engagement	14	
	2-30	Collective bargaining agreements	31	

GRI 3 : Material Topics 2021

Category	Index No.	Indicators	Reporting Location	Remark
Disclosures on material topics	3-1	Process to determine material topics	12	
	3-2	List of material topics	13	
	3-3	Management of material topics	13	

GRI Index

Topic Standards

Category	Index No.	Indicators	Reporting Location	Remark
GRI 201 : Economic Performance	201-1	Direct economic value generated and distributed	52	
	201-3	Defined benefit plan obligations and other retirement plans	29	
GRI 202 : Market Presence	202-2	Proportion of senior management hired from the local community	59-61	
GRI 203 : Indirect Economic Impacts	203-1	Infrastructure investments and services supported	40-41	
	203-2	Significant indirect economic impacts	40-41	
GRI 205 : Anti-corruption	205-2	Communication and training about anti-corruption policies and procedures	47	
GRI 206 : Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	47	
GRI 207 : Tax	207-1	Approach to tax	49	
GRI 301 : Materials	301-1	Materials used by weight or volume	-	This information is not disclosed to the public based on management judgment.
GRI 302 : Energy	302-1	Energy consumption within the organization	53-54	
	302-3	Energy intensity	53-54	
	302-4	Reduction of energy consumption	22	
GRI 303 : Water and Effluent	303-2	Management of water discharge related impacts	26, 58	
	303-5	Water consumption	24, 56	
GRI 305 : Emissions	305-1	Direct (Scope 1) GHG emissions	21, 55	
	305-2	Indirect (Scope 2) GHG emissions	21, 55	
	305-3	Other indirect (Scope 3) GHG emissions	-	Scheduled to be posted on the website
	305-4	GHG emissions intensity	21, 55	
	305-5	Reduction of GHG emissions	22	
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	26, 58	
GRI 306 : Waste	306-1	Waste generation and significant waste-related impacts	25, 57	
	306-3	Waste generated	25, 57	
	306-4	Waste diverted from disposal	25, 57	
	306-5	Waste directed to disposal	25, 57	
GRI 308 : Supplier Environmental Assessment	308-1	New suppliers that were screened using environmental criteria	37	
	308-2	Negative environmental impacts in the supply chain and actions taken	37	

GRI Index

Topic Standards

Category	Index No.	Indicators	Reporting Location	Remark
GRI 401 : Employment	401-1	New employee hires and employee turnover	62-63	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	33	
	401-3	Parental leave	64	
GRI 403 : Occupational Health and Safety	403-1	Occupational health and safety management system	34	
	403-2	Hazard identification, risk assessment, and incident investigation	35-36	
	403-3	Occupational health services	34-35	
	403-4	Worker participation, consultation, and communication on occupational health and safety	35-36	
	403-5	Worker training on occupational health and safety	35, 65	
	403-6	Promotion of worker health	33	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	34-36	
	403-8	Workers covered by an occupational health and safety management system	34	
	403-9	Work-related injuries	65	
	403-10	Work-related ill health	65	
GRI 404 : Training and Education	404-1	Average hours of training per year per employee	63	
	404-2	Programs for upgrading employee skills and transition assistance programs	29-30	
	404-3	Percentage of employees receiving regular performance and career development reviews	63	
GRI 405 : Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	61	
GRI 406 : Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	46	
GRI 408 : Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor	-	Not applicable
GRI 409 : Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	-	Not applicable
GRI 411 : Rights of Indigenous People	411-1	1 Incidents of violations involving rights of indigenous peoples	-	Not applicable
GRI 413 : Local Communities	413-1	Operations with local community engagement, impact assessments, and development programs	40-41	
GRI 416 : Customer Health and Safety	416-1	Assessment of the health and safety impacts of product and service categories	38	

SASB (Sustainability Accounting Standards Board)

Industry category : Semiconductor

Topics	Metric	Code	Response activities and related pages
Greenhouse Gas Emissions	(1) Scope 1 Gross emissions (2) Total emissions from perfluorinated compounds (PFC)	TC-SC-110a.1	(1) p55 (2) PFCs : 0.125 tCO_2-eq (2023)*Scope of data collected : Korea, Vietnam, Brazil
	Discussion of long- and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	TC-SC-110a.2	p19~22
Energy Management in Manufacturing	(1) Total energy consumed (2) Percentage grid electricity (3) Percentage renewable	TC-SC-130a.1	(1) p53-54 (2) p53 (3) p23
Water Management	(1) Total water withdrawn (2) Total water consumed; percentage of each in regions with High or Extremely High Baseline Water Stress	TC-SC-140a.1	(1) p56 (2) p24
Waste Management	(1) Amount of hazardous waste from manufacturing, (2) percentage recycled	TS-SC-150a.1	p57
Workforce Health & Safety	Description of efforts to assess, monitor, and reduce exposure of workforce to human health hazards	TS-SC-320a.1	ESG Performance>Social>Safety and Health (p34-36)
	Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violations	TS-SC-320a.2	Not applicable (Refer to 3. Matters Related to Sanctions (p231), XI Matters Necessary for Investor Protection in the 2023 Business Report)
Recruiting & Managing a Global & Skilled Workforce	(1) Percentage of employees that require a work visa (2) Percentage of employees at oversea operations	TS-SC-330a.1	Appendix>ESG Data Book>Social Performance >Diversity of Employees (p61)
Product Lifecycle Management	Percentage of products by revenue that contain IEC 62474 declarable substances	TS-SC-410a.1	HANA Micron does not use IEC 62474 reported substances, and all parts and raw materials used in the product comply with international standards and criteria.
	Processor energy efficiency at a system level for : (1) servers, (2) desktops and (3) laptops	TS-SC-410a.2	Not applicable
Materials Sourcing	Description of the management of risks associated with the use of critical materials	TS-SC-440a.1	ESG Performance>Social>Sustainable Supply Chain Management> Responsible Minerals (p39)
Intellectual Property Protection & Competitive Behavior	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulation	TS-SC-520a.1	Not applicable (Refer to 3. Matters Related to Sanctions (p231), XI Matters Necessary for Investor Protection in the 2023 Business Report)

Third Party Assurance Report

Dear Stakeholders of HANA MICRON

Korean Foundation for Quality (further 'KFQ') has been requested by HANA MICRON to conduct an independent verification on the 「2024 HANA MICRON SUSTAINABILITY REPORT」 (further 'the Report'). KFQ has responsibility to provide an independent verification opinion against the criteria and scope as specified below. HANA MICRON has sole responsibility for the preparation of the Report.

Verification Criteria and Scope

- **Verification Criteria** : AA1000AS (v3) and AA1000AP (2018)
- **Verification Type** : Type 1 [Verification of compliance of 4 reporting principles]
- **Verification Level** : Moderate [Verification based on limited evidence collected]
- **Verification boundary** : Domestic (HANA Micron, HANA WLS), Vietnam (HANA Micron Vietnam, HANA Micron Vina) and Brazil (HT Micron, HANA Electronics) business places. The performance and reporting practices of subsidiaries, related companies, business partners and third parties beyond the scope of this verification specified in the report are not included.
- **Verification Scope** : Compliance with the 4 reporting principles (Inclusivity, Materiality, Responsiveness, Impact) according to AA1000AP and the GRI Standards 2021 reporting requirements

※ GRI Standards (2021) Reporting Principles

- Universal Standards : Reporting in accordance with GRI Standards (2021), compliance with the following requirements

Requirements	Compliance	Requirements	Compliance
1. Reporting principles	○	6. Provide reasons for omission	○
2. General Disclosures	○	7. Publish a GRI content index	○
3. Determine material topics	○	8. Provide a statement of use	○
4. Report the disclosures in GRI 3 : Material Topics 2021	○	9. Notify GRI	○
5. Report disclosures from the GRI Topic Standards for each material topic	○	-	-

- Topic Standards

Requirements	GRI Standards 2021
Reporting material issues according to the GRI Topic Standards	· GRI 205 : Anti-corruption · GRI 206 : Anti-competitive Behavior · GRI 302 : Energy · GRI 305 : Emissions · GRI 306 : Waste · GRI 403 : Occupational Health and Safety · GRI 404 : Training and Education

Methodology

In order to assess the reliability of the sustainability performance in the Report against above mentioned criteria, the audit team reviewed sustainability-related processes, systems, internal control procedures, and available performance data. The documentation the audit team reviewed during the verification includes :

- Non-financial information e.g., data provided by HANA MICRON, disclosed business reports, and information obtained from media and/or the internet ; and
- Financial information i.e., data disclosed in the electronic disclosure system (dart.fss.or.kr) of the Financial Supervisory Service and data posted on the homepage were used, but these contents are not included in the scope of verification.

The assessment was performed by document review and interviews person in charge including on-site assessment. The validity of the materiality assessment process in the Report and the material issue selection considering stakeholders, data collection & management, and validity of the report preparation procedure as well as the description in the Report were assessed, but external stakeholder interviews were not conducted. Afterwards, it was confirmed that some errors, inappropriate information and misstatement found in the above steps were appropriately revised before publishing the Report.

Third Party Assurance Report

Competency and independence

The audit team was consisted in accordance with KFQ's internal regulations. KFQ has no conflict of interest to the HANA MICRON business which could threaten the independence and impartiality of verification, other than providing third-party verification services.

Limitations

The completeness and responsiveness of sustainability performance represented in the Report have inherent limitations due to its nature and the methodology used to determine, calculate and estimate its performance. In accordance with the terms of the contract, we assessed the information and evidence provided by the HANA MICRON. We did not perform any further assessment on raw data. In addition, verification of HANA WLS' greenhouse gas emissions was not included in the scope of this verification.

Findings and Conclusions

As a result of the verification, the Report was prepared in accordance with the requirements for 'in accordance with GRI standard 2021' and the audit team found reasonable objectives to guarantee the AA1000AS(V3) Type 1 assurance level. We also found no significant errors or inadequacies in the Report regarding compliance with reporting principles.

- **Inclusivity**
  HANA MICRON defines the six stakeholder groups (Government, Customer, Employees, Business Partners, Local Community, Shareholders and Investors) and identifies material ESG issues related to stakeholders' interests through the communication channels considering the characteristics of each group. The audit team could not find any major stakeholders that were omitted during this process, and it was confirmed that HANA MICRON is making efforts to reflect the collected opinions of stakeholders in its management strategy.
- **Materiality**
  HANA MICRON analyzed GRI and UN SDGs, internal·external business strategy and media information to make ESG issue pool and 24 ESG-related issues were selected. Based on review ESG-related issues in the same filed, level of awareness of risk or opportunity to each issues and timing of responding to the issues, HANA MICRON selected 19 issues. Finally they selected 12 material ESG-issues through impact materiality assessment and financial impact on each issues. In this process, a survey of internal and external stakeholders was conducted to collect opinions, and the positive and negative effects from the outside-in and inside-out perspectives were reviewed to enhance the justification for the selection of material issues.
  The audit team confirmed that the identified material issues were given more weight in this report and that the material issues identified in the materiality assessment process were reported without omissions.
- **Responsiveness**
  HANA MICRON cares to respond in a timely manner to the needs and key interests gathered from stakeholders. Nothing came to our attention to suggest that its responses and performance are inappropriately described in the Report.
- **Impact**
  HANA MICRON identifies and monitors the impact of stakeholder-related material issues throughout its management activities and reports them in the Report as much as possible. Nothing came to our attention to suggest that it does not properly assess and report impacts relating to material issues.

Recommendation for improvement

- We expect Hana Micron's ESG management performance to be more transparent by specifying how to monitor ESG-related data and improving the reproducibility of information through systematic data management system operations.
- By documenting and implementing internal procedures from the generation and collection of ESG-related data to performance reporting, we hope that Hana Micron's ESG management performance can be delivered to stakeholders more effectively.

June, 2024, Seoul, Korea
Ji Young Song, **CEO**
Korean Foundation for Quality (KFQ)

AA1000 Licensed Report 000-80/V3-DZIH4

kfq Korean Foundation for Quality

Ji Young Song

GHG Verification Statement

HANA Micron Inc.

The Korea Management Registrar Inc. (hereinafter "KMR") has conducted the verification on the greenhouse gas (hereinafter "GHG") emission (Scope 1, 2) of HANA Micron. Inc (hereinafter "the Company") in 2023.

SCOPE

Verification of all places of business and emission facilities under the control of the company.

STANDARDS

- ISO 14064-1:2018, ISO 14064-3:2019
- IPCC Guidelines for National Greenhouse Gas Inventory
- Operational Guidelines for Reporting and Certification of Emissions in the GHG Emission Trading Scheme
- Verification Guidelines for GHG Emissions Trading Scheme Operation
- Guidelines for GHG Target Management Scheme Operation

PROCEDURE

We conducted a risk analysis approach and on-site verification based on data evaluation, and we identified the appropriateness of the data and factors applied to GHG emission calculations based on objective evidence. The verification team verified the GHG emissions during the reporting period in a reasonable way based on the verification guidelines.

INDEPENDENT

KMR does not have any s take in the ver ified ent ity and does not conduct verificat ion with biased opinions/views. We have drawn an independent and objective verification conclusion based on the verification standards, and reviewed the every aspect of the verification we performed throughout the entire verification process through internal review

LIMITATIONS

The verification team verified the related reports, information and data presented by the audited institution by sampling or enumeration methods. As a result, there are many inherent limitations, and there may be disagreements in the interpretation of appropriateness. Although we have tried to faithfully perform verification that meets the verification standards, we suggest that errors, omissions, and false statements that could not be found may be latent as the limitations to the verification.

OPINION

- GHG verification has been performed to meet the reasonable assurance level according to the verification standards.
- We express that no significant errors were found in the calculation of emissions during the verification process, and that relevant activity data and evidence were appropriately managed and calculated. As a result, we express an "unmodified" opinion.
- Criticality : meets the criterion, which is less than 5%
- GHGs Emission(All places)

GHGs Emission	Direct emission (Scope1)	Indirect emission (Scope2)	Total (tCO_2-eq)[1)]
2023	1,668	36,465	38,134

Energy Consumption	Fuel	Electricity	Steam	Total (TJ)
2023	31	759	3	794

1) Note : There is a difference in the total amount of emissions and emissions by greenhouse gas and by workplace. (Total emissions are cut to a decimal point for each workplace unit and emissions are summed up for each workplace unit.)

RESULTS

- We confirm through verification that the emissions from major emission facilities have been calculated and reported without omission.

May 24, 2024

KMR ISO 14064-1

Authorized By
CEO Eun Ju Hwang

GHG Verification Statement

HANA Micron Inc.

Verification Target

Korean Foundation for Quality (hereinafter 'KFQ') has conducted a verification of Scope 1, 2 Greenhouse Gas Emissions (hereinafter 'GHG emissions') of subsidiaries of HANA Micron Inc. (hereinafter 'Company') for 2023.

Verification Scope

KFQ's verification scope covered on facilities that had been agreed upon in advance and emission sources under the operational control and organizational boundary of the company's subsidiaries (Hana Micron VINA Co., Ltd., Hana Micron Vietnam Co., Ltd., HT Micron Semicondutores S.A., Hana Electronics Industria E Comericio Ltda.) during 2023.

Verification Criteria

The verification process was based on [Rule for emission reporting and certification of greenhouse gas emission trading Scheme[1)]], [2006 IPCC Guidelines for National Greenhouse Gas Inventories] and ISO14064- 1]for every applicable part.

1) Notification No. 2023-221 of Ministry of Environment

Level of Assurance

The Verification has been planned and conducted as the 'Rules for verification of operating the greenhouse gas emission trading scheme', and the level of assurance for verification shall be satisfied as limited level of assurance. And it was confirmed through an internal review whether the process before the verification was conducted effectively.

Verification Limitation

The verification shall contain the potential inherent limitation in the process of application of the verification criteria and methodology.

Verification Opinions

Regarding to the data of the Greenhouse Gas Emission Consumption from the report through the verification, KFQ provides our verification opinions as below ;

1) GHG emissions for 2023 of Company were properly calculated according to the verification standards.
2) The data and information used in calculating the GHG emissions were appropriate, reasonable, and no significant errors or omissions could affect verification statement were not found. The materiality assessment result of GHG emissions has met the agreed-upon criterion of less than 5%.
3) Thus, KFQ concludes that the GHG emissions of Company in 2023 is correctly calculated and stated in accordance with 'Rule for emission reporting and certification of greenhouse gas emission trading Scheme'.

(Unit : tCO_2eq)

Division	Scope 1	Scope 2	Total
Hana Micron Vina	288.568	70,534.587	70,823
Hana Micron Vietnam	44.782	6,859.175	6,904
HT Micron	1,167.210	502.605	1,670
Hana Electronics	40.570	47.886	88

June 24th, 2024

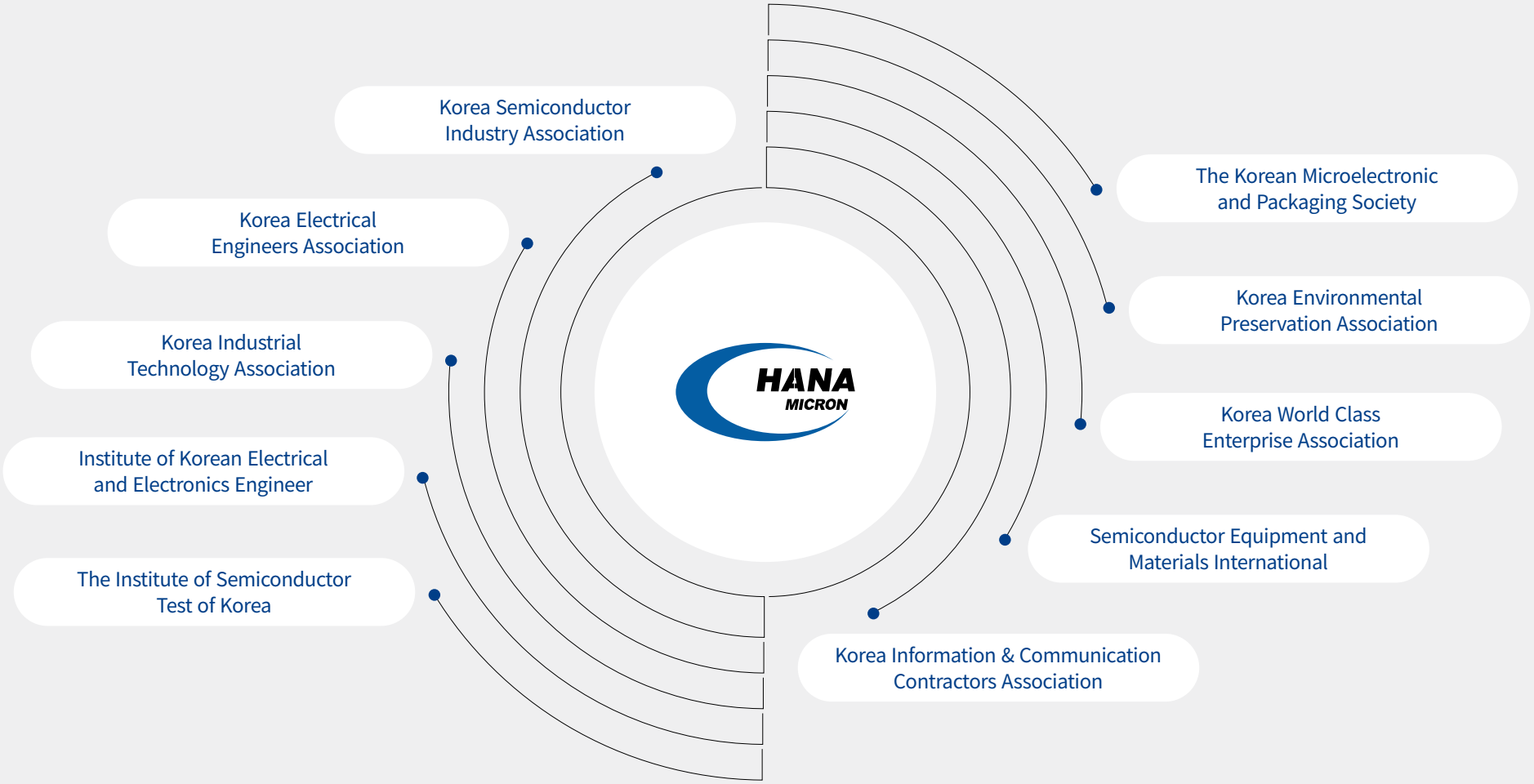
CEO Ji-Young Song
Korean Foundation for Quality

Ji Young Song

National Institute of Environmental Research

kfq Korean Foundation for Quality

Membership Organization Status



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