

# Growing the Future with Hana Materials

Hana Materials  
Sustainability Report 2022



# ABOUT THIS REPORT

## Overview

Hana Materials has published its first report in 2023 to transparently disclose our sustainability management activities and performance. We will continue to publish reports annually to share our progress and performance in ESG management with our stakeholders.

## Reporting Period and Scope

The reporting period for this report is based from January 1, 2022 to December 31, 2022, including some achievement from the first half of 2023. The scope of this report includes all the domestic business sites of Hana Material and there are no subsidiaries, with any exceptions footnoted.

## Reporting Criteria

This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards 2021. Financial information in the report is based on consolidation and complies with the Korean International Financial Reporting Standards (K-IFRS).

## Report Verification

This report has been verified by third-party verification by BSI. The assurance opinion can be found in page 66 of the report.

## Inquiries

For any additional information about the report, please contact us using the information below


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## Interactive User Guide

This report was published as an Interactive PDF with features such as navigation to relevant pages within the report and shortcuts to associated web pages.

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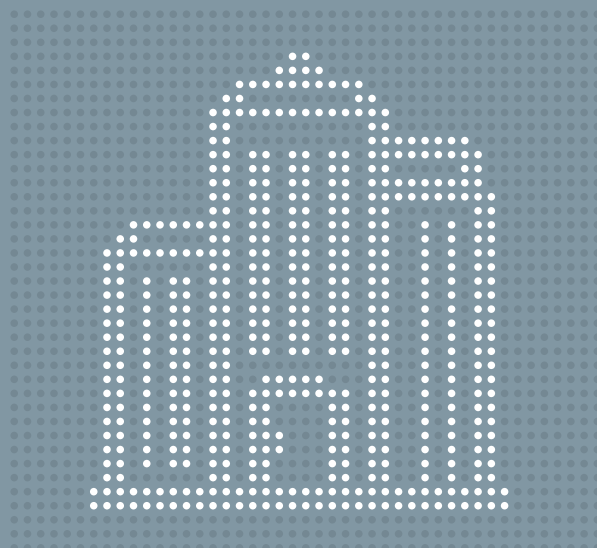
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# HANA MATERIALS OVERVIEW

Hana Materials aims to achieve corporate value improvement by establishing mid-to long-term strategies to fulfill its social responsibility as a member of the global society along with value and economic growth.



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# CEO Message



Dear Stakeholders,  
This is Oh, Kyung Seok  
CEO of Hana Materials

We sincerely thank you for your continued support and encouragement of Hana Materials.

As a result of our continuous growth over the past 17 years, we have published our first annual sustainability report for 2023. We have set 2023 as the base year to develop sustainable management and advance toward a better future with our stakeholders. We will maximize customer satisfaction and fulfill our social responsibility as a member of the global society.

The increase of raw materials and oil prices caused by the recent Russia-Ukraine War along with the United States Federal Reserve interest rate hikes due to the inflation, have led to both internal and external uncertainties, the downturn of semiconductor market and the US-China trade war. Despite the difficulties, we have managed to achieve significant performances, including quality improvement and cost reduction. Leveraging such performance, we will adopt and develop ESG management to move forward into a 'sustainable company'.

We believe ESG as an opportunity to improve our competitive advantage. To ensure our commitment to sustainability, we will endeavor to take on the following challenges.

## Leading innovation, transformation, and ESG strategy

Customers and the market demand the highest quality and cost reduction. As a result of our continuous effort on innovation, we have achieved our record high revenue and profit last year. We will adopt new business paradigm embracing ESG strategy along with technological transformation. Driven by the effort we put into innovation and transformation, we will enhance our capabilities and achieve our performance goals to become a global leading company.

## Empowering safety of our employees and ESG practices

Ensuring safety of our members and empowering ESG capabilities are essential for Hana Materials to build competencies in the global market. Especially to develop our ESG capabilities, we will start to diagnose and improve basic management factors in each area of environment, social, and governance. We will focus on creating safe and comfortable workplace through inspections and improving organizational culture, and regular ESG related training to strengthen employees' individual ESG capabilities.

## Moving towards green management

Hana Materials aims to establish green manufacturing by adopting solar panels and low-power facilities to reduce carbon emissions. For our New Asan Plant 2, we will focus on production efficiency and waste and pollutants minimization to build environmentally friendly facility.

Hana Materials will strive for business value enhancement and a brighter future for all through innovation and transformation. We are grateful for your support and warm encouragement.

Thank you.

CEO Oh, Kyung Seok

*K. S. Oh*

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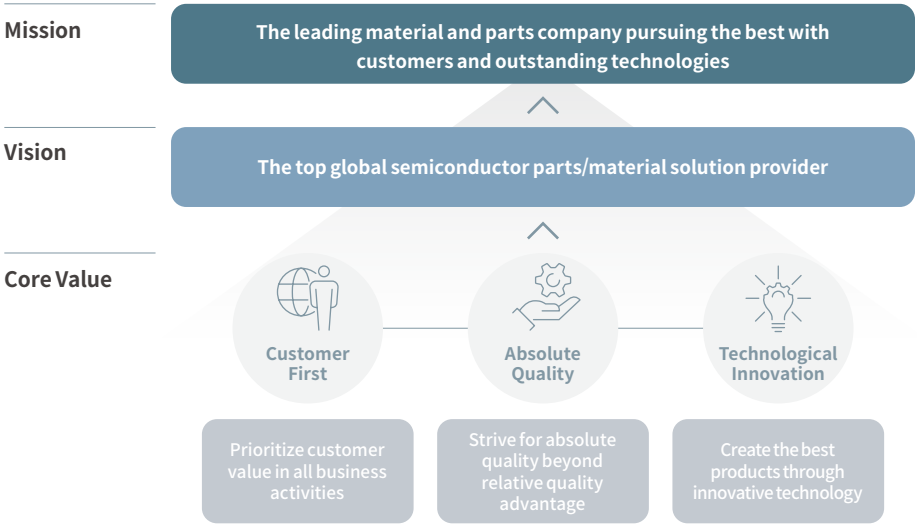
# Our Company



## Management Philosophy

### Mission and Vision

Hana Materials aims to grow into the world’s leading provider of semiconductor parts and material solutions by maximizing customer value through customer-value driven management, ensuring absolute quality beyond qualitative advantage, and manufacturing the best products through disruptive technologies.



## Company Profile

Hana Materials, a semiconductor parts/materials company, has contributed to ensuring the competitiveness of domestic semiconductors through technological advancement and localization of materials and parts since its establishment in 2007. In addition, we are growing together with customers by developing and producing innovative technologies and market-leading products to cope with the miniaturization, advancement, and high integration of the semiconductor industry.

To ensure our continuous growth, we are actively exploring new business opportunities in promising sectors, providing new values to customers, and strengthening ESG management to build better future in order to gain trust and support from customers, shareholders, society, and employees as a sustainable company.

Corporate Name	Hana Materials Inc.	Founding Date	January 23, 2007
CEO	Oh Kyung Seok	Number of Employees	750 (as of the, end of 2022)
Headquarter Address	42, 3 gongdan 3-ro, Seobuk-gu, Cheonan-si, Chungcheongnam-do	Website	www.hanamts.com
Capital	98.8(KRW 100million) (12/31/2022)	Outstanding Shares	19,752,674 Shares (current, end of 2022)
Total Assets	4,796 (KRW 100million)	Credit Rating	BBB+ (Assessment date: 03/20/2023)
Business Area	Silicon & Fine ceramic parts	Main Products	Si* Parts(Ring/Electrode) SiC** (Ring) Parts

\* Silicon  
\*\* Silicon Carbide



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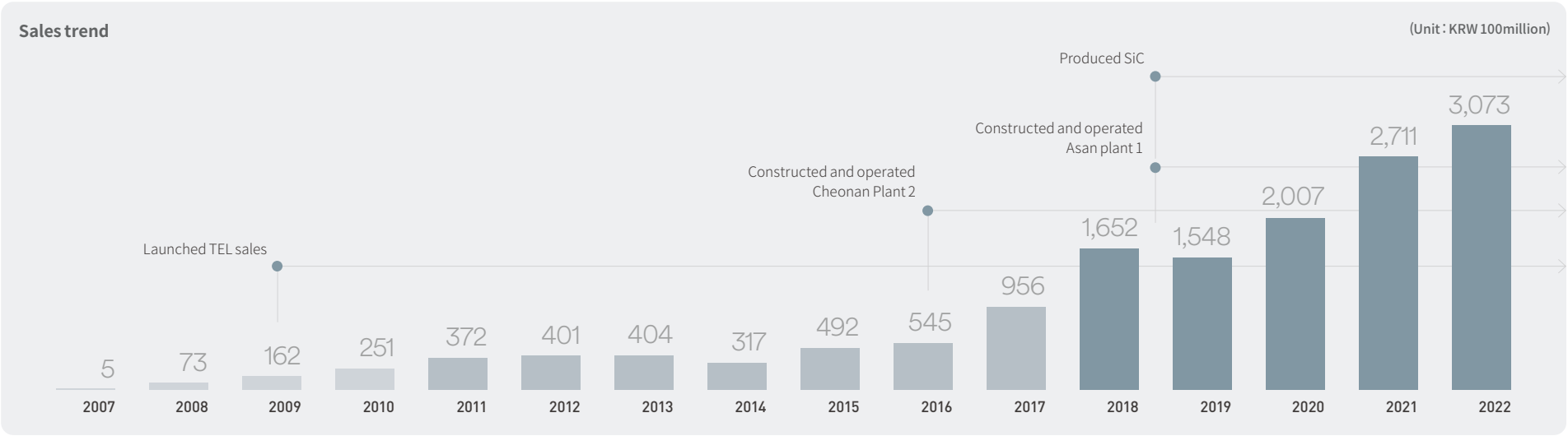
# Our Business

## About Us

To become the world’s leading semiconductor parts and materials solutions company, we have selected three core values- Prioritize Customer Value(World Wide), Pursue Absolute Quality(World Best) and Leading Innovation(World First)- and have identified and implemented nine strategic tasks to achieve this goal. We consistently strive to become a leading provider of semiconductor parts/materials with world-class competitiveness based on differentiated technology and expertise.

## History and Sales Trend

Hana Materials was founded in January 2007 and changed its name from Hana Silicon Inc. to Hana Materials Inc. on 19 April 2013. We are responding to the growing demand of semiconductor by preemptive investment and delivering high-quality products by securing high-cost competitiveness compared to our competitors. In addition, by diversifying our products and markets through development of innovative technologies, we have secured foundation for future growth and established both external and internal growth.



2007~2010 Establishment Period	2011~2016 Growth Period	2017~ Scale-Up Period
<div>2007. 01. Established Hana Silicon Co.,Ltd</div> <div>07. Started mass production of Si Electrode/Ring</div> <div>11. Acquired ISO 9001 Quality Management System Certification</div> <div>12. Registered as supplier for Samsung Electronics and SK Hynix</div> <div>2008. 08. Selected as a managing company for Ingot Growing government project for large caliber</div> <div>12. Started mass production 400mm single crystal ingot growing</div> <div>2009. 09. Signed supply contract for Tokyo Electron</div>	<div>2011. 06. Started mass production 520mm single crystal ingot growing</div> <div>07. Attracted Tokyo Electron strategic investment</div> <div>2012. 07. Certified AMAT Global Supplier</div> <div>2013. 04. Changed the corporate name to Hana Materials Co., Ltd</div> <div>2014. 12. Presidential Commendation for Labor Management Win-Win Cooperation</div> <div>2015. 04. Launched special gas business</div> <div>2016. 10. Obtained Lam Research quality approval</div>	<div>2017. 02. Constructed Cheonan Plant 2</div> <div>04. Listed on KOSDAQ</div> <div>2018. 12. Constructed large caliber silicon Ingot exclusive line</div> <div>2019. 01. Constructed Asan Plant</div> <div>11. Tokyo Electron Awarded Outstanding Partner</div> <div>2020. 02. Divested the special gas business</div> <div>2021. 05. Succeeded in producing 600mm single crystal</div> <div>11. Awarded presidential commendation from the National Productivity Award</div>



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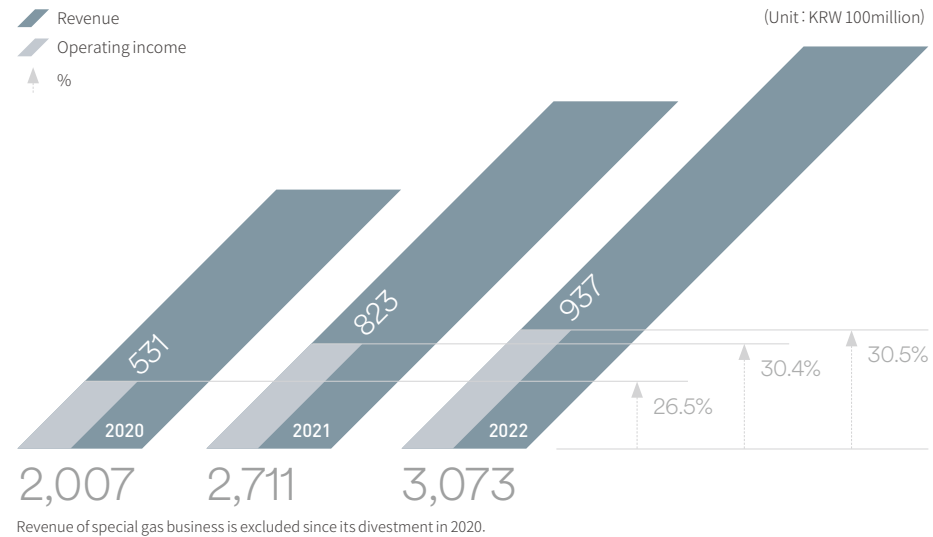
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## Key Financial Highlights

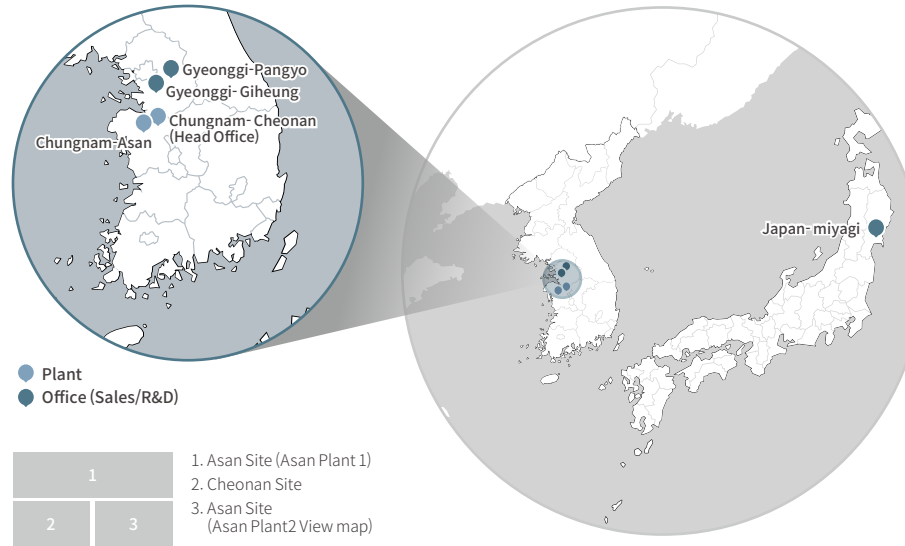
The company has been growing rapidly with the annual revenue growth rate of 25.7% from 2019 to 2022, on average. As the semiconductor cycle shifted to an upward from the second half of 2019, Samsung Electronics and SK Hynix expanded new factories, and the Capex\* was increased, and the number of new clients and sales of SiC Ring began to grow in 2021, resulting in revenue growth. In addition, we were able to achieve operating margin around 30% through continuous cost innovation.

\* Capital Expenditures: Money invested by a company to acquire or upgrade fixed, physical or nonconsumable assets



## Our Sites

Hana Materials' Head office is based in Cheonan, and the construction of Asan Plant 1 was completed in January 2019. Currently, the Cheonan site operates Si parts and Si manufacturing process, and Asan Plant 1 produces Si, SiC, and SiC materials. Construction on Asan Plant 2 began in the second half of 2022 which expected to be completed by August 2023, the current Capa will be doubled after the completion. Asan Plant 2 will operate Si and SiC manufacturing process, and we are planning to implement automated Line by introducing cutting the edge technology.



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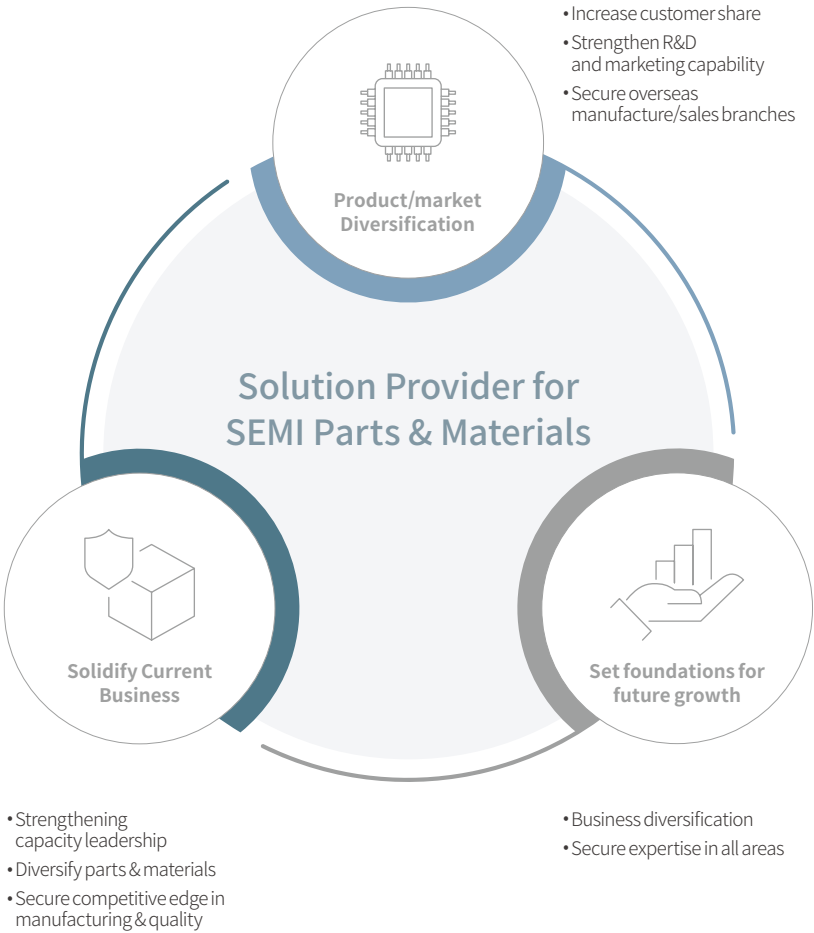
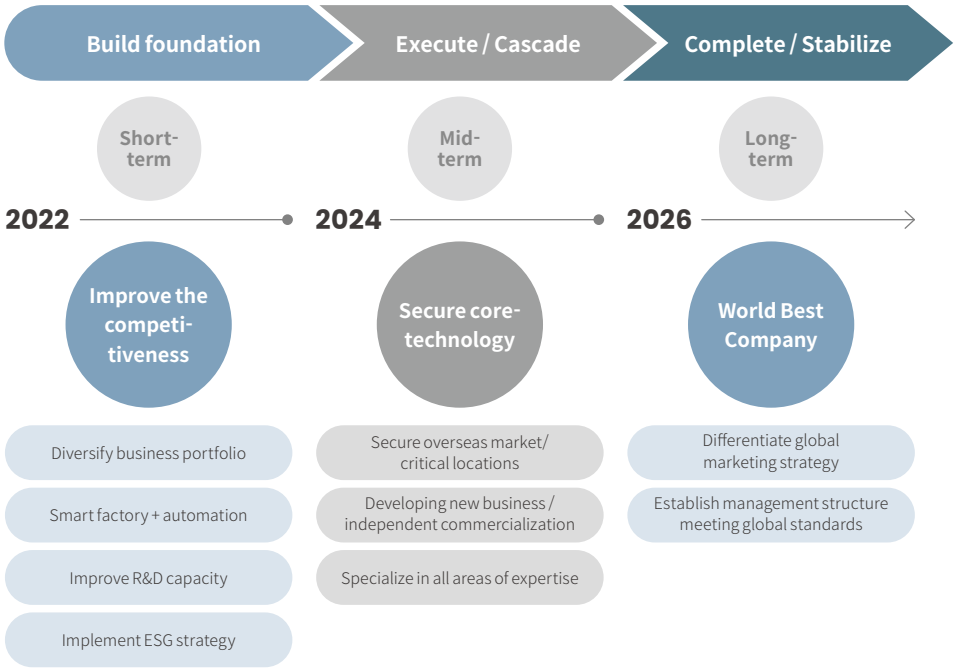
# Our Vision

## Business Strategy

Hana Materials will further solidify our market leader position by enhancing our competitiveness in SiC part products and increasing our market share as we continue to improve SiC product related technologies. We will also promote to diversify the shape and materials of our products parts. We aim to expand our business segments by applying various semiconductor fabrication and new market entry alongside continuous growth in semiconductor etching equipment market, our main source of revenue. We will secure growth potential and enhance our corporate value by developing new business model along with our semiconductor parts/ components expansion.

## Mid-to long-term Management Goals

Hana Materials is pushing forward with a step-by-step roadmap to become the world’s leading semiconductor parts/materials solutions company.



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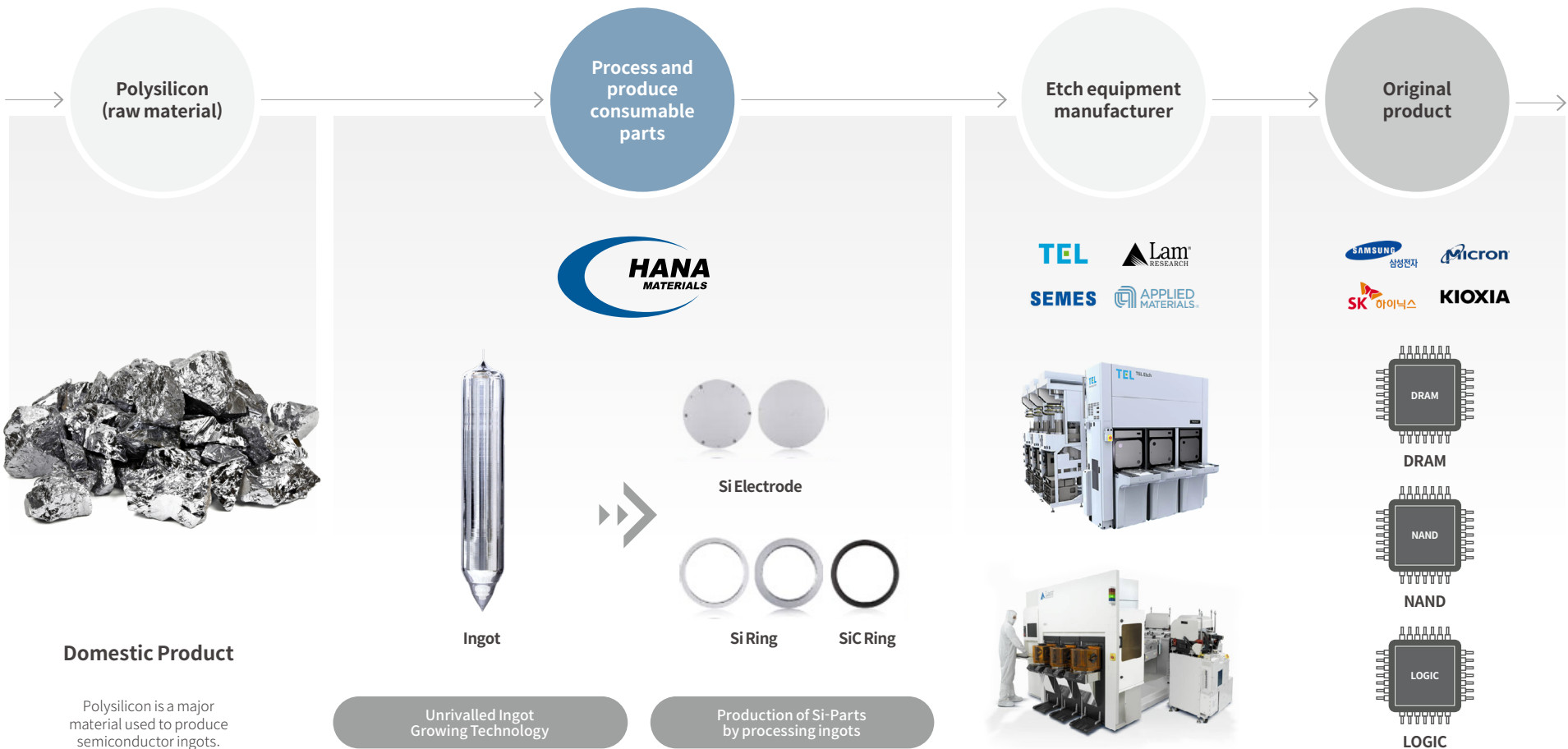
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# Our Products

## Introduce Products

Hana Materials produces Si Parts and SiC which are consumable parts of dry etcher equipment for semiconductor. The main products are Si Electrode, Si Ring, and SiC Ring. We have established an integrated production system from material production to processing of Si ingot and SiC bulk, raw materials for the main products, and successfully gained a substantial cost advantage. In addition, we have secured a large customer base with major global semiconductor equipment companies such as Tokyo Electron, Lam Research, Applied Materials, and SEMES, which gives recognition for our high standard for technology and quality.



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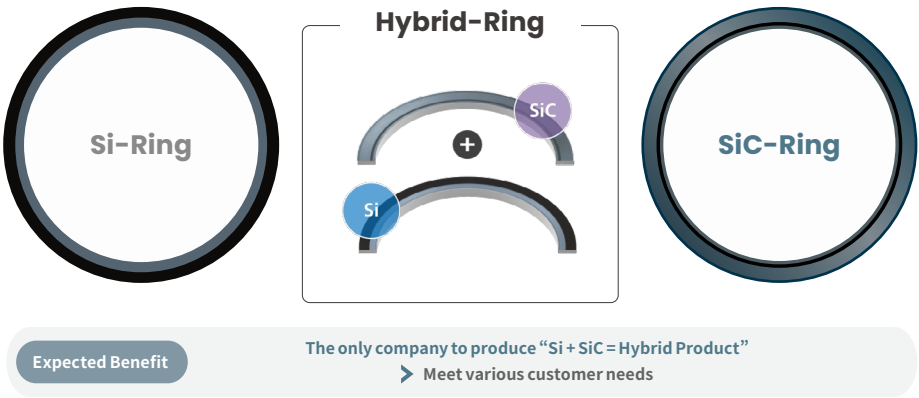
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Business-related Technology Development

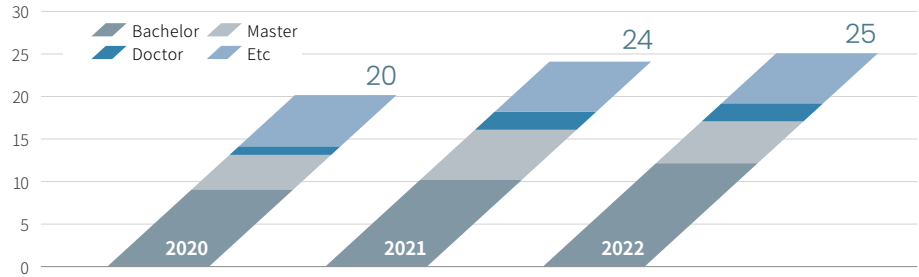
We have introduced Hybrid Ring, a new product that combines Si and SiC through development of hybrid joining technology patents. We plan to expand our market influence with our new products distinguished with newly developed advanced technologies.



R&D and Patents

Hana Materials has a specialized research center, with experts focusing on strengthening R&D capabilities, researching new products (parts, materials) introducing new technologies, technical management. In addition, as of 2022, the total number of patents registered increased to 39, securing competitiveness in development and mass production with continuous application/registration of patents.

Laboratory Manpower Status



Patent Registration Status

	Before 2020	2020	2021	2022
Registration	33	3	3	-
Total				39

\* 15 patent cases are pending

Patent List

Category	Patent Title	Registered dates
10-2128595	Focus ring and plasma device containing it	20.06.24
10-2128596	Bush assemblies for plasma electrodes and electrode assembly structures comprising them	20.06.24
10-2175990	Focus ring and plasma device containing it	20.11.02
10-2269878	Manufacturing process for silicon carbide powder and single crystal silicon carbide	21.06.22
10-2269883	Bush assemblies for plasma electrode plates and upper electrode assembly structure comprising them	21.06.22
10-2311031	Semiconductor parts and its manufacturing process	21.10.01



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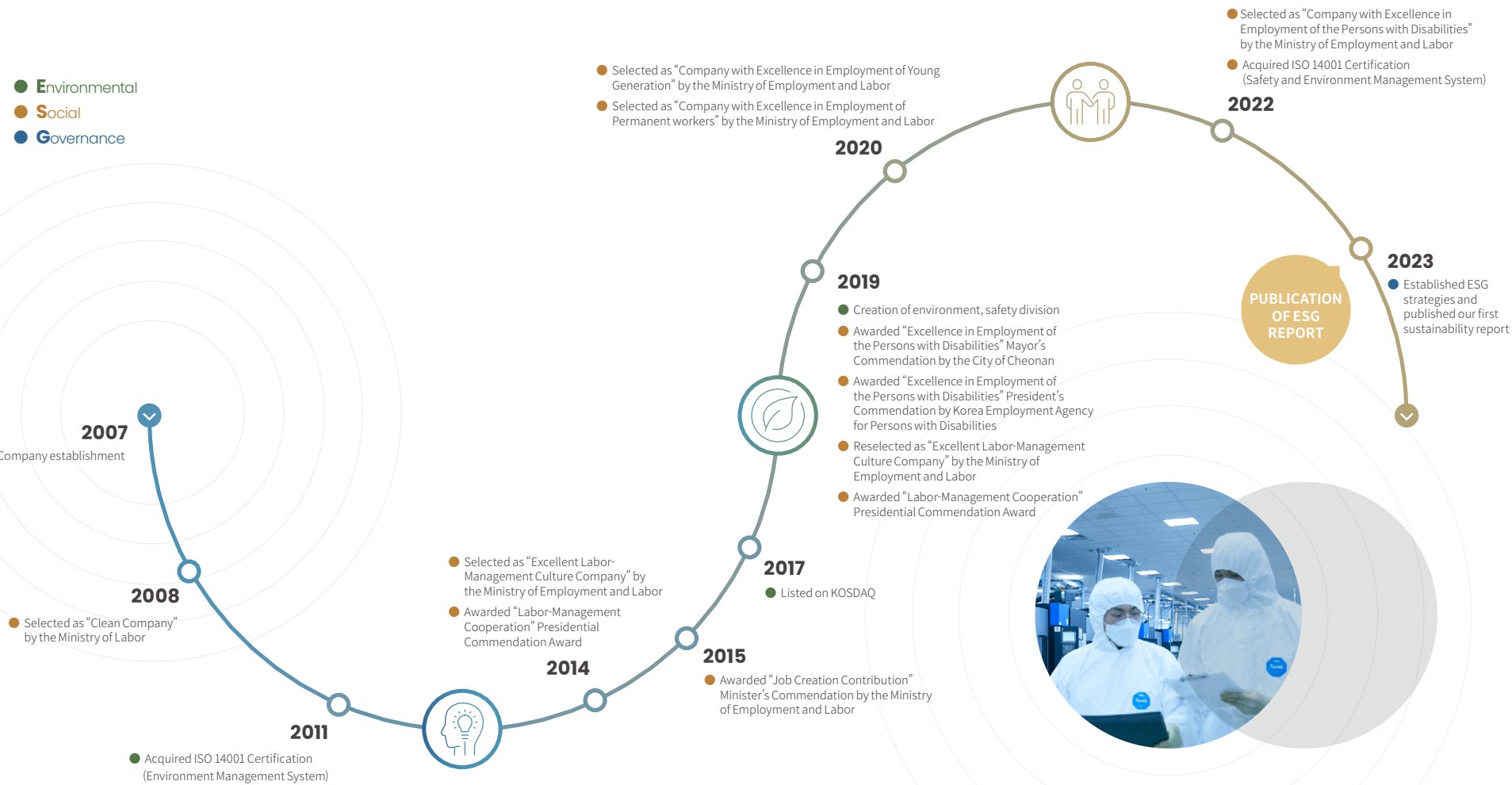
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# ESG History

Hana Materials has carried out activities to enhance co-prosperity beyond pursuing our own economic benefit based on our vision “Together for Brighter Future” since in 2007. We have acquired ISO14001 certification to manage our employees’ safety and create clean and safe local communities and contributed to local employment through fair talent hiring. We, in particular, supported the lives of the underprivileged, facilitate communication between the company and its employees, creation of organizational culture and successfully made a company where everyone grows together. We have established ESG strategies in 2020 to pursue sustainable values in each area of environmental, social, and governance. Through our first sustainability report we deliver our commitment to ESG strategies and disclose our performance.



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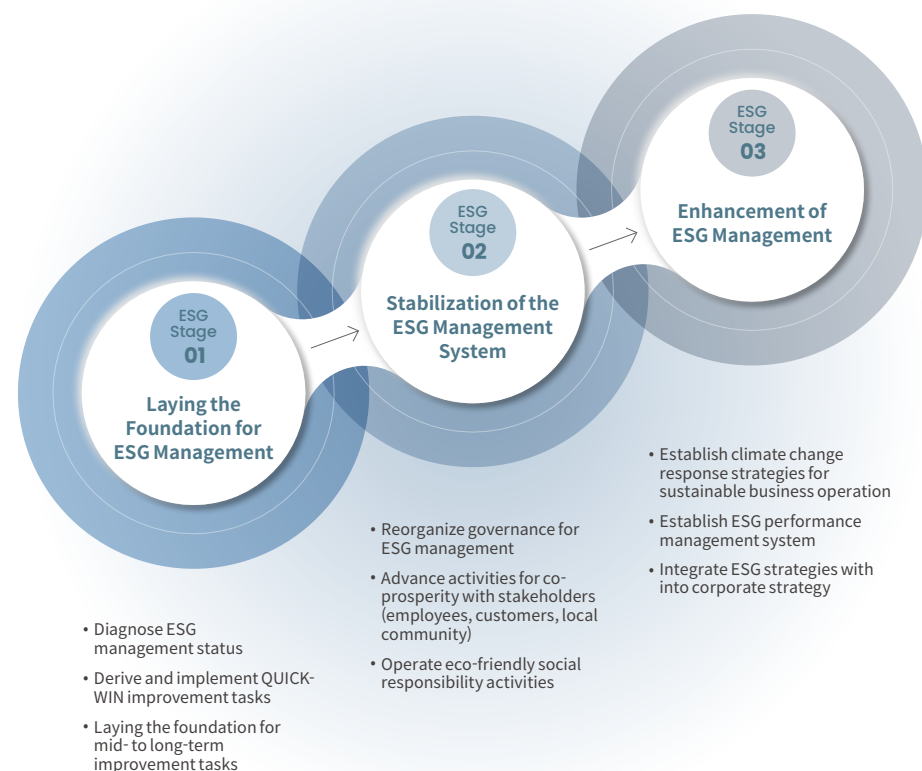
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# Mid-to Long-term ESG Strategy

Hana Materials has established a mid-to long-term ESG management strategy that focuses on ‘Pursuing Sustainable Values for All - Customers, the Environment, Employees, Partners’ to achieve our vision of ‘The world’s best semiconductor parts/materials solution company’ and sustainable growth. We fully appreciate the need for transition toward ESG management, beyond just a global trend. We will establish and implement strategies that will lead to sustainable growth of Hana Materials through innovative, committed, and genuine ESG activities in each area of environment, social, and governance considering the needs and feasibility of such activities.

*Sustainable value for all -  
Customers, Environment,  
Employees, Partners*



We will engage to transform into a company that attracts talent and provides safe workplace through status diagnosis and carrying out improvement tasks. Not limiting ourselves to our own business, we will strive to acquire capabilities that can bring co-prosperity with our business partners.



We will be reborn as an eco-friendly company through active climate change response and environmental protection activities to maximize corporate growth and minimize environmental impact.

We will establish a management system that can both achieve economic growth, our fundamental goal, and build a transparent and reliable governance.



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# Stakeholder Engagement

Hana Materials strives to collect opinions of stakeholders, including customers, employees, shareholders and investors, suppliers, local communities, and governments throughout its operation. We identify key issues through online and offline communication channels tailored to the characteristics of our stakeholders and reflect their opinions in our management activities. We will continue to strengthen mutual trust through regular communication with our stakeholders.



Category	Engagement Channels	Key Issues	Activities of Hana Materials
 Shareholder and Investor	NDR, Company tour	Industry trends and growth drivers Shareholder return policy	Explain performances and industry trends through quarterly NDR Establish and disclose dividend policy
 Customer	Customer satisfaction survey Visit to customer VOC survey	Product quality Customer satisfaction Strengthening technology competitiveness	Regular customer satisfaction survey, identify improvements Conduct research to improve product quality and strength competitiveness
 Internal Employee (Member)	Labor management council Inhouse newsletter/broadcasting Online bulletin board Online communication channel	Worker's right Work-life balance & benefits Human resources development and capabilities	Operate capacity building program Protect collective bargaining rights
 Partner	Technical meeting Online communication channel	Mutual growth Fair transaction culture Improvement of difficulties of partners	Support stable contractual relationships Supplier quality control
 Community	CSR activities Meetings MOU	CSR activities Vitalization of local communities Minimization of negative impact on the area near the business site	Operate CSR program customized to the minorities
 Government	Conferences Meetings Telecommunication with departmental representatives	Anti-corruption Compliance Taxation	Prevent unfair activities and corruption Transparent accounting disclosure and tax payment Comply with laws and regulations



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# Materiality Assessment

## Materiality Assessment Process

Hana Materials conducted a materiality assessment to identify and prioritize material issues and stakeholders' interested issues related to its business activities in terms of sustainable management perspective. We analyzed internal and external issues to form a pool of 45 sustainability issues and selected 10 core topics by receiving opinions from internal and external stakeholders through surveys. We established corresponding response plans for each core issues and disclosed relevant information in this report, and plan to continue to focus on them for the sustainable growth of Hana Materials.



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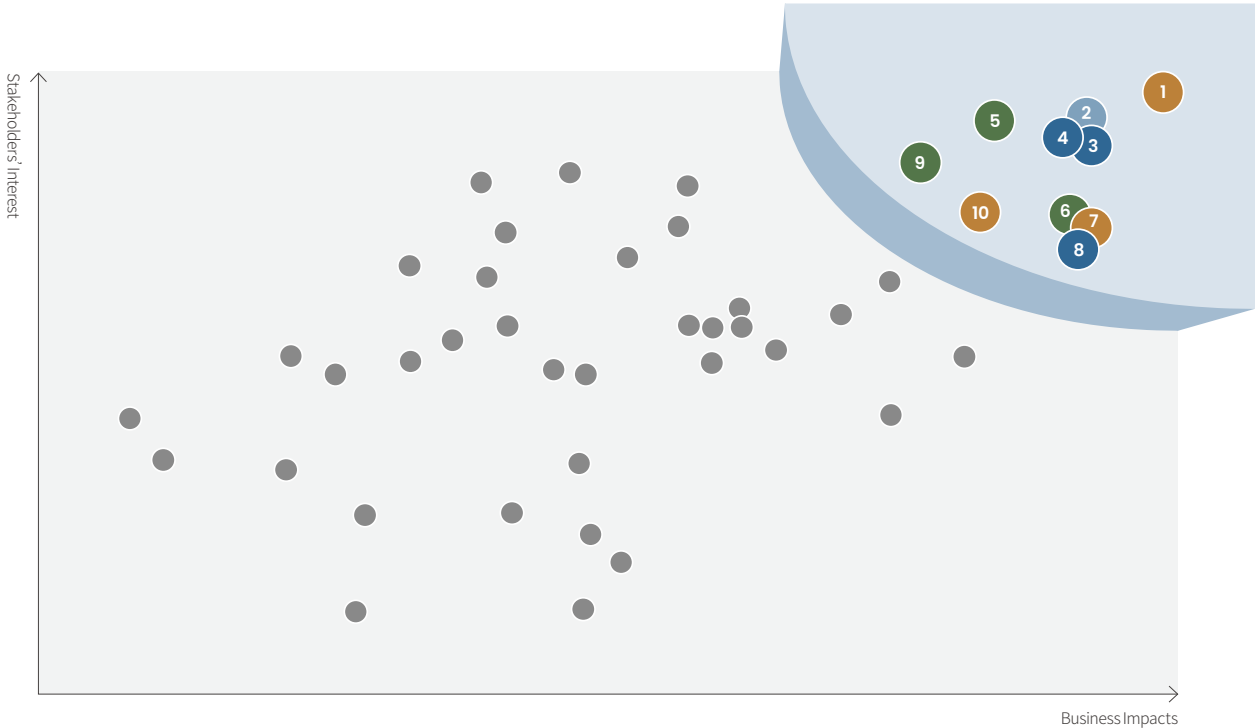


Result of Materiality Assessment

As a result of Hana Materials’ materiality assessment, the 10 material issues were selected including ‘Strengthen safety and health management system’, ‘Secure future growth engine’, and ‘Comply ethical management and compliance’. The relevant performances and activities are explained in detail.

Core Issues

E	5	Manage and minimize waste emissions
	6	Manage energy consumption and increase efficiency
	9	Manage and reduce GHG emissions
S	1	Strengthen safety and health management system
	7	Manage sustainable supply chain
	10	Respect employee diversity
G	3	Comply ethical management and compliance
	4	Prohibit unfair trade and compliance with related laws
	8	Establish risk management system
Economics/ Business general	2	Secure future growth engine



Area	Issue	Description	Reporting page	
1	Labor/ Human Rights	Strengthen safety and health management system	Reinforcement of health and safety management to ensure health and safety of employees and internal partners	39~41
2	Economics/ Business general	Secure future growth engine	Discover future growth engine and improve portfolio	11
3	Fair operation	Comply ethical management and Compliance	Comply with laws and regulations and conduct business in a transparent and fair manner	54
4	Fair operation	Prohibit unfair trade and compliance with related laws	Comply with fair laws and regulations and preventing anti-competitive behavior such as monopoly, unfair competition and collusion	55
5	Environment	Manage and minimize waste emissions	Recycle and manage various wastes generated by business operations	27
6	Environment	Manage energy consumption and increase efficiency	Improve energy efficiency, minimize usage and expand renewable energy	25
7	Supply Chain	Manage sustainable supply chain	Supply chain sustainability assessment, enhance risk management and comply with essential requirements from partners	42~43
8	Economics/ Business General	Establish risk management system	Establish and operate a risk management system and respond risks arising from changing internal and external management environments	56
9	Environment	Manage and reduce GHG emissions	Monitoring GHG emissions and minimize impact of climate change through emission reduction activities	24
10	Labor/ Human Rights	Respect employee diversity	Respect for employees' diversity and provide equal opportunities (Prevent discrimination against gender, disability, region, etc., conduct fair performance evaluation and improve such activities, provide career development, etc.)	33



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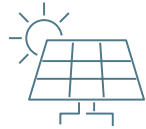
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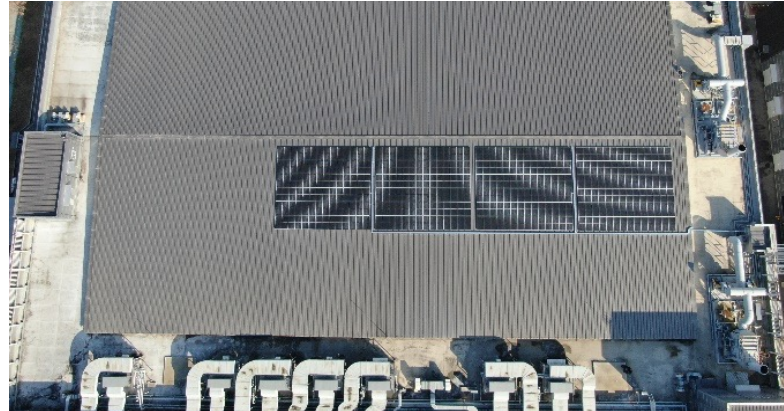
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# 2022 ESG Highlight

## Solar Panel Installation



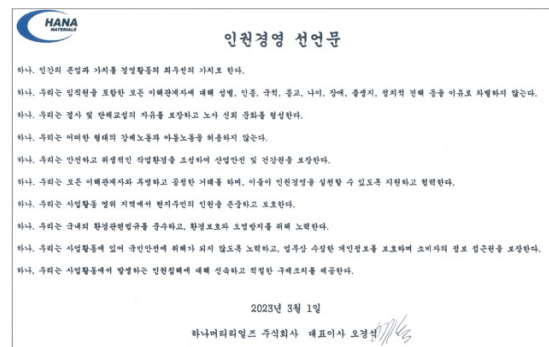
We installed solar panels on the roof of our Asan plant to actively reduce GHG emissions in 2022. Since its first operation in 2023, we have replaced the energy used by renewable energy and reduced energy consumption. We are also considering the installation of solar panels at the Asan Plant 2 to increase renewable energy consumption.



## Declaration of Human Rights Management



Hana Materials has written a Human Rights Management Declaration in response to international human rights issues in 2022. Through the Human Rights Management Declaration, we plan to publicly announce our intention to manage human rights and establish relevant regulations to further advance our human rights management.



## ISO 45001 Verified



Hana Materials continuously implements management activities to ensure the safety and health of its workplaces. The adequacy of our workplace safety and health system was proven through the newly acquired ISO 45001 certification in 2022. We will improve our safety and health management system to maintain the ISO 45001 certification.



<p><b>ESG위원회 규정</b></p> <p>2022년 4월 14일 제정</p> <p><b>제1장 총칙</b></p> <p><b>제1조 (목적)</b> 이 규정은 하나머티리얼즈 ESG위원회(이하 "위원회"라 함)의 설치와 내·외부위원회의 구성·운영에 관하여 필요한 사항을 규정함을 목적으로 한다.</p> <p><b>제2조 (위원회)</b> 위원회는 안전, 사람, 환경 또는 사회적 공헌과 관련하여 필요하다고 인정하는 이 규정 제2항에 따라 구성한다.</p> <p><b>제3조 (위원회 구성)</b> ① 위원회는 본회의 ESG 경영을 위하여 ESG경영위원회, ESG추진단, ESG추진단(ESG추진단)을 구성한다. ② 위원회는 기타 법령 또는 정관에 정해진 사항과 이사회의 위임한 사항을 처리한다. ③ 위원회는 필요한 경우 본회의 사정에 의하여 필요하다고 인정하는 경우에는 이사회에 보고할 수 있다.</p>	<p><b>내부거래위원회 규정</b></p> <p>2022년 4월 14일 제정</p> <p><b>제1장 총칙</b></p> <p><b>제1조 (목적)</b> 이 규정은 하나머티리얼즈 내부거래위원회(이하 "위원회"라 함)의 설치와 내·외부위원회의 구성·운영에 관하여 필요한 사항을 규정함을 목적으로 한다.</p> <p><b>제2조 (위원회)</b> 위원회는 안전, 사람, 환경 또는 사회적 공헌과 관련하여 필요하다고 인정하는 이 규정 제2항에 따라 구성한다.</p> <p><b>제3조 (위원회 구성)</b> ① 위원회는 본회의 ESG 경영을 위하여 ESG경영위원회, ESG추진단, ESG추진단(ESG추진단)을 구성한다. ② 위원회는 기타 법령 또는 정관에 정해진 사항과 이사회의 위임한 사항을 처리한다. ③ 위원회는 필요한 경우 본회의 사정에 의하여 필요하다고 인정하는 경우에는 이사회에 보고할 수 있다.</p>
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## Establishment of Board Committee Policy



We have established a committee policy for ESG management. Through the ESG Committee, Internal Transactions Committee, Compensation Committee and External director candidate recommendation committee, we plan to establish committees and launch activities. Each committee will strive to secure transparency of the BOD\* and actively promote ESG activities.

\* Board of director



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# ESG PERFORMANCE

Hana Materials aims to achieve corporate value improvement by establishing mid-to long-term strategies to fulfill its social responsibility as a member of the global society along with value and economic growth.



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# ENVIRONMENTAL

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# Eco-Friendly Management

## Establish a System for Eco-friendly Management

### Environmental Management

Hana Materials has established and operates a dedicated team for environmental management. A Chief Environment, Safety and Health Officer (CSO) is appointed to oversee the dedicated organization, and a decision-making system has been established so that related issues can be reported directly to the CEO. Responding to issues related to each business site was strengthened by appointing a person in charge at the Cheonan/Asan business sites, and a dedicated organization was formed separately to carry out the company's eco-friendly management through regular inspections.



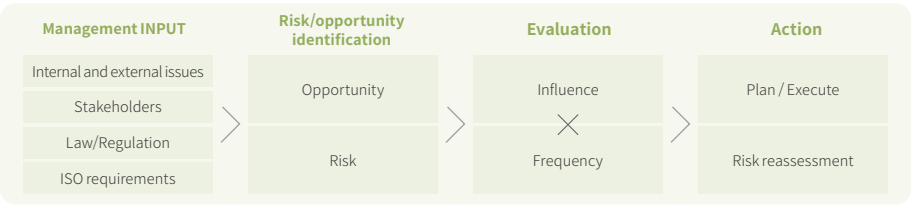
### Environmental Management Reporting System

We regularly report to the top management and the board of directors for eco-friendly management. Annual performance and plans related to the eco-friendly management are reported to the Board of Directors once a year. We make decisions on direction and major promotion activities through reporting twice a year to CSO on eco-friendly management. For executives and employees, performance and issues related to eco-friendly management are presented once a month and approaches for improvement are discussed. In order to actively reflect the opinions of the board of directors, we plan to expand the existing annual report to twice.

Report Target	Reporting time and agenda
Board of Directors	Regular report once a year, sharing of annual performance and plans
Top management	Regular report twice a year, directly report to CSO
Employees	Regular report once a month, sharing environment management progress and issues

### Environmental Risk Assessment

We identified vulnerabilities in Hana Materials' environmental management after conducting an environmental risk analysis based on the company-wide risk management system. The risk analysis was conducted based on a review of internal/external issues and stakeholder requirements, identifying each risk an opportunity factor and calculating the impact and risk level according to the frequency of occurrence. As a result of risk analyses in 2022, we identified 29 risk/opportunity factors, and we establish management measures and action plans according to materiality and engage in efforts to respond to risks.



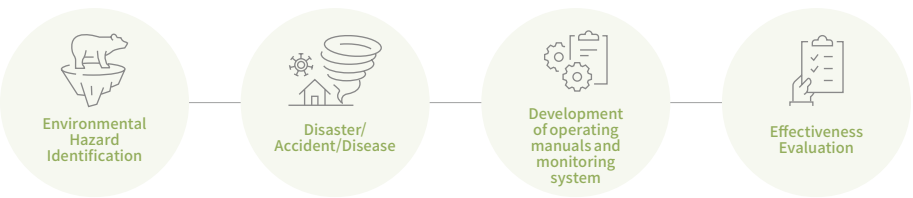
Input	Risk	Importance
Issues	Increasing demand for GHG reduction due to climate crisis	●
Law/Regulation	Increasing possibility of law violation due to strengthened environmental laws and regulations	●
Stakeholders	Request for disclosure of ESG performance by external stakeholders	○

Input	Opportunity	Importance
Issues	Establish foundation for ESG operation	●
Law/Regulation	Manage business sites through legal/international regulatory partner consultative body	●
Stakeholders	Exchange information through monthly environment, safety and health meetings	○

### Environmental Risk Management

We established risk management process in response to environmental risks. Based on this process, we will track for continuous environmental risk by identifying risks and establishing monitoring and management system.



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## Activities to Integrate Environment Management

We are providing environmental management training for executives and employees through activities to raise awareness and build consensus. Various trainings are provided including ESG/GHG management that employee recognize the need for environmental management as well as legally mandatory training such as hazardous chemical substances and environmental technician training. In 2022, we emphasized the importance of environmental management and attracted active participation from employees. We will continuously provide an ESG-related online trainings.



#### [Legal course description]

- Hazardous chemicals Management Training for relevant employees
- Hazardous chemicals Management Training for managers and supervisors
- Environmental Engineering Training

#### [Non-legal course description]

- 5-minute video daily training before starting work
- ESG/GHG management practical training
- ISO internal auditor / preparation training
- Chemical accident prevention management plan system training
- Chemical contained substances and product environmental regulation training

#### Description

### What is ESG?

Term refers to Environment, Society, and Governance



## Environmental Management Participation

We promote 'Hana BEST Practice' to revitalize the participation of employees in environmental management. Employees are encouraged to propose environmental management-related ideas, and the excellent proposal shared throughout corporation through monthly EHS meetings. The last environmental best proposal was "Waste Reduction Proposal" and we implemented waste reduction activities through improving facilities and manufacturing processes.



Received an excellent proposal award for "Waste Reduction Proposal"

## Eco-friendly Management

### Environmental, Safety, and Health Management

We recognize eco-friendly management as a key factor for sustainable growth, and has established the 'Environmental, Safety and Health Management Guidelines' for this purpose.

#### Our Efforts for Environmental Management Guidelines

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

#### Environmental Safety and Health Management Guidelines

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

1. Consider environment, safety and health as top priorities in all stages of product manufacturing.
2. Identify laws related to, safety and health and requirements of stakeholders and comply with regulations.
3. Minimize environmental pollution and impacts from production activities.
4. Faithfully disclose the performance of environment, safety and health management activities to stakeholders.
5. Create each business site a safe and healthy working environment to improve the health of employees.

Oh, Kyung-Seok CEO of Hana Materials Co., Ltd.

We obtained ISO 14001 certification for environmental management system in 2011 and maintains it through regular internal audits. In addition, we established internal processes and advanced the management system to promote eco-friendly management. We have established a process for environmental impact, related laws and regulations, emergency preparedness and chemical management system, and also advanced management system for chemical substances. Based on this process and system, we will actively promote eco-friendly management.



#### Environmental Impact Assessment Process

- Environmental goals, action plan/results
- Environmental impact assessment/ register

#### Environmental Management Process

- Wastewater operation report
- Air pollution operation report
- Waste management sheet
- Environmental Review

#### Identify EHS regulations and compliance assessment process

- Review regulations
- Regulations compliance assessment

#### Emergency preparedness and responses process

- Emergency drills
- Emergency response/Call tree

#### Chemical Management

- Review chemical regulations

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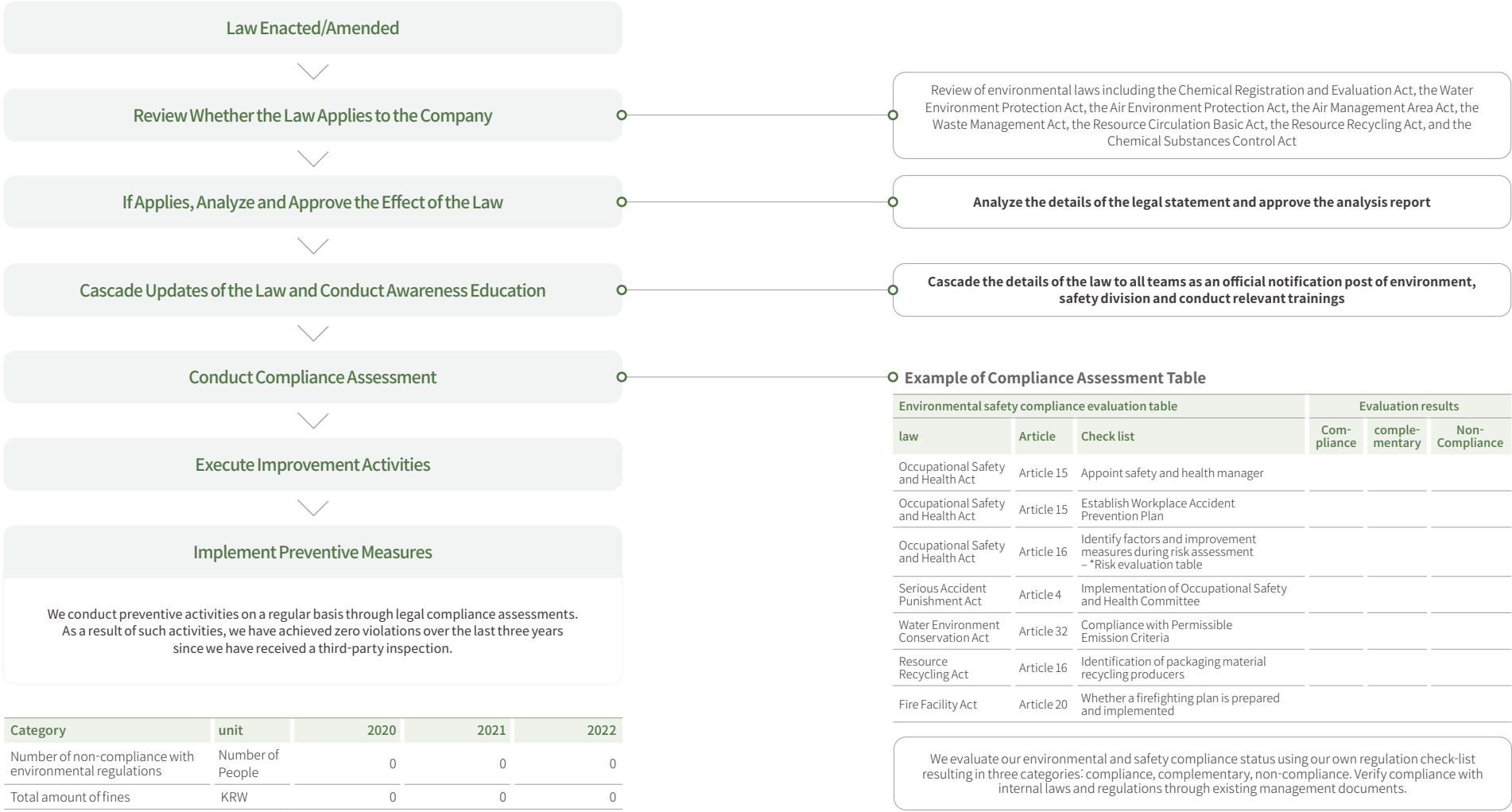
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Compliance

For eco-friendly management, we continuously monitor environmental laws and regulations (Chemical Substances Control Act, Water Environment Conservation Act, Atmosphere Conservation Act, Waste Management Act, etc.) that have a major impact on business sites, and actively converge stakeholders’ opinions on the environmental requirements. In addition, no violations of environmental laws have occurred since 2020 through the analysis of the effectiveness and self-evaluation of laws by preparing a response procedure for EHS-related laws.



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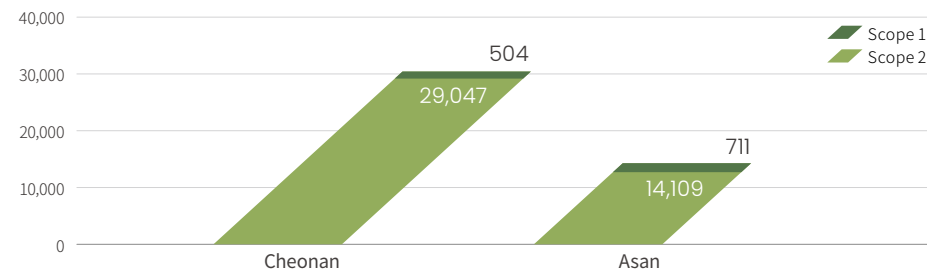
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# Response to Climate Change

## GHG Emission Management

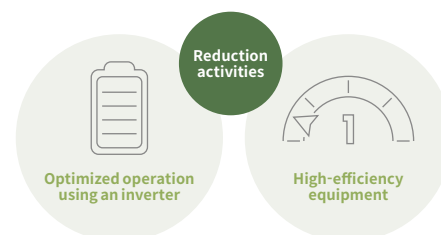
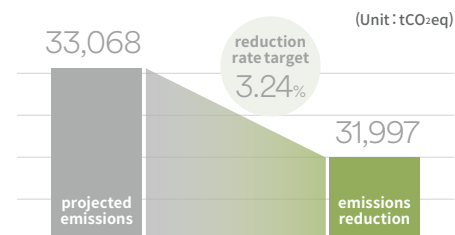
In 2022, Our GHG emission has increased more than 40% compared to 2020, to 44,372 tCO<sub>2</sub>eq, and the total emissions is expected to show an increasing trend due to the completion of Asan Plant 2. However, the emission per unit of sales has decreased compared to 2020, and we plan to manage GHG emissions based on unit emissions in the future.

GHG Emissions at Cheonan/Asan Plants in 2022



## GHG Reduction Targets

The Cheonan plant, as it emits more than 15,000 tCO<sub>2</sub>eq of GHG, is included as a target company for the GHG Energy Target Management System. Accordingly, reduction targets are set and reported to the government every year. In 2023, we promote reduction activities such as installation of inverters and use of high-efficiency equipment in order to achieve the reduction target of 3.24% compared to the base year (average emission of 2018, 2019, and 2020). In particular, since the proportion of GHG emissions from Scope 2 electricity consumption accounts for more than 90% due to the nature of the process, we have reviewed ways to reduce GHG emissions by expanding the use of renewable energy. After the completion of Asan Plant 2 in 2023, we plan to establish and manage a company-wide GHG reduction plan.



## Company-wide GHG Response Plan

We recognize the need to establish a mid-to long-term GHG management strategy as a responsive measure to climate change. We have expanded the scope of management from the Cheonan Plant to all business sites, which are managed based on the existing GHG target management system, a five-step procedure to ensure systematic management. We will identify and evaluate the issues related to climate change and issue status, then set internal GHG reduction target with action plans by 2023.



## GHG Reduction Activities

In 2022, Hana Materials installed renewable energy generation facilities to reduce GHG emissions. We are saving electricity through the completion of the rooftop installation at the Asan Plant and self-procurement of renewable energy in 2023. The estimated amount of electricity generated per day is 699.73 kWh, and the cumulative amount of electricity generated to date is 42,061 kWh. Installation of roof-type solar power installations at Asan Plant 2 is under review in the future.

### CASE

Hana Materials installed a solar power installations with a capacity of 199.93 kW on the rooftop of the Asan Plant to reduce GHG emissions. The construction started in 2022 and was completed in January 2023, and is now in operation, replacing 1% of the plant's total electricity. The average daily generation of solar power at the Asan site is 689.5 kWh, and as of March 27, 2023, it has generated a cumulative 42,061.2 kWh of electricity.



689.5 kWh per day  
on average Solar  
installations at  
Asan Plant



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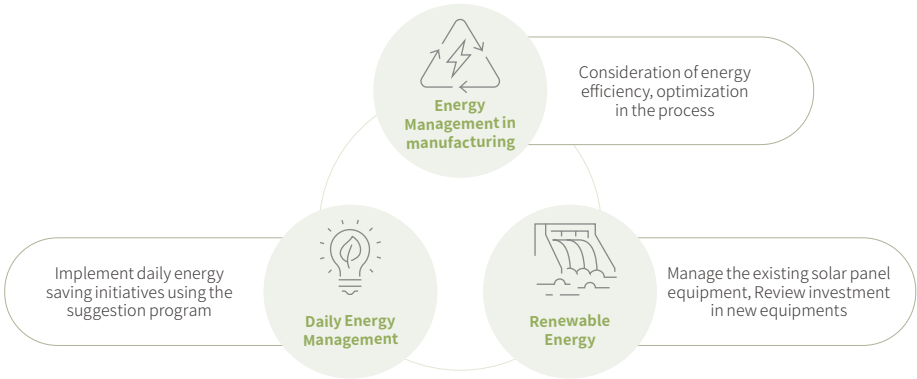
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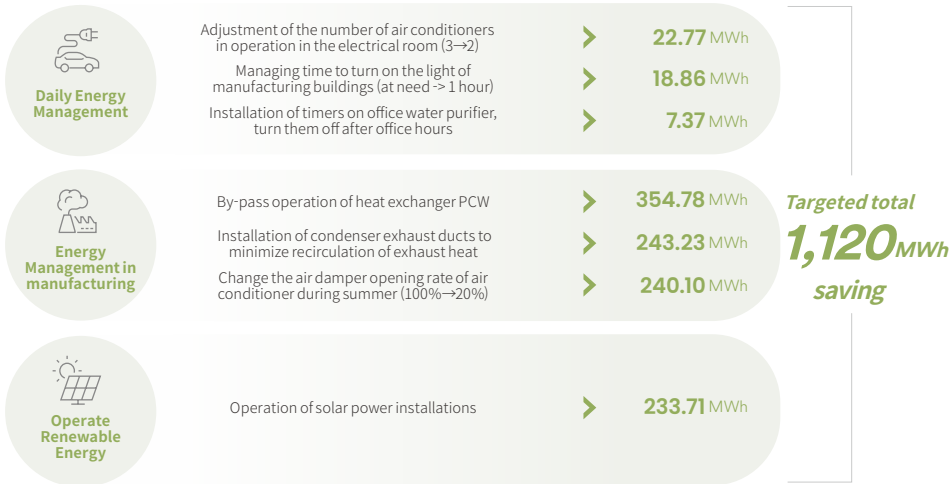
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Energy Saving Goals

For active energy reduction, Hana Materials has set up three energy reduction initiatives to reduce energy. We have established energy reduction activity plans for three areas: manufacturing, renewable energy, and daily energy management. We will strive to save 1,120 MWh of energy by upgrading the activity plans based on key directions.



Energy Reduction Activity Plans

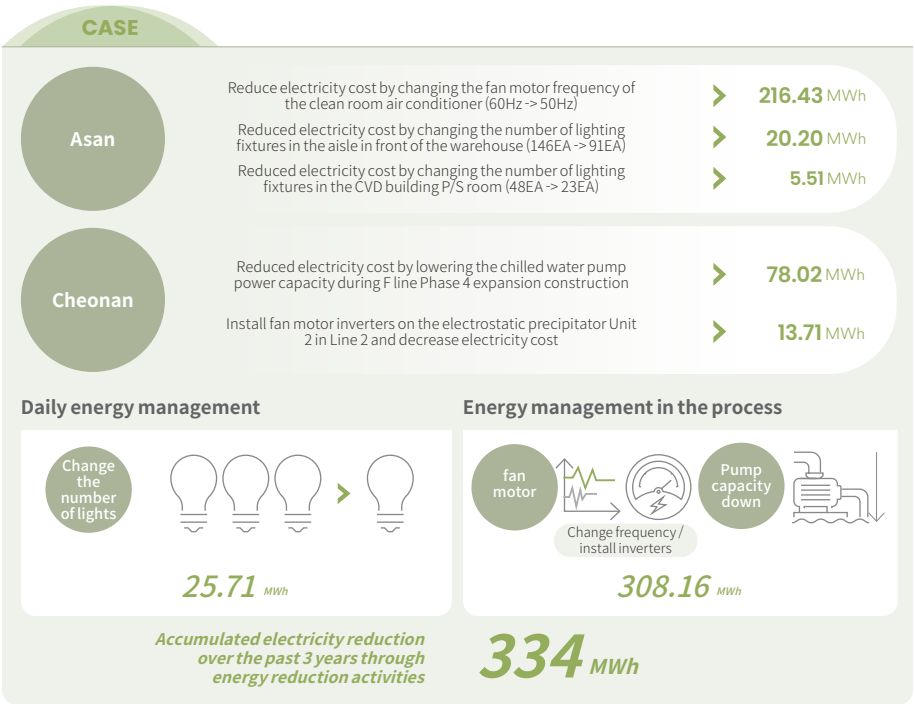


Energy Saving Management

Hana Materials carries out various energy management activities based on its energy saving initiatives. UT group actively promotes efficiency improvement of facilities and equipment to save the energy used in the production process. Additionally, practicing energy savings in daily life such as adjusting the operation of air conditioners and lighting times to create energy-saving culture among employees.

Energy Saving Activities

Each year, relevant departments prepare plans to reduce environmental/energy impacts and carry out annual reduction activities as planned. Through various reduction activities, we have reduced energy consumption by 334MWh in 2022.



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# Environmental Management

## ● Empower Water Resource Management

### Water Resource Management

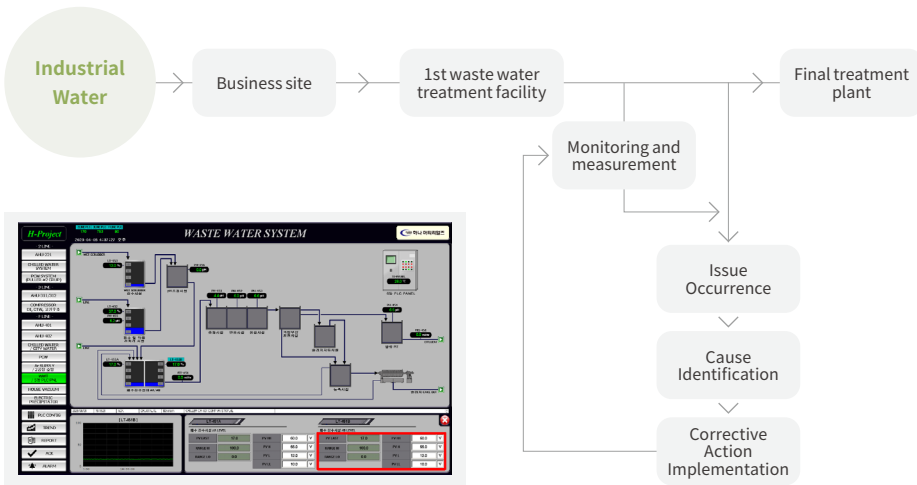
#### Water Management

Due to the increase in production of products, water consumption is on the rise from 396 kton in 2020 to 500 kton in 2022. However, unit emissions are on decline to 0.16 kton/KRW 100million in 2022, and in the future, we will manage water resource usage based on unit emissions.

Category	2020	2021	2022
Total water usage (kton)	396	442	500
Water source unit emissions (kton/KRW 100million)	0.20	0.16	0.16

#### Water Quality Management

We conduct self-measurement regularly through the system to manage water pollutants generated at business sites. We categorize water pollutants generated by each site, and work to reduce pollutants by measuring them. In order to minimize the environmental impact of wastewater that has been discharged, we conduct various activities such as regular monitoring of wastewater pollutants at each site and strengthening water pollutant control.



### Water Resource Improvement Activities

#### Water Recycling

At the Cheonan plant, R/O concentrated water generated in the ultrapure water process is stored in a water tank and then used in scrubbers or other processes that can be reused to reduce costs. The Asan plant also adopted the same process to reduce water consumption and costs, which is expected to reduce water use by about 3,000 tons per year. The Asan Plant reduced water consumption by 5,344 tons by modifying the regeneration cycle of the boiler water softener. Hana Materials will also continue to reduce water consumption in various ways in 2023.

The circular diagram shows the water recycling process: Ultra Pure Water System R/O occurrence → R/O concentrated water reservoir, tank storage → Raw water for R/O scrubber, supplied to manufacturing process → Water Reduction → back to Ultra Pure Water System R/O occurrence.

**CASE**

In 2022, the Cheonan plant increased water reduction to around 30,000 tons through various activities such as R/O concentrated water recycling, which is a 1.6-fold increase compared to the previous year.

Water reduction at Cheonan Plant	2020	2021	2022
A amount of reduction (ton)	18,269	18,254	29,636



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## ● Empower Waste Management

### Waste Emission Status

As production continues to increase, the amount of waste is increasing from 1,960 tons in 2020 to 3,086 tons in 2022. Despite the increasing total emissions of designated waste, the basic unit emissions remain similar to those in 2020. This is the result of efforts to minimize the impact of generation throughout the entire process and recycle the discharged residual ingots to use more than 20% recycled raw materials. We will continue to improve to reduce waste emissions.

#### Waste Emission Status

Category	Unit	2020	2021	2022
Total Waste Emissions	ton	1,960	2,556	3,086
General Waste	Total Consumption	ton	570	801
	Units	ton/ KRW 100million	0.28	0.30
Designate Waste	Total Consumption	ton	1,390	1,755
	Units	ton/ KRW 100million	0.69	0.65

#### Use of Recycled Raw Materials

Category	Unit	2020	2021	2022
Renewable Resources	Total amounts of renewable resources	ton	97,253	123,764
Recycled Resources Usage Ratio	%	26	23	22

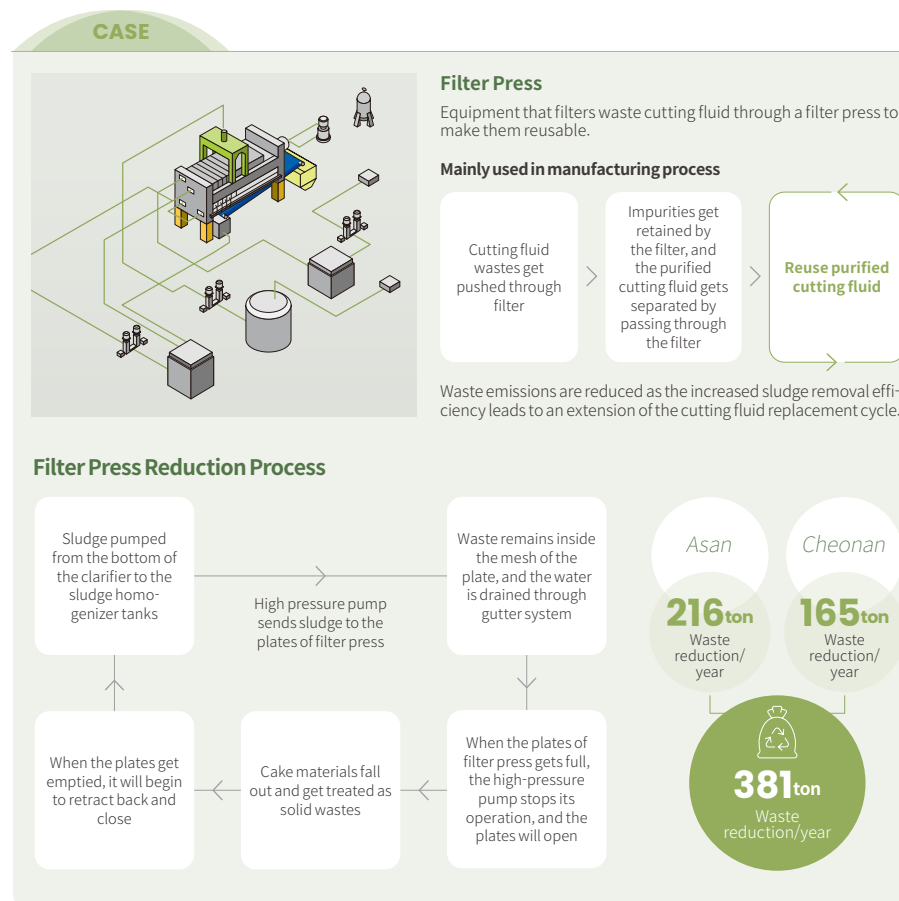
### Waste Management Process

We have promoted improvement activities for the entire process to reduce waste generated within the business site. When identifying the current status of internal waste, we review the feasibility of recycling, promote recycling of recyclable waste, and dispose them through a consignment company throughout the storage and transportation process. We are executing various improvement activities to reduce waste generated from business sites.



### Waste Reduction Activities and Accomplishment

To reduce waste generated within business sites, we have executed two approaches-process improvement and waste recycling expansion. We apply a 'filter press' in the process to improve the process so that cutting fluid can be reused, and promote resource circulation activities such as discovering companies to expand recycling. We are carrying out the plan for waste reduction with the final goal of building resource recycle based on waste management of base unit.



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● Empower Air Pollutant Management

Air Pollutant Management

Amount of Emission by Air Pollutant Type

The government continues to strengthen the regulations on the emission of air pollutants such as NOx and SOx. We are striving to minimize the impact on the atmospheric environment and respond to the strengthening regulatory circumstances. As a result of our emphasis on the management of specific air pollutants, air pollutant emissions were reduced by about 70% from 395.8 kg in 2020 to 123.5 kg in 2022.

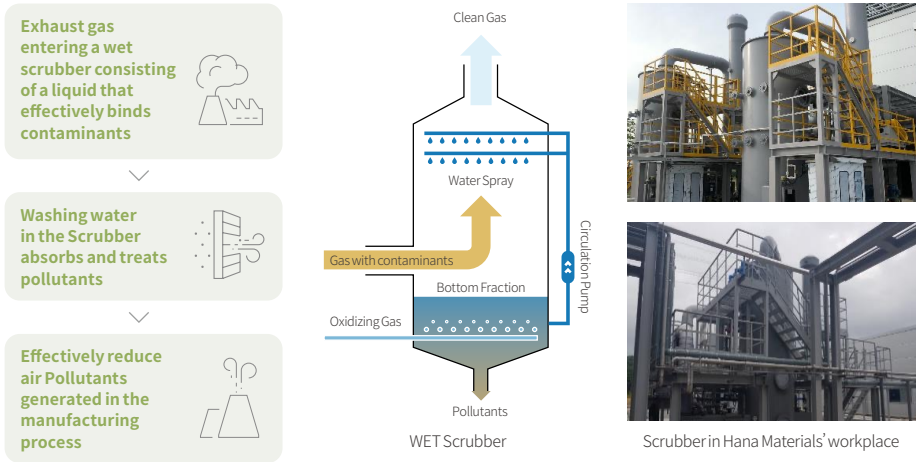
Amount of Emission by Air Pollutant Type

Category		Unit	2020	2021	2022
Air pollutants	Specific	kg	395.81	387.94	123.55
	Non-specific	kg	4,956.95	3,766.44	4,668.53
	Specific air pollutant emissions	Fluorine compound, Hydrogen chloride, NH <sub>3</sub>			
	Non-specific air pollutant emissions	Dust, SOx, NOx, HCl, NH <sub>3</sub> , Fluorine compound, THC			

Air Pollutant Management Status

We conduct regular measurement and monitoring to manage air pollutants. Furthermore, we are carrying out various activities such as installing scrubbers, filtration/electrostatic precipitators, and operating low NOx boilers to reduce air pollutants generated in the workplace.

Scrubber Ar Pollution Reduction Process



● Empower Hazardous Chemical Management

Chemical Emission Status and Management System

Current Status of Chemical Emissions

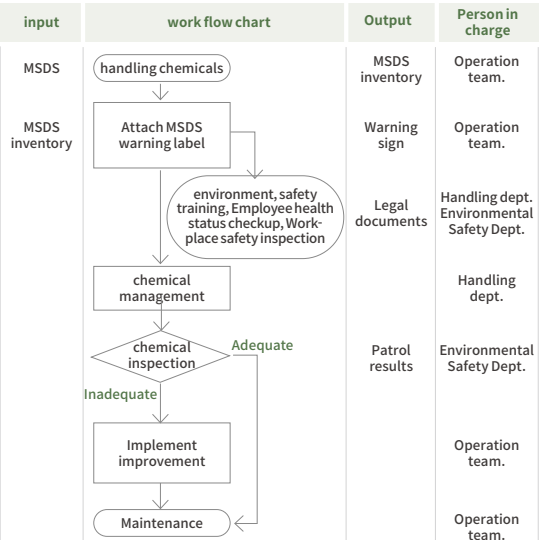
Category		Unit	2020	2021	2022
Chemical Substance	Hazardous Chemical Substances	ton	1,627	2,250	2,615

We conduct internal and external audit systems to strengthen the management of hazardous substances used at our sites. New chemicals as well as the existing chemicals are systematically managed based on the internal process, and regular inspections and training are conducted to prepare for emergencies.

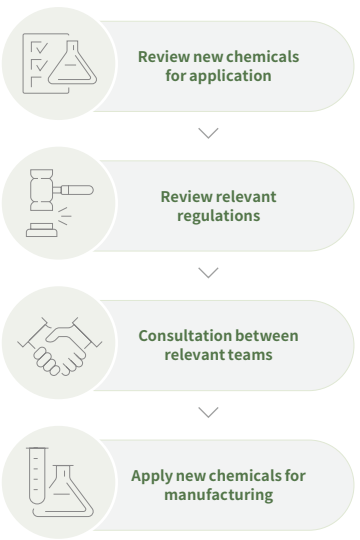
Chemicals Management Process

We are actively responding to domestic and foreign regulations related to chemical substances and systematically managing them to prevent accidents caused by chemical substances. When introducing new chemicals, we review the risk and material safety data sheet (MSDS) of the material on our own in advance to block risks that may occur when introducing new chemicals.

Chemical management process



Newly chemicals management process



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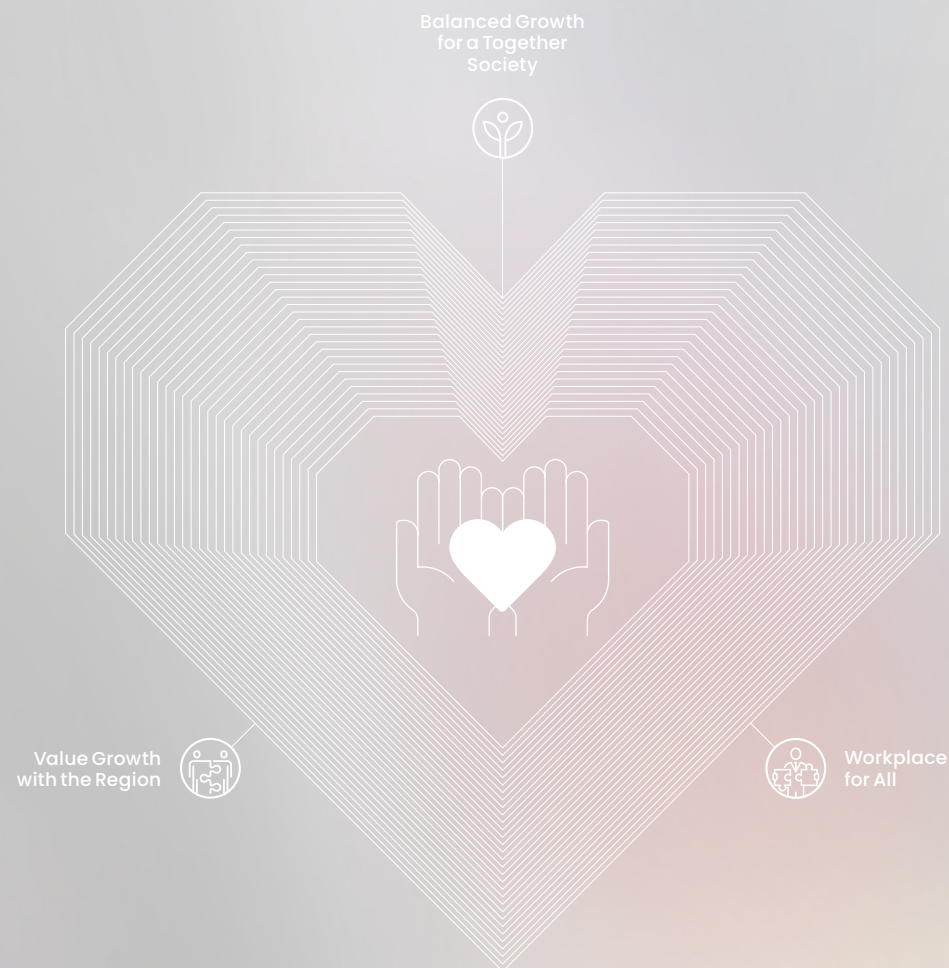




# SOCIAL

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# Human Rights Management

## Human Rights Policy

Hana Materials is dedicated to respecting all stakeholders’ rights and values, including employees, customers, suppliers, and local communities, based on our management philosophy, “Respect for People”, and promoting employees’ happiness. Based on the Human Rights Management Declaration, we do not discriminate based on gender, race, nationality, religion, age, disability, pregnancy, marital status, and social status in all management activities, including recruitment, promotion, compensation, and training. In addition, we have established a human rights management policy covering 10 areas to prevent any human rights violations that may occur during our business activities and have established human rights violation prevention and remediation process. We will strive to comply with human rights and labor regulations for employees, partners, and customers.

### Human Rights Management Declaration

1. We set Make human dignity and value the top priority in business activities.
2. We do not discriminate all stakeholders, including our employees, by gender, race, nationality, religion, age, disability, place of birth on grounds of political preference.
3. We guarantee freedom of association and collective bargaining and form a culture of trust between the company and the employees.
4. We do not allow any form of forced or child labor.
5. We create a safe and hygienic workplace to ensure occupational safety and health rights.
6. We conduct transparent and fair transactions with all stakeholders, and support and cooperate to facilitate their practice human rights management.
7. We respect and protect the human rights of local residents in the areas where we conduct business activities.
8. We comply with domestic and foreign environmental laws and regulations, and strive to protect the environment and prevent pollution.
9. We strive not to harm public safety in our business activities, protect personal information collected in the course of business, and guarantee consumers’ right to access information.
10. We provide prompt and timely remedies for human rights violations that occur in our business activities.

March 1, 2023

Oh Kyung -seok , CEO of Hana Materials Co., Ltd.

## Principle on Human Rights Management

The principles of human rights management cover discrimination, forced labor, child labor, workplace harassment, wages and benefits, freedom of association, safety, personal information, and human rights management of suppliers. Under the 10 principles, we aim to prevent human rights violations by Hana Materials and conduct human rights-friendly management practices.

Principle	Description
Non- discrimination	We do not discriminate in employment for any reason, such as gender, race, nationality, religion, age, disability, pregnancy, marital status, or social status, and we do not discriminate in terms of employment, promotion, compensation, training, etc. for the same reason.
Prohibition of forced labor	We do not force employees to work against their free will through mental and physical restraints for joining and maintaining employment, and we do not require the transfer of government-issued ID cards or passports as a condition of employment.
Prohibition of Child labor	We comply with the legal employment age, and relevant laws and regulations when hiring young workers.
Prohibition of work-related and sexual harassment	All acts that cause sexual humiliation, such as sexual harassment and sexual violence in the workplace, are prohibited, and all acts of harassment that cause physical and mental pain by taking advantage of one’s position or relationship advantage in the workplace are prohibited.
Wage and Benefits	We comply with the legal standards for wages and benefits, and operate a fair and reasonable compensation system.
Comply with working time regulations	We follow the standard of regular working hours and overtime hours stipulated in labor-related laws and regulation of each country or region.
Freedom of association	Freedom of association and the right to collective bargaining are guaranteed in accordance with labor-related laws and regulations of each country or region, and are not subject to unfavorable treatment or discrimination on the grounds of membership, activity, or formation of a labor union.
Workplace safety	To ensure that employees can work in a safe working environment, we regularly inspect the facilities, equipment, tools, etc. of the workplace, and prepare appropriate measures for the purpose of preventing physical and mental risks and support plans for follow-up management.
Personal Data Protection	We establish and operate personal information management standards, and comply with laws and regulations related to personal information.
Supplier Human Rights Management Rights	We do our best to establish a human rights management system for suppliers and support activities to prevent human rights violations.



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Human Rights Education

We conducted human rights education for all employees to integrate human rights management and encourage employees’ participation. The human rights training in 2022 covered sexual harassment, disability awareness, and workplace harassment prevention to prohibit any kind of human rights violation. 750 employees (100%) participated in the training, and we plan to prevent human rights violations that may occur unintentionally by continuing the training and creating an environment for employees to actively participate in human rights management.

Contents of human rights education

Program	Unit	2020	2021	2022
Sub total	Hour	3	3	3
Disabled Awareness Improvement Training	Hour	1	1	1
Awareness Improvement for Disabled Employees Training	Hour	1	1	1
Workplace Bullying Prevention Training	Hour	1	1	1
Number of Participation	Number of People	583(98%)	701(97%)	750(100%)



Grievance Communication / Reporting and Handling Process

We have offline grievance boxes and a HR team leader hotline channel to communicate and handle employees’ human rights-related grievances. Employees can report human rights-related issues to the head of the HR team/head of the HR group. Reported cases will be handled in accordance with the internal human rights protection process of the HR team. When a violation is reported, a disciplinary board is set up to decide on penalties, and to prevent the recurrence of such issues, grievance cases will be posted on a website accessible to all employees. In 2022, 19 grievance cases were filed by employees, and we resolved 15 cases related to the working environment, human relations, and organizational culture. Hana Materials will continue to manage internal human rights issues proactively to ensure no recurrence and further victims in the future.



Principle	Process	Responsibility	Remarks
Incident investigation	1. Investigate the details of the accident and the cause of the person involved 2. Organize the contents of the accident and report it to the CEO		
Submit disciplinary committee for consideration	3. Disciplinary Submission - Disciplinary Committee Submission (including accident report)		
Hold disciplinary committee	4. Hold a disciplinary committee - Referring to explanatory materials, accident reports, and supporting documents disciplinary resolution	HR Team	
Approve the result of the meeting	5. Approve the result of disciplinary -CEO decision		
Notify and enforce disciplinary decisions	6. Notify the result of the disciplinary decision to the subject 7. Immediately enforce the disciplinary decisions		



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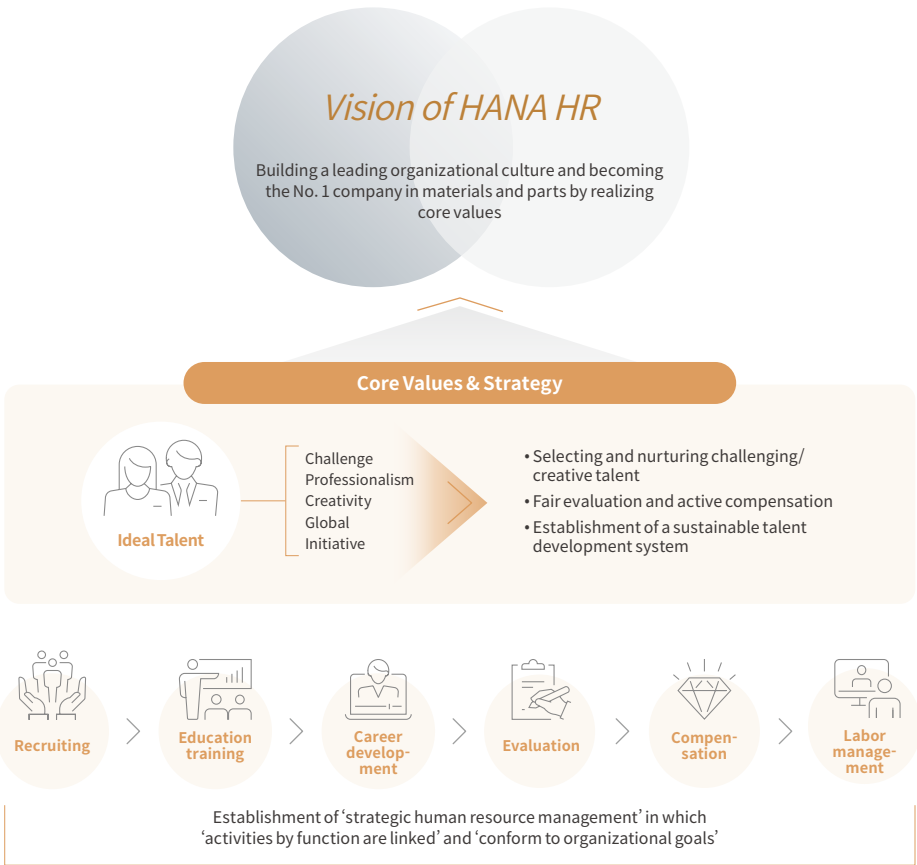
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# Employee

## Employee Management

### Talent Management Strategy

Under the HR vision of ‘Establishing a Leading Organizational Culture and Becoming the No. 1 Company in Materials and Parts by Realizing Core Values’, we select and train daring and creative talent/ execute fair evaluation and active compensation/ manage talent through the establishment of a sustainable talent development system. In addition, the overall human resource management system from the recruitment process to education/training, evaluation, and compensation is established to enhance the work competency and satisfaction of executives and employees.

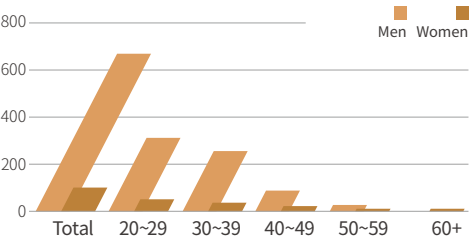


### Workforce Statistics

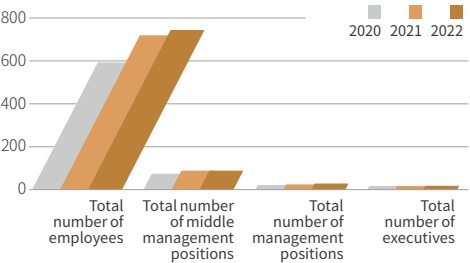
As of 31 December 2022, Hana Materials has a total of 750 employees, of which 99% are regular workers. Due to the nature of the industry, the proportion of female employees is not high, but we are making efforts to recruit female talent and increase the proportion of female managers.

Category		Unit	2020	2021	2022
total number of employees		Number of People	592	722	750
Female		Number of People	91	96	96
Male		Number of People	501	626	654
Types of employment	Fixed-term	Number of People	590	719	745
	Male	Number of People	499	624	650
	Female	Number of People	91	95	95
	Ratio of fixed-term	%	99.7	99.6	99.3
	Temporary *	Number of People	2	3	5
	Male	Number of People	2	2	4
	Female	Number of People	0	1	1
	Ratio of temporary	%	0.3	0.4	0.7

\* On-site support staff



Category	Male	Female	Total
20~29	299	41	340
30~39	246	32	278
40~49	84	21	105
50~59	21	2	23
60+	4	0	4
Total	654	96	750



Category		Units	2020	2021	2022
Total number of employees		Number of People	592	722	750
Male		Number of People	501	626	654
Female		Number of People	91	96	96
By position	Female Managers	Number of People	7	7	7
	Percentage of Female Managers	%	6.0	5.4	5.3



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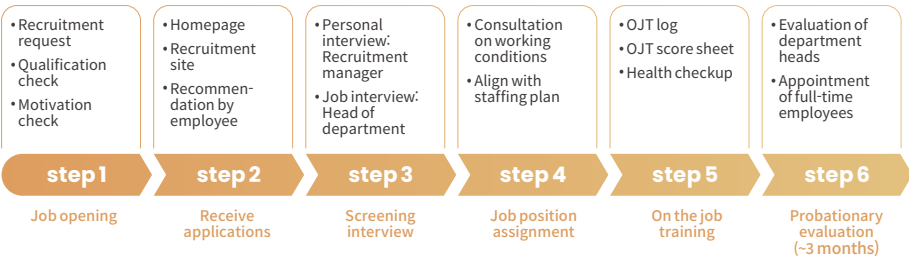
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Talent Acquisition

Recruitment Process

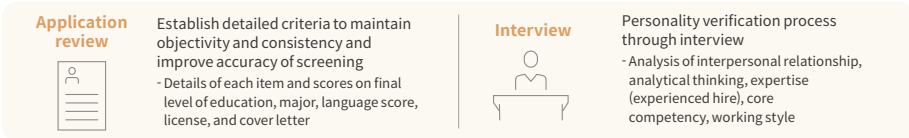
We operate the recruitment process from recruitment to selection and placement with top priority on fairness. In order to secure a pool of excellent talent, we are actively conducting recruitment activities using various channels, such as university job fairs, partners recruitment fairs, acquaintance recommendation, and in-house recruitment for internal employees.



Fair Recruitment

We conduct blind recruitment to ensure fairness and legitimacy of the recruitment process. We conduct evaluations based on applicants' capabilities, excluding personal information such as gender and region, and do our best to ensure that applicants are not disadvantaged in the recruitment process. We establish detailed criteria for each document screening items to verify objective specifications, thereby maintaining the objectivity and consistency of the screening and increase the accuracy. For the interview stage, we strive to secure excellent human resources through personality verification such as competency, interpersonal relationships, analytical thinking, and work style.

Strategy for Securing Fairness/Feasibility



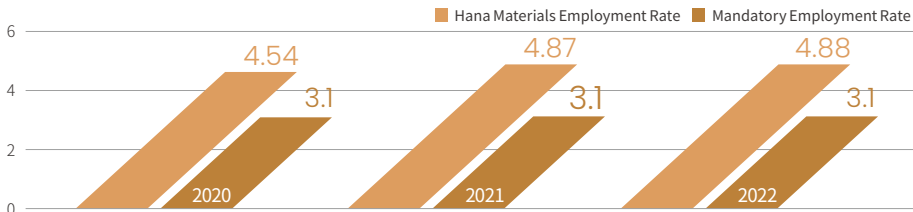
Employment Status for the last 3 years

Category	Unit	2020	2021	2022
Male	Number of People	61	140	128
Female	Number of People	14	9	10
Total	Number of People	75	149	138

Recruit People with Disabilities

Based on the people-first management philosophy, we are expanding the number of employees with disabilities, hiring more than required by the law to fulfill our social responsibilities and obligations for workers in the underprivileged. We separately operate departments with low technical requirements within the production operation department and actively hire disabled workers through an MOU with Chungju Seongsim School. The department consists of disabled workers, making it easy to adapt, and because there are many people from the same school, enabling them to form a bond together. Upon request, we invite sign language interpreters to support communication during interviews. We received an Excellence in Hiring People with Disabilities Award in recognition of our effort, and we plan to continue to support the social activities of the underprivileged in the future.

Three-year Employment Statistics of People with Disabilities



The 42nd Persons with Disabilities Day Excellent Employers for Persons with Disabilities



2022 Best Employers for Disabled Employers

Award Record

- Minister of Employment and Labor Award  
Disability Employment Promotion Business Owner
- Cheonan Mayor Award  
The 42nd Persons with Disabilities Day Excellent Employers for Persons with Disabilities
- Employment for the Disabled Award from Chungnam Branch  
2022 Best Employers for Disabled Employers



2022 Best Employers for Disabled Employers



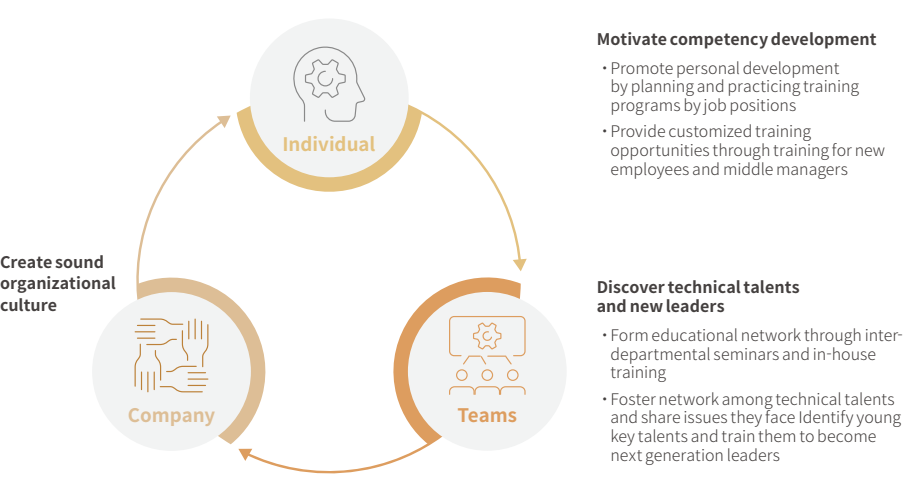
Manage Turnover Rate

To reduce the high turnover rate in the semiconductor industry, competing for talent, we have conducted preventive measures to reduce the outflow of talent and manage the turnover rate. We improve the satisfaction of existing employees with benefit programs and regularly collect vulnerable workers' opinions by holding meetings.

	Activities	Description
1	Collect female workers' opinions	<p>Due to the nature of the manufacturing industry (mechanical processing), female members are selected within the labor-management council in order to actively collect opinions (VOC) of executives and employees that can be neglected due to the low number of female employees</p> <p>We have many female employees at the management level such as female chiefs and department heads (team leader, group leader, etc.) which ensures female employees concerns and issues to be appropriately addressed</p>
2	Expand recruiting channels	<p>① In-house Recruitment: Provide opportunities to participate in the Career Development Program (CDP) by simultaneously recruiting in-house to strengthen employees' career development</p> <p>② Increase the average tenure by providing 'Naeil-Chaewoom Support Program' which provides grants for young employees with more than 5 years of tenure</p> <p>③ External Recruitment Agents: Recruit experienced employees via external agencies to verify the reliability of the applicant's work experience/capabilities. We expand our agency network every day</p>
3	Turnover rate improvement activities	<p>① 2 teams of 2 shifts to reduce on-site fatigue▶ Converted to 3 teams of 2 shifts (2018)</p> <p>② Encourage employees to work for a long time by providing 'Naeil-Chaewoom deduction system (Tomorrow's fill deduction)' in the form of a savings account</p> <p>③ Reward employees who have reached certain years of tenure (3 years, 5 years, 10 years, 15 years, etc.)</p> <p>④ Incentives (in the form of PI and PS) are provided twice a year to promote performance and induce longevity</p> <p>⑤ Promote various activities at the WLB level to let employees focus on their work</p> <p>- Operate flexible-time work (07:00-16:00, 08:00-17:00, 09:00-18:00)</p> <p>- Operate telecommuting for organizations that can work from home</p> <p>- Emergency Response System (child care, COVID-19, etc.)</p>
4	Operate meetings for employees with disabilities	<p>① Hold a meeting with the head of the department at least once every quarter with a sign language interpreter</p> <p>② Host a vocational counselor for employees with disabilities by the HR manager</p> <p>③ Cooperate with the Employment Agency for the Disabled to continuously promote support services for the disabled, settlement support</p>

Strengthen Employee Capabilities

It is recognized that securing core talents with various expertise is an essential element for enhancing corporate competitiveness and sustainable growth. Hana Materials fosters a sound organizational culture through employee training, supports talent development at the departmental level and discovers next-generation leaders, thereby motivating and encouraging employees to develop their competencies. Furthermore, we manage the training history and reflect it into compensation to motivate employees to bolster individual competency.



Training Statistics

In order to provide effective training for employees, Hana Materials organized programs ① general courses by position, ② specialized courses by department ③ core talent training ④ mandatory course required by law. This helps employees to improve their basic work skills through introductory, promotional, and leadership training depending on their position, and enhance their professional knowledge and ability to perform tasks through specialized training. The number of training programs increased from 166 in 2020 to 626 in 2022, and more employees participated from 128 to 370 in 2022.



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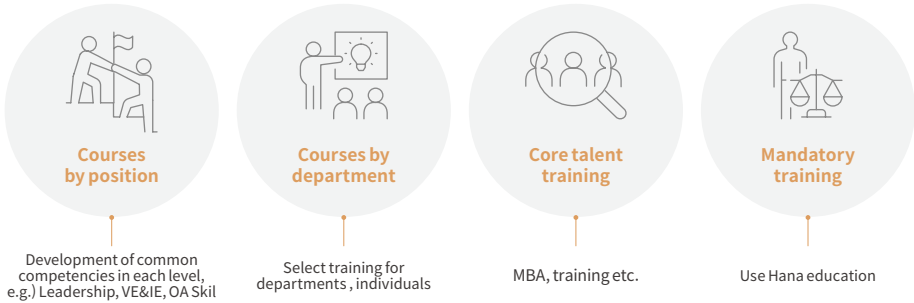
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Category	Unit	2020	2021	2022
Total number of employees participating in training	Number of People	128	284	370
total education cost	1,000 won	12,801	23,971	40,170
total training hours	Hour	2,862	8,415	10,504
Number of trainings	EA	166	521	626
Training completion rate	%	100	100	100

\* Provided trainings for office workers

Manage Training

Through employee training satisfaction survey, we identify possible improvements/additions to the current training program and strive to create a better training program.



Career Development Structure and Key Activities

Career Development Process



Hana Materials has a career development process, in addition to the educational support to strengthen employee competencies. The career development process is designed for employees who have been working for over a year to establish their own career development plan (goals and action plans) and elaborate them through career counseling with their direct department heads. At the company level, we have implemented career development support systems such as external training, overseas training, and mentoring programs as well as degree acquisition support and providing challenging projects.

Major Career Development Activities

The career development program consists of various activities such as education/training support, degree acquisition support, technical seminars, and job transition etc. We provide license acquisition support program and ensure fairness of selecting candidates for the program. In addition, if an employee wishes to switch position, we support them to do so in consideration of their work capabilities and characteristics. 10 of our employees had switched their positions in 2022. Hana Materials will continue to strive to improve and secure the career development activity program for individual career development and job satisfaction.

Support for Education and Training

	Write an official recommendation letter for the head of the department	eligibility review	application decision
Target	Employee who have received review and consent from the head of the HR team and the support team among those recommended by the relevant executive (team leader)		
Personnel Review Matters	3 years or more Personnel evaluation result within the last 3 years		
Supporting Details	Full admission fee + 50% tuition fee (up to 3KRW million/semester)		

Support for Degree Acquisition

Eligibility (Admission Criteria)	Unit	2020	2021	2022
Doctor's Degree	Number of People	1	1	-
Master's Degree	Number of People	1	2	2
Bachelor's Degree	Number of People	-	1	-
Associate Degree	Number of People		1	-

Job Transition Process

	Career Planning	Department Head career Counseling	Capacity Building Program
Category	Number of people	Effect	
Quality Inspector → Engineer	2	Contribute to strengthening management & technical capabilities within the department based on field experience	
Processing Operator → Engineer	3	Efficiency increase such as improvement of machining process, improvement of manager's skill level	
Job Transfer	10	Fostering practitioners with broad perspectives, fulfilling personal growth needs	



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Performance Management Process

For systematic performance management of all Hana Materials employees, we established company-wide goals and achievement directions, and established business plans and strategic tasks for each team/ group level linked to the company-wide business plan. After defining key tasks to achieve the team/ group's goals, setting personal goals based on the SMART principle, coordinating and agreeing on goals with department heads, and improving personal competencies while enhancing work performance.



Rewards

To improve employee engagement and satisfaction, we have established a performance compensation system that fairly and objectively evaluates employees' performance and rewards them according to the results, based on the promotion strategy of 'fair evaluation and active rewarding'. Employees who have been working with the company for more than three months are evaluated through relative performance. They are evaluated twice a year, in the first half (January-June) and second half (July-December), by group heads/ team leaders. They are evaluated on their performance, abilities, and attitudes toward achieving the company's business strategy and team/group goals. It is a process of scoring items based on internal evaluation criteria to calculate an overall score, which is then considered for salary increases, promotions, etc.

Annual Performance Management Schedule



Performance Compensation System

(Unit: KRW 1,000)

Award	Eligibility	Compensation
Proud Hana People	Employees who have contributed to the development of the company	500
Labor Day Achievement Award		300
Exemplary Employee		400
Immediate Award	On-site employees who have made efforts for monthly production activities, business guidance	50

Working Environment

Employee Work-Related System

We have implemented "flexible-time work" by which employees can maintain a work-life balance. This allows employees to freely choose the time they come to work to maximize their productivity. We will continue to comply with the Labor Standards Act and strive to improve the working environment of our employees.

Employee Welfare

Hana Materials offers a variety of benefit programs to its employees to increase work satisfaction and employee work-life balance. We have been providing leisure support programs to help employees to take a break after work, health check-ups, medical expenses support programs, congratulatory and condolence expenses for stable living, dormitories, tuition supports for children's financial support, commute buses, group personal accident insurance, and other activities to help employees focus on their work. We will continue to diversify and expand our benefit programs to improve employee satisfaction so that employees can find a better work-life balance and increase work efficiency.

Welfare Program



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## Organizational Culture

### Labor & Culture Management Vision and Strategy

To cultivate and revitalize our organizational culture, Hana Materials has set a labor-management vision of “ZERO confrontation/conflict” and has established detailed strategies to accomplish this by realizing social responsibility, increasing profits, improving quality of life, and expanding communication. The Labor-Management Council has five employer members and five employee representatives and holds regular labor-management meetings at least once every quarter. All 10 members of the labor-management council attend the regular meetings, where they discuss wages and benefits, working conditions, and other issues, and carry out the agreements made. In addition to this, by improving the working conditions of employees and promoting various communication activities, we have been selected as an outstanding company for labor-management culture by the Ministry of Employment and Labor in 2019. Hana Materials will continue to communicate and improve the quality of life for our employees, and we will think and act more deeply from the perspective of our internal employees.

### Confrontation/Conflict ZERO (0%)



- Implement ethical management
- Expand employment of the underprivileged

- Improve productivity
- Distribute performance through fair compensation system

- Establish an organizational culture that balances work and family
- Reduce working hours

- Expand and activate communication channels
- Activate GWP

#### Employee Conference - Reinforcing communication between company and workers

- Company-wide employee meeting (July/three times)**  
: Listen to the opinions of workers related to the emergency management system
- Meeting with site managers (September/three times)**  
: Awareness of the manager's mind and confirmation of willingness to collaborate through mutual exchange
- Giheung office meeting (May, September/twice)**  
: Offer HMT a sense of belonging through regular exchanges with workplaces, sharing goals
- Customer representative meeting (June/once)**  
: Mutual encouragement among employees who contributed greatly to being selected as the best partner of SEMES
- Meeting with new group heads (1st in December)**  
: Encourage communication between organizations and preparing joint solutions through issue sharing

#### In-house events - formation of organizational culture and enhancement of employee morale

- Celebrating the 15th anniversary of the company (April)**  
: Introduction and operation of events involving all employees (OX quiz, lucky draw)
- 2022 college graduate new hire workshop (November)**  
: for 16 people, first 2 days 1 night lodging course, department exchange meeting held
- Labor-management council workshop (May, November)**  
: Cheju-do, Chungnam-boryeong Workers' members' encouragement and building teamwork

### Organizational Culture Enrichment Activities

Hana Materials is continuously implementing various activities to revitalize organizational culture as a way to implement the established labor-management culture vision and strategy. We hold regular labor-management councils, run occasional meetings, and establish various communication channels such as group chat rooms to consistently communicate on labor-management issues and identify improvement needs. In addition, we organize sports events, departmental bonding activities, and movie days every year to foster a stronger bond between the company and its employees. We will continue to provide more opportunities for our employees to work, socialize, and interact together by having more communication events and activities to revitalize our organizational culture.



Regular labor-management council meeting (100% of CEOs attendance)



Regular (annual) sports events held



Holding a meeting between classes



Work-life balance activities (Movie Day)



Unity activities between departments



Christmas company event



Labor-Management Council Workers' Meeting



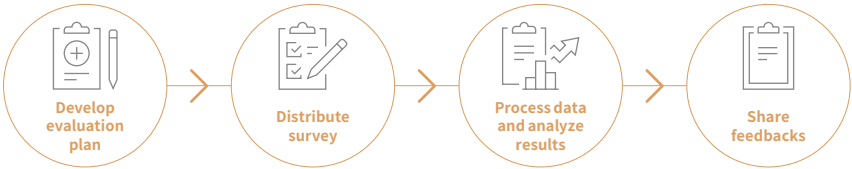
Election of workers' members



Dormitory meeting

### Employees’ Satisfaction Survey Process

To measure how satisfied employees are with their experience at Hana Materials and what improvements they would like to expect, we conduct a satisfaction survey of all employees to determine their level of satisfaction with organizational culture, work environment, leadership, communication, and business management. The results of the survey are used as a basis for improving the development and happiness of employees, and Hana Materials will do its best to ensure that the satisfaction level of all employees gets closer to 3.80.

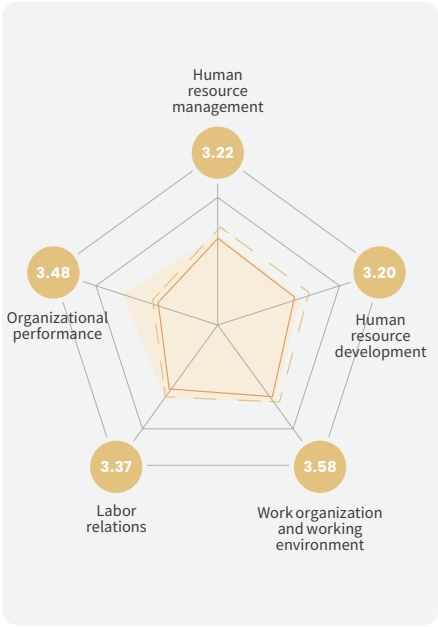


### Employee Satisfaction Results

In order to understand how satisfied employees are and what improvement activities they want while working at Hana Materials, satisfaction levels of organizational culture, work environment, leadership, communication, and management are identified through satisfaction surveys. The results of the survey are used as basic data to promote the happiness of executives and employees. We will give our best to reach a satisfaction score of 3.80 points (a 0.5-point increase) by enhancing our work-life balance and transparency in performance evaluation.

#### 2022 Employee Satisfaction Survey Overview

Purpose	Diagnosis of the level of workplace innovation in each field and survey of employee opinions on system improvement
Investigation period	2022.08.02 ~ 2022.08.05
Target	All employees of Hana Materials
Response rate	76.8%
Reference group	Top 12 companies with more than 300 employees and less than 1,000 employees in manufacturing & workplace satisfaction



#### Satisfaction survey items

Areas	Questions	Areas	Questions
Human resource management	Employment	Employment relationship	Elderly worker employment relationship
	Duties and Placement	labor relations	Labor values
	Evaluation		Level of labor relations
	Compensation		Grievance handling
Talent development	Promotion	Organizational performance	Job immersion
	Training and company recognition		Organizational commitment
	Training support conditions		Turnover intention
Organization of work	Training effects and utilization		Job satisfaction
	Organization of work	Personal information	Period of working
	Workplace safety status		Business
Working environment	Working system		Position
	Maternity protection and work-family balance support		tenure
	Shift work		

Category	Hana Materials Satisfaction Rating	Manufacturing with more than 300 ~ less than 1,000 employees		average top group	
		Satisfaction Rating	Gap	Satisfaction Rating	Gap
Overall average	3.37	3.04	▲ 0.33	3.28	▲ 0.09
Human resource management	3.22	3.13	▲ 0.09	3.37	▼ 0.15
Talent development	3.20	3.04	▲ 0.16	3.36	▼ 0.16
Working organization and working environment	3.58	3.32	▲ 0.26	3.54	▲ 0.04
Labor relations	3.37	3.09	▲ 0.28	3.35	▲ 0.02
Organizational performance	3.48	2.60	▲ 0.88	2.79	▲ 0.69



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# Safety and Health

## Safety and Health Management

Hana Materials manages safety and health according to the PDCA cycle. We set goals through the annual EHS plan and implement various activities to maintain safety and health in the workplace, such as EHS meetings and regular safety patrols. We monitor our safety and health activities and take corresponding actions to resolve any problems. We incorporate the contents into the annual EHS to prevent recurrence of problems and thus continue the safety and health management cycle. Hana Materials aims to prevent accidents through the advanced safety management process.

### Plan

- EHS annual plan report to the board of directors
- EHS annual KPI establishment
- Assess risk and environmental impact

### DO

- Regular monthly safety patrol (department + external associations)
- Monthly environment, safety and health meetings
- EHS education and accident response training
- Safety check, safety inspection

### ACTION

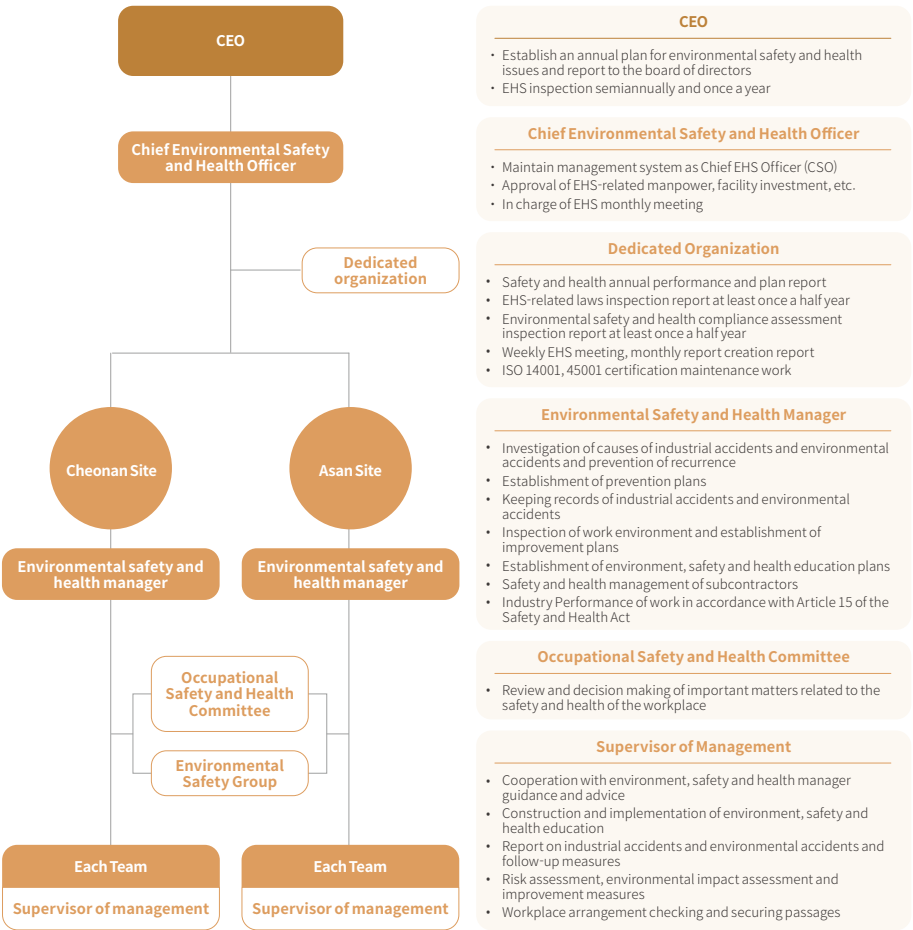
- EHS KPI result report and feedback by department
- Examine analysis of accident statistics, monitoring result

### CHECK

- Internal audit and customer audit
- EHS Monthly Report
- Compliance evaluation and revision by external organizations

## Health and Safety Organization and Role

We have appointed an environment, safety and health director for the safety and health management teams at our Cheonan and Asan plants to ensure integrated management. We have created a management system for environment, safety and appointed department supervisors. We operate a separate Occupational Safety and Health Committee every quarter to hear opinions on safety and health issues, review, and resolve related issues. In 2022, the committee resolved eight issues and amended the safety and health management regulations. Lastly, a separate consultative body of suppliers is formed to hold meetings, and the safety and health of the number of suppliers are guaranteed in accordance with related laws such as the Industrial Safety and the Punishment of Serious Accidents Act.



### 2022 Occupational Safety and Health Committee Agenda

Category	Receipt Agenda	Decisions Made	Others
Performance	8 cases	8 cases	13 cases
Remarks	7 cases including investigation of musculoskeletal hazards	Revision of safety and health management regulations	12 cases including eyestrain related to dark room lighting



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Safety and Health Management

Health and Safety Management Structure

We have set EHS targets to manage our health and safety. Every year, we review our overall safety and health activities through TRIR\* and KPI indicators for each department. KPI management indicators are comprised of prevention indicators such as safety education and emergency measures, and follow-up indicators such as accidents and legal compliance. The safety and health goal for the 2023 year is to maintain a TRIR of 1.1 or less and a KPI of 100 or more and improve safety and health within the workplace.

\* TRIR (Total Recordable Incident Rate): Total Recordable Accident Rate = Total Recordable Accidents x 200,000/Total Labor Hours.

Category	Description		Frequency
Prevention Indicator	Safety Education	Regular safety and health education	Every quarter
		Special safety education	Every quarter
		Onboarding training	Every quarter
		Training for operation procedure change	Every quarter
	Continuous improvement	Semiannual Improvement of Environmental Safety Patrol Issues	Every 6 months
		Proposal for safety improvement, case of near-miss accident	Every quarter
		Discover/improve risk assessment	Every Month
		Discover/improve environmental impact assessment	Every Month
	EHS meeting	Operate EHS meeting	Every Month
	Emergency training	Group emergency training	Every 6 months
		Emergency training at each business site	Every 6 months
Follow-up Indicator	Accident response and recurrence prevention		At occurrence
	Compliance with regulations		At occurrence

Risk Assessment

Hana Materials has implemented a self-assessment mechanism to identify potential risk factors and reduce workplace risks through continuous improvement activities. We have introduced various assessment techniques to discover risk factors from a new perspective.



Safety and Health Management

Workplace Safety and Health

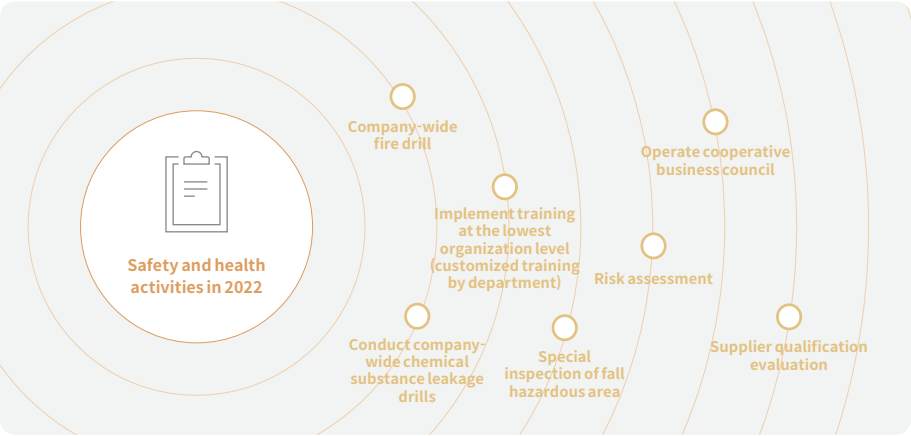
Hana Materials focuses on prevention and handling possible accidents in the workplace through active safety and health practices. We identify the types of accidents that may occur at our workplaces and behave to minimize risks. We regularly operate emergency drills to minimize casualties through quick response in case of an accident. We raise safety awareness of accidents through comprehensive leak response drills and fire drills. We have a regular inspection process to prevent hazardous accidents that may occur at our worksite. We are committed to minimizing the risk impact of our sites through environment, safety patrols, regular risk assessment, and regular environmental impact evaluation.



Fire Drill



Patrol Environmental-Safety Patrol



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Health and Safety Education

Through safety and health training for employees, we identify external regulations and prevent man-made disasters. We invited external instructors to provide training in accordance with the enforcement of the Serious Accident Prevention Act in 2022. Through sharing cases of accidents and providing safety and health education to employees, we raised awareness of possible safety and health accidents in the workplace.

Safety and health training hours	2020	2021	2022
Total employee training hours	14,184	28,119	29,406



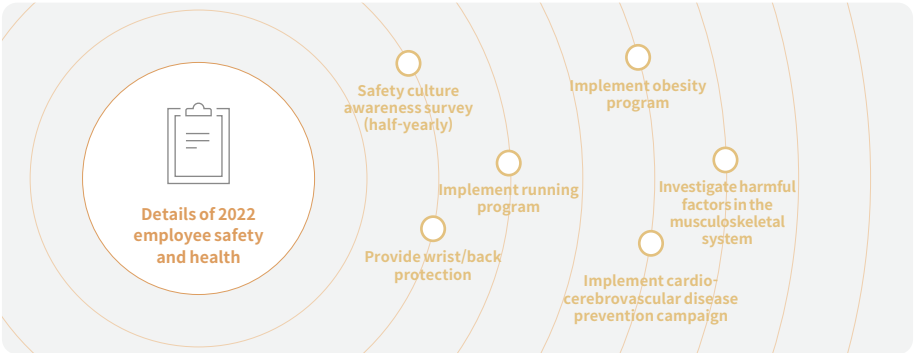
Training for Serious Accident Punishment Act (hosted by external lecture)

Safety and health training in 2022



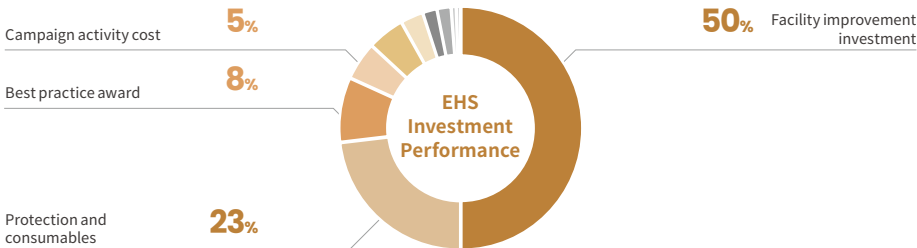
Employee Safety and Health

We have established a computerized system (IMIS) to manage the safety and health conditions of our employees in order to resolve safety and health issues. We offer medical checkups and job stress evaluations to foster a safe working environment for employees. We held a campaign for cerebrovascular and musculoskeletal education to prevent employee illnesses. We conducted the 2022 employee safety and health awareness survey to raise workers' safety awareness. Based on the findings from the survey, we are conducting various activities to ensure the safety and health of employees.

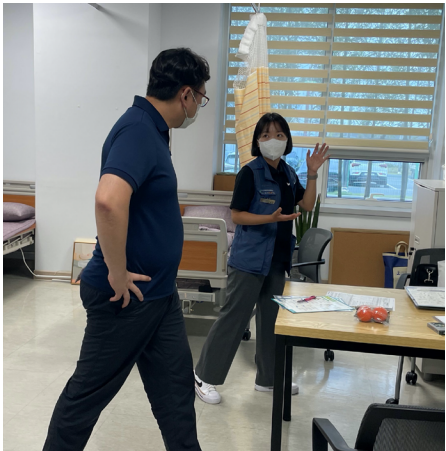


Investment Performance on Safety and Health

In 2022, Hana Materials expanded its investments in the environment, safety and health sector. In particular, we improved aged facilities and minimized risks in the workplace through improvements in the manufacturing process. In order to ensure the safety of employees, we invested in protective equipment and gear to prevent accidents. We are increasing awareness regarding environment, safety by rewarding the best environment, safety proposals and holding campaigns.



Cardiocerebrovascular Disease Campaign



Specialized education for musculoskeletal disorders

# Supply Chain Management

## Supply Chain Management Strategy

We have conducted objective evaluation/management activity toward new suppliers and existing suppliers in order to ensure smooth production operations by receiving high-quality raw materials needed for the manufacturing of products in a timely manner. We have established and implemented four major activities for its supply chain management strategy.



## Supply Chain Management Process

Hana Materials manages its supply chain according to the PDCA cycle to build a reliable supply chain. According to the PDCA cycle, P(Plan) establishes performance-oriented goals ▶ D(Do) Planned execution process ▶ C(Check) Preparation stage through learning and development ▶ A(Activity) Performs verified outcomes/final execution. Based on the evaluation results, we provide feedback to each supplier and manage the supply chain to operate efficiently through corrective actions.



## Supply Chain Assessment Process

### Supply Chain Assessment Process

We aim to manage a sustainable supply chain through regular evaluation of our supply chain. By establishing supplier management goals, we evaluate suppliers through internal evaluation indicators. Based on the results, we provide feedback to each supplier and take corrective actions, and internally approve them. We have various evaluation processes depending on the type of suppliers (raw materials, new, existing, etc.). For suppliers that exceed a certain threshold amount, Hana Materials takes efforts to ensure safety and security in the supply chain by conducting safety and health assessments in addition to the existing assessment process. If a company receives a low score in the due diligence or safety and health evaluation, it will be excluded from the contract or reflected in the next contract. Through the assessment, we identify the current condition of the supply chain and encourage sustainable management of our suppliers.



### Supply Chain Assessment Items

Hana Materials has various evaluation items for overall supply chain evaluation. It consists of 4 evaluation categories and 13 subcategories\* to manage supply chain. We have evaluated management-wide data to ensure the financial safety of our partners and environmental/safety data for sustainability. In order to check the environmental safety of suppliers, additional points are given when holding ISO 14001 certification, or a pledge to comply with safety management regulations is prepared to check the environment, safety and health management system. Hana Materials will strive to build a sustainable supply chain by upgrading partner evaluation items. Hana Materials is not subject to compliance with a conflict mineral as a semiconductor silicon wafer manufacturer that mainly handles silicon raw materials such as ingots. In the process of future business expansion, we will follow the RMI process when using conflict minerals.

\* ① Quality Management ② Inspection Management ③ Nonconformity Management ④ Material Management ⑤ Site Management ⑥ Facility Management ⑦ Change Management ⑧ R&D Infrastructure ⑨ Drawing/Warranty Management ⑩ Environment Management ⑪ Safety and Health Management ⑫ Purchase Performance Management ⑬ Partner Management

Items for environmental management	ISO 14001 Certification
	Environment, safety and health management regulation
	Organization



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Supply Chain Management

We have carried out Improvement measures based on supply chain evaluation. Evaluation is executed based on supply chain assessment items of periodic due diligence. We issue improvement measures according to the results of the regular evaluation. Depending on the regular due diligence items, it is classified into cervical suitability, improvement recommendations, and data requests to check for deficiencies. We request each improvement task to take action and check whether the improvement has been completed after a certain period of time. Hana Materials strives for supply chain management through evaluation of various items in the supply chain and improvement measures.

STEP1

Disclosure of regular due diligence plan for suppliers

Regular due diligence evaluation and on-site inspection

STEP2

Supplier due diligence evaluation

Based on 13 evaluation items

STEP3

Share regular evaluation results and request improvement actions

After issuing a request for improvement measures according to the results of regular evaluation, it is confirmed as an improvement letter

STEP4

Final result of supplier regular evaluation

Organize good/bad points, share inspection results (pass/fail), and include improvement item results

Examples of Regular Evaluation Improvement Action Results

Face-to-face due diligence and non-face-to-face evaluations are conducted on suppliers to identify items that do not meet our standards. Then, we issue a ‘request for improvement action’ including the request for improvement and the date of completion of improvement, and conduct a re-inspection to evaluate the supplier’s evaluation results.

Examples of rRegular Evaluation Improvement Measures Results

Items	FINDING	Illegible
Environmental Management	Absence of environmental safety management regulations	OFI
BCP	Need to establish BCP related to worker files	OFI
Safety and health management	Failure to submit safety and health pledge	Minor

Activities for Supporting Supply Chain

By establishing the stability of the contractual relationship through a “regular consignment contract,” we have provided a stable flow of funds for our partners and a financial foundation for growth. The contract is regularly operated by evaluating the consignment operation capability of consignment processing companies. We have provided stable supply and demand channels and our partners have established a stable financial management foundation, building a co-prosperity system with each other. In the future, we plan to expand our regular support activities.

Consignment Contract

Article 1. Purpose	• Regulation of all necessary matters such as rights and obligations between parties related to consignment transactions such as manufacturing, processing, testing, and repair of products
Article 2. Consignment of Manufacturing, etc.	• Obligation of consignment and conscientious consignment regarding the manufacture of the object • Details of the object and manufacturing, such as specifications, are described in a separate sheet • Applies to the order issued by the consignor for the manufacture of the object • The point at which the individual contract is concluded (When the order is (considered) accepted) • The status of an independent contractor between the consignor and the consignee

Supply Chain Communication Channel

We have prepared a regular communication channel to hear VOC to check the pain points and demands from suppliers. The communication channel is operated at least once a quarter for companies that need to check the status of incidents/accidents and supply and demand conditions. Through regular communication, we receive grievances and complaints from our partners and strive to resolve them.

Listening to Supplier VOC

Background	• Improve the existing problem that was possible to grasp the current situation only after an incident/cause occurred due to irregular, onetime business discussions with each company
Target company	• Companies that have had past incidents/accidents • Suppliers of raw and subsidiary materials that need to check supply and demand conditions • Companies that understand competitors and market conditions
Period	• At least once per quarter
Procedure	• Business discussions, meals, meetings, etc.
Participants	• Business associates, purchasing group managers, purchasing group heads, etc



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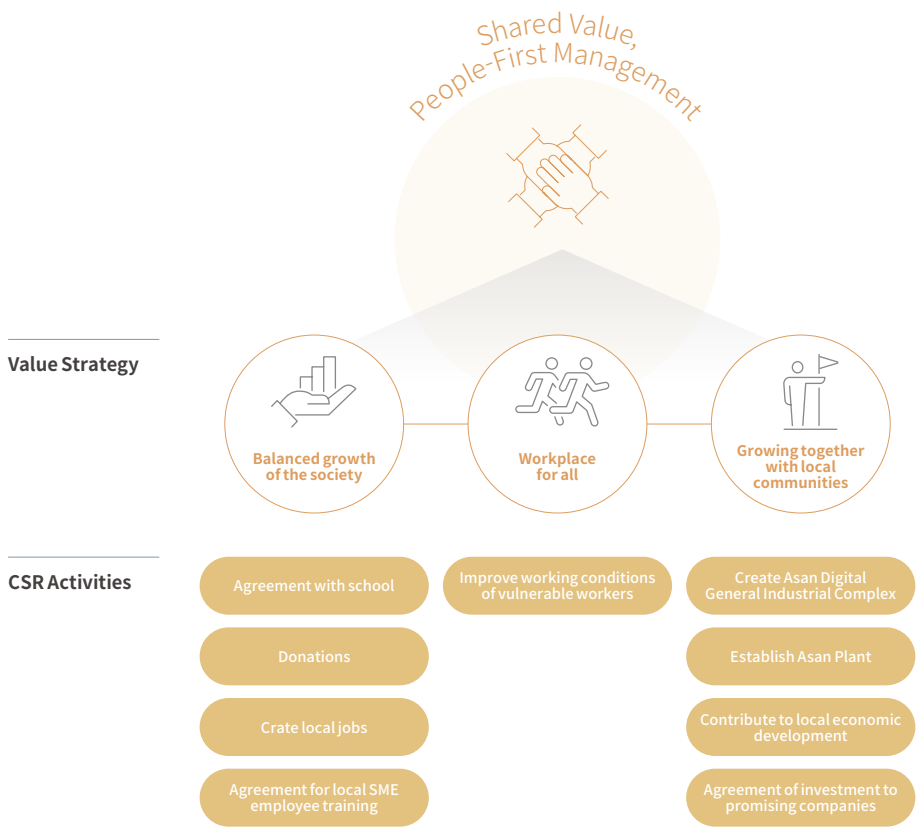


# Corporate Social Responsibility (CSR)

## Strategies for driving CSR

### CSR Philosophy

Hana Materials aspires to achieve a human-centered management philosophy with the goal of “Shared Value, Human-Centered Management”. In order to realize shared value, Hana Materials performs social contribution activities by setting the direction of three aspects: “Balanced Growth with Society,” “Workplace for All,” and “Shared Value with Local Communities”. The Human Resources and General Affairs teams oversee social contributions within Hana Materials and are reviewing the direction and goals of social contribution activities for systematic ESG management operations in the future.



### Foster Local Talent

Hana Materials is actively promoting activities such as fostering and recruiting local talents to grow together with the local community. We held recruitment fairs for universities in the Chungnam and Pohang regions to explain the semiconductor parts manufacturing industry and promote recruitment activities.



Chungnam Job Festival



Korea Job Fair



(Pohang) Nano Convergence Technology Institute  
Company Information Session

Period	times	University	Description of activity
2020	2	Soonchunhyang University, Korea Technology University	Company briefing session, job fair
2021	2	Korea University of Technology and Education University, Hoseo University	Company briefing session, job fair
2022	3	Dankook University, Soonchunhyang University, Korea University of Technology and Education University	Company briefing session, job fair



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## CSR Activities

### Create Social Value

Hana Materials regularly sponsors the Chungju Seongsim School, a private special school for the deaf, every year. The support program has been continuous for ten years, and in addition to providing financial support, we went a step further and provided recruitment programs within the company to lower the barriers for difficulty in finding a job. Going forward, Hana Materials will continue to implement activities to provide support and socialization opportunities for the vulnerable social group.

2020

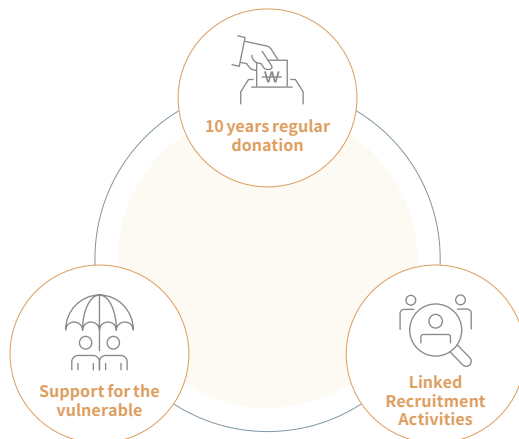


Support Chungju Seongsim School for the hearing impaired and link to employment for the disabled

2021



2022



### Status of Chungju Seongsim School Scholarship Fund Donations to Schools for the Disabled

Period	Donation amount
2020	5,000
2021	7,000
2022	5,000

### Contribute to Local Communities



### Details of Major Social Contribution Activities

(Unit: KRW 1,000)

Year	Donation	Amount of donation
2020	Chungju Seongsim School Development Fund	5,000
	Hope 2021 Sharing Campaign	200
	Korean Red Cross Chungcheongnam-do Branch Environment-loving Companion Company	100
2021	Children's Foundation Chungnam Regional Headquarters	10,000
	Chungju Seongsim School Development Fund	7,000
	Community Chest of Korea Let's Walk the Campaign	10,000
2022	Chungju Seongsim School Development Fund	5,000
	Korea University of Technology and Education Scholarship Fund	3,000

### Employee's CSR activity

In 2022, Hana Materials started the employee health improvement project "Gutju(dialect of 'let's walk')". When employees reached a certain number of steps, donations were made to the vulnerable social group in Asan City. A total of 425 employees participated in the program, and the original goal was 40 million steps, but it surpassed and doubled to 100 million steps. Through the active participation of employees, the amount donated in the year 2022 is 10 million KRW. 'Gutju', a co-prosperity program that enables employees to improve their health and deliver support to the vulnerable social group, will continue to be active this year.



Support for the vulnerable through the 2022 Together Happiness Walk Campaign

# Quality Management

## Quality Management System

Hana Materials has established a quality management system and carries out continuous improvement activities to provide quality and services that meets the needs of customers. We have established three principles of quality management: “Providing flawless quality and reliable services”, “Providing customer satisfaction through continuous quality innovation”, and “Thoroughly complying with the requirements of the quality management system” to ensure the absolute quality. In 2020, all employees participated in the “Declaration of Quality Innovation” and “Reading of Quality Resolutions” to foster the quality renewal mindset of employees and achieve absolute quality. After acquiring ISO9001 (2007), we have been continuously improving our quality management system and management processes.

### Three Quality Management Policies

Provide flawless quality and reliable services

Provide customer satisfaction through continuous quality innovation

Strict compliance with quality management system requirements

#### Quality Innovation Declaration

In 2020, we declare the company's management philosophy **as quality first** and declare the following to regain lost **customer trust**.

1. Customer's trust **is our life**.
2. The customer's judgment **is always right**.
3. Only the process followed **is the degree of quality**.
4. **I am the subject** of quality.

January 15, 2020  
All employees of Hana Materials



#### 2020 Quality Pledge

The quality team resolves as follows to establish a perfect process for restoring customer trust.

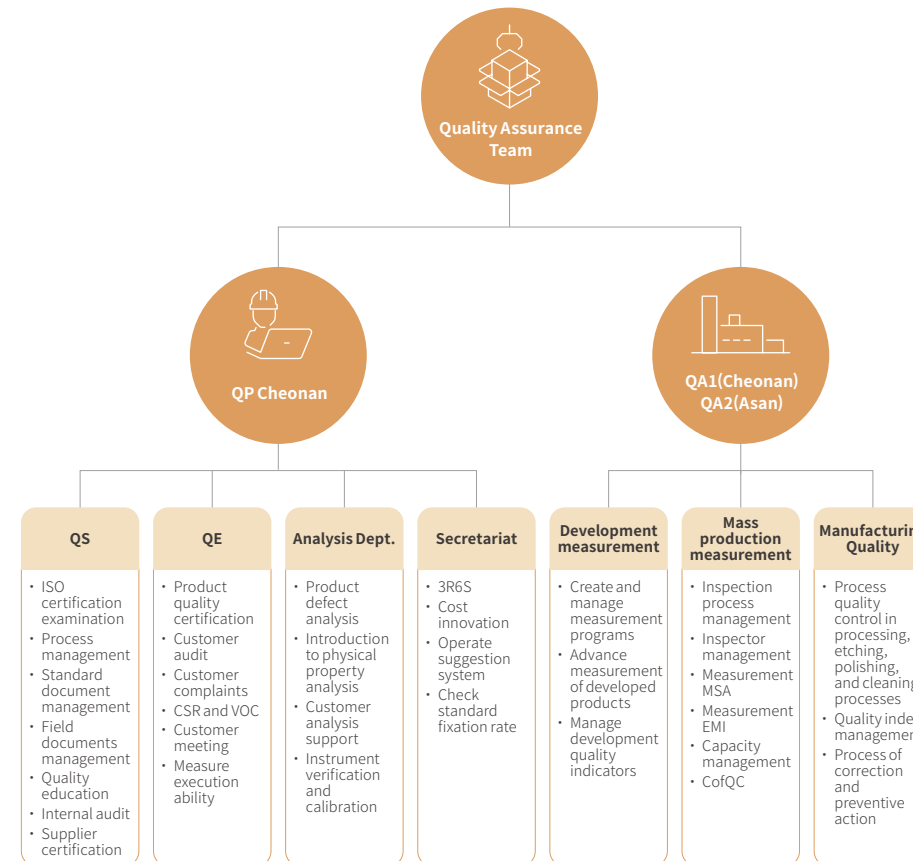
1. Quality problems leaked to customers **are our responsibility**.
2. **We are** the spokesperson for our customers.
3. Maintenance of all processes **is our responsibility**.
4. Preventive quality activities **are the top priority of our business**.

Quality Team Leader	CEO
2020. 1. 15	2020. 1. 15



## Quality Management Organization

Hana Materials is carrying out various tasks to improve the quality of products and services centered on the QP (Quality Planning) Group and QA (Quality Assurance) Group under the Quality Team. The QP group is in charge of external business and quality innovation, and the QA group is in charge of product assurance. The Quality Team takes on technical roles such as responding to customer VOC and quality perspectives, and performs tasks such as quality system (ISO 9001), internal standard document management, and internal audits, and strives to practice the best quality management.



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Quality Strategy

The quality of products and services is an important element directly related to the trustworthiness of a company, and Hana Materials is strengthening its quality management based on one of its core values, “Pursuit of Absolute Quality”, to provide high-quality products and differentiated customer service. To pursue absolute quality, we have established a step-by-step quality strategy for systematic and continuous quality improvement activities based on digital transformation to secure customer-focused absolute quality.

Ensure the highest quality to lead customers through digital transformation

Flawless

Zero Defect  
We neither make nor deliver defective products

Systematic QC

Digital Transformation = Innovation in work productivity  
Create database, automate, and utilize big data

Quality mind

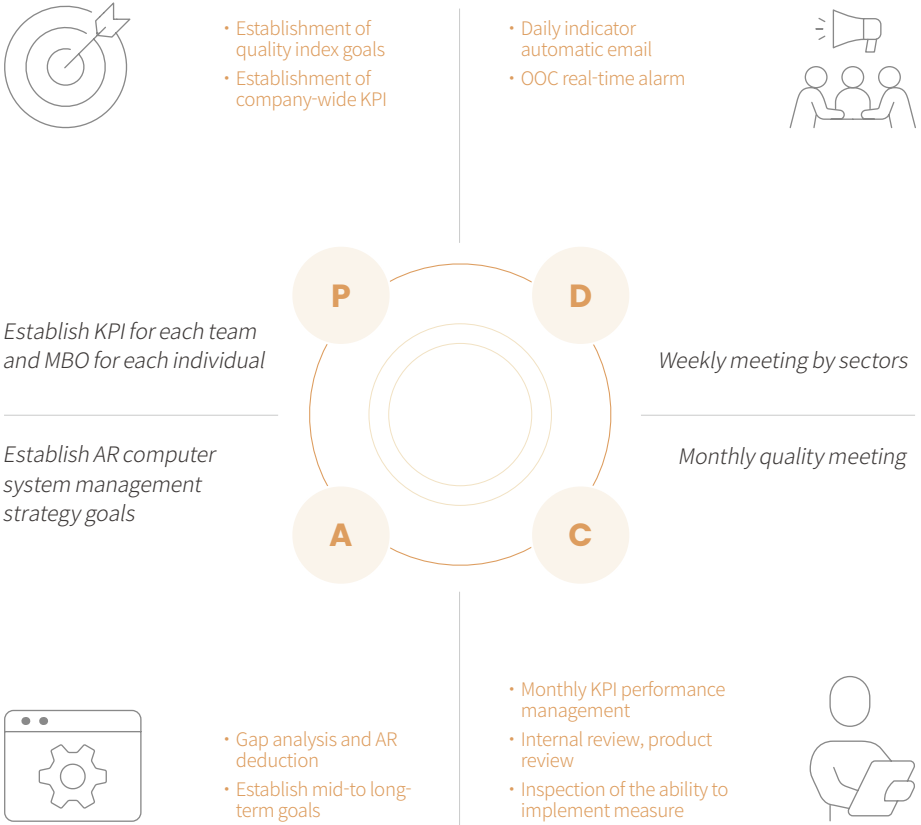
Realization of Perfect Quality  
All employees equipped with customer-oriented quality mindset

In order to improve the quality level to the World Class Bench Marking target level, we have established a four-step quality strategy with detailed implementation plans in three aspects: improving customer satisfaction, enhancing process quality, and matching quality among business sites.

	Step1 2022 Top Level in the Local Market	Step2 2023 Local Best Practice	Step3 2024 Top Level in the Global Market	Step4 2025~ Global Best Practice
Client satisfaction	In-house customer satisfaction measurement	Self Customer Satisfaction + Customer Satisfaction Survey	VOC → Management strategy reflection and improvement PDCA	
	Customer VOC history management	VOC Computer System		
Product quality	Product SPC operation and settlement	Process SPC + OCAP	Real Time SPC + OCAP	
	Segmentation of change management standard	Advancement of change management computer		
Business sites cooperation	Measurement/management Smart Factory	Measurement automation	Site Matching	
	Quality mind improvement training	Engineering Process Innovation Education		

Quality Improvement Activities

**CIP**  
For continuous improvement activities (CIP: Continuous Improvement Plan), we hold regular meetings and conduct measurement and improvement activities in accordance with the PDCA cycle. In order to prevent the occurrence of the same or similar defects and to improve quality continuously, we are conducting operational inspection activities and trying to obtain uniform quality by constantly identifying and improving the causes of issues and countermeasures.



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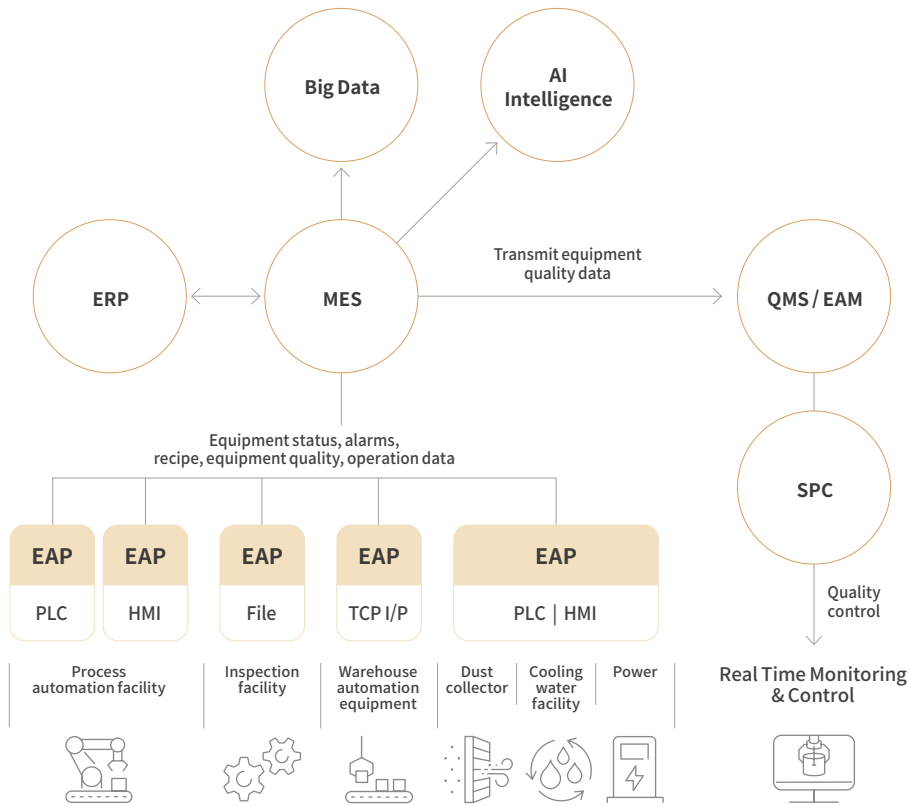
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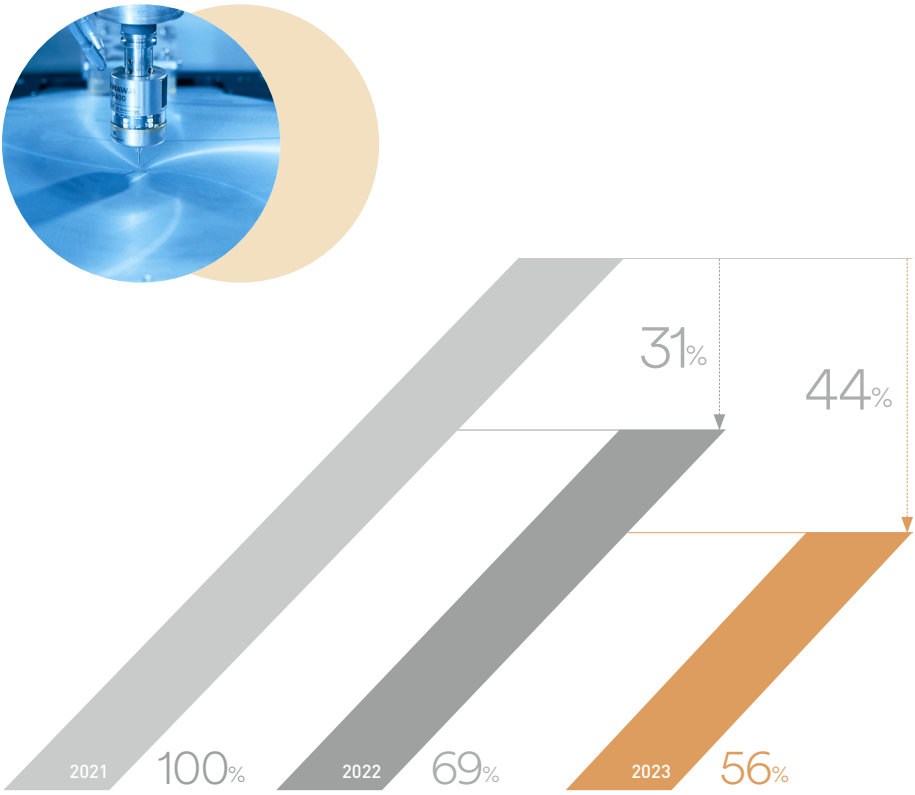
Digital QMS

Hana Materials has developed an SPC process for systematic quality Trend management in product quality control to improve customer satisfaction. Through Real-time monitoring of manufacturing data, we can quickly identify defective factors and improve the management efficiently. To realize Digital QMS, we are promoting Smart Factory through Big Data analysis and AI intelligence.



Quality Management Results

To achieve our goal of ‘absolute quality’, Hana Materials actively conducts activities to identify and improve quality degradation factors within the process. By identifying the causes of process defects and utilizing statistical techniques to improve the process capability index, we have secured standardized quality through continuous verification of measures. Through the above activities, Hana Materials’ process defective rate has been gradually reduced over the past three years, down by 44% by 2023. We promise to continue to do our best for the highest and absolute quality.



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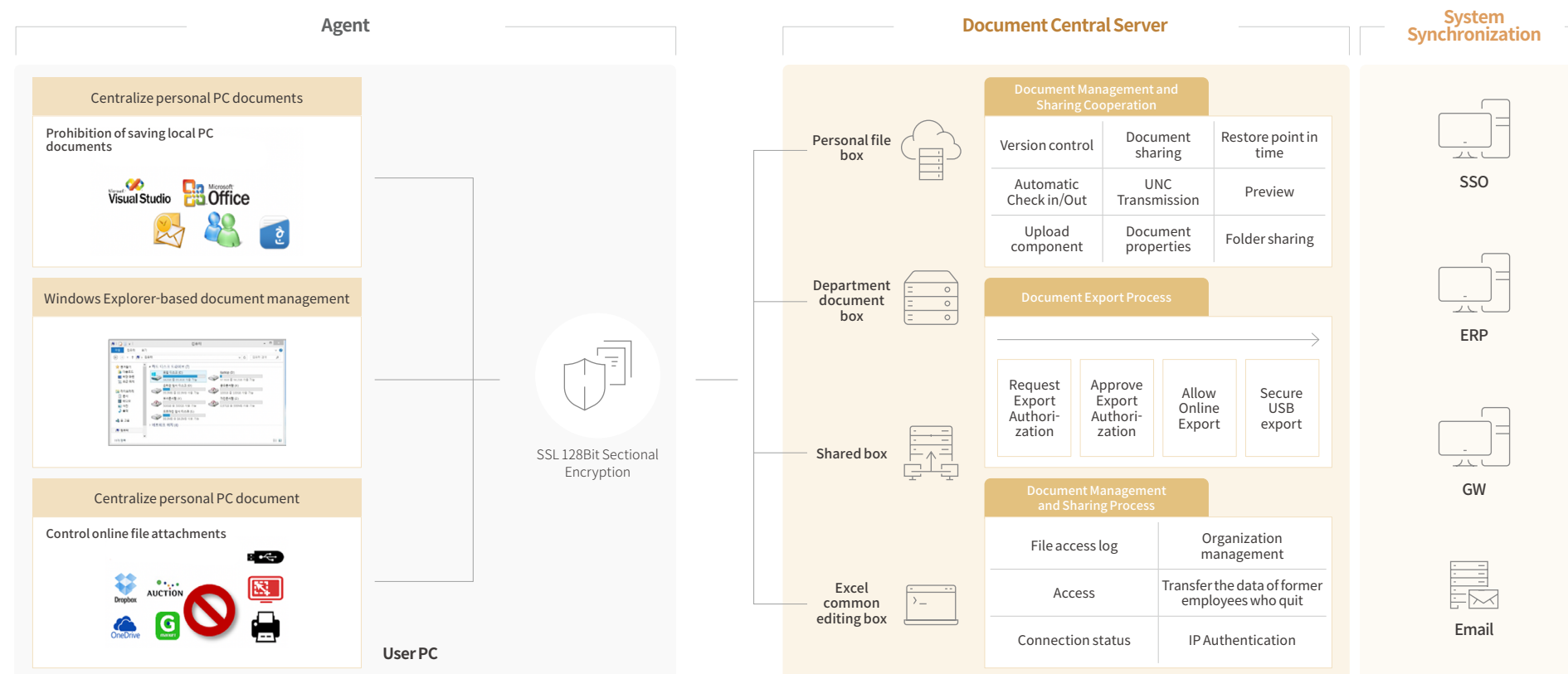
# Information Security

## Information Management Department

Hana Materials is aware of the importance of information management and promotes information protection activities to securely manage not only the company's information assets but also the information of internal and external stakeholders. Currently, key internal information is managed by the General Affairs and IT teams, and the overall security/inspection of the system is managed by an outsourcing company with specialized expertise. The IT team is in charge of electronic documents, while the General Affairs team manages other internal and external employees and subcontractors. In order to implement more systematic information management/protection activities, we will appoint an information protection management system, a dedicated organization, and a director in accordance with laws related to information security.

## Information management system

In order to protect customer information, Hana Materials has built a management system that prohibits information leakage. We have set up a VPN firewall on our internal network to restrict access by outsiders other than authorized personnel. We have also established a centralized document system to prevent security leaks through a shared document system that does not save on the PC itself.



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### Information Management Activities

Information security is a critical issue in the semiconductor industry, and in recent years, due to an increased volume of information handled and frequent data leakages, the importance of information security management has been highlighted. In order to quickly respond to these changes, Hana Materials sets every Thursday as “Self-Security Inspection Day” to recognize the importance of information management and perform regular management activities. We check vulnerabilities in our information security through document security, data rights, server management, and network management, and actively prevent information leakages. In addition to systematic management practices, we conduct information protection training once a year to raise employee awareness. The information protection training covers prevention of malware attack and internal information leakage through email. Through these trainings, we inform employees about the importance of information protection and how to secure information.

Provide information through ERP, MES real-time interface executives

We provide integrated management information (EIS) through a real-time interface between ERP and MES, and provide information and collaborate with internal users, customers, and partners through systems that support internal and external information.

In-house VPN firewall setup and management

We set up a firewall for the company's internal network (VPN), block access to the internal network from outside the company, and set up a server section (DMZ) to restrict access to authorized persons only.

DLP(Data Loss Prevention)

DL is used to safely protect documents stored on corporate PCs and prevent data from being stolen, lost or leaked due to intentional or mistaken insiders.  
\*DLP (Data Loss Prevention): PC security control + personal information leakage prevention + security area USB (prevention of loss) + S/W + H/W management

Appropriate handling of failures in case of failure

Information and knowledge are systematically managed through integrated monitoring of hardware and software. In addition, when a failure occurs, we identify the exact location and scope to deal with the failure quickly and effectively.

Storage device: Block USB, only allow CD/DVD reading

For information security, we refrain from taking in and out of information storage media (PC, external HDD, USB, CD/DVD) without permission. Access to the USB connection in the PC is blocked, CD/DVD is read only, and only approved information storage media can be used.

Conduct self-security checks

We conduct self-security checks every Thursday.  
**1. Document security** Personnel with special trends, website, mail, web export, storage media, printing, personal Information handling, etc.  
**2. Data authority** File server, document centralization, ERP, MES, iMIS, GroupWare, etc.  
**3. Server management** Server log, capacity , server manager, power, temperature and humidity, etc.  
**4. Access Management** Network, firewall log, etc.

Centralize document and folder management

For cyber security management, local PC document storage is prohibited, and file movement and copying are controlled. Documents are managed based on Windows Explorer, and all documents are centrally managed as assets and security.

Document security & physical security: watermark, print information, storage

When sending or taking documents out of the company, you must obtain approval from the head of the department in charge. Sensitive documents are not copied as much as possible, and must be shredded and incinerated. For the security of output, watermarks are introduced and used to prevent copying and track copying routes.

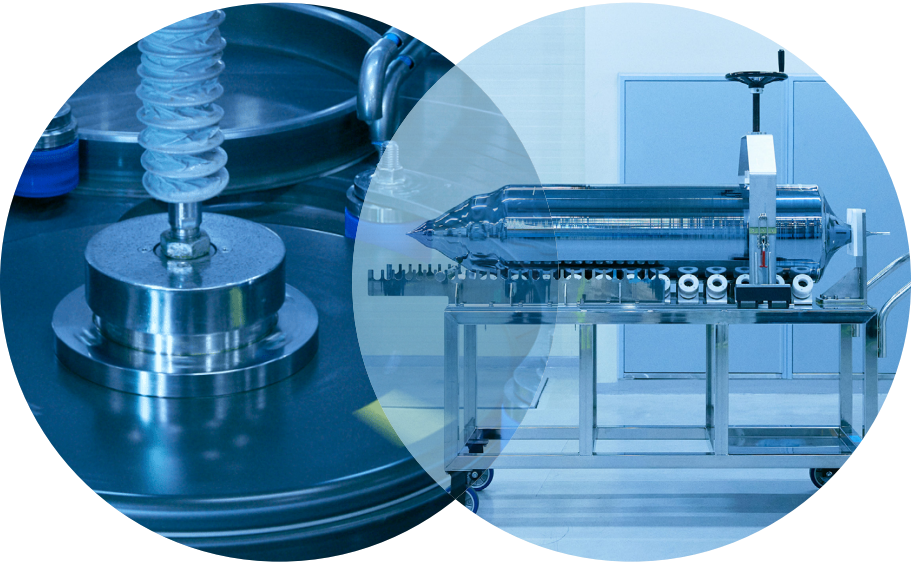
Details of Information Protection Training

Category		Unit	2020	2021	2022
Information security education	Training time	Min	20	30	30
	Number of participants	Number of People	595	769	641

### Information Security Overview

Hana Materials has been checking personal PCs, centralizing management of documents and folders, and working to minimize ransomware and hacking damage. As a result, there was not a single case of ransomware and hacking damage from 2020 to 2022. Especially in 2021, we introduced a DB Control Solution (DBSAFER) and NAC, and increased our investment in DLP, firewall, spam filtering, NAC, antivirus, and backup solution maintenance, which increased our investment in information security by more than four times compared to the previous year.

Category		Unit	2020	2021	2022
Status of Information Security Violation	Number of personal information leakage incidents	Case	0	0	0
	Number of cases of improvement by inspection of internal information protection level	Case	1	1	1
Number of complaints	Number of complaints that have been proven to violate/lose information protection	Case	0	0	0
Investment on information security	Amount of investment	KRW million	44	190	93



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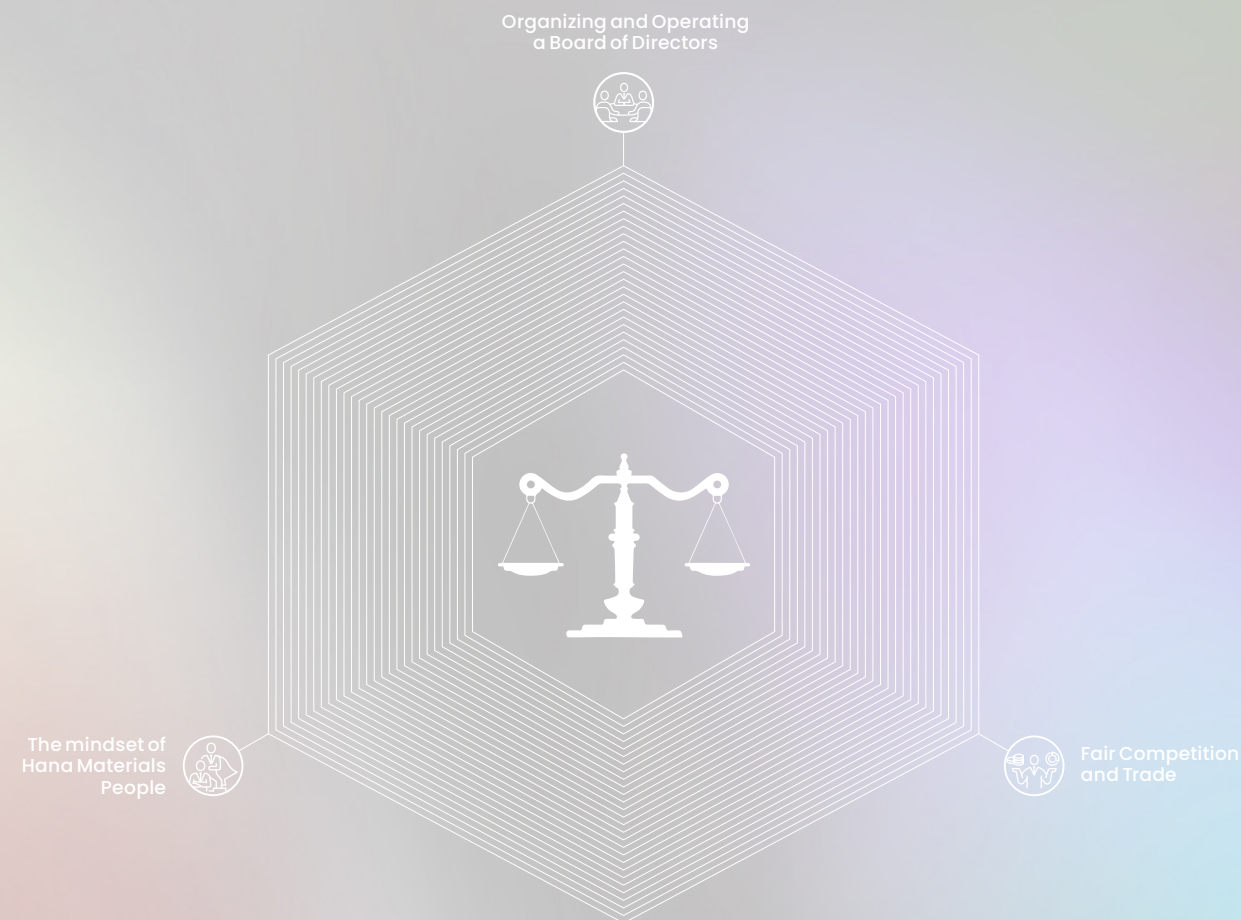
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# GOVERNANCE

# 3

Building Mutual Trust  
through  
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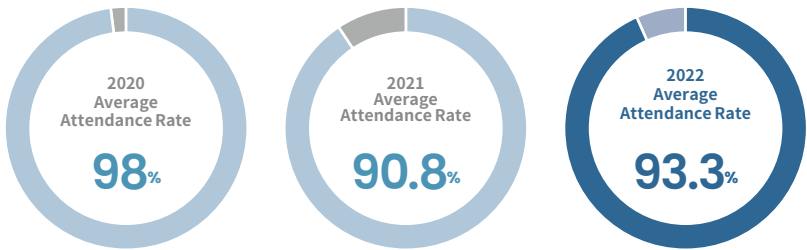
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# Board of Directors

## Composition and operation of the board of directors

Hana Materials’ board of directors makes fair decisions in line with internal regulations. As of March 2023, the company consists of 3 internal directors and 1 external director, meeting the 25% external director appointment rate stipulated by the Korean commercial law. However, for the stable business operation of the company, the chairman of the board of directors is concurrently held by the CEO. By appointing additional external directors in the future, we plan to strengthen our independence. The Board of Directors is convened and operated regularly once a quarter, and resolutions of the Board of Directors are made with a majority of attendees and a majority of those present. A total of 28 board meetings were held in 2022 to review and make decisions on management-related issues such as financial statement approval, new investment, and stock purchase. The average attendance rate of internal and external directors was 93.3%. Hana Materials has complied with 75% of the director attendance rate set forth in domestic and overseas voting guidelines for the past three years. We have actively managed the operation of the board of directors with 90% attendance.



### Members of BOD

(As of April 2023)

Director	Name	Position / title	Tenure*	Areas of expertise	Role
Internal Director	Oh Kyung-seok	CEO	5 years 1 month	General business and external affairs	General Management
	Choi Wang-gi	Vice-President	12 years 1 month	General Manufacturing and Technology Development	Research Director
	Kim Soon-young	Executive Director	2 years 1 month	Effective business management practice	Support Team Leader
External Director	Jung Yong-joo	External Director	1 month	Experts in semiconductor	External Director

\* The tenure of the board of directors

## BOD Independence, Expertise and Diversity

New internal director candidates are selected by the board of directors, and the selection of the candidates is confirmed and appointed as an agenda at the general shareholders’ meeting. In order to strengthen the professionalism of the board of directors, internal/external directors are composed of personnel with expertise in each field, details of directors’ competencies are disclosed through business reports, and related training will be provided if necessary. In addition, in order to strengthen the role and responsibility of directors, we apply the responsibility system and purchase liability insurance to prevent possible accidents and minimize damage caused by issues. In order to strengthen the independence of the board of directors in the future, We plan to operate a Director Candidate Recommendation Committee, which will manage and review candidates for external directors.

## Disclosure BOD Compensation

We have disclosed the annual remuneration of all directors through its business report, including information on the total and average remuneration of directors, auditors, and the framework for calculating remuneration for the top five directors. The total remuneration limit is approved by the general meeting of shareholders, including internal and external directors and unregistered executives, and is paid in comprehensive consideration of the company’s business environment and business performance. To ensure objectivity and transparency in the process of determining directors’ remuneration, we plan to establish a compensation committee to evaluate and review the performance system in future.

### Remuneration

(Unit : KRW 1,000,000)

Category	Number of People	Total compensation	Average Compensation per person
Registered Directors (Excluding external directors and members of audit committee)	3	1,433	478
External directors (Excluding members of audit committee)	1	39	39
Member of Audit Committee	-	-	-
Audit	1	44	44



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# SPECIAL PAGE

## Committee regulations

In the board meetings held in May 2023, Hana Materials approved the establishment of four board committees, including ESG Committee, to lay the foundation for sustainable growth. The newly established committees are ‘ESG Committee’, which will play an overall decision-making role in ESG management; the ‘Internal Transactions Committee’ to enhance transparency and prevent conflicts of interest; the ‘Compensation Committee’ to objectively evaluate management and determine appropriate compensation accordingly; and the ‘External director candidate recommendation committee’ to recommend external director required by the article of incorporation and the BOD regulations. The BOD plans to proceed with the selection of members and the establishment of a staff-level promotion plan based on the operation regulations. Each committee plans to appoint members with expertise according to the purpose. The chair of the BOD will be selected by those who do not have any common interest with candidates. The Internal Transaction Committee, Compensation Committee, and External Director Candidate Recommendation Committee will function as a sustainable governance system for the company.



### ESG Committee



The committee reviews and makes decisions on ESG-related agendas for corporate sustainable management and establish ESG management goals, investments, and management strategies from a mid-to long-term perspective. The company expect the ESG committee will make appropriate business decisions on a regular basis.

Roles and Functions	Composition
Operate ESG management system	3 or more members 1 or more external directors
Main Agenda	- ESG management strategy - Major ESG investment agenda - Issues related to the environment/safety/health in the workplace

### Internal Transactions Committee



The regulation include the regulatory system about integrity and fair business operation and prevention of fraudulent profit of internal employees through internal control tools. The committee reviews and deliberates on internal trading agendas. Based on these, it will secure transaction transparency.

Roles and Functions	Composition
Prevent internal fraudulent transactions	3 or more members 1 or more external directors
main agenda	- A single transaction size is more than 1/100 of the current total assets/sales volume - If the annual transaction volume is more than 5/100 of the current total assets/sales volume

### Compensation Committee



The committee makes transparent and independent decisions for management’s fair remuneration decisions. The committee reviews and deliberates compensation, such as remuneration/stock options for management. In the future, the committee will make efforts to objectively evaluate management and establish an appropriate compensation system accordingly.

Roles and Functions	Composition
Build a reasonable compensation system	3 or more members 1 or more external directors
main agenda	- Matters related to compensation such as executive remuneration and stock options - Other issues delegated by the board of directors

### External director candidate recommendation committee



The Committee selects appropriate external director candidates through a transparent process, verifies the expertise of external director candidates, and helps them actively express their opinions and carry out activities within the board of directors. The committee plans to appoint external directors through an appropriate process to enhance board independence.

Roles and Functions	Composition
Selection of appropriate external directors	2 or more members 1 or more external directors
main agenda	- Recommendation of candidates for external directors - Matters necessary for recommending candidates for external directors - Other matters delegated by the board of directors



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# Ethical Management

## Code of Ethics

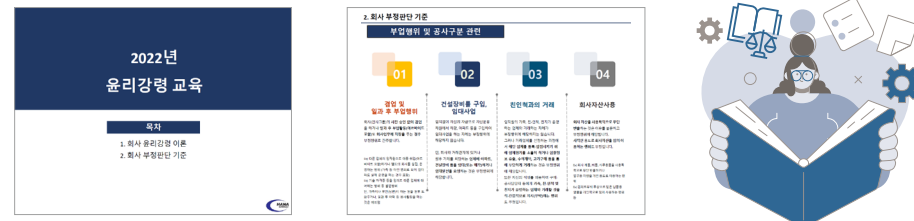
Hana Materials has established a Code of Ethics to clarify its responsibilities to customers, employees, and society. The Code of Ethics and the Ethical Management Policy are posted on the website to publicize Hana Materials' commitment to ethical management internally and externally.



## Ethical Management Activities

### Ethics Education

We provide ethics training regularly to our internal employees, emphasizing ethics management. We take efforts to raise employees' ethical awareness by offering training on the Code of Ethics to all employees once a year with exams. We use the Hana Education System to provide various ethics training on fair trade, standards of unfair judgment, etc.



### Employee training details

구분	Unit	2020	2021	2022
Ethics, Compliance Education	Training hours	0.5	1	1
	Number of participants	587	674	714

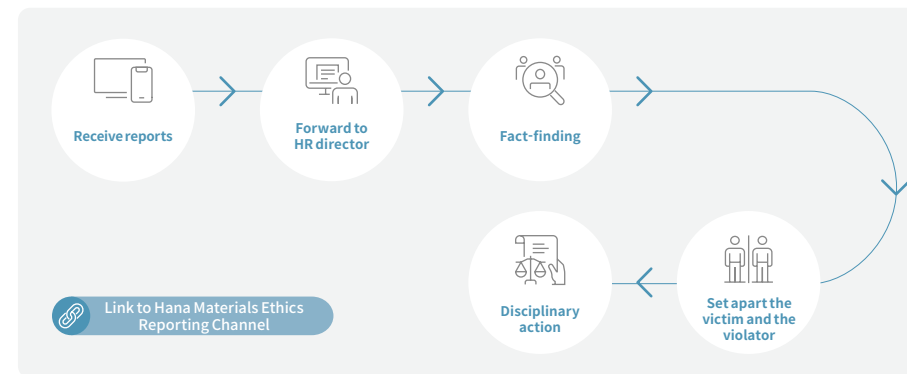
## Internal Accounting Management System

We have enhanced the accuracy of accounting information through internal accounting management system and secured data reliability through independent external auditors since 2022. Based on the design and operation status of the internal accounting management system announced by the 'Internal Accounting Management System Steering Committee, we check the effectiveness, audit the operation status, and report to the board of directors and shareholders' meeting in every fiscal year. With the recent revision of the Internal Control over Financial Reporting, we are now required to obtain an 'audit' opinion in external audit, which is a higher standard. In response, we completed the design of the internal accounting management system by integrating the revised best standards through consulting with external accounting agencies and advanced operation of the internal control system. We regularly assess and validate the company's key business processes to proactively prevent and take action against risk factors.

## Ethics and Compliance Reporting Channel

### Reporting channel

Hana Materials newly launched the ethics and compliance reporting channel on its website to foster ethical management. The channel allows anonymous reporting and internal and external stakeholders can report for non-compliance to our Code of Ethics as follows: violations of legal procedures, lack of respect for human rights, conflicts of interest, inappropriate task management, and violation of social values. We also inform the reporters of the result of their reporting to ensure fairness and transparency in the process.



## Ethics compliant results

In 2022, Hana Materials received two reports through the ethics and compliance reporting channel (one for sexual harassment and one for anti-corruption), and we identified the facts of the cases in accordance with our internal policies and handled two violation cases (sexual harassment and anti-corruption). We dismissed the employees who violated our Code of Ethics in a proper procedure based on our policy. We will continue to actively work to resolve grievances.



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# Compliance Management

## Establish Guideline for Fair Trade

In promoting business activities, we strive to proceed with fair transactions in carrying out business related to our transactions. We guarantee equal opportunities for everyone to participate in our transactions, conduct evaluations according to the principle of free competition, and build mutual trust and cooperation through fair transactions. In addition, the Code of Ethics stipulates the standards and procedures that executives and employees should follow, including ‘Fair Trade Guidelines’.

Free-competition

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

Regulation Compliance

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

Equal Opportunity & Fair-trade

Hana Materials offers fair opportunities to participate in transaction and fair-trade competition, for all partners that complies with our required qualifications

The registration and selection of trading partners shall be carried out in a reasonable manner, based on objective and fair screening criteria, on an equal footing, with appropriate negotiation of the terms and procedures of the transaction, and shall not involve any form of unfair practice by taking advantage of a favorable position.

Pursuing common good

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

## Internal/External Whistleblower System

Hana Materials has a unified compliance-related reporting channel on our website (Ethical Management Online Reporting Menu). To protect whistleblower, reports can be made anonymously or not, and the reports will be directly forwarded to the head of the HR team. In addition, we have built a system for uploading accurate evidence to prevent false reports from causing innocent victims.

### Whistleblower Protection

Hana Materials has published the ‘Standards for Determining Misconduct and Code of Conduct’ since September 2018 on the company-wide notice board. In order to prevent violations of the Code of Conduct and protect whistleblowers, we have clearly specified the duty to report, protection of whistleblowers, rewards, and discipline.

Article 2. Reporting obligation & whistleblower protection

Employees who are aware of a violation of this Code of Conduct should report it to the HR Group. Whistleblowers will not be penalized for making a valid complaint.

Article 3. Reward & Disciplinary

The company may reward appropriate compensation to employees who have made a significant contribution to comply with the “Standards for Misconduct and Code of Conduct”. All executives and employees are required to comply with this Code of Conduct, and any violation will result in strict disciplinary action in accordance with our policy.

## Anti-corruption activities

Hana Materials has committed to operate a fair and transparent organization. Over the last three years, Hana Materials has recorded zero violations of fair trade, and we will keep this record in the future. Hana Materials have provided anti-corruption and fair-trade education to all employees once a year and raised awareness of anti-corruption through the employee pledge of integrity. In 2022, 750 out of 770 employees (97.4%) participated in the pledge, excluding retirees and employees on leave. By the end of 2023, Hana Materials plans to add items of supply chain management process to internalize transparent transactions and advance our anti-corruption activities through corruption impact assessments.

Category		Unit	2020	2021	2022
Number of Fair Trade Violations		Cases	0	0	0

Category		Unit	2020	2021	2022
Anti-corruption education	Training hours	Hour	0.5	1	1
	Number of participants	Number of People	587	674	714
Fair-trade education	Training hours	Hour	0.5	1	1
	Number of participants	Number of People	587	674	714



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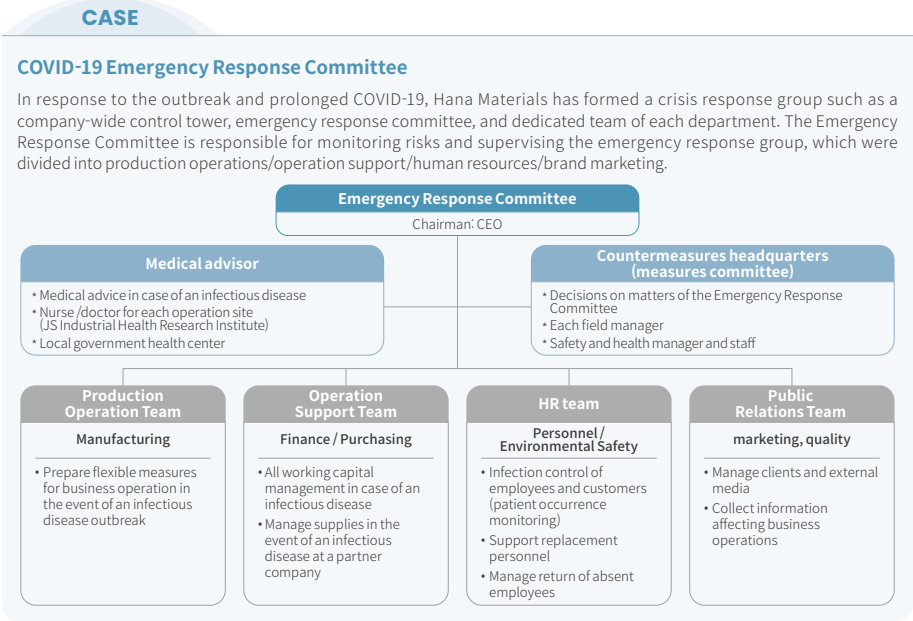
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# Risk Management

## Company-wide Risk Management Process

We have a system for minimizing the impact of risks that may occur in business through enterprise-wide risk management, and in the case of the past COVID-19, we responded based on the integrated management system. However, each department has a different response method depending on the type of risk management. Therefore, risk management is currently implemented separately for each department. To integrate internal risk management framework We have promoted work to identify risks in various departments and advance evaluation/response methods suitable for each type.



## Response system based on risk type and dedicated department

We are proactively aware of risks that can have a significant impact on our business, and we classify them by type to drive appropriate response activities. Risk is divided into 6 categories and 14 types, and a dedicated department for each risk is selected and actively responded. In the future, we plan to promote the risk management system and the response plan by type.

Category	Risk	In Charge
Financial stability	Exchange rate risk	
	Interest rate risk	finance group
	Liquidity/Credit Risk	
Supply chain management	Risk of supply and demand of raw materials	
	Risk of waw material price rise	purchasing group
	Risk of raw material/facility logistics	
	Origin sanctions risk	

Category	Risk	In Charge
Environment/safety	Environmental/Safety Law Violation Risk Environment	Safety/Environment Tam
	Environmental/Safety Accident Risk Safety Group	
Information management	information leakage risk	Information Team
Human resource management	Manpower Supply and Demand Risk	HR Team
	Human Rights Management Risk	
Compliance with laws and regulations	Compliance risk	
	Intellectual Property (IP) Risk	Legal Team



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# Financial Statements

## Economic

	Unit	2020	2021	2022
Summary of Financial Information				
Asset				
current assets	KRW million	94,205	118,239	147,841
Cash and Cash Equivalents	KRW million	46,183	46,374	30,834
Trade receivables	KRW million	14,495	21,665	12,429
Other bonds and financial assets	KRW million	3,413	3,547	27,217
Inventory	KRW million	28,751	44,411	72,892
Other current assets	KRW million	1,363	2,242	4,469
Long-term assets held for sale	KRW million	1,900	0	0
Long-term assets	KRW million	256,431	325,440	331,785
Tangible assets	KRW million	201,204	205,606	264,575
Intangible asset	KRW million	4,071	5,532	5,638
Licensed assets	KRW million	2,687	3,514	2,859
Financial assets at fair value through profit or loss	KRW million	1,552	3,765	4,794
Other comprehensive income - fair value financial assets	KRW million	21,071	80,254	44,073
Associated company investment	KRW million	4,588	4,705	5,806
Other non-current assets	KRW million	21,258	22,064	4,040
Total assets	KRW million	352,536	443,679	479,626
Liabilities				
Current liabilities	KRW million	76,214	109,592	103,017
Non-current liabilities held for sale	KRW million	0	0	0
Non-current liabilities	KRW million	88,257	77,111	79,037
Total liabilities	KRW million	164,471	186,703	182,054
Equity				
Pain in capital	KRW million	9,814	9,869	9,876
Additional paid-in capital	KRW million	33,428	35,627	35,953
Other components of equity	KRW million	-1,723	-357	-1,880
Other comprehensive income	KRW million	9,389	20,468	-7,755
Retained earnings	KRW million	137,157	191,369	261,378
Total capital	KRW million	188,065	256,976	297,572
Total Liabilities and Capital	KRW million	352,536	443,679	479,626

	Unit	2020	2021	2022
Comprehensive Income Statement				
I. Revenue	KRW million	200,685	271,101	307,324
II. Cost of Goods Sold	KRW million	127,498	162,787	186,355
III. Gross Profit	KRW million	73,188	108,314	120,969
IV. Selling, General, the Administrative expenses	KRW million	20,088	26,043	27,230
V. Operating Income	KRW million	53,099	82,270	93,739
Other income	KRW million	1,022	2,290	3,945
Other expense	KRW million	3,282	1,030	2,134
Financial income	KRW million	425	750	997
Financial expense	KRW million	3,198	2,897	3,653
Share in earnings of	KRW million	251	108	1,103
VI. Carrying on Ordinary income before tax	KRW million	48,317	81,492	93,998
VII. Corporate tax	KRW million	10,070	14,820	13,863
VIII. Continuing Operating Net Income Financial Statements	KRW million	38,247	66,672	80,135
Discontinued operating profit (loss)	KRW million	-197	0	0
IX. Net income	KRW million	38,050	66,672	80,135
Other comprehensive income	KRW million	8,157	10,295	-26,638
X. Total comprehensive income	KRW million	46,207	76,967	53,497
Earnings per share				
Basic earnings per share	KRW	1,960	3,425	4,105
Basic earnings per share from continuing operations	KRW	1,970	3,425	4,105
Basic earnings per share (loss) from discontinued operations	KRW	-10	0	0
Diluted earnings per share	KRW	1,955	3,390	4,080
Diluted earnings per share from continuing operations	KRW	1,965	3,390	4,080
Diluted earnings per share (loss) from discontinued operations	KRW	-10	0	0
Stock and Dividend Status				
Total Cash Dividends	KRW million	5,822	11,708	11,712
Dividend type	-	Cash dividend	Cash dividend	Cash dividend
Cash dividend payout ratio	%	15.3	17.6	14.6
Cash dividend per share (common stock)	won	300	600	600
Cash Dividend Yield (common stock)	%	1.1	1.0	1.8



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# ESG Data

## Environmental

Category				Unit	2020	2021	2022
Environmental management system							
Eco-Friendly management	ISO 14001	Certified sites <sup>1)</sup>	EA		2	2	2
Environmental management training							
Environmental management training	Hazardous chemical worker training		Hour		1,128	1,388	1,460
	Hazardous chemical manager training		Hour		64	16	64
	Hazardous chemical handler training		Hour		656	768	528
	Environmental engineer training		Hour		64	36	0
Violation of environmental regulations							
Compliance	Total amount of fines	Total amount of fines	Cases		0	0	0
		Total amount of fines	KRW		0	0	0
GHG emissions							
GHG <sup>2)</sup>	Total GHG emissions (Scope1+2)		tCO <sub>2</sub> eq		30616.68	36893.93	44371.71
	Scope 1	Scope 1 Subtotal	tCO <sub>2</sub> eq		1142.68	1268.93	1215.71
		LNG	tCO <sub>2</sub> eq		979	1,094	1,036
		Diesel	tCO <sub>2</sub> eq		21	25	23
		Gasoline	tCO <sub>2</sub> eq		142.68	149.93	156.71
	Scope 2	Electricity	tCO <sub>2</sub> eq		29,474	35,625	43,156
	원Emissions per units		tCO <sub>2</sub> eq/EA		15.25	13.61	14.44
Energy consumption							
Energy <sup>3)</sup>	Total energy consumption		TJ		618	744	895
	Diesel		L		8,042	9,697	8,954
	Gasoline		L		65,521	68,851	71,961
	Gas (LNG)		Nm <sup>3</sup>		455,461	508,484	481,775
	Electricity		kWh		62,089,908	75,048,973	90,913,365
	Emissions per units		TJ/ KRW100million		0.31	0.27	0.29
Raw material							
Raw material	Raw materials input	Total raw materials	kg		441,012	677,357	792,436
		Poly si	kg		278,838	420,934	507,621
		single ingot	kg		35,583	72,131	76,542
		Multi ingot	kg		29,339	60,528	64,670
	Recycled Resources	Total amounts of renewable resources	ton		97,253	123,764	143,603
	Renewable resources usage ratio		%		26%	23%	22%

※ Renewable energy has been in operation for 2023, with a cumulative production capacity of 43,061 kwh as of March 2023

- 1) The certified business sites are Asan and Cheonan.
- 2) This data is the sum of GHG emissions in Cheonan and Asan. Cheonan manages the GHG target management system, and Asan manages the energy consumption report standard of the Korea Energy Agency has been calculated. Data from the Asan Plant have not been verified.
- 3) This data is the combined data of energy consumption in Cheonan and Asan. Cheonan manages the GHG target management system, and Asan manages the energy consumption report standard of the Korea Energy Agency. fixed. Data from the Asan Plant have not been verified.
- 4) Amount of waste Cheonan office and research center are included, and the waste recycling rate was calculated based on the recycling rate of resource circulation performance management.
- 5) Amount of waste The Asan office is included, and the recycling rate of waste was calculated based on the recycling rate of resource circulation performance management.
- 6) Changed the measurement company in 2022

Category				Unit	2020	2021	2022	
Waste Management								
Cheonan Plant <sup>4)</sup>	Total Waste emissions			ton	1,084	1,146	1,228	
	General Waste	Total Consumption		ton	399	468	513	
		Designated Waste		ton	685	678	715	
	Waste recycling rate (General waste + Designated waste)				%	54.87	38.86	42.52
Asan Plant <sup>5)</sup>	Total Waste emissions			ton	876	1,411	1,768	
	General Waste	Total Consumption		ton	171	333	439	
		Designated Waste		ton	705	1,077	1,329	
	Waste recycling rate (General waste + Designated waste)				%	34.29	37.38	31.33
Water Management								
Water and waste water	Total water consumption			kton	396	442	500	
	Service water			kton	292	264	304	
	industrial water			kton	104	178	196	
	Water recycling			kton	18	18	30	
	water intensity			kton/ KRW 100million	0.20	0.16	0.16	
Water Pollutants	Cheonan Plant	BOD	kg	637.29	1,276.94	299.66		
		TOC/COD	kg	1,260.42	1,341.3	1,609.88		
		SS	kg	474.43	1,019.7	7,685.77		
		T-N	kg	2,634.13	7,163.4	6,244.34		
		T-P	kg	18.41	20.19	1,907.63		
	Asan Plant	BOD	kg	1,206.69	2,099.12	3,506.56		
		TOC/COD	kg	7,642.37	2,985.41	2,400.64		
		SS	kg	8,044.6	1,2594.69	5,408.19		
		T-N	kg	3,418.96	7,603.46	4,539.64		
		T-P	kg	98.55	40.35	39.79		
	specific	kg	0	18.12	97.24			
	non-specific	kg	23,802.52	32,991.55	31,352.33			
	Specific water pollutant emissions				Cu, Chloroform, Formaldehyde			
	Non-specific water pollutant emissions				pH, BOD, TOC, SS, N-H, T-N, T-P,F,Cu, Fe, Zn, Mn, Ba, chlorine compound, sulfur compound, Poly- and Perfluorinated Compounds, Perfluorooctanesulfonic acid (PFOS), Perfluorohexane sulfonic acid (PFHS), ecotoxicity, chloroform, formaldehyde			
	Pollutants Management							
Pollutants	Air pollutants	Cheonan Plant <sup>6)</sup>	NOx	kg	0	62.3	1,049.84	
			SOx	kg	0	0	94.27	
		Asan Plant <sup>6)</sup>	NOx	kg	2,775.13	1,929.29	1,416.01	
			SOx	kg	0	0	182.37	
		Specific	kg	395.81	387.94	123.55		
		non-specific	kg	4,956.95	3,766.44	4,668.53		
		Specific air pollutant emissions				Fluorine compound, HCl, NH <sub>3</sub>		
		Non-specific air pollutant emissions				dust, SOx, NOx, HCl, NH3, Fluorine compound, THC		
		Chemical Substances	Hazardous Chemical Substances	ton	1,627	2,250	2,615	



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Social

Category			Unit	2020	2021	2022	
Human Rights							
Human Rights	Training on human rights	Sexual harassment prevention training	Hour	1	1	1	
		Training for awareness improvement of disabled	Hour	1	1	1	
		Workplace harassment training	Hour	1	1	1	
		Number of Trainees	Number of People	583(98%)	701(97%)	750 (100%)	
Handling Employee grievances		grievances	Cases	20	23	19	
		Number of grievances handled	Cases	18	16	15	
Status of Employee							
Status of Employee	Total number of employees		Number of People	592	722	750	
	Types of employment	Regular	Number of People	590	719	745	
		male	Number of People	499	624	650	
		female	Number of People	91	95	95	
		Regular worker's ratio	%	99.7	99.6	99.3	
		temporary	Number of People	2	3	5	
		male	Number of People	2	2	4	
		female	Number of People	0	1	1	
		Temporary worker's ratio	%	0.3	0.4	0.7	
		By age	20-29	Male	Number of People	193	265
	Female			Number of People	44	41	41
	30-39		Male	Number of People	205	244	246
			Female	Number of People	25	30	32
	40-49		Male	Number of People	81	90	84
			Female	Number of People	21	23	21
	50-59		Male	Number of People	18	23	21
			Female	Number of People	1	2	2
	60-69		Male	Number of People	4	4	4
			Female	Number of People	0	0	0
	By gender		Male	Number of People	501	626	654
			Female	Number of People	91	96	96
	Service years		Male average length of service	Year	3.5	3.2	3.9
			Female average length of service	Year	3.5	3.9	4.8
	Turnover and Retirement	Total number of turnover and retirement	Number of People	62	78	127	
		Voluntary turnover rate <sup>1)</sup>	%	10.7	12.0	16.7	
	New employee hires	Male	Number of People	61	140	128	
		Female	Number of People	14	9	10	

1) Criteria for resignation excluding forced dismissal

Category				Unit	2020	2021	2022
Diversity							
Employee diversity	Employment of the underprivileged	People with disabilities		Number of People	15	20	21
		Compliance with mandatory employment of disabled		%	4.7	5.3	5.1
		Veterans		Number of People	2	2	2
		Foreigners		Number of People	13	17	17
Basic Salary and Compensation Ratio by Gender	Average salary per person <sup>2)</sup>	Male		KRW million	63	66	76
		Female		KRW million	51	58	61
		Talent cultivation					
Talent cultivation	Employee training <sup>2)</sup>	Total trainees		Number of People	128	284	370
		Total training cost		KRW 1,000	12,801	23,971	40,170
		Total training hours		Hour	2,864	8,415	10,504
		Training cost per person		KRW 1,000	100	84.4	124.7
		Training hours per person		Hour	22.4	29.6	32.6
		Number of trainings participated in		EA	166	521	626
		Completion rate		%	100.0	100.0	100.0
		Working Environment					
Welfare	Cost	Total employee benefits cost		KRW million	4,294	5,657	6,291
		Employee benefits cost per person		KRW million	7.27	7.85	8.34
Longterm Leaves	Childbirth leave	Number of employees on childbirth leave	Male	Number of People	10	13	12
			Female	Number of People	1	4	3
		Number of employees who returned to work after childbirth leave	Male	Number of People	10	13	12
			Female	Number of People	1	4	3
	Parental leave	Number of employees on parental leave	Male	Number of People	1	1	3
			Female	Number of People	0	2	3
		Number of employees who returned to work after parental leave <sup>3)</sup>	Male	Number of People	0	0	2
			Female	Number of People	0	2	2
	Continuous service after return <sup>3)</sup>		12 month continuous service rate	%	0	67	-
	Organizational Culture						
Organizational Culture	Activities	Number of activities to revitalize the organizational culture		Cases	3	3	3
	Satisfaction <sup>4)</sup>	Result of employee organizational culture satisfaction survey		points	-	-	3.37/5.00
Labor/ Management Relations	Labor management council	Number of members		Number of People	5	5	5
		Membership rate		%	5	5	5
Freedom of Association and Collective Bargaining	Labor management council	Number of labor management councils held		Cases	once a quarter	once a quarter	once a quarter
		Number of items resolved by labor-management council		Cases	13	9	11

2) The figure excludes registered executives.

3) Less than 12 months are not reflected

4) Organizational culture satisfaction survey was conducted from 2022.



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Social

Category					Unit	2020	2021	2022
Safety/Health								
Safety and health management system	Safety and health management system	Occupational Safety and Health Committee	Receipt agenda	Cases		4	10	8
			Deliberation decision	Cases		4	10	8
		Number of workplaces with ISO 45001 certification		EA		0	0	2
Occupational safety and health training for workers	Education	Safety/health	Education hour	Hour		14,208	18,483	33,000
		Hazardous substance	Education hour	Hour		24	72	96
	Training	Action Training	Training Results	Cases		3	3	41
Promotion of worker health	Program	Number of health promotion programs		Cases		0	0	6
		Conduct health checkup	Special check-up	Number of People		441	466	582
			Basic check-up	Number of People		520	566	702
Work-related injury	Injury	Industrial accident rate	Employee	%		0	0	0
		TRIR <sup>1)</sup> (Total Recordable Incident Rate)	Employee	-		4.3	2.8	1.3
Work-related ill health	Illness <sup>2)</sup>	OIFR <sup>3)</sup> (Occupational Illness Frequency Rate)	Employee	-		0	0	0
			Partners	-		0	0	0
Safety and health of business partners	Management of business partners	Supplier Qualification Evaluation Performance	Pre-assessment	Cases				19
			Conforming	Cases				19
			Non-conforming	Cases				0
			Post-assessment	Cases				37
			Conforming	Cases				37
			Non-conforming	Cases				0
Supply Chain Management								
Supplier Assessment	AVL assessment	Evaluated company		EA		56	47	27
		Evaluation completed company		EA		44	47	27
Supplier Environmental Assessment	Number of new suppliers that have been screened for environmental criteria			EA		0	1	2
	Environmental impact within the supply chain	Number of identified cases		Cases		4	0	0
		Number of actions		Cases		4	0	0

1) Criteria for hospital treatment  
2) No occupational disease  
3) Criteria for judgment of occupational disease

Category				Unit	2020	2021	2022
CSR							
CSR	Donations	Total donations		KRW million	42	67	165
Quality Management							
Customer Health and Safety	Quality	Product safety	Number of recalls	Cases	0	0	0
			Total recalled products	EA	0	0	0
			Number of counterfeit parts detected	EA	0	0	0
		Quality Performance	Human Error Rate	%	0.4	0.2	0.2
		Customer VOC	Customer complaint handling rate	%	17	1	1
		Customer satisfaction	Customer satisfaction management	Points	84.2	87.8	89.4
Information Security							
Customer Privacy	Information Security Violation Status	Number of leaks of personal information		Cases	0	0	0
		inspection of internal information protection level Number of complaints		Cases	1	1	1
	Number of complaints	Number of complaints that have been proven to be in violation of information protection/lost		Cases	0	0	0
	information security education	Training hours		Minute	20	30	30
		Participants		Number of People	587	701	746
	Information security investment	Amount of investment		KRW million	44	190	93



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Governance

Category		Unit	2020	2021	2022	
Status of Board of Directors						
Status of BOD	Composition of the BOD	Internal Directors	Number of People	3	3	
		External directors	Number of People	1	1	
		Percentage of external directors	%	33.3	33.3	
		Percentage of female directors	%	0	0	
	Number of BOD meetings		times	16	17	20
	Attendance Rate of BOD	Average attendance rate	%	98	91	93.3
		Attendance Rate of external directors	%	92	94	91
		Attendance Rate of Internal Directors	%	100	90	94
	BOD agenda items		Cases	27	27	28
	Number of items voted against by external directors		Cases	0	0	0
Shareholder Status						
Shareholder status	CEO shareholding		%	0.00	0.51	0.51
	Public entity shareholding: National Pension Service (NPS)		%	6.04	5.88	4.82
	5Shareholders Holding More Than 5%	Hana Micron	%	32.75	32.57	32.57
		Choi Hansu	%	11.72	11.65	11.65
		Tokyo Electron	%	13.89	13.81	13.81
		National Pension Service (NPS)	%	6.04	5.88	-
Shareholder-friendly management	System	Paper voting system	-	Not Institutionalized	Not Institutionalized	
		Electronic voting system	-	Not Institutionalized	Institutionalized	
BOD Compensation						
BOD Compensation	Registered Directors	People	Number of People	3	4	3
		Total compensation	KRW million	1,440	4,507	1,433
		Average Compensation per person	KRW million	480	1127	478
	External directors	People	Number of People	1	1	1
		Total compensation	KRW million	36	37	39
		Average Compensation per person	KRW million	36	37	39
	(Member of) Audit (Committee )	People	Number of People	1	1	1
		Total compensation	KRW million	40	41	44
		Average Compensation per person	KRW million	40	41	44
Audit personal information						
Name	Career Highlights	Disqualification	Appointment date	Remark		
Shin Moo	Samsung Electronics (Giheung Plant) Accounting Department Current Samji Accounting Corporation Certified Public Accountant Current Hana Materials Auditor	None	March 18 <sup>th</sup> , 2019	Full-time		

Category		Unit	2020	2021	2022
Ethics and Compliance					
Current Status of Internal Ethics Management Inspection	Number of internal ethics and compliance checks		Cases	0	0
	Internal Ethics & Compliance Status Number of Violations		Cases	0	0
	Compliance report status by type	sexual harassment	Cases	0	1
		Anti-corruption	Cases	0	1
		Unfair trade	Cases	0	0
Status of Ethics and Compliance Education	Ethics, Compliance Education	Training hours	Hour	0.5	1
		Participants	Number of People	587	674
	Anti-corruption education	Training hours	Hour	0.5	1
		Participants	Number of People	587	674
	Fair-trade education	Training hours	Hour	0.5	1
		Participants	Number of People	587	674

Shareholding by Executives and Special Afiliated Investors

Name	Relationship	Stock types	Number of stocks and shareholding				Remark
			Beginning		Ending		
			Number of stocks	Shareholding	Number of stocks	Shareholding	
Hana Micron	Self	Common stock	6,428,508	32.57	6,428,508	32.55	-
Choi Hansu	Special affiliated investors	Common stock	2,300,000	11.65	2,300,000	11.64	-
Oh Kyungseok	Executive of affiliate	Common stock	100,000	0.51	100,000	0.51	-
Choi Wanggi	Executive of affiliate	Common stock	45,000	0.23	35,000	0.18	Spouse Gift
Kim Taemin	Executive of affiliate	Common stock	10,000	0.05	25,000	0.13	Exercise Stock option
Lee Dongin	Executive of affiliate	Common stock	12,000	0.06	12,000	0.06	-
Lee Jongmin	Executive of affiliate	Common stock	15,000	0.08	17,000	0.09	Exchange-traded stock trading
Kang Dongho	Executive of affiliate	Common stock	2,500	0.01	5,000	0.03	Exchange-traded stock trading
Total		Common stock	8,913,008	45.16	8,922,508	45.17	-



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# GRI Standards 2021 Index

Description	The 2022 Sustainability Report of Hana Materials was reported in accordance with the GRI Standards 2021 standard.				
Usage	GRI 1: Foundation 2021				
Applicable GRI Sector Standard	Not published				
GRI Standards	Category	No	Disclosure	Page	Note
General Disclosures 2021					
General Disclosures 2021	General disclosure	2-1	Organizational details	6, 8, 62	
		2-2	Entities included in the organization’s sustainability reporting	2, 8	
		2-3	Reporting period, frequency and contact point	2	Inquiries will be added
		2-4	Restatements of information	-	N/A (first publication of the report)
		2-5	External assurance	68, 69	Include related contents after verification
		2-6	Activities, value chain and other business relationships	7, 8, 10	
		2-7	Employees	32	
		2-8	Workers who are not employees	32	
		2-9	Governance structure and composition	52	
		2-10	Nomination and selection of the highest governance body	52, 53	Business report 125 pages
		2-11	Chair of the highest governance body	52	Independent and transparent decision-making support planned by concurrent appointment for CEO expertise and establishment of committee regulations
		2-12	Role of the highest governance body in overseeing the management of impacts	52, 53	
		2-13	Delegation of responsibility for managing impacts	21, 39, 52, 53	
		2-14	Role of the highest governance body in sustainability reporting	53	
		2-15	Conflicts of interest	53	
		2-16	Communication of critical concerns	31, 56	
		2-17	Collective knowledge of the highest governance body	52	Business report 126 pages
		2-18	Evaluation of the performance of the highest governance body	52, 53	
		2-19	Remuneration policies	52, 53	
		2-20	Process to determine remuneration	52, 53	
		2-21	Annual total compensation ratio	-	Information incomplete
		2-22	Statement on sustainable development strategy	5	
		2-23	Policy commitments	14, 21, 30, 54, 55	
		2-24	Embedding policy commitments	30, 53	Enable to check the education history data for each policy.
		2-25	Processes to remediate negative impacts	56	Process retention and impact resolution (handling/discipline, etc.)
		2-26	Mechanisms for seeking advice and raising concerns	31, 43, 54, 55	
		2-27	Compliance with laws and regulations	23, 55	
		2-28	Membership associations	-	N/A (no membership/agreement)
		2-29	Approach to stakeholder engagement	15	
		2-30	Collective bargaining agreements	37	
Material Topics					
GRI 3: Material Topics 2021	Disclosure of materiality issues	3-1	Process to determine material topics	16	
		3-2	List of material topics	17, 67	



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GRI Standards	Category	No	Disclosure	Page	Note
Risk management					
GRI 3-3:Material Topics 2016	Disclosure of materiality issues	3-3	Material issue management	56	Link business report
General Disclosures 2021	General disclosure	2-25	Processes to remediate negative impacts	56	
Securing future new growth engines					
GRI 3-3:Material Topics 2016	Disclosure of materiality issues	3-3	Material issue management	11	
GRI 201: Economic Performance 2016	Economic Performance	201-1	Direct economic value generated and distributed	58	 <a href="#">Hana Materials Business Report</a>
Ethical management and compliance					
GRI 3-3: Material Topics 2016	Disclosure of materiality issues	3-3	Material issue management	54,55	
GRI 205: Anti-corruption 2016	Anti-corruption	205-1	Operations assessed for risks related to corruption	55	Information incomplete
		205-2	Communication and training about anti-corruption policies and procedures	55,62	
		205-3	Confirmed incidents of corruption and actions taken	55	
Prohibition of unfair trade and compliance with related laws					
GRI 3-3:Material Topics 2016	Disclosure of materiality issues	3-3	Material issue management	55	
GRI 206: Anti-competitive Behavior 2016	Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	55	
Manage energy consumption and increase efficiency					
GRI 3-3:Material Topics 2016	Disclosure of materiality issues	3-3	Material issue management	25	
GRI 302: Energy 2016	Energy	302-1	Energy consumption within the organization	59	
		302-2	Energy consumption outside of the organization	-	Information Unavailable (Scope 3 not calculated)
		302-3	Energy intensity	59,60	
		302-4	Reduction of energy consumption	25,60	



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GRI Standards	Category	No	Disclosure	Page	Note
GHG Emissions Management and Reduction					
GRI 3-3: Material Topics 2016	Disclosure of materiality issues	3-3	Material issue management	24	
GRI 305: Emissions 2016	Emission	305-1	Direct (Scope 1) GHG emissions	24, 59	
		305-2	Energy indirect (Scope 2) GHG emissions	24, 59	
		305-3	Other indirect (Scope 3) GHG emissions	-	Information unavailable (scope 3 not calculated)
		305-4	GHG emissions intensity	59	
		305-5	Reduction of GHG emissions	24	No reduction, establishment of reduction plan
Waste management and minimization					
GRI 3-3: Material Topics 2016	Disclosure of materiality issues	3-3	Material issue management	27	
GRI 306: Waste 2020	Waste	306-1	Waste generation and significant waste-related impacts	27	
		306-2	Management of significant waste-related impacts	27	
		306-3	Waste generated	27, 59	
		306-4	Waste diverted from disposal	59	
Sustainable Supply Chain Management					
GRI 3-3: Material Topics 2016	Disclosure of materiality issues	3-3	Material issue management	42, 43	
GRI 308: Supplier Environmental Assessment 2016	Supplier Environmental Assessment	308-1	New suppliers that were screened using environmental criteria	61	
		308-2	Negative environmental impacts in the supply chain and actions taken	42, 43, 61	
Reinforcing safety and health management system					
GRI 3-3: Material Topics 2016	Disclosure of materiality issues	3-3	Material issue management	39, 40, 41	
GRI 403: Occupational Health and Safety 2018	Occupational Health and Safety	403-1	Occupational health and safety management system	39, 40, 61	
		403-2	Hazard identification, risk assessment, and incident investigation	40	
		403-3	Occupational health services	40	
		403-4	Worker participation, consultation, and communication on occupational health and safety	39, 40	
		403-5	Worker training on occupational health and safety	41, 61	
		403-6	Promotion of worker health	36, 41, 61	
		403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	39, 40, 43	
		403-8	Workers covered by an occupational health and safety management system	61	
		403-9	Work-related injuries	61	
		403-10	Work-related ill health	61	
Respect for Diversity of Employees					
GRI 3-3:Material Topics 2016	Disclosure of materiality issues	3-3	Material issue management	33	
GRI 405: Diversity and Equal Opportunity 2016	Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	32, 52, 60	
		405-2	Ratio of basic salary and remuneration of women to men	60	



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# Independent Assurance Statement

## The Stakeholders of Hana Materials Inc

### Introduction and objectives of work

BSI Group Korea (hereinafter “the Assurer”) was asked to verify Hana Materials Inc. 2022 Sustainability Report hereinafter “the Report”). This assurance statement applies only to the relevant information contained in the scope of the assurance. Hana Materials Inc. is solely responsible for all information and assertion contained in the report. The responsibility of the assurance is to provide independent assurance statement with expert opinions to Hana Materials Inc. by applying the verification methodology and to provide this information to all stakeholders of Hana Materials Inc.

### Assurance Standards and Levels

This assurance was based on the AA1000AS v3 (2020) Assurance Standard and confirmed that the report was prepared in accordance with the GRI Standards, the international standards guidelines of sustainability reports. The assurance level was based on the Type 1 that confirmed compliance with the four principles of AA1000 AP (2018) in accordance with the AA1000 AS.

### Scope of Assurance

The scope of assurance applied to this report is as follows.

- Based on the period from January 1st to December 31st 2022 included in the report, some data included 2023.
- Major assertion included in the report, such as sustainability management policies and strategies, goals, projects, and performance, and the report contents related to material issues determined as a result of materiality assessment.
- Conformity, appropriateness and consistency of internal processes and systems for information, data collection, analysis and review.

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

- Financial information presented in the report.
- Disclosures in the international standards and initiatives index excluding GRI presented in the report.
- Other related additional information such as the website, business annual report.

### Methodology

As part of its independent assurance, the assurer has used the methodology developed to collect relevant evidence to comply with the verification criteria and to reduce errors in the reporting, and has performed the following activities;

- Review of the system for sustainability management strategy process and implementation
  - Review of materiality issue analysis process and verification of the result to determine verification priorities
  - Review of the evidence to support the material issues through interviews with senior managers with responsibility for them
  - Verification of data generation, collection and reporting for each performance index
- Limitation

### Limitation

The assurer performed limited verification over a limited period based on the data provided by the reporting organization. This means that no significant errors are found during the verification process, and that there are limitations associated with the inevitable risks that may exist. The assurer does not provide assurance for possible future impacts that cannot be predicted or verified during the verification process and any additional aspects related thereto.

### Assurance Opinion

On the basis of our methodology and the activities described above, it is our opinion that

- The information and data included in the report are accurate and reliable and the assurer cannot point out any substantial aspects of material with mistake or misstatement.
- The report is prepared in accordance with the GRI Standards.  
(Reporting in accordance with the GRI standards)
- The assurance opinion on the four principles presented by the AA1000 AP (2018) is as follows.



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AA1000AP (2018)

**Inclusivity : Stakeholder Engagement and Opinion**

Hana Materials Inc. defined customers, employees, external stakeholders, and experts as key stakeholders groups, and operates communication channels for each group for stakeholder engagement. Hana Materials Inc. reflected key issues drawn through stakeholder channels in sustainability management decisions and disclosed the process in the report.

**Materiality : Identification and reporting of material sustainability topics**

Hana Materials Inc. established the strategy related to sustainability management and established the process to derive reporting issues. Hana Materials Inc. identified stakeholder and business impacts and derived 10 major issues based on the analysis of media research, benchmarking of global advanced companies, and analysis of major global initiatives related to sustainability.

**Responsiveness : Responding to material sustainability topics and related impacts**

Hana Materials Inc. established the management process for major issues determined by the materiality assessment. In order to respond appropriately to the expectations of stakeholders, Hana Materials Inc. disclosed the process including policy, indicator, activity and response performance on major issues in the report.

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

Hana Materials Inc. established the process to identify and evaluate the impact on organizations and stakeholders related to major issues. Hana Materials Inc. used impacts, risk and opportunity factor analysis results for major issues to make decisions to develop response strategies for each issue and disclosed the process in the report.

Key areas for ongoing development

- By publishing its first sustainable report, Hana Materials inc. has embodied its commitment to sustainable management to internal and external stakeholders. At the same time, deriving underperforming sustainability issues and specifying related mid- to long-term strategies and goals can help ensure a balanced reporting.
- Developing a mid- to long-term ESG strategy, taking into account the key industry and business characteristics of Hana Materials Inc., and revealing the key roles and responsibilities of the ESG organization that will play an overall decision-making role in ESG management can help advance the sustainable management system.

**Statement of independence and competence**

The assurer is an independent professional institution that specializes in quality, environment, safety and health, energy and anti-bribery, compliance related ESG management with almost 120 years history in providing independent assurance services. No member of the assurance team has a business relationship with Hana Materials Inc. The assurer has conducted this verification independently, and there has been no conflict of interest. All assurers who participated in the assurance have qualifications as AA1000AS assurer, have a lot of assurance experience, and understand the BSI Group’s assurance standard methodology.

**Evaluation against GRI ‘In Accordance’ Criteria**

The assurer confirmed that this report is prepared in accordance with the GRI Standards and the disclosures related to the following Universal Standards and Topic Standards Indicators based on the data provided by Hana Materials Inc., the sector standard was not applied.

**Universal Standards**

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

**Topic Standards**

201-1, 205-1~3, 206-1, 302-1~4, 305-1~5, 306-1~4, 308-1~2, 403-1~10, 405-1~2



bsi.

1st June 2023

S.H. Lim / BSI Group Korea, Managing Director



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