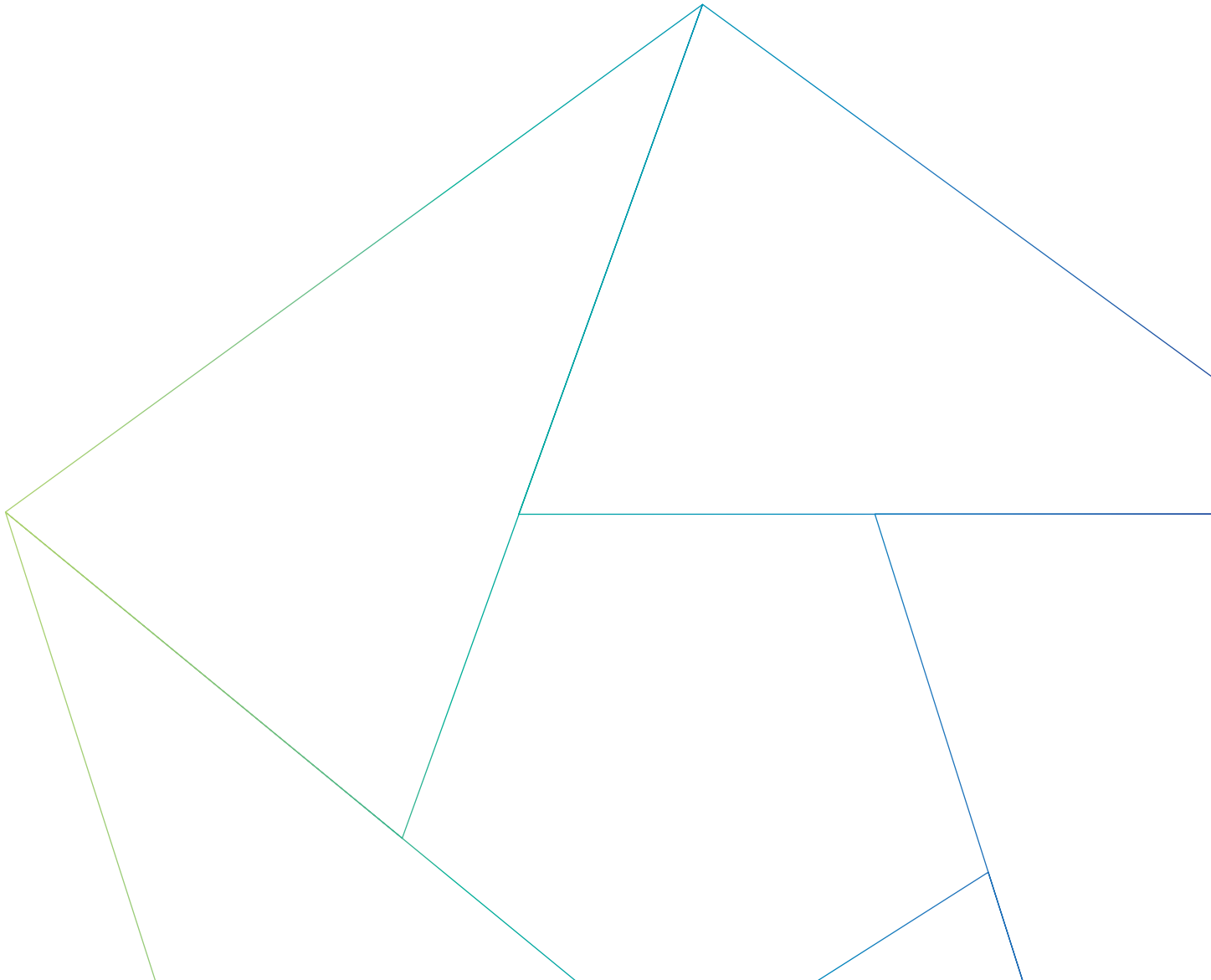
SK hynix Sustainability Report 2023



About This Report

Overview

SK hynix actively engages in a diverse range of activities across the economic, social, and environmental sectors, and has been publishing an annual sustainability report since 2008 to provide transparent information to its stakeholders. During the report's publication process, the company conducted a materiality assessment and interviewed stakeholders to identify the most significant issues. This sustainability report provides a comprehensive overview of SK hynix's ESG (Environmental, Social, and Governance) efforts and achievements.

Reporting Period

The reporting period for this report spans from January 1, 2022, to December 31, 2022. Notable performances occurring outside the reporting period are included in this report, covering activities in the first half of 2023. Quantitative performance data from 2019 to 2022 is provided for trend analysis.

Reporting Boundaries

This report covers SK hynix's ESG activities and performance at all its campuses in Korea (Icheon, Cheongju, Bundang) and manufacturing facilities in China (Wuxi, Chongqing). Partial information is provided for the facilities in Wuxi and Chongqing, China, with specific reporting boundaries for each dataset.

Report Issuance Date: June 30, 2023
Last Updated: December 18, 2023

Reporting Standards

This report adheres to the Global Reporting Initiative (GRI) Standards recognized as the global standards for sustainability reporting. It also aligns with ISO 26000, the UN Global Compact principles, SASB, and TCFD recommendations. Financial information is presented on a consolidated basis, following the reporting standards and definitions of K-IFRS. Both financial and non-financial information are based on the fiscal year according to our disclosure system. Energy use-related data and greenhouse gas emissions were prepared in accordance with verified emission results. Any significant changes are separately indicated.

Report Assurance

To enhance the internal and external reliability of the reported information, SK hynix commissioned LRQA, an independent assurance provider, to ensure the fairness and reliability of our preparation process, as well as the disclosed data and information and the verified report is reported to the CEO. Detailed assurance statements can be found in the Appendix.

For Additional Information and Inquiries

SK hynix ESG Strategy | sustainability_skhynix@sk.com

SK hynix upholds the Ten Principles of the UN Global Compact and strives to incorporate these principles throughout its management practices.

COMMUNICATION ON PROGRESS

UN GLOBAL COMPACT

This is our **Communication on Progress** in implementing the Ten Principles of the **United Nations Global Compact** and supporting broader UN goals.

We welcome feedback on its contents.

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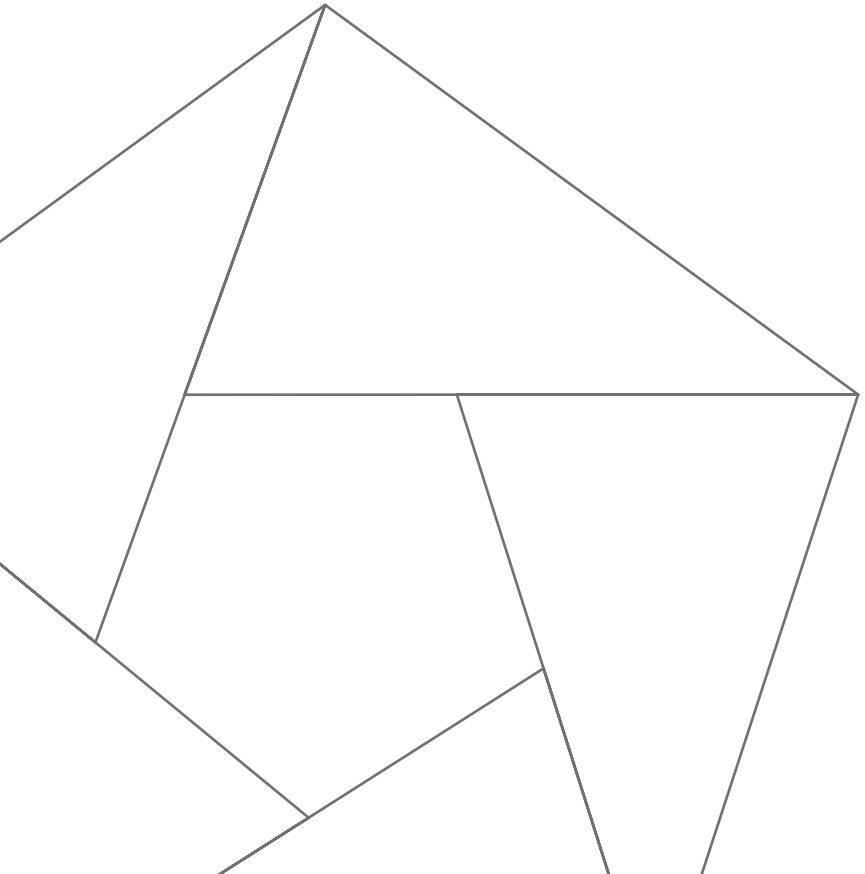
Introduction



CEO Message

CEO of SK hynix / Vice Chairman

Park Jung-ho

Jung park.

In recent years, the world has faced a series of uncertainties, ranging from the global pandemic to economic slowdowns and international conflicts. In the midst of fierce competition to overcome these crises and survive, corporate sustainability has become increasingly important.

In these challenging circumstances, SK hynix is dedicated to achieving sustainable growth by enhancing our technological competitiveness and actively embracing Environmental, Social, and Governance (ESG) management.

In July 2022, SK hynix announced our ESG strategy framework called PRISM, which outlines the reasons, objectives, and plans for implementing ESG management. The key ESG values pursued by SK hynix are summarized in five keywords (Pursue, Restore, Innovate, Synchronize, and Motivate), and specific goals have been established to realize these values by 2030. Building upon this framework, we have implemented ESG management more systematically over the past year and faithfully documented our progress and achievements in the Sustainability Report 2023.

As a first step towards our ambitious goal of "Achieving Net Zero by 2050," SK hynix purchased 100% of its electricity from renewable sources for our overseas facilities and increased the proportion of our overall renewable electricity sourcing to 29.6% last year. In November, we also became a founding member of the Semiconductor Climate Consortium (SCC), an initiative launched by the Semiconductor Equipment and Materials International (SEMI), to actively participate in global collaboration within the semiconductor industry. We believe that achieving net zero emissions requires collective efforts from the industry as a whole, since no single company can accomplish this alone. SK hynix will continue to strive for the development of high-efficiency semiconductors based on our technological leadership, as demonstrated by the "world's first mass-production of HBM3." We are also committed to contributing to global carbon reduction efforts by engaging in solidarity and cooperation at the industry level.

In addition to the environmental aspect, SK hynix places significant focus on creating social value (SV). We have made efforts to achieve shared growth with partners in the semiconductor ecosystem through initiatives such as SV measurement consulting for suppliers and providing technical and financial support services. In April, the cumulative amount of the Happiness Sharing Fund exceeded KRW 30 billion. Throughout the past year, we have also introduced new initiatives to foster a corporate culture where SK hynix employees can experience growth and happiness. Notable examples include the Happy Friday program, which allows employees to enjoy a four-day workweek once a month, the Global eXperience Program (GXP), offering employees the opportunity to immerse themselves in a global work environment, and the Pregnancy Congratulations Package for expectant employees. Furthermore, the company has increased the diversity of its board by expanding the number of female directors from one to two.

Looking ahead, SK hynix remains committed to driving ESG management and top-tier technological innovation based on our Double Bottom Line (DBL) management philosophy while working together with stakeholders to create a sustainable future. We sincerely appreciate your support and encouragement.

Company profile

At the forefront of advanced technology, we are dedicated to creating a better world

Memory semiconductors play a central role in the future of the ICT world. In the midst of the digital transformation (DX) spurred by the Fourth Industrial Revolution, memory semiconductors are driving technological innovations that enhance the quality of our lives.
As a manufacturer of semiconductors that play a pivotal role in the future ICT world, SK hynix has solidified our position as a leading provider of memory-based semiconductor solutions since the pilot production of Korea's first 16Kb SRAM in 1984. Leveraging our proprietary expertise and technological capabilities, we not only develop high-capacity, high-speed, and low-power memory solutions, but also ensure the reliability needed for technological innovations suitable for the smart ICT environment.
SK hynix is committed to creating technological value in response to the exponential growth in data generation and consumption resulting from virtual activities and technological advancements like 5G and AI. We also actively engage in addressing various environmental and social issues, such as energy shortages, climate change, and human rights. We will strive to create a better ICT world by generating both economic and social value, with the aim of promoting the happiness of all stakeholders.

Company name	SK hynix
CEO	Park Jung-ho, Kwak Noh-jung
Date Began Semiconductor Business	February 1983
Area of business	Manufacture and sales of semiconductor devices
Address of headquarters	2091, Gyeongchung-daero, Bubal-eup, Icheon-si,Gyeonggi-do, Korea
Products and services	**Memory semiconductor** | DRAM, NAND Flash, MCP(Multi-Chip Package), etc. **System semiconductor** | CIS(CMOS Image Sensor), etc.

We Do Technology | SK hynix

Purpose

The mission of SK hynix

Making a better world with all members of society by leading the tech-based IT ecosystem

Values

The unique values upheld by all SK hynix members

Tenacity
Advanced Tech.
Prosperity Together

Drivers

The reasons for which customers/ society choose and support SK hynix

Leading Technology
Trusted Partnership
Shared Social Value

2022 at a Glance

Global Top-Tier Technology Leader Driving World Innovation

SK hynix is at the forefront of driving innovation in the IT world with our cutting-edge technology. Despite the challenging global economic conditions in 2022, we continued to demonstrate our technological competitiveness and achieve revenue growth through the development and release of groundbreaking products, including HBM3, the highest-performing DRAM available, and the world's highest-density 238-layer 4D NAND. Looking ahead to 2023, we remain committed to making generous investments in future growth areas and expanding our customer base in the automotive and AI sectors as we aim to create new drivers for growth and become a global top-tier semiconductor company.

Securing the Foundation for Future Growth

Following the completion of the Key Foundry acquisition in 2022, SK hynix initiated the construction of the new semiconductor production facility, Cheongju M15X, as part of our ongoing investment to expand our business model and strengthen production capabilities. The Yongin Cluster project, involving the construction of four fabs on a 4.15 million square meter site, is progressing smoothly with the goal of completing the first fab by 2027. Despite the rapid changes in the business environment, SK hynix will actively and proactively secure the foundation for future growth through infrastructure investments, ensuring continued growth based on our solid core businesses of DRAM and NAND.

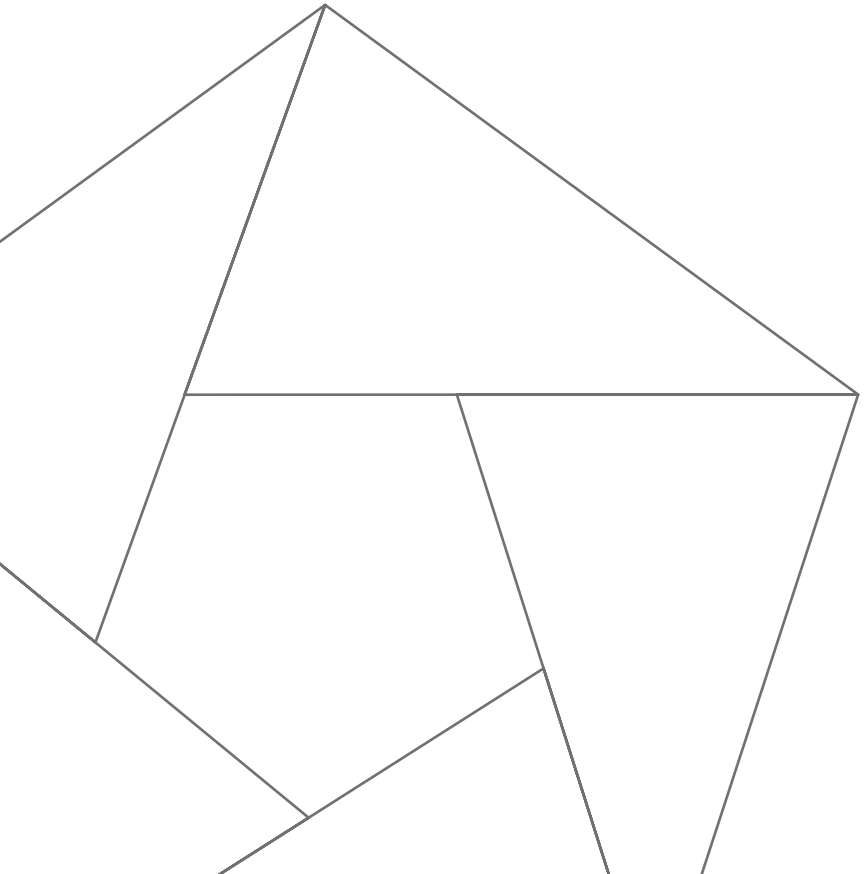
Enhancing Technological Competitiveness

In 2022, SK hynix demonstrated its world-first and best-in-class technology across various product categories. We successfully achieved mass production of HBM3, the highest-specification DRAM available in the market. We also made significant strides in the development of high-speed DRAM products such as MCR DIMM for servers and LPDDR5T for mobile devices, which are now poised for mass production. In the NAND segment, we successfully developed the 238-layer 4D NAND, and started mass production in May 2023. Despite the decline in global semiconductor demand, SK hynix strives to maintain a significant lead through substantial investments and innovation in our core products while continuously pursuing technological advancements in new fields to further expand our business model.

Continued Pursuit of ESG Management

SK hynix undertook various activities throughout 2022 to achieve its medium to long-term goals based on PRISM. In addition to sourcing 100% renewable electricity for our overseas facilities, we increased the company's overall utilization of renewable electricity to 29.6% and conserved 49.4 million tons of water resources. Furthermore, we invested KRW 36.82 billion in technological cooperation aimed at fostering mutual growth with suppliers and conducted on-site ESG assessments for high-risk suppliers to manage supply chain ESG risks. We also actively participated in industry-wide collaboration to achieve net-zero emissions by 2050, which includes the intermediate target of maintaining absolute greenhouse gas emissions (Scope 1 and 2) at the 2020 level by 2030. As part of these endeavors, in November 2022, SK hynix became a founding member of the Semiconductor Climate Consortium (SCC), established by the Semiconductor Equipment and Materials International (SEMI), and led the joint declaration on the utilization of renewable electricity in conjunction with member companies of the ECO Alliance, an eco-friendly semiconductor ecosystem alliance spearheaded by SK hynix.
In January 2023, SK hynix became the first global memory semiconductor company to issue a sustainability-linked bond (SLB). The SLB's interest rate is adjusted based on the attainment of SK hynix's Scope 1 and 2 GHG emissions intensity targets. Initially, we set the target issuance amount at $500 million; however, due to higher-than-expected investor interest, the total issuance amounted to $1 billion. The successful issuance of the SLB amidst the semiconductor industry downturn underscores the confidence of global investors in SK hynix's commitment to climate change mitigation.

ESG Strategy



Our Business

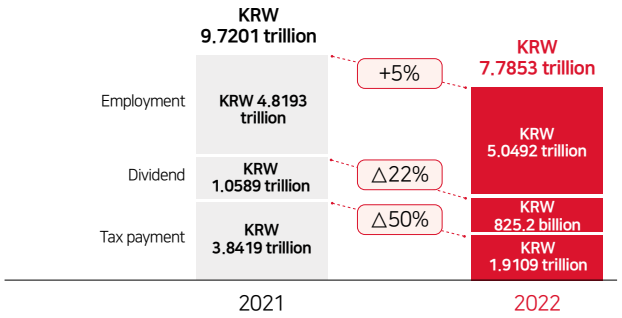
Double Bottom Line (DBL) Management Philosophy

SK hynix embraces Double Bottom Line (DBL)[1] management as our core philosophy in pursuit of co-prosperity with society through the creation of economic value (EV) and the enhancement of social value (SV)[1] in all business activities. In line with the revised "New SK Management System (SKMS)" in 2020, we shifted our corporate purpose from "pursuing profit (EV)" to "happiness of all employees." To achieve the happiness of all employees, we must pursue the happiness of our stakeholders (customers, shareholders, society, and suppliers), while providing both EV and SV to create differentiated value. This is at the heart of our DBL management, and built on the "commitment" of our employees who share this common goal. SK hynix firmly believes that proactive DBL practices will earn the trust of all stakeholders and ultimately create happiness for everyone. Recognizing that "what cannot be measured cannot be managed or improved," SK hynix measures the social value we generate every year and transparently discloses our performance. In 2022, we also began measuring the social value generated by our key suppliers, aiming to promote our DBL management philosophy across the semiconductor ecosystem.

SK hynix's Performance in Creating Social Value in 2022

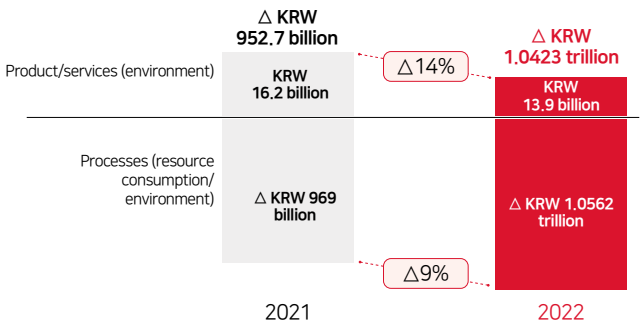
Indirect contribution to economy

KRW 7.7853 trillion
(△20%, △KRW 1.9348 trillion YoY)



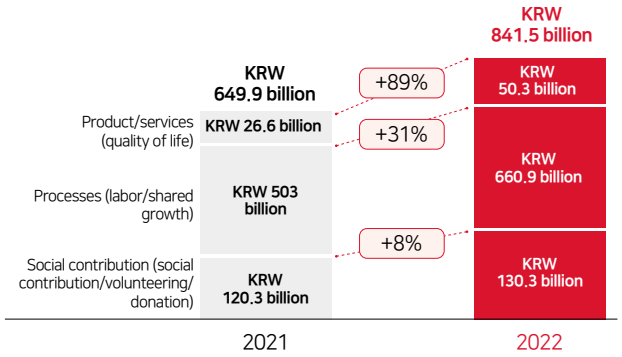
Environmental performance

△KRW 1.0423 trillion
(△9%, △KRW 89.6 billion YoY)



Social performance

KRW 841.5 billion
(+29%, +KRW 191.6 billion YoY)



SK hynix's Social Value Management System

SK hynix is committed to contributing to the public interest and community development by addressing social issues through collaborative efforts between the company and society. Social value measurement represents the comprehensive social impact generated by the company's business activities. SK hynix classifies social impact into four categories: "indirect economic contribution," "environmental performance," "social performance," and "governance." These categories are measured and disclosed annually by converting them into monetary value. The performance in each category is assessed using objective and conservative criteria, and the governance performance will be disclosed later after further refining the indicator system to better reflect the unique characteristics of the domain.

Social value measurement system

Indirect contribution to economy	Economic The value that the company indirectly creates for the economy through business activities	Employment		
		Dividend		
		Tax payment		
Environmental performance	Environment Environmental benefits generated by the company's products and services	Products/services	Resource consumption	Environmental pollution
		Processes		
Social performance	Social Social benefits generated by business activities	Products/services	Quality of life	
			Consumer protection	
		Processes	Labor	
			Shared growth	
		Social contribution	Social contribution activities	
			Donation	
			Volunteering	
Governance	Governance How the company strengthens its business stability through transparent governance	※ The governance indicator is being reviewed as social value metrics based on governance activities		

Social value measurement principles

1. We aim to measure all business activities.

- Measure overall corporate activities, including product development, production, sales, HR, and cooperation with business partners
- Measure positive as well as negative performance

2. We measure outcomes but aim to measure impacts.

- Measure the changes in the lives of the beneficiaries as the direct outcome of business activities
- Aim to assess the impact that our business activities ultimately have on society

Input → Activity → Output → Outcome → Impact

3. Principle of conservatism

Use objective and conservative criteria and data to increase validity and reliability

Ethical Management

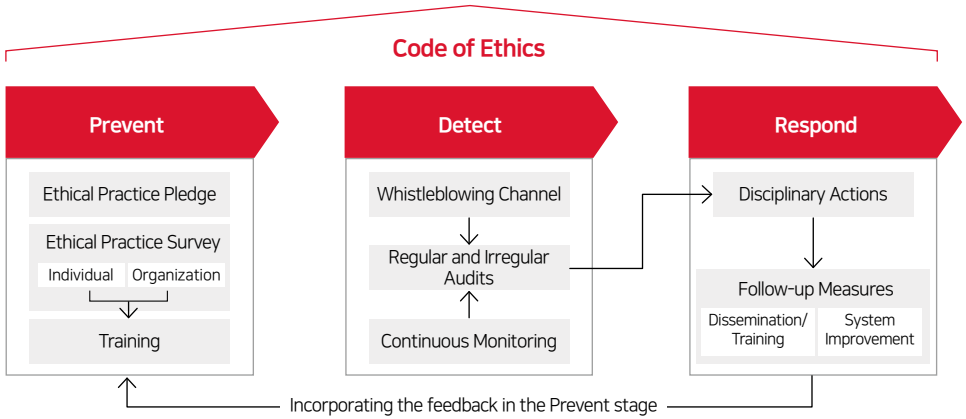
Code of Ethics

Based on the SK Management System (SKMS), the foundation of SK Group's corporate management, SK hynix has a Code of Ethics as a guideline for proper behavior and value judgment that all employees should follow. Moreover, SK hynix has developed an Ethics Action Guide that provides specific principles of conduct. All key stakeholders of SK hynix, including the Board of Directors, employees, and suppliers, understand and adopt the principles of ethical management as norms for decision-making and behavior in business processes.

SK hynix's Code of Ethics

SK hynix's Ethical Management Operating Framework

To effectively implement ethical management, SK hynix operates an ethical management system consisting of three stages: Prevent, Detect, and Respond. In 2022, an ethical management measurement infrastructure was established at the SK Group level to objectively assess and improve the level of ethical management in group companies. A comprehensive evaluation was conducted on the adequacy of SK hynix's ethical management operating system. Based on the evaluation results, SK hynix remains committed to enhancing management capabilities and risk management levels



Prevent

Ethical Practice Pledge and Ethical Practice Survey

Each year, our employees and suppliers in Korea and abroad participate in the "Ethical Practice Pledge" to increase awareness of the importance and necessity of ethical management and to demonstrate their commitment to ethical practices. Additionally, SK hynix conducts an annual "Ethical Practice Survey" among all employees to assess changing perceptions of ethical practices and make effective improvements to our ethical management system. In 2022, as part of the Ethical Practice Survey, we conducted in-depth interviews with over 200 employees to gain a comprehensive understanding of factors that may contribute to a decrease in awareness of ethical practices. These efforts aim to foster empathy, resolve misunderstandings, and build trust in our company's commitment to ethical practices.

Ethics Training to Employees

SK hynix conducts ethics training for all employees at home and abroad, including contract and dispatched workers. We conduct basic ethics training online, while team leaders organize advanced discussion-based sessions with a focus on case studies to enhance employees' ethical decision-making capabilities and execution skills. Furthermore, we provide ethics management training to newly appointed audit committee members, ensuring their support in ethical decision-making processes within the management team. In 2022, we specifically designed and implemented customized training to reinforce ethical awareness among purchasing personnel. This training focused on addressing areas for improvement and major unethical practices identified by the procurement department, with a goal of preventing misconduct and appropriately handling ethical conflicts. A total of 293 purchasing personnel participated the training. Alongside ethics training, we actively strive to improve employee understanding of ethical management through content such as "Useful Ethical Management Dictionary," which explains company regulations and real-life cases related to common ethical conflicts frequently encountered by employees, such as dual employment or conflicts of interest.

Participation Rates in Ethical Practice Pledge and Training

(Unit: %)

Category		2019	2020	2021	2022
Ethical Practice Pledge		97.7	98.4	97.0	98.4
Ethics Training	Basic Training	99.0	98.7	99.0	99.4
	Advanced Discussion-based Training	100	100	100	100

* 1,061 suppliers participate in the ethical practice pledge in 2022.

Detect

Whistleblowing and Counseling Channels

SK hynix operates whistleblowing and counseling channels to facilitate external stakeholders in reporting unfair demands or misconduct by our employees based on their experiences or observations. These channels also provide an avenue for our employees to seek advice on ethical management concerns. Whistleblowers have the option to submit their reports anonymously or non-anonymously through various channels such as the website, phone, or email. We strictly adhere to whistleblower protection regulations to ensure the confidentiality of the whistleblower's identity and the content of the report. SK hynix implements post-reporting monitoring for a minimum of one year and takes proactive measures to prevent any form of retaliation or adverse consequences against the whistleblower.

Whistleblowing and Counseling (Korea)

(Unit: Cases)

Category		2019	2020	2021	2022
Whistleblowing	Total Reports	185	237	368	308
	Valid Reports	15	36	85	51
Counseling	Ethics Counseling Center	150	135	191	97

* Whistleblowing data from 2019 to 2021 have been revised due to changes in the criteria for data.

Self-inspection System

SK hynix has implemented a self-inspection system that autonomously conducts inspections on designated risk areas in key business functions such as procurement, personnel, finance, and investment management. Operational teams are required to conduct annual self-inspections or collaborate with the Ethics Management department, using task-specific checklists prepared by the department. During inspections, data extracted from each business system is reviewed to determine if any inappropriate handling has occurred.

Audits and Assessments

SK hynix conducts audits and assessments for all its facilities and subsidiaries (with the objective of completing them for all facilities every 3 years) to ensure compliance with internal regulations and procedures, as well as to evaluate the adequacy and efficiency of business operations. Audit results are reported through a “Dual Reporting” system to the CEO and the Audit Committee. As part of strengthening the Dual Reporting system in the Ethics Management department, regular reports are submitted to the CEO and the Audit Committee at least six times a year. In 2022, seven business reports were conducted, including the regular audit results for subsidiary-type standard workplaces for persons with disabilities.

Respond

Upon identifying improvement needs in ethical or efficiency aspects during the Detect stage, SK hynix takes immediate corrective actions or collaborates with relevant departments to determine improvement tasks. Additionally, thorough monitoring is regularly conducted to prevent the recurrence of risks. For serious unethical behaviors such as false reporting, bribery, sexual misconduct, and harassment, a zero-tolerance principle is applied, and strict measures are taken regardless of position. Leaders, in particular, are held to higher standards of ethical conduct, and stronger management accountability for corruption is enforced. Furthermore, suppliers involved in misconduct may face sanctions according to SK hynix’s standards, including restrictions on transactions, contract termination, and limited access to SK hynix’s facilities, following deliberation by the BP Sanctions Review Committee.

Disciplinary Actions for Employees and Sanctions for Suppliers (Korea)

(Unit: Cases)

Category		2019	2020	2021	2022
Employees[1]	Light Disciplinary Action	49	35	25	27
	Severe Disciplinary Action[2]	44	52	65	72
Suppliers	Restricted Access/Supplies	1	2	–	1
	Contract Suspension/Termination	4	4	12	1

1) Out of the total number of actions taken, there were 11 cases of disciplinary action for harassment
2) Severe disciplinary actions: Wage cut, suspension, demotion, dismissal measures against unethical conduct
* Due to simple numerical errors, the data for severe disciplinary action in 2019-2021 have been revised.

Case

Reflecting Ethical Misconduct in Executive Performance Evaluation

As part of the measures implemented in response to enhanced ethical prevention activities recommended by the Audit Committee in 2021, SK hynix has introduced a penalty points system in executive performance evaluations. If significant unethical conduct involving executives or their subordinates takes place, penalty points are deducted from the executives’ key performance indicators (KPIs). Following a trial period in 2021, the system was officially adopted in 2022, leading to point deductions for approximately 20 executives.

Compliance

Global Compliance Program

SK hynix complies with the regulations of various countries where it conducts business through the operation of the Global Compliance Program (GCP). We are committed to meeting the demands of regulatory agencies and stakeholders. In particular, given the growing significance of export control management amidst recent tensions between the United States and China, the scope of the GCP has expanded beyond traditional compliance areas such as fair trade and anti-corruption to encompass new domains.

Currently, SK hynix implements pre- and post-inspections, monitoring, internal audits, training, and preventive activities to minimize legal risks in five areas: ① strategic materials and export control management, ② counterparty risk management, ③ anti-trust, ④ anti-corruption, and ⑤ personal information protection. We aim to achieve "zero" incidents of legal violations in these five areas and recorded no violations in 2022.

Establishment of the Global Compliance Management System

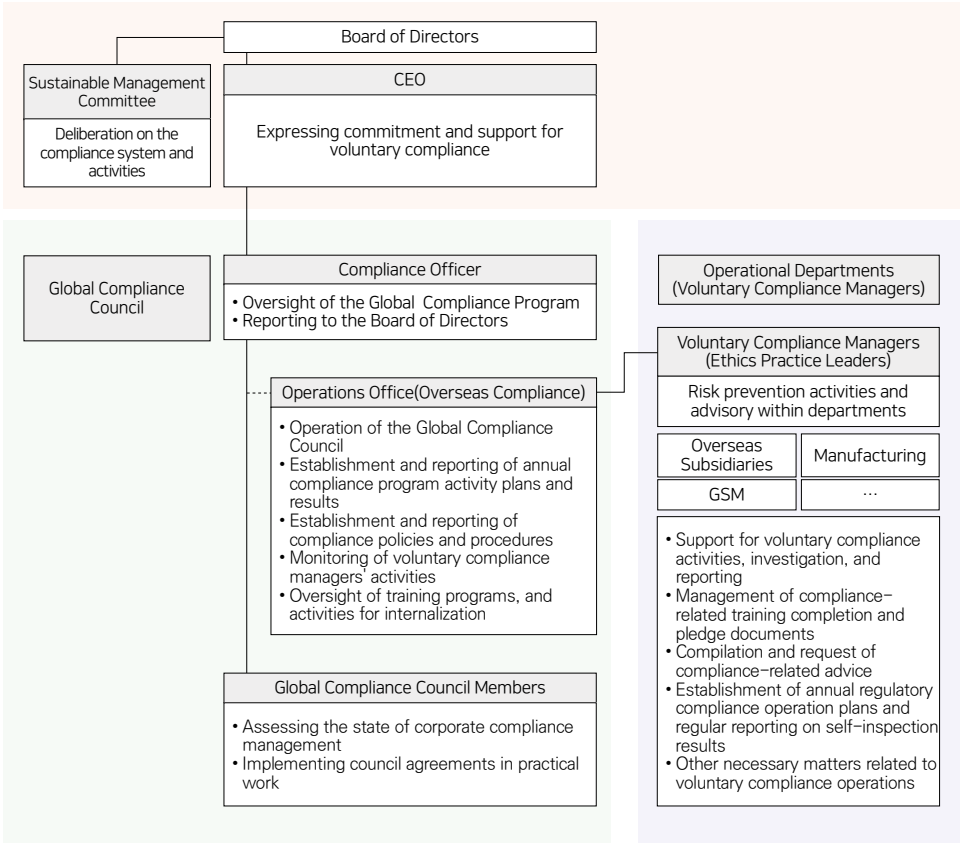
SK hynix has expanded and restructured its existing Global Compliance System into the Global Compliance Management System (GCMS) to effectively achieve the operational goals of the revamped Global Compliance Program. The Global Compliance Team utilizes GCMS to develop annual business plans and conduct monthly pre-inspections, monitoring, and post-inspections to systematically manage global regulatory risks.

The Compliance Team and management use GCMS to verify the company's overall compliance performance and track the implementation[1] of improvement measures, including preventive actions, to address identified deficiencies and improvement needs.

Operation of the Global Compliance Council

SK hynix recognizes that compliance with international laws and regulations cannot be achieved solely through the compliance activities of one department. To actively practice compliance and establish a company-wide response system, SK hynix operates the Global Compliance Council, chaired by the executive responsible for sustainable management, who is also the compliance officer. The Global Compliance Council convenes semi-annually to discuss and determine the company's compliance activity plans, performance, and policy directions. This facilitates the dissemination of compliance-related decision-making throughout the organization and promotes the internalization of these decisions. Furthermore, the council periodically reports meeting outcomes and activities to the Board of Directors, while important matters are executed with the approval of the board and CEO. This approach enables an effective company compliance program/system with active participation and implementation by the board, management, and employees.

Organization Chart of the Global Compliance Council



Publication of Subcontracting and Affiliate Transaction Guidelines

In response to social demands for shared growth and collaboration among businesses, compliance with the Fair Transactions in Subcontracting Act (referred to as the "Subcontracting Act")[6] is increasingly important, and its enforcement is also being strengthened. Against this backdrop, SK hynix has published the "Subcontracting Trading Manual" to assist employees responsible for subcontracting transactions in understanding the Subcontracting Act and related considerations and apply them in their work. The manual categorizes subcontracting transactions into stages: contract negotiation, contract execution, payment, contract termination, and document retention. It provides guidance on legal regulations and considerations that apply to the prime contractor at each stage.

Meanwhile, transactions with affiliates are subject to strict regulation under various laws such as the Monopoly Regulation and Fair Trade Act (referred to as the "Fair Trade Act") and the Commercial Act. These transactions are closely examined by government agencies including the Fair Trade Commission, prosecutors, and tax authorities. Consequently, additional procedures such as board approval (resolution), disclosure, or reporting at the general shareholders' meeting may be required to conducting transactions with affiliates. To ensure compliance with lawful and fair transaction procedures with affiliates, SK hynix is preparing the "Affiliate Transaction Guidelines," which are scheduled for publication in 2023. These guidelines will consolidate regulations and considerations related to affiliate transactions scattered across different laws, such as the Fair Trade Act and the Commercial Act. They will be organized by items that require prior review, such as the selection of counterparties, determination of transaction conditions, and the need of board approval, making them easily accessible for reference during work.

Case

Compliance Training for Overseas Subsidiary Employees

SK hynix conducts a variety of training programs to enhance compliance understanding and strengthen compliance management practices not only at domestic locations but also at overseas facilities. Here is a case from the Wuxi plant.

The Legal Team at SK hynix's Wuxi plant provides legal training sessions tailored to the needs of each business division on a biannual basis. In May 2022, a training session on intellectual property law compliance was conducted to prevent economic losses and brand devaluation resulting from intellectual property (IP) infringement. Employees from relevant teams including Public Relations, Safety, HR, Strategy GR, Industrial Security, and IT Management attended the session. The training covered basic knowledge of legally protected IP rights (trademarks, patents, copyrights, etc.), the scope of IP rights, acts of infringement, and the legal responsibilities associated with infringement. It also highlighted key points for protecting IP rights and provided notable cases and considerations relevant to day-to-day operations. In October 2022, a seminar on employment regulations was held for HR employees. Employment regulations are fundamental rules of a company that closely relate to the rights and obligations of all employees. Through various case studies, HR employees gained a better understanding of the principles, procedures, legal effects, and relevant precedents of employment regulations to accurately perform their duties.

Human Rights

Principles of Human Rights

SK hynix respects the human rights of all stakeholders who have a relationship with SK hynix, including employees. Our human rights management encompasses activities, goals, and strategies aimed at respecting and protecting the human rights of stakeholders while fulfilling our responsibilities. In order to prevent potential risks of human rights violations in all aspects of business operations, we seek to establish a corporate culture that prevents human rights violations, respects human rights, and maintains a balance between business performance and social responsibility. We identify potential risks of human rights violations and implement systems and processes to prevent them. We also take measures to address and mitigate identified risks. Furthermore, we strive to establish a corporate culture that respects and protects human rights through employee human rights training and by fostering a culture of respect for human rights. Meanwhile, in 2023, SK hynix has developed detailed human rights policies aimed at enhancing its capacity to address specific human rights concerns, including child labor, migrant workers' rights, discrimination, and harassment issues. While the Human Rights and Labor Policy serves as the company's foundational policy on human rights, the detailed human rights policies provide actionable measures to tackle significant human rights issues, serving as a guide to effectively safeguard and improve human rights. For the full text of the detailed human rights policies, please visit the SK hynix website.

SK hynix Human Rights and Labor Declaration & Human Rights and Labor Policy

Labor & Human Rights Council

In February 2023, SK hynix established the Labor & Human Rights Council (LHRC) to create a more systematic and effective governance framework concerning labor and human rights. The LHRC consists of leaders and team members from four departments closely related to human rights and labor matters: HR, Procurement, Legal, and ESG Strategy. The LHRC reviews significant human rights and labor issues that may arise within SK hynix and its supply chain, and works to prevent risks and develop response measures. The LHRC holds regular monthly meetings to review and discuss human rights and labor issues, and reports on key matters to the ESG Management Committee and the Board of Directors through the HR ream responsible for human rights.

Human Rights Survey

In late 2022, SK hynix conducted a human rights survey targeting employees in Korea to assess the status of human rights risks within the company. The survey consisted of 33 questions across six areas, including sexual harassment and mistreatment at work, non-discrimination, and adherence to working hours. The survey results indicated that work-related stress was the most significant issue perceived by SK hynix employees. In 2023, the HR department, responsible for human rights, utilized the results of the human rights survey to develop specific response measures for each identified issue. In 2023, improvement activities are underway according to the response measures developed by HR, the department responsible for human rights, based on the human rights survey. SK hynix plans to maintain continuous monitoring of the progress made in addressing these issues and regularly evaluate the effectiveness of the implemented measures to tackle human rights concerns.

Response measures for each human rights issue

Issues	Response measures
Work-related stress	• Expand the "Do-Dream Talk Talk" HR visiting counseling program
Workplace harassment	• Expand workplace harassment prevention training, focusing on case studies • Distribute materials on workplace harassment prevention and response to leaders • Implement harassment prevention programs for high-risk departments • Share workplace harassment-related cases and conduct Q&A sessions through live broadcasts
Discrimination	• Ensure clear communication of evaluation criteria for organizational performance at the beginning and end of the year • Establish a feedback and appeals system for performance evaluation results • Establish an internal job change system to support individual career development and strengthen communication

Identification of Human Rights Risks and Response Measures

To identify human rights risks, SK hynix conducts a comprehensive human rights impact assessment using a self-evaluation checklist across our headquarters, subsidiaries, and global facilities. This assessment thoroughly examines the company's policies, procedures, and systems pertaining to human rights issues. Additionally, by conducting a human rights survey among employees, we gather and analyze their opinions and experiences regarding potential human rights concerns within the organization. This process provides opportunities for identifying and addressing any potential problems. The identified human rights risks from the impact assessment checklist and the human rights survey are further verified and reviewed through human rights due diligence. This involves interviews with responsible personnel to inspect company policies and relevant documents, as well as employee interviews to confirm the concerns identified in the human rights survey. In 2021, SK hynix conducted human rights impact assessments at our facilities in Korea (Icheon, Cheongju) and China (Wuxi, Chongqing), and the joint venture company, Hitech. The findings were publicly disclosed through the SK hynix Human Rights Report 2022. Among the 119 improvement tasks identified in the 2021 impact assessment, all short-term tasks were successfully completed, and as of the end of 2022, the completion rate for medium- to long-term tasks reached 48%. We plan to maintain continuous monitoring of the progress and disclose the results, with the goal of completing all improvement tasks by the first half of 2024. Through regular human rights impact assessments, we are committed to strengthening human rights management within the company and ensuring the effective implementation of improvements.

Status of Completion of Human Rights Impact Assessment Improvement Tasks (As of end-2022)

Category	Number of Improvement Tasks	Number of Completed Tasks	Completion Rate
Short-term	40	40	100%
Mid-term	46	21	45.6%
Long-term	33	17	51.5%
Total	**119**	**78**	**65.5%**

Stakeholder-Centered Grievance Mechanism

With the amendment of the Labor Standards Act in 2019, which prohibited workplace harassment, and the introduction of a correction system by the National Labor Relations Commission in 2022 to address gender discrimination in hiring, regulations and systems related to human rights and labor in Korea have been strengthened. In line with these developments, SK hynix is facing growing demands from internal and external stakeholders to address various human rights violations and resolve grievances. To proactively fulfill our human rights responsibilities in response to these external changes, we have established a "stakeholder-centered grievance handling system." This system aims to prevent human rights violations and enables us to respond promptly and actively in cases where such violations occur.

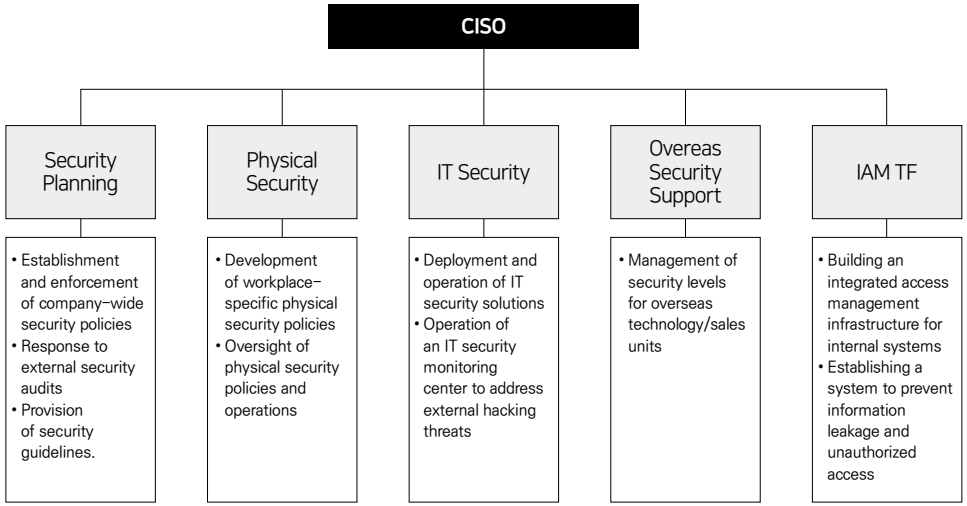
Employees and external stakeholders of SK hynix have the freedom to report ethics violations, including human rights violations, that they have experienced or witnessed. They can make these reports through various channels such as the "SK Ethical Management" website, phone, email, and more, either anonymously or non-anonymously. These reports are connected to a hotline, and the relevant parties are contacted within 48 hours. SK hynix maintains strict confidentiality and security measures to protect the identity of the whistleblower through a whistleblower protection program. All information provided is treated with the utmost confidentiality. For SK hynix employees, there is an internal counseling and whistleblowing channel called "Do-Dream" specifically designed to address human rights issues, including workplace harassment, sexual harassment, discrimination, and disadvantages resulting from the implementation of maternity protection measures. In 2022, SK hynix further strengthened its grievance handling channels by assigning dedicated counselors for each workplace in Korea to provide counseling services and training on human rights protection. In cases of human rights violations, a comprehensive one-stop system is in place to handle whistleblowing, counseling, problem resolution, and post-management. Additionally, SK hynix operates programs aimed at increasing employees' awareness of human rights issues as part of its ongoing efforts to proactively reduce potential human rights risks.

Corporate Security

Corporate Security System

SK hynix aims to cultivate a robust security culture by effectively managing and mitigating security risks through security infrastructure and management systems that adhere to the Best In Class (BIC) criteria. This initiative is led by the Chief Information Security Officer (CISO), who is an executive responsible for corporate security. The Identity and Access Management (IAM) Task Force plays a crucial role in enhancing security by establishing an integrated access management infrastructure for internal systems and implementing measures to prevent information leakage and unauthorized access. SK hynix also operates integrated security monitoring, conducts vulnerability assessments, reinforces security infrastructure, enhances security awareness, and oversees the Corporate Security Council for overseas subsidiaries, promoting global governance of corporate security.

Corporate Security Organization Chart



Security Enhancement and Inspection Activities

SK hynix is actively responding to changes in the internal and external security environment by proactively establishing various security infrastructures, including strengthening security-related compliance and expanding remote work. We have ensured business continuity by implementing measures to prevent the leakage of our proprietary technologies through national core technology (NCT) protection in compliance with the Act on the Prevention of Disclosure and Protection of Industrial Technology. We have also completed the disclosure of information regarding information security personnel, investment, and activities as SK hynix was included in the list of companies subject to information security disclosure for the first time in 2022 under the Act on the Promotion of Information Security Industry. Furthermore, we have implemented measures to prevent data leakage by controlling access systems in FABs, established a secure file transfer system to prevent ransomware and malware, and conducted security inspections on critical information assets such as NCTs, confidential documents, and FAB production equipment. Ensuring comprehensive industrial security also necessitates the presence of appropriate security systems within subsidiaries and suppliers. Accordingly, SK hynix has been conducting intensive security inspections and improvement activities for new subsidiaries, as well as regular inspections of suppliers and subsidiaries to drive continuous enhancement. Our security system has gained international recognition through ISO/IEC 27001 certification for information security.

Activities and Plans for Strengthening Corporate Security

2022	2023
• Proactive response to changes in the security landscape, such as strengthened security regulations and increased remote work • Establishment of the foundation for IAM (Phase 1) • Reinforcement of security infrastructure and cyber monitoring for overseas subsidiaries Enhanced security for fabs	• Continuous expansion of systems covered by IAM (Phase 2) • Improvement of electronic document security management. • Intensive security assessment for overseas units/ subsidiaries Enhancement of security solution effectiveness

Improving Security Awareness

In addition to establishing robust systems, it is crucial for employees to have a strong awareness of security in order to prevent security breaches like information leakage. SK hynix employs various methods to enhance employees' security awareness.

Firstly, we designate a monthly security day, during which team leaders conduct security training to promote proactive security management. Employees are also required to sign an annual information security pledge to demonstrate their understanding of responsibilities and obligations related to information protection. In addition, we conduct semi-annual online security training sessions to update employees on common security incidents and company security policies. This training is followed by an examination to assess employees' comprehension, and a survey is conducted to gather feedback on the training process. The company-wide online security training achieves a 100% completion rate, effectively increasing employees' knowledge of protecting company information assets. Furthermore, we organize various security events, such as finding hidden security words, completing a corporate security activity bingo, and a security slogan contest, to further raise awareness among employees. To prevent incidents such as malware infections through phishing emails, we send simulated emails to all employees, enabling them to learn how to respond effectively in such scenarios.

Cyber Threat Response Measures

SK hynix has implemented and operated security solutions for each cyber threat pathway, including detecting and analyzing signs of malware infection, preventing malware infiltration, and isolating and disinfecting infected systems. In 2022, we further strengthened our security infrastructure to address the evolving cyber threats. To minimize potential security vulnerabilities that may arise between the release of patches for internal systems and their application, we developed a proprietary proactive response mechanism that assesses our readiness against hacking codes and generates and registers patterns through hacking simulations.

Personal Information Protection System and Raising Awareness

SK hynix recognizes the importance of protecting personal information and makes every effort to safeguard the personal data of all stakeholders involved in our business. To comprehensively manage the risks associated with personal information protection, we have appointed a Chief Privacy Officer (CPO), responsible for corporate security. We manage personal data through a robust system and implement protective measures to ensure the safety and prevent the loss, theft, leakage, or damage of personal information belonging to our customers, employees, suppliers, and other stakeholders. To meet global standards for personal data protection, we strengthen our compliance with personal information regulations in different countries, considering key laws and regulations such as the General Data Protection Regulation (GDPR) in Europe, the California Consumer Privacy Act (CCPA) in the United States, and the Personal Information Protection Law (PIPL) in China.

We also carry liability insurance to cover damages resulting from personal data breaches and fulfill our responsibility for compensation in such cases. We proactively strive to prevent personal data incidents and respond effectively to any damages suffered by individuals. To verify compliance with the Personal Information Protection Act as well as our managerial and technical protection measures and manage security risks in advance, we operate the "HyPrivacy" personal information security management system. Regular security inspections and improvement activities are conducted on systems and subcontractors handling personal data to enhance the level of personal information protection. In accordance with the Personal Information Protection Act, we provide personal information protection training to all employees at least once a year to raise awareness of the importance of personal information protection. The training sessions focus on real-life cases of personal data breaches and emphasize the significance of safeguarding personal information.

Materiality Assessment

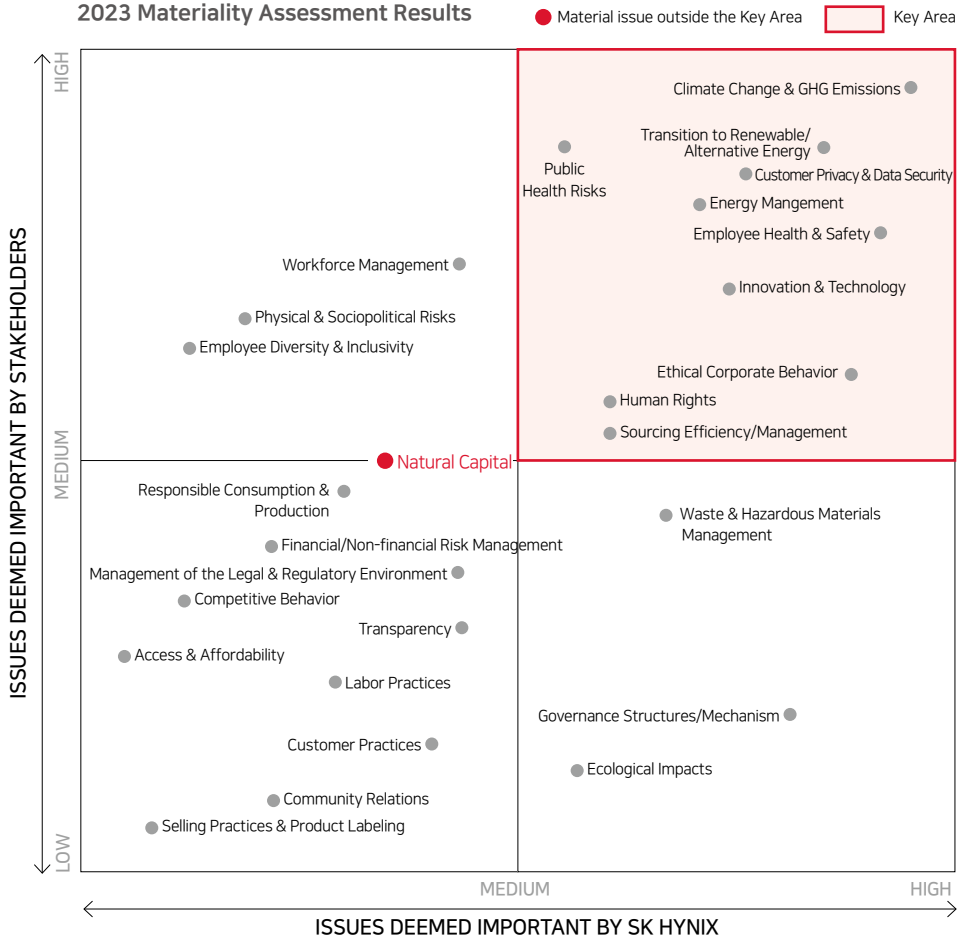
SK hynix identifies ESG issues that have a significant impact on our business through an annual materiality assessment and incorporates the results into our medium- to long-term management strategy. Starting from 2022, we utilize a big data analysis platform to crawl information from various sources such as corporate reports, policies/regulations, media, and more, and integrate the findings into our materiality assessments.
Our materiality assessment process is as follows:

Materiality Assessment Process

Issue Pool Formation	Create an issue pool consisting of 27 issues highly relevant to the semiconductor business within the technology and communications industry.
↓	
Big Data Analysis	Analyze investor data, various regulations and initiatives, information disclosed by peers/ customers/suppliers, media sources, and more.
↓	
Surveys	Conduct surveys among SK hynix executives, ESG Management Committee members, and employees.
↓	
Identification of Material Issues	Identify material issues based on the analysis results of issues considered important by SK hynix (X-axis) and issues deemed important by stakeholders (Y-axis).

Through this materiality assessment process, SK hynix has identified a total of 11 material ESG issues that are that are deemed critically important for the company to address. These include 10 issues that are important to both SK hynix and external stakeholders (key area in the right graph) and one issue that is particularly significant due to the water-intensive nature of the semiconductor industry (Natural Capital).

2023 Materiality Assessment Results



Analysis of Material Issues and Changes

Following the previous year, SK hynix has once again selected a total of 11 material issues for this year. However, the composition of these material issues has changed compared to the previous year. Three new issues – "Transition to Renewable/Alternative Energy," "Customer Privacy/Data Protection," and "Public Health Risks" – have been included in the key area. The increased importance of these issues reflects the findings of a survey conducted in February 2023, targeting a total of 248 individuals, including members of the ESG Management Committee, key executives, and SK hynix employees.

First, the issue of "Transition to Renewable/Alternative Energy," which investors consider to be the most important, is ranked fourth in importance within the company. SK hynix views the procurement of renewable electricity as a crucial means to achieve net-zero emissions, as demonstrated by the company's achievement of 100% renewable electricity at overseas facilities in 2022.

Recently, there has been a rise in regulations related to data protection in various countries, leading to increased emphasis placed on "Customer Privacy/Data Protection." Regulators have identified this issue as their top concern, and within SK hynix, it is considered the sixth most important issue.

In addition, SK hynix's management and employees share the importance of preventing an increase in public health risks as we transition back to normalcy following the COVID-19 pandemic. While the situation is shifting from a pandemic to an endemic state, effectively managing "Public Health Risks" remains a significant challenge for companies.

Moreover, the issue of "Natural Capital," chosen as a material issue considering the water-intensive nature of the semiconductor industry, has gained even greater significance among external stakeholders compared to the previous year. This can be attributed to the planned release of final framework recommendations by the Taskforce on Nature-related Financial Disclosures (TNFD) in 2023. "Natural Capital" encompasses biodiversity conservation and water resource management, making it highly relevant not only to the semiconductor industry but also expected to gain increased attention across all sectors in the future.

SK hynix plans to actively identify the evolving needs of diverse stakeholders and integrate them into its ESG issue management and business strategies through material assessments based on big data analysis.

Material Issues Identified

Issues	Internal Priority Rankings	Priority Rankings by Stakeholder							Reporting Page
		Customers	Peers	Investors	Media	Initiatives	Regulators	Suppliers	
Climate Change & GHG Emissions	1	3	3	3	10	1	3	3	43-48, 59-60
Transition to Renewable/Alternative Energy	4	5	5	1	7	3	13	6	43, 46
Employee Health & Safety	2	8	8	9	14	15	7	8	36-42
Customer Privacy/Data Protection	6	2	2	27	3	9	1	2	17-18
Energy Management	8	9	9	1	4	5	14	9	47-48
Ethical Corporate Behavior	3	6	6	27	12	14	18	5	11-14
Technology & Innovation	7	7	7	15	2	12	22	7	59-71
Public Health Risks	13	1	1	27	1	6	4	1	40
Human Rights	11	14	15	27	11	4	2	15	15-16
Sourcing Efficiency/Management	11	10	11	4	16	22	26	12	72-77
Natural Capital	18	21	21	9	23	2	8	21	49-55

Stakeholder Engagement

SK hynix categorizes key stakeholders into seven groups based on their accountability, influence, dependence, and interest. Through active communication via various channels, we engage with each stakeholder group and develop and implement response strategies based on identified areas of interest and demands. The results of these efforts are shared with the stakeholders.

Stakeholder Group	Communication Channels		Communication Activities
Customers	• Customer-oriented QI (Quality Intelligence) activities • SHA (Shareholder Account) • Website		• The Customer Service Center (CSC) handles customer inquiries and requests on the website • Quarterly Business Review (QBR) to share business updates with customers • Quarterly Technical Review (QTR) meetings to review production plans and technical issues
Employees	• Management briefings • Labor-Management Council • Communication bulletin board	• Junior Board, 1-on-1 meetings • Surveys among employees	• "THE Communication" conducted quarterly for communication between the CEO and employees • Upgrade of the employee communication bulletin, Comm.ON • Regular 1-on-1 meetings between executives and employees • Regular conduct of "Culture Survey" and "SwitchON Survey" for all employees
Shareholders/Investors	• Earnings conference calls • General Shareholders' Meeting	• Meetings with investors and securities firms • Website, telephone inquiries	• Quarterly earnings conference calls and website disclosures • Year-round meetings with investors and securities firms • Regular general shareholders' meetings and e-voting
Suppliers	• Shared Infrastructure Portal • Shared Growth Committee	• ECO Alliance • ESG consulting	• Support programs for suppliers, such as Win-Win Academy and Youth Hy-Five, through the Shared Infrastructure Portal • Joint declaration of renewable electricity use with participating companies in the ECO Alliance
Communities	• Work Environment and Health Center • Happiness Sharing Fund Steering Committee • Regional Committee on Chemical Substances		• Opening of the Work Environment and Health Center in Icheon • Operation of the Steering Committee for the execution of the Happiness Sharing Fund • Participation in the Gyeonggi Committee on Chemical Substances
Government/NGO	• Korea Chamber of Commerce and Industry (KCCI) • National Assembly	• Policy meetings • UNGC	• Participation in the KCCI Digital Leaders Academy • Submission of the UNGC Communication on Progress (CoP)
Associations/Initiatives	• Korea Semiconductor Industry Association • Semiconductor Equipment and Materials International	• SCC(Semiconductor Climate Consortium)	• Participation in the World Semiconductor Council (WSC) meeting • Participation in the SCC as a founding member

PRISM Framework and 2030 Goals

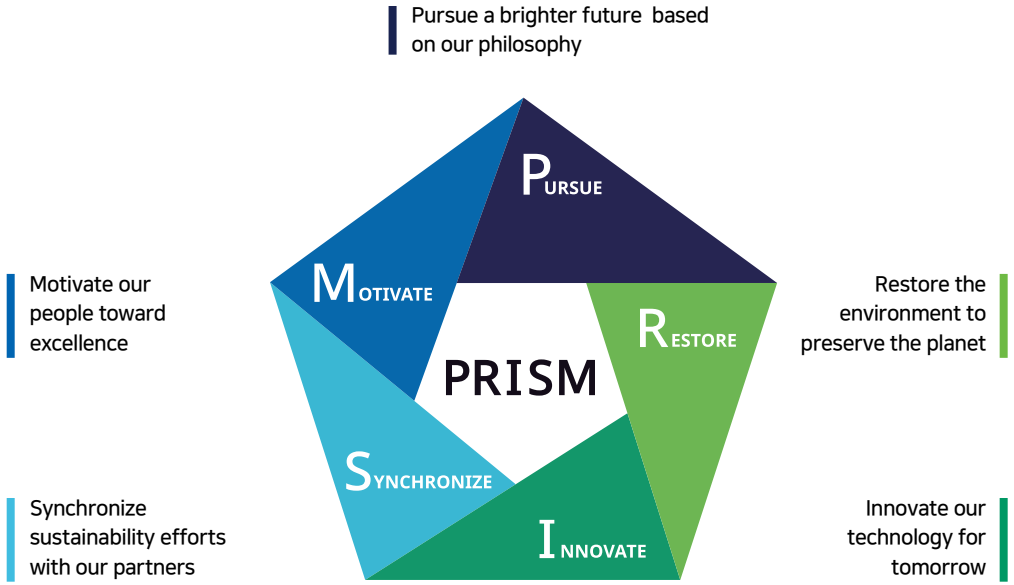
PRISM Framework

In 2022, SK hynix unveiled our new ESG strategy framework, PRISM. Through PRISM, SK hynix aims to transparently communicate with stakeholders, showcasing the reasons, direction, and journey towards our ultimate goal.

PRISM comprises five pillars: Pursue, Restore, Innovate, Synchronize, and Motivate. Each pillar holds unique significance and embodies SK hynix's medium- to long-term goals for sustainable management.

The first pillar, Pursue, reflects our belief in pursuing a brighter future based on the DBL management philosophy. The second and third pillars of PRISM, Restore and Innovate, demonstrate SK hynix's strong determination to restore the environment, enhance Earth's sustainability, and contribute to building a prosperous future through innovative technology development. The fourth and fifth pillars, Synchronize and Motivate, represent SK hynix's commitment to achieving all these goals through collective efforts based on a shared vision among employees and all stakeholders.

The journey to accomplish the goals of PRISM area will encounter various challenges and will not be easy. Nevertheless, to realize our philosophy of promoting the happiness of all, we will attentively listen to and incorporate stakeholder demands into our new goals and consistently share the process of achieving those goals. Building on PRISM, SK hynix will enhance our positive influence and contribute to creating a brighter future.



2022 Achievements and 2023 Targets of PRISM

Following the establishment and announcement of the 2030 goals of PRISM last year, SK hynix has dedicated substantial efforts to attain the targets set for 2022. The analysis of SK hynix's sustainability endeavors in 2022 revealed that we successfully achieved our targets for 19 out of the total 25 goals (excluding biennially managed goals). In March 2023, the ESG Management Committee, along with key executives and the CEO, deliberated on these results and established new targets for 2023. Comprehensive discussions were held to analyze the reasons for underachievement of the six goals in 2022 and formulate effective implementation plans to ensure their successful realization in 2023. SK hynix's commitment to 2030 PRISM goals will persist in 2023. The progress and outcomes of these efforts will be transparently disclosed through the Sustainability Report and SK hynix's Sustainability Reporting System.

PURSUE

Among the eight goals under the Pursue pillar, we successfully accomplished six goals in 2022, with five of them exceeding the established targets.
Notably, our dedicated safety activities led to excellent outcomes in reducing the integrated incident rate, aligning with our preparations for the enactment of the Serious Accidents Punishment Act in 2022.
However, we fell short of the target for participation in the global ICT talent development program due to adjustments made in response to the demands of the local community, resulting in changes to the selection of social contribution beneficiaries and support schedules. Additionally, the prolonged COVID-19 pandemic contributed to an increase in the rate of metabolic syndrome among our employees, stemming from decreased physical activity.
In 2023, we will actively expand the HAPPY IT STUDY LAB, which provides IT education infrastructure and content for children and adolescents, to address the areas where we fell short in 2022. Furthermore, we will implement a personalized health promotion program to enhance employee well-being, assess health grades by department, and foster healthy lifestyle habits at both individual and organizational levels.

★ Overachieved ● Achieved ○ Underachieved

Category	2030 Goals (Base year: 2020)	2023 Targets	2022 Achievements	Compared to Target
Our Value to Society	Generate value created from SV social contribution activities of KRW 1 trillion (cumulative)	KRW 289.1 billion	KRW 250.6 billion	★
	Create 1,000 jobs for people with disabilities or low-income households*	1,000 jobs	1,052 jobs	★
	Promote the participation of 100,000 individuals in the global ICT talent fostering program (cumulative)*	27,467 persons	17,767 persons	○
	Help 100,000 people from underserved communities through social contribution activities leveraging cutting-edge technology (cumulative)*	28,015 persons	23,728 persons	★
	Serve 12,000 individuals through our meal sharing program (cumulative)*	4,280 persons	3,480 persons	★
Robust Governance	Increase gender and nationality diversity on the Board to 30%	20%	11%	●
Safety & Health at Work	Reduce the integrated incidents rate by 10%* (Base year: 2021)	2.2% decrease	1.8% decrease	★
	Reduce the rate of metabolic syndrome by 10%* (Base year: 2021)	2.2% decrease	9.0% increase	○

* Figures from domestic sites

RESTORE

★ Overachieved ● Achieved ○ Underachieved

Under the Restore pillar, we achieved the 2022 targets in six out of seven goals. We exceeded the targets for water conservation and water intensity, which are critical for the semiconductor industry, by expanding our water reuse infrastructure and optimizing water resource usage. In terms of the Zero Waste to Landfill (ZWTL) goal, our facilities in Korea obtained Platinum certification. We also made significant progress in renewable electricity usage. Our overseas facilities successfully achieved 100% renewable electricity target, and we substantially increased the overall renewable electricity usage rate across our domestic operations from approximately 4% in 2021 to 29.6% in 2022 by actively leveraging the Green Premium System. Additionally, through continuous efforts to reduce carbon emissions, such as minimizing process gas emissions and improving energy efficiency, our Scope 1 & 2 greenhouse gases (GHG) emissions in 2022 decreased by 210,000 tCO_2eq compared to the initial projection, reaching 7.17 million tCO_2eq. Although the GHG intensity slightly fell short of the 2022 target by 2 percentage points, it showcased a significant decrease compared to the base year (2020), demonstrating that SK hynix's reduction efforts are progressing as planned. Led by the Carbon Management Committee, SK hynix will continue its comprehensive efforts to reduce process gases emissions, implement AI/DX-powered energy savings, and collaborate with suppliers to develop energy-efficient equipment.

Category	2030 Goals (Base year: 2020)	2023 Targets	2022 Achievements	Compared to Target
Climate Action	Maintain Scope 1 and 2 GHG emissions at 2020 levels	6.19 million tCO_2eq	7.17 million tCO_2eq	★
	Reduce GHG emissions intensity by 57% (by 2026)	37% decrease	30% decrease	○
	Achieve cumulative energy savings of 3,000 GWh	678GWh	393GWh	★
	Attain 33% renewable electricity use	30%	Overseas 100% Overall 29.6%	●
Water Stewardship	Conserve 600 million tons of water (cumulative)	140 million tons	99.23 million tons	★
	Reduce water intensity by 35% (by 2026)	5% decrease	14% decrease	★
Circular Economy	Obtain ZWTL Gold (99%) certification	99% in Wuxi, 95% in Chongqing	100% in Korea	●

※ Emissions targets are based on market-based method. GHG emissions from the Dalian fabrication plant (acquired from Intel), and Key Foundry are not reflected. All intensities are measured by a unit of production (Gigabit equivalent).

INNOVATE

★ Overachieved ● Achieved ○ Underachieved – N/A (A biennial goal)

Under the Innovate pillar, we have successfully achieved the targets for scrubber efficiency and HBM energy efficiency, which were among the three goals established in 2022. However, the absolute emission of process gases showed a slight increase compared to the originally set targets due to increased production added to the early 2022 management plan. The development of alternative gases with low Global Warming Potential (GWP) is crucial for reducing process gases emissions. SK hynix remains committed to making sustained efforts in this regard, actively collaborating with material and equipment suppliers to develop and adopt alternative gases.

Category	2030 Goals (Base year: 2020)	2023 Targets	2022 Achievements	Compared to Target
Sustainable Manufacturing	Reduce GHG emissions from process gases by 40%	26% decrease	5.2% increase	○
	Achieve 95% scrubber efficiency	90% (overall)	94% (domestic)	●
Green Technology	Double HBM energy efficiency	1.38 times (2024)	1.28 times	●
	Increase eSSD energy efficiency by 1.8 times	1.26 times	1.2 times (2021)	–

SYNCHRONIZE

★ Overachieved ● Achieved ○ Underachieved – N/A (A biennial goal)

Under the Sychronize pillar, we successfully achieved or surpassed the targets set for all four goals in 2022.
This accomplishment is a result of our efforts to strengthen supplier ESG management by implementing the 2022 supplier ESG assessment process, along with our continuous endeavors for shared growth with suppliers.
Moving forward into 2023, we will continue to support suppliers' on-site ESG assessments and growth, aiming to grow together with them.

Category	2030 Goals (Base year: 2020)	2023 Targets	2022 Achievements	Compared to Target
Responsible Engagement	Ensure 100% of new suppliers sign the SK hynix Supplier Code of Conduct	100%*	100%*	●
	Ensure 100% of tier 1 suppliers complete online ESG self-assessment (every two years)	100%*	89% (2021)*	–
	Ensure 100% of high-risk/critical suppliers receive on-site ESG assessment (every two years)	100%	53%	●
	Triple the number of responsibly sourced minerals (from 3TG minerals to 12 minerals)	5 minerals (3TG+cobalt)	4 minerals (3TG)	●
Shared Growth	Invest KRW 3 trillion in technological cooperation to promote shared growth (cumulative)	KRW 782.3 billion	KRW 698.6 billion	★

* Figures from domestic sites

MOTIVATE

★ Overachieved ● Achieved ○ Underachieved

Under the Motivate pillar, we achieved significant results in both of the diversity enhancement goals. First, we successfully met the target for the ratio of female executives in 2022. Although we fell short of the target for female representation in team leader positions by 0.1 percentage point, we came very close to achieving it. However, regarding the target for employee education hours, despite an increase in training hours related to job expertise, the overall training hours showed a slower growth rate, failing to meet the target. For 2023, our plan is to expand programs aimed at strengthening job expertise and create an environment that facilitates learning anytime, anywhere using mobile devices, in order to reach the target level.

Category	2030 Goals (Base year: 2020)	2023 Targets	2022 Achievements	Compared to Target
Inclusive Workplace	Triple the ratio of women in executive positions (Base year: 2021)	2.4%	2.1%	●
	Ensure a 10% representation of women in team leader positions	5.1%	4.2%	○
Empowering People	Achieve 200 hours of annual self-development education per employee	128 hours per employee	112 hours per employee	○

* Figures based on domestic engineering and office staff

2030 PRISM Goals at a Glance

★ Overachieved ● Achieved ○ Underachieved – N/A (Biennial goals)

Category		2030 Goals (Base year: 2020)	2023 Targets	2022 Achievements	Compared to 2022 Target
PURSUE	Our Value to Society	Generate value created from SV social contribution activities of KRW 1 trillion (cumulative)	KRW 289.1 billion	KRW 250.6 billion	★
		Create 1,000 jobs for people with disabilities or low-income households*	1,000 jobs	1,052 jobs	★
		Promote the participation of 100,000 people in the global ICT talent fostering program (cumulative)*	27,467 persons	17,767 persons	○
		Help 100,000 people from underserved communities by conducting social contribution activities with cutting-edge technology (cumulative)*	28,015 persons	23,728 persons	★
		Serve 12,000 people through our meal sharing program (cumulative)*	4,280 persons	3,480 persons	★
	Robust Governance	Increase gender/nationality diversity of the Board to 30%	20%	11%	●
	Safety & Health at Work	Reduce the integrated incidents rate by 10%* (Base year: 2021)	2.2% decrease	1.8% decrease	★
		Reduce the rate of metabolic syndrome by 10%* (Base year: 2021)	2.2% decrease	9.0% increase	○
RESTORE	Climate Action	Maintain Scope 1 and 2 GHG emissions at 2020 levels	6.19 million tCO_2eq	7.17 million tCO_2eq	★
		Reduce GHG emissions intensity by 57% (by 2026)	37% decrease	30% decrease	○
		Create energy saving of 3000 GWh (cumulative)	678GWh	393GWh	★
		Achieve 33% renewable electricity use	30%	Overseas 100% Overall 29.6%	●
	Water Stewardship	Conserve 600 million tons of water (cumulative)	140 million tons	99.23 million tons	★
		Reduce water intensity by 35% (by 2026)	5% decrease	14% decrease	★
	Circular Economy	Receive ZWTL Gold (99%) certification	99% in Wuxi, 95% in Chongqing	100% in Korea	●
INNOVATE	Sustainable Manufacturing	Reduce GHG emissions from process gases by 40%	26% decrease	5.2% increase	○
		Improve the destruction and removal efficiency of abatement systems to 95%	90% (overall)	94% (domestic)	●
	Green Technology	Double HBM energy efficiency	1.38 times (2024)	1.28 times	●
		Increase eSSD energy efficiency by 1.8 times	1.26 times	1.2 times (2021)	–
SYNCHRONIZE	Responsible Engagement	Ensure 100% of new suppliers sign SK hynix Supplier Code of Conduct	100%*	100%*	●
		Ensure 100% of tier 1 suppliers complete online ESG self-assessment (every two years)	100%*	89% (2021)*	–
		Ensure 100% of high-risk/critical suppliers receive on-site ESG assessment (every two years)	100%	53%	●
		Triple the number of responsibly sourced minerals (from 3TG minerals to 12 minerals)	5 minerals (3TG+cobalt)	4 minerals (3TG)	●
	Shared Growth	Invest KRW 3 trillion in technological cooperation to promote shared growth (cumulative)	KRW 782.3 billion	KRW 698.6 billion	★
MOTIVATE	Inclusive Workplace	Triple the ratio of women in executive positions (Base year: 2021)	2.4%	2.1%	●
		Ensure 10% representation of women in team leader positions**	5.1%	4.2%	○
	Empowering People	Achieve 200 hours of annual self-development education per employee**	128 hours per employee	112 hours per employee	○

* Figures from domestic sites
** Figures based on domestic engineering and office staff
※ Emissions targets are based on market-based method. GHG emissions from the Dalian fabrication plant (acquired from Intel), and Key Foundry are not reflected. All intensities are measured by a unit of production (Gigabit equivalent)

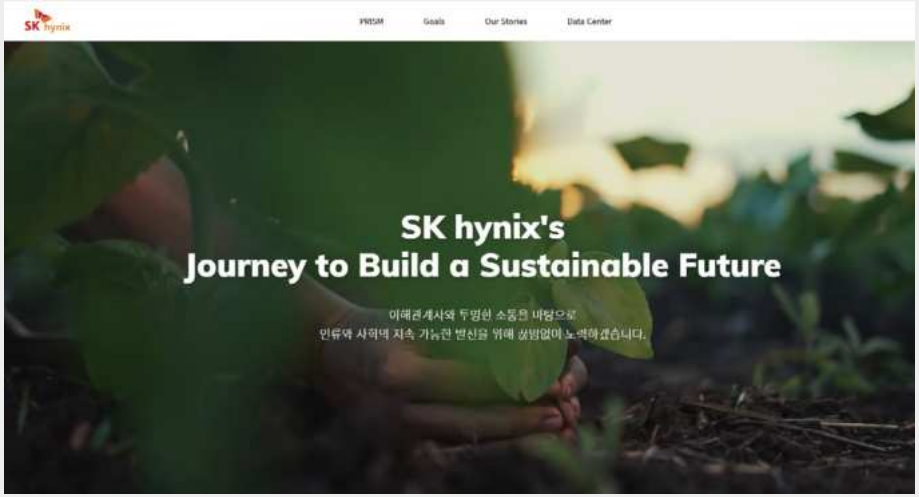
Spotlight

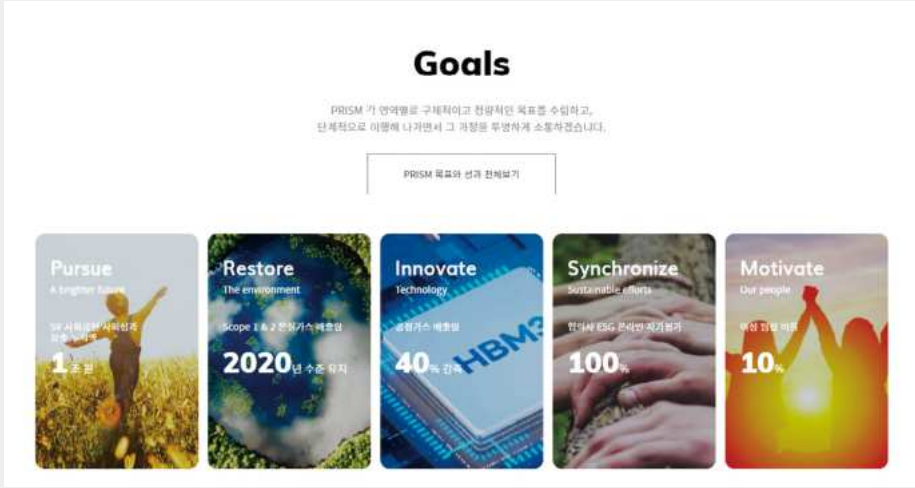
SK hynix's Sustainability Reporting System (SRS)

SK hynix launched its Sustainability Reporting System (SRS) in December 2022 to improve communication with a wide range of stakeholders, including global customers, investors, employees, and the general public.

Responding to the demand for accurate and reliable information from external stakeholders and anticipating future ESG disclosure requirements, the SRS offers comprehensive disclosure of over 500 data points accumulated over a period of more than four years through quantification and visualization, alongside SK hynix's ESG strategy, goals, achievements, and policies based on PRISM. Moreover, the sustainability report is organized into key areas to facilitate easy access and usability for stakeholders.

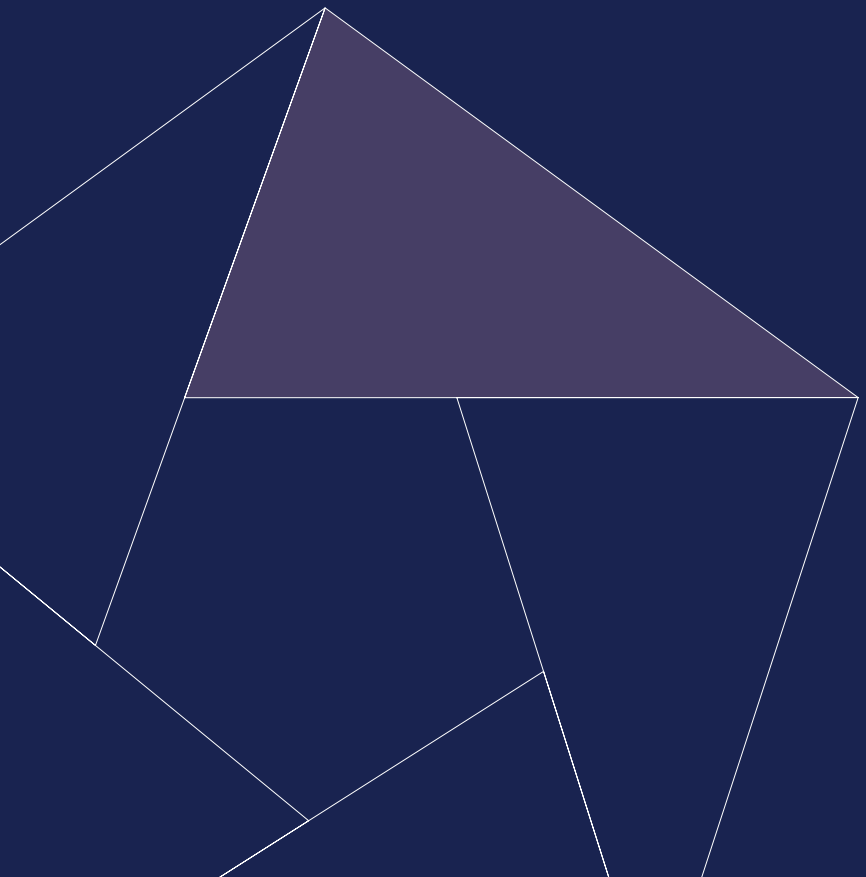
SK hynix's Sustainability Reporting System





Pursue

a brighter future based on our philosophy



2022 Achievements

KRW 250.6 billion

Value created from SV social contribution activities of KRW 1 trillion (cumulative)

11%

Women representation in the Board of Directors

1.8%

Integrated incident rate reduction (compared to 2021)

Material issues | Employee Health & Safety, Public Health Risks

Our Value to Society

Under the CSR vision of “Creating Happiness by Connecting People and Technology,” SK hynix remains committed to prioritizing social contribution activities in three key areas: “Establishing an ICT-based Social Safety Net,” “Nurturing Future Talent,” and “Encouraging Voluntary Employee Participation.” The medium- to long-term goals in these areas of social contribution are integrated within the Pursue domain of the ESG strategy framework PRISM. Annually, we disclose our performance for the current year and set targets for the upcoming year.

Social Contribution

Establishing an ICT-based Social Safety Net

Happy GPS

The Happy GPS program aims to prevent and detect missing incidents among individuals with dementia or developmental disabilities by supplying GPS tracking devices and covering the telecommunication service charges. Since its launch in 2016, SK hynix has partnered with the National Police Agency and provided over 20,000 Happy GPS trackers by 2020. In 2021, the program expanded through a collaboration with the Ministry of Health and Welfare. In 2022, the distribution of an additional 4,267 Happy GPS trackers contributed to the safety of more than 29,000 individuals with dementia or developmental disabilities. As of 2022, the program has successfully facilitated the safe return of 1,544 missing persons, significantly reducing the average return time from 12.2 hours to 40.8 minutes.

Silver Friend

Since 2018, SK hynix has operated the Silver Friend program, an ICT-based caregiving service that utilizes AI speakers. Silver Friend offers AI speakers with features such as conversation, voice control, and caregiving assistance based on pattern analysis to elderly individuals living alone, with the goal of reducing loneliness and promoting better healthcare. In collaboration with the National Fire Agency’s 119 Emergency Call service, the program also provides ambulance services in case of emergencies, which was recognized as an exemplary global ICT caregiving model by the United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP) in 2020. In 2022, an additional 1,200 AI speakers were distributed, benefiting over 5,100 elderly individuals living alone and contributing to their safety and well-being.

Nurturing Future Talent

Heinstein

To cultivate future STEM talent, SK hynix offers programming education that incorporates cutting-edge technologies like AI and big data for children and adolescents. Alongside this educational program, we also run the Heinstein idea project aimed at addressing societal issues. In 2022, we provided “IT Creative Convergence Education” to over 3,400 students nationwide, including in the communities where we operate. We conducted problem-based learning (PBL) sessions called “Hy-Dreaming” for science clubs in five Korean schools, and we organized an Olympiad event to present educational achievements and recognize outstanding students.

HAPPY IT STUDY LAB

To contribute to bridging the IT education gap in small and medium-sized cities, SK hynix established the HAPPY IT STUDY LAB in the Icheon City Library in February 2023. This initiative aims to enhance access to creative IT convergence education for children and adolescents. The HAPPY IT STUDY LAB provides state-of-the-art educational content and tools, covering coding, artificial intelligence, the Internet of Things, and autonomous driving, serving as a platform for local community students to develop and grow as future IT talent.

Encouraging Voluntary Employee Participation

Happy Dreaming Career Mentoring

Happy Dreaming is a mentoring program where SK hynix employees introduce semiconductor and STEM-related careers to adolescents and assist them with career planning. In 2022, we formed a mentoring team comprising university students majoring in STEM fields. These team members were paired with SK hynix employees to provide mentoring tailored to the needs of the students. In 2022, as the COVID-19 pandemic eased, the Visiting Semiconductor/STEM Mentoring program resumed offline activities, visiting 22 middle and high schools in local communities. SK hynix employees and university student mentors engaged with 520 students, discussing career choices. Additionally, 3,200 students participated in the Online Career Live Concert, where they had the opportunity to listen to lectures from renowned science experts and engage in discussions on various topics.

Happiness Sharing Fund

SK hynix operates the Happiness Sharing Fund, which raises funds through a matching grant system where the company matches the donation amount made by its employees. Starting with KRW 900 million collected through employee participation in 2011, the cumulative donation of the Happiness Sharing Fund reached KRW 30 billion in April 2023. These funds have been used to support various projects that have improved the living standards and future prospects of approximately 77,000 individuals (including 11,460 in 2022) from vulnerable groups, including the elderly and children.

Celebration ceremony for reaching KRW 30 billion in the Happiness Sharing Fund.

Interview

Employee Participation in Donations and Volunteer Programs

During the 2023 Happiness Sharing Fund delivery ceremony, a special award ceremony took place to honor the recipients of the Happiness Sharing Practice Award. This award recognizes employees who have consistently participated in donations and volunteering over the years. We had the opportunity to listen to the stories of the award recipients:

Woo Se-Han:
I believe that being an SK hynix employee has allowed me to consistently donate for over 10 years. The company provides an environment where I can work diligently for a long time, and the transparent operation of the fund has been the driving force behind

Choi Eun-Kyung:
As a mother myself, I have always wanted to help other children in need. The transparent operation of the Happiness Sharing Fund motivated me to participate, and I have come to realize that donation is not something distant from me.

Ryu Ho-Seok:
When I see photos of smiling children who have benefited from the Happiness Sharing Fund, I feel proud of my donations. I believe that donations can become stepping stones for someone's life. I want to continue donating and be a part of their journey.

Park Mi-Jeong:
As volunteering became challenging due to the prolonged COVID-19 pandemic, I organized a remote volunteer project to produce personal protective equipment that people could participate in remotely. Contributing to the safety of community members through this project gave me a great sense of fulfillment.

Community Sharing

Happy Lunchbox

Since 2012, SK hynix has been running the Happy Lunchbox project, which aims to provide lunchboxes to children at risk of hunger in the local community. In 2022, we supplied lunchboxes with well-balanced side dishes to 1,110 children facing food insecurity on a weekly basis. Our commitment to supporting the healthy development of these children, who will become future leaders, continues through the Happy Lunchbox program, ensuring that they receive essential nutrients for their growth and well-being.

Purme Social Farm

In order to promote sustainable independence among young individuals with developmental disabilities in the local community, SK hynix participated in the establishment of Purme Social Farm, a state-of-the-art smart farm located in Yeosu, Gyeonggi Province. By creating job opportunities and operating training programs, Purme Social Farm allows young individuals with developmental disabilities to cultivate crops using advanced technology, learn baking and barista skills, and become healthy members of the community. SK hynix supports the farm's operations, purchases the harvested crops, and utilizes them in the company cafeteria. We also operate volunteer programs that help Purme Social Farm serve as an exemplary model in helping young individuals with developmental disabilities achieve independence.

SK hynix employees volunteering at Purme Social Farm

Global Social Contributions

SKHidea

At our Wuxi plant in China, we annually host SKHidea, a public-interest idea competition aimed at fostering NGO talent and contributing to the development of a social value ecosystem in the local community. Since its launch in 2020, SKHidea has been open to NGOs, university students, and the general public in Wuxi. In 2022, we received 63 project submissions, and after a thorough evaluation process conducted by experts, including university professors, NGO representatives, and government officials, two outstanding projects were selected as winners. The top award-winning NGO receives a cash prize and project execution funds for one year. The final competition, livestreamed on WeChat, garnered an accumulated viewership of up to 250,000, demonstrating strong community engagement. In 2023, we plan to expand the competition to include participation from Suzhou and Hangzhou, neighboring cities of Wuxi, further establishing SKHidea as a distinguished social contribution idea competition.

Volunteer Activities at Overseas Subsidiaries

SK hynix actively engages in diverse community initiatives at our global facilities. SK hynix America Inc. encouraged employee donations through the Matching Gift Program in 2022, while also facilitating employee participation in initiatives such as Second Harvest, which provided groceries to low-income households, and Wrapping Party, where employees donated and delivered Christmas gifts to those in need. Our Wuxi plant in China conducted volunteer activities at orphanages and nursing homes, and also engaged in Happy Volunteer programs where employees and local students participated in environmental cleanup efforts at local landmarks. In 2023, we plan to launch new projects, including Happiness Seeds, which will provide learning opportunities and improve educational environments for underserved children, as well as Sounds of Hope, which aims to support individuals with disabilities by providing specialized hearing aids. We will continue to encourage employee participation in volunteer activities. At our Chongqing plant in China, we supported medical expenses for children from low-income families, volunteered at autism treatment centers, and participated in local environmental cleanup activities, sharing warmth with members of the community.

Spotlight

Developmental Disabilities Handball Club and League Operations

SK hynix aims to promote the physical and social well-being of individuals with developmental disabilities by utilizing the less popular sport of handball, while also raising awareness and popularity of handball. In 2021, SK hynix launched a nationwide recruitment effort to form developmental disability handball teams, successfully establishing 10 teams and forming a club. Retired handball players were enlisted as coaches, and comprehensive training sessions were conducted. Starting with a divisioning match in May 2022 to assess the performance of the newly formed teams, in October, SK hynix organized the inaugural "ALL WIN PEAK" handball competition, the first of its kind in South Korea specifically for athletes with developmental disabilities. In November, SK hynix participated in the Special Olympics Korea, where handball was adopted as a demonstration sport. Through this project, SK hynix has confirmed the significant positive impact of handball on the social skills and physical abilities of individuals with disabilities. A collaborative study conducted with the Center for Social Value Enhancement Studies revealed that the project has a social value creation effect approximately 4.89 times the project cost. Looking ahead, SK hynix plans to host South Korea's first-ever handball league for athletes with developmental disabilities in 2023, ensuring continuous support for the growth of individuals with disabilities into healthy and engaged members of society.

Progress and Schedule of the Developmental Disabilities Handball Club and League Project

Schedule		Description
2021	October	Nationwide establishment/recruitment of handball teams (Selection of 10 disability teams nationwide)
	November	Publication of a training guidebook/manual for developmental disability handball
		Hosting of "Happy Togetherness," an inclusive handball tournament for individuals with and without disabilities
	December	Commencement of MBC Chungbuk documentary filming (project spanning 2022)
2022	May-June	Divisioning match
	October	Inauguration of South Korea's first developmental disability handball competition, ALL WIN PEAK
	November	Participation in the Special Olympics Korea, which includes handball as a demonstration sport
	December	Broadcast of the MBC Chungbuk documentary "Handball is My Destiny" (December 15, 2022)
2023	June-October	Hosting of the regular developmental disability handball league (9 participating teams)

Divisioning handball game for individuals with developmental disabilities.

Robust Governance

SK hynix recognizes that an independent and transparent governance structure is the foundation for long-term enhancement of corporate value and building trust with stakeholders. We continuously strive to establish an advanced governance structure and a board-centered responsible management system through various policies and institutional improvements.

Enhancing Board Independence and Diversity

SK hynix forms its Board of Directors to ensure a balanced combination of expertise, capabilities, and career backgrounds while maintaining independence. Independent director candidates are selected through a fair and transparent process facilitated by the Independent Director Candidate Recommendation Committee. These principles are outlined in the SK hynix Charter for the Independent Director Candidate Recommendation Committee, revised in March 2022. Since 2021, SK hynix has appointed independent directors as the chairperson of the board and all committee chairpersons to enhance independence. The company also makes efforts to enhance diversity including appointing a female finance expert as an independent director in March 2023, increasing the representation of women on the board to 20%. SK hynix will continue to improve policies and systems to enable the board to independently oversee management activities from diverse perspectives.

Charter for the Independent Director Candidate Recommendation Committee

Enhancing Expertise of Independent Directors

SK hynix conducts programs to enhance board expertise, such as training and workshops focusing on management activities, including industry and global board trends. Additionally, as part of our commitment to support the board's rational decision-making and broaden its expertise, we are exploring the possibility of engaging industry experts for external advice. Recognizing the significance of in-depth knowledge in technology and the semiconductor industry, as well as strategic approaches amidst the rapidly evolving market landscape, we anticipate that incorporating expert opinions will bolster the preview function of the Board of Directors and make substantial contributions to its rational decision-making.

Introduction of Board Skills Matrix (BSM)

In October 2022, SK hynix introduced the Board Skills Matrix (BSM), a visible indicator of board competence that showcases the capabilities and qualities (experience, expertise, qualifications, independence, ethics, etc.) of board members. BSM provides an objective and transparent view of the appropriateness and expertise of the board composition. Through BSM, investors can easily understand the competence and expertise of the SK hynix Board of Directors, thereby increasing understanding of the board composition. SK hynix aims to enhance transparency and expertise in corporate governance by progressively refining BSM, complementing the core skills necessary for the company's continuous growth and vision realization, and utilizing it as an objective indicator for evaluating incumbent directors and selecting independent director candidates.

Board Skills Evaluation Results

In 2022, SK hynix conducted a total of 11 board meetings, during which reports and decisions were made on 60 agenda items. For detailed information about the board composition, agenda, and resolutions in 2022, please visit the company's website.

Board Attendance Rate

(Unit: %)

2019	2020	2021	2022
98	100	100	100

* Minimum mandatory attendance rate for board meetings: Over 75%

Corporate Governance Guidelines
Bylaws of the Board of Directors
Director's Code of Conduct
Performance Standards for Directors
Programs for greater expertise in the Board of Directors

Board Compensation Policy and Performance Evaluation

SK hynix determines the basic salary of directors by comprehensively considering their responsibilities, expertise, and the company's business environment, within the limits approved by the shareholders' meeting every year, in accordance with Article 388 of the Commercial Act. The compensation is approved by the board and paid accordingly. For executive directors, performance-based bonuses can be granted based on business performance. For the CEO, the Human Resources and Compensation Committee within the board approves key performance indicators (KPIs), performance evaluations, and compensation. In 2022, a total of 5 rounds of assessment and evaluation were conducted for CEO KPIs.

Moreover, SK hynix conducts online surveys for board members, including performance evaluations of the board and its committees, consisting of multiple-choice and open-ended questions, as well as self-assessments. The evaluation results of the board and committee composition, roles and responsibilities, and operations, as well as the self-assessments of directors' roles and responsibilities, are reported in the March board meeting and publicly disclosed through the May quarterly report. The evaluation results are used to assess the board's operations and identify areas for improvement, which are then incorporated into the direction of future board operations. Following the introduction of performance evaluation of the audit committee and directors' self-assessment in 2022, a new evaluation item for the Human Resources and Compensation Committee was added in 2023 to clarify the committee's composition, operations, and roles and responsibilities regarding the evaluation, compensation, and leadership succession system for the CEO, thereby enhancing operational efficiency.

Charter for the Human Resources and Compensation Committee

Case

Talk Concert: A Communication Platform for Independent Directors and Employees

To enhance employee understanding of the board and share subject matter expertise and insights from independent directors, SK hynix organized a "Talk Concert" in October 2022 at its Icheon Campus. During the Talk Concert, employees had the opportunity to engage with independent directors who have backgrounds in economics, finance, and law. SK hynix plans to hold additional Talk Concerts in 2023, utilizing them as communication channels between the board and employees. Furthermore, the company plans to expand these meetings to the Cheongju Campus and Chinese production subsidiaries, enabling more direct interactions with employees and creating further opportunities to listen to their voices.

Interview Ha Yung-Ku, the Chairperson of the Board of Directors

An independent and transparent governance structure forms the foundation for sustainable business activities. Building on a board-centered responsible management system, SK hynix strives to create a transparent business environment. Ha Yung-Ku, the Chairperson leading the SK hynix Board of Directors, shared his thoughts on responsible management.

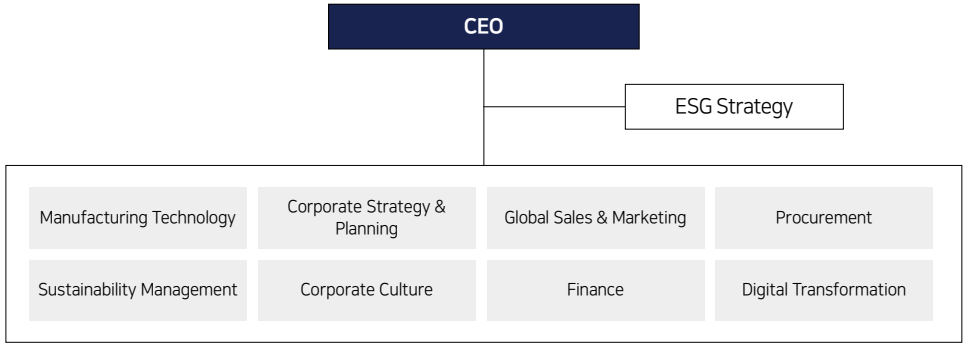
"In recent years, our external stakeholders have shown increased interest in ESG. The mandatory disclosure of sustainability reports, which will be enforced gradually starting in 2025 in Korea, will further amplify the focus on ESG. Consequently, the importance of the board's responsible management is also growing. The SK hynix Board of Directors meticulously verifies key management decisions across various fields based on their expertise. Without sufficient support from the board, even projects approved by management may be put on hold. I believe that the efforts of the SK hynix Board of Directors will positively influence the perception of global investors regarding the governance of Korean companies."

ESG Management Committee

SK hynix holds regular meetings of the ESG Management Committee, with the CEO serving as the chairperson, to discuss and decide on key ESG issues at the management level. The committee's objective is to enhance corporate value by embedding ESG into management practices. Under the purview of the ESG Strategy department, the committee reviewed approximately 20 agenda items in its inaugural year in 2021 and engaged in in-depth discussions on nearly 30 agenda items in 2022. These discussions covered various ESG areas, including climate change risk management, Scope 3 emissions management, biodiversity, supply chain ESG assessment, human rights management, measurement of suppliers' social value, and the implementation of the Board Skills Matrix (BSM). Significant agenda items are reported to the Sustainable Management Committee under the Board of Directors, demonstrating the company's commitment to driving sustainable management with responsibility and accountability at both the management and board levels. A prime example is the ESG strategy framework known as PRISM, which was unveiled in the Sustainability Report in July 2022. Initially presented as an agenda item in September 2021, PRISM underwent three additional discussions within the ESG Management Committee before being publicly disclosed. It was also reported to the Sustainable Management Committee in June 2022. Key executives from various areas, including Manufacturing/Technology, Future Strategy, Global Sales & Marketing (GSM), Procurement, and Sustainable Management, actively participated in the ESG Management Committee's discussions to establish quantified goals for 2030 in five specific pillars: Pursue, Restore, Innovate, Synchronize, and Motivate. These goals were finalized through deliberations within the Sustainable Management Committee, setting the direction and specific targets for sustainable management.

ESG Management Committee's Key Agenda for 2022

ESG Management Organization Chart



Message from the Chairperson of the ESG Management Committee

"At SK hynix, the ESG Management Committee plays an integral role in ESG management."

CEO Kwak Noh-Jung

SK hynix operates the ESG Management Committee to integrate and discuss ESG issues as part of its medium- to long-term business strategy. Through this committee, the company aims to strengthen ESG management by addressing key issues such as climate change response, supply chain ESG assessment, and the introduction of BSM.

In the previous year, the ESG Management Committee, with the participation of key executives, established sustainable management goals for PRISM through collaborative discussions. The outcomes made to achieve these goals will be continuously monitored through the ESG Management Committee on an annual basis, with the results being transparently disclosed.

Moving forward, SK hynix will continue to closely analyze the domestic and international regulatory environment related to ESG and the demands of stakeholders, aligning them with the company's medium- to long-term strategies to enhance corporate value.

Safety & Health at Work

At SK hynix, the safety of our employees is always our top priority. We are actively engaged in various safety enhancement activities, including safety inspections and increasing employee awareness, in line with our occupational health and safety policy. We spare no effort in providing comprehensive support throughout the company to ensure that our employees can lead healthy lives both physically and mentally, taking the lead in creating a happy workplace.

Safe Workplace

Safety and Health Management System

At SK hynix, we have appointed the head of Manufacturing/Tehchnology department as a Chief Safety Officer (CSO) as the person responsible for safety and health management. The CSO oversees a dedicated safety and health team that conducts safety management activities. With safety and health management as a core value, we have established systematic management systems by implementing our own occupational health and safety management regulations and obtaining certification for our occupational health and safety (OH&S) management system (ISO 45001). Furthermore, the Occupational Health and Safety Committee, consisting of members from the company and employees at each campus, meets quarterly to share and discuss matters related to occupational safety. The committee makes joint decisions on relevant issues through mutual agreement between labor and management. The company's safety and health system, along with the annual implementation plan, is reported to the Board of Directors and the Sustainable Management Committee under the board at least once a year for approval.

Major Reporting Items to the Board of Directors in 2022

- 1st Board of Directors Meeting in 2022 (January 27, 2022)
  - 2022 Safety and Health Plan
- Sustainable Management Committee Meeting for Q4 2022 (November 15, 2022)
  - Progress of introducing socio-scientific safety management

Compliance Inspection for Safety and Health Obligations

In response to the enforcement of the Serious Accidents Punishment Act in January 2022, SK hynix conducted a thorough review of our compliance with safety and health obligations in the first half of 2022. This review was jointly led by the SHE (Safety, Health, and Environment) Legal Team and the dedicated safety and health team, with the aim of identifying areas for improvement. Based on the improvement plans developed, we actively engaged in communication activities to collect opinions and feedback from workers[9], allowing us to better understand their perspectives. Furthermore, we established standards for the safety and health management costs of subcontractors. We have also strengthened the evaluation criteria and items for effectively assessing the performance of safety and health managers, as well as subcontractors' safety and health capabilities. Moreover, we have implemented systematic improvements to enable comprehensive management of safety and health obligations in an integrated manner. In the second half of the year, we conducted a compliance project in collaboration with external experts, simulating hypothetical accidents to enhance on-site response capabilities and inspect our safety and health management system and compliance obligations. The inspection results demonstrated that SK hynix has a well-established safety and health management system in place and faithfully fulfills safety and health obligations, including conducting biannual inspections as required by the established system. Additionally, we have improved our safety and health management system to address serious civil accidents by reviewing relevant laws and regulations and developing response manuals. Looking ahead to 2023, we remain committed to creating a safer workplace by continuously improving the on-site implementation of our safety and health system.

Risk Assessment and Emergency Response Training

At SK hynix, our dedicated safety and health team conducts annual risk assessments across all our facilities, processes, and chemicals to ensure workplace safety and prevent risks or illnesses among employees. These assessments help us identify harmful risk factors and develop improvement measures. In 2022, we standardized our operating procedures, and for the 2023 risk assessment, we plan to enhance its effectiveness by providing guidelines for harmful risks and risk assessments. Furthermore, SK hynix conducts emergency response training at least twice a year to ensure the safety of employees during emergencies such as fires or chemical spills. The training consists of department-specific sessions and company-wide joint sessions, and all employees are required to participate at least twice a year. In 2022, each employee underwent a total of four emergency response training sessions (one department-specific and one joint session per half-year). As a result, we reduced evacuation time from 9.3 minutes to 7.8 minutes and developed optimized evacuation routes for four buildings within our facility through the introduction of an evacuation simulation program. In 2023, we plan to expand the number of buildings with optimized evacuation routes and make continuous efforts to further strengthen our emergency response capabilities.

Case

SK Hynix Intelligent Safety Navigator (HINT), a Hazard Identification System

In February 2023, SK hynix introduced the SK Hynix Intelligent Safety Navigator (HINT), a hazard identification system that empowers employees to directly assess and prevent safety accidents. HINT enables employees to identify risks, causes, and countermeasures associated with their tasks by utilizing relevant information on similar incidents. By integrating ICT technology with the company's accumulated safety-related data, including accident history, SK hynix has developed a hazard identification model based on this data and incorporated it into the HINT system to evaluate task risk levels. When employees receive approval for their registered tasks, the HINT system automatically receives the relevant information. For high-risk tasks, the system sends risk information to the involved personnel through automatic email notifications. The safety department can monitor the overall risk level based on task data through the HINT system, and they can also access lists of high-risk tasks and their associated risk levels for specific processes and areas. Furthermore, the HINT system allows for the reconstruction of an accident profile using past accident information. This enables searching for accidents based on specific risk factors, which can be referenced during accident investigations and inspections to support similar accident prevention activities. SK hynix will continue to enhance the HINT system to create an even safer working environment.

HINT's major functions

Dashboard:
Check the risk level by facility, process, building, or area based on their daily tasks.

Work Permit List:
Check the risk level and relevant information on potential incidents for each approved task.

Simulator:
Assess the risk level in advance based on the work plan without requiring work approval registration.

Accident Profile:
Search for accident causes and prevention measures based on risk factors.

Equipment Safety Management System

Semiconductors are produced 24/7 without interruption, and the equipment used in semiconductor production involves the use of various chemicals and gases. Therefore, ensuring the safety of employees requires comprehensive equipment safety management. SK hynix has established and operates a safety management process for incoming equipment to prevent accidents caused by equipment defects. According to this process, all equipment brought into the fabs undergo stringent safety management, from production to setup and throughout its operation.

Since 2022, SK hynix has introduced one-on-one safety specification consulting for equipment suppliers as part of our on-site inspection process. The objective is to address any potential non-compliance with safety management that may arise during operation, even if the equipment initially meets the safety specifications upon delivery. This is intended to minimize discrepancies in interpretation between our company and equipment manufacturers, as safety specifications consist of comprehensive content based on standard specifications rather than precise figures. This consulting initiative aims to enhance the understanding of safety specifications among employees of equipment suppliers and strengthen their safety management capabilities beyond our own facilities.

Safety Management Process for Incoming Equipment

Third-party safety certification
Conducting third-party safety certification based on local and international safety certification standards

Specification review
Reviewing compliance with safety specifications based on SK hynix's safety specification documents

On-site inspection
Conducting on-site inspections to verify the implementation of specifications and providing consulting to equipment suppliers

Safety, health, and environmental qualification process
Final check before equipment operation

Equipment operation

Spotlight

Fostering a Safety Culture with Employees

Creating a safe workplace requires not only appropriate company policies and systems but also the cooperation and efforts of our employees. At SK hynix, we are dedicated to cultivating a voluntary safety culture that revolves around our employees.

In the Manufacturing/Technology departments and the Revolutionary Technology Center, each department selects ten intensive management tasks from high-risk areas based on the specific characteristics of their processes. This initiative aims to promote a voluntary safety culture and is implemented through the Safety Compliance Card (SCC) program, which facilitates improvement activities led by team leaders. The dedicated safety department conducts on-site validation and feedback processes based on the ten tasks selected by each department, working in collaboration with employees to create a safe workplace. We plan to expand this program company-wide in the future. Our leaders also conduct thorough on-site safety inspections. The Leader Patrol, where fab executives oversee on-site safety, is conducted weekly, and site supervisors are required to perform daily safety inspections. Furthermore, we have established safety innovation teams for each process, aiming to develop fundamental measures against risk factors and strengthen execution capabilities through standardized improvement activities.

The dedicated safety department spares no effort in supporting employees in establishing a voluntary safety culture. Regular special safety inspections are conducted in high-risk facilities and new work areas to prevent accidents and mitigate legal risks. Based on the inspection results, additional inspections and customized guidance are provided to departments requiring safety management support. Moreover, a second follow-up inspection is conducted using the check sheet provided by the safety department to enhance the autonomous safety inspection capability of field teams.

At SK hynix, we provide quarterly occupational health and safety training for all employees to strengthen their safety culture awareness. We also consistently promote education, campaigns, and the sharing of best practices regarding our safety system. This includes informing employees about their right to stop work during hazardous situations without facing disadvantages. We are actively fostering SK hynix's unique safety culture, where employees themselves contribute to creating a safe working environment.

Employee Health

Occupational Health Advancement Committee

SK hynix places a top priority on the health and well-being of our employees. In an effort to prevent occupational diseases and create pleasant workplaces, since 2017, we have been operating the Occupational Health Advancement Committee, a collaborative platform comprising representatives from management, labor unions, and external professors. Through the committee, we discuss and actively implement advanced health policies with the aim of establishing a robust and trustworthy occupational health system.

Health Promotion Programs

Based on the results of annual employee health check-ups, SK hynix categorizes employees in four groups[9], using more detailed internal management criteria than the general health check-up standards. We provide medical post-management, including physician consultations and medication prescriptions, based on the severity of employees' health conditions. Additionally, the Health Management Office operates an obesity management program for employees with a body mass index (BMI) of 30 or higher. We also offer programs for alcohol abstinence, targeting individuals with signs of liver disease and problematic alcohol habits, as well as smoking cessation programs, exercise programs, and various other health promotion initiatives. All employees of SK hynix, regardless of employment contractual type, are eligible to participate in these health promotion programs. Leveraging employees' health information, we launched a dedicated mobile healthcare platform named "Health Benefits" in 2022, providing personalized health promotion programs. We plan to gradually expand the services offered through Health Benefits, including various exercise coaching, customized diets, and health and psychological counseling.

Operation of HyMedical Clinic

HyMedical Clinic, our in-house medical facility at SK hynix, provides top-notch healthcare services to our employees, ranging from diagnosing illnesses to providing medical information and health consultations, aimed at promoting their health. Staffed with a team of medical professionals, including physicians, nurses, radiologists, clinical pathologists, and physical therapists, the clinic not only offers trauma treatment but also a wide range of examinations such as X-rays, blood tests, and electrocardiograms. Specialized physical therapy options such as low-frequency therapy and infrared treatment are also available. All medical services provided at HyMedical Clinic are free of charge for all SK hynix employees and employees of our suppliers. In 2022, we extensively remodeled the clinic to enhance convenience for our employees and provide an even higher level of medical care. In addition to general medical services, we have established emergency medicine and ophthalmology departments to improve emergency response capabilities and expertise. Furthermore, we have newly implemented a self-service reception system to ensure prompt and convenient access for our employees.

Mindwalk

Mindwalk is a mental sanctuary for SK hynix employees, aimed at addressing psychological challenges and promoting mental well-being. Currently, there are 13 professional counselors stationed at the Icheon and Cheongju offices, providing counseling in areas such as job-related stress, personality and emotional issues, interpersonal relationships, and behavioral control. Any SK hynix employee in need of counseling can seek assistance by submitting a counseling request through the company's SHE portal. In light of the growing importance of mental well-being due to the prolonged COVID-19 situation, Mind Stroll offers a variety of programs to enhance mental health, focusing on emotional self-regulation and the development of healthy mental habits, thus supporting employees in leading healthy lives.

Spotlight

Looking Back on COVID-19 Task Force Activities

To ensure workplace safety and respond promptly to the rapidly changing environment during the COVID-19 pandemic, SK hynix launched a company-wide task force (TF) in January 2020 and concluded TF activities in April 2022. We have reviewed the endeavors of the COVID-19 TF over the past two years and three months to prevent the spread of COVID-19 within the company and the local communities.

Phase 1 TF (January 2020 - July 2020)
Our focus was on establishing an infectious disease emergecy response system to prepare for the surge in COVID-19 cases in Korean and Chinese communities. Through this effort, we effectively prevented infections within the workplace and minimized the risk of operational disruptions by establishing emergency response measures in response to travel restrictions in each country.

Phase 2 TF (July 2020 - December 2020)
Our objective was to enhance the company's resilience in response to the spread of COVID-19. Notable achievements during this phase include the establishment of an integrated management system for infectious diseases, the development of a remote activity infrastructure with enhanced corporate security, and the implementation of innovative and efficient work practices to reduce in-person interactions.

Phase 3 TF (December 2020 - August 2021)
To minimize the occurrence of confirmed cases within the company during regional outbreaks caused by virus variants, we established an in-house testing center, strengthened workplace disinfection protocols, conducted thorough epidemiological investigations, and facilitated vaccinations for all employees to achieve herd immunity.

Phase 4 TF (August 2021 - April 2022)
Our focus during this phase was to transition from an infectious disease response to a return to normalcy in preparation for the post-COVID era. Although we concluded our COVID-19 TF activities in April 2022 in accordance with government guidelines, we maintain ongoing workplace disinfection and infectious disease response protocols.

Throughout the two years and three months of COVID-19 TF operations, we promptly addressed employee inquiries regarding COVID-19 infections and transparently communicated the status of our COVID-19 response through various channels. This included 1,179 posts on the in-house bulletin board, over 17,600 emergency response calls, and 360 company-wide announcements. Furthermore, we conducted approximately 85,000 COVID-19 tests and safely isolated more than 40,000 patients. Through the COVID-19 TF activities, SK hynix not only established an effective infectious disease response system but also introduced efficient work practices such as remote work and virtual meetings. As a result, we have earned the trust of our employees, suppliers, and stakeholders by creating a safe workplace environment.

85,000	COVID-19 tests
40,000	patients safely isolated (including the duplicated persons data)
17,600	emergency response calls
1,179	posts on the internal bulletin board
360	company-wide announcements

Hazardous Chemical Substance Management

As the global emphasis on chemical substance management continues to grow, it is imperative for us to expand our compliance efforts from domestic regulations to encompass both domestic and international regulations. It is also essential to proactively investigate and respond to global regulations on chemical substances. To this end, SK hynix has established its own list of regulated substances based on domestic and international regulations and conventions and implemented a management system for incoming chemicals, as part of our ongoing commitment to the pre- and post-management of hazardous chemical substances.

Chemical Substance Management Policy

At SK hynix, we prioritize values centered around people and the environment. In pursuit of this, we have established and implemented our chemical substance management policy known as SK hynix RSC (Regulated Substances for Chemical management). The SK hynix RSC policy aims to assist our suppliers in understanding and complying with our chemical substance management requirements. It includes detailed information on incoming inspection and assessment procedures, self-regulated substances, and provides advanced guidance on Safer Chemicals and substances that may be subject to future regulations. This enables our suppliers to effectively align with our chemical substance management policy. Through RSC, SK hynix aims to share our leading chemical substance management system, supporting our suppliers in establishing their own systematic chemical substance management systems.

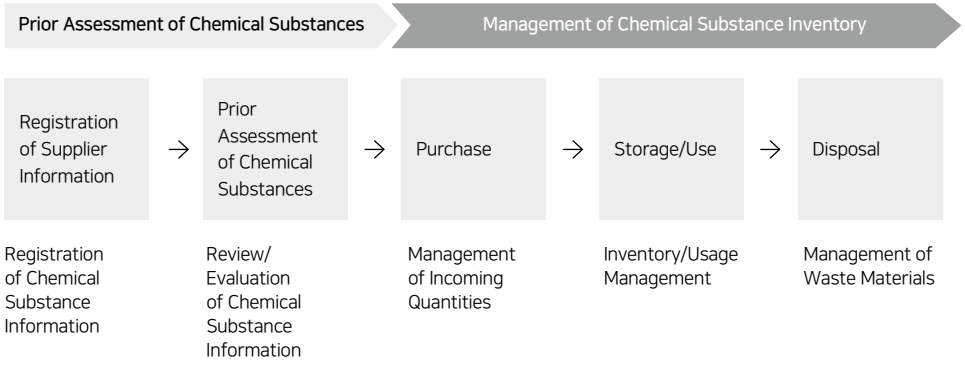
Furthermore, SK hynix designates and manages our own list of regulated substances (prohibited/restricted substances) that are strictly prohibited for internal use. In addition to complying with legally prohibited substances and those regulated by international conventions, we also manage chemicals with significant environmental hazards (such as air and water) and high human hazards (such as carcinogenicity, reproductive toxicity, and germ cell mutagenicity) to ensure that such substances are not introduced into our company. We also ensure the non-use of chemicals that our customers have requested to be regulated by aligning their policies and regulatory requirements in the countries where they are located with our own list of regulated substances. As part of our commitment to corporate social responsibility within the global supply chain, we comply with the Responsible Business Alliance (RBA)'s chemical regulations.

SK hynix Chemical Substance Management Policy

Management of Chemical Substance Life Cycle

SK hynix has established a management process for the life cycle of chemical substances, from prior assessment to purchase, storage, use, and disposal, in order to ensure systematic and transparent information management. All processes are operated and managed based on systems. Through the prior assessment process of chemical substances, hazardous substances are thoroughly reviewed before approval. We also operate a change management system to promptly respond to any changes in substances subject to regulations. For chemical substances introduced to the company, we periodically monitor their major usage areas, as well as inventory and usage by equipment. All data is managed transparently until disposal and integrated with worker exposure information based on the actual movement of chemicals. This enables proactive and effective monitoring of the working environment, health checkups, and illness management according to harmful factors.

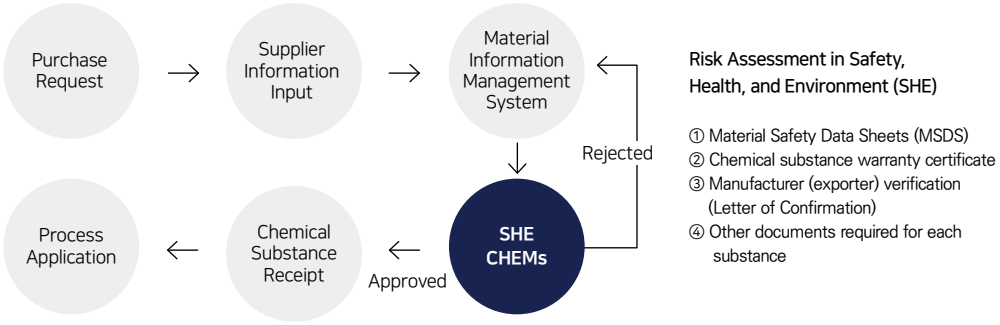
Management Process of Chemical Substance Life Cycle



Operation of Incoming Chemical Hazard Management System (SHE CHEMs)

SK hynix operates the SHE CHEMs (SHE Chemical Hazard Management system), an incoming chemical substance management system, to review the suitability of Material Safety Data Sheets (MSDS)[6] for all chemical substances supplied by suppliers and to assess compliance with internal regulations. The process for incoming chemical substances is led by the chemical substance evaluation team, and substances that do not meet the company's standards cannot be introduced or used. Even for substances that meet the company's standards, monitoring and improvements are regularly conducted with suppliers. Through this, we strive to ensure the safety of chemical substances used within the company and create a workplace that is not harmful to the environment and people.

SHE CHEMs



Improving the Reliability of Material Safety Data Sheets (MSDS)

MSDS serves as fundamental information for the safe use and management of chemical substances. SK hynix acquires MSDS from chemical substance suppliers and manages them through systems while promoting various activities to enhance the reliability of the obtained MSDS. Low reliability of MSDS provided by suppliers can lead to non-compliance with regulations and challenges in implementing safety and health measures. Therefore, SK hynix is dedicated to continuously improving the reliability of MSDS. First, the submitted MSDS is reviewed prior to receiving chemical substances to ensure compliance with the Occupational Safety and Health Act and the Ministry of Employment and Labor's regulations. Communication with chemical substance suppliers also facilitates content consistency. If an MSDS is ultimately determined to be non-compliant with regulations, the receipt of the corresponding chemical substance is blocked altogether. After receiving chemical substances, we are committed to enhancing reliability through a detailed content review of the MSDS. For substances whose MSDS registrations have passed a specific period, a comprehensive inspection is conducted, and if necessary, suppliers are requested to make revisions. For substances with long-standing unmodified MSDS, suppliers are advised to re-register the MSDS. Additionally, sampling inspections are performed to review data correlation between MSDS items, thereby improving reliability. In order to enhance the capability of chemical substance manufacturers and suppliers in preparing MSDS, SK hynix provides regular training on relevant regulations and MSDS preparation methods. Through continuous promotion and guidance, we emphasize the importance of MSDS reliability. Going forward, we plan to implement an automated MSDS review system to improve work efficiency and data consistency.

Establishing a Chemical Substance Management System for the Prevention of Serious Civil Accidents

SK hynix conducts off-site impact assessments in accordance with the Chemical Substances Control Act to prevent serious civil accidents that could affect people and the environment in the surrounding areas in the event of a chemical accident, and to minimize impact in case of an accident. Based on these assessments, we identify potential accident scenarios within our facilities, analyze and manage the potential impact distances of chemical leaks that could spread to the surrounding areas, and continuously engage in various activities such as examining our emergency response system. Moreover, we have selected evacuation sites to cooperate with the local community in the event of an emergency caused by chemical leaks. We have also distributed a summary of chemical accident risks and emergency response information for each chemical substance within the city of Icheon, providing guidelines on how to report when detecting hazardous risk factors, as part of our efforts to prevent serious civil disasters. Furthermore, in compliance with the Gyeonggi Province ordinance, we have been participating in the Gyeonggi Committee on Chemical Substances, established in 2022, continuously striving to reduce chemical-related risks in the local community.

Restore

the environment to preserve the planet

2022 Achievements

Overseas 100% (overall 29.6%)

Renewable electricity usage

99.23 million tons

Cumulative water savings (since 2021)

Platinum (100%)

Zero Waste to Landfill (ZWTL) certification for domestic facilities

Material issues | Climate Change & GHG Emissions, Transition to Renewable/Alternative Energy, Energy Mangement

Climate Action

SK hynix recognizes that actively addressing climate change is not only about reducing business risks but also a global responsibility. We continuously explore how the company can contribute to solving climate change issues. To this end, we have established a robust climate change governance structure, which drives our efforts as well as collaborative initiatives across the semiconductor industry.

Climate Change Governance

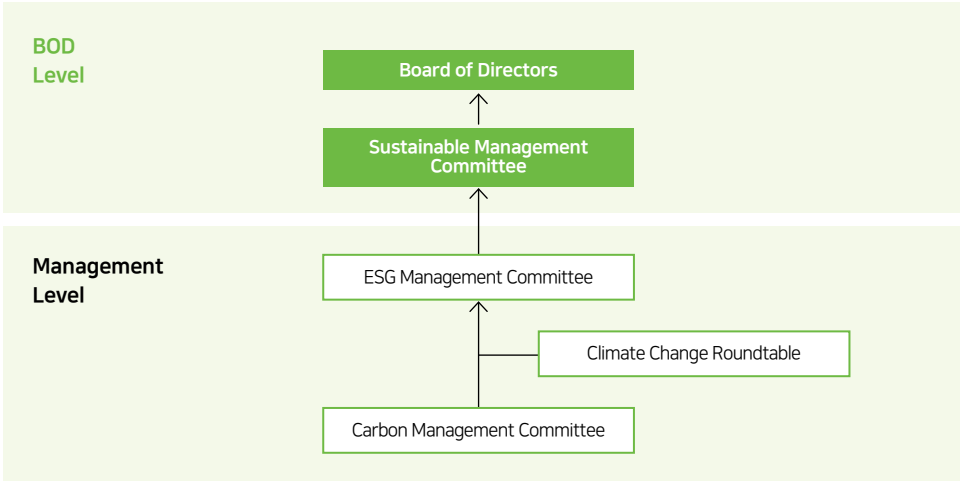
Carbon Management Committee

To prudently address climate change risks and identify new opportunities, SK hynix has been refining its decision-making process and operates a Carbon Management Committee under the ESG Management Committee. The Carbon Management Committee, which convenes monthly, consists of eight subcommittees, including Climate Change Response, Process Gas Emission Reduction, and RE100 Implementation, led by executives responsible for manufacturing/technology. Progress is regularly reported to the ESG Management Committee and the Board of Directors. In 2022, the Carbon Management Committee improved our carbon reduction system, identified specific carbon reduction tasks, and discussed implementation plans to achieve net-zero emissions by 2050, including exploring renewable electricity procurement options. In 2023, we plan to strengthen the execution of carbon reduction tasks, such as adopting low-power equipment, components, and facilities, and reducing process gas usage. We also aim to refine our management objectives and execution strategies for Scope 1, 2, and 3 emissions.

Climate Change Roundtable

To facilitate the preview and review of climate change-related matters presented to the ESG Management Committee, SK hynix operates the Climate Change Roundtable, consisting of key executives. In 2022, the roundtable established working groups comprising team leaders and an advisory group of external experts to enhance its role and facilitate in-depth discussions. The working groups are structured into seven categories based on climate change risks/opportunities defined by the Task Force on Climate-related Financial Disclosure (TCFD)[9], with participation from 26 teams, including R&D, Manufacturing/Technology, Strategy, Marketing, Finance, and IR/PR/CR. The working groups conduct regular workshops to discuss the identification, evaluation, and response measures of climate risks and opportunities, and they report the outcomes to the Climate Change Roundtable. Meanwhile, the external advisory group, composed of experts from academia, research institutions, and environmental consulting firms, provides diverse and objective advice on the latest trends and opinions regarding the physical and transitional risks and opportunities identified through climate change scenario analysis. SK hynix plans to systematically manage climate change risks and opportunities by proactively identifying and developing appropriate response measures through the effective operation of the Climate Change Roundtable.

SK hynix's Climate Change Governance



Demonstrating Climate Change Leadership

Joining the Semiconductor Climate Consortium as a Founding Member

Collaboration with like-minded partners is crucial for the semiconductor industry to effectively address climate change. In November 2022, SK hynix proudly became a founding member of the Semiconductor Climate Consortium (SCC), initiated by Semiconductor Equipment and Materials International (SEMI)®. SCC, the first global forum dedicated to promoting greenhouse gas reduction across the semiconductor value chain, brings together key industry players representing materials, components, equipment, manufacturing, and global ICT companies. A total of 65 companies, including SK hynix, joined SCC as founding members, and by June 2023, the consortium expanded to 83 members. SCC is aligned with the goals of the Paris Agreement, focusing on limiting global warming to 1.5°C and emphasizes setting reduction targets for greenhouse gas emissions throughout the semiconductor industry, fostering collaboration among stakeholders in the supply chain. SK hynix is actively participating in five working groups finalized in early 2023 within the SCC, collaborating closely on methodologies, technological innovations, and communication efforts to reduce greenhouse gas emissions. We enhance management transparency by reporting annual progress on the reduction performance of Scope 1, 2, and 3 emissions. Furthermore, we set both short- and long-term targets for greenhouse gas reduction, aiming to achieve net-zero emissions by 2050.

Semiconductor Climate Consortium
FOUNDING MEMBER

Managing Value Chain Emissions

Scope 3 emissions can occur throughout a company's entire value chain, including raw material production and transportation. SK hynix actively collaborates with our suppliers to manage and reduce Scope 3 emissions while addressing their impacts.

SK hynix has adopted a phased approach to effectively manage Scope 3 emissions. First, we have broadened the scope to ensure accurate emission calculations. This includes incorporating emissions (Category 1) from purchased raw materials and services, as well as expanding the calculation scope for emissions (Category 4, 9) associated with raw material and product transportation to encompass domestic transportation.

Meanwhile, SK hynix is leading collaborative efforts with our suppliers to reduce emissions. In September 2022, we convened a meeting with executives from the top four suppliers with significant emissions. During this meeting, we emphasized the semiconductor industry's imperative to reduce greenhouse gas emissions and collectively pledged our commitment to GHG reduction. In 2023, we plan to expand the number of participating suppliers. Moreover, we are continuously striving to enhance our calculation methodology by increasing the proportion of data obtained directly from our suppliers. Furthermore, we will endeavor to calculate emissions from capital goods (Category 2) to further expand the scope and refine the methodology of our calculations.

Additionally, in 2022, SK hynix joined the CDP Supply Chain program to enhance our suppliers' ability to combat climate change. The CDP Supply Chain is a global initiative that evaluates and supports suppliers in their efforts to address climate change. SK hynix's participation demonstrates our commitment to reducing greenhouse gas emissions alongside our suppliers. Moreover, we provided tailored guidelines and training to facilitate suppliers' engagement with the CDP. SK hynix will continue to support suppliers participating in the CDP Supply Chain program by helping them set and achieve climate change response goals and strategies. We aim to strengthen our leadership in collaborative climate action within the semiconductor ecosystem.

RE100 Implementation

SK hynix has made a commitment to achieve 100% renewable electricity consumption by 2050 by joining RE100 in 2020. The semiconductor sector is a major energy-intensive industry that operates large-scale fabs. Moreover, as our production capacity expands, we anticipate further increases in our power consumption. Operating large fabs in Asia, where the proportion of renewable electricity generation is relatively low, presents a challenging objective to transition all our power consumption to renewable sources. Nevertheless, we remain steadfast in our dedication to achieving our RE100 implementation goal and actively contributing to global climate change mitigation by reducing Scope 2 carbon emissions.

RE100 Goal and Implementation Plans

SK hynix has set an interim target to power 33% of our global operations using renewable electricity by 2030 as part of our roadmap to achieving RE100 by 2050. The successful transition to renewable electricity requires a deep understanding of country-specific policies, regulations, along with the development of tailored plans for each country. To this end, we established a renewable electricity subcommittee within the Carbon Management Committee in 2022 to discuss medium- to long-term RE100 implementation strategies. We have also explored renewable electricity procurement methods aligned with the 2050 net-zero achievement plan and the South Korean government's Basic Plan for Long-term Electricity (BPLE). We plan to strengthen collaboration with various stakeholders in the renewable electricity ecosystem and diversify the tools for implementing RE100, thereby enhancing the execution of our renewable electricity transition.

Renewable Electricity Procurement Status and Future Plans

In 2022, SK hynix sourced 29.6% of its global electricity use via renewable electricity, marking a significant increase compared to the 4% range in 2021. Notably, our overseas sites (San Jose in the United States, and Wuxi and Chongqing in China) have already completed a full transition to 100% renewable electricity for their power consumption in 2022. Expanding the use of renewable electricity within Korea presents challenges due to limited land area, low solar radiation, and low wind speed. However, we plan to gradually expand the means of RE100 implementation through collaboration with renewable electricity generators and intermediaries, moving closer to achieving the RE100 goal.

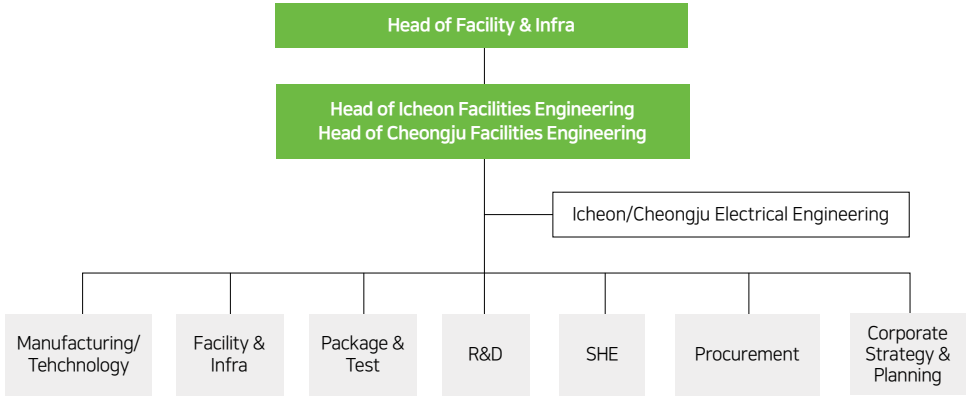
Renewable Electricity Consumption (Unit: MWh)

Energy Management

Energy Conservation Task Force

SK hynix operates an Energy Conservation Task Force (TF), led by the Head of Facility & Infrastructure, to ensure efficient energy use and management. Since its establishment in 2012, the Energy Conservation TF has obtained ISO 50001 certification, a global standard for energy management systems, in 2014. We have been diligently promoting energy-saving efforts in alignment with international standards. Recognizing the heightened significance of efficient energy use amid energy shortages triggered by the COVID-19 pandemic, logistics disruptions, and international conflicts since 2021, the Energy Conservation TF has proactively pursued various initiatives. In 2022, the company set comprehensive energy conservation targets and conducted monthly meetings to identify energy-saving measures while monitoring performance. Consequently, a total of 290 energy-saving measures were implemented, resulting in a reduction of 207 GWh of energy consumption. This accomplishment surpasses the conservation target established at the outset of the year by an impressive 134%.

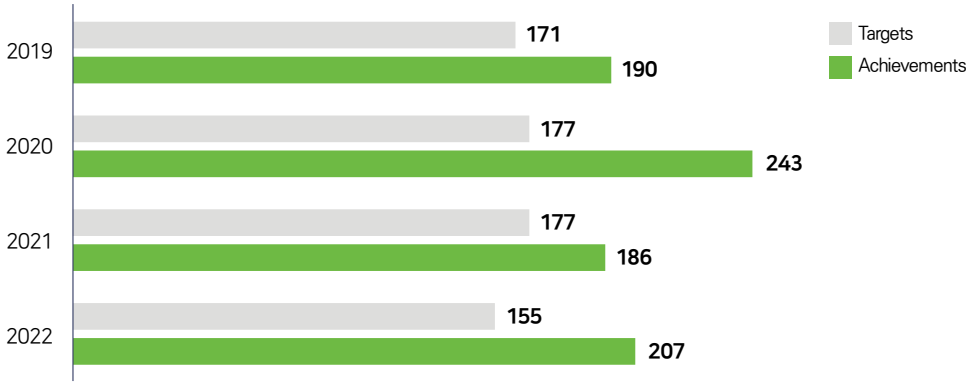
Energy Conservation Task Force Organization Chart



Operation of Point of Use Scrubbers in Idle Mode for Energy Savings

SK hynix employs Point of Use (POU) scrubbers to treat process gases and ensure compliance with environmental regulations for emissions. Specifically, gases like nitrogen trifluoride (NF_3), carbon tetrafluoride (CF_4), and nitrous oxide (N_2O), which have strong binding properties, are treated using plasma generated by POU scrubbers. As plasma generation requires substantial energy, POU scrubbers are recognized as energy-intensive equipment within SK hynix. In our continuous pursuit of energy-saving measures associated with POU scrubbers, we have confirmed that operating them in idle mode is highly effective for energy conservation. During the idle mode of production equipment, the process gases targeted for plasma treatment (NF_3, CF_4, N_2O) are not in use. In this case, even when power consumption is reduced for POU scrubbers, other process gases can still be effectively treated. Based on this finding, we have concluded that energy savings can be achieved by receiving valve signals before and after the process gas mass flow controller (MFC) of the production equipment from the scrubber and adjusting the power consumption value for plasma generation according to the operational status of the equipment. In 2022, by establishing communication between equipment and POU scrubbers through cables in a total of 263 production equipment units using NF_3 and N_2O, we achieved a power reduction of 3,507 MWh. We plan to continue these energy-saving activities in 2023 by applying the same measure to the remaining equipment, considering the production schedule.

Energy Saving Targets and Achievements (Korea) (Unit: GWh)

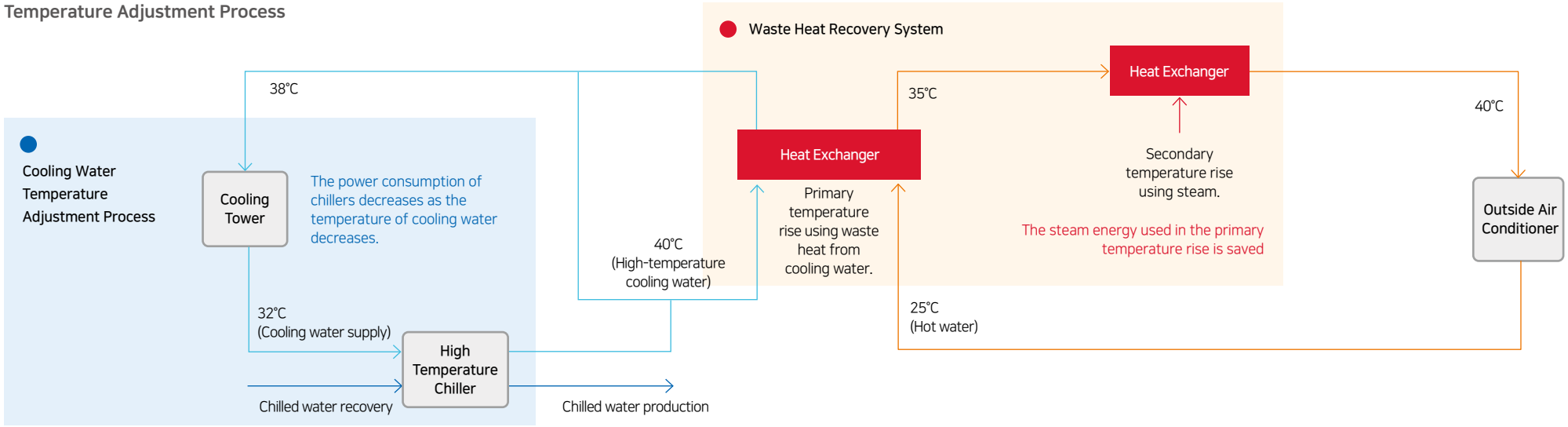


Improving COP[6] through Waste Heat Recovery System Optimization and Cooling Water Temperature Adjustment

Maintaining appropriate temperature and humidity levels in clean rooms, machine rooms, and offices of semiconductor fabrication facilities requires continuous operation of air conditioning and heating systems regardless of the season. In large Fabs like SK hynix's M16, temperature and humidity are regulated using cold water from chillers, hot water produced through steam from boilers, or steam directly, to maintain the desired levels. To reduce energy consumption in the heating system, we recycle waste heat up to a certain temperature and utilize steam only when higher temperatures are required.

SK hynix utilizes a waste heat recovery system to recycle waste heat. This system recovers the heat from the high-temperature cooling water generated by high-temperature chillers during their operation. The recovered heat is exchanged with hot water before being discharged into the atmosphere from the cooling tower. By utilizing the waste heat from the cooling water to raise the temperature of the hot water first, we can reduce both the amount of steam required to reach the optimal temperature for heating and the operating power of the fans used to dissipate heat from the cooling tower. In 2022, SK hynix successfully reduced steam consumption by 110,559 tons through optimized operation, including the adjustment of pump operation methods and operational parameters in the waste heat recovery system. The chillers also produce chilled water for cooling purposes. The operation of the chillers follows a four-stage cycle: "evaporation → compression → condensation → expansion." The power consumption of the chillers varies based on the temperature of the cooling water, which is responsible for cooling the refrigerant inside the chillers. Lower cooling water temperature leads to more efficient reduction in the refrigerant's temperature, resulting in lower power consumption by the chillers. By optimizing the control logic of the cooling tower to lower the cooling water temperature, SK hynix achieved a power reduction of 7,859 MWh in 2022.

Waste Heat Recovery System and Cooling Water Temperature Adjustment Process



Water Stewardship

Semiconductor manufacturing processes demand a substantial quantity of clean water. At SK hynix, we acknowledge the potential impact of our business operations on water resources. To mitigate this impact and promote coexistence with the surrounding aquatic ecosystems, we undertake comprehensive measures such as minimizing water withdrawals, promoting water reuse, and implementing effective wastewater quality management.

Policy for Water Management

Demonstrating Water Conservation Leadership

- We proactively adopt water-saving technologies and ensure the continuous implementation of water conservation activities to secure leadership in water resource management.
- We prioritize water conservation and sustainability, raising awareness among our employees to consider water conservation as an integral part of our corporate culture.
- Through comprehensive water management across the entire product manufacturing process, we exemplify our leadership approach that combines water management technologies with a culture of water conservation.

Water Risk Management

- We assess potential impacts on water resources that may arise from our business operations and establish response scenarios to minimize risks during emergencies.
- We set ambitious goals to maximize water reuse and consistently increase our investment in facilities and equipment utilization rates to achieve these objectives.
- Through a real-time monitoring system, we monitor the status of supplied water resources and respond to water-related risks.

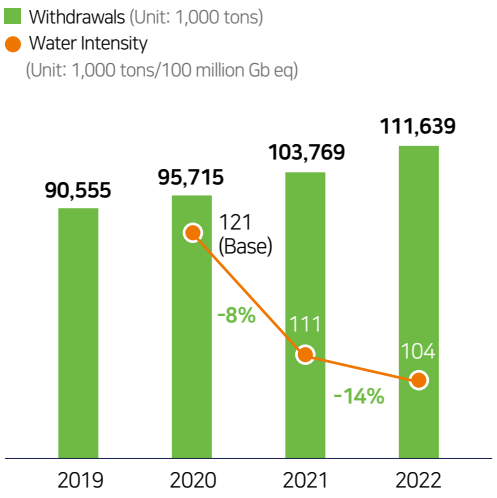
Ensuring Healthy Ecosystems

- We strictly manage and maintain the quality of effluent to create an environment in which various species, such as plants, mammals, and birds, can inhabit the local rivers.
- By regularly monitoring aquatic ecosystems, we identify and mitigate the impacts of effluent on the surrounding ecosystems.
- Through our research activities on biodiversity, we foster a healthy environment in which we can thrive with the local communities.

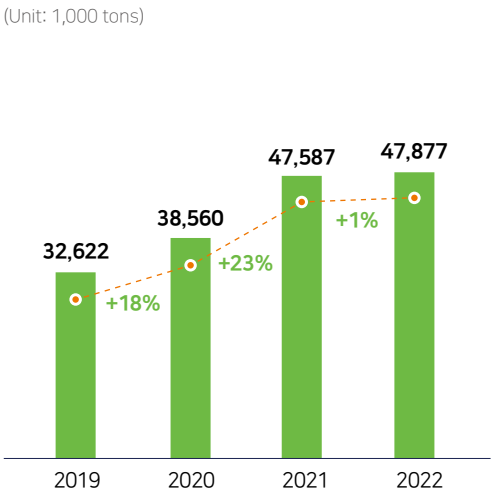
Key Achievements in Water Management Strategy

	Withdrawal	Use	Discharge
Targets	Reduction in Water intensity	Increase in Water Reuse	Compliance with Water Quality Standards
Achievements	As our company's operations continue to expand, it is inevitable that our total annual water withdrawals will increase. However, SK hynix has successfully reduced water intensity by implementing efficient water usage practices. Using the year 2020 as the base year, SK hynix aims to achieve a 35% reduction in water intensity by 2026. In 2022, we surpassed our target of 12% reduction by achieving a 14% reduction compared to 2020.	SK hynix is actively increasing water reuse by establishing wastewater reuse facilities. In 2022, our facilities in Korea reused approximately 36.08 million tons of water, while overseas facilities reused 11.8 million tons. These efforts have resulted in a continuous increase in water reuse across the entire SK hynix organization.	To safeguard the ecological environment of rivers that receive discharged water, SK hynix's production facilities in Korea have set specific goals to meet the "Good Water" standards in accordance with the river's living environment criteria under Article 2 of the Enforcement Decree of the Framework Act on Environmental Policy. To meet the Good Water standards, SK hynix maintains concentrations of five indicators below the following targets: chemical oxygen demand (5mg/L), biochemical oxygen demand (3mg/L), suspended solids (25mg/L), total phosphorus (0.1mg/L), and total organic carbon (4mg/L).

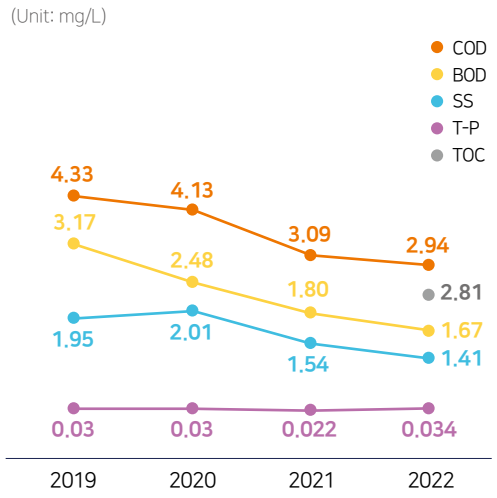
Water Withdrawals and Intensity



Water Reused



Discharged Water Quality Concentration (Korea)



Key Water Management Activities

Water Conservation and Wastewater Reduction Task Force

Since 2018, SK hynix has operated a Water and Wastewater Reduction Task Force to decrease water usage throughout the production process. In 2022, efforts such as expanding the reuse of process cooling water (PCW) from air conditioning units and implementing changes to Point of Use (POU) scrubber models to reduce flow resulted in a water usage reduction of approximately 1.26 million tons our facilities in Korea. SK hynix is committed to continuing and expanding these reduction activities, with a target of achieving a cumulative water savings of 600 million tons by 2030.

Water Management in Water-Stressed Areas

SK hynix identifies the water stress levels in the regions where each of our production facilities is located using the Water Risk Atlas provided by the World Resources Institute (WRI). We establish and manage targets based on the identified stress levels. Among the regions where SK hynix' s production facilities are located, Icheon in Korea is classified as areas with "High" water stress, while Cheongju in Korea falls under the "Medium-high" category. (Based on latitude, longitude, and baseline analysis of each facilities)

At the Icheon Campus, we have achieved industry-leading rates of wastewater reuse for effective withdrawals management by establishing a water reuse system with a capacity of 94,400 tons per day. Additionally, our water supply is ensured through a dual supply system that combines the Namhan River intake with the metropolitan water supply.

In the Cheongju Campus, while the current water stress level is not high, we have proactively managed potential risks by utilizing reused wastewater from external sources since 2023. We have plans to further expand this supply. Moreover, the implementation of dual water supply pipes ensures the reliability of our water supply in preparation for potential environmental accidents.

Yongin, the location of our upcoming new production facility, falls under the category of "Medium-high", so it's not an area where water stress level is very high. But we are actively considering measures to integrate water-saving and reuse technologies from our existing facilities to proactively mitigate water-related risks.

2022 Water Balance

Withdrawal	Water consumption	Water discharge
111,639 thousandm^3	**20,851 thousandm^3**	**90,789 thousandm^3**
Municipal water 69,642		
Surface water 34,697		
Water reuse from external sources (reclaimed water) 7,300		

Total water reduction in 2022

Reuse from onsite	40,577,452m^3
Reuse from offsite	7,300,000m^3
Total reuse	47,877,452m^3
Water usage reduction	1,547,602m^3
Total water reduction	49,425,054m^3

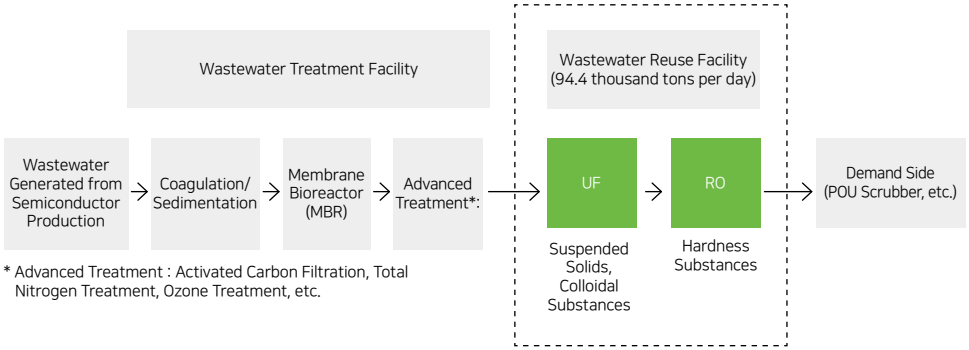
Construction of Wastewater Reuse Facilities

To reduce water consumption, it is crucial to not only reduce usage but also reuse wastewater. SK hynix is expanding its water reuse capacity through the construction of wastewater reuse facilities. These facilities treat wastewater through primary physical, chemical, and biological processes. The treated wastewater is then further treated using ultrafiltration (UF)[1] and reverse osmosis (RO) to meet the standards required by demand-side applications, such as Point of Use (POU) scrubbers. The primary purpose of reusing the treated water is for air pollution prevention facilities, aiming to reduce greenhouse gas emissions. The wastewater reuse facility at the Icheon Campus has a treatment capacity of approximately 94,400 tons per day and reused approximately 18.06 million tons of wastewater in 2022. SK hynix plans to expand wastewater reuse further by optimizing the utilization rate of the reuse system in the future.

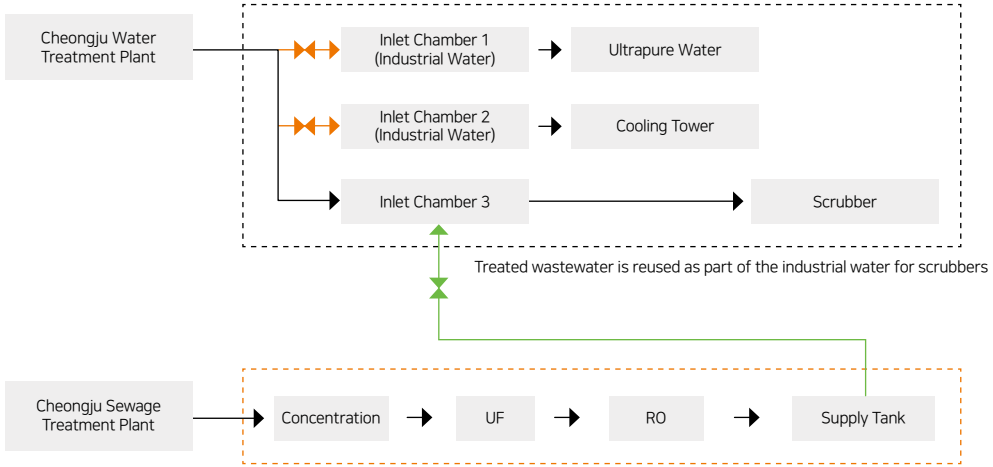
Expansion of Wastewater Reuse from External Sources

SK hynix is actively working to reduce its freshwater withdrawals through water reuse initiatives. As part of these efforts, the Wuxi facility has been utilizing approximately 20,000 tons of externally sourced reused water per day. Furthermore, starting in 2023, the Cheongju Campus has become the first in the Korean semiconductor industry to incorporate externally treated wastewater. The campus utilizes around 10,000 tons per day of reused water produced at the municipal wastewater treatment plant in Cheongju. This practice ensures the reliability of scrubbers, which are equipment units used for air pollution prevention, while simultaneously achieving water resource conservation and reducing air pollutant emissions. SK hynix plans to continue expanding its water reuse efforts by collaborating with the local community to secure a stable supply of treated wastewater.

Wastewater Reuse Process



Reused Water Production and Supply Process in Cheongju



Efforts for Aquatic Ecosystem Health Management

Establishment of Biodiversity[9] Policy

In April 2023, SK hynix established a biodiversity policy to acknowledge the direct and indirect environmental impacts stemming from semiconductor production processes and to minimize or eliminate environmental consequences, aiming to coexist with ecosystems. SK hynix is committed to adhering to the biodiversity policy and actively taking the lead in ecosystem conservation through collaborative efforts with local community members.

SK hynix's Biodiversity Commitment and Policy

Objective

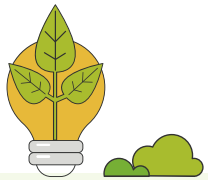
- SK Group is built on the "Double Bottom Line (DBL)" principle of seeking mutual growth with the society by creating not only economic values, but also social values. The principle is at the heart of SK hynix's business activities as SK hynix strives to achieve sustainable growth and aims for the sustainable global environment.
- SK hynix focuses mainly on the development and production of memory semiconductors and is well aware of the impacts – both direct and indirect – its operations have on the environment. SK hynix is committed to minimizing or offsetting such impacts to address biodiversity-related social issues, therefore delivering social values.

Scope and Principles

- This Policy applies to SK hynix's operation sites in Korea, including our headquarters (Icheon, Korea), and those abroad.
- SK hynix incorporates the philosophy of "People and Environment-centered management" into its Safety, Health and Environment (SHE) policy to remain committed to protecting biodiversity.
- SK hynix supports the Convention on Biological Diversity as well as the UN Sustainable Development Goals, such as the goal to protect and promote sustainable use of terrestrial ecosystems and halt biodiversity loss.
- SK hynix is fully aware of the protected and conserved areas, such as World Heritage Areas and International Union for Conservation of Nature (IUCN) Category I~IV Protected Areas, and ensures that it complies with all national and local laws and regulations at all our business sites located in the regions that fall under the supervision of the IUCN.
  * Strict Nature Reserve, IUCN Category 1a
  * Wilderness Area, IUCN Category 1b
  * National Park, IUCN Category II
  * Natural Monument, IUCN Category III
  * Habitat/Species Management Area, IUCN Category IV
- SK hynix recognizes its responsibility in conserving biodiversity and using biological resources in a sustainable manner. In addition, SK hynix will strive to achieve "no net loss" of biodiversity near its operation sites and to deliver "net positive" impacts.

Strategy

- As part of its commitment in fulfilling this Policy, SK hynix shall assess the impact on biodiversity from its overall business operations and endeavor to preserve the ecosystem.
- The following are our key strategies in conserving biodiversity.
  - Observe and record ecological monitoring results of citizen scientist activities and share the data with stakeholders.
  - Implement biodiversity conservation activities based on big data and AI.
  - Focus on fostering biodiversity talent, especially among youths in the local community.
  - Engage and cooperate in various ways with diverse stakeholders.



Activities

Citizen Science Activities

- Establish a public group comprising of NGO members, ecology education specialists and teachers, etc. dedicated to training professional ecology guides who will lead the citizen science activities.
- Develop and run a monitoring program specialized for the ecosystem near sites of operation. Observe the flora and fauna inhabiting nearby ecosystems and develop educational programs and activities for citizen scientists.
- Provide support to ensure that citizen science activities are carried out systematically by engaging in co-research on ecosystem services with professional research teams.

Big Data/AI-based Conservation Activities

- Develop and release an AI-based observation app that citizen scientists can utilize to observe the ecosystem prior to and after the development of SK hynix business sites, record their findings, and monitor the data history.
- Support the accumulation and management of biodiversity data utilized during biodiversity engagement and research nearby our business sites.
- Implement regular and occasional activities that draw on regional ecological functions to restore and conserve the ecosystem and to preserve habitats of endangered wildlife.

Fostering Local Talent

- Train Big Data/AI/digital experts specializing in biodiversity and support their job search in the field of the local community needs.
- Provide professional training courses as well as ecological research opportunities and conservation activities to youth and elementary and middle school environmental clubs near business sites, in order to better ensure their rights on decision-making regarding biodiversity.
- Host the “AI Challenge for Biodiversity” to elicit stakeholder interest in biodiversity and brainstorm ideas on how to best utilize the data accumulated from citizen science activities.

Stakeholder Engagement and Collaboration

- Work with stakeholders to develop and run an AI-based app for monitoring the ecosystem. Through this, increase efficiency in recording observations of the ecosystem, and collect and store transparently the data for training and ecological research.
- Define the territorial scope around our business sites that may sustain direct impacts on biodiversity, as well as conservation targets and threats within the scope, and identify key influencing factors to analyze the dynamics between each factor.

Biodiversity Conservation Efforts with Stakeholders

SK hynix is committed to understanding the impact of biodiversity on the entire ecosystem and actively engaging in conservation efforts. Given the water-intensive nature of the semiconductor industry, we place particular emphasis on the river ecosystems surrounding our fabs. In 2021, we signed a memorandum of understanding (MOU) on "AI for Biodiversity" with Microsoft, and in collaboration with various stakeholders, including the Korea Safety Health Environment Foundation and the local community, we initiated the Anseongcheon Biodiversity Project. This long-term project, spanning over six years, aims to contribute to biodiversity conservation by conducting extensive observations of ecological changes before and after the establishment of fabs and collecting objective ecosystem data. To accomplish this, we are implementing a range of medium to long-term tasks, including citizen science activities, expert observation of ecosystem changes, biodiversity research, and the development of digital talent in the environmental field.

For the collection of ecological change data, we harness Microsoft's AI technology for identification, categorization, collection, and accumulation. Citizen scientists play a central role in observation activities to ensure transparency. In 2022, we conducted a pilot data collection of the ecosystem in collaboration with the Korea Safety Health Environment Foundation and students from a nearby middle school's environmental club. In 2023, we are expanding participation to include local residents and employees' families. Based on the accumulated data, we plan to conduct expert research and host forums on biodiversity, sharing our research findings. Moreover, we provide biodiversity data analytics training for local youth and students, supporting their growth as environmental and data experts. As part of these efforts, we held the AI Challenge for Biodiversity in September 2022, targeting local youth and students. This competition holds significant value in generating interest in biodiversity conservation among various stakeholders, including SK hynix. Moving forward, we will continue to explore ways to coexist with all life forms in the ecosystem through collaboration with diverse stakeholders.

Case

Anseongcheon ECOSEE Program

On April 22, 2023, in commemoration of Earth Day, SK hynix conducted the Anseongcheon ECOSEE program as part of the Yongin Semiconductor Cluster Biodiversity Project. This event aimed to raise awareness about the biodiversity project in the Yongin Semiconductor Cluster and generate attention towards biodiversity issues through citizen science activities on the 53rd Earth Day. Anseongcheon is a river located near the Yongin Semiconductor Cluster site in Wonam-myeon, Cheoin-gu, Yongin. It flows southwest and eventually reaches the West Sea via Pyeongtaek. The ECOSEE program's activity site is the upper reaches of Anseongcheon. Currently, it is a dry stream, but with the establishment of the Yongin Semiconductor Cluster, treated water will be discharged into the stream, leading to anticipated changes in the river environment and surrounding ecosystems, including biodiversity. This makes it an ideal observation site for monitoring the implementation of the biodiversity project. SK hynix has made substantial preparations, including developing a curriculum for the citizen science program curriculum, training professional ecological interpreters, and creating a dedicated ECOSEE application for recording biodiversity observation data. The Anseongcheon ECOSEE program was piloted with middle school students in Yongin in 2022, and starting from 2023, we plan to systematically collect data on ecological changes.

Participants of the Anseongcheon ECOSEE Program

Circular Economy

SK hynix is dedicated to achieving resource circulation by optimizing resource usage and recycling generated waste. To ensure proper waste disposal, we rigorously evaluate and select waste management companies to entrust all waste processing. Furthermore, SK hynix has established a control system for waste transportation vehicles and conducts annual on-site evaluations of contractors to systematically manage the proper movement and disposal of generated waste.

Waste Management

Reducing Waste Liquid Generation through Optimization of Chemical Usage and Process Improvement

Various types of chemicals are used in the cleaning process of the semiconductor manufacturing process, and waste sulfuric acid used in the semiconductor cleaning process accounts for the largest portion of the waste liquid generated after chemical usage. In order to reduce waste sulfuric acid, SK hynix established a task force (TF) consisting of manufacturing and environmental departments starting in 2020. The TF focused on improving the manufacturing process and conducting multiple tests to determine the optimal amount of sulfuric acid usage without compromising product quality. As a result, an optimization plan was developed and implemented, resulting in an approximately 13% reduction in waste sulfuric acid generation at the Icheon Campus in 2021. Furthermore, at the Wuxi plant in China, approximately 17% of waste sulfuric acid generated from the production process in 2022 was reused as a chemical in the in-house wastewater treatment facility, reducing sulfuric acid usage. These improvement initiatives not only decrease waste sulfuric acid usage but also lead to a reduction in carbon emissions by minimizing the operations of waste sulfuric acid collection vehicles. SK hynix remains committed to exploring additional measures to reduce chemical usage and minimize liquid waste generation.

Achieving Zero Waste to Landfill (ZWTL) Platinum Certification for Facilities in Korea

Zero Waste to Landfill (ZWTL) certification evaluates the level of a company's resource recycling and the final landfill amount of residual waste generated during the waste disposal process. After SK hynix initially obtained ZWTL certification for our Korean facilities in 2018 and completed certification for overseas facilities (Wuxi, Chongqing) in 2019. In 2022, we achieved the highest level of ZWTL certification, Platinum, in recognition of waste generation reduction and recycling improvement at our Korean facilities. We will continue working to obtain and maintain ZWTL Platinum certification for all our facilities, both domestically and internationally.

2022 ZWTL Certification Rate

(Unit: %)

Icheon	100
Cheongju	100
Wuxi	98
Chongqing	94

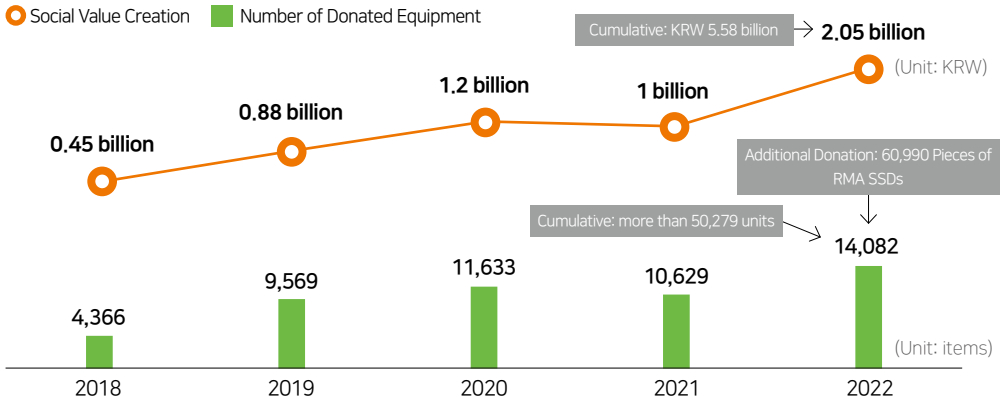
ZWTL Platinum Certification Badges for Icheon Campus (left) and Cheongju Campus (right)

Expansion of Waste Recycling

Waste Reduction through the Recycling of Used ICT Equipment

SK hynix has consistently donated and recycled used ICT equipment since 2018. Our donations have been directed to the social enterprise Happy ICT, an IT company recognized as a standard workplace for individuals with disabilities, with disabled employees accounting for 45% of the total employees as of 2022. In the first year of our donation program in 2018, outdated office equipment was the primary item, and in 2019, we expanded our donations to include industrial equipment such as server storage. Since 2021, we have also started donating non-usable SSDs, which were previously discarded due to reasons such as their use in the development process for customer certification or other factors that made them unsellable. Starting from 2022, we introduced a new initiative to separate NAND chips from SSDs collected through the Return Material Authorization (RMA)[9] service for recycling. In many cases, the SSD products collected through RMA are not inherently faulty but are returned due to malfunctions in associated devices or other components, making them mostly reusable. At SK hynix, we separate usable NAND chips from RMA SSDs to manufacture USBs and IoT sensors, while recycling the remaining parts and defective NAND chips to reduce waste and increase equipment recycling. We are committed to exploring various initiatives involving more departments to further reduce waste and enhance equipment recycling.

Trend in Used ICT Equipment Donation



* Donation items: Office automation equipment (since 2018), server equipment (since 2019), SSDs (since 2021)

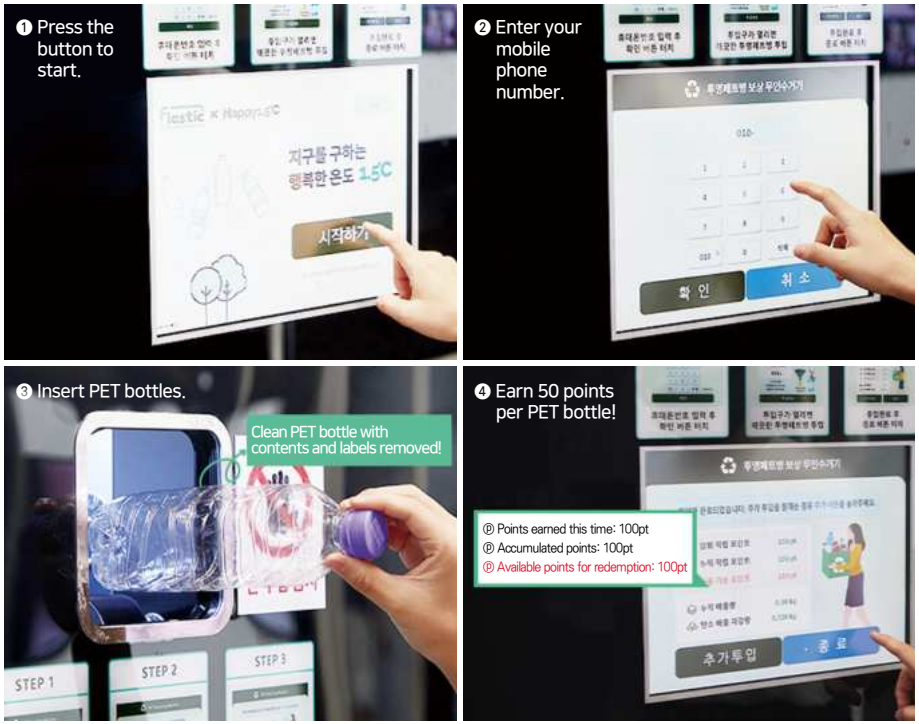
Recycling Efforts for General Waste

In addition to waste generated in the production process, SK hynix also strives to increase the recycling rate of non-industrial waste generated in employees' office spaces. First, we have established agreements with the Ministry of Environment, the City of Icheon, and the Korea Packaging Recycling Cooperative to collect and separate recyclable resources generated in office spaces since 2021. Paper cups and milk cartons are transformed into recycled toilet paper, which is then distributed to underserved communities and local kindergartens. Furthermore, since 2022, we have implemented separate collection and recycling of coffee grounds. Coffee shops within our company premises generate significant amounts of coffee grounds, which used to be mixed with general waste and incinerated. Now, coffee grounds are discharged separately and recycled as mixed feed, reducing carbon emissions from incineration. SK hynix will continue actively seeking recycling methods for general waste that is prone to be easily discarded to maximize the overall recycling rate of the company.

Case

SK hynix's Efforts for Free Plastic (Flastic)[9]: Flastic Challenge Utilizing Clear PET Bottle Collection Kiosks

In 2021, SK hynix entered into the "Clear PET Recycling Agreement" with the Ministry of Environment, a recycling material company, and a product manufacturer. Under this agreement, SK hynix takes direct responsibility for the entire process, from collecting PET bottles to recycling them into long fibers. As part of our efforts, we launched the Flastic campaign in 2021, aiming to promote clear PET bottle separation and proper disposal habits among our employees and secure clear PET bottles that can be recycled into high-quality long fibers. In 2022, we conducted the Flastic Challenge, a pilot project featuring clear PET bottle collection kiosks. In collaboration with SK Telecom, we developed clear PET bottle collection kiosks and installed one each at our Icheon, Cheongju, and Bundang campuses. The dedicated Happy 1.5°C[9] app was developed for SK hynix employees to monitor employee participation and collection performance. The clear PET bottle collection kiosks are equipped with four sensors to assess the material, color, weight, and presence of labels, ensuring that only clean and uncontaminated clear PET bottles can be deposited. PET bottles suitable for collection are compressed to reduce volume before final collection. To encourage resource circulation, employees who deposit PET bottles receive a small amount of social value (SV) points per bottle, making their participation in the Flastic Challenge enjoyable and rewarding. Despite being a three-month pilot project, we collected over 260,000 clear PET bottles, surpassing the initial goal of 50,000 bottles by more than five times, using only three kiosks. If all these collected bottles are recycled, it will lead to approximately 18,725 kilograms of carbon dioxide emissions reduction compared to using conventional plastic raw materials. The success of the Flastic Challenge was made possible by the active participation of employees who recognized the plastic issue. SK hynix plans to continue exploring various recycling initiatives in which employees can voluntarily participate.



How to Use the Clear PET Bottle Collection Kiosk

Innovate

our technology for tomorrow

2022 Achievements

94%
Scrubber efficiency at Domestic facilities

1.28 times
HBM energy efficiency increase

KRW 4.9053 trillion
R&D investment

Material issues | Climate Change & GHG Emissions, Technology & Innovation

Sustainable Manufacturing

Low Carbon Process

Development of Alternative Gases

SK hynix has continuously developed alternative gases in order to reduce Scope 1 direct greenhouse gas (GHG) emissions in semiconductor processes. We have established a collaborative network that enables various stakeholders, including material and equipment suppliers, to participate in the development of alternative gases. Our goal is to replace high global warming potential (GWP) process gases, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), sulfur hexafluoride (SF_6), perfluorocarbons (PFCs), and nitrogen trifluoride (NF_3), which are the six greenhouse gases emitted from semiconductor processes. As part of these efforts, SK hynix has implemented a carbon emission reduction prediction system through the application of alternative gases in 2023. Based on the predictions obtained from this system, we are promoting the identification and implementation of measures to achieve our emission reduction targets.

Optimization of NF_3 Cleaning Process and Transition to Alternative Gas

The use of perfluorocarbons (PFCs) gases in etching and chamber cleaning processes in semiconductor manufacturing has significant environmental impacts due to their long atmospheric lifetimes and high global warming potential. To mitigate their effect on the Earth's temperature, it is crucial to minimize the usage of PFCs gases. In January 2022, SK hynix established the Process Gas Usage Reduction Task Force, consisting of experts in process technology under the Carbon Management Committee, to actively reduce PFCs gas consumption. As part of our efforts, we have completed the optimization of 13 processes that involve the use of nitrogen trifluoride (NF_3) for cleaning, utilizing time-of-flight mass spectrometry (ToF-MS) for process gas analysis. This optimization has resulted in a reduction of 25 tons of NF_3 usage, leading to a decrease of 12,029 tCO_2eq of annual greenhouse gas emissions. SK hynix plans to continue implementing alternative gases and pursuing process optimization to achieve a 40% reduction in process gas emissions by 2030 compared to 2020.

Improvement of Scrubber Efficiency

As technology advances and more ultra-fine processes are required, greenhouse gas emissions from production processes continue to rise. SK hynix is focusing on the treatment of high GWP substances, such as carbon dioxide (CO_2), nitrous oxide (N_2O), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). We classify each process that utilizes these substances and install appropriate scrubbers to reduce greenhouse gas emissions. In addition, we implement diagnostic technologies to monitor the condition of components that directly impact process gas treatment efficiency. We also expand the application of variable power technologies that adjust scrubber output based on gas flow during process operation. Furthermore, we are continuously pursuing the development of new concept technologies. Our focus is on reducing energy consumption and ensuring higher treatment efficiency through integrated treatment methods, moving away from the conventional concept of installing individual equipment for each process. Moreover, to foster collaborative growth, we conduct regular technology exchange meetings with our suppliers in pursuit of the development of elemental and energy-efficient technologies. These efforts have resulted in SK hynix achieving a scrubber efficiency of 94% for facilities in Korea in 2022, 4% points increased compared to 2021.

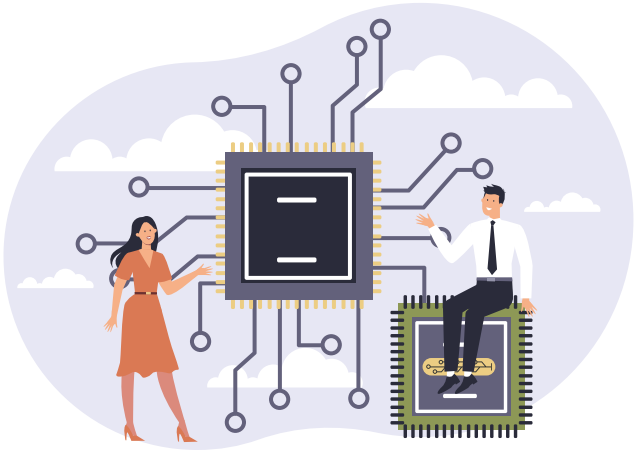
Process Efficiency Enhancement

Enhancing Semiconductor Manufacturing Efficiency Through AI/DX Technology

In the era of artificial intelligence (AI) and digital transformation (DX), SK hynix has been preparing new ICT infrastructures, such as cloud and data lakes, since 2018. Currently, we are continuously driving field innovation to improve the efficiency of semiconductor manufacturing operations. Specifically, the adoption of deep learning-based AI image classification technology is not only enhancing work efficiency but also enabling analytics that were previously considered impossible, thereby contributing to the improvement of quality and output. Since 2022, we have been operating "HyVIS (Hynix Visual Inspection Solution)," our AI-based image classification platform that utilizes AI technology to replace human inspectors using the images obtained through equipment. This platform has significantly reduced work time by up to one-tenth and enabled efficient workforce management. Moreover, the development, deployment, and improvement of click-based AI models allow engineers without deep learning expertise to operate AI models easily and quickly. Additionally, the AI-based automated measurement system called "VAIS (Vision AI Solution)" utilizes algorithms to automatically measure images obtained from equipment, resulting in a 50% improvement in work productivity, as well as a reduction in investment costs for measurement equipment. Furthermore, we have implemented a Decision Service Platform in our manufacturing facilities, enabling an automated system that does not require engineers' direct involvement in addressing standardized process issues among the numerous issues arising from equipment/processes. This has led to an average reduction of 23 minutes in the time required per case for decision-making and subsequent actions. SK hynix plans to continue our field innovation activities in various areas, such as virtual methodology and advanced root cause analysis, leveraging AI/DX technology to enhance our competitiveness by achieving innovation in productivity with the aim of establishing smart fabs.

Improving Production Efficiency through the Adoption of Process Prediction AI Solution

In December 2022, SK hynix introduced Panoptes VM AI, a virtual methodology AI solution that predicts manufacturing process outcomes using sensor data, into our mass production fabs. Developed by Gauss Labs, an industrial AI startup in which SK hynix has invested, this solution was initially applied to the thin film deposition process, a critical step in depositing thin films onto wafers. The thickness and refractive index of thin films are directly related to the semiconductor quality, but comprehensive measurement of thin films requires significant time and resources, posing significant challenges. However, the newly implemented Panoptes VM solution collects data such as pressure, temperature, spray distance, gas injection, and current inside the chamber to predict process outcomes, including the refractive index and thickness of films deposited on wafers. This enables virtual measurement results comparable to comprehensive inspections. Additionally, by leveraging the analysis results, SK hynix achieved a 21.5% reduction in process variation, which represents the magnitude of product quality variations within the process, along with an improvement in yield. SK hynix is considering expanding the application of Panoptes VM to other processes and plans to continue incorporating AI technology into all aspects of semiconductor development and production to maintain technological superiority.

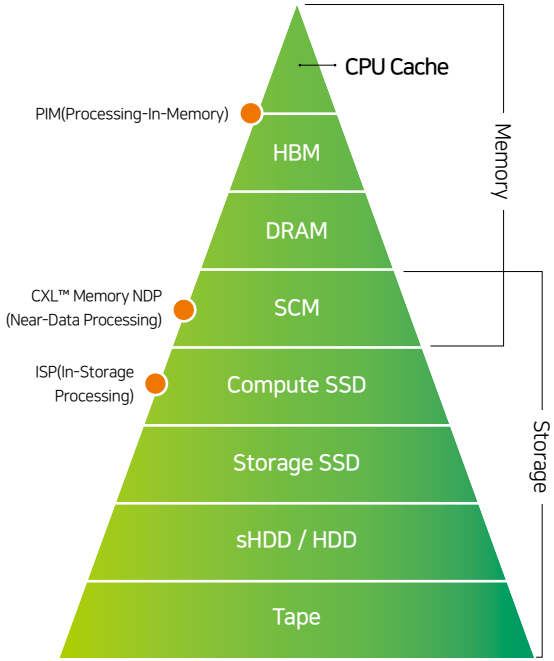


Green Technology

Today, advancements in AI, machine learning, autonomous driving, high-performance computing, graphics, and network applications have led to a surge in the demand for data processing across various industries. This rapid change has created a disparity in bandwidth between systems and memory, prompting the need for memory semiconductors to deliver enhanced performance in terms of both high bandwidth and high capacity. However, high-performance products consume substantial amounts of power during data processing, resulting in a corresponding rise in greenhouse gas emissions. To address this issue, it is crucial to prioritize energy efficiency. SK hynix acknowledges our immense responsibility for the increased power consumption and associated greenhouse gas emissions during the product usage phase. In 2021, SK hynix unveiled our new vision, "Memory ForEST," which is aimed at building a future semiconductor ecosystem, and we are actively investing in R&D to achieve this vision. Under the vision of Memory Forest, SK hynix is committed to reducing greenhouse gas emissions not only within the value chain of product manufacturing but also during the product usage phase. As part of these efforts, we have focused on researching energy-efficient products and clean technologies, such as High Bandwidth Memory (HBM).

SK hynix has incorporated the development of green technologies, specifically energy-efficient technologies, into our corporate strategy. To achieve this more systematically, we have included the Green Technology category in PRISM, our ESG strategy framework established in 2022. We have also set specific targets, including "doubling HBM energy efficiency" and "achieving a 1.8x increase in energy efficiency for eSSD (Enterprise Solid State Drive)" by 2030. SK hynix will continue to transparently disclose the progress and efforts made towards achieving these product energy efficiency goals to the public.

MEMORY FOREST | Environment | Society | Tomorrow



Nature Forest	Memory Forest
Emergent	Insight-Foresight AI/ML Model
Canopy	Intelligence Real-time Analytics
Under story	Information Batch Analytics
Forest Floor	Raw Data Data Lake

Improving Product Energy Efficiency

Development and Mass Production of HBM3

In the first half of 2022, seven months after SK hynix developed HBM[1]3, a DRAM with the industry's highest speed and capacity, in October 2021, we successfully commenced mass production and supply to customers. HBM3 enables data processing of up to 819GB per second and achieve a maximum capacity of 24GB through the vertical connection of up to 12 DRAM chips using Through Silicon Via (TSV)[1] technology. It also features on-die ECC (Error Correction Code) that autonomously corrects data errors in DRAM cells, enhancing product reliability. Notably, HBM3 improves energy efficiency by 1.28 times compared to HBM2. HBM is the culmination of SK hynix's dedicated efforts in developing energy-efficient products. SK hynix has designed HBM to consume less power when processing the same amount of data with each new generation. These efforts will continue even after achieving the goal of "doubling HBM energy efficiency" by 2030.

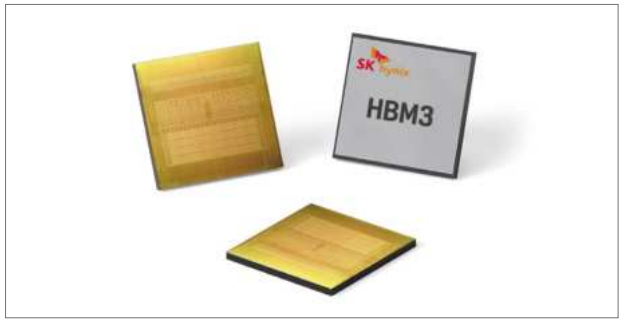
Development of 238-layer 4D NAND

SK hynix completed the development of 238-layer 512Gb TLC 4D NAND in August 2022 and began mass production in May 2023.

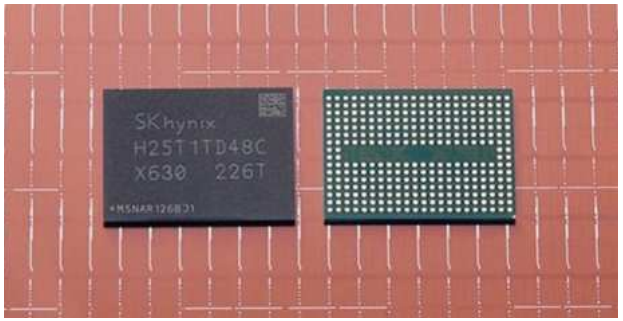
Leveraging Charge Trap Flash (CTF)[1] and Peri Under Cell (PUC)[1] technologies, SK hynix's 4D NAND offers the advantage of reduced cell area per unit compared to 3D NAND while increasing production efficiency. The adoption of innovative technologies has enabled an increase in the number of layers to 238, along with a 34% improvement in productivity compared to the previous generation, which had 176 layers. Furthermore, the data transfer speed has increased by 50% to 2.4Gb per second compared to the previous generation. Moreover, the energy consumption during data reading has decreased by 21%, contributing to potential greenhouse gas reduction through power savings.

Development of Mobile LPDDR5T

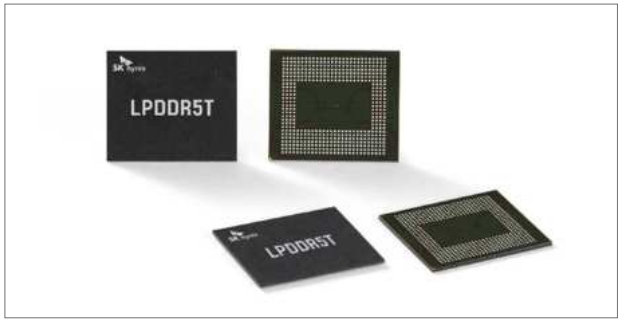
Just two months after the release of the mobile DRAM LPDDR5X in November 2022, SK hynix succeeded in developing LPDDR5T (Low Power Double Data Rate 5 Turbo). The operating speed of LPDDR5T, an upgraded version of LPDDR5X, has increased to 9.6Gbps, which is 13% faster than the previous version. The addition of "Turbo" to the product name signifies the achievement of the highest speed. Moreover, LPDDR5T operates within the international semiconductor standard voltage range of 1.01 to 1.12V, as defined by the Joint Electron Device Engineering Council (JEDEC), providing high speed at ultra-low power. The success of LPDDR5T's top performance was largely attributed to SK hynix's application of the next-generation HKMG (High-K Metal Gate)[1] process, a world-first in mobile DRAM, in November 2022. SK hynix aims to continue leading the market with its world-leading technological competitiveness and contribute to the environment through constant innovation.



HBM3 D램



238단 512Gb TLC 4D 낸드플래시



LPDDR5T

Spotlight

Participation in CES 2023

The Consumer Electronics Show (CES), the world's largest consumer electronics and IT exhibition, opened in Las Vegas, United States, in January 2023. After the COVID-19 pandemic, the event returned to a fully in-person format for the first time in three years, attracting the participation of many big tech companies. Eight SK Group affiliates, including SK hynix, presented a booth under the slogan "Together in Action," symbolizing its commitment to translating its net-zero aspirations into tangible actions in collaborating with ten partner companies in the US. In line with SK Group's direction of a "carbon-free future," SK hynix showcased "Green Digital Solution" products that significantly reduce carbon emissions.

SK hynix's Exhibition Booth at CES 2023

Exhibition Story

As of 2023, the estimated annual global data generation amounts to a staggering 100ZB, with data being produced at a rate of 3.5 million GB per second. Today, we live in the data age, where everything revolves around data, and we exist in the "Memory Centric Universe" where memory semiconductors play a crucial role in storing and processing data. In key areas of the Fourth Industrial Revolution, such as AI, metaverse, big data, and autonomous driving, a vast amount of data is generated, which, in turn, leads to inevitable power consumption and heat generation during storage and processing. SK hynix aims to mitigate these challenges by minimizing power consumption and heat dissipation through its Green Digital Solution products, thereby contributing to the cooling of future cities.

Exhibited Products

At this exhibition, SK hynix showcased its flagship memory products and new product lines, starting with the high-performance enterprise SSD, PS1010 E3.S (referred to as PS1010). PS1010, which premiered at CES 2023, offers a 75% improvement in performance per power consumption, helping reduce server operation costs and carbon emissions. This advancement is expected to help reduce server operating costs and carbon emissions. SK hynix also presented next-generation memory products designed for high-performance computing (HPC) environments, including HBM3, the highest-performance DRAM available, GDDR6-AiM powered by PIM* technology, which is a memory with computing capabilities, and CXL Memory, which allows flexible scalability of memory capacity and performance.

Major displayed products in CES 2023

Green Products

SK hynix adheres to international standards, such as the EU Restriction of Hazardous Substances (EU RoHS) Directive, for all products delivered to customers. We manage and ensure the suitability of our hazardous substance management systems to meet customer demands. Moreover, we analyze environmentally friendly standards and strive to implement the best control systems to meet the long-term standards of all customers.

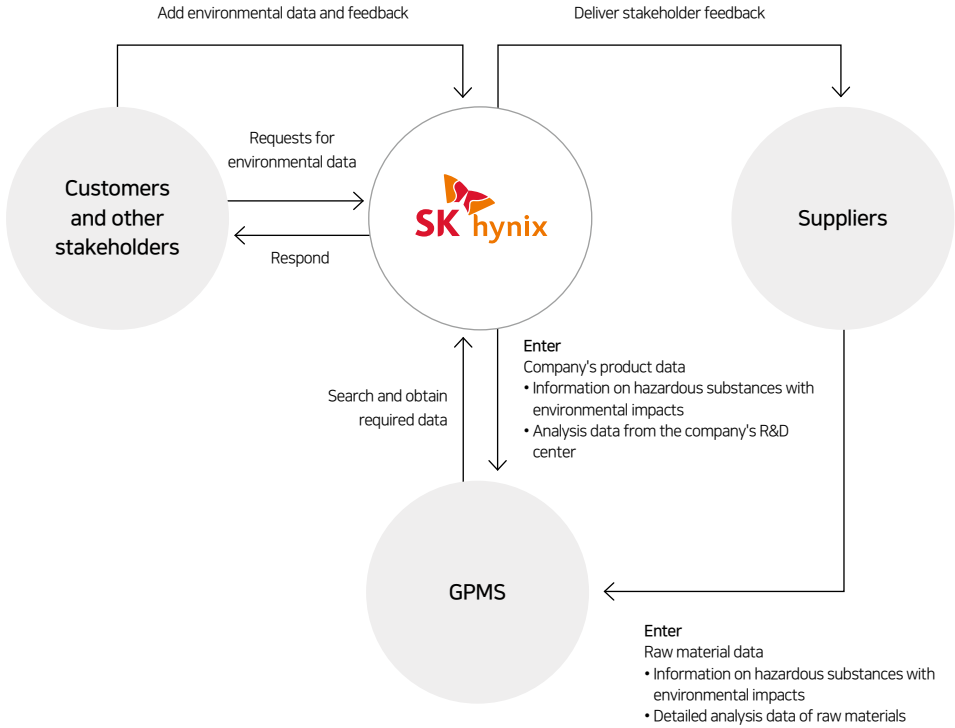
Green Product Policy

SK hynix establishes and manages a green product policy to produce safe products that comply with international standards and customer requirements while minimizing environmental and human impacts. We prioritize minimizing environmental impacts from the development stage, design products without hazardous substances, and verify their compliance. We have verification procedures in place to ensure the use of non-hazardous materials and conduct regular evaluations and inspections to ensure suppliers provide eco-conscious materials. In the manufacturing and shipping processes, we strictly manage hazardous substances to prevent product contamination. SK hynix continuously monitors trends and proactively responds to the latest regulations to achieve the environmental friendliness of our products.

Operation of the Integrated Green Product Management System

To rigorously manage compliance with international standards and customer requirements for substances in our products, we operate the Integrated Green Product Management System (GPMS). GPMS integrates existing systems to control hazardous substances, including product and raw material information, product certification, response to customer requests, and hazardous and regulatory substance control. When there are regulatory changes or requests from stakeholders, including customers, GPMS enables prompt response based on the data entered into the system. SK hynix utilizes GPMS for thorough pre-inspections and post-management starting from the raw material stage, making every effort to provide hazard-free products that have no impact on customers and the environment.

Integrated Green Product Management System Operation Process



Case

Hazardous Substance Free Semiconductors

In November 2022, SK hynix achieved the IECQ QC 080000 certification, an internationally recognized standard for hazardous process management systems, from SGS (Societe Generale de Surveillance), a Swiss certification body. This certification acknowledges SK hynix' s capabilities in managing hazardous substances and establishes it as the first comprehensive semiconductor company in Korea to receive such recognition for supplying environmentally friendly semiconductors.

IECQ QC 080000 is an international standard for hazardous substance process management established by the International Electrotechnical Commission (IEC). It mandates the reduction and elimination of hazardous substances that are harmful to the ecosystem, including heavy metals and environmental hormones, as well as their exclusion from products. The standard also requires compliance with various environmental regulations such as RoHS and WEEE (Waste Electrical and Electronic Equipment) and ensures environmental sustainability for customers, employees, and shareholders.

SK hynix pursued this certification as a proactive measure to mitigate potential business risks associated with hazardous substances and to comply with strengthening international regulations. In January 2022, the company formed a dedicated task force to establish a robust hazardous substance management process and engaged in related activities. In September of the same year, SK hynix underwent an audit and successfully obtained certification from SGS by meeting all the requirements. This certification applies to all semiconductor products manufactured at the Icheon and Cheongju campuses. Building upon its recognized ability to systematically manage harmful substances in products, as validated by the IECQ QC 080000 international standard certification, SK hynix remains committed to providing environmentally friendly semiconductors to customers and promoting environmental management practices throughout the semiconductor value chain.

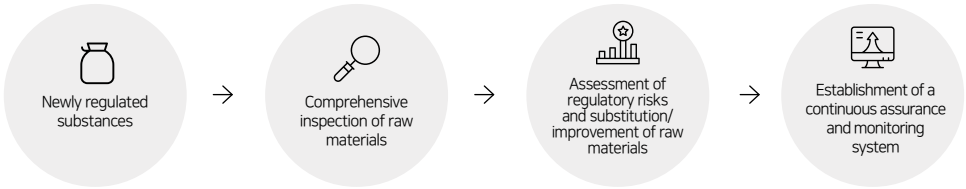
IECQ QC 080000 Certification Ceremony

IECQ QC 080000 Certificates for Icheon Campus (left) and Cheongju Campus (right).

Monitoring of New Hazardous Substances

SK hynix ensures that our product manufacturing strictly adheres to international standards and regulations by using only compliant substances. To achieve this, we continuously monitor the latest trends in environmental regulations for electrical and electronic products, such as RoHS and REACH, as well as the expansion of regulated substances. When it comes to newly regulated substances, we implement thorough verification procedures, including comprehensive inspections of raw materials and components, as well as securing alternative materials to prevent the introduction of new hazardous and regulated substances.

Verification and Assurance System for Newly Regulated Substances



Green Partnership

SK hynix has established the Green Partnership program to ensure the delivery of environmentally friendly products throughout our supply chain, including tier 1, tier 2, and tier 3 suppliers. We conduct educational programs for our suppliers, providing them with information on international regulations related to hazardous substances, while engaging in discussions about industry-wide response measures. Additionally, through regular evaluations of our suppliers, we identify areas for improvement and provide support for their enhancement activities. For suppliers lacking sufficient infrastructure for substance management, we offer an analytic system to help improve their own management capabilities.

Promotion of Green Partnership

Communication and information sharing with suppliers	• Regular eco-friendly seminars for suppliers • Discussion of international trends and industry response directions • Sharing and explanation of concrete industry response measures to regulations such as Halogen Free and REACH • Inspection and advisory support for suppliers
Regular evaluation of suppliers	• Objective evaluation of suppliers' response levels, including environmental information sharing and process management • Encouragement of voluntary eco-friendly management by suppliers
Customized supplier management	• Targeting small suppliers with limited information and economic resources • Providing training and an analytic system through separate visits or gatherings • Providing analysis support systems

Environmental Product Declaration (EPD) Certification

Environmental Product Declaration (EPD) certification measures the environmental impact of the entire production process, including carbon emissions and water footprints. It provides essential data in meeting the demands of customers, investors, and other external stakeholders regarding climate change. SK hynix pursues EPD certification for our major DRAM and NAND flash memory products on an annual basis. Starting with obtaining the industry's first EPD certification for 20nm 4Gb DDR3 in 2013, we have consistently expanded our portfolio of EPD certified products. In 2014, we obtained EPD for 20nm 64Gb NAND Flash, followed by 10nm 8Gb LPDDR3 in 2017. In 2019 and 2021, we acquired EPD certification for carbon footprint and water footprint for 10nm 8Gb LPDDR4 DRAM, 10nm 6Gb LPDDR4 DRAM, and 3D-V4 NAND Flash 256Gb TLC. In 2022, in addition to domestic EPD certification, we also obtained Carbon Trust's carbon footprint label for SSD products. SK hynix will continue to pursue EPD certification, striving to reduce the environmental impact of our product manufacturing.

Carbon Footprint Label from Carbon Trust

Strengthening Technological Competitiveness

SK hynix Academic Conference

Since 2013, SK hynix has been hosting the SK hynix Academic Conference annually to promote the technological development of our employees and provide a platform for sharing ideas. The conference aims to not only consolidate exceptional research findings into SK hynix's proprietary assets but also inspire and empower our employees to engage in advanced technological exploration and research. Over the past decade, the conference has played a pivotal role in enabling SK hynix to develop cutting-edge technologies and patents, positioning us as a global leader in the technology industry, as evidenced by the high acceptance rate of papers similar to that of papers submitted to major semiconductor conferences worldwide. Each year, the conference receives 800 to 1,000 paper submissions, with approximately 30-35% of them selected as outstanding papers and presented during the event. From the inaugural conference in 2013 to the 10th conference in 2022, we have received over 6,800 papers, out of which more than 2,600 have been selected.

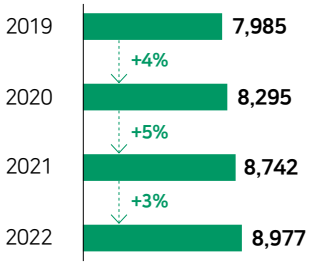
The submitted papers become intellectual property of SK hynix and serve as a foundation for the development of improved semiconductor technologies. Over the course of ten years, about 200 of the selected papers have led to patents, with 41% of them designated as strategic patents. These figures demonstrate the conference's ability to produce technically exceptional papers, especially when compared to the fact that strategic patents constitute only 10% of SK hynix's annual patent filings.

Moreover, the papers presented at the conference are actively utilized for research and development purposes, rather than being shelved after the event. They contain SK hynix' s proprietary data and research achievements, which are not publicly disclosed at external conferences due to security reasons, making them valuable resources for employee research and work. In fact, the submitted papers have accumulated approximately 78,763 views, with an average of around 11.5 views per paper, indicating their practical utility as references for product research and development.

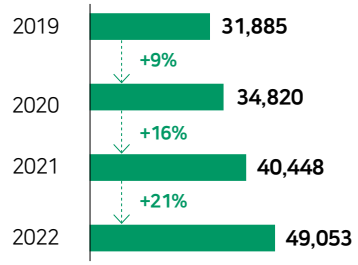
These achievements are made possible by the active participation of SK hynix employees. Over the past decade, 10,243 employees have contributed as authors, and 1,473 employees have served as reviewers for the conference. Considering that SK hynix had 40,153 employees as of the end of 2022, this demonstrates that innovation and continuous research and development are ingrained in SK hynix's corporate culture. The conference award recipients receive cash prizes and opportunities to attend international conferences as a means of recognition and encouragement. As epitomized by the slogan "We Do Technology, We Talk Technology," the SK hynix Academic Conference has become a platform for sharing technically sensitive information, fostering collective brainstorming, and facilitating retrospective analysis of technical matters among employees. Looking ahead, SK hynix will continue to host the academic conference while expanding diverse programs that stimulate intellectual growth for our employees.

Recipients of the Grand Prize at the SK hynix Academic Conference: TL Heo Hye-Eun (left) and CEO Kwak Noh-Jung (right)

R&D Workforce (Unit: persons)



R&D Investment (Unit: KRW 100 million)



Quality Design New Deal

SK hynix has established a new quality design policy to develop optimized DRAM products that exemplify world-class quality and features. Our goal is to ensure a reliable supply chain and deliver enhanced value to our customers. Dubbed the "Quality Design New Deal," this policy takes inspiration from the New Deal policy implemented during the Great Depression under U.S. President Franklin D. Roosevelt. Through this policy, SK hynix aims to establish a system that fosters continuous improvement in product integrity and competitiveness by transforming our products, technologies, foundations, and culture. The policy consists of Process New Deal, Platform New Deal, Digital New Deal, and Data New Deal.

① The Process New Deal focuses on streamlining work processes. Traditionally, DRAM design involved two stages: "design preparation" and "design." Through the Process New Deal, we will provide comprehensive descriptions of various aspects related to product characteristics during the design stage. We will also clearly define the start and end of the design preparation stage to establish a reliable process. This streamlined approach will optimize resource allocation, schedules, and ultimately achieve the highest level of design quality.

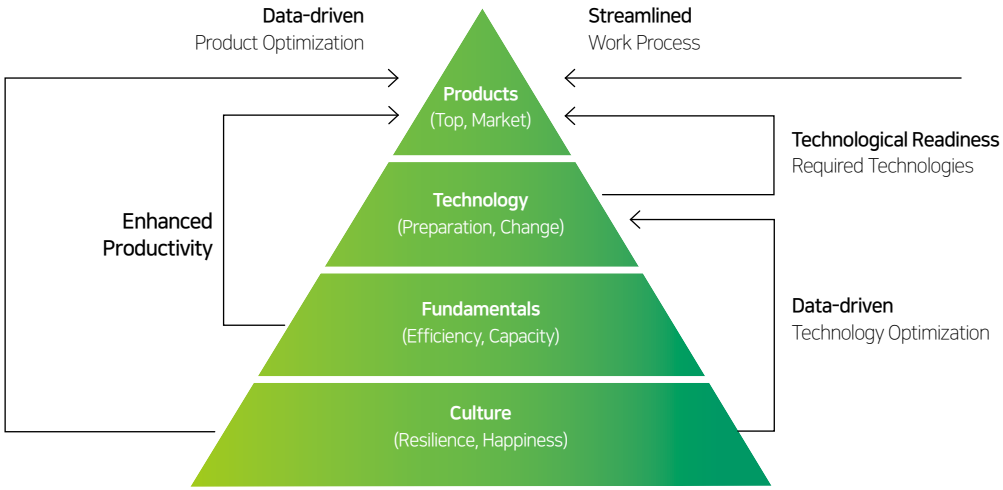
② The Platform New Deal centers on establishing a platform to enable timely product development. The goal is to overcome limitations such as decisions based solely on individual engineers' capacity and judgment when selecting crucial elemental technologies, insufficient advanced evaluation of required technologies, or the adoption of unvalidated technologies. Under the Platform New Deal, SK hynix will create a roadmap of essential elemental technologies, which will enable us to explore and validate future-ready technologies and develop competitive products to ensure the continuity of our performance and technological advancement.

③ The Digital New Deal aims to drive structural changes in design and increase development efficiency by establishing digital infrastructure. In the past, DRAM design prioritized increasing "Net Die" through circuit area minimization and relied on a customized design approach. However, with the diversification of product lines and the increasing capacity and performance of our products, the issue of reduced development efficiency has emerged, highlighting the need for design digitalization through standardization, specification, and automation. SK hynix plans to establish a digital infrastructure that revolutionizes the fundamentals of DRAM design and aims to drive productivity innovation by progressively expanding its application to diverse fields.

④ Lastly, the Data New Deal is aimed at facilitating the utilization of design data (circuit, layout, signal information, etc.) accumulated in the Digital Asset Management (DAM) system established in 2021. The goal is to progressively enhance the impact of data-driven design optimization and ultimately create an AI-based design environment for the future. To achieve this, SK hynix will devise new quality protocols and develop HoVIS, a DRAM design artificial intelligence system. This transition from experience-based work to data-based work will enable us to achieve both efficiency and optimization simultaneously.

Through the implementation of the Quality Design New Deal policy, SK hynix aims to develop optimized products with world-leading quality, integrity, and features. We are committed to continuously establishing industry-leading systems and standards.

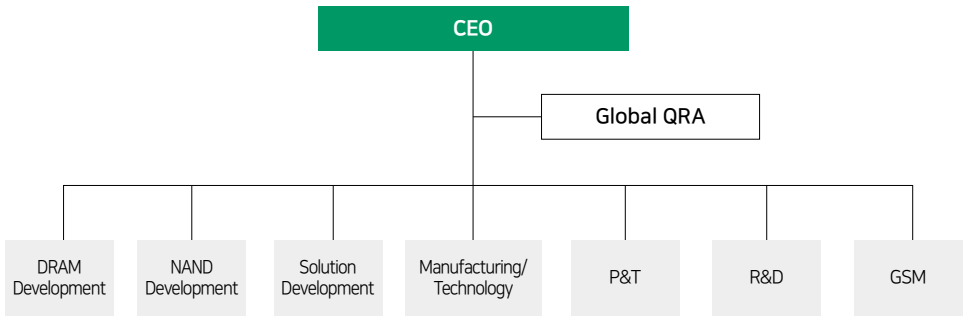
Quality Design New Deal



Category	Process New Deal	Platform New Deal	Digital New Deal	Data New Deal
Goal	Streamlined work	Technological readiness	Enhanced productivity	Optimized development
Key objective	Reliable design and development process	Established technology development system	Transition from analog to digital	Data-driven criteria optimization
Expected effects	Enhanced integrity (streamlined process)	Performance assurance (Ensuring technological continuity)	Productivity improvement (Achieving digitalization)	Quality optimization (Expansion of quality design)

Quality Innovation Council

At SK hynix, the Quality Innovation Council convenes monthly to ensure quality competitiveness and deliver customer value. The council's primary objective is to explore strategies for mitigating potential quality risks and enhancing product competitiveness. It brings together key executives, including the CEO, with the goal of achieving the "Best-in-Class (BIC) Customer Brand" built on customer trust. Each year, SK hynix sets "Event Zero Quality" as the quality target to bolster customer trust and implements various innovative ideas derived from the Quality Innovation Council to achieve the goal. As a result, the number of quality incidents decreased by approximately 60% in 2022 compared to 2017, significantly enhancing customer trust. Looking ahead to 2023, our goal for the Quality Innovation Council is to achieve "premium quality" by identifying the latent "unmet needs" of customers that may not be explicitly expressed but are nevertheless significant. We anticipate that achieving premium quality will elevate the company's brand awareness and create new opportunities based on quality. SK hynix remains committed to continuously enhancing our quality management practices to provide customers with the utmost value by strengthening our quality competitiveness.



Protection of Intellectual Property Rights

Intellectual Property Rights Team

SK hynix maintains a dedicated team of experts responsible for patents, overseeing their development, filing, registration, and dispute resolution. This team is fully committed to enhancing the company's competitiveness in intellectual property rights. In 2020, an SK hynix executive in charge of patents assumed the position of President of the Korea INtellectual Property Association (KINPA), raising the company's standing in the field of intellectual property rights. KINPA is actively engaged in advancing the competitiveness of Korean companies with intellectual property rights and facilitates the exchange of information on patent dispute resolutions. As the chair company of KINPA, SK hynix consistently strives to elevate not only the company's intellectual property rights management capabilities but also those of the nation to global standards.

Status of Patent Holdings (as of the registration basis) (Unit: cases)

Securing Intellectual Property Rights

SK hynix is dedicated to building a strong patent portfolio to swiftly secure future technologies, drive growth, and enhance our global competitiveness. We implement various patent training and development programs for our employees and encourage their invention activities and patent applications by providing various forms of compensation and rewards for patents developed through these programs. Additionally, we actively acquire outstanding patents from external sources and collaborate with universities to secure innovative patents, thereby expanding our patent portfolio. As of the end of 2022, we hold over 18,446 registered patents worldwide. Our focus is on developing outstanding patents with high technological applicability and patents related to next-generation technologies, allowing us to proactively secure patents for the future.

Response to Intellectual Property Disputes

SK hynix is also actively addressing various intellectual property rights disputes. We take proactive measures to respond to global patent infringement lawsuits and minimize associated risks. In cases where there is a high likelihood of resource leakage and related losses can be reliably estimated, we consider such amounts as liabilities and manage them accordingly. Additionally, we engage in multiple patent licensing agreements pertaining to the production and sale of our products.

Synchronize

sustainability efforts with our partners

2022 Achievements

100%

New suppliers signed SK hynix Supplier Code of Conduct

53%

High-risk/critical suppliers received on-site ESG assessments

KRW 698.6 billion

Cumulative investment in technological cooperation with suppliers

Material issues | Human Rights, Sourcing Efficiency/Management

Responsible Engagement

With the increasing social awareness of environmental and human rights practices in business supply chains and the strengthening of ESG regulations worldwide, the importance of establishing and managing responsible supply chains has grown significantly. To align with this trend, SK hynix, as a member of the Responsible Business Alliance (RBA), has established its Supplier Code of Conduct in accordance with RBA requirements and implemented a supplier ESG evaluation process to proactively manage ESG risks within the supply chain.

Supply Chain ESG Management

Supply Chain ESG Management Policy

Recognizing that suppliers' ESG risks are inherent business risks, SK hynix formulated the SK hynix Supply Chain ESG Management Policy and Guidelines in May 2023 to comply with international standards and norms, aiming to build an environmentally and socially sustainable and responsible supply chain. Under this policy, we strive to enhance the ESG management level of suppliers across all areas, including labor rights, environment, safety and health, and ethics, strengthening the sustainability of the ICT ecosystem and supply chain.

SK hynix actively shares and promotes joint compliance with this policy among our suppliers. We conduct a thorough pre-evaluation of essential requirements starting from the registration process for new suppliers. In the event that a supplier is found to be in violation of SK hynix's Supply Chain ESG Management Policy or demonstrates a lack of willingness to address high-risk risks within the specified timeframe, SK hynix may notify the supplier of trade restrictions or other appropriate sanctions.

SK hynix Supply Chain ESG Management Policy and Guidelines

Supply Chain ESG Assessment

Building upon the Supply Chain ESG Management Policy, SK hynix has developed supply chain ESG evaluation indicators by comprehensively reviewing the RBA's Code of Conduct and internationally required supply chain management criteria. These indicators are utilized to assess suppliers' ESG risks, facilitating the timely identification, mitigation, and improvement of suppliers' ESG risks.

Our supply chain evaluation indicators cover five areas: Human Rights and Labor, Safety and Health, Environment, Ethics, and Management Systems. We utilize these indicators to enhance the integrity of the supply chain through self-assessment, on-site assessment, risk identification, and improvement measures. Additionally, we provide annual ESG consulting programs through professional agencies for suppliers requiring intensive management, including critical suppliers and key suppliers. To enhance suppliers' ESG management capabilities, we also organize training sessions and seminars with ESG experts from home and abroad.

Supply Chain ESG Evaluation Assessment

Policy Application
- Formulation/revision of the Code of Conduct
- Provision of the Code of Conduct
- Code of Conduct compliance commitment (pledge letter, standard contract)

Information Collection
- Collection of supplier information
- Selection of self-assessment targets
- Selection of critical suppliers

Self-Assessment
- Online self-assessment by area
- Selection of high-risk suppliers

On-site Assessment
- In-person assessment (based on self-assessment results)
- Identification of improvement tasks
- Interviews

Utilization of Results
- Monitoring of improvement tasks
- Incentives for suppliers with best practices
- Incorporation into procurement policy

Spotlight

2022 Supply Chain On-site ESG Assessment Results

In 2021, SK hynix conducted an online ESG self-assessment of its supply chain and has been implementing on-site ESG assessments since 2022 for high-risk suppliers and critical suppliers selected based on ESG risk and business impact considerations (The focus of the 2022 assessments was on high-risk suppliers, while the 2023 assessments prioritize key suppliers). The on-site assessments were carried out in collaboration between SK hynix experts and a professional consulting firm. Prior to the on-site assessments, we organized an online explanatory session to share the results of the self-assessment, the on-site assessment plans, and provided introductory training on ESG to suppliers. The majority of these suppliers were small and medium-sized enterprises, leading to the identification of policy formulation and improvement tasks primarily related to human rights, labor, ethics, and other evaluation areas. All target suppliers have developed improvement plans for the identified tasks, and SK hynix regularly monitors their progress.

Examples of Key Improvement Tasks and Progress by Area (As of December 2022)

Areas	Examples of Key Improvement Tasks	Improvement Rate
Human Rights and Labor	• Establishment of specific policies to address sexual harassment, bullying, human rights, and labor grievances. • Establishment of a principle prohibiting child and adolescent labor and implementation of protective measures in the workplace	51%
Health and Safety	• Establishment of specific procedures for managing occupational accidents (reporting, cause analysis, and corrective actions). • Establishment of specific policies related to workplace safety and health.	49%
Environment	• Demand for activities to reduce pollutant emissions (classification criteria, quantitative targets, emissions management, improvement measures). • Establishment of specific policies for waste management, air quality, water resources, energy consumption, and greenhouse gas emissions.	30%
Ethics	• Establishment of policies for proper management of stakeholders' personal information, including customers and employees. • Establishment of policies for anti-corruption and conflict of interest prevention (reporting and management procedures, whistleblower protection, regular inspections, etc.).	33%
Management System	• Recommendation for proactive implementation through the establishment of annual Key Performance Indicators (KPIs) and implementation plans for each ESG area. • Periodic performance measurement and reporting to management on the annual KPIs for each ESG area.	2%

* No suppliers were identified with improvement tasks related to forced labor.

Case of Addressing Labor Contract Violations with Foreign Workers

SK hynix ensures legal labor contracts are in place when entering into employment agreements. Specifically for foreign workers, contracts must be drafted in their native language. During the on-site assessment conducted in May 2022, it was discovered that one supplier was employing foreign workers without proper labor contracts. In response, SK hynix promptly requested the termination of their employment and provided training on legal matters pertaining to labor contracts.

Case of Supporting Supplier's Voluntary Improvements

SK hynix compiled the improvement tasks identified during the 2022 on-site assessments and conducted an online explanatory session for executives and employees of its suppliers. During the session, SK hynix introduced the key contents and requirements of the company's Supplier Code of Conduct, along with notable examples of improvement tasks and measures identified through the on-site assessments. With the presence of external experts and purchasing managers, the company reiterated its commitment to continued support and collaboration for mutual growth.

ECO Alliance, an Environmental Coalition of Semiconductor Companies

SK hynix operates the ECO Alliance, a coalition focused on proactively addressing environmental issues and enhancing environmental competitiveness among semiconductor companies in Korea. The ECO Alliance has established three common goals: greenhouse gas reduction, the use of renewable electricity and energy conservation, and waste reduction. To achieve these objectives, the ECO Alliance facilitates various information-sharing gatherings among its 46 member companies (as of June 2023) and provides financial support through ESG funds and participation in national support programs, such as the Green Premium Renewable Electricity Installation Support Program organized by the Korea Energy Agency.

In 2022, four members, namely Comico, MiCo Ceramics, Mecaro, and Hana Micron, participated in the Green Premium Renewable Electricity Installation Support Program and received government support to expand their renewable electricity power generation facilities and generate renewable electricity at their respective locations. Additionally, the ECO Alliance operates an online communication platform called "Eco Place" where member companies can share their environmental goals and access important environmental news. The ECO Alliance also organizes executive seminars, interest groups, newsletters, and various educational programs with an environmental focus.

ECO Alliance Declaration on the Use of Renewable Electricity

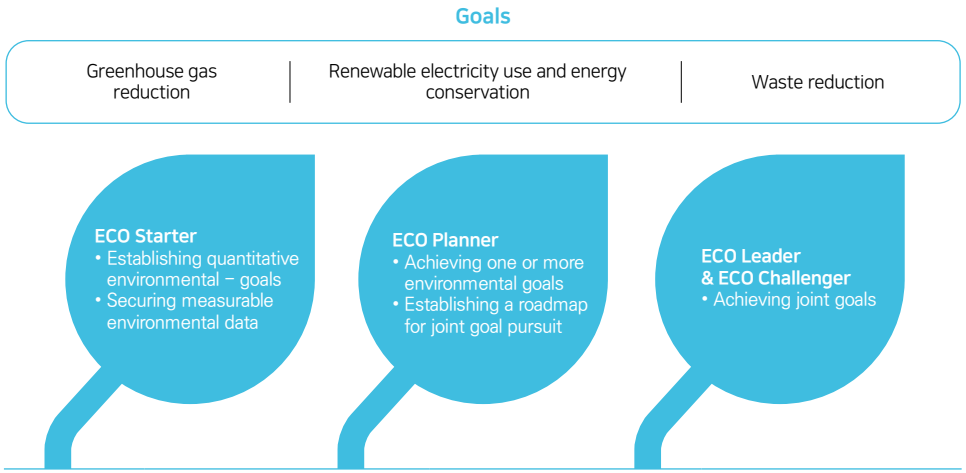
The ECO Alliance, an environmental union of semiconductor companies led by SK hynix and comprising leading semiconductor technology partner/member companies, aims to actively respond to the global movement towards carbon neutrality and renewable electricity use building upon a robust network among its members. In line with this commitment, the 17 member companies of the ECO Alliance pledge to develop "Renewable Electricity Generation Plans" starting in 2023 and progressively increase their utilization of renewable electricity.

November 11, 2022

ECO ALLIANCE

Furthermore, in November 2022, 17 member companies of the ECO Alliance, including SK hynix, made a joint declaration as the first Korean initiative to contribute to carbon neutrality through the utilization of renewable electricity. The joint declaration on the use of renewable electricity by the ECO Alliance is as follows:

ECO Alliance Goals and Plans



Key Objectives	2022	2023	2024
Customized strategies for members	• Development of ECO strategies by stages • Customized segmentation for ECO Starter members	• Proportion of ECO Starters less than 50%	• Achieving a proportion of ECO Leaders/Challengers greater than 50%
Pursuit of joint goals	• Declaration of renewable electricity use by 10 companies • Participation in CDP by 15 companies	• Establishing joint goals for all members (Align, mandatory selection of one or more goals)	• Securing roadmaps for net zero (top goal) by more than 10 companies

Responsible Minerals Procurement

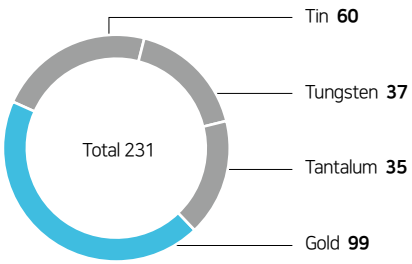
Responsible Minerals Management

Semiconductor manufacturing involves the use of various minerals as raw materials. SK hynix responsibly procures minerals necessary for semiconductor production, using minerals produced by smelters and refiners certified under the Responsible Minerals Assurance Process (RMAP) for 3TG minerals, namely Tantalum, Tin, Tungsten, and Gold. SK hynix obtains a "Responsible Minerals Use Compliance Pledge" from raw material suppliers, ensuring that minerals from conflict-affected and high-risk areas are not purchased. We regularly monitor information on our minerals supply chain and utilize our Minerals Management System established in 2021 to conduct the pledge process and status surveys for efficient management of supplier minerals usage. If a supplier provides false information or fails to take corrective measures for identified risks, SK hynix considers it non-compliant with the pledge and suspends transactions. We also provide consulting and educational programs to improve suppliers' awareness and pledge compliance regarding responsible minerals. SK hynix will continue to monitor the minerals supply chain to ensure responsible raw material usage, revise relevant policies, improve and operate supplier support programs, and expand the scope of responsible minerals management to contribute to resolving human rights and environmental issues in conflict-affected and high-risk areas.

SK hynix Responsible Minerals Policy

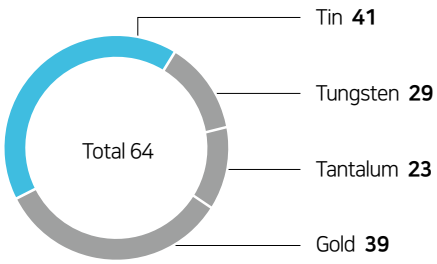
Smelters and Refiners

(Unit: number)



Suppliers Using Conflict Minerals

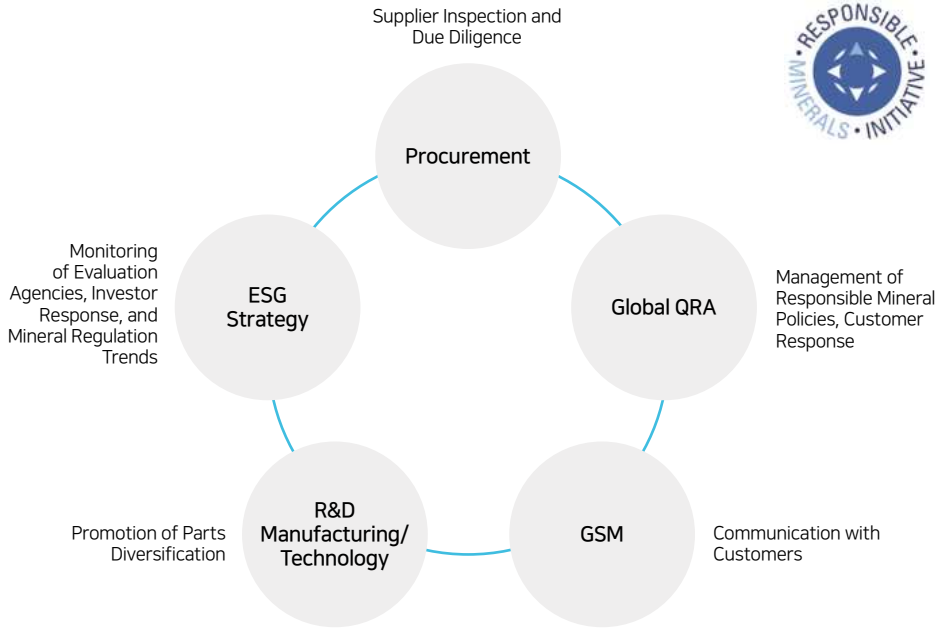
(Unit: number)



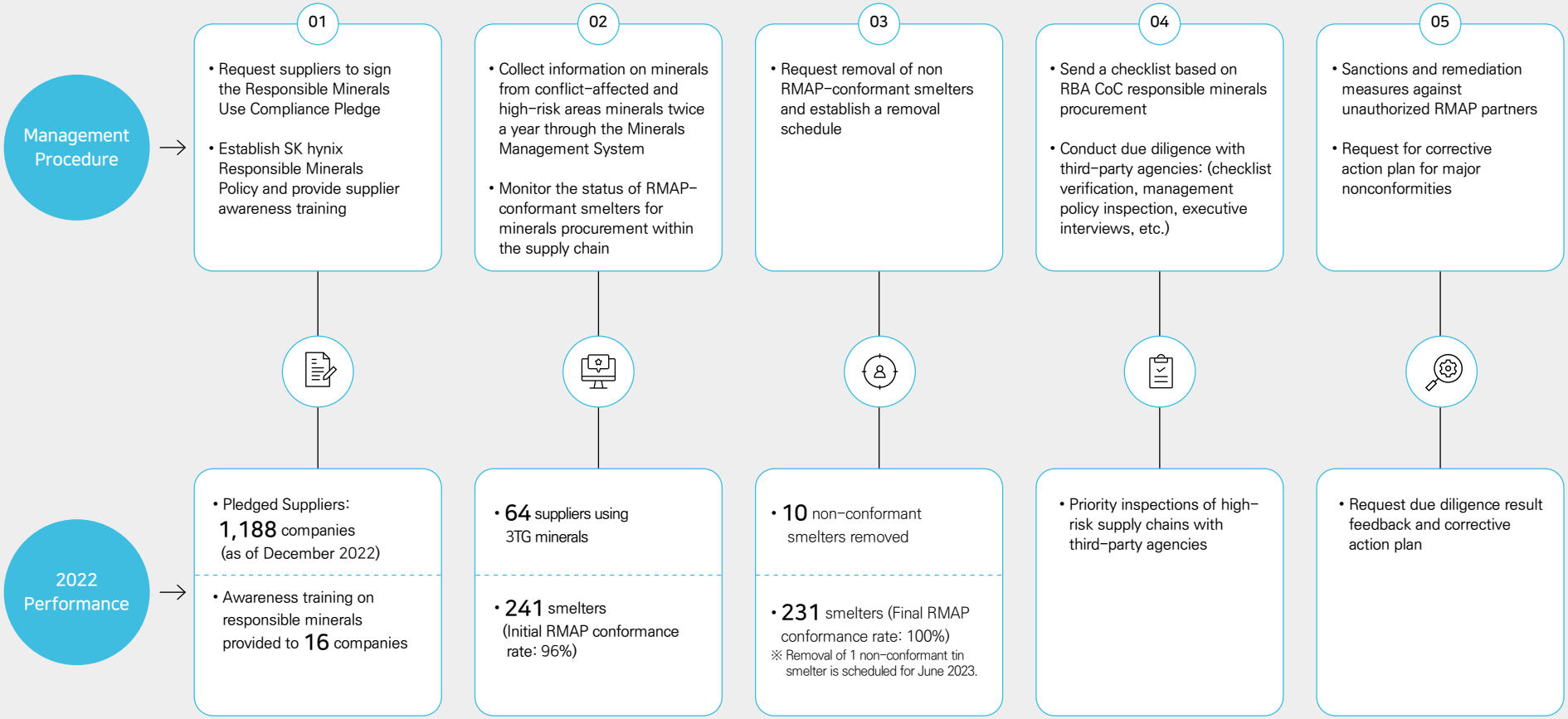
Minerals Regulation Response Council

To systematically manage responsible minerals practices, SK hynix has established the Minerals Regulation Response Council, consisting of representatives from the Procurement, ESG Strategy, Global QRA (Global Quality & Reliability Assurance), Revolutionary Technology Center, Manufacturing/Technology, and GSM departments. Through this council, we identify domestic and international trends in minerals regulation and incorporate them into the company's responsible minerals policy and management procedures. Based on this, we regularly assess the status of raw minerals sourcing in our supply chain and report the findings to the ESG Management Committee.

Minerals Regulation Response Council



SK hynix's Responsible Minerals Management Procedure



Shared Growth

SK hynix continuously shares and fosters consensus on our core values of ethical management, environment, safety, and corporate security to create an environment for mutual growth with our suppliers, while actively supporting suppliers in need. SK hynix is committed to enhancing our technological competitiveness through cooperation with our suppliers, aiming to create a sustainable semiconductor ecosystem that maximizes both economic and social value.

Creating Social Value in the Supply Chain

SV Measurement Consulting for Suppliers

Since 2022, SK hynix has implemented social value (SV) measurement consulting to establish strong partnerships, focusing not only on economic value but also on social value based on our DBL management philosophy, recognizing suppliers as our partners in sustainable growth. SV measurement consulting is an initiative based on SK hynix's SV management system, which measures the social performance achieved by target suppliers over the past three years and derives/proposes improvement plans in environmental and social areas.

From 2022 to May 2023, SV measurement consulting was conducted for 13 suppliers in the areas of equipment, raw materials, components, and infrastructure, raising awareness of social value among the management and employees of the suppliers and empowering them to autonomously manage social value and ESG-related data. Building upon these results, SK hynix plans to further enhance the consulting program, taking into account the unique characteristics of each business, and continuously expand the scope of support.

Suppliers Participating in SV Measurement Consulting from 2022 to May 2023

Materials	Components	Equipment	Infrastructure
Simmtech	Comico	KC Tech	Wonik Holdings
Dongwoo Fine-Chem	MiCo Ceramics	TechWing	PNS Logics
Daeduck Electronics		Eugene Technology	Hana Micron
Wonik Materials			Veolia

SV Measurement Results for Suppliers in 2022

Category	SV Creation
Indirect contribution to economy	KRW 1.5807 trillion
Environmental performance	KRW -182.7 billion
Social performance	KRW 71.8 billion
Total	KRW 1.4698 trillion

Interview Eugene Technology

"Due to the escalating effects of global climate change, there is a growing imperative for carbon neutrality within the semiconductor industry. Eugene Technology has been steadfastly expanding its ESG initiatives, which include the development of a comprehensive long-term roadmap to enhance the efficiency and eco-friendliness of its equipment. In line with these endeavors, Eugene Technology had the privilege of engaging in SK hynix's SV measurement consulting for suppliers. This collaborative consulting provided a valuable opportunity to reaffirm the economic and social impacts of Eugene Technology's ESG efforts. It was particularly helpful in quantifying and identifying areas for improvement in both economic and social performance, as well as establishing future plans. We anticipate that the continual accumulation of social performance data will serve as a constructive resource in effectively communicating Eugene Technology's social contributions to our stakeholders."

Hwang Yoo-Hee, Manager,
Eugene Technology

Shared Growth with Suppliers

Technical Support for Suppliers

SK hynix operates technology support programs to help suppliers secure sustainable technological competitiveness, which includes the protection of their core technologies and support for technology development. Each year, we discover promising small and medium-sized enterprises with technological potential and designate them as "Innovative Tech Companies" to support their sustainable growth through joint technology development opportunities with SK hynix, along with financial support. Additionally, we offer a range of support programs, including pattern wafer support, a performance evaluation project, sharing analytic/measurement equipment, and technology development funds to enhance our suppliers' technological capabilities.

Financial Support for Suppliers

SK hynix operates financial support programs to ensure the stable business activities of our suppliers. The Shared Growth Fund is provided to tier 1 to 3 suppliers in need of funds for facility investment or working capital. Furthermore, we have established the ESG Fund to assist with investments related to environmental and facility improvements as part of our ESG management initiatives. In 2022, through SK hynix's financial support programs, 77 suppliers received a total of KRW 151.7 billion in support to improve their business environment. Moreover, in collaboration with Shinhan Bank, we developed a program in 2022 to reduce loan interest rates by up to 2% for suppliers with excellent ESG practices. This program aims to promote the expansion of ESG management practices among suppliers. SK hynix remains committed to continuously seeking solutions and addressing the challenges faced by our suppliers to strengthen the semiconductor ecosystem.

Case

6th Round of Innovative Tech Companies

Since 2017, SK hynix has been operating the Innovative Tech Companies program, through which we discover small and medium-sized suppliers with technological capabilities but lacking growth infrastructure. We provide them with technological and management assistance. Suppliers selected as Innovative Tech Companies are given the opportunity to jointly develop technology and products with SK hynix. They also receive interest-free loans for development funds and consulting aimed at enhancing management efficiency during the development period. Digital Imaging Technology (DIT), selected for the 6th round of Innovative Tech Companies in 2022, is an innovative company specializing in materials, components, and equipment. They have the capabilities to apply technologies to new processes and develop core equipment technologies. Over the next two years, DIT will collaborate with SK hynix in technology development and receive comprehensive management support. Through this technology development collaboration with DIT, specializing in display equipment, SK hynix anticipates creating social value by promoting shared growth in a broader area, such as providing new business opportunities to Korean companies in industries beyond semiconductors. From 2017 to 2022, SK hynix supported the technological development infrastructure of a total of 14 companies through the Innovative Tech Companies program. This program has significantly contributed to the growth of the Korean semiconductor industry, generating social value of KRW 85.1 billion in 2022 alone. SK hynix will continue to make every effort to create a virtuous cycle that enables sustainable achievements with local suppliers.

Signing Ceremony for 6th Round of Innovative Tech Companies

Support for Suppliers' Employee Skills Enhancement

SK hynix is committed to helping suppliers develop talent and enhance their competitiveness by sharing our accumulated semiconductor knowledge and technological know-how. We provide a wide range of educational programs, such as the Semiconductor Academy and executive seminars, for tier 1 to 3 suppliers. Additionally, we operate the knowledge-sharing platform, DBL Square, where supplier employees can access online educational courses free of charge anytime and anywhere. Particularly noteworthy is the "Introduction to Semiconductor for New Employees of Suppliers" course launched in 2022, focusing on semiconductor technology, quality, ESG, and industry trends. Over 370 new employees from members of SK hynix's Shared Growth Council and Innovative Tech Companies have completed this course. SK hynix plans to continue developing and operating diverse educational programs to foster collaborative growth with supplier employees.

Case

Youth Hy-Five: Connecting Outstanding Suppliers and Talent

SK hynix operates the Youth Hy-Five program, which serves as a bridge between outstanding suppliers and job seekers. With this program initiated in 2018 to assist suppliers facing challenges in securing exceptional talent, SK hynix engineers provide semiconductor on-the-job training to promising young individuals. It also supports the matching process with outstanding suppliers to facilitate recruitment. Through the Youth Hy-Five program, as of 2022, a total of 1,221 young individuals have successfully completed job training, resulting in 525 employments across 79 different suppliers. SK hynix will continue to identify the needs of outstanding suppliers and young talent while developing programs that satisfy both parties.

Center for Working Environment Health

SK hynix has established and operates the Center for Working Environment Health, a private occupational health center, to contribute to the health management and prevention of occupational diseases and safety accidents among suppliers and small businesses in the local community. Since its establishment in Cheongju City in 2019, SK hynix has implemented various safety and health projects such as "workplace doctor," "support for vulnerable workers' safety and health," and "strengthening occupational health capabilities." In December 2022, SK hynix opened the Icheon Branch of the Center for Working Environment Health. The Icheon Branch is planning to provide programs such as skills training for health managers and SHE consulting support for suppliers from a compliance perspective, while promoting the health of employees at vulnerable suppliers and preventing occupational diseases among supplier employees stationed at SK hynix facilities. Additionally, the branch is preparing other programs to manage occupational diseases, including prevention of cardiovascular diseases, musculoskeletal disorders, and job-related stress. With the establishment of the Icheon Branch of the Center for Working Environment Health, SK hynix aims to expand its coverage to the Seoul Metropolitan area. This is to fulfill our social responsibility regarding occupational diseases of semiconductor workers, promote shared growth with suppliers by enhancing their health management competitiveness, and contribute to creating a healthy work environment in the local community.

일환경건강센터 이천사무소 개소식

Motivate

our people toward excellence

2022 Achievements

2.1%
Representation of women in executive positions

4.2%
Representation of women in team leader positions

112 hours
Annual self-development education per employee

Material issue | Technology & Innovation

Inclusive Workplace

SK hynix firmly believes that creating a culture and environment where every employee can fully realize their potential is essential for the sustainable growth of not only the employees but also the company. SK hynix strives to improve the cultural and institutional environment to foster the growth of our employees through open communication, free from discrimination based on gender, race, nationality, religion, and other factors.

Diversity and Inclusion

Efforts to Expand Female Leadership

SK hynix is committed to establishing a foundation for the growth of women leaders through the recruitment and development of female talent. Despite the challenge of securing female semiconductor talent due to gender imbalances in engineering majors, SK hynix continuously explores avenues to attract exceptional female talent. We also encourage female employees to participate in various SK Group-led women's leadership development programs. Through these programs, female employees poised for team leadership roles are provided with opportunities for capacity-building, including strategic thinking, problem-solving skills, and leadership coaching. They also have the chance to learn from female executives who have already excelled as leaders within the group.

the Pregnancy Congratulations Package

Family-Friendly Policies for Work-Life Balance

Maintaining healthy relationships not only within the company but also in the family is closely related to the happiness of our employees, which, in turn, contributes to improved workplace efficiency. SK hynix implements various family-friendly policies and programs to enable our employees to achieve work-life balance with equal emphasis on both areas. Firstly, our All-in-One Care policy provides comprehensive support for employees from pregnancy preparation to childbirth. To assist employees struggling with infertility, we introduced paid infertility leave in 2022, which covers unlimited artificial insemination procedures. We have also extended the criteria for shortened working hours to cover the entire pregnancy period for pregnant employees. Additionally, we have established "Dodamibang," dedicated resting areas for pregnant and postpartum employees, at 39 locations across our Icheon, Cheongju, and Bundang campuses.

Moreover, we have expanded the parental leave period, allowing employees facing challenges in balancing work and childcare to be present during critical stages of child upbringing. In addition to the legally mandated one-year parental leave, we have introduced an additional "special parental leave," extending the maximum parental leave period to two years. We have also implemented the "school admission childcare leave" policy, enabling employees to take up to 90 days of leave specifically around the time when their child enters elementary school, separate from regular parental leave.

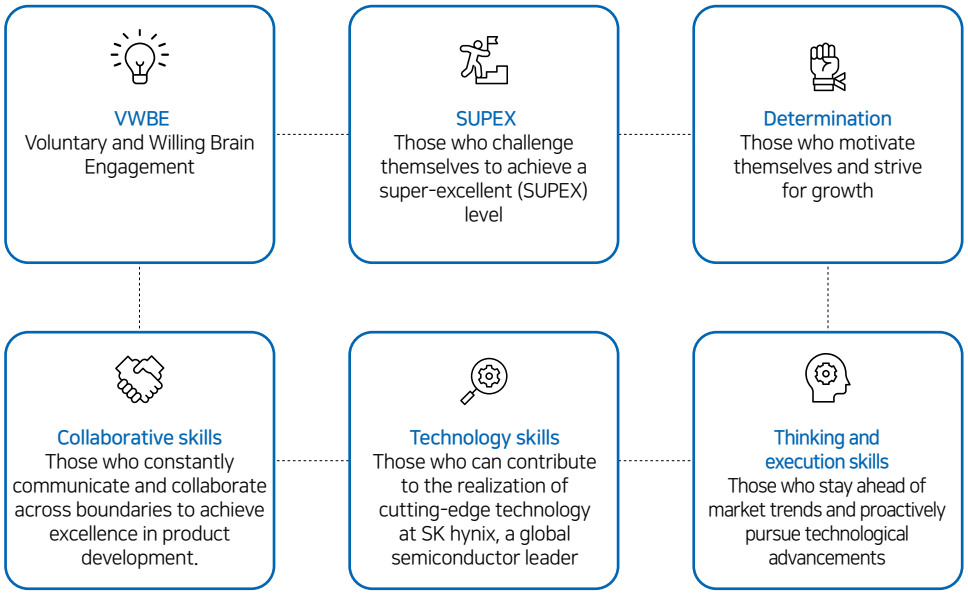
These policies are available to eligible employees. SK hynix will continue to expand family-friendly programs to ensure the well-being and happiness of both employees and their families.

Talent Acquisition

Principles of Talent Acquisition

SK hynix believes that recruiting talented individuals who are ambitious, passionate, collaborative, and capable of growing together through effective communication is the first step toward becoming a leading tech company. We carefully select individuals with the competencies and expertise required for each job, and we ensure that no discrimination is made against applicants based on gender, disabilities, or any other unjustifiable reasons during the selection process.

Desired Talent for SK hynix



Securing Future Talent

SK hynix actively cultivates future talent through partnerships with renowned universities at home and abroad. Beginning with the establishment of the Department of Semiconductor Engineering at Korea University in 2020, we have expanded our collaborations by introducing the Department of Semiconductor Engineering at Hanyang University and the Department of System Semiconductor Engineering at Sogang University in 2022. Through these initiatives, we identify and nurture exceptional individuals, including approximately 100 undergraduate students and 60 graduate students annually, to become experts in the field of semiconductors. We also offer an academic credit exchange internship program that provides students studying semiconductor-related disciplines at our partner universities with valuable opportunities to gain practical experience and explore various career paths, thus facilitating their growth as essential professionals in cutting-edge technology.

Recruiting Global Top Talent

In line with our medium- to long-term business and technological development strategies, SK hynix has developed a comprehensive recruitment roadmap to attract exceptional talent. Based on this roadmap, we actively expand and attract a diverse pool of outstanding individuals with advanced skills and capabilities, both domestically and internationally, thereby ensuring our access to future technologies. As part of this endeavor, we organize the annual SK Global Forum in Silicon Valley every June, where key executives from SK hynix engage directly with global talent in the Americas region. Through these interactions, we foster continuous exchange of ideas and insights on semiconductor technology evolution, aiming to translate these exchanges into successful recruitment of exceptional individuals.

Tech Seminar

To attract exceptional doctoral researchers within Korea, SK hynix annually organizes and hosts the Tech Seminar at major university campuses. This seminar invites doctoral researchers specializing in future technology fields, with the goal of acquiring world-class expertise in semiconductor development. Our executives in core technological areas participate in the seminar, sharing SK hynix's vision for future growth and discussing technological challenges with the participants. SK hynix will make consistent efforts to further enhance collaboration between academia and the industry and attract exceptional doctoral talent.

Empowering People

Talent Development

SK hynix strives to be a growth-driven company where employees can take pride. We support their development into world-class semiconductor talent, fostering a virtuous cycle that strengthens the company's technological competitiveness through employee growth. We provide diverse educational programs to empower employees to proactively advance their skills while cultivating a culture of continuous learning.

SKHU (SK hynix University)

SK hynix operates SKHU, an in-house educational platform with a university system, to enhance employees' semiconductor-related expertise. SKHU comprises 12 colleges and offers 240 majors, including DRAM, NAND, Solution, Manufacturing/Technology, P&T, and GSM. Each major has dedicated professors, expert instructors, and internal lecturers who contribute to course development and teaching. All SK hynix employees are required to participate in SKHU for eight years from their date of employment, systematically learning essential theories, practical skills, and core technologies relevant to their job responsibilities. Subsequently, employees continue to enhance their competencies through self-directed learning. To ensure high-quality courses, SKHU conducts satisfaction surveys (with an average satisfaction rating of 4.63 out of 5 in 2022), using the feedback to improve existing courses and develop new ones. In order to ensure more systematic management, we incorporate employee skills development goals into our ESG strategy framework "PRISM." The annual goals, achievements, and implementation plans are reported to the ESG Management Committee and the Sustainable Management Committee under the Board of Directors. In 2022, SKHU transformed its training system from department-focused to job-focused, expanded the role of professors, and improved infrastructure to facilitate on-demand learning. SK hynix plans to continue refining SKHU as an exceptional platform for nurturing top-notch semiconductor talent.

Average Annual Training Hours per Employee (Unit: Hours per person)

* Based on technical and administrative positions in Korea

University Degree Programs

To secure future technologies and fulfill other objectives, SK hynix offers degree programs that enable employees to dedicate time to academic studies and pursue master's and doctoral degrees. The scope of these programs is progressively expanding, with over 200 employees enrolling in university degree programs in 2022, fully committed to their academic pursuits.

ADP (Academic Degree Program)	Master's Programs in Target Departments	Online Overseas Master's Programs
• Occupational semiconductor programs • MBA programs	• V-KEPSI program • DSS program at Yonsei University • Department of Semiconductor Convergence Engineering at Korea University (Sejong)	• Semiconductor skills program at Georgia • Institute of Technology • Data science programs • MBA programs

i-TAP (innovative Technology Advancement Program)

Since 2016, SK hynix has been operating i-TAP, a program that facilitates collaboration with external experts to solve real-life challenges. When field teams encounter a challenge, they can initiate an i-TAP project by inviting experts from universities or equipment/material companies in Korea to provide consultation and guidance. Once the project is completed, field teams are encouraged to internalize the outcomes. In 2022, a total of 35 projects were successfully completed as the program's scope was expanded from addressing current challenges to exploring future technology research.

Fast Track

To cultivate citizen data scientists (CDS), SK hynix collaborates with universities and specialized educational institutions through the Fast Track program, which offers advanced training in data analytics. Since 2018, employees participating in this program have undergone theoretical and practical training in data analytics, followed by a 12-week period of working on practical projects. In 2022, the Fast Track program had significant achievements, including Yonsei University's specialized process program and Seoul National University's Machine Learning (ML) Engineer program conducted in collaboration with SK Group's learning platform, mySUNI. These initiatives empowered 99 employees to enhance their data utilization capabilities, leading to the proliferation of a data-driven work culture.

Global Talent Development Program

Given SK hynix's strong presence in the global market, employees not only require job expertise but also need to develop global capabilities. SK hynix offers various programs to support employees in becoming global talent.

GLP
Global Leadership Program

The Global Leadership Program (GLP) is a mini-MBA program that helps employees grow into global leaders by acquiring practical management knowledge from top experts from home and abroad. GLP participants initially learn the fundamentals of the MBA curriculum from professors at business schools in Korea. They then have the opportunity to attend lectures from renowned overseas universities, such as Stanford University, and engage in activities such as visiting leading global companies and participating in projects to propose innovative ideas that enhance global leadership skills.

GBEP
Global Business English Program

The Global Business English Program (GBEP) is an English education program designed for employees who require proficient English language skills to effectively communicate with overseas subsidiaries, customers, and other stakeholders. The program provides participants with several weeks of intensive English learning, enabling them to focus exclusively on language improvement beyond their regular work responsibilities.

GXP
Global eXperience Program

Under the GXP program, employees can choose to work in a subsidiary or supplier overseas and participate in a self-designed 5-week work program to enhance their global competitiveness. During this time, they handle both domestic and international tasks, maximizing collaboration efficiency and gaining firsthand experience of the working methods and environments of global companies.

GIP
Global Insight Program

GIP is a short-term training program that empowers employees to deepen their technical and work skills through collaboration with research institutions within prestigious universities overseas. Participants in this program have the opportunity to enhance their technical capabilities and professional expertise by working with global research institutions for up to one year.

Employee Happiness

Based on the belief that increasing the overall happiness of the organization leads to greater individual happiness for employees, SK hynix is committed to creating a company and organization where employees can experience happiness. To achieve this, SK hynix measures employees' happiness levels and expands systems and programs that promote a culture of happiness based on the results.

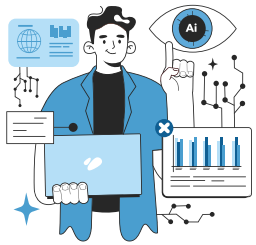
New CoC - Code of Conduct Developed by Employees

In February 2023, SK hynix introduced the New Code of Conduct (New CoC), which outlines a fresh set of behaviors for employees. Guided by the core value of "Hyper-technology for Greater Happiness," the New CoC establishes a systematic approach to how SK hynix operates across six behavioral categories. The development process involved active participation not only from management but also from employees through interviews, workshops, and surveys, receiving significant support and empathy. Recognizing that employees are the driving force behind creating happiness at both the organizational and individual levels, SK hynix will continue its unwavering efforts to foster a corporate culture where everyone can grow together happily by actively listening to employees' voices.

SK hynix's New Way of Working

New CoC

Hyper-technology for greater happiness!



Bar Raising
Aim higher for Best-In-Class

Innovation
Stack more, scale down, store more

Data Driven
Speak from data, solve with data

Customer Focus
Move one step ahead of customers

One Team
Connect and collaborate as one team

Perfection
Detail makes the difference

Fostering a Communication Culture of Participation and Empathy

At SK hynix, we recognize the importance of active employee participation and transparent communication in creating a happy corporate culture. In 2022, we transformed our existing anonymous communication community for employees into a new platform called "Comm ON." This platform serves as a hub for sharing important company information, enabling responsible personnel to respond to employee suggestions, and facilitating discussions on a wide range of topics.

The Comm ON platform operates anonymously, ensuring that employees can freely engage in communication activities. Suggestions that receive a high number of likes from employees have the potential to drive actual improvements in our company system. Additionally, to assess individual and organizational happiness levels and gather ideas for change, we conduct the Culture Survey and Switch ON Survey annually and quarterly, respectively. The Culture Survey and Switch ON Survey serve as a valuable tool for monitoring employee happiness and identifying areas for improvement within the organization. Furthermore, SK hynix regularly publishes the Happiness Sketch, which serves as the primary channel for employees to stay informed about system improvements and upcoming programs designed to enhance their happiness.

Spotlight

Results of the 2022 Culture Survey

SK hynix administers the Culture Survey to create a robust corporate culture together with employees. The survey assesses employee happiness and corporate cultural characteristics, providing insights for improving the corporate culture. It is conducted annually for all employees as part of the company's commitment to practicing happiness management grounded in on SKMS.

The employee happiness index derived from the 2022 Culture Survey was 74 out of 100 points. This result indicates a relatively high level of employee happiness at SK hynix compared to the national happiness index of 5.9 out of 10 points in South Korea. It reflects the company's efforts to promote employee happiness through various corporate cultural activities. Notably, the happiness level of female employees, who had previously reported relatively low happiness index, significantly improved due to the introduction and expansion of policies related to pregnancy and childcare such as infertility treatment and vacation support. Additionally, entry-level employees experienced an increase in happiness levels attributed to changes in leadership and improved communication. When asked about the factors that contribute to their happiness, many employees mentioned "mutual growth of the company and individuals," "improvement of work-life balance and increased autonomy," and "performance-based rewards." Taking these responses into account, SK hynix shared concrete ideas and implementation plans proposed by employees to overcome the challenges posed by the semiconductor downturn during a company-wide communication event which focused on envisioning the future of "mutual growth" between the company and its employees. SK hynix is dedicated to building a corporate culture where the company's strategic direction is transparently shared with employees, their opinions are actively incorporated into the decision-making process, and a sense of empathy is fostered. This culture will serve as a source of pride for the employees and, in turn, contribute to the company's core competitiveness.

Culture Survey Results (Unit: Points)

Measuring Happiness Data and Publishing a Happiness Map

Since 2020, SK hynix has been measuring happiness data to analyze the factors that affect employees' happiness, with the aim to establish systems and cultures that promote happiness effectively. In collaboration with the Center for Happiness Studies at Seoul National University, a comprehensive survey was conducted among all employees to collect and analyze happiness data. Through additional surveys and interviews, three key factors were identified as significant influencers of employees' happiness: competence[9], a sense of relationship[9], and autonomy[9]. Based on this analysis, SK hynix created a "Happiness Map" in 2021 and 2022, which visually depicted the process and results. The map was shared company-wide, along with diverse happiness stories from employees. Furthermore, SK hynix is developing systems and programs to increase employees' happiness based on these three key factors. The analysis of happiness data will continue as part of the ongoing efforts to create a workplace where employees can thrive happily.

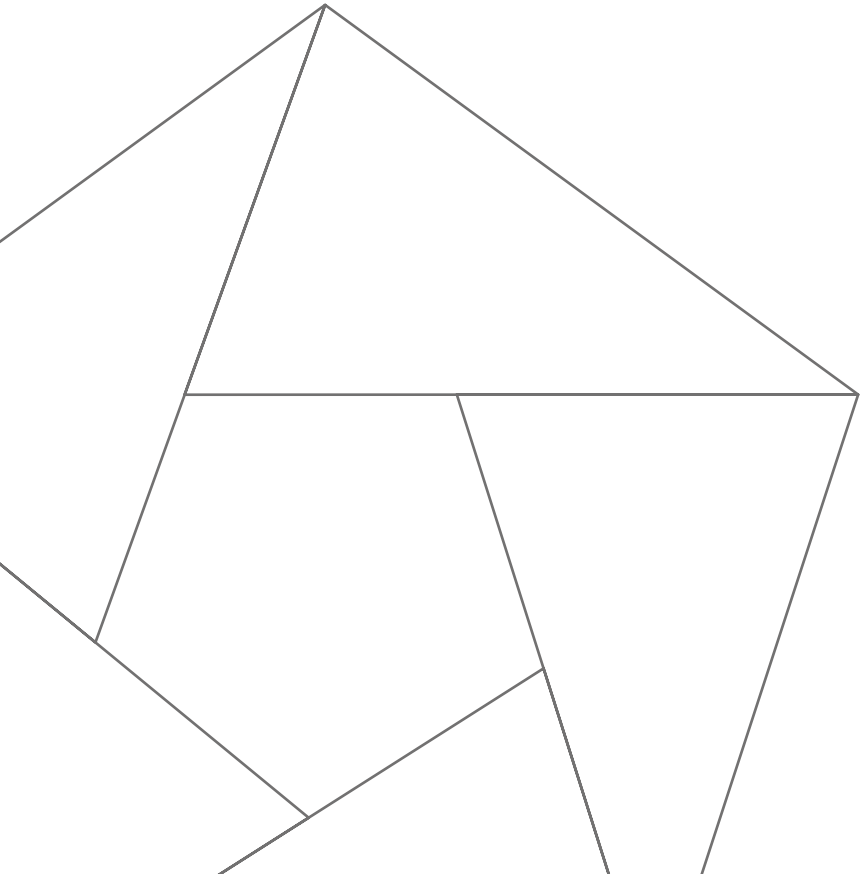
Programs to Foster a Culture of Happiness

In 2022, SK hynix introduced various programs to enhance employees' happiness. One notable program is "Happy Friday," which allows employees to design their own working hours and utilize the second Friday of each month as a day off if they exceed the mandatory working hours (average 40 hours per week). The Happy Friday program aims to improve both personal happiness and work efficiency by providing opportunities for employees to recharge themselves. Additionally, long-service vacations were extended to 3 weeks and 1 week for employees who have reached the milestone of 10 years and 5 years of service, respectively, to provide ample rest and relaxation opportunities for employees who have contributed to the company's growth. The recently opened branch offices at Grand Walkerhill Seoul (July 2022) and Euljiro, Seoul (January 2023) were designed to enhance workplace flexibility for employees and promote a better work-life balance. Moreover, SK hynix provides comprehensive welfare services that cover hotels, resorts, and amusement parks in Korea, enabling employees to refresh themselves and enjoy leisure activities with their families. We also organize "THE Open," an event that invites employees' families and friends, fostering happiness and pride among the employees. Furthermore, the company has implemented diverse programs to enhance employee happiness in their workplace and daily lives. These programs include support for education expenses for children with disabilities, early breast cancer screening, a care program for employees working in shift schedules, limousine commuting buses, and the in-house busking performance "Campus Begin Again."

THE Open


Campus Begin Again

ESG DATA



Financial Highlights

Key financial performance

(Unit: KRW billion)

Category	2019	2020	2021	2022
Sales	26,991	31,900	42,998	44,622
Gross profit	8,172	10,811	18,952	15,628
Operating profit	2,719	5,013	12,410	6,809
Profit before corporate tax	2,433	6,237	13,416	4,003
Corporate tax	424	1,478	3,800	1,761
Cash taxes paid[1]	5,153	371	1,015	3,979
Net profit	2,009	4,759	9,616	2,242
Total assets	65,248	71,174	96,347[2]	103,872
Total borrowings	10,524	11,252	17,624	22,995

1) For cash taxes paid, it is based on the corporate tax expense determined in the previous year. Cash taxes paid in 2022 amount to approximately 30% of the profit before corporate tax in 2021.
2) The correction was made based on the 75th audit report.

Shareholding by executives and special affiliated investors

(As of the end of 2022)

Category	Name	No. of stocks
CEO	Park Jung-ho	18,023
	Kwak Noh-jung	2,211
Executive director[1]	Noh Jong-won	1,000
Independent directors	Ha Yung-ku	920
	Song Ho-keun	785
	Shin Chang-hwan	650
	Yoon Tae-hwa	785
	Cho Hyun-jae	650
	Han Ae-ra	650
Total		25,674

1) Excluding two executive directors who resigned or whose terms expired in 2022 (Lee Seok-hee, Oh Jong-hoon).

Shareholders' status

(As of the end of 2022, common stocks)

Category	No. of stocks	Shareholding (%)
SK square[1] and others[2]	146,125,674	20.07
National Pension Service[3]	52,401,276	7.20
Others	489,124,090	67.19
Treasury Shares	40,351,325	5.54
Total	728,002,365	100

1) SK Inc. is the largest shareholder of SK Square, with members of the founding family representing the majority shareholders.
2) Executives and related parties hold 25,674 shares.
3) SK hynix does not issue any golden shares for government institutions.

Stock types and voting rights

(As of the end of 2022)

Category	Issued stocks	Ratio (%)	Remarks
Preferred stocks	0	0	No voting right
Common stocks with voting right	687,651,040	94.46	Voting right
Common stocks - Treasury stocks	40,351,325	5.54	No voting right
Total	728,002,365	100	

Financial Highlights

Key financial performance by international region in 2022

(Unit: KRW 100 million)

Company name	Country	Type of business	No. of employees (persons)	Sales	Profit before tax	Corporate tax (accural basis)	Corporate tax (cash basis)
SK hynix Semiconductor (China) Ltd.	China	Semiconductor production	4,430	56,982	−1,252	−12	206
SK hynix Semiconductor (Chongqing) Ltd.	China		3,108	11,009	778	126	167
SK hynix (Wuxi) Semiconductor Sales Ltd.	China	Semiconductor sale	256	95,243	1,711	442	263
SK hynix America Inc.	U.S.		298	195,880	742	20	21
SK hynix Deutschland GmbH	Germany		26	3,645	13	4	16
SK hynix UK Ltd.	U.K.		11	12,611	28	-	-
SK hynix Japan Inc.	Japan		54	7,169	131	30	65
SK hynix Asia Pte. Ltd.	Singapore		29	26,868	43	2	-
SK hynix Semiconductor Hong Kong Ltd.	Hong Kong		18	20,454	43	−2	-
SK hynix Semiconductor Taiwan Inc.	Taiwan		57	22,457	32	61	17
SK hynix Semiconductor India Pvt. Ltd.	India		6	555	3	2	2
SK hynix memory solutions America Inc.	U.S.	Semiconductor R&D	289	1,913	83	168	0
SK hynix memory solutions Taiwan Ltd.	Taiwan		41	92	11	2	0
SK hynix memory solutions Eastern Europe LLC.	Belarus		29	192	−9	0	0
SK hynix Italy S.r.l.	Italy		39	89	6	1	0

* Data scope: Key semiconductor manufacturing, sales, and R&D subsidiaries within our consolidated entities.
* Due to different financial audit schedules for each country, some subsidiaries' financial figures are before the audit and there may some changes after the audit.

Ratio of CEO compensation in 2022

Category	Unit	CEO	Employees	
			Mean	Median
Compensation[1)]	KRW million	1,100	71	64
CEO compensation divided by the employee compensation	times	-	15.49	17.19

1) Compensation is calculated based on the contractual annual salary, and the CEO's compensation is based on CEO Kwak Noh-jung, who receives a salary from SK hynix. As CEO Kwak Noh-jung was appointed in March 2022, there may be differences between the contractual annual salary and the actual payment (actual payment: KRW 1,014 million).
*A portion of the CEO's short-term incentives is paid in stocks.

BOD compensation in 2022

(Unit: KRW million)

Category	No. of directors (persons)	Total compensation	Average compensation per person
Executive directors	3	11,657	3,886
Independent directors (excluding members of the Audit Committee)	2	311	156
Members of the Audit Committee	4	637	159

* Based on the total compensation amount.

Environment

Greenhouse gas emissions

Category		Unit	2019	2020	2021	2022
Scope 1	CO_2	tCO_2eq	103,208	106,640	111,567	197,807
	CH_4		475[1]	515	496	10,150
	N_2O		151,415	146,593	72,920	71,954
	HFCs		171,672	236,172	253,753	252,547
	PFCs		671,204	1,036,958	961,220	1,020,389
	SF_6		169,250	232,692	248,419	228,907
	NF_3		852,883	951,838	980,546	1,161,003
	Total		**2,126,171**	**2,711,409**	**2,628,921**	**2,942,757**
Scope 2[2]	CO_2		4,706,167	4,829,381	4,988,932	4,210,193
	CH_4		1,257	1,317	1,001	1,005
	N_2O		5,875	6,221	19,611	19,595
	Total		**4,713,299**	**4,836,919**	**5,009,544**	**4,230,793**
Scope 3	Purchased raw materials and services		2,623,411	2,801,363	3,092,433	2,616,779[3]
	Fuel- and energy-related activities[4]		–	–	–	557,269
	Upstream transportation and distribution		33,565	26,849	55,269	70,096
	Downstream transportation and distribution		23,598	29,447	26,832	2,934
	Waste generated in operations		6,655	6,197	228,419	261,498
	Business travel		1,687	167	144	1,944
	Employee commuting		23,454	37,105	29,680	31,281
	Total		**2,712,370**	**2,901,128**	**3,432,777**	**3,541,801**
Emissions intensity by production unit	Scope 1&2	tCO_2eq/100 million Gb eq	9,780	9,555	8,151	6,660
Emissions intensity by sales[5]	Scope 1&2	tCO_2eq/KRW 100 million	25.34	23.66	17.76	16.08

1) Due to changes in the internal calculation logic, the 2019 CH_4 emissions (unit: tCO_2eq) were revised from 6,540 to 475, but the total emissions remain unchanged based on the verification results.
2) Disclosures have been made based on market-based emissions since 2021. The location-based Scope 2 emissions for 2022 are 6,156,116 tCO_2eq.
3) Newly disclosed figures starting from 2022.
4) Emissions that were double-counted between facilities have been excluded.
5) Based on sales in the Annual Report's consolidated accounting standards.

* AR5 GWP values are applied.
* Based on the criteria of the US Electronic Product Environmental Assessment Tool (EPEAT), the F-GHG process emissions in 2022 are 3,047,662 tCO_2eq.
* Data scope: Icheon, Cheongju, Bundang, Seoul (branch office), Wuxi, Chongqing.

Environment

Air pollutant emissions

Category		Unit	2019	2020	2021	2022
Icheon	SOx	Ton	8.8	6.8	7.7	25.9
	NH_3		46.8	33.1	20.6	10.4
	NOx		100.1	363.5	241.3	194.8
	HF		2.7	1.7	3.0	3.8
	HCl		8.6	5.6	2.7	5.5
	VOC[1]		0.8	–	–	–
	Dust		0.1	0.0	0.0	0.4
Cheongju	SOx		3.4	4.8	7.9	5.3
	NH_3		34.2	21.2	26.7	19.4
	NOx		347.1	341.7	248.8	120.5
	HF		1.9	2.1	3.5	2.6
	HCl		8.0	10.4	10.1	3.6
	VOC[1]		1.8	–	–	–
	Dust		35.9	32.1	37.8	25.0

Category		Unit	2019	2020	2021	2022
Wuxi	SOx	Ton	3.3	3.3	2.6	0.7
	NH_3		9.1	10.6	6.6	0.1
	NOx		7.9	4.7	0.0	0.0
	HF		1.1	0.2	0.2	0.0
	HCl		12.2	13.4	28.6	23.7
	VOC		10.6	9.7	0.6	0.3
	Dust		–	–	–	–
Chongqing	SOx		0.1	0.0	0.0	0.5
	NH_3		–	–	–	–
	NOx		1.4	6.9	6.8	2.8
	HF		–	–	–	–
	HCl		3.7	0.4	0.4	0.0
	VOC		0.6	0.2	0.1	0.01
	Dust		3.8	9.8	8.5	2.05

1) This substance is not used in our production processes and is determined to have no impact on pollutant emissions due to its minimal emission concentration. Therefore, it has been excluded from the substances subject to air pollutant management in Icheon/Cheongju since 2020.
* All legal emission standards for each campus are met.

Energy consumption

Category		Unit	2019	2020	2021	2022
Energy consumption	Electricity[2]	GWh[1]	9,205	9,887	10,921	11,940
		GJ	78,617,897	83,403,131	95,498,700	99,215,695
	LNG		2,100,857	2,026,936	2,199,591	3,450,666
	Steam		4,551,895	4,733,947	5,801,655	6,176,572
	Other[3]		–	–	59,725	40,017
	Total		**85,270,649**	**90,164,014**	**103,559,671**	**108,882,950**
Consumption intensity by sales	Electricity	GWh/KRW billion	0.34	0.31	0.25	0.27
		GJ/KRW 100 million	291.28	261.45	222.10	222.35
	LNG		7.78	6.35	5.12	7.73
	Steam		16.86	14.84	13.49	13.84
	Other		–	–	0.14	0.09
	Total		**315.92**	**282.64**	**240.85**	**244.01**

1) According to the Enforcement Rules of the Energy Act in the Republic of Korea, domestic electricity consumption of 1MWh is equal to 9600MJ, overseas electricity consumption of 1MWh is equal to 3600MJ.
2) Electricity consumption includes renewable electricity consumption. Total electricity consumption, including self-generation (SEC, Smart Energy Center) in 2022: 12,083GWh.
3) Gasoline, diesel, kerosene, and other energy sources are included and have been disclosed since 2021.
* Data scope: Icheon, Cheongju, Bundang, Seoul (branch office), Wuxi, Chongqing; Bundang and Seoul (branch office) included from 2022

Energy savings

Category	Unit	2019	2020	2021	2022
Target	GWh	171	177	177	155
Achievement		190	243	186	207

* Reduction in GHG emissions based on energy savings in 2022: 95,096 tCO_2eq (an emission coefficient of 0.4594 tCO_2eq/MWh applied)
* Data scope: Icheon, Cheongju

Environment

Water management

Category			Unit	2019	2020	2021	2022
Domestic sites	Withdrawals	Municipal water	1,000m³	34,910	36,163	39,355	43,488
		Surface water		30,950	30,960	32,343	34,697
		Reclaimed water		–	–	–	–
		Total		**65,860**	**67,123**	**71,698**	**78,185**
	Consumption			11,478	10,423	13,714	17,327
	Wastewater discharge			54,382	56,700	57,984	60,858
	Ultra pure water consumption			25,376	27,437	29,254	29,475
Overseas sites	Withdrawals	Municipal water		18,776	21,272	24,771	26,154
		Surface water		–	–	–	–
		Reclaimed water		5,919	7,320	7,300	7,300
		Total		**24,695**	**28,592**	**32,071**	**33,454**
	Consumption			3,242	2,995	4,268	3,523
	Wastewater discharge			21,454	25,597	27,803	29,931
	Ultra pure water consumption			8,925	9,936	10,925	10,040
Total	Withdrawals	Municipal water		53,686	57,435	64,126	69,642
		Surface water		30,950	30,960	32,343	34,697
		Reclaimed water		5,919	7,320	7,300	7,300
		Total		**90,555**	**95,715**	**103,769**	**111,639**
	Consumption			14,720	13,418	17,982	20,851
	Wastewater discharge			75,836	82,297	85,787	90,789
	Ultra pure water consumption			34,301	37,373	40,179	39,515

* Some data for water withdrawals, consumption, and discharge from 2019 to 2021 were revised due to simple numerical errors.

Water reuse and reuse rate

Category		Unit	2019	2020	2021	2022
Water reuse	Domestic sites	1,000m³	21,631	26,932	34,464	36,075
	Overseas sites		10,991	11,628	13,124	11,802
	Total		**32,622**	**38,560**	**47,587**	**47,877**
Water reuse rate	Domestic sites	%	28	32	37	37
	Overseas sites		34	31	32	28
	Total		**30**	**32**	**36**	**35**

* Some data for 2020 to 2021 were revised due to simple numerical errors.

Wastewater discharge quality

Category		Unit	2019	2020	2021	2022
Domestic sites[1]	COD	ton	235.6	234.2	203.9	–
	TOC[2]		–	–	–	194.5
	BOD		172.5	140.7	116.6	110.7
	T-P		1.6	1.6	1.0	2.0
	SS		106.0	113.8	97.0	96.9
Overseas sites	COD		69.4	365.6	430.1	453.1
	F		7.7	19.2	23.9	36.5
	NH_3-N		11.4	65.5	65.4	137.0

1) The quality of water discharged from our domestic operations is being maintained at a level that more than satisfies key 'Good Water' management indicators (COD ≤ 5, TOC ≤ 4, BOD ≤ 3, SS ≤ 25, T-P ≤ 0.1, unit: mg/L).
2) Starting from 2022, among the management items for organic matter in the discharged wastewater of domestic wastewater treatment facilities, COD has been changed to TOC. Accordingly, TOC data is newly disclosed from 2022.
* Some data for 2019 to 2021 were revised due to simple numerical errors.

Water stressed areas (Icheon)

Category		Unit	2019	2020	2021	2022
Withdrawals	Amount	1,000m³	38,462	38,597	39,708	42,115
	Rate	%	42	40	38	38
Consumption	Amount	1,000m³	6,795	6,793	10,153	11,274
	Rate	%	46	51	56	54

* Due to changes in the method of analyzing water stress areas, data on withdrawal and consumption rates for "High" or higher water stress areas from 2019 to 2021 were adjusted.

Environment

Total waste

Category			Unit	2019	2020	2021	2022
Domestic sites	Total waste generated		Ton	289,337	298,090	300,694	368,711
	Waste Treatment	Recycled		277,359	287,688	291,992	359,188
		Self-reuse[1]		–	–	–	–
		Incineration[2]		7,187	6,853	8,338	9,057
		Others[3]		4,791	3,549	364	465
Overseas sites	Total waste generated			123,784	169,780	204,165	221,767
	Waste Treatment	Recycled		88,202	135,377	184,971	206,018
		Self-reuse[1]		8,867	15,363	14,117	11,533
		Incineration[2]		2,726	2,790	2,937	3,183
		Others[3]		23,989	16,250	2,139	1,033
Total	Total waste generated			413,122	467,871	504,859	590,478
	Waste Treatment	Recycled		365,562	423,065	476,963	565,206
		Self-reuse[1]		8,867	15,363	14,117	11,533
		Incineration[2]		9,912	9,643	11,275	12,240
		Others[3]		28,780	19,799	2,503	1,498

* Data scope: Domestic (Icheon, Cheongju), overseas (Wuxi, Chongqing)
** Data for 2019 to 2021 were revised. As waste amounts are categorized based on legal waste dischargers at each facility, the figures from SK hynix's subsidiary reported as a wastewater treatment sludge discharger have been excluded from the previous data.
1) Self-reuse of waste within the facility, separate from recycling through external waste treatment facilities.
2) Recycling through heat energy recovery, such as generating steam and electricity using heat generated from waste incineration.
3) Solidification, landfilling, neutralization, incineration without energy recovery, etc.

ZWTL Validation (Waste Diversion Rate)

Category		Unit	2019	2020	2021	2022
Domestic sites	Icheon	Certification	Silver (93%)	Gold (98%)	Gold (98%)	Platinum (100%)
	Cheongju		Silver (94%)	Gold (97%)	Gold (98%)	Platinum (100%)
Overseas sites	Wuxi		Gold (96%)	Gold (98%)	Gold (99%)	Gold (98%)
	Chongqing		Silver (91%)	Silver (90%)	Silver (90%)	Silver (94%)

Hazardous waste

Category			Unit	2019	2020	2021	2022
Domestic sites	Total waste generated		Ton	226,639	220,138	214,432	254,961
	Waste Treatment	Recycled		219,790	214,371	210,182	250,107
		Self-reuse[1]		–	–	–	–
		Incineration[2]		5,384	5,125	3,886	4,389
		Others[3]		1,464	642	364	465
Overseas sites	Total waste generated			74,867	111,589	139,760	149,824
	Waste Treatment	Recycled		43,243	81,078	125,419	137,959
		Self-reuse[1]		8,867	15,363	14,117	11,533
		Incineration[2]		31	60	48	131
		Others[3]		22,726	15,087	174	200
Total	Total waste generated			301,506	331,727	354,191	404,784
	Waste Treatment	Recycled		263,033	295,449	335,601	388,066
		Self-reuse[1]		8,867	15,363	14,117	11,533
		Incineration[2]		5,415	5,186	3,934	4,520
		Others[3]		24,190	15,729	538	666

* Footnote description is the same as total waste

SHE investment result

Category	Unit	2019	2020	2021	2022
Invested capital	KRW million	103,611	82,456	74,354	62,227

Breach of environmental laws

Category	Unit	2019	2020	2021	2022
Breach of law	Cases	0	0	0	0

* Cases of non-compliance with a value exceeding $10,000.

Social

Employee status

Category		Unit	2019	2020	2021	2022
Number of employees		Persons	36,484	37,195	38,352	40,153
Type	Regular		34,053	35,205	36,243	35,437
	Temporary		2,431	1,990	2,109	4,716
Gender	Male		22,845	23,381	24,255	25,616
	Female		13,639	13,814	14,097	14,537
Age group	~29		11,956	11,615	11,934	11,889
	30~49		23,432	24,182	24,603	25,713
	50+		1,096	1,398	1,815	2,551
Nationality	Korea		28,609	29,345	30,484	31,892
	China		6,906	6,855	6,909	7,263
	U.S.		36	43	38	121
	Others		933	952	921	877
Location	Korea		28,244	29,006	30,123	31,944
	China		7,320	7,246	7,309	7,291
	Americas		476	484	464	512
	Others		444	459	456	406

Employee status by type and gender in 2022 (Korea)

Category		Unit	Type		
			Regular	Temporary	Total
Gender	Male	Persons	21,080	46	**21,126**
	Female		10,776	42	**10,818**
	Total		**31,856**	**88**	**31,944**

Hires

Category		Unit	2019	2020	2021	2022
New hires		Persons	4,343	2,003	3,549	3,901
Gender	Male		2,606	996	2,483	2,892
	Female		1,737	1,007	1,066	1,009
Age group	~29		2,177	1,195	2,550	2,927
	30~49		2,117	763	936	932
	50+		49	45	63	42
Average hiring costs (Korea)		KRW	806,782	1,620,516	952,538	1,164,986
Average length of service (Korea)		Years	10.8	11.4	11.7	11.8

Social

Turnover (Korea)

Category			Unit	2019	2020	2021	2022
Voluntary turnover rate	Total		%	2.2	1.9	3.6	2.1
	Gender	Male		2.3	2.0	4.1	2.4
		Female		2.2	1.8	2.5	1.5
	Age group	~29		3.3	3.4	5.7	3.1
		30~49		1.6	1.3	2.7	1.6
		50+		8.4	1.8	2.8	2.1
Non-voluntary turnover rate	Total			0.3	0.3	0.3	0.4
	Gender	Male		0.3	0.4	0.4	0.5
		Female		0.2	0.1	0.1	0.2
	Age group	~29		0.2	0.3	0.1	0.1
		30~49		0.2	0.1	0.1	0.3
		50+		4.1	5.6	4.2	2.9
Turnover rate	Male			1.6	1.5	2.9	1.8
	Female			0.9	0.7	0.9	0.6
	Total			**2.5**	**2.2**	**3.8**	**2.4**

* Figures for the age groups of 30–49 and 50 and above in 2019 were revised due to simple numerical errors

Diversity (Korea)

Category			Unit	2019	2020	2021	2022
Representation of female	Total		%	36.3	35.5	35.2	33.9
	Leadership[1]	Senior managers		–	–	1.9	2.1
		Middle managers		27.7	27.7	28.4	29.6
	Revenue-generating functions[2]	Management level		28.2	27.9	29.0	29.6
		Non-management level		38.6	37.8	37.3	35.5
Others	Employees with disabilities	Own operation	Persons	183	194	189	188
		Subsidiaries[3]		616	781	800	889
	National veterans			306	319	320	328

* Figures for middle managers and revenue-generating functions from 2019 to 2021 were revised due to simple numerical errors

1) Leadership criteria
Senior managers: Executives (registered and non-registered)
Middle managers: Team/project leaders, independent part leaders, field managers, line leaders.

2) Revenue-generating functions: Departments directly contributing to sales or product manufacturing (excluding support departments)

3) Happymore

* Figures for employees with disabilities are calculated based on Article 22 (3) of the Act on the Employment Promotion and Vocational Rehabilitation of Persons with Disabilities.

Social

Parental leave (Korea)

Category			Unit	2019	2020	2021	2022
No. of employees who used a maternity leave[1]				744	662	646	431
Childcare leave	No. of valid employees for childcare leave	Male	Persons	–	7,588	7,306	7,691
		Female		–	4,856	4,808	4,051
		Total		-	**12,444**	**12,114**	**11,742**
	No. of Employees on childcare leave	Male		61	91	117	145
		Female		853	765	724	775
		Total[2]		**914**	**856**	**841**	**920**
	No. of employees who returned to work after childcare leave	Male		55	74	107	130
		Female		870	822	779	777
		Total		**925**	**896**	**886**	**907**
	Return to work rate after childcare leave	Male	%	96.5	96.1	99.1	91.6
		Female		98.8	99.6	99.5	98.1
		Total		**98.6**	**99.3**	**99.4**	**97.1**
	No. of employees who worked for at least 12 months after returning to work (%)[1]	Male	Persons (%)	26(89.7)	51(92.7)	65(87.8)	98(91.6)
		Female		882(93.7)	818(94.0)	772(93.9)	743(95.4)
		Total		**908(93.6)**	**869(93.3)**	**837(93.4)**	**841(94.9)**

1) Due to simple numerical errors, the data for employees who have worked for more than 12 months after returning to the company in 2019–2021 have been revised.

Labor (Korea)

Category		Unit	2019	2020	2021	2022
Working hours	Annual working hours per person	Hours	2,229	2,277	2,180	2,116
	Average weekly working hours		42.9	43.8	41.9	40.7
	No. of employees on flexible working	Persons	14,311	15,382	16,551	18,612
Share of labor union membership[1]	Icheon	%	98	97	96	95
	Cheongju		99	99	99	99

1) The contents of the collective agreement between labor and management apply equally to all employees (100%) of SK hynix.

Compensation (Korea)

Category		Unit	2022
Equal pay ratio[1]	Executive level	%	100
	Team leader level		99
	Non-management level		100
New hires starting salary	Monthly salary	KRW	4,456,889
	Percentage of monthly starting salary to legally required minimum	%	233

1) Sampling was conducted to determine the pay equality ratio (female salary/male salary) based on equivalent positions. (The sampling was done for executives and team leaders with two years of service as of 2022, as well as new employees who joined in January 2022).

Social

Employee training (Korea)

Category		Unit	2019	2020	2021	2022
Expenses	Total	KRW 1,000	7,545,583	53,227,246	51,349,240	60,673,330
	Per person		540	3,675	3,381	3,764
Time	Total	Hours	1,745,576	1,749,666	1,708,234	1,798,881
	Per person		125	121	112	112

* Training costs and hours from 2019 to 2021 have been revised due to changes in the criteria for determining the training recipients.

Employee engagement (Korea)

Category		Unit	2019	2020	2021	2022
Total		%	72	72	70	80
Gender	Male		–	72	72	82
	Female		–	68	58	72
Job positions	Senior managers		–	78	93	96
	Middle managers		–	76	91	95
	Others		–	71	68	79

Occupational safety management

Category	Unit	2019	2020	2021	2022
Accident rate	%	0.138	0.061	0.076	0.078
Lost time injuries frequency rate	Per 200,000 working hours	0.100	0.108	0.049	0.167
Fatalities	Persons	3	0	0	2

* Data scope: Domestic (Icheon, Cheongju, Bundang)
* The number of occupational fatalities in 2019 was adjusted after the recognition of disease-related fatalities as occupational accidents following the amendment to South Korea's Rule on Occupational Accident Statistics Processing (Ministry of Employment and Labor Rule No. 160) in 2022.

Occupational safety and health management system (ISO 45001)

Category	Icheon	Cheongju	Wuxi	Chongqing
Valid of certification	2021.01.07 ~2024.01.06	2021.01.07 ~2024.01.06	2021.08.03 ~2024.08.02	2022.01.18 ~2025.01.18

* Scope of application of the occupational health and safety management system: All SK hynix employees in Korea and China (39,235 people), as well as employees of suppliers at SK hynix facilities (35,168 people, average number of supplier employees with access to our facilities in 2022).

Social

Supplier status

Category	Unit	2019	2020	2021	2022
Total suppliers (first-tier)[1)]	Companies	1,659	1,747	1,789	1,822
Critical suppliers (first-tier)		–	–	59	59
High risk suppliers (first-tier)		–	–	46	45
New suppliers[2)]		167	203	185	145
Total purchase amount	KRW 100 million	193,350	210,213	246,956	273,308

1) Our suppliers are divided into equipment, raw materials, infrastructure, and parts categories.
2) All new suppliers passed our SHE adequacy assessments (human rights and labor, environment, safety).
* Based on domestic transactions.

Supplier management

Category	Unit	2019	2020	2021	2022
New suppliers that agreed with the Supplier Code of Conduct	%	100	100	100	100

* Based on domestic transactions.

Shared growth

Category	Unit	2019	2020	2021	2022
Total amount of support	KRW 100 million	2,685	2,705	2,800	2,914
No. of companies on Shared Growth Agreement	Companies	117	123	123	122
No. of companies that joined Shared Growth Committee		79	79	82	91

Supply chain ESG assessment[1)]

Category		Unit	2022
Suppliers ESG assessment[2)]		Companies (%)	1,131(62[3)])
Critical suppliers ESG assessment			10(17[4)])
High-risk suppliers ESG assessment	ESG assessment		45(100[4)])
	With corrective action plans		45(100)
	Fulfill corrective action plans	%	100
RMAP certification		%	100

1) ESG assessment results for the past three years (2020–2022).
2) Including SHE consulting and RBA audits specialized in certain ESG elements.
3) The rate compared to the total number of tier 1 suppliers (based on domestic transactions).
4) The rate compared to newly defined and selected critical and high-risk suppliers in 2021. On-site assessments will be conducted for high-risk and critical suppliers until 2023.

Ethical training status (2022)

Category		Unit	2022
SK hynix		%	100
Subsidiaries	SK hynix system IC		100
	SK hystec		100
	SK hyeng		100
	Happy More		100
	Happy Narae		100

Social

Customer satisfaction survey

Category		Unit	2019	2020	2021	2022
Overall score		Points (out of 5)	4.48	4.53	4.45	4.31
Scores by specific application	Computing DRAM		4.38	4.66	4.43	4.20
	Mobile DRAM		4.67	4.52	4.53	4.47
	Mobile Solution		4.30	4.45	4.55	4.55
	Storage Solution		4.58	4.50	4.27	4.00
No. of recalled products		Cases	0	0	0	0
No. of complaints from customers		Cases	0	0	0	0

* Due to simple numerical errors, overall scores for 2019–2021 and scores for specific applications in 2021 were revised.

Community support (Korea)

Category			Unit	2019	2020	2021	2022
Expenditure	Investment	Social contribution	KRW 100 million	614	736	710	749
	Donations	Cash		440	559	600	576
		In kind		8.1	4.4	0.1	2
		Total		**448**	**564**	**600**	**578**
	Employees fund raising	Amount raised		29	28	21.6	22
		Employee participants	Persons	16,224	15,979	11,070	11,117
Employees volunteering	Employee participants			4,884	1,991	400	3,256
	Participation rate		%	17.3	6.9	1.3	10.2
	Total time spent		Hours	16,737	13,027	7,127	12,129
	Time spent per person		Hours	0.59	0.45	0.24	0.38

Contributions to relevant associations

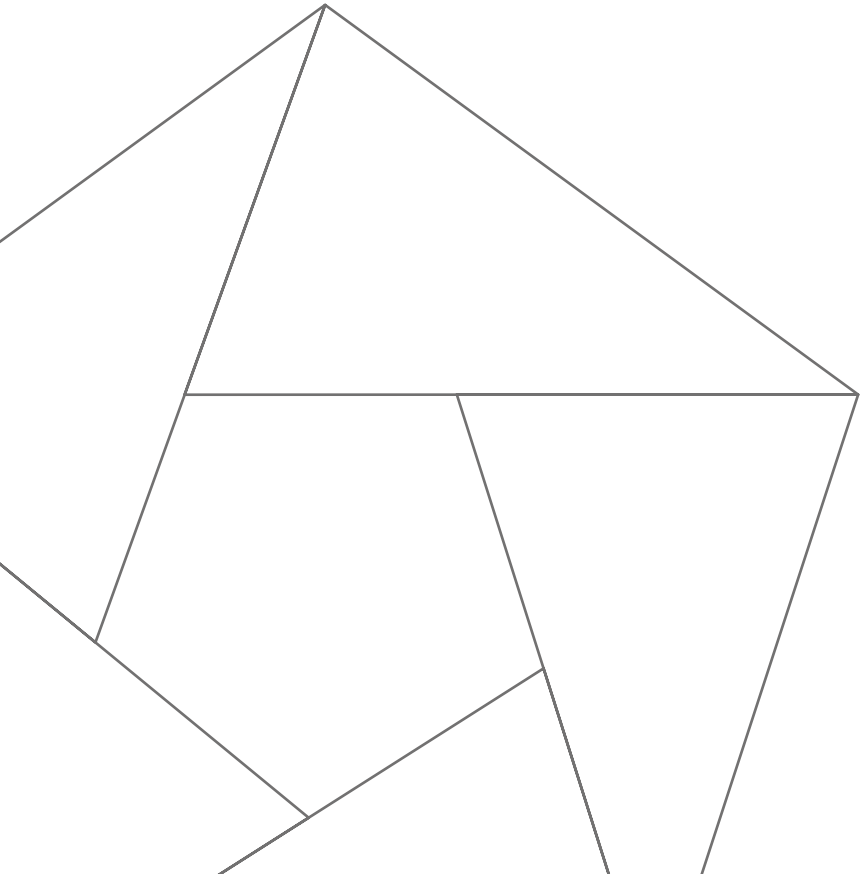
Category	Unit	2019	2020	2021	2022
Total amount	KRW 100 million	22.4	22.1	23.6	29.8

Contributions to relevant associations in 2022

Category	Unit	Amount
Korea Semiconductr Industry Association	KRW million	705
Information Technology Industry Council		479.4
Korea Enterprises Federation		297.5
The National Academy of Engineering of Korea		202.7
Silicon Integration Initiative		200

* Funds for lobbying and interest groups, as well as political funds are not provided.

Appendix



TCFD

Governance

a) Describe the board's oversight of climate- related risks and opportunities	As the highest decision-making body of the company, SK hynix's Board of Directors oversees and ensures that ESG factors, including climate change issues, are integrated into the company's long-term business strategy. To enhance the efficiency and expertise of the Board of Directors, a subcommittee called the Sustainable Management Committee was established within the board. The Sustainable Management Committee thoroughly reviews the integration of climate change response strategies across all business areas and provides guidance to align medium- to long-term business strategies with climate action plans to create synergy. Goals and strategies related to climate change, such as Net Zero and RE100, have a significant impact on overall management and financial strategies, necessitating discussions and decisions at the board level. In 2021, the Sustainable Management Committee held discussions on the current status of Net Zero issues and the progress being made to expand renewable electricity use, In 2022, the committee reviewed and approved the PRISM framework, which systematizes the company's overall ESG strategy, encompassing climate change response, as well as its 2030 goals.
b) Describe management's role in assessing and managing climate-related risks and opportunities	SK hynix's management has consistently improved its internal decision-making process to proactively address climate change risks and explore new climate opportunities that can unlock future value. Firstly, the ESG Management Committee, led by the CEO, has been operational since 2021. Around 10 executives from key departments such as Future Strategy, Manufacturing/Technology, and Sustainable Management participate in this committee to tackle ESG issues, including climate change. They discuss and establish specific implementation strategies and goals, regularly review progress, and monitor performance. In 2022, the Carbon Management Committee was formed under the ESG Management Committee, headed by the executive responsible for Manufacturing/ Technology. This committee comprises eight working groups dedicated to tasks such as climate change response, greenhouse gas reduction, and RE100 implementation. Outcomes of the Carbon Management Committee is regularly reported to the ESG Management Committee and the Board of Directors. To analyze climate-related risks and opportunities and assess their potential impacts, as well as review climate related agenda items to be discussed by the ESG Management Committee, SK hynix also operates the Climate Change Roundtable. As climate change can significantly impact areas such as finance, sales, and corporate reputation, the Climate Change Roundtable involves executives not only from R&D and Manufacturing/Technology but also from support departments such as Marketing, Finance, IR, PR, and CR. In 2023, SK hynix has operationalized working groups and an external advisory group within the Climate Change Roundtable as a means of improving the quality of climate change assessments defined by the Task Force on Climate-related Financial Disclosures (TCFD) and develop practical response measures. The working groups are structured into seven categories based on climate change risks/ opportunities defined by the TCFD, while the external advisory group consists of experts from academia/research and consulting firms to provide objective and in-depth opinions on SK hynix's climate action and strategies.

Strategy

a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	SK hynix has established a systematic process for evaluating climate change risks and opportunities, led by working groups and an external advisory group within the Climate Change Roundtable. First, the working groups identified climate change risks and opportunities that SK hynix may encounter under various climate change scenarios. They assessed the potential impacts of these factors across different areas, including raw material sourcing, manufacturing, and operational activities. The working groups, participated by 26 departments, evaluated the "probability" and "magnitude" of each risk or opportunity factor on a 5-point scale, leveraging their broad understanding and experience of SK hynix's operations. In addition, the working groups provided qualitative feedback on the reasons behind the results of quantitative evaluation, as well as information on ongoing efforts being made in the field to mitigate climate change risks. Subsequently, the assessment results, incorporating input from external experts, were presented to the Climate Change Roundtable for a final review of the key climate change risks and opportunities with high probability and magnitude. This year, the following climate change risks and opportunities were identified and evaluated to be the most significant to SK hynix: Transition and physical risk factors such as enhanced GHG emission regulations and policies, slowdown and uncertainty in renewable electricity supply, increasing industrial electricity costs, and heatwaves, as well as opportunity factors such as establishing a low-carbon manufacturing system, improving energy efficiency at facilities, transitioning electricity consumption at facilities to renewable electricity, and developing high-efficiency products.

Strategy

b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	Under the Korean Emissions Trading Scheme (K-ETS), SK hynix is required to purchase emissions permits in the emissions trading market or reduce emissions that exceed the allocated emissions allowances. In line with international trends, such as the EU ETS's move to eliminate the free allocation of allowances, the South Korean government has also initiated discussions on adjusting the total emissions allowance and expanding the paid allocation. Consequently, "enhanced GHG emission regulations and policies" was identified as a climate change risk factor with the greatest financial implications this year, following last year. As of the end of December 2022, our GHG emissions liabilities stood at approximately KRW 2.1 billion. The emissions liabilities were relatively low compared to the previous year due to the allocation of additional allowances. Although this accounted for only 0.03% of the operating profit on a consolidated basis in 2022, further tightening of ETS regulations could potentially increase the associated financial impact. For instance, a change in government policy could lead to the semiconductor industry being excluded from the sectors eligible for free allowance allocation. Since the current proportion of allowances through auctions in K-ETS is 10%, a hypothetical cost incurred due to the policy change would be estimated to be KRW 10.532 billion (4.42 million tons (free allowances allocated in 2022) x 0.1 (proportion of allowances via auctions) x KRW 23,830 (average closing price of KAU21)). While most of the key climate change risks were classified as transition risks, SK hynix also assessed the financial impact of heatwaves, which pose the most significant future risk exposure among the physical risks at our facilities. The number of heatwave days at our Icheon and Cheongju Campuses increased by 14 days compared to the base year of 2010. The financial impact resulting from increased electricity costs for air conditioning and chiller operations was estimated at approximately KRW 1.5 billion. In 2022, the number of heatwave days decreased significantly compared to 2021, primarily due to higher-than-usual summer rainfall in Icheon. However, from a long-term perspective, the duration, intensity, and frequency of heatwave exposure, driven by climate change, are expected to further increase. Considering the planned expansion of facilities, such as the completion of the Yongin Campus, additional expenses due to heatwaves are forecast to rise. Meanwhile, increase in remote working due to COVID-19 and the growing demand for data processing capacity driven by big data and AI present significant opportunities for medium- to long-term memory demand. There is a notable surge in the demand for semiconductor products that can handle larger volumes of data per unit of time while offering improved energy efficiency compared to previous products. SK hynix is actively responding to these market changes by manufacturing and selling high-efficiency semiconductor products such as HBM3, DDR5, LPDDR5, and GDDR6, which continue to drive market expansion. In 2022, the sales of high-efficiency DRAM reached approximately KRW 5.5 trillion, accounting for around 12% of SK hynix's total revenue, representing a 2.6-fold growth compared to the previous year. To minimize financial risks associated with climate change, SK hynix has closely monitored climate change policies and regulations at both domestic and international levels while establishing medium- to long-term greenhouse gas reduction targets and specific implementation plans. Since 2014, the company has implemented the ISO 50001 Energy Management System and operated an Energy Saving Task Force (TF) as part of our ongoing efforts to expand energy-saving activities through real-time monitoring of energy usage. Monthly meetings have been held to actively develop energy-saving measures and manage performance. As a result, in 2022, SK hynix achieved a total energy reduction of 207GWh through the implementation of 290 different energy-saving measures. In January 2022, the company organized a Process Gas Reduction TF composed of experts in the field of process technology under the Carbon Management Committee. This TF carries out activities aimed at reducing PFC gas usage. Additionally, SK hynix is making continuous efforts for the development of alternative gases by building a collaborative network that allows various stakeholders, such as material and equipment suppliers, to participate with the aim of replacing process gases. In January 2023, SK hynix became the first global memory semiconductor company to issue a Sustainability-Linked Bond (SLB) worth $1 billion. The interest rate of this bond is adjusted based on the achievement of ESG goals. Alongside the SLB, SK hynix also issued a Green Bond worth $750 million. The company plans to use the proceeds of the Green Bond in environmentally friendly projects, such as water quality management, energy efficiency, pollution prevention, and ecological restoration.
c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	For climate change scenario analysis, SK hynix has classified climate change risks into transition risks and physical risks and selected appropriate scenarios. First, for the analysis of transition risks, we chose two scenarios (2050 Net Zero and Below 2℃) that are considered an orderly transition among six scenarios (updated in September 2022) by the Network for Greening the Financial System (NGFS). The NGFS' climate change scenarios are well recognized for providing a comprehensive set of data at the granular level for a variety of plausible scenarios. For physical risks, we have updated the scenarios used in last year's analysis from Representative Concentration Pathways (RCP) to Shared Socioeconomic Pathways (SSP). The SSP scenarios are new greenhouse gas pathways that consider future socioeconomic factors such as population and land, in addition to the RCP scenarios. They were used in the Intergovernmental Panel on Climate Change's (IPCC) Sixth Assessment Report in 2023. The future climate data based on the SSP scenarios has been adopted by National Standard Climate Change Scenarios. Among the five SSP scenarios, SK hynix conducted a physical risk analysis based on SSP1-2.6, a sustainable growth pathway with the greatest socioeconomic efforts for climate adaptation, and SSP5-8.5, a high-speed growth pathway centered around rapid industrial and technological development. Regarding climate change risks and opportunities, SK hynix comprehensively considered the reliability of measurement, the magnitude of financial impact, and the calculability. As a result, we identified potential financial impacts for two transition risks and one physical risk. Detailed information and results of the financial impact analysis will be available in a separate TCFD report, scheduled to be published in the second half of 2023.

Risk Management

a) Describe the organization' s processes for identifying and assessing climate-related risks	SK hynix recognizes climate-related risks as significant risks and has established the Climate Change Risk Management Framework to comprehensively manage these risks. The Climate Change Risk Management Framework consists of four stages: Risk Identification, Risk Assessment and Analysis, Formulation and Implementation of Response Strategies, and Monitoring and Reporting. Using this framework, we identify key climate risks that can impact our long-term business strategies and overall operations and determine potential impacts and develop mitigation strategies through scenario analysis. Relevant departments then implement tasks based on these strategies and monitor progress to identify areas for improvement. Key risks are reported to the management/Board of Directors to enhance accountability for climate risk management. In the risk identification stage of the climate change risk management framework, we compile a pool of climate risks determined through internal and external analysis. This analysis involves considering climate-related issues discussed at the Climate Change Roundtable, as well as reviewing domestic and international climate policies, industry trends, stakeholder interests and demands, and expert opinions. Subsequently, we conduct a materiality assessment based on the probability and magnitude of these risks to identify the key climate-related risks.
b) Describe the organization's processes for managing climate-related risks	Based on the analysis results of identified and assessed key climate risks, we establish response strategies for various stages/areas. Relevant departments then develop and implement tasks to address climate change. We continuously monitor the progress, report the status of key risks to the management/Board of Directors, develop improvement measures, and continuously update tasks.
c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	Managing and mitigating climate change risks cannot be carried out solely by a specific department. To effectively prepare for and respond to risks, it is essential to adopt a company-wide approach and analyze their long-term impacts. SK hynix operates a comprehensive risk management system consisting of four steps – risk identification, risk assessment and analysis, formulation of response plans and strategies, and monitoring – which includes climate change risk management. We define climate change as a significant risk that profoundly affects our medium- to long-term business strategy. We proactively manage it to ensure short-term business continuity and minimize any adverse effects on our business in the long run while also unlocking opportunities to enhance our corporate value.

Metrics & Targets

a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	SK hynix provides disclosures in accordance with the seven climate-related metric categories outlined by the TCFD: greenhouse gas (GHG) emissions, transition risks, physical risks, climate-related opportunities, capital deployment, internal carbon prices, and remuneration. Additionally, we disclose information on "energy, water resources, and waste." Regarding "GHGs, energy, water resources, and waste" metrics, we disclose four years of quantitative data, as well as our targets and achievements in detail.
b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	We disclose four years of Scope 1, Scope 2, and Scope 3 emissions data of all SK hynix facilities through third-party verification. For more information, please refer to the ESG Data section on page 92.
c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	In 2020, SK hynix became the first company in Korea to join the RE 100 initiative along with other SK Group companies, and in 2021, we announced our goal to achieve net zero emissions by 2050. To this end, we aim to keep our absolute emissions (Scope 1 & 2) in 2030 at 2020 levels through aggressive GHG reduction efforts despite the expected increase in production with the operation of new fabs to be built in the Yongin Semiconductor Cluster. For more information, please refer to the PRISM 2030 Goals section on page 26.

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<table>
<tr><th>Category</th><th>Index</th><th>Code</th><th>SK hynix's response activities</th><th>Page</th></tr>
<tr><td rowspan="2">GHG Emissions</td><td>(1) Gross global Scope 1 emissions and
(2) amount of total emissions from perfluorinated compounds</td><td>TC-SC-110a.1</td><td>
<table>
<tr><th>Category</th><th>Unit</th><th>2019</th><th>2020</th><th>2021</th><th>2022</th></tr>
<tr><td>Scope 1 emissions</td><td rowspan="2">tCO_2eq</td><td>2,126,171</td><td>2,711,409</td><td>2,628,921</td><td>2,942,757</td></tr>
<tr><td>PFCs</td><td>671,204</td><td>1,036,958</td><td>961,220</td><td>1,020,389</td></tr>
</table>
* Data scope: Icheon, Cheongju, Bundang, Seoul (branch office), Wuxi, Chongqing
</td><td>92</td></tr>
<tr><td>Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets</td><td>TC-SC-110a.2</td><td>In 2020, SK hynix became the first company in Korea to join the RE 100 initiative along with other SK Group companies, and in 2021, we announced our goal to achieve net zero emissions by 2050. To this end, we aim to keep our absolute emissions (Scope 1 & 2) in 2030 at 2020 levels through aggressive GHG reduction efforts despite the expected increase in production with the operation of new fabs to be built in the Yongin Semiconductor Cluster. GHG emissions from the Dalian fabrication plant we acquired from Intel in December 2021 are not reflected in this goal. Emission control targets for new facilities such as Key Foundry, for which the acquisition contract was completed in 2022, will be announced later after a separate detailed analysis.</td><td>24</td></tr>
<tr><td>Energy Management</td><td>(1) Total energy consumed,
(2) percentage grid electricity,
(3) percentage renewable</td><td>TC-SC-130a.1</td><td>
<table>
<tr><th>Category</th><th>Unit</th><th>2019</th><th>2020</th><th>2021</th><th>2022</th></tr>
<tr><td>Total energy consumed</td><td rowspan="3">GJ</td><td>85,270,649</td><td>90,164,014</td><td>103,559,671</td><td>108,882,950</td></tr>
<tr><td>Total grid electricity consumed</td><td>-</td><td>-</td><td>89,652,551</td><td>99,208,558</td></tr>
<tr><td>Total renewable electricity consumed</td><td>83,280</td><td>275,990</td><td>2,597,398</td><td>18,883,026</td></tr>
</table>
* Data scope: Icheon, Cheongju, Bundang, Seoul (branch office), Wuxi, Chongqing; Bundang and Seoul (branch office) included from 2022
* In general, 1kWh is converted into 3.6MJ, but for facilities in Korea, 1kWh is considered equivalent to 9.6MJ under local energy law.
</td><td>93</td></tr>
<tr><td>Water Management</td><td>(1) Total water withdrawn,
(2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress</td><td>TC-SC-140a.1</td><td>
<table>
<tr><th>Category</th><th>Unit</th><th>2019</th><th>2020</th><th>2021</th><th>2022</th></tr>
<tr><td>Total water withdrawn</td><td rowspan="2">$1,000m^3$</td><td>90,555</td><td>95,715</td><td>103,769</td><td>111,639</td></tr>
<tr><td>Total water consumed</td><td>14,720</td><td>13,418</td><td>17,982</td><td>20,851</td></tr>
<tr><td>Withdrawals with 'High' or above water stress area ratio</td><td rowspan="2">%</td><td>42</td><td>40</td><td>38</td><td>38</td></tr>
<tr><td>Consumption with 'High' or above water stress area ratio</td><td>46</td><td>51</td><td>56</td><td>54</td></tr>
</table>
* Data scope: Icheon, Cheongju, Wuxi, Chongqing
* Regions with "High" water stress: Icheon
* Due to changes in the method of analyzing water stress areas, data on withdrawal and consumption rates for "High" or higher water stress areas from 2019 to 2021 were adjusted.
</td><td>94</td></tr>
<tr><td>Waste Management</td><td>Amount of hazardous waste from manufacturing, percentage recycled</td><td>TC-SC-150a.1</td><td>
<table>
<tr><th>Category</th><th></th><th>Unit</th><th>2019</th><th>2020</th><th>2021</th><th>2022</th></tr>
<tr><td rowspan="2">Amount of hazardous waste from manufacturing</td><td>Domestic</td><td rowspan="2">Ton</td><td>226,639</td><td>220,138</td><td>214,432</td><td>254,961</td></tr>
<tr><td>Overseas</td><td>74,867</td><td>111,589</td><td>139,760</td><td>149,824</td></tr>
<tr><td rowspan="2">Hazardous waste recycling rate</td><td>Domestic</td><td rowspan="2">%</td><td>97.0</td><td>97.4</td><td>98.0</td><td>98.1</td></tr>
<tr><td>Overseas</td><td>69.6</td><td>86.4</td><td>99.8</td><td>99.8</td></tr>
</table>
* Data scope: Icheon, Cheongju, Wuxi, Chongqing
* The scope of hazardous waste calculation varies depending on the waste laws of the country where each facility is located.
</td><td>95</td></tr>
</table>

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<table>
<tr><th>Category</th><th>Index</th><th>Code</th><th>SK hynix's response activities</th><th>Page</th></tr>
<tr><td rowspan="2">Employee Health & Safety</td><td>Description of efforts to assess, monitor, and reduce exposure of employees to human health hazards</td><td>TC-SC-320a.1</td><td>Guided by the principle of "Safety First," SK hynix strives to create a workplace where all employees can work happily. To ensure the safety and health of our employees and those of our suppliers, we have integrated the safety and health management system (ISO 45001/KOSHA 18001), the environmental management system (ISO 14001), and the process safety management system into our Safety, Health, and Environment (SHE) management system. Furthermore, we conduct annual risk assessments to identify and continuously improve potential risk factors in the workplace</td><td>36-38</td></tr>
<tr><td>Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violations</td><td>TC-SC-320a.2</td><td>This is in accordance with "3. Sanction-related Matters (p.374)" in the 2022 Annual Report.</td><td>Annual Report p.374</td></tr>
<tr><td>Recruiting & Managing a Global & Skilled Workforce</td><td>Percentage of employees that are (1) foreign nationals and (2) located offshore</td><td>TC-SC-330a.1</td><td><table><tr><th>Category</th><th>Unit</th><th>2019</th><th>2020</th><th>2021</th><th>2022</th></tr><tr><td>Percentage of foreign employees</td><td rowspan="2">%</td><td>0.2</td><td>0.2</td><td>0.2</td><td>0.2</td></tr><tr><td>Percentage of employees located offshore</td><td>23</td><td>22</td><td>22</td><td>20</td></tr></table>* Foreign national employees are based on our campuses in Korea (Icheon, Cheongju, Bundang).</td><td>96</td></tr>
<tr><td rowspan="2">Product Lifecycle Management</td><td>Percentage of products by revenue that contain IEC 62474 declarable substances</td><td>TC-SC-410a.1</td><td>SK hynix does not use substances in the IEC 62474 Declarable Substance List (DSL), and all substances we use comply with international standards. For more information, please refer to the related page in our Sustainability Reporting System (PRISM ▸ Innovate ▸ Green Technology).</td><td>65-67</td></tr>
<tr><td>Processor energy efficiency at a system-level for: (1) servers, (2) desktops, and (3) laptops</td><td>TC-SC-410a.2</td><td>N/A</td><td>-</td></tr>
<tr><td>Materials Sourcing</td><td>Description of the management of risks associated with the use of critical materials</td><td>TC-SC-440a.1</td><td>SK hynix recognizes that human rights violations, such as labor exploitation, ecosystem damage, and environmental pollution that occur in the mining process of conflict-affected and high-risk areas, are serious problems, and makes every effort to eradicate them. Since we do not directly purchase and procure any minerals used for semiconductor manufacturing from mines but source them through suppliers, we transparently track and manage the entire supply chain under our policy based on the OECD Due Diligence Guidance for responsible minerals sourcing.
SK hynix requires raw material suppliers to sign a Responsible Mineral Use Compliance Pledge, committing not to purchase minerals from conflict-affected and high-risk areas. To ensure compliance, we use the Conflict Minerals Reporting Template (CMRT) provided by the Responsible Minerals Initiative (RMI) to regularly verify information about our mineral supply chain. If a supplier provides false information or fails to take corrective measures for identified risks, SK hynix considers it non-compliant with the pledge and suspends transactions. SK hynix also provides consulting and training to suppliers to raise awareness of responsible minerals sourcing. As of December 2022, there were a total of 231 3TG smelters and refiners, and the RMAP conformance rate was 100%.</td><td>76-77</td></tr>
<tr><td>Intellectual Property Protection & Competitive Behavior</td><td>Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations</td><td>TC-SC-520a.1</td><td>N/A</td><td>-</td></tr>
</table>

GRI Content Index

Statement of use	SK hynix has reported in accordance with the GRI Standards for the period [2022.01.01 ~ 2023.06.30]
GRI 1 used	GRI 1: Foundation 2021
Applicable GRI Sector Standard(s)	N/A

GRI Standards	Disclosures	Page	Notes
GRI 2: General Disclosures 2021	2-1 Organizational details	6	
	2-2 Entities included in the organization's sustainability reporting	2, 91	
	2-3 Reporting period, frequency and contact point	2	
	2-4 Restatements of information	12, 46, 90, 94-95, 97-99, 101, 106	
	2-5 External assurance	2	
	2-6 Activities, value chain and other business relationships	6-7, 76, 78	
	2-7 Employees	N/A	The classification of the current workforce status according to the criteria provided by GRI is difficult, and we have plans to improve this by 2025.
	2-8 Workers who are not employees	99-100	
	2-9 Governance structure and composition	33-35	
	2-10 Nomination and selection of the highest governance body	33	
	2-11 Chair of the highest governance body	33	
	2-12 Role of the highest governance body in overseeing the management of impacts	9-10	For more detailed information, including the agenda of the Sustainable Management Committee, please visit our company's website.
	2-13 Delegation of responsibility for managing impacts	9	The measurement and management of social value (SV) are handled by our Sustainability Management Department.
	2-14 Role of the highest governance body in sustainability reporting	35	
	2-15 Conflicts of interest	33	To prevent conflicts of interest among directors, SK hynix has established Performance Standards for Directors. In case of such conflicts, we disclose them to stakeholders through the Electronic Corporate Disclosure System.
	2-16 Communication of critical concerns	33	
	2-17 Collective knowledge of the highest governance body	33	
	2-18 Evaluation of the performance of the highest governance body	34	
	2-19 Remuneration policies	Annual Report p.339	
	2-20 Process to determine remuneration	33-34	
	2-21 Annual total compensation ratio	91	The increase in compensation amount is not disclosed due to its confidential nature.
	2-22 Statement on sustainable development strategy	5	
	2-23 Policy commitments	11, 15, 36, 39, 49, 53-54	SK hynix reports progress on ethical management to the Audit Committee. For more detailed information, including the agenda of the Audit Committee, please refer to our company's website.
	2-24 Embedding policy commitments	11-12, 15-16, 36-38, 39, 51	
	2-25 Processes to remediate negative impacts	11-12, 16	
	2-26 Mechanisms for seeking advice and raising concerns	11-12	
	2-27 Compliance with laws and regulations	13, 95, Annual Report p.374-377	SK hynix reports the status of sanctions imposed by investigative, judicial, and administrative agencies in our Annual Report. In 2022, there were two cases of fines imposed and four cases of penalties or excess discharge fees. Among them, two fines and one case of penalties or excess discharge fees were related to payments made during the previous reporting period. In this Sustainability Report, we consider fines or penalties of $10,000 or more as significant violations and report them accordingly.
	2-28 Membership associations	111	
	2-29 Approach to stakeholder engagement	21	
	2-30 Collective bargaining agreements	98	

GRI Content Index

GRI Standards	Disclosures	Page	Notes
GRI 3: Material Topics 2021	3-1 Processes to determine material topics	19	
	3-2 List of material topics	20	
Climate Change & GHG Emissions			
GRI 3: Material Topics 2021	3-3 Management of material topics	24, 44-48	
GRI 201: Economic Performance 2016	201-2 Financial implications and other risks and opportunities due to climate change	103-105	
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	92, 106	SK hynix manages its emissions reduction targets based on emissions of 7.55 million tons in the base year of 2020 when we announced our ESG strategy framework, PRISM. The scope of greenhouse gas emissions reporting in this report includes domestic facilities (Icheon, Cheongju, Bundang) and overseas facilities (Wuxi, Chongqing) within our operational control scope.
	305-2 Energy indirect (Scope 2) GHG emissions	92	
	305-3 Other indirect (Scope 3) GHG emissions	92	
	305-4 GHG emissions intensity	93	
	305-5 Reduction of GHG emissions	93	
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	93	
Energy Management, Transition to Renewable/Alternative Energy			
GRI 3: Material Topics 2021	3-3 Management of material topics	20, 24, 46-48	
GRI 302: Energy 2016	302-1 Energy consumption within the organization	46, 93	
	302-3 Energy intensity	93	
	302-4 Reduction of energy consumption	93	
Employee Health & Safety			
GRI 3: Material Topics 2021	3-3 Management of material topics	23, 36-40	
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	36	
	403-3 Occupational health services	39-40	
	403-4 Worker participation, consultation, and communication on occupational health and safety	38	
	403-5 Worker training on occupational health and safety	38	
	403-6 Promotion of worker health	39-40	
Customer Privacy & Data Security			
GRI 3: Material Topics 2021	3-3 Management of material topics	17-18, 20	
	Corporate security enhancement activities	17-18	
Ethical Corporate Behavior			
GRI 3: Material Topics 2021	3-3 Management of material topics	11-12	
GRI 205: Anti-corruption 2016	205-2 Communication and training about anti-corruption policies and procedures	11-12	
Innovation & Technology			
GRI 3: Material Topics 2021	3-3 Management of material topics	24, 68-71	
	R&D investment, personnel, and patent registration status	68, 71	
Public Health Risks			
GRI 3: Material Topics 2021	3-3 Management of material topics	20, 23, 39-40	
	Response to infectious diseases status	40	

GRI Content Index

GRI Standards	Disclosures	Page	Notes
Human Rights			
GRI 3: Material Topics 2021	3-3 Management of material topics	25, 73-74, 82	
GRI 401: Employment 2016	401-3 Parental leave	98	
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	97	As of the end of December 2022, the proportion of women among registered and unregistered executives at SK hynix is 2.1%. By age, 15% are between 30 and 49 years old, and 85% are 50 years old or above.
	405-2 Ratio of basic salary and remuneration of women to men	98	
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child	74, SK hynix Human Rights Report 2022 p.11	
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor		
Sourcing Efficiency/Management			
GRI 3: Material Topics 2021	3-3 Management of material topics	25, 73-77	
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	73, 100	
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screed using social criteria		
Natural Capital			
GRI 3: Material Topics 2021	3-3 Management of material topics	20, 24, 49-55	
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	49-55	
	303-2 Management of water discharge-related impacts	53-55	
	303-3 Water withdrawal	94	
	303-5 Water consumption	94	
	Biodiversity policy and ecosystem management	53-55	

Membership associations

- Compute eXpress Link
- Global Semiconductor Alliance
- IOWN Global Forum
- Information Technology Industry Council
- Joint Electron Device Engineering Council
- Mobile industry processor interface
- Peripheral Component nterconnect Special interest group
- Responsible Business Alliance
- Semiconductor Climate Consortium
- Stanford Center for Image System Engineering
- Semiconductor Equipment and Materials Institute
- Open Access Coalition
- Silicon Integration Initiative
- The Climate Group
- UCI Express
- Universal Flash Storage Association
- Association for Supporting the Sustainable Development Goals for the United Nations
- UN Global Compact Network Korea
- University of New Hampshire Interoperability Labo ratory
- Voluntary Control Council for Interference
- World Semiconductor Trade Statistics
- Gyeonggi Enterprises Federation
- Consultative Group of Manufacturing Safety Managers in Eastern Gyeonggi Province
- Korean National Quality Award-winning Enterprise Council
- Corporate Renewable Electricity Foundation
- Korea Mech. Const. Contractors Association
- Korea Industrial Safety Association Seongnam Branch
- Korea Industrial Safety Association Chungbuk Branch
- The Korea Chamber of Commerce & Industry Carbon Neutral Research Association
- The Institute of Electronics and Information Engineers
- The Korean Society of Occupational and Environmental Medicine
- Korea Handball Federation Industrial Athlete Committee
- Korean Society of Environmental Engineers
- Ministry of Trade, Industry and Energy Emergency Planning Council
- Metropolitan Area Chemical Safety Community Council
- Icheon Chamber of Commerce
- Icheon Chamber of Commece Council of Environmental Safety Department Heads
- Korea Business Council for Sustainable Development
- Korean Association of Occupational Health Nurses
- Cheongju Chamber of Commerce
- Chungbuk Enterprises Federation
- Chungbuk Process Safety Council
- Chungbuk Environmental Engineers Association
- Chungchung Green Company Council
- Chungchung Chemical Safety Community Council

Authorized Economic Operator

Korea Forum of Chief Information Offices

- Korea Investor Relations Service
- Korea Enterprises Federation
- Korea Fair Competition Federation
- The National Academy of Engineering of Korea
- Korea Customs Logistics Association
- The Korean Microelectronic and Packaging Society
- Korea International Trade Association
- Korean Society on Water Environment
- Korea Semiconductor Industry Association
- Consortium of Semiconductor Advanced Research
- The Institute of Semiconductor Test of Korea
- The Korean Association for Industrial Technology Security
- Korea Industrial Technology Association
- Korean Industrial Hygiene Association
- Korea Listed Companies Association
- Korea Fire Safety Institute (Icheon)
- Korea Fire Safety Institute (Cheongju)
- Korea Intellectual Property Association
- Korea Integrated Logistics Association
- Korean Standards Association (Icheon)
- Korean Standards Association (Cheongju)
- The Korean Society for Quality Management
- The Korean Quality Master Association
- Korea Chemicals Management Association

Independent Assurance Statement

LRQA Independent Assurance Statement

Relating to SK hynix Inc.'s Sustainability Report for the calendar year 2022

This Assurance Statement has been prepared for SK hynix Inc. in accordance with our contract but is intended for the readers of this Report.

Terms of engagement

LRQA was commissioned by SK hynix Inc. to provide independent assurance on its 'SK hynix Sustainability Report 2023' ("the report") against the assurance criteria below to a "moderate level of assurance and materiality of professional judgement" using "Accountability's AA1000AS v3", where the scope was a Type 2 engagement.

Our assurance engagement covered SK hynix Inc.'s operations and activities in Korea and China, and specifically the following requirements:

- Evaluating adherence to the AA1000 AccountAbility Principles1 of Inclusivity, Materiality, Responsiveness and Impact
- Confirming that the report is in accordance with GRI Standards 2021[2]
- Evaluating the accuracy and reliability of data and information related to performance indicators on material topics listed in the GRI Content Index.

Our assurance engagement excluded the data and information of SK hynix Inc.'s suppliers, contractors and any third-parties mentioned in the report.

LRQA's responsibility is only to SK hynix Inc. LRQA disclaims any liability or responsibility to others as explained in the end footnote. SK hynix Inc.'s responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems from which the report is derived. Ultimately, the report has been approved by, and remains the responsibility of SK hynix Inc.

LRQA's Opinion

Based on LRQA's approach nothing has come to our attention that would cause us to believe that SK hynix Inc. has not, in all material respects:

- Met the requirements above
- Disclosed accurate and reliable performance data and information as all errors or omissions identified during the assurance engagement were corrected
- Covered all the issues that are important to the stakeholders and readers of this report.

The opinion expressed is formed on the basis of a moderate level of assurance and at the materiality of the professional judgement of the verifier.

Note: The extent of evidence-gathering for a moderate assurance engagement is less than for a high assurance engagement. Moderate assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a moderate assurance engagement is substantially lower than the assurance that would have been obtained had a high assurance engagement been performed.

LRQA's approach

LRQA's assurance engagements are carried out in accordance with our verification procedure. The following tasks though were undertaken as part of the evidence gathering process for this assurance engagement:

- Assessing SK hynix Inc.'s approach to stakeholder engagement to confirm that issues raised by stakeholders were captured correctly. We did this through reviewing documents and associated records.
- Reviewing SK hynix Inc.'s process for identifying and determining material issues to confirm that the right issues were included in their Report. We did this by benchmarking reports written by SK hynix Inc. and its peers to ensure that sector specific issues were included for comparability. We also tested the filters used in determining material issues to evaluate whether SK hynix Inc. makes informed business decisions that may create opportunities that contribute towards sustainable development.
- Auditing SK hynix Inc.'s data management systems to confirm that there were no significant errors, omissions or mis-statements in the report. We did this by reviewing the effectiveness of data handling procedures, instructions and systems, including those for internal verification. We also spoke with those key people responsible for compiling the data and drafting the report.
- Checking whether GHG emissions and energy consumptions in the report were transposed correctly from the GHG inventory which was verified by the third party assurance provider.
- Reviewing additional evidence made available by SK hynix Inc. at its office in Seongnam-si, Gyeonggi-do.
- Checking that the GRI Content Index allows stakeholders to access sustainability indicators.

1 https://www.accountability.org
2 https://www.globalreporting.org

Observations
Further observations and findings, made during the assurance engagement, are:

- Inclusivity:
  We are not aware of any key stakeholder groups that have been excluded from SK hynix Inc. 's stakeholder engagement process.
- Materiality:
  We are not aware of any material issues concerning SK hynix Inc.'s sustainability performance that have been excluded from the report. It should be noted that SK hynix Inc. has established extensive criteria for determining which issue/aspect is material and that these criteria are not biased to the company's management.
- Responsiveness:
  SK hynix Inc. should enhance its process in order to apply the requirements of GRI standards into its own reporting practices by reporting more detailed information as required by GRI standards and effectively implementing the procedure to determine appropriate indicators that represent the material topics.
- Impact:
  SK Hynix Inc. needs to consider additional indicators to report its significant impacts more appropriately in the process of selecting sustainability indicators for disclosures. For example, work-related ill health indicator needs to be considered as a highly relevant reporting indicator on occupational safety and health topics.
- Reliability:
  SK hynix Inc.'s data management system for the selected indicators are well defined.

LRQA's standards, competence and independence
LRQA implements and maintains a comprehensive management system that meets accreditation requirements for ISO 14065 Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition and ISO/IEC 17021 Conformity assessment – Requirements for bodies providing audit and certification of management systems that are at least as demanding as the requirements of the International Standard on Quality Control 1 and comply with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants.

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

This verification engagement is the only work undertaken by LRQA for SK Hynix Inc. and as such does not compromise our independence or impartiality.

Dated: 27 June 2023

Tae-Kyoung Kim Dated: 27 June 2023
LRQA Lead Verifier
On behalf of LRQA
2nd Floor, T Tower, 30, Sowol-ro 2-gil, Jung-gu, Seoul, Republic of Korea
LRQA reference: SEO000000814

AA1000
Licensed Report
000-11/V3-OLR7O

Greenhouse Gas Verification Statement

SK hynix Inc.

Scope:

- The annual GHG emission for the 2022 calendar year inclusive
- The physical scope is limited within the boundary of Domestic Area for SK HYNIX INC in Korea. (purchased products and services in Scope 3 emissions include Wuxi and Chongqing campuses in China)
- GHG emissions for Scope 1(Direct-emissions), Scope 2(Indirect-energy related) and Scope 3(Indirect-emissions from logistic, commuting etc.) as defined in WBCSD/WRI GHG protocol Chapter 4 "Setting Operational Boundaries"
- GWP (The 100-year time horizon global warming potential) applies the IPCC Fifth Assessment Report, 2014 (AR5)

Data Verified:

Scope 1 and Scope 2 GHG emissions of domestic sites in 2022 with GWP of AR5 are as follows.

(Unit: tCO_2e/y)

Scopes \ Sites	Icheon Campus	Cheongju Campus	Boondang Campus	Seoul Shared Office	Sub Total
Direct Emissions (Scope 1)	280,143	159,779	517	12	440,451
In-direct Emissions (Scope 2)	2,898,909	1,630,565	3,727	24	4,533,225
Optional Information (Used the NF_3)	533,118	454,577	–	–	987,695
Total	**3,712,170**	**2,244,921**	**4,244**	**36**	**5,961,371**

Emissions of each greenhouse gas in 2022 with GWP of AR5 are as follows.

(Unit: tCO_2e/y])

GHG	CO_2	CH_4	N_2O	HFC	PFC	SF_6	NF_3	Total
Emissions	4,694,097	1,199	41,447	26,331	176,689	33,913	987,695	**5,961,371**

Scope 3 GHG Emissions in 2022 with GWP of AR5 are as follows and Emission boundaries and calculation methods for each Scope 3 sector are described in the assurance report.

(Unit: tCO_2e/y)

Category		Emissions in 2022
1. Purchased goods and services		2,616,779
3. Fuel-and energy-related activities(not included in scope 1 or scope 2)		526,709
4. Upstream transportation and distribution	Overseas Import	24,803
	Overseas Export	13,634
5. Waste generated in operations		255,903
6. Business travel	Domestic business trip	222
	Overseas business trip	1,717
7. Employee commuting		28,179
9. Downstream transportation and distribution		680
Total		**3,468,626**

bsi. Verification Opinion

GHG Criteria & Protocols used for Verification:

The verification was performed at the request of SK HYNIX INC. using the followings:

- Guideline for Reporting and Certification of Emissions in the Greenhouse Gas Emissions Trading Scheme
- WBCSD/WRI Technical Guidance for Calculating Scope 3 Emissions (version 1.0)
- 2006 IPCC Guidelines _Volume 2_chapter 3 Mobile Combustion
- IPCC Climate Change 2013_chapter 08_Anthropogenic and natural Radiative forcing (AR5)
- ISO14064-1:20218 & ISO 14064-3:2019
- Environmental Product Declaration Assessment Emission Factor – Korea Environmental Industry & Technology Institute, 2021
- EPA Center for Corporate Climate Leadership, Emission Factors for GHG inventories (EPA, 2023)
- BSI GHGEV Manual

The standard confidentiality principle of BSI Group Korea is applied to the all verification activities

Verification Opinion:

BSI Group Korea's verification opinions on the result of carrying out verification in accordance with the GHG criteria and protocols mentioned above are as follows.

- This verification of the sites in Korea were conducted to provide a reasonable level of assurance in accordance with the 'Guideline for Reporting and Certification of Emissions in the Greenhouse Gas Emissions Trading Scheme'.
- Scope 3 emissions have been verified with a limited assurance level.
- Data quality was considered acceptable in meeting the key international principles for greenhouse gas emissions verification.
- No material misstatement during the verification process for emissions was found, it was confirmed that relevant activity data and evidences were properly managed. Therefore, the BSI Group Korea Verification Team provides a verification opinion that is "appropriate".

For and on behalf of BSI:
Issue: 12/06/2023

Managing Director Korea, SeongHwan Lim

Greenhouse Gas Verification Statement

Wuxi site

SGS

Statement of Conformity CN23/00003547

Greenhouse Gas Verification Statement

The inventory of Greenhouse Gas emissions in
01 Jan. 2022 to 31 Dec. 2022 of

SK Hynix semiconductor China Ltd.

Business address: Block K6-3, Block K7, Bonded area, Xinwu District, Wuxi City, Jiangsu Province, P.R China
Organization boundary: Block K6-3, Block K7, Bonded area, Xinwu District, Wuxi City, Jiangsu Province, P.R China

has been verified in accordance with ISO 14064-3:2019 as meeting the requirements of

ISO 14064-1:2018

Direct Emissions [Category 1]
1,505,901.33 tonnes of CO2e
Indirect Emissions from Imported Energy [Category 2]
1,526,421.03 tonnes of CO2e
Indirect Emissions from Transportation [Category 3]
25,571.39 tonnes of CO2e
Indirect Emissions from Products Used by An Organization [Category 4]
5,044.26 tonnes of CO2e
Indirect Emissions Associated with The Use of Products from The Organization [Category 5]
[be determined as non-significant indirect emissions and not quantified]
Indirect Emissions from Other Sources [Category 6]
[be determined as non-significant indirect emissions and not quantified]
Total Emissions Quantified
3,062,938.01 tonnes of CO2e

Authorized by
David Xin
Sr. Director - Knowledge
DATE: 12 Jun. 2023

SGS-CSTC Standards Technical Services Co., Ltd.
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Chongqing site

SGS

声明编码 CN23/00002469

温室气体核查声明

以下组织的 2022 年 1 月 1 日至 2022 年 12 月 31 日
温室气体盘查清册

爱思开海力士半导体(重庆)有限公司

注册地址：重庆市沙坪坝区西永组团 V 分区 V2-4/02
组织边界：中国重庆市沙坪坝区西永组团 V 分区 V2-4/02

已由 SGS 依据 ISO 14064-3:2019 进行了核查并满足以下要求

ISO 14064-1:2018

直接温室气体排放量 [类别 1]
8,710.20 吨二氧化碳当量
来自输入能源的间接温室气体排放量 [类别 2]
0 吨二氧化碳当量
运输产生的间接温室气体排放量 [类别 3]
11,476.98 吨二氧化碳当量
组织使用的产品产生的间接温室气体排放 [类别 4]
191,279.09 吨二氧化碳当量
组织产品的使用有关的间接温室气体排放 [类别 5]
[属于非重大间接排放，未量化]
其他来源的间接温室气体排放 [类别 6]
[属于非重大间接排放，未量化]
经量化的总排放量
211,466.87 吨二氧化碳当量

签署
David Xin
Sr. Director - Knowledge
签署日期：2023 年 4 月 27 日

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SK hynix