# WE DO TECHNOLOGY

SK hynix Sustainability Report 2021





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This report is published as an interactive PDF file for readers to take reference to related sources including our website and videos.











# CEO's Message

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# SK hynix will establish itself as a Global Tech Leader, breaking through challenges with active communication and cooperation to deliver greater and sustainable value

Even amidst the worldwide COVID-19 pandemic in 2020, semiconductors continued to enable technologies of hope that would help us reconnect to life-as-usual. Amid a disruptive and challenging market landscape, SK hynix still achieved meaningful progress in its business with sales of KRW 32 trillion and operating profit of KRW 5 trillion, owing to our sustained development of advanced technologies and flexible response to customer demand.

Meanwhile, we laid the groundwork for our future by signing a deal for Intel's NAND flash memory unit and opening the new, state-of-the-art M16 fabrication plant in 2021 with its dedicated space for EUV(extreme ultra violet) equipment and advanced pollution reduction facilities. We also continue working to set up a semiconductor cluster envisioned in the city of Yongin, Korea, which should serve as our foundation for sustained growth ahead.

In January 2021, we announced 'Social Value 2030(SV 2030)', our mid-long-term plan to create maximum value for societies by achieving Net Zero, stimulating the semiconductor ecosystem, building and supporting a social safety net, and internalizing a corporate culture of diversity and inclusion. On top of cultivating our fundamental strengths as a semiconductor business

and generating financial returns on such, SK hynix tracks our performance in Environmental, Social, and Governance(ESG) and reflects such in our business decisions to help resolve issues of the communities we operate in. Together with all major affiliates of the SK corporate group, SK hynix measures and discloses the Social Value created thus in the prior year, across the three areas of 'indirect economic contribution', 'business-driven social contribution', and 'social contribution via philanthropic programs.'

Going forward, we seek to strengthen our global tech leadership by expanding new forms of cooperation with global ICT players to overcome the technological and business constraints faced by semiconductor companies together. We will actively communicate and collaborate with world-leading businesses to become a true pathfinder that can create our way forward with confidence in this era of Digital Transformation. Furthermore, we will make our best effort to strengthen trust with all stakeholders including our shareholders, customers, and local communities, and to deliver greater and sustainable value beyond financial achievements. We ask for your continued support and interest in this journey. Thank you.



# CEO's Message

[←→] 🏫 🗎

# SK hynix envisions a new leading role with an ESG-focused approach

The prior year's COVID-19 crisis has drastically upended daily life and caused enterprises to question existing business goals. From ensuring employee safety and building social safety nets to preserving the natural environment, various non-financial factors have become imperative to the sustainability of a business, which is now called upon to assume a wider role regarding social responsibility.

SK hynix has proactively responded to this trend: Guided by our management principles, we strive to achieve a Double Bottom Line(DBL) that tracks performance in social value(SV) on top of economic value(EV), as part of a sustained effort to deliver happiness to all stakeholders.

This year, we will take a step further to bolster our ESG management with a more systematic approach to social value creation, as a means to enhance our sustainability. We will weigh all decisions from an Environmental, Social, and Governance perspective and align our business activities to society's changing needs, pushing ourselves as a company to new, greater heights.

At the center of our endeavor is technology. As a leading provider of cutting-edge semiconductors that drive the era of AI and Digital Transformation, SK hynix will use technology to help societies and humanity thrive. In addition to fulfilling our customers' demand for semiconductors, we will work to reduce our environmental footprint including carbon emissions with continuous research and innovation, ultimately establishing an environment-friendly manufacturing process as our standard. Furthermore, we will strengthen the role of our board of directors to ensure transparency and fairness of management, which would allow us to lead in creating a healthy semiconductor ecosystem built on mutual trust.

Our new ESG-focused approach would surely require substantial time and investment. Still, we believe this is 'a path to be taken firmly, and one to be taken first', as we are convinced that only those businesses that echo and respond to society's needs may survive over time and explore opportunities for continued growth.

We invite you to see the detailed plans covered in this 2021 Sustainability Report. Your unwavering interest and support are crucial as we prepare to undergo this new transformation. Thank you.





SK hynix Sustainability Report 2021

ESG Focus

CEO's Message · Corporate Profile · DBL Management · Sustainability Management Value Creation

# **Corporate Profile**



# We Do **Technology**

Technology Innovator for a Better World



#### **Purpose**

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



#### Values

Tenacity & Commitment Advanced Tech. Prosperity Together



#### **Drivers**

Leading Technology Trusted Partnership Shared Social Value

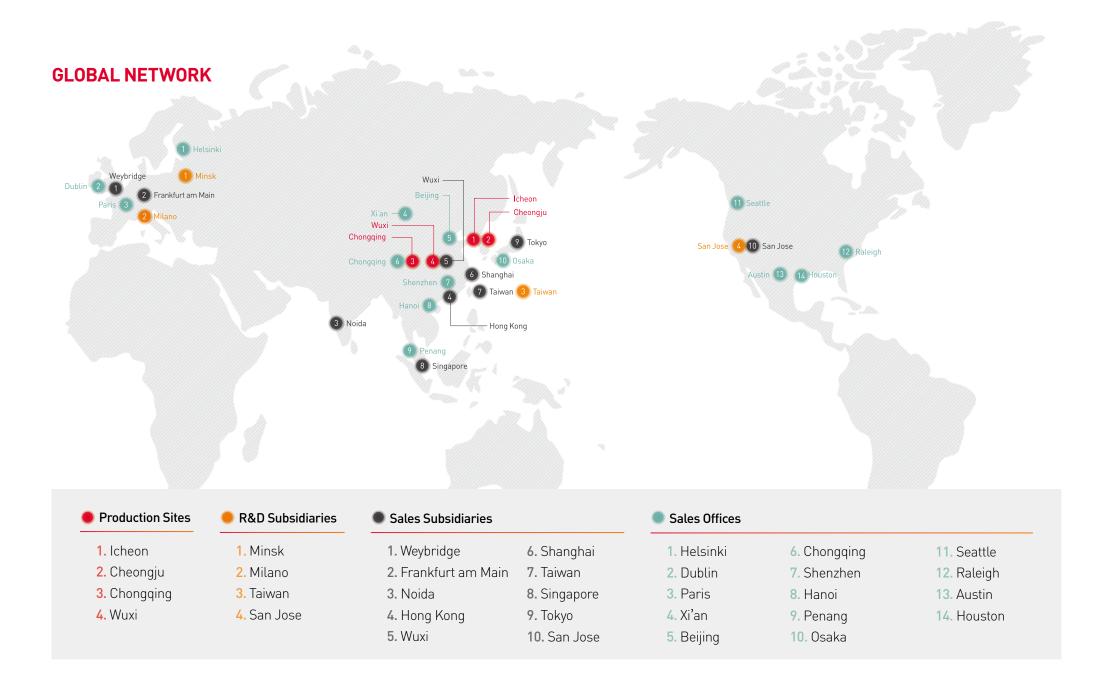
#### A 'Great Company' that Contributes to Humanity and Society with Technology

Semiconductor memory plays a pivotal role in the prospective ICT world. Ever since the great digital transformation spurred by the Fourth Industrial Revolution, semiconductor memory is not only used in personal computers and mobile devices but in leading pioneering technological innovations that elevate our quality of life.

Starting in 1984, SK hynix has solidified its position as the world's top-tier semiconductor supplier with its know-how and technology since its first trial production of the 16Kb SRAM in Korea. Now, beyond the development of high-capacity, high-speed, and lowpower memory solutions, we have been acknowledged with a high level of reliability for technological innovations within the Smart ICT industry.

We aim not only to focus on technological development in response to the growing data generation and consumption prompted by the normalization of remote activities and technological innovations such as 5G and AI, but also to actively address various social issues such as energy deprivations, climate change, and so forth. It is our goal to create a better ICT world by materializing social and current values based on technology and the satisfaction of our members and stakeholders.

Company Name	SK hynix
CE0	Park Jung-ho, Lee Seok-hee
Date Began Semiconductor Business	February 1983
Area of business	Manufacture and sales of semiconductor devices
Headquarters	2091, Gyeongchung-daero, Bubal-eup, Icheon-si, Gyeonggi-do, 17336, Korea
Products and Services	DRAM, NAND Flash, MCP(Multi-Chip Package), CIS(CMOS Image Sensor), etc.





# **DBL Management**

A company can survive and grow only after garnering trust and support from its stakeholders, and to this end, it must simultaneously pursue economic value(EV) and social value(SV) in carrying out its management activities.

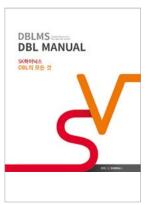
SK hynix places great emphasis on sustainable growth via its core technology and at the same time strives to secure a competitive edge in the industry via its DBL management system that creates both EV and SV.

#### **DBL Goals**

To utilize the DBL Business Model, SK hynix seeks to create SV not only for our existing customers, but also for all stakeholders including suppliers, the community, and the financial society. As a result, addressing social issues with customers, strengthening suppliers' capabilities, and building trust with the community and the financial society has granted us with a stronger foundation for EV.

While identifying and expanding the SV elements within the conventional EV-focused business, we are also working hard to develop a new approach that could strengthen all three factors of ESG, and simultaneously create SV and EV.

#### Establishment of **DBL Management System**







#### Publishing DBL Management System(DBLMS) Guidebook for DBL

• DBLMS is a guidebook containing a concrete action plan for employees' SV creation in line with SK hynix's values.

### Establishing DBL Readiness Index(RI) Diagnostic System

• We measure the DBL awareness and engagement of employees and the organization and implement plans for improvement according to the DBL RI diagnostic system.

#### SV Criteria Reflected in the KPI Evaluation for all Company Executives

• We have included the SV criteria when evaluating corporate executives since 2019 and have expanded this to all corporate executives from 2020 to stress the significance of SV.

#### **Existing Business Model**

Enhancing elements of SV during the creation of EV

- Sustaining EV growth
- Enhancing ESG levels
- Finding and expanding SV factors in preexisting operations



#### **DBL** Business Model

Pursuing EV through creating SV

- Simultaneous creation of both SV and EV
- · Launching of feasible state-of-the-art business model

CEO's Message · Corporate Profile · DBL Management · Sustainability Management Value Creation

#### Mid- to Long-term Propulsion Strategy

SK hynix has pronounced its goal of Social Value 2030 by collecting demands regarding SVs from diverse stakeholders, reflecting the main global social problems, and hence maximizing SV creation. By setting mid- to long-term plans in four major aspects(Green 2030, Advance Together, Social Safety Net, and Corporate Culture), we are striving to match the direction of our SV creation activities with the UN Sustainable Development Goals(SDGs). By making use of external disclosure materials such as the Sustainability Report, we will share our progress with the stakeholders and carry out our tasks with integrity.

> Social Value 2030

#### Green 2030



- 2050 RE100<sup>1</sup> (Establishing a preliminary, achievable goal by 2030)
- - Achieving RE100 for production facilities in China by 2022
- Net Zero by 2050
- Zero additional emission of air pollutants
- Achieving ZWTL Gold(99%) certification
- Increasing water reuse up to 3 times













- Accumulated investment of KRW 3 trillion in technical cooperation
- Increase in sales of partner companies participating in 'WeDoTech' Center









#### Social Safety Net



- · Operate a corporate social responsibility associated system in case of pandemics and natural disasters
- Solving local communities' social problems
- Benefiting 12K people with sharing free meals
- Creating 1,000 jobs for the disabled
- Recruiting 100K people to participate in the Global ICT human resource development program
- Benefiting 100K technologically vulnerable people with various social contributing programs











#### **Corporate Culture**



- Encouraging Employees' Career Development
- Encouraging all employees to participate in at least 200 hours a year of self-development education courses
- Diversified & Inclusive Corporate Culture
- 100% completion of diversity education for all employees
- Expanding female leadership





# Sustainability Management Value Creation

#### **6 Capitals**



#### Total Assets

· Support industrial growth based on the capital of the shareholders and investors



#### Manufacturing

#### **Facilities**

 Enhanced productivity and competitiveness due to relentless investment in infrastructure



#### Intelligence

#### R&D

 Increase in intellectual property assets through open innovation and R&D in pursuit of becoming a global semiconductor company



#### Human Resource

#### Attracting Talents

 Continuous investment in human resources development such as attracting and hiring talents.



#### Eco-friendly Workplace

· Investment and creation of an eco-friendly workplace to reduce environmental impact such as the reduction of greenhouse gas emissions



#### Win-win Relationship Between the Community and Suppliers

 Creating SV based on the win-win relationship between the community, suppliers and other various stakeholders

#### **Process & Method**

# Our Value Chain





Procurement of

Raw Materials &

**Energy Resources** 



Product

Production



Sales & Product

Application





Use

#### Sustainabilty Strategy

#### Green 2030

- 2050 RE100 (Establishing a preliminary, achievable goal by 2030)
- Achieving RE100 for production facilities in China by 2022
- Net Zero by 2050
- · Zero additional emission of air pollutants
- Achieving ZWTL Gold(99%) certification
- Increasing water reuse up to 3 times

#### Advance Together

- · Accumulated investment of KRW 3 trillion in technical cooperation
- Increase in sales of partner companies participating in 'WeDoTech' Center

#### Social Safety Net

- · Operate a corporate social responsibility associated system in case of pandemics and natural disasters
- Solving local communities' social problems

#### Corporate Culture

- · Encouraging Employees' Career Development
- Diversified & Inclusive Corporate Culture



(%, compared to the same period last year)

#### Indirect Economic

#### Contribution Accomplishment KRW 5,373.7 billion

The indirect economic contribution to society by carrying out business activities







KRW 800.3billion Dividend

KRW 3.094.8billion **Employment** 

KRW 1.478.6billion Tax Payment

#### **Business Social** Accomplishment

△KRW 596.9billion

Social values generated from product development / production / sales



KRW 25.5billion Products / Services

KRW 322.4billion Society (Labor / Shared Growth) ∧KRW 944.8billion Environmental (Process)

#### **Social Contribution** Accomplishments

KRW 110.6hillion

Values created through social contribution activities in the community







KRW 36.1 billion Social Contribution

KRW 74.4billion Donation

KRW 0.2billion Volunteer Work

#### EV in 2020

**KRW** 31.900.4 billion

Sales

**KRW** 5.012.6 billion

Operating Income

**KRW 4.7**58.9 billion

Net Profit During the Term

# During times of change, SK hynix creates opportunities out of crises.





## Global Challenge

Response to COVID-19 ·····	1
Response to Climate Change	1





# Response to COVID-19

The COVID-19 pandemic has filled the world with social and economic crises. To overcome this pandemic, SK hynix has established the mission statement of 'protecting health and safety in the workplace and achieving zero shutdown.'

Our Business

ESG Focus

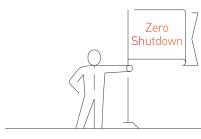
Appendix

#### **COVID-19 Emergency Response System**

In the advent of risks, SK hynix makes quick, field-oriented responses by unifying the command system and sharing information in real-time. Despite COVID-19, SK hynix has managed to carry out periodic meetings using the response to risks system(illustrated below) and has managed all information regarding activities in a systematic way. We note down the inspection items in each branch and set emergency situation scenarios to establish measures in order to appropriately respond.



and sales



Protecting health and safety in the workplace and achieving zero shutdown(2020)

#### COVID-19!

SK hynix takes the following measures to ensure safety for all employees



Infection in the workplace



#### Identification

· Isolate the infected and identify anyone who had been in close contact



#### Route Tracker

· Inspect routes taken by the infected such as cafeteria and transportation routes



#### **Notification & Quarantine**

- Inform all employees via text messages
- Entrance tag suspension and infectious disease prevention and control

Thanks to our systematic response measures, only 0.01% of total employees were exposed to COVID-19.

Response to COVID-19 · Response to Climate Change

#### **Emergency Response Implementation for the Safety of all Employees**

#### **Employee Safety and Health Measures and Activities**

To tighten quarantine measures and exercise emergency scenarios, SK hynix has built the internal infrastructure necessary for remote work conditions and enhanced the cultural practice of meetings that comply with social distancing. Furthermore, we reduced the risk of infections by installing anti-droplet shields and providing masks and hand sanitizers to high-risk facilities throughout the company. Moreover, due to the government's prolonged social distancing measures, we provide our employees with two additional support policies, which are an extension on family vacation days (10 days → 40 days a year) and long service leave(until December 2022). Additionally, employees have access to communication channels to raise questions or concerns related to COVID-19 at any time.

#### **Physical Distancing**

We provide distancing instructions at meetings or during training (guidelines for work and meetings) and create an environment that instills physical distancing at work / rest / dining related facilities.

#### Guidelines on work or meetings

- Meetings consisting of 5 or more are prohibited
- Refrain from holding meetings and making physical contact
- Wear masks at all times

#### Protection Measures for Employees

We are implementing protective measures, including work-from-home, special vacations, and childcare leave, for pregnant employees or workers with underlying illnesses.



Accumulated no. of employees in the headquarters who took paid leave 11,240(2020)

#### **Diversifying Work Methods**

SK hynix, in order to ensue normal operation of global production fields, have created a flexible work environment through active use of work-from-home regulations, video conferences, conference calls, etc. We are operating the work-from-home dedicated security portal 'HyCon' to allow the employees to work-from-home, and have implemented and are now operating the 'remote support system' for cooperation with overseas suppliers.

#### Construction of a Channel for Mental Health Protection

We are offering remote mental health consulting and related contents to help employees and provide them with psychological stability in case of infection or contact with confirmed patients.

Counseling Room



#### Case HyCon, a Work-from-home Portal

In response to COVID-19, SK hynix has launched HyCon, a workfrom-home portal based on Zero-Trust, to implement remote work and take immediate action on security issues and system anomalies that may happen outside company premises. Furthermore, we enhanced the security function which advanced the security anomaly detection scenarios, and created an infrastructure that can control availability relevant to the authority of the system by department and individuals upon a work-from-home environment.



#### Case Remote Support System

With the worldwide spread of COVID-19, suppliers abroad took 2 to 3 weeks to enter Korea, raising issues regarding limitations of international cooperation. Remote conferences often had limitations, due to problems relevant to industrial security for equipment and schedule management. Accordingly, we immersed ourselves in addressing these issues for six months, until we finally established the 'remote support system.' With the help of this system, we were able to address issues related to equipment even in a remote environment.

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Response to COVID-19 · Response to Climate Change

#### 24-hour Emergency Report Channel

SK hynix checks the temperatures of everyone who accesses the company buildings and restricts those with abnormally high temperatures. We also conduct measures such as self-quarantine after taking tests at screening clinics.

In addition, we provide consultation inquiries via our 24-hour emergency channels, and paid leave for employees who visited high-risk areas, had contact with the infected, or showed suspected symptoms.

Due to the prolongation of the COVID-19 pandemic, SK hynix expanded and made improvements on the emergency channels. The COVID-19 emergency channel has gone from telephone calls to KakaoTalk channels, and starting 2021, the 'SK hynix infection report system' has been constructed so that test results and possibilities of coming in contact with the infected can be reported.

SK hynix is in the process of developing the 'infectious disease integrated management portal' to deal with not only COVID-19 but also to preemptively deal with other emerging infectious diseases. We plan to continuously monitor related agencies, such as the WHO(World Health Organization) and global news, for various infectious disease situations, analyzing the collected data and making predictions about the direction of the situations.

#### Enhancement of the COVID-19 Emergency Report Channel



Telephone reports

(In the early phase)

**Improved** speed and efficiency





KakaoTalk channel reports (February 2020)



SK hynix infection report system (January 2021)



SK hynix infectious disease integrated management portal (scheduled)

#### **Prompt and Accurate Communication**

In response to COVID-19, SK hynix communicates in real time with its employees and suppliers via the announcement board, text messages, and e-mail. We raise the employees' reliability in a safe working environment by informing them of the company's situation and measures such as response instructions, occurrence of infections, infection routes, notices, number of those getting tested, and test results. We also provide immediate aid to help speed response in the event of a suspected infection.



#### **COVID-19 Announcement Board**

-Posting the company's response instructions according to the government's response levels (company-wide instructions, instructions on everyday life, etc.)



#### Sending Text Messages in Real Time

-Posting occurrence and route of infections. how to make a report, real-time announcements (number of those tested for the virus, test results, etc.)



#### Case Continuous Communication within the Executives in Charge

Since the outbreak of the pandemic, the SHE executives in charge of health and safety have been making reports regarding COVID-19 responses to their managers via email every 1~2 days. To limit the level of anxiety on our employees, they are being well-informed of the current situation, including the responses taken domestically and in major foreign countries. They received positive feedback for their relentless efforts in responding to COVID-19 related questions on the company-wide communication board called 'Hytong,'

'Despite all the hardships that come in times like these. thank you for constantly keeping in contact.'

'We sympathize with the difficulties. Thank you for sharing detailed information with us about the current situation. I believe that many people wanted not just answers, but wanted to communicate like so. I hope we beat the virus by cheering for each other and making our own share of

- Employee in charge of SHE's comment to a question regarding COVID-19 on HyTong

Response to COVID-19 · Response to Climate Change

#### Collaborative Network with the Community and Specialized Institutions

Uncertain and complex issues such as the COVID-19 pandemic can be overcome through cooperation with various stakeholders. As such, SK hynix is working hard to overcome the pandemic through cooperation with the community as well as specialized companies. We share information related to COVID-19 in real time and provide necessary infectious disease prevention and control supplies, while supporting small business owners and the vulnerable in the region in preparation for a prolonged economic downturn both domestic and abroad. Furthermore, we signed an MOU with the Korea University Medicine to operate an in-house screening clinic to prevent the spread of infectious diseases in the region including our company.



Icheon-Cheonaiu

Collaboration to prevent infection among local residents (Medical assistance, real-time information sharing, etc.)

Negotiation and implementation of a preemptive response rather than government guidelines Support with community infectious disease prevention and control equipment, etc.



Prevention of secondary damage and spread of infection in the community through the operation of a in-house screening clinic



Korea University Medicine

In order to relieve the burden on self-employed people who have suffered from the prolonged COVID-19 pandemic and to help revitalize the local economy by creating a safe environment for consumers, SK hynix provided free quarantine services for small business owners in the Icheon area. In addition, as non-face-to-face classes were conducted, we contributed to creating an online education environment by providing laptops and tablets to children from low-income families who do not have access to the online learning infrastructure. For medical staff and volunteers, we provided emergency relief supplies worth KRW 500 million, including masks, protective glasses, gloves, red ginseng, and hand sanitizers.



Purchased local currency to revitalize the local economy

> KRW 3 billion of local currency



Free infectious disease prevention and control services for small businesses

Donated KRW 200 million for infectious disease prevention and control goods and services



children/youth

**Donated** 700 Tablet PCs



Support for low-income Emergency relief supplies for medical staff / volunteers

> Supplied 10,000 Emergency tool Kits worth KRW 500 million

To minimize the risk of COVID-19, SK hynix is permanently operating an in-house screening clinic. The screening clinic is primarily targeted at the employees of SK hynix and its suppliers. One can make a reservation at the desired date and time through the 'SHE portal,' and the test is completely free. A rapid antigen test or a polymerase chain reaction(PCR) test is performed depending on the presence or absence of symptoms and the situation. The medical staff of Korea University Medicine, consisting of one doctor and four nurses, are stationed at the Icheon office screening clinic to collect samples, conduct contact investigations with confirmed cases, and manage diagnostic kits. At the in-house screening clinic, we are working hard to find the infected promptly to prevent secondary damage, as well as preemptively defend against the spread of infection within the community.

'The semiconductor manufacturing industry is a key industry that represents Korea, and I believe that the most important thing for technological development and business operation is the health and safety of its employees. I am proud to take on an important role in protecting these industrial sites and preventing the spread within the community.'

- Kim Mi-sun, head nurse, Korea University Ansan Hospital

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#### **Business Continuity Plan(BCP) and Risk Management**

SK hynix has established and implemented a Business Continuity Plan(BCP) across all business sites in preparation for emergencies such as disturbances and disasters. In the face of the COVID-19 pandemic, we adopted business continuity quickly and systematically according to our BCP. In addition, the acquisition of ISO 22301, the international standard for business continuity management, shows that the company's crisis management capabilities against various disasters and accidents have been recognized.

#### **BCP Policy**

SK hynix abides by relevant policies and strives to fulfill the responsibilities and duties of each employee to implement the BCP.



#### **BCP Functions by Organization**

As soon as BCP is implemented by the CEO, SK hynix converts the existing organization to a BCP organization and enters a 24-hour emergency system to restore and normalize its business.



#### **Detailed Strategic Directions and Execution Tasks**



#### Secure Execution Power of BCP

- Arrange responsibilities and roles of employees in case of emergency
- Verify BCP system through regular mock training exercise



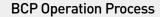
#### Improve Responsiveness to Customers

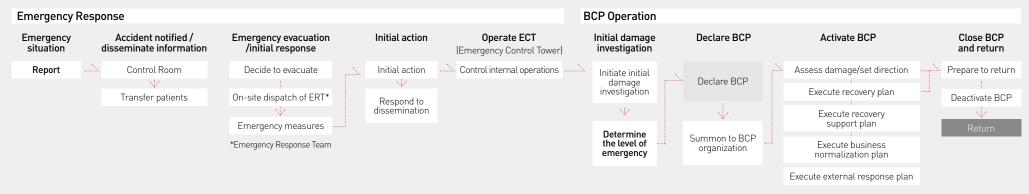
- Acquire global BCP standards by maintaining ISO 22301 certification
- Successful response to customer inquiries and audits



#### Internalize BCP DNA

- Internalize BCP DNA of the employees through cultural diffusion
- Continuous BCP improvement activities





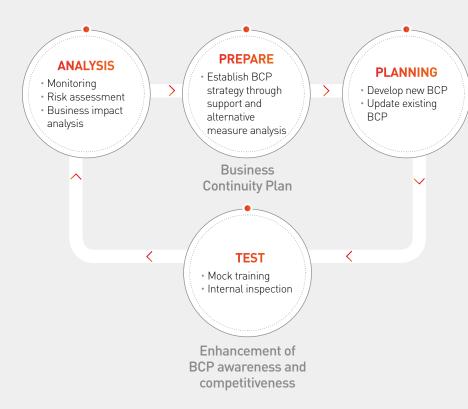
Overview





Global Challenge

#### **BCP Framework**



#### ISO 22301 Certification: International Standard for Business Continuity Management

ISO 22301 is a certification to prove the company's ability to normalize business activities by restoring core business within the shortest duration of time possible in case of interruptions from various disasters and accidents. Accordingly, all business sites of SK hynix have acquired the ISO 22301 certification and are regularly renewing the certificate as well. Based on this, we identify and analyze risk factors and establish relevant strategies, while effectively responding to the crisis and recovery process through an annual company-wide training simulation.

#### Risk Sensitivity Analysis

SK hynix manages a pool of 56 risk factors based on the review of risk factors in Major domestic and overseas laws and regulations.\*We identify core risk factors subject to BCP by analyzing past occurrence types, customer perspectives, semiconductor industry characteristics, geographic characteristics, and global company benchmarking analysis. By conducting analyses on the probability of occurrence and level of influence of core risk factors, a total of 17 domestic business sites, 19 Wuxi business sites, and 16 Chongging business sites manage BCP-targeted risk factors.

\*Includes domestic related laws such as the Framework Act on the Management of Disasters and Safety and the Countermeasures Against Natural Disasters Act, as well as local legal regulations and international standards where overseas production sites are located.

#### Monitoring and Improvement

ISO 22301 requires the maintenance and improvement of BCP activities. For this, SK hynix works hard to monitor their business continuity activities and report corrective measures within the BCP document.

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Response to COVID-19 · Response to Climate Change

Global Challenge



SK hynix defines each BCP-targeted risk factor and identifies potential business impacts to carry out responsive activities. Below is the report on our efforts regarding risk factors of 'logistics network shutdown' and 'computational failure.'

#### BCP Potential Risk Examples Description

#### Name of the Emerging Risk



Post-COVID-19 economic recovery will inevitably increase the demand for goods and transportation. Hence, risk management in logistics network is becoming more important. The post-COVID-19 era and acceleration of the Fourth Industrial Revolution are expected to increase the volume of cargo and transportation demand, causing various changes in the global air cargo market. Without appropriate measures and efforts to expand the logistics infrastructure, unprecedented logistics disruptions may occur.

Our Business

#### Impact

ESG Focus

Appendix

As seen from the case of a grounded ship in the Suez Canal, delays in transit time due to the shutdown of the logistics network can lead to a rapid increase in costs, decrease in customer trust, loss of brand image, and impact on the overall existence of a company. SK hynix, in addition to those at Icheon and Cheongju in Korea, have multiple overseas subsidiaries, so it is necessary to secure air, marine, and land transportation networks for purchasing/manufacturing/sales logistics. Failure to secure a stable logistics network can seriously damage our brand value and reputation, and may even affect the national economy.

#### Mitigating Actions

In preparation for the shutdown of the purchasing/manufacturing/sales logistics network, SK hynix has established a logistics contingency plan and a preemptive response system in accordance to its internal standards. After identifying the amount of inventory/damage, the possibility of emergency transportation is examined, and alternative transportation routes and means are devised to define the role of the organization to prevent issues from occurring, while striving to internalize capabilities and establish and operate a stable logistics network.



Digital data, an essential element in maintaining this modern society, is being utilized faster and in diverse places. Moreover, the emergence of various business systems due to the Fourth Industrial Revolution requires processing of a vast amount of information, and the resulting increase in data packets is emerging as a major risk factor that can cause fatal failures in the overall IT business system of the company.

SK hynix is equipped with a variety of IT business systems, which are being used to process vast amounts of information. If data access is not possible due to a computer failure or a problem in processing information, the plant may shut down, resulting in chaos. Since the use of IT systems is essential for a business to function, if the risk of computer failure is not mitigated, customer trust and corporate value will be lost.

In preparation for unexpected computational failures or disasters, SK hynix implemented server redundancy when building the initial data center and reduced computational risks by classifying possible failure factors for each IT business system and distributing them to individual data centers. Disaster Recovery Plan(DRP) has been launched to mitigate business disruptions and to establish policies and procedures for recovery and business resumption.

Response to COVID-19 · Response to Climate Change

# Response to Climate Change

#### **RE100 Commitment**

SK hynix recognizes the seriousness of climate change and is establishing a long-term plan to build an eco-friendly energy system. Through our commitment to the RE100 initiative in 2020, we vow to use 100% renewable energy by 2050. We have also established a company-wide renewable energy TF to steadily increase the use of RE through RE purchase via the current green premium system, certificate(REC, Renewable Energy Certificates) purchase, third-party PPA, equity investment in RE producers, and construction and operation of RE facilities.







### CDP, Platinum Club

SK hynix maintains the 'Platinum Club,' the Hall of Fame for achieving the highest level in the climate change category of the Carbon Disclosure Project(CDP). The Hall of Fame, which can only be accessed after being selected in the 'Carbon Management Honors Club' for five consecutive years, requires companies to maintain the highest level. SK hynix, which has participated in the CDP since 2007, was the first Korean company to be added to the Hall of Fame in 2013 in recognition of its efforts to mitigate climate change, and has maintained its status for eight years, which is the longest duration among domestic companies, while also maintaining the Platinum Club membership for five years since 2016.

Maintained the CDP Hall of Fame Platinum Club status in Climate Change program



ESG Focus

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#### Decision-making System on Major ESG Issues including Climate Change

SK hynix has established a decision-making system in which the board of directors(BOD) oversees and monitors the top executives' decisions on major ESG issues including climate change. To effectively respond to these issues, we have established ESG Strategy, an ESG-dedicated organization, which directly reports to the CEO. In addition, the ESG Management Committee composed of top executives including the CEO regularly meets throughout the year. The ESG Management Committee holds in-depth discussions on ESG-related issues like climate change, GHG emissions, and water scarcity, and decides strategic direction on these issues, with the various business units collaborating with each other to develop a concrete implementation plans. To foster a robust and independent decision making process, the BOD acts as oversight to ensure ESG decisions made by the ESG Management Committee reflect the long-term ESG pursuits of the company.

#### Governance System on Climate Change



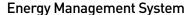


Response to COVID-19 · Response to Climate Change

#### **Climate Change Response System**

Skip to TCFD details

SK hynix Sustainability Report 2021



SK hynix minimizes consumption by managing building and equipment electricity usage in line with the energy management systems standard ISO 50001. Our efforts to comply with the Government's climate change-related regulations and electricity conservation includes developing a GHG measurement system and innovating relevant products.

#### Climate Change Risk and Opportunity Analysis









Classification	Item	Risk factor	Potential financial impact	Opportunity factor	Potential financial impact	Term
Transition risks (transition to	Regulatory and legal risks	GHG emissions trading system	Increase in cost of securing emissions trading	Conserve energy through high- efficiency energy facilities	Reduced cost in energy	Short-term
a low-carbon economy)	tegat i isks		Increase in investment for reduction facilities	entertry energy facilities		Mid-term
		Expansion of renewable energy transition	Increase in energy costs due to renewable energy transition	Reduction in emissions with clean energy	Reduced cost of purchasing certified emission reduction(CER)	Mid- to long-term
	Market risks	Expansion of low-power semiconductor market	Increase in costs due to increased development and manufacturing costs	Marketing through product differentiation	Obtain price premium accompanied by the strengthened reputation	Long-term
	Reputation risks	Unfulfilled stakeholders' expectations	Decrease in customer credibility and competitiveness in attracting talents	Enhanced business reputation	Attract potential customers	Long-term
Physical risk	Weather-related risks including typhoon, flood, drought, heat waves	Unstable utility supply(water / electricity), damage to facilities due to disasters	Financial loss due to delay in production discontinuation, increase in cost of lowrisk factory site	Increased water efficiency and recycling, securing of energy management solutions	Strengthened climate resilience, and reduced recovery costs from disasters	Mid- to long-term

#### Response to the emissions trading and analysis of climate change scenarios

SK hynix reviews climate change scenarios in the Emission Trading Scheme(ETS) task force to trade certified emission reduction(CER). To achieve this, we established a reduction target of 40% by 2022 relative to the BAU emission units in 2016.

#### Development of low-carbon products

Customers' demand for low-power products with less greenhouse gas emissions is increasing due to climate change. In response, SK hynix dedicates itself to developing low-power/high-performance products.

#### Extreme weather response system

Heavy rain, heavy snow, and drought caused by climate change are direct risk factors at semiconductor production facilities, in which power outages and water restrictions may occur. Accordingly, SK hynix continues to increase the water recycling rate and secure power safety net by installing uninterrupted power supplies, central monitoring system, and dual power system.

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#### **Climate Change Response Goals and Activities**

In 2020, SK hynix declared to join the RE100 and vowed to use 100% renewable energy by 2050. Based on this, our goal is to achieve Net Zero by 2050. SK hynix strives to achieve a new goal every year, with an aim to reduce greenhouse gas emissions by 40% from 2018 to 2022(2016 BAU standard emission unit: 29.7tCO₂eq/100 million). The result of this effort has seen greenhouse gas emissions reduced to 23.7tC02eq/100 million, a 20% decrease since the 2016 BAU.

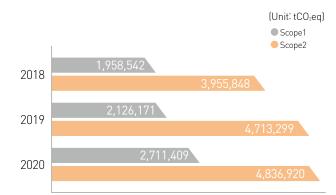
Energy management activities GHG emission management activities



To reduce emission unit by 40% by 2022 (compared to BAU in 2016)



To achieve RE100 for overseas production sites by 2022



2020 activities



Renewable energy production and use 968MWh



Replacing cargo transportation vehicles operated within business sites to electric vehicles



Development of low-power high-efficiency memory

# SK hynix creates corporate value through ESG management.



#### **Our Business**

2020 at a Glance
Advanced Technology for a Better Future
Governance
ESG Management
Human Rights & Labor



SKMS online art competition artwork

Park Young-mi Resilient to COVID-19, SK hynix

'RTC'

Released

world's first

DDR5

Full-scale mass production of

high bandwidth DRAM

'HBM2E'

Developed the industry's highest

'176-layer 4D NAND'

solution fields in the era of big data

Contract to acquire Intel NAND Memory business

SSD, NAND component, Wafer business, etc.

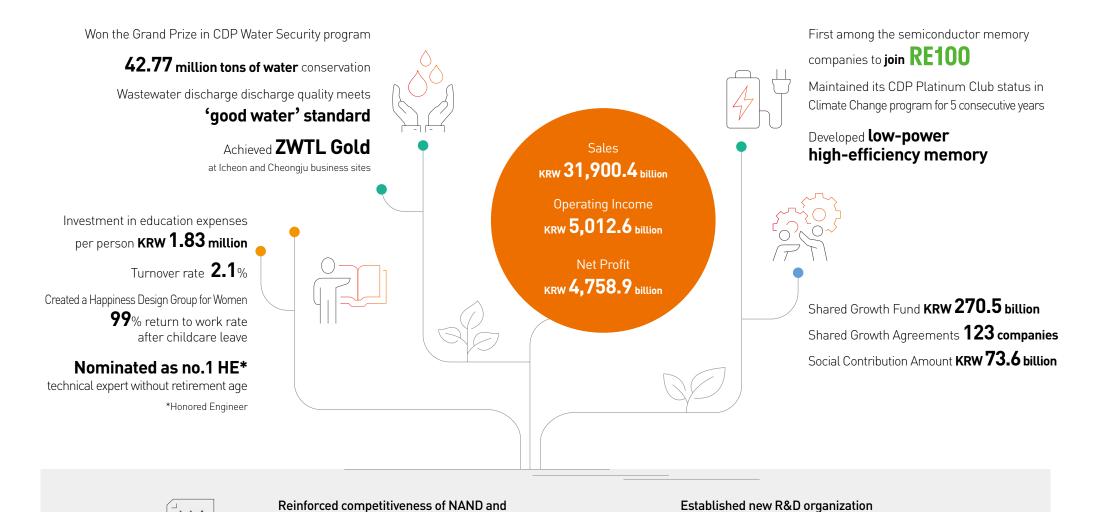
worth USD 9 billion

Appendix

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### 2020 at a Glance

intel



# **SK hynix Activities and Plans**

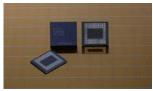
Material Issues <sup>9</sup>	2020 Activities and Achievements	Next Step	SDGs
Talent Attraction & Retention	<ul> <li>Investment in education expenses per person: KRW 1.83 million</li> <li>Creation of 'Happiness Design Group for Women'</li> <li>Turnover rate: 2.1%</li> <li>Selected as no.1 HE technical expert without retirement age</li> </ul>	<ul> <li>Completion rate of employee diversity education(by 2030): 100%</li> <li>Diversification of women's happiness improvement program(by 2021)</li> <li>Achieve 200 hours of employees' total training participation hours per year(by 2030)</li> </ul>	4 BRUTT
Water Usage and Wastewater	<ul> <li>Awarded first prize at CDP Water for best water management</li> <li>42.77 million tons of water conservation(amount that can be used by approximately 400 thousand people in Korea for a year)</li> <li>Wastewater discharge quality meets the criteria for four major management indicators of 'good water' standard</li> </ul>	30% reduction in withdrawals(compared to the estimated withdrawals in 2024, by 2024)     Increase water reuse amount by 3 times(by 2030, compared to 2019)     Meet 'good water' standards for wastewater discharge quality(by 2021)	6 GLIMENT 12 REPORTED WHENCHES
Response to Climate Change	<ul> <li>Declaration of joining the RE100</li> <li>Maintained CDP's Platinum Club for 5 consecutive years</li> <li>Conservation of steam consumption by KRW 7.8 billion and electricity consumption by KRW 3.5 billion through efficiency of process energy</li> </ul>	Achieve RE100(by 2050) Achieve Net Zero(by 2050)	7 amounts 13 ame  (***)
Product Quality	Reduced 83% of customer's major quality issues     Customer satisfaction score 4.6	<ul> <li>Zero customer's major quality issues(by 2021)</li> <li>Maintain customer satisfaction score of 4.5(by 2021)</li> </ul>	12 Greens Notice of the Company Notice of th
Technology and Data Breach	<ul> <li>Renewal of ISO 27001 certification</li> <li>Completion rate of industrial security online education: 100%</li> <li>Data breach: 0 cases</li> <li>Breaches of Customer Privacy: 0 cases</li> </ul>	<ul> <li>Maintain 100% completion rate of employee data security education(by 2021)</li> <li>Maintain 0 cases of key data breach(by 2021)</li> </ul>	8 sourcesson
New Growth Power and Innovative Technologies	<ul> <li>Established new R&amp;D organization 'RTC'</li> <li>Released world's first DDR5</li> <li>Developed industry's first 176-layer 4D NAND</li> </ul>	<ul> <li>Establishment of RTC and R&amp;D cooperation network(by 2021)</li> <li>Continuous development of next-generation technologies in response to big data, AI, 5G, etc.(by 2021)</li> </ul>	8 800 800 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
Compliance	Distribution and education on global compliance guidebooks     O cases of serious law violations	Maintain 0 cases of serious law violations(by 2021)	16 FLOC. ADDRESS RESTRICTION R

2020 at a Glance · Advanced Technology for a Better Future · Governance · ESG Management · Human Rights & Labor

# Advanced Technology for a Better Future

SK hynix is committed to creating a better ICT world through disruptive technologies that make use of Scaling value, Social value, and Smart value, while striving to create EV and SV simultaneously. Due to the COVID-19 pandemic, the ongoing digital transformation of the Fourth Industrial Revolution is accelerating, while data usage is rapidly increasing as remote activities, such as ICT-based distance education and telecommuting, are being practiced more each day. In particular, the development of new technologies, such as 5G, autonomous vehicles, and AI, have triggered an explosive increase in real-time data generation and consumption. As a result, the global data center market continues to grow and the demand for DRAM and NAND, which are essential here, is also expected to increase significantly. In the era of digital transformation,  $\triangle$  social value, and  $\triangle$  smart value will drive the development of semiconductor technology, and SK hynix will ensue various efforts in diverse areas to make this a reality.

#### Scaling Value



18GB LPDDR5 Mobile DRAM that SK hynix mass-produces

#### **DRAM Scaling**

- Overcoming limitations of patterning
- Maintaining cell capacitor capacitance
- Securing technology for low wiring resistance



176-layer 4D NAND based 512Gb TLC that SK hynix invented

#### NAND Stacking

- Securing HARC etching technology
- Securing cell dielectric properties
- Solving the film stress problem

To recognize scaling value, SK hynix carries out innovations in materials and structures for the evolution of DRAM / NAND technology and solves reliability issues, with a goal to respond to the needs of the industry and customers.

#### Social Value

Energy efficiency is emerging as the biggest topic in the data center market, requiring a vast amount of data to be processed in real-time. Processing more data with less electricity can help conserve the planet and solve environmental problems. In this regard, SSD, which is twice as efficient as HDD, is a representative product that technology-based semiconductor companies can provide to protect the global environment. SK hynix expects to reduce 41 million tons of greenhouse gases considering the speed of technological evolution if it is able to replace HDDs installed in all data centers around the world with SSDs by 100% by 2030. SK's unique approach is worth 3.8 billion in terms of monetary value. SK hynix will strive to maximize social values by focusing on technological innovation centered on environmentally friendly energy-efficient products.

#### **Smart Value**

Smart value means to prepare for the new upcoming era by completing an intelligent memory solution that matches the era after the digital transformation. In the future, all devices will be integrated with AI and Smart ICT technology. This refers to the Hyperconnected Era, in which all societies are connected faster with less power consumption due to the convergence of semiconductors, AI, and

communication technologies. SK hynix is currently implementing 'disruptive innovation' in order to prepare for such transition.

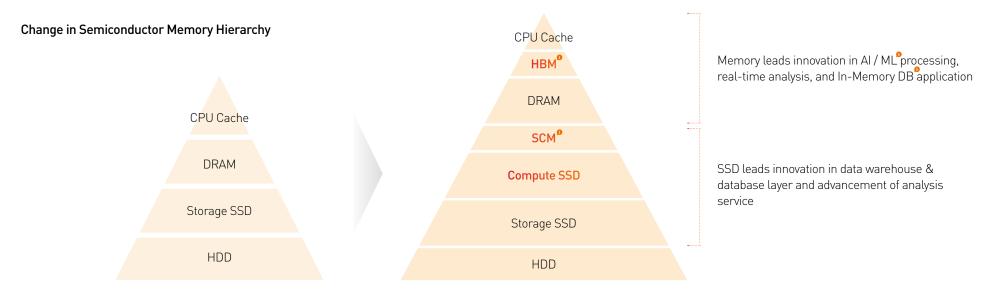
SK hynix is preparing for the future by taking the evolutionary path and the revolutionary path to respond to changes in semiconductor memories. We will continue to incorporate the value of scaling in the conventional memory, to include social value in the next generation memory and intelligent memory, and to contain the value of smart in the post von-Neumann era, where data storage memory and CPU converge, to create Smart Value.

#### **Green Leadership Strategy amid Data-Centric Era**

As the leading memory industry, the shift from computing-centric to data-centric era is providing us with an opportunity to play a pivotal role within this emerging ICT industry. The explosive increase of delay in data transfer, due to the monumental increase in data processing between numerous types of chips in data centers, has made the technology to resolve this issue a core competitive power in leading the industry.

SK hynix is dedicating efforts to improving server efficiency by developing solutions that meet the system requirements, such as the next-generation High Bandwidth Memory(HBM), interface compatible with various processors, and implementation of processing function in memory, by segmenting the hierarchy of semiconductor memory in each stage of data processing—from collection to storage, management, analysis, and valuation.

Based on our technological power, SK hynix will not only secure global leadership in the data-centric era, but also increase efficiency for the future industry including the data center business, and thus ultimately making the environment and society we live in healthier and more enriched.



#### Case Low-power High-efficiency Memory

SK hynix focuses on innovating semiconductor technology with an aim to reduce power consumption and carbon emissions resulting from the non-face-to-face environment and digital transformation.

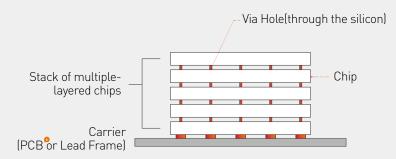
ESG Focus

**Appendix** 

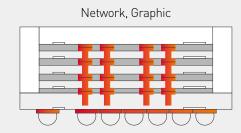
DDR5 has up to 4 times the capacity and approximately 2 times the speed(bandwidth) compared to the previous generation, DDR4. It has a rated voltage of 1.1 V, lower than DDR4(1.2 V), which can reduce power consumption by approximately 20%.

High Bandwidth Memory(HBM) is a product that directly connects to a system on a System on Chip(SoC) without the package assembly process in the die state. This semiconductor is ecofriendly as it does not generate by-products(waste) and consumes less power. HBM2E guarantees competitiveness in power consumption through design innovation and improves heat generation through TSV(Through Silicon Via), and ultimately obtain high-performance, low-power, and low heat generation. SK hynix will continue to strive towards carbon emissions reduction and greater contribution to sales through green technology.

#### Through-silicon Via(TSV) for Realization of High-performance and High-capacity Memory



#### High Bandwidth Memory(HBM) Applied with TSV Technology



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Global Challenge

Our Business 2020 at a Glance · Advanced Technology for a Better Future · Governance · ESG Management · Human Rights & Labor

ESG Focus Appendix

# Governance

Corporate Governance Charter Articles of Incorporation @ Corporate Governance Report

SK hynix aims to enhance our corporate governance by recognizing transparency and independence as important elements in creating long-term value.

#### **Responsible Management Centering** on the BOD

The BOD is the top decision-making authority for key management goals and strives to create a transparent management environment.

By securing the independence of the BOD and reinforcing professionalism for company management, we establish a responsible management system centered on the BOD for the happiness and trust of stakeholders.

#### Corporate Governance Assessment

**(bv the Korea)** Corporate Governance Service(KCGS))

2020

#### Participation Rate of the BOD



#### Strengthening of Management Supervision Through Various committees

With the BOD being the top decision-making authority of SK hynix, we are operating professional committees in line with our various efforts to supervise over the corporate group. The Sustainability Committee was installed in 2018 to deliberate on strategies and outcomes for achieving sustainability management, which is SK hynix's management philosophy. In 2021, the existing Compensation Committee was changed to the Human Resources and Compensation Committee expand the committee's functions by adding human resource-related deliberation matters aside from compensation(such as evaluating the CEO's management performance and his/her remuneration). Also, Strategy Committee was expanded and restructured into the Future Strategy Committee to carry out professional and in-depth discussions on key matters related to management, planning, strategy, investment, etc.

						Committee		
	Name	Title/ Area of Expertise	Gender	Audit Committee <sup>0</sup>	Independent Director Nomination Committee	Sustainability Committee <sup>9</sup>	Human Resources and Compensation Committee	Future Strategy Committee
	Park Jung-ho	CEO and Vice Chairman	Male				0	0
Executive Directors	Lee Seok-hee	CEO and President	Male					0
	Oh Jong-hoon	Head of GSM	Male			$\circ$		
	Ha Yung-ku <sup>0</sup>	Board Chair/ Finance and Management	Male	0	•		0	•
	Song Ho-keun <sup>6</sup>	Sociology	Male		0	•	•	
Independent	Cho Hyun-jae <sup>0</sup>	Media	Male		0	0	0	0
directors	Yoon Tae-hwa	Accounting and Auditing	Male	•			0	
	Shin Chang-hwan	Semiconductor and electrical engineering	Male	0			0	0
	Han Ae-ra	Law	Female	0		0	0	



BOD Regulations @ BOD Code of Conduct @ Performance of Duty Standards of Directors @

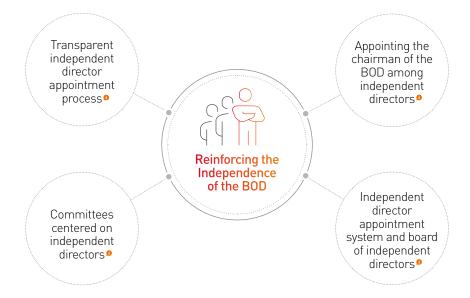
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#### Reinforcing the Independence of the BOD

Overview

SK hynix appoints independent directors who participate in important decision making from independent candidates who are not related to management and shareholders. We disregard candidates who were a full-time member or a non-standing director of SK hynix or its subsidiaries, or a full-time member or a non-standing director within the last two years. Additionally, the director and their family shall not have been inaugurated as a director of the company, parent company, or subsidiary within the last two years, and must not have worked as a partner or worker of an audit institution. Furthermore, they must not be affiliated with major clients or suppliers of SK hynix, and must not cause any conflict of interest that deems the BOD as a non-independent body. In accordance with the duty of loyalty by independent directors as stipulated in the Commercial Act, we are increasing the efficiency of the BOD by limiting the amount of concurrent positions in other companies to two positions.

Out of nine directors, the BOD consists of six independent directors, which is more than 67% of the total. From March 2021, we enhanced the independence even more by establishing a 100% independent director system for the chairman of the BOD and of all committees.



#### Increasing the Professionalism and **Diversity within the BOD**

SK hynix strives to obtain diversity within the BOD so that it can be operated considering the different interests of stakeholders. During the process of appointing a director, various aspects of diversity, such as nationality, gender, religion, and race, are considered, and a person who fits the criteria set by relevant laws are appointed through the decision of the general shareholders' meeting. Moreover, the BOD is composed of directors with experience in various professions, such as management, accounting, finance, law, semiconductors, social policies, and media, and we further expanded our diversity by appointing a female legal expert as our independent director in 2020.

> Expertise enhancement program for the BOD

Independent directors within the BOD

**1**00% Committees with independent director majority

Committees chaired by independent directors

11% Female directors within the BOD

**Appendix** 

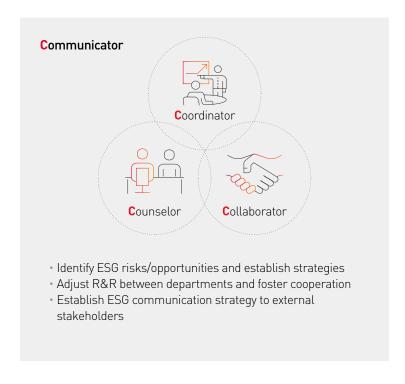
# **ESG Management**

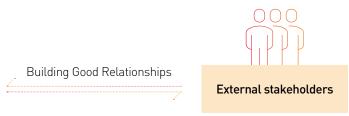
#### **ESG - A Growth Engine for Sustainability**

SK hynix incorporates ESG as a value-creating growth engine for sustainability. The goal of ESG management is to integrate ESG factors into the company's long-term business strategy to manage risks and focus on seizing new business opportunities. To accelerate ESG management, we launched the ESG task force in September 2020, and converted it to an official organization in December of the same year. This new organization, ESG Strategy, carefully considers ESG-related needs from various stakeholders, such as investors, customers, and governments, and analyzes the business issues to comprehensively manage risks and establish mid- to long-term management strategies.

Specifically, the organization proactively recognizes the company-wide ESG risks and opportunities to counsel business units with improvement measures, promotes collaboration between various departments with clearly defined roles and responsibilities(R&R), and coordinates the execution capabilities of ESG management. At the same time, ESG Strategy checks the ESG performance of related departments and communicates with the various stakeholders by disclosing the relevant information to build trust. With ESG Strategy spearheading the company's sustainability initiative, SK hynix will actively pursue ESG management.

#### Roles of ESG Strategy



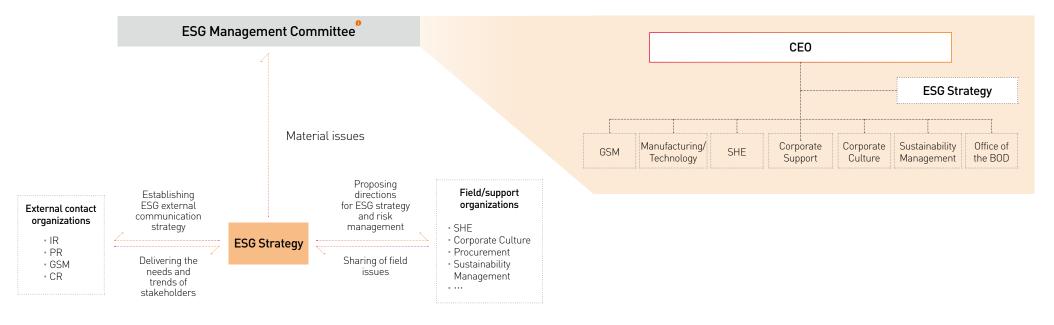




#### **ESG Decision-making System - ESG Management Committee**

From February 2021, SK hynix started to run the ESG Management Committee to identify and proactively respond to ESG risks that may pose a significant impact on financial performance. The committee is also responsible for developing mid- to long-term ESG management strategies and enhancing the execution capabilities. Organized by ESG Strategy, the ESG Management Committee is an important decision-making committee held monthly where members including the CEO and senior executives from key departments such as GSM, Manufacturing/Technology, SHE, Corporate Support, Corporate Culture, Sustainability Management, and Office of the BOD participate. The ESG Management Committee holds indepth discussions on the direction of mid- to long-term ESG strategies such as Net Zero or water management and specific action plans. The key issues discussed among top management in the ESG Management Committee, which establishes corporate-wide ESG strategies, are then submitted as agendas to be further discussed by the Sustainability Management Committee and the BOD to ensure oversight by independent directors. By internalizing a systematic and transparent ESG decision-making system, SK hynix continuously pursues and solidifies sustainability management.

#### ESG decision-making system



# **Human Rights & Labor**

Human Rights Report @

We support and respect human rights in line with international labor standards, such as the Universal Declaration of Human Rights, OECD Guidelines for Multinational Enterprise, the Ten Principles of the UN Global Compact, the UN Convention on the Rights of the Child, and the International Labour Organization (ILO). We are also taking the lead in abiding by global regulations. We are dedicated to comply with the labor-related regulations of each country our business sites are located in and are following the RBA Code of Conduct. For further information, please refer to SK hynix's Human Rights Report.

Appendix

Policy and declaration	Target	Details
Declaration of Sustainability Management	All stakeholders including employees, suppliers, the community, government, NGOs, and customers	We are focusing on practicing sustainable management based on the SK Management System(SKMS), which embodies SK Group's corporate philosophy. We promise to ensure that all our employees, products and services, subsidiaries, contractors, suppliers, and joint ventures comply with the SK hynix Sustainability Guidelines.
Human Rights and Labor Policy	Employees, suppliers	To ensure that all our employees and related companies respect and promote human rights, we implemented the Human Rights and Labor Policy. This Policy specifies detailed guidelines on respect for human rights, forced labor prohibition, child labor prohibition, working hours, responsible mineral sourcing, etc.
SHE Policy and Guidelines	Employees, suppliers	We prioritize the wellness of people and the environment. In this context, we established the four SHE management principles of 'Creating SHE Advanced Management Environment', 'Pursuit of Safety 'Global Top", 'Achieving the top level of health in all positions', 'A Green Healthy Earth with Society'.
Code of Ethics	Employees	We have the Code of Ethics in operation to prohibit offensive, intimidating acts such as workplace sexual harassment and bullying. We regularly revise the Code of Ethics to provide guidance on ethics and integrity for our employees.
Supplier Code of Conduct and Guidelines	Suppliers	We implemented the Supplier Code of Conduct to effectively manage social and environmental risks in relation to our suppliers and made it mandatory to abide by the standard contract forms.
Slavery and Human Trafficking Prevention Statement	Employees, suppliers	We reaffirm our opposition to all forms of forced labor and pledge to strive to prevent forced labor across all our supply chain through the Slavery and Human Trafficking Statement.

#### **Human Rights Risk Management**

SK hynix annually inspects the status of human rights and labor at business sites domestic and abroad based on the RBA Code of Conduct and carries out improvement measures for discovered risks.

Main agent	Key Methods	Details	Results
Pusinoss	Human Rights Impact Assessment	Checked the policies, procedures, and systems for human rights at business sites	<ul><li>Identified potential human rights risks per business site</li><li>Established improvement tasks</li></ul>
Business Sites, Employees	RBA regular and internal screening	<ul> <li>Detailed diagnosis of human rights management risks and follow up actions through regular review in accordance to the RBA principles.</li> <li>Carry out internal screening through document review, on-site verification and interviews to identify the level of human rights related awareness of employees and potential underlying risks.</li> </ul>	• Identified the details of human rights management risks
Suppliers	New assessment and regular assessment	<ul> <li>In the selection and evaluation of new supply chains, evaluation of sustainability in terms of ESG, with due diligence to safety, health, environment, and whether or not hazardous substances were included.</li> <li>Yearly evaluations regarding safety, human rights, and technology to analyze risks.</li> </ul>	• Identified the status for management of new and existing suppliers
	ESG Consulting and RBA Briefing	Manage potential human rights and labor risks(including safety, health, and environment) in the supply chain according to the Supplier Code of Conduct, based on the RBA VAP(Validated Assessment Program)	<ul> <li>Enhanced suppliers' understanding of RBA VAP requirements</li> <li>Recommended solutions and monitored compliance targeting suppliers that have discovered risks</li> </ul>

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#### **Employee Human Rights**

#### **Human Rights Education for Employees**

SK hynix offers human rights education to respects employee's human rights and raise awareness. The employees are provided with compulsory education in addition to online human rights education by the UN Global Compact Network Korea, further expanding their awareness on human rights risk management in line with international standards.

#### Human Rights Education Programs for Employees

Prevention of Sexual Harassment in the Workplace	Disability Awareness training in the Workplace	Routine Employee Safety and Health Education	Ethical Management Education	Corporate Security Education
Guideline of Sexual Harassment Prohibition	Enhanced Awareness of the Disabled	Employee Safety and Accident Management	Workplace bullying prevention, whistleblowing, and grievance resolution	Guideline of Personal Information Protection
	Com	pany Wide Mandatory Ti	raining	

#### Whistleblowing Channels and Grievance Procedures

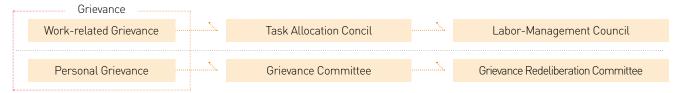
Consulting/reporting of human rights and ethical management relevant issue

SK hynix operates 'the Ethics Counseling Center' on our intranet, which can be easily accessed by our employees to report human rights issues anonymously. All reports are investigated and handled based on relevant standards and guidelines. We also offer our own whistleblowing channel for workplace sexual harassment named Dodream to encourage our employees to join in our efforts to combat sexual harassment. The Labor-Management Council and the Grievance Committee are also available to resolve grievance among the employees.

#### Report Handling Procedures



#### **Grievance Procedures**





#### Case Open Counseling Office for Employee Counseling

We operate the Open Counseling Office to help resolve employees' grievances and build a more pleasant working environment. This Office is dedicated to employee grievances concerning organizational units and supervisors and deals with workplace sexual harassment and bullying, stress due to the incompatibility with the organizational culture, and relationships with other employees. Psychological tests and counseling services are offered by professional

full-time counselors. as well as guidance on reporting and follow-up procedures for victims. All personal information and counseling details are kept confidential



# SK hynix manages key material ESG issues.





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SKMS online art competition artwork

Yoon Hae-ri Together with Stakeholders, SKMS

Creating a Healthier Future Through Systematic Climate Change Response

Green Management · Talent Management · R&D and Quality · Corporate Security · Ethical Management and Compliance · Safety and Health · Responsible Supply Chain · Social Contribution

# ESG Focus1. Green Management

#### Link to SDGs









Response to Climate Change issues

Since the Paris Agreement, countries over the world submitted their greenhouse gas(GHG) reduction goals to the UN in 2020 and initiated reduction efforts starting in 2021. Reducing carbon emission has become the key agenda for every company. Semiconductor industries that use precision equipment need to respond promptly due to their high dependency on unexpected factors, such as blackouts or water shortages from climate-related natural disasters.

#### Our Approach

With the declaration of the 'Green 2030', SK hynix is striving to develop an eco-friendly production system. From manufacturing to product use, we plan to set up energy efficiency goals and increase the use of renewable energy to reduce direct and indirect greenhouse gas emissions and energy use.



#### **Environmental Management System**

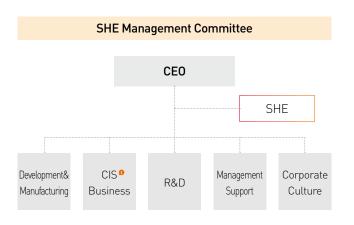
#### **Environmental Management System**

SK hynix has obtained an environmental management standard with its systematic management system. Through ISO 14001 certification, we operate an environmental management system that meets the requirements of local and foreign regulatory clients, and establish operational policies and review compliance on a guarterly basis for chemical management, water and air pollutant emissions, waste disposal, and energy management.

In January 2021, we acknowledged society's environmental issues and declared SV 2030 including the environmental sector, to fulfill corporate social responsibility. In particular, the Green 2030 roadmap is centered on mid-to-long-term goals such as increasing water reuse, obtaining a Zero Waste to Landfill(ZWTL) gold rating, and implementing RE100, and contributing to solving social and environmental problems through the quantified implementation of each goal.

#### **SHE Management Committee**

SHE Management Committee is a conference that quickly determines the direction of operations on environmental and health and safety issues. It is held regularly once a month under the supervision of the SHE organization and discusses risks and opportunities that may arise from changes in related laws and policies. By focusing on SHE operational strategies and execution stage issues, we are enhancing SHE leadership and execution by creating an environment in which SHE can be considered during policy-making.



#### Roles

- Strengthen execution by discussing management operational strategies and implementation phase issues and improvement requirements aligned with SHE policies

#### Major Agendas

- Response to strengthened SHE policies
- Measures to manage water quality and water conservation
- Measures to manage atmosphere and GHG emissions
- Discussions on current SHE management agendas, such as hazardous substance management measures



#### **Environmental Management System** Certifications

Icheon	Cheongju	Wuxi	Chongqing
(Valid until)	(Valid until)	(Valid until)	(Valid until)
~	~	~	~
2023.01.30	2023.01.30	2021.08.14	2022.01.18

#### **SHE Advisory Committee**

The SHE Advisory Committee is a committee of academics and external institutions with technical experts that also serves as an external communication channel. SK hynix's level of trust in SHE activities is increasing while minimizing all risks associated with SHE operations.

Global Challenge

Green Management · Talent Management · R&D and Quality · Corporate Security · Ethical Management and Compliance · Safety and Health · Responsible Supply Chain · Social Contribution

ESG Focus

# **Energy Management**

#### Laying the Foundations to Achieve RE100 by 2050

Since joining the RE100 in 2020, SK hynix has been striving to achieve RE100 by 2050. To test and apply renewable energy, we estalished the TF in January 2020, including a Chinese production site, to review local policies and renewable energy procurement measures. In Korea, we are actively working to networking with related organizations by participating in meetings on the government's renewable energy policy and presenting opinions from the industry.

## **Energy Conservation with Renewable Energy**

In order to conserve energy at the workplace, solar power generation facilities(capacity 641kW) and small hydropower generators(capacity 45kW) were installed at the Icheon workplace. About 793MWh of electricity was produced in 2020 through solar power an was used for generating electricity and power for restaurants inside the building. Also, we used small hydropower generated from the elevation difference underground near the Icheon business site's wastewater treatment site to produce and use a total of 174 MWh electricity.





**793**MWh

Solar power plant generation Small hydropower generation [2020]

#### **Energy Use System Optimization at Business Sites**

Semiconductor plants operate numerous equipment for 24 hours and consume vast amounts of electricity in the process of cooling. Therefore, we are trying to reduce greenhouse gas emissions by preventing energy leaks and reducing electricity consumption by optimizing the energy use system. Since acquiring the Energy Management System(ISO 50001) in 2014, an international framework for an eco-friendly energy management, the company has been using energy portals to monitor energy usage and manage performance indicators.

A major example of ISO 50001 leading to improvements in operations and actual energy savings was the Out Air Conditioner(OAC) energy efficiency improvement, which conserved power and energy costs.

#### Major Cases of Process Energy Efficiency(Icheon / Cheongju)

Case	Details	Performance
Optimal operation of OAC(steam)	Al analysis using previous data to derive an OAC optimal operating model.	Conserved KRW 3.62 billion of steam usage
Optimal operation of OAC(electricity)		Conserved KRW 790 million of electricity
Waste heat recovery system Optimal operation(steam)	Applied optimal energy saving operation system based on data analysis from freezer / cooling tower / waste heat	Conserved KRW 4.18 billion of steam usage
Freezing system Optimal operation(electricity)		Conserved KRW 2.72 billion of electricity



Installation of solar power plant in Icheon business site's package & test factory



Installation of small hydro-power generator in the basement near the Icheon business site's wastewater treatment plant

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Appendix



Green Management · Talent Management · R&D and Quality · Corporate Security · Ethical Management and Compliance · Safety and Health · Responsible Supply Chain · Social Contribution

# **GHG and Air Pollutant Management**

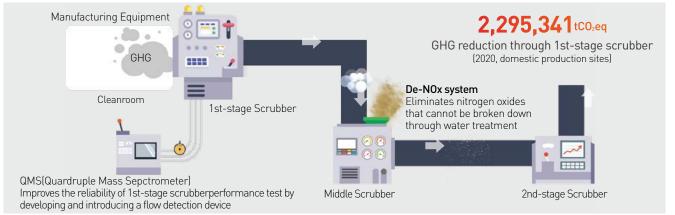
# Reducing Process Gas and Fine Dust through Technological Development

Semiconductor manufacturing equipment, where various kinds of chemicals are used, uses process gas, which produces greenhouse gases. SK hynix decomposes process gas after 3 steps of processing from scrubbers. In 2020, the De-NOx system, a technology that removes nitrogen oxides that's also the cause of fine dust, has been developed to handle nitrogen oxides that couldn't be removed by the existing treatment method alone. We plan to expand the scope the new Fab M16 and Cheongju business site. In addition, we have signed an 'Agreement on voluntary reduction of high-concentration seasonal fine dust' with the Geumgang Basin Environment Agency and the Ministry of Environment. Following the agreement, SK hynix has strengthened its standards for allowing fine dust emissions during high-concentration seasonal periods. We set our own concentration standards and actively respond to the issuance of emergency reduction measures for fine dust.

#### Replacing Cargo Transportation Vehicles with EVs

More than 100 large diesel vehicles, inside and outside the workplace, travel more than 1,600 times a day and 23,000 kilometers a day, emitting exhaust fumes amounting to 6 tons daily and 2,600 tons annually. To address this issue, we have replaced freight vehicles in the workplace with electric vehicles in 2020. First, we decided to phase in replacement of small 1-ton trucks that correspond to 40 out of a total of 100 vehicles and selected and replaced 10 vehicles with the most deteriorated exhaustion system. Currently, seven electric cars are operating at the Icheon business site and three electric cars at the Cheongju business site. Within the next five years, all 1-ton vehicles in the workplace will be replaced with electric vehicles, and 400 tons of greenhouse gases will be reduced annually.

#### Eco-friendly Scrubber that Reduces GHG



#### Response Activities of Overseas Production Sites

The Wuxi business site establishes energy and greenhouse gas reduction targets early every year and actively promotes reduction activities in cooperation with the supervising department. As a result of activities such as replacing LED lights in the outer area and improving power optimization for primary scrubbers, we reduced greenhouse gas emissions by 1200tCO2eg. Additionally, we have launched an organic waste disposal facility in 2020 and reduced air pollutant emissions by collecting all waste during the production process.

Chongging's business site is participating in the headquarters' renewable energy TF to review how to achieve RE100. In 2020, we increased the utilization rate of hydropower to 35.5%, and reduced electricity usage by 901,788kWh by replacing unnecessary lights with lowenergy ones. Moreover, one boiler was converted into a low nitrogen combustion furnace in 2019 to reduce air pollutant emissions, and four additional boilers were remodeled to increase smoke circulation pipes in 2020. As a result, nitrogen oxide emissions were reduced by 1,479kg by lowering the concentration of nitrogen oxides from 60 to 80mg/m³ to 50mg/m³. Furthermore, we have launched two carbon disposal facilities to dispose of organic and acid waste since October 2020.

Link to SDGs



# Recognizing the Value of a Virtuous Cycle and **Taking the Lead in Water Management**

Water usage and wastewater issue

Water is an essential resource for cleaning before and after the semiconductor manufacturing process, therefore a vast amount of water is needed to operate the plant. Some of SK hynix's workplaces are located in the 'High' water stress area designated by the World Resources Institute, thus making a stable water supply management essential. Since used water is discharged into local rivers, additional effort is required to fulfill responsibility for water management, such as paying more attention to water quality management.

#### Our Approach

SK hynix considers water as 'rice in the semiconductor industry' and comprehensively manages water supply from the manufacturing process to wastewater treatment. We maintain a stable source of water, while treating wastewater safely with a system that includes altitude treatment. Furthermore, we have established a system that allows water reuse through the process in the wastewater treatment plant and supplied it to places we deemed necessary. For efficient water management, we will evaluate the impact of production, distribution, use, and disposal of products, and establish a definition of water within the semiconductor industry through the World Semiconductor Council(WSC) and lead the declaration of water reuse joint goals.

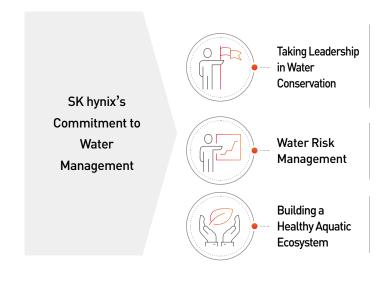


Wastewater treatment plant(independent from this article)

**Appendix** 

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# Water Management Strategies and Goals



- Proactively apply water usage conservation technologies and become a leader in water management through continuous implementation of conservation activities.
- · We will consider water conservation and sustainability as the top priority for employees to recognize water conservation as part of the corporate culture.
- · Through water management and product manufacturing process, we will take the lead in water management technology that comes along with water conservation culture.
- · We will evaluate the impact of water that may come from business operations and set up a response scenario to minimize risks in the event of an emergency.
- · We will set up goals to maximize water reuse and continuously expand facility investment and operation rate to achieve such goals.
- · We will check the status of the water supplied through the real-time monitoring system and respond to water risks.
- · We will strictly manage and maintain the wastewater discharge quality to create a habitat for various species, such as flora, mammals, and bird to thrive in.
- Through periodic aquatic ecosystem monitoring, we will identify and improve the impact of wastewater discharge to the surrounding ecosystems.
- Through research on biodiversity, we will create a healthy environment that coexists with the community.

#### Strategies & Goals

#### **Strategies** 2020 Results Goals Withdrawals Reduced by 29.7% Withdrawals Reduction by 30% Taking Leadership in Water Conservation (Expected withdrawals in 2020: 136.2 million tons/year (Expected withdrawals in 2024: 189.93 million tons/year Reduction in water withdrawals<sup>11</sup> Actual withdrawals goal by 2024: 132.95 million tons/year)<sup>21</sup> Actual withdrawals in 2020: 95.71 million tons/year) Water Risk Management Water Reuse Amount: 26.93 million tons/year Increase Water Reuse by 3 times Increase in water reuse (Goal: 25 million tons/year) (Compared to 2019, by 2030) Satisfied 4 major management indices for 'Good Water' Continue to Manage 'Good Water' Below Target Building a Healthy Aquatic Ecosystem (COD below 5, BOD below 3, SS below 25, and T-P below 0.1 mg/L) Acquired wastewater discharge standards Concentration 2) Estimated mid- to long-term withdrawals 1) Including overseas production sites

(Unit: mg/L)

4.13

2.48

2.01

0.03

2020

Green Management · Talent Management · R&D and Quality · Corporate Security · Ethical Management and Compliance · Safety and Health · Responsible Supply Chain · Social Contribution

ESG Focus

# Major Achievements of the Water Management Strategy



#### Reduction in Water Withdrawals

SK hynix prioritizes stable water supply in the semiconductor production process and manages water withdrawals as one of the ways to resolve water shortage. With the expansion of the company s production facilities, the total amount of withdrawals is increasing each year, but efforts to conserve water usage and increase water reuse can slow down the withdrawal rate. In 2019, the withdrawal increased by 12%(+9.72 million tons/year) compared to the previous year, while it only increased 6% in 2020(+5.16 million tons/year), which is about half of the increase rate from the previous years.



\* Including overseas production sites



#### Increase in Water Reuse

As of the end of 2020, the domestic production site's wastewater reuse system reached a total capacity of 15.34 million tons/year(41,920 tons/day), and a total of 26.93 million tons/year of water was reused at domestic production sites alone, including the enhanced operation rate of the system and the reuse of UPW.9

At overseas production sites, the water reuse rate for external facilities increased by 24% YOY in Wuxi, while the UPW reuse rate increased by 79% YOY in Chongging, thus reusing a total of 13.55 million tons/year of water. In 2020, domestic and overseas production sites combined reused a total of 40.49 million tons/year of water.



#### Acquired wastewater discharge standards

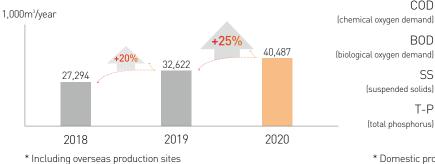
SK hynix is striving to manage the water quality with the goal of recharging water withdrawn from the community to its original state. In order to preserve the ecological environment of local rivers where wastewater discharge flows in, domestic production sites sites have set and strictly adhere to the specific goals of discharging to the standard of 'good water' in accordance with Article 2 of the Enforcement Decree of the Framework Act on Environmental Policy. The management standards of the four indicators in measuring wastewater discharge quality of good water is to maintain below the standards(COD 5 mg/L, BOD 3 mg/L, SS 25 mg/L, and T-P 0.1 mg/L).

4.33

3.17

1.95

0.03





4.01

3.60

2.29

0.04

\* Domestic production sites

COD

BOD

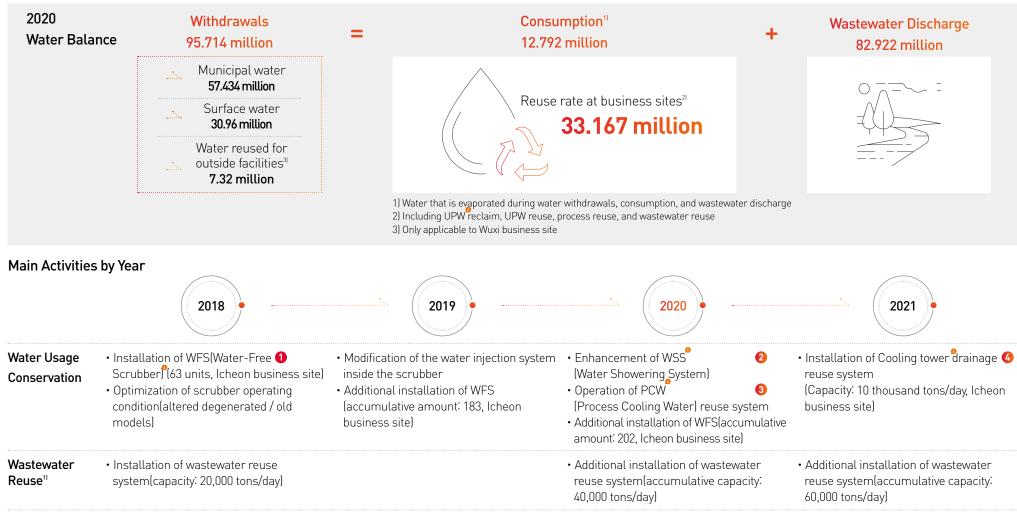
SS

(suspended solids)

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**Appendix** 

# Taking Leadership in Water Conservation and Water Risk Management



1) Icheon business site

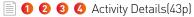










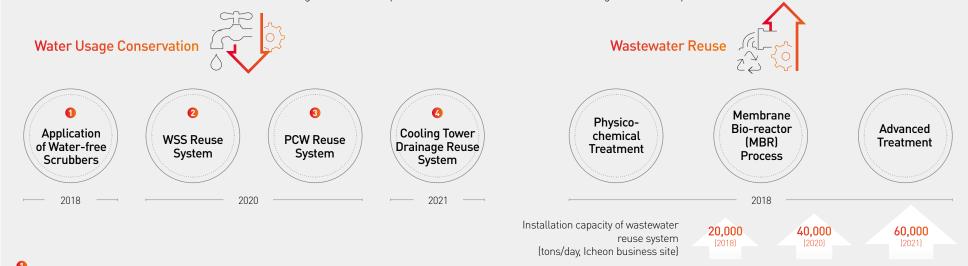


# Taking Leadership in Water Conservation and Water Risk Management



#### Case Water and Wastewater Reduction TF Activities

SK hynix not only focuses on conserving water usage itself but also on reuse after wastewater treatment through efforts to conserve water and establish wastewater reuse systems. The water and wastewater conservation TF, which consists of managers from the departments related to water use and management, is a representative case.



In 2018, we developed water-free scrubbers\* to compensate for the disadvantage of a scrubber that consumes a large amount of water from removing processed gases.

23

In 2020, we applied the process of recycling wastewater discharge from the Water Showering System(WSS)\* as well as establishing the Process Cooling Water(PCW)\* reuse system that recycles sewage by adjusting the PCW pipes.

From 2021, we plan to conserve water usage by reusing the drain from cooling towers and establishing the 'Cooling Tower Drainage Reuse System'.

The wastewater reuse system is being supplied according to the water quality requirements after processing industrial water in treatment plants.

Wastewater treatment is largely categorized into three steps: physico-chemical treatment that eliminates dissolved impurities through condensation and precipitation; membrane bio-reactor(MBR) process that combines biological treatment with a membrane filter; and advanced treatment that eliminates residual pollutants through activated carbon filtration, total phosphorous(T-P) treatment, and ozone treatment.

We added ultra filtration(UF) and reverse osmosis(RO) processes to the three steps to produce and supply reused water with optimal quality.

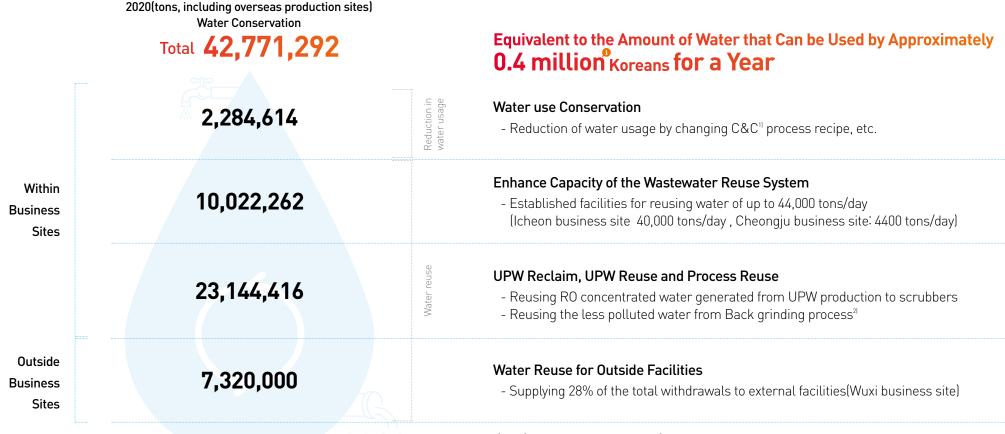
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**Appendix** 

# Taking Leadership in Water Conservation and Water Risk Management

#### Water Conservation Outcome

In 2020, we saved a total of 42.77 million tons of waters through activities surrounding water conservation and wastewater reuse. We will continue to conserve water by increasing the capacity of the wastewater reuse system and by installing a cooling tower drainage reuse system.



<sup>1)</sup> CMP(Chemical Mechanical Polishing) & Cleaning

<sup>2)</sup> One of the post-semiconductor processes is the process of thinning the back of a wafer to make the wafer the thickness suitable for the package process and characteristics

#### Building a Healthy Aquatic Ecosystem

#### Strict Management to Minimize Water Footprint

SK hynix raises water utilization and maintains treatment process to the highest standard. BOD, a major water quality indicator among legal standards, is managed below 20% of the legal standard and we will continue to make more investments and focus on maintenance.

SK hynix actively uses the life-cycle assessment(LCA) in water management. The entire process evaluates the environmental impact by considering the life cycle of a product from production to distribution, use, and disposal. Accordingly, we were given the water footprint certification by the Ministry of Environment based on the assessment. We aim to obtain more certifications on eco-friendly products by identifying improvements in water usage and environmental impact throughout the entire life cycle of our products.



#### Biodiversity Conservation through Monitoring Aquatic Ecosystem

SK hynix's water management stretches from business sites to the community. Since 2019, we have been monitoring the aquatic ecosystem of a total of five locations, including Jukdangcheon Stream, a local river, and Bokhacheon Stream, which joins the Namhan River. In addition to water quality, we monitor the riverbed's physical environments such as sediments (the floor of a river's water course in a certain direction), topographical structures, structures, and aquatic ecosystems, such as plants and mammals in real time. This is to preserve the ecological environment by understanding the impact of operating business sites within the aquatic ecosystem. Through aquatic ecosystem monitoring, we monitor ecological changes compared to reference streams in accordance with the Natural Environmental Survey Guidelines (National Institute of Ecology, 2015) and the National Aquatic System Health Survey and Assessment Guidelines (National Institute of Environmental Research, 2016). Biodiversity near business sites is indicated based on streams. Various species including flora, mammals, and birds inhabit Jukdangcheon Stream compared to Jangnokcheon and Wonducheon Streams that are reference rivers, and the habitat for legally protected species, such as the Eurasian otter, leopard cat and kestrel, have been identified. As river temperature is one of the most important factors to maintain biodiversity, SK hynix spares no effort to reduce water temperature changes. Temperature control facilities are installed to lower the temperature of wastewater, and we are making continuous efforts to preserve biodiversity in the ecosystem and to minimize the impact of wastewater discharge by measuring the water temperature from the outlet to the entire section of Jukdangcheon Stream.



# Case Eurasian Otter in Jukdangcheon Stream

In July 2020, we have confirmed the inhabitation of the Eurasian Otter(Lutra Lutra), Class I Endangered Species and Natural Monument No. 330 of Korea, in Jukdangcheon Stream, where wastewater discharge from SK hynix's Icheon business site flows into. In 2019, we conducted an ecological survey of rivers near the Icheon business site on a guarterly basis and we applied stricter discharge standards compared to the national water quality standard. To minimize the impact on rivers and enhance ecosystem diversity, we measure and manage river water quality once a month and changes in aquatic ecosystem once a quarter. We will strive to preserve aquatic ecosystems through continuous monitoring and environmental impact monitoring and analysis.





ESG Focus

# Water Stress Management

SK hynix identified the regions that were experiencing water scarcity based on the Intergovernmental Panel on Climate Change(IPCC) research results in its Sustainability Report 2018 and disclosed that none of its business sites were applicable. However, beginning this year, we will be identifying areas with high water stress as suggested by WRI's Water Risk Atlas in accordance with the Sustainability Accounting Standards Board(SASB) standards and have confirmed that Icheon in Korea and Wuxi in China are applicable. Among the five stages of water stress levels(low, low-medium, medium-high, high, and extremely high), both Icheon and Wuxi business sites were categorized as 'high' level stages.





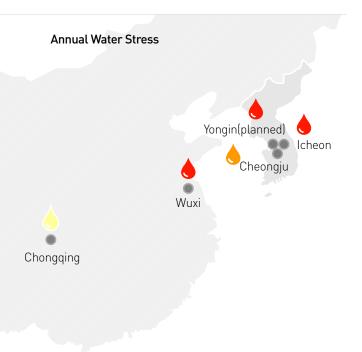








<sup>\*</sup> Water stress: An index that represents the yearly proportion of usable water and the demand of water. Higher numbers mean higher level of water scarcity.



#### Source: Water Risk Atlas from World Resources Institute

# 'High' Region | Icheon Business Site

The Icheon business site is working to further increase water reuse to manage withdrawals. As of 2020, Icheon plans to expand the wastewater reuse facility capacity from 40,000 tons/day to 80,000 tons/day by 2023 and establish a dual water supply system(direct withdrawal from Namhangang River + municipal water).

#### 'High' Region | Wuxi Business Site

As of 2020, the Wuxi business site has supplied 28% of the total withdrawals for external facilities and thus reduced freshwater withdrawals. To prevent the risk of flooding, Wuxi improved the water discharge sites near the complex where river flooding is concerned and is also improving the rainwater discharge pipes.

#### 'Medium-high' Region | Cheongju Business Site

The water stress level at the Cheongju business site is not high at the present, but it has prepared preventive measures to manage potential risks. From November 2022, Cheongju will be supplied with 29,400 tons/day of reused water for external facilities. Moreover, to ensure stable water supply, Cheongju will proceed with dualization of water supply pipes by the end of 2021, and to prepare for flooding and water quality accidents, it has established a back-up system by connecting the water pipes between campuses.

#### Region for Production Facility Expansion | Yongin

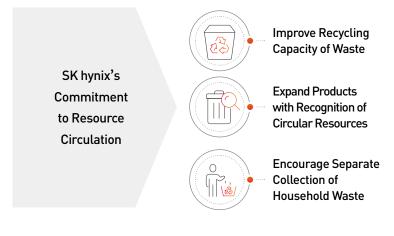
SK hynix identifies water stress in the Yongin area where production facilities are planned to be expanded in addition to its current operations. Because Yongin is located in 'high' region in terms of water stress, in preparation for water risk, we are considering methods to reflect water conservation and reuse technologies and activities, that are currently applied to other operations, to the Yongin business site.

Appendix

# **Resource Circulation Management**

If the recycling rate of waste goes beyond 90%, we need to put forth a greater amount of effort than before to raise it by 1%p. SK hynix carries out various activities to reduce waste generated during the manufacturing process as well as our daily lives. With our goal to achieve a recycling rate of 99% by 2030, all employees are practicing activities to reduce waste from business sites.

## Resource Circulation Strategies and Goals



- We reduce and manage waste generated throughout the life cycle of products in accordance to environmental standards that are even stricter than the legal standards.
- We strengthen recycling capabilities through strict management and environmental consulting in reducing waste from suppliers.
- We recycle IC trays and wafers that are left from the semiconductor process through washing or shredding / grinding.
- · We increase the reuse rate of materials, seek alternative recycling methods, and continue to identify recyclable waste conversion targets.
- · We improve the recycling rate by collecting household waste separately, such as paper packs, transparent PET bottles, or paper generated at workplaces.
- We have our employees sign a pledge to practice resource circulation and distribute educational videos on separate collection to enhance company-wide participation.

#### **Achievements in Resource Circulation**



- Recognized for resource circulation(waste synthetic resin IC tray) for the first time as a conglomerate in Korea
- Following the acquisition of ZWTL certification for Chinese corporations(Wuxi, Chongqing), SK hynix is the first company in Korea to acquire ZWTL certification for all business sites



- Achieved ZWTL Gold at Icheon and Cheongju business sites
- Recycled incinerated waste, such as Relacs, waste drums, and patterned wafers
- Reduced M14 drain volume by 20% through TF activities to reduce waste sulfuric acid in Icheon
- · Identified waste resource recovery items through resource circulation TF in Cheongju participated by 59 teams
- Started resource recovery activities of household waste by encouraging separate collection
- Shifted to high concentration BOE recycling in Icheon
- Successfully raised sales for 2020 using new technology, to restore defective products that had been wasted into 'half chips'



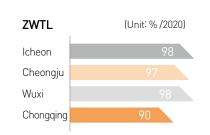
- · To spread the resource recovery activities of household waste from offices to all domestic business sites
- To increase sales by increasing products applied with half chip technology

# Resource Circulation Management Status and Activities

#### Strict Waste Management

SK hynix reduces waste from manufacturing process. household waste from offices, hazardous waste, and nonhazardous waste through strict management. Waste is managed throughout the life cycle of products from the warehousing of raw materials to production, distribution, and sales.

# First in Korea to be 'certified for Zero Waste to Landfill' at all business sites Icheon, Cheongju and Wuxi business sites **Gold Standard**





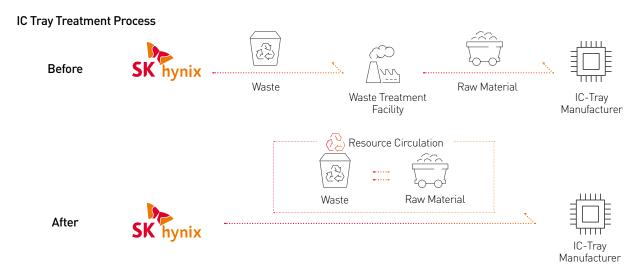
Award by the Minister of Environment as a resource circulation leading company



Award by the Chairman of the Korea Environment Corporation for excellence in resource circulation

#### First Enterprise to obtain Recognition of Circular Resources 'IC Tray'

In 2019, SK hynix acquired the government's Recognition of Circular Resources. Until now, such waste had been sold to qualified businesses for waste recycling, shredded and ground, and delivered again to IC tray manufacturers. Instead, we communicated with the government officials and acquired legal evidence that proved zero detriment to the environment and economic feasibility. As a result, the value of used waste resources increased and contributed to annual reduction of waste generation by 1,500 tons.



# Half Chip: Using Waste Disposal Products by adopting New Technology

SK hynix succeeded in commercializing defective memory chip products that were discarded after being rejected in the wafer test into half chips by applying its self-developed recovery algorithm technology (patent number: IVX000138439, IVX000140452). The applied recovery algorithm is a technology that allows the product to operate even if only a few areas are partially passed during the wafer test, allowing it to be used at half the capacity even if it cannot be used at the existing target capacity. In 2020, the technology led to reducing waste by approximately 1 ton and increasing sales of approximately USD 25 million through commercialization. We plan to continuously expand on sales by reducing and recycling waste along with the expansion of applied products.

# Waste Reduction Activity by Business Site

#### Icheon

The Icheon business site cooperates with the manufacturing process department to change and improve the manufacturing process for major waste products, thereby reducing the amount of waste generated. By recycling sulfuric acid from wastewater treatment facilities, the Icheon business site has reduced the cost of purchasing sulfuric acid and treating waste acid and is minimizing pollution from the process. In 2020. 15.363 tons of sulfuric acid was reused.

#### Wuxi

For safe management of waste, the Wuxi business site further enhanced its waste management system. To prevent accidents, Wuxi separates non-hazardous and hazardous wastes from cradle to grave and collect each item by category for safe treatment. Moreover, in order to prevent accidents from the waste collection, classification, and transportation process, the Wuxi business site sets up work procedures and carries out risk assessment and trainings.

#### Chongging

The Chongging business site improved its equipment to reduce the amount of final sludge. By extending sludge drying facilities to dry the sludge generated from WWT(Waste Water Tank), Chongging reduced the moisture content to 26% and the final sludge to about 65%. From August to December 2020, a total of 162 tons of sludge has been reduced.

#### Improving Company-wide Separate Collection System

In order to recycle household waste from offices by category, SK hynix recategorized the company's garbage collection bins from 2 different types to 5 different types. We are making various efforts such as creating videos, to promote and educate our employees on how to separate household waste and the importance of it.

Recently, we had our employees sign a pledge to practice resource circulation to raise their willingness to separate household waste. Despite being a voluntary pledge, many are participating in the company-wide efforts to circulate resources, with 24%(approximately 6,600) of the employees signing the pledge. Such efforts are expected to allow recycling of 254 tons of waste annually, which had been previously incinerated due to poor separation collection, and the most valuable transparent PETs among the five items will be recycled separately based on a recycle chain.



Recategorization of Waste Collection

 $[2 \text{ types} \rightarrow 5 \text{ types}]$ 



#### **Think Different Activity**

To recycle all types of waste other than those that are legally prohibited or cannot be recycled due to lack of technology, The Cheongju business site reviewed the recyclability of waste that had been incinerated from the perspective of 'Think Different' and converted the waste to recycling through technology and business discovery.

By recycling waste that had been previously incinerated, such as Relacs waste, CMP pads, and Waste drums, we achieved recycling rates of 97.3% and 98.6%(global toplevel) for non-hazardous waste and hazardous waste, respectively, and an annual reduction of 1.977 tons of waste incineration. The reduction in incineration amount not only reduced air pollutant emissions, but also resulted in reducing 2,505 tons of CO2(GHG) a year, according to the environmental performance carbon emissions index, Environmental Product Declaration.

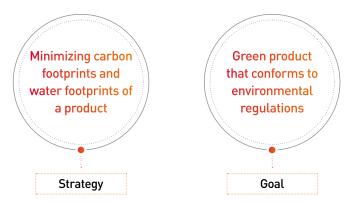
# Management of Selecting Waste Disposal Companies

For safe waste disposal, SK hynix conducts on-site preliminary evaluation when selecting a our suppliers. Even after signing a contract, on-site post-evaluation is carried out each year to ensure that waste is stored and disposed of properly in accordance with environmental laws. Moreover, we are diversifying waste disposal companies to ensure sustainability of waste disposal.

### **Green Products**

SK hynix is making continuous efforts to produce green products that prioritize eco-friendliness and conform to environmental regulations for production.

# Strategy and Goal



#### **Green Product Policy**

In order to prevent environmental pollution and provide products that are safe to the human body, SK hynix endeavors to produce green products by using eco-friendly ingredients in the development and mass manufacturing processes and to prevent pollution in the manufacturing process by establishing and operating verification procedures.

- We have established and are operating systematic monitoring and verification systems to comply with environmental regulations preemptively.
- We are finding elements that minimize detrimental impact on the environment and the human body in the development stage by applying zero hazardous substances in raw and subsidiary materials.
- · We have built production systems that do not use hazardous substances and constantly inspect and improve the management systems of SK hynix and suppliers. We guarantee green products by testing ingredients to remove hazardous substances in the final delivering stage.

#### Status and Activities

Producing Eco-friendly Products through the Environment Product Declaration Following the certification of Environmental Product Declaration(EPD) on two products, 1z NAND Flash 128Gb TLC and V3 NAND Flash 256Gb TLC in 2018, SK hynix obtained another EPD for 1x DRAM 6Gb MODDR4, and 1x DRAM 8Gb MODDR4 the following year, and for 1x DRAM 6Gb LPDDR4 and NAND Flash 256Gb TLC in 2020. Through never-ending acquisitions of EPD, we will strive to produce and supply eco-friendly products by reducing GHG emissions and water usage of each product.

#### EPD Certified Products(2020)

Certified Product	Carbon Footprint	Water Footprint	
Certified Product	Total Amount	Total Amount	
1x DRAM 6Gb LPDDR4	285g CO₂eq/unit	4.93L H₂Oe/unit	
3D-V4 NAND Flash 256Gb TLC	284g CO₂eq/unit	4.20L H₂Oe/unit	



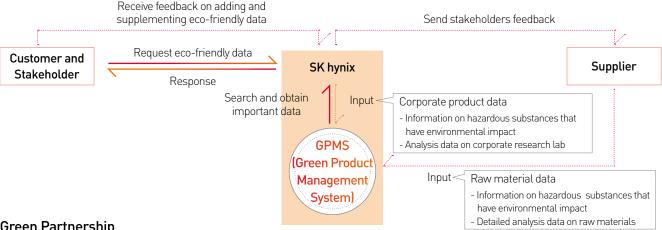


ESG Focus

Our Business

#### An Integrated Product Information System, GPMS(Green Product Management System)

We practice policies on eco-friendly products through the operation of the Green Product Management System(GPMS). which integrates all information systems from the raw material certification system to the packaging process management system, product certification system, and the customer response and hazardous/regulated substance management system.



### **Green Partnership**

Not only the first-tier suppliers, but also second- and third-tier suppliers of SK hynix are implementing Green Partnership for green products through integrated management and response to regulated substances in the supply chain.

#### **Green Partnership Content**

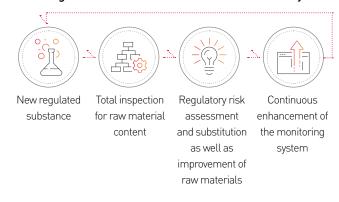
Communication and information sharing with suppliers	<ul> <li>Holding periodic briefing sessions for suppliers on eco-friendliness</li> <li>Discussing international trends and industrial response directions</li> <li>Sharing and explaining industrial responses to regulations such as Halogen Free and REACH</li> <li>Inspecting on the current status of suppliers and giving advice</li> </ul>
Periodic evaluation of suppliers	- Objectively evaluating supplier's level of sharing eco-friendly information and response to process management - Encouraging suppliers for their voluntary eco-friendly management
Customized supplier management	<ul> <li>Target small businesses that are disadvantageous in procuring information or securing budget</li> <li>On-site training or training through invitation</li> <li>Provision of analysis support system</li> </ul>

#### Strengthening Verification Process for New Substances

In response to the expansion of additional substances in EEE (electrical and electronic equipment) environmental regulations such as RoHS and REACH, SK hynix strives to strengthen the verification process for new regulated substances. In 2020, around 20 environmental regulations, including REACH, and 80 regulated substances were added. Accordingly, based on the substance data registered in GPMS, a 'total inspection of raw materials' was conducted to examine whether raw materials contain new regulated substances. Moreover, in order to restrict hazardous and regulated substances, we carried out improvement measures by identifying materials that have been confirmed with abnormalities and registered them to the regulated substance list in GPMS and set an alarm to react when registering raw materials.

\*No substances related to IEC 624741 are being used at SK hynix, and all our substances comply with the international standards and criteria.

#### New Regulated Substance Verification and Guarantee System





Link to SDGs

Green Management · Talent Management · R&D and Quality · Corporate Security · Ethical Management and Compliance · Safety and Health · Responsible Supply Chain · Social Contribution

# ESG Focus 2. Talent Management











Talent Attraction and Retention issues

(←→) 🏠 🗎

With the growing complications of the semiconductor industry's manufacturing process, the capacity to deal with on-site issues promptly and fostering a corporate culture where the Generation MZ can immerse themselves in their work environment is becoming more important than ever. As such, attracting and developing diverse, innovative talents and strengthening their key competencies are extremely important to the company's growth and achieving Sustainable Development Goals(SDGs).

#### Our Approach

We firmly believe that the well-being of the employees brings corporate social value. SK hynix supports the continuous growth of individual employees and strives to develop global and future talents.

Furthermore, SK hynix provides continuous support by running a specialized competency building program in the semiconductor field so that our employees, who are the subjects of technological innovation, can grow into experts within the industry.



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Green Management · Talent Management · R&D and Quality · Corporate Security · Ethical Management and Compliance · Safety and Health · Responsible Supply Chain · Social Contribution

# Our approach to Talent Management

SK hynix recruits diverse talents with high technological competencies and potentials. We provide employees with customized education and self-directed learning foundation suitable for our semiconductor industry and characteristics. In addition, through communication and coachingoriented performance management processes to improve performance and capabilities, employees are evaluated on their performance and potential. Based on these assessments, substantial compensation is provided for the market value of the job and the contribution value of the individual's organizational performance. SK hynix respects its employees, who are the center of the company, and strives to achieve sustainable growth.



# **Attracting Innovative Talent**

#### **Principles of Attracting Talent**

SK hynix prioritizes talents with expertise in their jobs and undergo a recruiting process based on job competency and expertise. This will help employees enhance their work satisfaction and adapt to the working environment. Our full-time employee rate exceeds 99.6%, which means we're contributing to stabilizing employment, and the extremely low turnover rate proves our stable workplace and pleasant employee welfare. Furthermore, SK hynix does not discriminate its applicants by gender or disability. Out of the finalized pool of candidates, the proportion of female employees is increasing every year.

#### **Developing Future Talent**

SK hynix attracts future talents by cooperating with leading domestic and foreign universities. By offering credit-bearing internship exchange programs, SK hynix provides students from semiconductor-related majors with opportunities for their future career path and work experience. SK hynix selects and supports excellent engineering talents from its partner universities, including KAIST Educational Program for Semiconductor Industry(KEPSI), Korea University Department of Semiconductor Engineering, Korea Graduate University Department of Semiconductor System Engineering, and Hanyang University Department of Nanoscale Semiconductor Engineering.

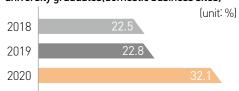


Proportion of full-time employees(2020 domestic business sites)

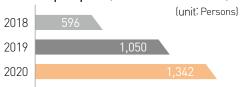


Turnover rate(2020 domestic business sites)

# Proportion of new female employees among university graduates(domestic business sites)



# Cumulative number of academic-industrial scholarship recipients(domestic business sites)



Appendix

#### Fair Performance Assessment and Compensation

Overview

SK hynix utilizes fair performance assessment and compensation systems to attract long-term professional talents. In 2020, the performance assessment was replaced with a self-assessment and made improvements by implementing constant evaluations rather than an end of the year evaluation. Through constant evaluation, we deliver meaningful feedback, to motivate and increase the immersion of our employees. It is our goal to guarantee the growth and well-being of our employees.

#### Professional and Long-term Talent Retention



# Providing Professional Job Competency Level(CL)

SK hynix believes that the company's competitive key element is its talent, due to the the nature of the semiconductor industry which places importance on technical competency. We operate an expert-centered promotion system that gives employees a high-level job competence role in consideration of talent retention, employees' job competency, level of expertise, and possibility of playing high-level roles.



# Fair Assessment for Performance Improvement and Growth

We consider 'increased satisfaction' as the core value of performance management in which our employees 'develop' by carrying out their work and feel 'satisfied' at the workplace. To achieve these, our assessment system contributes to continuously improving employees' performance and reflect fair absolute evaluation to help them grow in the long-term through constant coaching and provided feedback throughout the year.



# Reasonable Compensation According to Performance

We maintain the highest annual salary level in Korea to value the ability of our employees and motivate them. Our reasonable compensation system pays incentives(PI/PS) according to the management performance.

#### Employee Stock Ownership Plan

SK hynix implements employee stock ownership plan (ESOP) to help our employees develop a sense of belonging to the company as shareholders and grow with the company over a long period of time. ESOP enables employees to exercise their stock rights, which will raise business transparency and reliability, and thus motivate them to increase corporate value.



 Company's development = personal development



Stock Ownership Plan



 Increased corporate value leading to employees' motivation and improved welfare  Management transparency improved with employees exercising ownership as shareholders ESG Focus

# **Talent Retention**

SK hynix not only improves the employees' expertise in semiconductor technology but also helps the employees build up extensive knowledge in various fields to grow as talent in numerous areas. However, the total education hours in 2020 decreased due to the COVID-19 restrictions. Accordingly, we expanded our investments in online education, such as the joint SK Group educational platform 'mySUNI,' and thus provided quality education. Our educational systems are available for all our employees, apart from the production sites in China that run their own system.

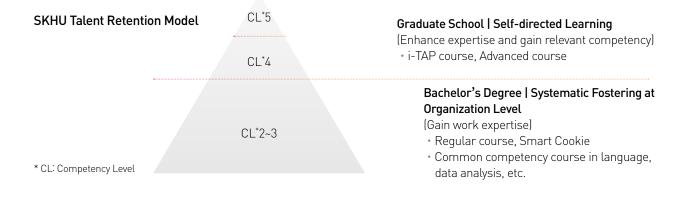
Global Challenge

#### SK hynix University(SKHU), Growing into Semiconductor Experts

Established in 2017, SK hynix University(SKHU) offers specialized technical training to encourage junior and senior engineers to grow into semiconductor experts and strengthen their own competitiveness as well as the company's. The university consists of 12 colleges, various departments, and majors, centered on professional technologies in each business sector. With its systematic curriculum, SKHU encourages employees to grow and learn voluntarily.

#### **SKHU System**

- 1. Build employees' competencies by proposing a foundation to grow as top-level engineers by providing systematic educational curriculum
- 2. Establish a specialized college system centered on the organization's technical strategy
- 3. Transfer of expertise and know-how of professors with abundant experience through the professional professor/instructor/in-house instructor system





hours/employee Education hours per employee (2020, domestic business sites)



## Innovative-Technology Advancement Program(i-TAP)

Innovative-Technology Advancement Program(i-TAP) is a program that aims to strengthen employees' competency and increase their work performance level through communication and learning with external experts that may also help employees in solving work related assignments they find difficult to complete with just internal competencies. In 2020, 31 courses were implemented as customized programs to deal with practical tasks, and various educational solutions were supported.

#### **Smart Cookie**

Smart Cookie is a self-directed learning educational platform that offers online learning content in units of 20 minutes or less. Here, employees can share their expertise and technical skills. About 4,500 contents (mainly on semiconductors) are uploaded, which support employees to freely engage in repetitive learning.

# A Common Learning platform for Future Planning SK employees, mySUNI

Overview

'mySUNI' is SK Group's integrated learning platform that offers various content to accumulate human capital. The platform consists of 11 colleges with courses that teach you skills necessary for the future(AT/DT, Environment, Future Semiconductors), courses that help broaden your horizon as part of the community(Happiness, Social Value), and courses that enable you to carry out tasks autonomously(Job Courses, Leadership). Furthermore, it also provides special lectures from the CEO and other appropriate content in relation to the times. 'mySUNI' is enhancing the effects provided by education through not only online classes but also through various offline methods.



#### Case Future Semiconductor College

'Future Semiconductor College' provides a variety of contents to improve technical skills relevant to semiconductors and fundamental knowledge on the industry's history, outlook, and vision for employees to better understand the nature of the semiconductor industry and to predict the impact of technological advancements on the world.



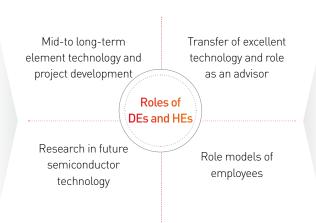
#### Semiconductor Expert Leading Technological Innovation, DE & HE

**Appendix** 

The semiconductor industry, being an industry where knowhow accumulated over experience is significant, requires experts in each field. To meet such demand, SK hynix established a Distinguished Engineer(DE) system that honors talented technicians who have contributed to the company's growth by sharing their know-how to juniors, and an Honored Engineer(HE) system that allows them to guide junior engineers even after their retirement. Technicians selected as HEs will mentor juniors as their role models by sharing their long-accumulated knowhow and fostering motivation within them, while in turn, playing a role in nurturing their future.



- Senior employees with excellent technical skills
- Motivate DEs to continuously exercise their competencies
- Expected to serve as role models to the employees





#### HE

- · Employees who are recognized for their technical skills and maintain their status even after retirement
- · Continued exercise of excellent technical skills even after retirement
- · In addition to executive promotions, proposing of new values as excellent level engineers

ESG Focus

# **Happiness Culture**

#### 'Happiness Culture Secretariat' and Happiness Recipe

In 2020, SK hynix established 'Happiness Culture Secretariat' that analyzes happiness together with employees and carries out in creating happiness for all. Based on the management philosophy of putting employees at the center of change, we are striving to create a happiness strategy led by the employees through their process of finding their own happiness, the 'happiness recipe.'

To help them find and observe happiness in their daily life, the Happiness Culture Secretariat under the support of the Seoul National University Center for Happiness Studies, collected and analyzed a wide range of data through a survey of all employees. Moreover, for the employees to record and measure their everyday happiness by themselves, SK hynix launched a mobile application named 'Kong' that provides daily happiness, personal challenges, happiness diagnosis, and happiness related content. Through the app, Happiness Culture Secretariat researches happiness from a new perspective, thereby improving the actual system that enhances employees' happiness level.

#### Happiness Design Group

It was found that the happiness level of working mothers balancing both jobs and parenting duties in their 30s was relatively low. In response, SK hynix established the Happiness Design Group for Women where women gather to design their own happiness. In 2020, the group performed a design thinking project, in which they proposed improvement measures and experimented to create a happy environment for all under the clause of 'happy work environment for all starting with working moms.' Moreover, to resolve time management issues for working mothers and fathers, SK hynix proposed working from home measures and a 'Base Office' in Bundang. Through a variety of experiments—such as holding one-on-one meeting with leaders, mentoring, and mental health consulting—carried out with the schedule management system, working parent's day, and reinstatement on-boarding program, we gained positive responses from the employees. The Happiness Design Group will continue to communicate with numerous employees and go on experimenting for the sake of the employees' happiness.



#### Case Increased Flexibility in the Work Place, 'Base Office'

To provide a separate office for employees due to business trips, household chores, or urgent businesses during the weekends, we established a base office with approximately 150 seats in Bundang in March 2021. The new workplace offers high accessibility as it is located near Jeongja Station, and thus reduces employees' commute burden while adding flexibility to the work space.



SK hynix Base Office at Bundang

#### **Culture Survey**

SK hynix conducts an annual culture survey on employees to self-evaluate their performance under a variety of themes such as 'WBE: Voluntarily Willingly Brain Engagement', 'bold experiments', and 'communication and collaboration'. A total of 10,291 employees participated in the culture survey in 2020. SK hynix works hard to improve the overall corporate culture and system by reflecting on the employees' response.

#### Corporate Culture of Free Communication

'HyTong' is an online anonymous communication channel where employees can share innovative business ideas, hold discussions, and make honest proposals to the company. 'QuestionTong' is where employees can make questions or requests that require answers from other employees or managers of a specific organization, while 'DiscussionTong' is where employees can share opinions regarding various issues.

Cheongju business site operates 'Bright', an in-house communication channel where young employees voluntarily gather in a 'playground' to rest. Aside from 'Bright', Cheongiu also provides a variety of platforms, such as 'True Interview' that allows talks with executive directors, and channels for sharing hobbies, such as 'Hangout at Home', and 'Bright Travel', to give employees joy and encourage active communication amid this un-tact era.

#### Collaborative Corporate Culture, HyThanks

ESG Focus

To create a collaborative atmosphere for employees, SK hynix operates the 'HyThanks' system that encourages employees to express gratitude to colleagues. The system works even with global sales offices as well as the Wuxi and Chongging business sites, allowing for thank you messages to be given out to global business sites and even to our suppliers. Those who have received the messages from other employees will be given I-Points, which are then converted to monetary wages.

#### Enhancing Diversity and Inclusion, DI&E

With the growing interest on DI&E(diversity, inclusion, and equity) management, the Bundang business site held a workshop in April 2021 to enhance diversity and leadership. The workshop was lectured by external experts under the themes of 'Enhancement of Gender Diversity and Leadership' and 'Business Sustainability and Gender Diversity' and introduced excellent cases along with methodologies for improving women's leadership in both local and foreign companies.



#### Case Junior Board & Leader Board

To listen to all employees' voices while reflecting on our corporate culture, SK hynix manages Junior Board, a representative communication channel for employees. Along with its 12 channels for each organization, Junior Board leads field-oriented happiness management to discuss various topics by dividing them into three tasks: system improvement, improvement in the way of working and culture improvement, and happiness life design.

In the 'Happiness Up' project, employees made improvement proposals to strengthen flexibility in the workplace environment, enhance performance management system, and innovate working conditions in the post-COVID-19 era. The project offered an opportunity to reflect the abolition of core time and the subsequent change in our way of work, propose simple yet efficient performance management centered on feedback, and spread non-face-to-face meeting / reporting culture in the actual corporate culture system.

In 2021, SK hynix launched the 'Leader Board', a consultative group that shares various concerns of leaders and seeks solutions. Using the 'Leader Board', we plan to collect team leaders' opinions and discuss agendas of each division's systems and policies.

Using Advanced Technologies to Lead the Future of ICT

Green Management · Talent Management · R&D and Quality · Corporate Security · Ethical Management and Compliance · Safety and Health · Responsible Supply Chain · Social Contribution

# ESG Focus 3. R&D and Quality

# Link to SDGs









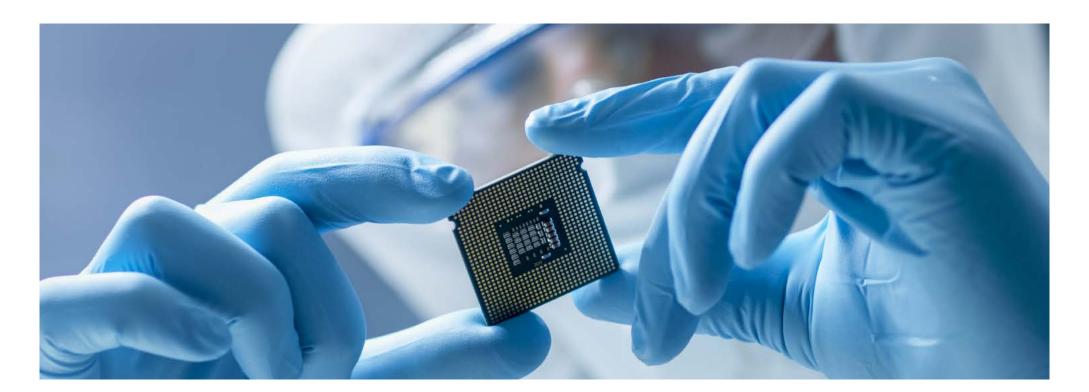
Product Quality and Safety issues

New Growth Engines and Innovative Technologies issues

In the face of the Fourth Industrial Revolution and the non-face-to-face era, data is increasing exponentially across the world. As efficient processing and big data analysis becomes more prominent, the roles of the semiconductor memory is expected to increase in the future. Technological advancement is essential for people to adapt, and semiconductor memory is at the core of it. Quality, performance, and service advancement of innovative technologies are essential issues in the semiconductor industry to keep pace with changes.

#### Our Approach

SK hynix has long been recognized for its technical skills, which focuses on high-density memory and HBM2E. High-density memory has a high level of density, and thus requires both quality and yield. SK hynix achieves significant market share by acquiring the competitive edge required in the market and innovating product quality by evaluating, analyzing, and improving products from a customer-oriented perspective.



# **Open Innovation Strategy**

SK hynix aims to grant happiness to its employees and stakeholders by building partnerships with various stakeholders toward open innovation and developing technologies to realize technological, social, and contemporary values to elevate quality of life and solve environmental issues.

Global Challenge



#### Scaling Value

Satisfying the needs of industries and customers by solving the problems of innovation and reliability in materials and structures for the evolution of DRAM and NAND technologies

# Social Value

Using technology to address various social problems such as energy, disease, and environmental issues to create economic value and fulfill social responsibilities

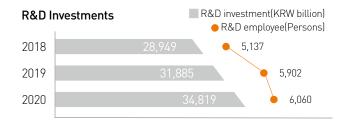
# Smart Value

Preparing for a new, approaching era, by completing an intelligent memory solution suitable for the post-digitaltransformation era

# Strengthening Technological Competitiveness

#### **R&D Expansion**

The newly established R&D organization of Revolutionary Technology Center(RTC) plans to develop products that enhance data processing speed of memory chips and overcome the issue of information volatility(spin transfer torque(STT)-magnetic random memory(MRAM) and phase-change memory(PRAM)) and to improve both memory capacity and speed by stacking the layers vertically such as with the NAND flash memory. At the same time, we plan to create the world's first pioneering semiconductor architecture and discover new materials.



# SK hynix Signed Contract to acquire Intel NAND and SSD Business

In the big data era, SK hynix signed a contract to acquire Intel NAND and SSD business to strengthen its competitiveness in the rapidly growing NAND flash memory sector. By combining Intel's solution technology, wafer business, and production facility in Dalian, China, we expect to provide 3D NAND solutions portfolio centered on high-added values, such as enterprise SSD(eSSD). With our recent cooperation in the DDR5 production, our cooperation with Intel will continue to respond to the ever-increasing memory-based semiconductor demand. In addition to the newly signed contract with Intel, we have signed a MOU Contract with the government of Dalian, China and celebrated 'Signing Ceremony for Strategic Cooperation Memorandum of Understanding' in January 2021. We will strive to grow our memory business and provide more value to our stakeholders with a mutual cooperation with Intel.



Signed a MOU contract with the Dalian government regarding the Intel NAND Fab production facility, for a Strategic Cooperation



#### World's First DDR5

SK hynix launched the world's first DDR5 DRAM, a highspeed and high-capacity product optimized for big data, artificial intelligence(AI), and machine learning. Since its first launch in November 2018, we have verified the performance of our products through various tests and compatibility verifications carried out by major partners including Intel. DDR5 is 1.8 times faster than the previous model DDR4, and by lowering the operation rated voltage, it saves electricity consumption by 20%. This eco-friendly DDR5, which simultaneously improves reliability and saves electricity, is expected to reduce power consumption and operating costs at data centers.

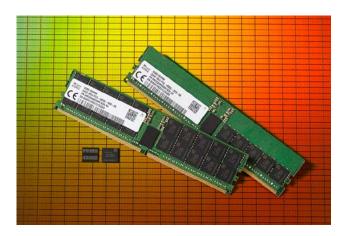
Low-power High-efficiency memory

# M16 plant completion: Strengthening Leadership in Semiconductor Micro-processing Technology

SK hynix constructed the M16 plant, a new semiconductor memory production line, in February, 2021, about 25 months since its commencement. Being the largest production facility, M16 is a plant exclusive for extreme ultraviolet(EUV) and is a complex manufacturing facility equipped with modern infrastructure, such as advanced pollution reduction facilities. EUV exposure equipment was installed in the M16 plant for the first time in order to implement micro-processing, and we plan to produce 4th generation 10-nano(1a) DRAM products through the EUV process. By commencing mass production at M16, we aim to strengthen our leadership in semiconductor micro-processing technology.

#### Innovation Patent Awards for Employees

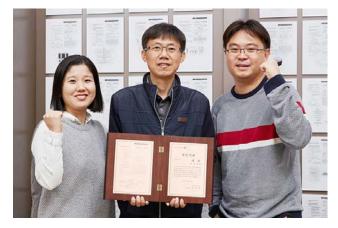
SK hynix nominates the Innovation Patent Award to encourage employees who have worked hard to develop new technologies and contributed to business performance. In total, 11 teams were awarded at the 2nd Innovation Patent Awards(January 2020) and 10 teams were awarded at the 3rd Innovation Patent Awards(October 2020). Through the awards, we encourage employees to get involved in research activities and create an atmosphere where employees develop the required skills in a timely manner and discover solutions to solve challenges.



2nd generation 10 nano-level(1ynm) DDR5 DRAM



Aerial view of M16



Innovation Patent Award

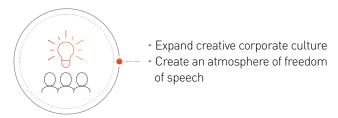
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# In-house Venture, 'HiGarage'

#### Direction of 'HiGarage'









HiGarage is a project that supports employees who dream of starting their own business. SK hynix supports employees' venture plans whenever an employee proposes a start-up idea that can improve the discomforts they experience from work. Officially launched in January 2019, we are selecting a total of 6 team each year. A total of 18 teams have been chosen until this year and out of those 18, 9 have started their own business. Startups that have undergone the HiGarage project are expected to contribute to developing new semiconductor technologies and play an important role in achieving technological independence in materials, parts, and equipment, which are one of SK hynix's mid- to long-term goals.

Furthermore, SK hynix aims to recruit more talent outside of the semiconductor field and include the areas surrounding the Fourth Industrial Revolution and the areas adjacent to semiconductors. We renewed our in-house venture website and launched an open audition method so that employees can submit ideas at the workplace periodically. By efficiently operating HiGarage, SK hynix will create a semiconductor ecosystem where everyone grows together by

creating a creative organizational culture that does not fear failure and develops ventures with technical skills.

#### 'HiGarage' Step by Step Process



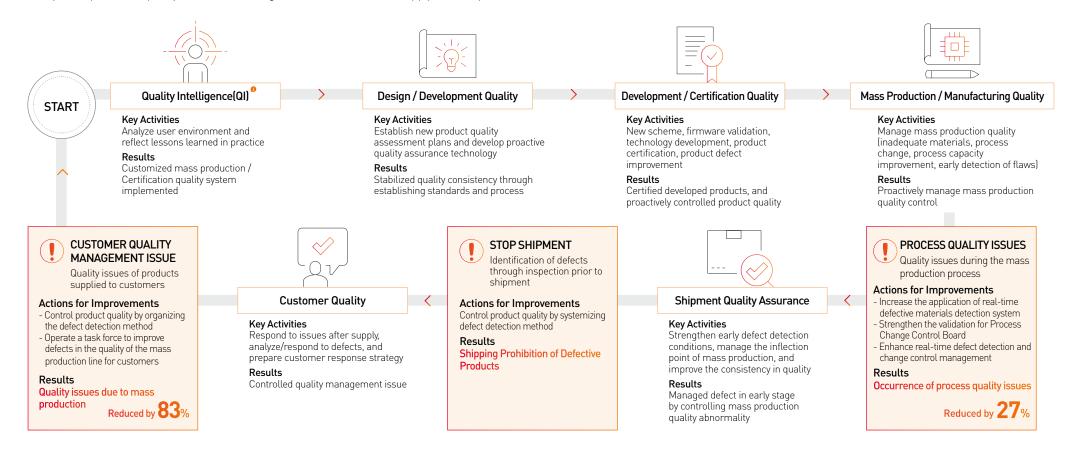
Appendix

# **Customer-oriented Quality Management**

SK hynix promotes customer-oriented quality management that prioritizes customer satisfaction. We comprehend the environment of our customers' experience to register and manage customer data in the database. We derive reinforcement items through Quality Assurance Gap analysis and reflect them in the enhancement of the entire phase—from preliminary development to product certification, and mass manufacturing while validating and continuously managing reinforcement items.

# Quality Assurance System throughout the Value Chain

SK hynix implements quality assurance throughout the value chain to supply reliable products to our consumers.



#### Package&Test(P&T) Quality Innovation

P&T is the process of packaging completed wafers in the form of products delivered to customers and final testing of whether the quality of the products is appropriate to the level required by customers. We try to eliminate errors and defects considering the environment in which customers use the product, achieving customer satisfaction and product reliability with the optimal product quality. SK hynix established the Screen Ability TF in 2020 as customers' needs gradually diversified and precise testing capabilities became important. Through this, we developed innovative testing methods for finding faults and improved module testing, reducing field test time by approximately 70%. In addition, we also promoted 'shift left', which focuses on wafer testing, to speed up feedback between processes and reduce costs by pre-blocking defects that can occur in the later processes of the wafer testing stage. We plan to strengthen our testing capabilities in 2021 by promoting the 2nd Screen Ability TF.

#### Customer Satisfaction Level(out of 5 points)



# Education for Suppliers and Quality Inspection Meeting for Quality **Improvement**

SK hynix takes part in actively making quality improvement efforts with its suppliers to manage the quality of the entire process. In July 2020, a total of 96 employees from 11 companies were provided with quality education, which includes cultural quality definition, cases, and quality system gaps. Through feedback from direct suppliers, it has given us the opportunity to check the educational performance by raising awareness through continuous inspection and recognition of the quality system gap with SK hynix. As a result, the difference in our company's system quality improved by 13% compared to the previous year, while defects were improved by 20% compared to the previous year.





Supplier quality mindset training on preventing defects

# **ESG Focus 4. Corporate Security**

#### Link to SDGs





# **Protecting Important Information Resources and Key Technologies**

Breach of trade secrets or semiconductor-related core technologies, such as semiconductor fabrication technology and semiconductor cleaning recipes, by means of corporate espionage, can potentially lead to serious losses not only to the company but also to the country. Accordingly, it is necessary to strengthen the company's security measures to ensure protection of the nation's interest as well as the future of the company.

#### Our Approach

**Appendix** 

Based on the corporate security policies, SK hynix has established and manages a corporate security organization that considers infrastructure and culture. We have appointed dedicated organizations and management personnel at each organization to carry out corporate security activities and establish, manage, and improve systematic security systems based on voluntary participation. We are also striving to optimize safety by enhancing employees' awareness on data security through our education programs and promotional activities.



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Appendix

# **Corporate Security System**

#### **Enhancing the Corporate Security Organization**

SK hynix established a systematic corporate Security system by arranging detailed task groups by function such as security planning, physical security, and IT security. Furthermore, in order to elevate the level of security overseas to one that is equivalent to the level of security found in our headquarters, we newly established the 'Overseas Security Support' organization to ensure safety and security at the overseas department of technology development and sales including the production corporations in China.



- and establishment of policies for each business site company-wide security policy Oversee the physical
- Provide response to security policy and its external inspections and operations security policy guidelines
- IT security solutions
- Operate a control center against external hacking threats

overseas department of technology and sales

#### Establishing a Response System to Security Incidents

SK hynix established a systematic system of inspecting and responding to security incidents and strengthened the security principles by setting violation standards and higher penalty levels. Through the External Corporate Security Council and enhancement of the response procedures, we built a security incident response system to take measures promptly against external security issues.

#### Breach of key data(Unit: Cases)







### Corporate Security Policy

- To contribute to reinforcing the core competency and raising competitiveness by protecting tangible and intangible assets that include core technologies and key personnel.
- To observe the relevant laws and regulations governing industrial security, not to mention, to participate in the campaign to protect the business secrets of partners and trade connections.
- To raise the security awareness of executives and staff members through education and a publicity campaign making efforts to establish a security environment.
- To set up an organization unit with the relevant personnel assigned to, taking exclusive responsibility of industrial security activities, and to construct a systematically organized system with emphasis given to continuous management for enhancement.
- To have the implementation of such policy diagnosed by an independent external specialist and use the results in promoting a corporate campaign for industrial security.

# Strengthening Corporate Security

SK hynix recognizes the importance of tangible and intangible assets and thus pursues sustainable growth by establishing a voluntary company-wide security culture. In 2020, we strengthened our corporate Security system and innovated security infrastructure to enhance our response to external security threats and prevent information breach.

#### Security System Operation

SK hynix operates various security systems to prevent information breach and to respond to external cyber attacks. All security logs collected at each system are managed at the Integrated Security Analysis Platform. We also developed our own measures to overcome abnormalities from each type of risk and security incidents.

#### Transition to a 'Need-to-Know' Access Control System

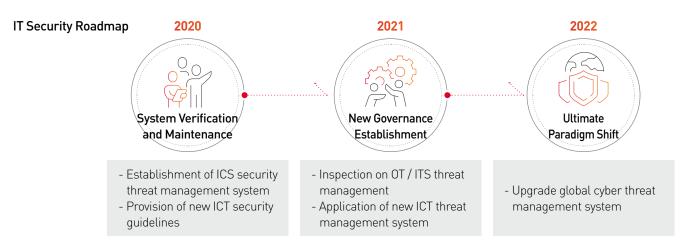
By designating persons in charge to take control of Korea's core semiconductor technologies, SK hynix reestablished its classification standards for confidential information. Moreover, to manage the access control on a 'need-to-know' basis, we conducted a radical overhaul on the management system for core semiconductor technology information, such as developing new confidential information storage.



Renewal of the ISO 27001 Certification Icheon, Cheongju, and Bundang business site

#### Strengthened IT Security Response System

SK hynix established a standard Fab model to expand the technological security on IT infrastructure to the OT / ITS of the Fab and set up an IT security roadmap to apply the system to all operating Fabs until 2022.



# **Enhancing Activities that Raise Awareness on Security**

SK hynix broadcasts the security code of conduct to all employees within the company. To raise awareness among employees, we have produced security campaign songs, distributed security emoticons, and held volunteer programs. We also spread relevant activities to other branches overseas. In 2021, we plan to launch a gamified storytelling-based educational content involving quizzes to strengthen the awareness on security.



Industrial security online training completion rate



Data protection compliance rate(2020)

# **Personal Information Protection**

SK hynix fully recognizes the significance of personal information protection and strives to enhance the protection levels accordingly. We comply with relevant domestic laws and regulations as well as overseas personal information protection regulations such as EU GDPR when processing information of third parties including customers, employees, and suppliers.

We subscribed to the liability insurance to take responsibility for damages incurred by privacy breach. In 2020, we enhanced personal information protection for all departments and systems that handle personal data by carrying out company-wide diagnosis and improvement activities.



# **Intellectual Property Protection**

ESG Focus

To drive growth engines and strengthen our competitive advantages through technological innovation, we are building a strong patent portfolio. We will continue to monitor both market and technology trends to lead innovative patents and enhance our scope and competitiveness on next-generation technologies as well as a wide range of applications.

SK hynix also copes with multiple disputes regarding intellectual property. By filing litigations on global patents, we minimize patent infringement risks and manage liabilities that have a high possibility of being breached. Furthermore, we are signing various patent license contracts regarding production and sales.

#### Intellectual Property Rights Organization

SK hynix manages an organization dedicated to handling intellectual property(IP) rights. Each expert takes charge of developing, applying, registering, and post-managing IP rights and relevant disputes.

#### Roles of Intellectual Property Rights Organization





#### Efforts and Activities to Protect Intellectual Property

SK hynix operates various patent development programs to secure new patents within areas with a high level of applicability, we engage with the R&D division from the Business / product planning stage. We encourage our employees to make innovative inventions and proceed to patent applications with various rewards and prizes. We are also expanding our patent portfolio by acquiring patents from external sources to secure more patents through collaboration with diverse academic institutions. SK hynix provides patent education to raise R&D personnel's intellectual property awareness, motivate them to apply for innovative patents, and thus reinforcing their competencies. We strive for sustainable growth by providing the R&D division with our competitors' patent trends and patent maps displaying primary R&D technologies. These attempts aim at maximizing their talent and potential to invent disruptive patent technologies. As of December 31, 2020, SK hynix owns a total of 15,277 registered patents worldwide and mainly targets its patent portfolio to the U.S. and China due to its massive market scale and systematic dispute response strategies.

# ESG Focus 5. Ethical Management and Compliance

Link to SDGs



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# **Complying with Global Regulations and Policies**

With the growing expectations from the international society of corporations' roles and responsibilities, regulations and standards are becoming stricter and more complicated. Followed by the increasing demand from stakeholders including investors, global companies are being asked to take more responsibility with their compliance.

#### Our Approach

**Appendix** 

In order to achieve practical and effective compliance management, SK hynix's dedicated Compliance team reviews and oversees all compliance related activities and reports them to the BOD yearly. By disclosing the Global Compliance Guidebook on the company's website, we ensure that our domestic and overseas business sites comply to the rules and regulations.



Global Compliance Guidebook

Primary Duties of the Compliance Officer

# **Compliance Management**

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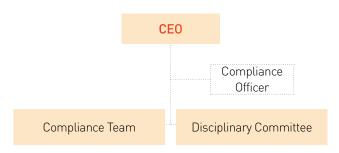
# Compliance Management System

SK hynix established a compliance management system to effectively and responsibly manage compliance and appointed a compliance officer to inspect the company's compliance to rules and regulations.

Overview

We also strive to raise awareness by producing and distributing various compliance quidelines, including primary legal contents and precautions required for each employee's roles and duties.

#### **Dedicated Compliance Management Organization**



Review and take

legal violations

Review and take

disciplinary actions against

disciplinary actions against

each instance of violation

General Operation and Support for Compliance Programs

- Compliance Program planning
- Compliance training & consultation
- Prevention and supervision of legal violationsSystem improvement
- Publishing compliance quidebooks etc.

Declaration of Compliance

# Principle of Compliance Program(CP) Operation

The Compliance Program(CP) manages core compliance risks by selecting major compliance risks and a global standard established for world-class companies under the repetition of these following five steps: Policy Making → Training → Audit → Correction → Report to Executive Managers



# Maintenance and Spread of Fair-Trade Compliance Culture

SK hynix drafts guidelines to observe relevant laws and regulations and creates a fair-trade environment with suppliers and stakeholders. To achieve such purposes, training is provided on a regular basis to related departments along with other compliance activities. We strive to hold trades with subcontractors in an appropriate manner and create manuals to protect the rights of small and medium-sized enterprises(SMEs). Furthermore we create relevant manuals and put forth continuous effort.

# Spread and Sustain a Fair-trade Compliance Culture



# **Antitrust**

SK hynix has proactively established and is operating its Global Compliance Program(GCP) in line with the global antitrust laws that are increasingly being strictly enforced around the world. The GCP is designed by taking the following elements into consideration, antitrust laws of each country where SK hynix operates its business, international treaties, customers' requirements, and the nature of the semiconductor industry.

#### **Antitrust Inspection System**

SK hynix's Antitrust Inspection System consists of steps such as the establishment of internal antitrust policies, periodic training and counseling, prior and follow-up inspections, monitoring, internal audit, and recurrence prevention. Our executives and employees are required to access the GCP system before engaging in activities that may raise antitrust concerns to familiarize themselves with the checklist, prevent antitrust violations, and monitor the fulfillment of the checklist through a follow-up inspection, allowing for early discovery of any violations.

#### **Antitrust Inspection System**

# Maintenance of Internal Policies

 Preparation and distribution of quidelines that members can reference when performing their duties

Establishment and Operation of a Dedicated Organization

Establishment and operation of the Global Compliance Team

Periodic Training

 Online and offline training

 Legal consulting service

# Whistleblowing and Monitoring

 Operation of whistle-blowing channel Detection of risks through

electronic monitoring system

# Audit. Recurrence Prevention

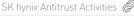
- Investigation of violations and disciplinary actions against those responsible for violation
- Whistleblowing system quaranteeing anonymity

#### **Antitrust Activities**

Appendix

SK hynix has been expanding and strengthening the scope, contents, and subjects of the GCP activities each year. SK hynix actively engages in the following diverse GCP activities:

#### **Antitrust Activities**



- CEO's commitment and support for compliance
- · Establishment of GCP operation standard and procedure and continuous supplementation
- · Appointment of the compliance officer and establishment and operation of a team dedicated to compliance
- Preparation and utilization of compliance quidelines(compliance handbook)

- · Continuous and systematic antitrust law training
- · Periodic self-inspection and risk assessment
- Independent audit by external experts
- Operation of reporting system for contact with competitors
- Prior consultation system
- · Establishment of internal monitoring system



- · Have the attitude to comply with laws and restrictions
- Recognize and apply the Company's policy in performing tasks
- Attend compliance training



· Understand the relevant regulations of each country, international treaties, and customers' requirements

Company

- · Announce the Company's commitment and compliance with the laws, in consideration of the nature of the semiconductor industry
- · Compliance team for stakeholders
- Manage the lead office and overseas corporations
- Establish appropriate policies for the Company's business
- · Audit and take proactive actions in advance







Overview









ESG Focus

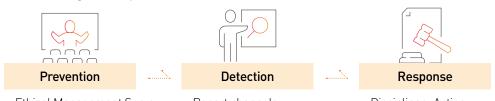
# **Ethical Management**

# Code of Ethics Code of Ethics Practice Guidelines

#### **Ethical Management Organization**

The Ethical management organization is independent from the company's management, and major ethical management issues are transparently reflected in management activities through regular reports to the BOD(Audit Committee).

#### **Ethical Management System**



- Ethical Management Survey
- Ethics Education and PR
- Report channels
- Audit and management counseling
- Risk monitoring

- Disciplinary Action
- Follow-up Measures

# SK hynix's Ethics Policy

Based on SK's business philosophy and principles of conducts, also known as the SK Management System(SKMS), SK hynix created its ethics policy in relevance to the code of conduct and valuation criteria for all employees, and established practice guidelines for detailed valuation measures.

The Ethics policy is comprised of the Declaration of Ethical Management, Code of Ethics, and Code of Ethics Practice Guidelines. We have continuously updated and improved our ethics policy since its establishment in 2000 and made our latest 11th revision in July 2019. We use ethics policy as the basis for decision-making and overall management.

#### **Ethical Management Practice Survey**

We are conducting the 'Ethical Management Practice Survey' on a regular basis to ascertain the company's overall ethics standard. This includes the employee's ethics compliance level, the level of the company's ethical management system operation, and the level of the internalized ethical practice culture. The survey covers employees ethics, stakeholders' and customers' ethics, ethics as a employee of society, and ethical management practices as well as sections on internalization. This survey was carried out in domestic and foreign production sites, as well as subsidiaries and the results of which will be used to secure and improve the ethical management system.

#### Ethical Management Practice Survey Participants (2020)

Category		Respondents	Participation Rate
SK hynix	Executives	214	88.8%
	Employees	25,934	73.7%
Subsidiaries(SK hynix SystemIC, and 2 others)		2,118	78.0%

#### Counseling and Reporting System Operation

Ethical Management Counseling/Report

SK hynix operates online and offline communication channels to ensure that our stakeholders can freely report on ethics-related issues and receive consultations. We operate a program to protect informant's rights, which guarantees confidentiality, to prevent retaliation, such as disadvantages in relation to status or discrimination in work conditions. We clearly state that disclosure of the identity of informants is a cause for serious disciplinary action. In 2020, we imposed stricter disciplines in the confirmed unethical practice cases in order to establish an upright ethical management culture, and thereby enhanced employees' awareness regarding the matter.

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ESG Focus

# Raising Employees' Ethical Awareness

SK hynix's education curriculum helps raise employees' ethical awareness. The curriculum includes a common group course(online), an advanced course(debate), and an organization-specialized course(visiting Ethics Class). The common course primarily provides case-oriented education, such as the significance of ethical management and guidelines, while the advanced one has employees engaged in debate regarding their dilemmas in performing their duties. The organization-specialized course is comprised of lectures and content tailored to each organization's employees.



The online training is a general curriculum held annually to study unethical case studies and raise employees' awareness on proper ethical practices. Content is created and provided based on the Code of Ethics, the Code of Ethics Practice Guidelines, covering topics that employees must comply with as well as frequently asked questions. The content is also available in English and Chinese for our international employees.

Debate training is held annually to strengthen employees' ethical decisionmaking and execution capabilities. SK hynix opens conversations about ethical dilemma situations potentially faced in the organization to make it easier for employees to internalize and put ethical standards into practice. Debate results are made into each organization's ethical practice guidelines as a reference point for task performances.

Aimed at effective, ethical management, the Visiting Ethics Class is operated all year for the field workers. The class is comprised of essential courses based on the analysis of

unethical risks for each organization.

# Spreading Ethical Management for Suppliers

To achieve the joint practice of ethical management with our suppliers, SK hynix has been spreading the culture of ethical management to the suppliers employees. To this end, we are sending a monthly Q&A series, 'Let's learn about ethical management,' in which we share the key ethical policies and information of interest to our suppliers. Individual e-mail messages are sent to sales managers, with close contact to employees, who are encouraged to individually forward the information to all employees, while information about Procurement Integrated System aims to spread and promote ethical standards. In cooperation with our suppliers, we will continue to create an ethical atmosphere and raise awareness of our ethical responsibility.

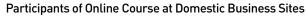




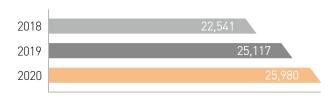












# **Tax Policy**

# SK hynix's Tax Policy

SK hynix operates globally with corporations in 12 countries. As a global leader in the semiconductor industry, we provide products with state-of-the-art technology that connect the world and elevate the quality of life.

Since our business can have a critical impact on the economy and society, we are deeply aware of our social responsibility in relation to tax. We meet our social duty voluntarily by completing our tax compliance requirements on time in each country we operate in. We comply with obligatory taxation regulations, as it is our self-imposed duty to grow responsively alongside it. To achieve our duty in relation to taxation, we aim to:

- Understand and comply with tax laws
- Recognize an appropriate amount of tax to each tax jurisdiction we operate in, based on value creation
- Prepare, submit, and retain pertinent tax information in required forms on time, as required by tax laws and tax authorities
- Employ appropriately qualified and trained tax professionals, whom have knowledge and understanding regarding our business
- Utilize professional tax advisers when intricate, uncertain or significant tax issues require specialized knowledge

# Approach to Tax Risk Management and Control

SK hynix establishes internal policies and working processes for tax filings and compliance while effectively managing tax risk. We firmly believe that complying to the tax regulations will protect us from the potential tax risks during the future value creation process.

#### Approach to Tax Risk Control





SK hynix's Tax Strategy 🔗

## Our Thoughts on Tax Planning

SK hynix does not engage in the misuse of tax havens, low tax jurisdictions and tax structures for the sake of tax evasion. We take responsibility as taxpayers and carefully keep principles of good faith and strive for efficient tax management with the purpose of creating the greatest value and social contribution in mind. Additionally, we strive to prevent any conflict of interest between the profits of society, shareholders, employees and the tax authorities from happening. Any internal transactions within the group are done with the continuously modified, the changing industry environment in mind, arm's length principle.

#### Mitigable Tax Risk Management

We comply with the tax laws of each jurisdiction we operate in. However, we acknowledge that the elimination of all tax risk is impractical due to the complexity of tax legislations. That being said, the Group is committed to identifying and monitoring relevant significant tax risks, and in these circumstances we will seek the guidance of professional tax advisors.

Additionally, we keep wary of the amendment and enactment of international tax laws in a timely manner to respond actively in accordance to them. We also put emphasis on monitoring and identifying uncertain tax issues as early as possible. Where any tax law is unclear or subject to interpretation and is deemed to have a significant business impact, we will engage with external tax advisers to ensure we remain compliant in all our operations and to ensure appropriate discussions and disclosure to tax authorities where applicable.

#### Our Attitude Towards Tax Authorities

Our engagement with Tax Authorities is an essential part of our taxation related activities. In order to mitigate and reduce ambiguity, we engage with Tax Authorities in a transparent and honest manner. Upon the request of Tax Authorities, we aim to provide relevant information through domestic accounting managers under the global head of tax & accounting in a timely manner. We aim to invest considerable efforts to reach an agreement with Tax Authorities when each party has a different point of view.

Link to SDGs







# Creating a Safe and Happy Business Site for All

ESG Focus 6. Safety and Health

Accident, Health, and Safety issues

The semiconductor corporations comprise of numerous tasks extending from office work and research to manufacturing, repair and maintenance, and construction. This diverse group of fields tend to coexist within a single business site. Accordingly, we must manage, strictly, the different causes that may contribute to affecting the health and safety of employees negatively due to the nature of the different types of work environments that employees must deal with. SK hynix also takes the responsibility of ensuring safety and health of its suppliers and inhouse subcontractors in accordance with the intensified safety laws and regulations, such as the Occupational Safety and Health Act and the Serious Accident Punishment Act.

#### Our Approach

**Appendix** 

SK hynix fulfills core assignments to prevent severe accidents not only for its employees but also its suppliers. We monitor and improve safety and health risks through our SHE Management System and plan to construct a clean environment through our Occupational Health Advancement and Maintenance Committee.



Appendix

# Safety and Health System

SHE Management Committee



# Health and Safety Management and System

SK hynix periodically holds the SHE Management Committee to make fast and accurate decisions to ensure a safe working environment for all employees and suppliers. We also integrated the safety and health management system(ISO 45001 / KOSHA 18001) and the process safety management to the SHE Management System. Through the SHE Management System, we monitor and improve factors that lead to safety and health issues and evaluate the company's integrated level of safety, health, and environment. With the proposal of the Serious Accident Punishment Act, serious accidents are now recognized as a management-wide problem, moving away from negligence-centered recognition. Accordingly, SK hynix plans to conduct overall inspection on its company-wide safety and health management system and carry out system modifications on decision-making and execution.

#### Safety and Health Policy

- **01.** SK hynix establishes a business site in which its members are healthy and safe through defining safety and health management as its core value and establishing standards that exceed regulations.
- **02.** SK hynix improves its safety and health standards through continuously reforming and upgrading its system for the safe operation of equipment.
- **03.** SK hynix creates working conditions to help its members and employees of cooperative companies and detects risks in advance and eliminates them.

#### SHE Safety and Health Management Principle

#### Creating SHE Advanced Management Environment

- Development and reinforcement of the SHE safety net
- Establishment of a SHE database and information
- Reinforcement of the supplier support platform and shared growth
- Ensured trust through participation and communication

#### Pursuit of Safety 'Global Top'

- · Lead a safety culture based on happiness and empathy
- Acceleration of working-level safety management autonomy
- Improvement of the preemptive chemical substance management system
- Advancement of risk assessments and secured safety

#### Achieving the Top level of Health in all Positions

- Establishment of the SK hvnix health cluster
- Ensured healthy work environment for all positions
- · Research and prevention of potential harmful factors
- · Promotion of practicing four healthy behaviors
- \*Smoking cessation, moderate drinking, exercise, stress management

# A Green Healthy Earth with Society

- · Contribution to the natural environment's ecological health
- Pursue Net Zero
- Maximize water reclamation and minimize water footprint
- · Establishment of a pleasant business site with circular resources

# Safety and Health Outcomes & Goals

#### Outcomes in 2020

#### Tasks for 2021

## Safety and Health Certifications(Expiration Date)

	Icheon	Cheongju	Wuxi	Chongqing
ISO 45001	~ 2024. 01.06	~ 2024. 01.06	~ 2021. 08.14	~ 2022. 01.18
KOSHA 18001	~ 2021. 11.06	~ 2021. 11.15	-	-

#### Reduced Risks of Three Major Accident Types and Successful Serious Accident Prevention

- Applied intrinsically safe explosion-proof equipment LDS/ARS
- Improved fire protection for hazard facilities
- Duplexed fab pipe leak sensors

#### Reduced Harm Within the Semiconductor Ecosystem

- Comparison analysis with previous and present exposure data
- Established an external communication channel and carried out promotional activities

# To Prevent Severe Accidents and Implement Three Core Tasks

- Standardization of safety designs(10)
- Improvement of high-risk facilities (60 facilities)
- Improved audit on chemical / process accidents

Reduction of Chemical Accident Risks: 20% of accident reports Instilling a Safety-first Culture: Five practice tasks

ESG Focus

# **Occupational Safety**

# **Serious Accident Prevention and Management**

Overview

#### Serious Accident Prevention TF

In January 2021, SK hynix formed the 'Serious Accident Prevention TF' to hold weekly discussions on prevention and management of substantial, severe accidents in the field. The TF identifies and improves hazards and risks for each of the five departments, including Fab, P&T, Utility and primarily focuses on carrying out zero serious accident activities.

SK hynix prioritizes safety and puts its utmost effort and responsibility to prevent severe accidents.

# **Upgraded Safety Management System TF**

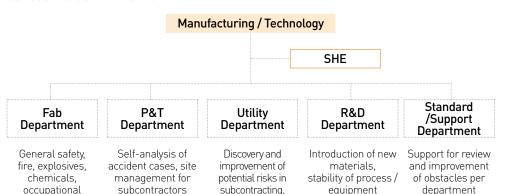
SK hynix fulfills its obligations to guarantee safety and health. In March 2021, we established the 'Upgraded Safety Management System TF' to prevent severe accidents systematically.

Under the supervision of the sustainable management officer, the TF cooperates with other relevant departments, including the legal, SHE, and manufacturing, to consult company-wide measures for safety and health management system improvements.

TF's obligations include operating the safety and health management system, detecting the management status, and introducing or implementing improvement plans, while the team has been filing improvement plans according to the health and safety management status on June 2021. In the second half of the year, the team plans to introduce a new safety and health management system according to said improvement plans.

#### Serious Accident Prevention TF

disease



construction, and rebasing

#### Upgraded Safety Management System TF



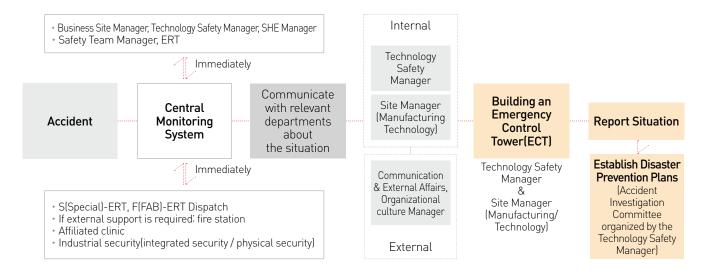
#### **Accident Prevention Activities**

#### **Emergency Response System and Process**

Overview

SK hynix operates a central emergency room which provides 24-hour surveillance of safety / fire systems, and using preemptive detection of emergency situations and response systems we have created an Emergency Response System thus creating safety for employees at business sites as well as the overall community. The Emergency Response System, centered around the Emergency Control Tower(ECT), is designed to secure human safety and prevent the spread of damage through prompt responses in the early stages of a accident. Also, we have secured the ability to act through the establishment of response procedures and emergency evacuation/response training for each type of accident (fire, chemical harm, or physical injury). Furthermore, with the operation of our Emergency Response Team(ERT), we can respond rapidly on-site to emergency situations.

#### **Emergency Response Process**



# Operation of PSM(Process System Management) System

PSM is a systematic safety management system. SK hynix prepared 'process safety reports' containing plans about management of safety, health and technology data, assessment of risks regarding hazardous and dangerous processes, the securing of perfect safety of facilities and safe operation of facilities and has implemented them.

The company has implemented a comprehensive safety management system to prevent serious industrial accidents by making all workers take part in the process voluntarily, discover potential risks regarding dangerous facilities and eliminate them or reduce their effects as much as possible.

#### 12 Elements of PSM



# Accident Prevention Activities with IoT Technologies

Overview

SK hynix applies IoT-based technologies to efficiently prevent accidents and ensure safety. We discover harmful factors within the business sites in advance to protect employees from severe injuries using IoT technologies, such as smart MSDS. Bluetooth detector, drone inspection, smart tag, and smart emergency evacuation system.

To optimize safety management, the Smart Safety TF, which is comprised of safety management experts, utilizes IoT technologies to handle a variety of tasks, such as conducting AR/VR-applied experience education, operating intelligent CCTVs, inspecting AR-based equipment, and alleviating emergency evacuation bottleneck situations.

Category	Risk Factor	Description
Bluetooth detector	Confined space	Real-time gas status monitoring by internal workers and external supervisors in confined space
Drone inspection	Blind spots	Reduction of potential risks through off-limit zone inspections
Smart tag	Emergency evacuation	Identification of the number of access and isolated employees through employee IDs
Smart emergency evacuation system	Emergency evacuation	Delivery of accurate action guidelines in real-time through accurate emergency analysis

# **Cultivating a Safety Culture**

## Cultivating a 'Safety First' Culture

SK hynix recognizes the safety culture as the most fundamental factor in sustaining the semiconductor business. With our slogan 'Nonexceptional Safety First,' we strive to instill safety culture in the business site. By establishing the Safety Culture Committee, we share the safety culture value of 'People-focused Safety with Communication and Empathy' through communication and strengthened safety culture activities. To achieve this goal, we have attempted various approaches from the most basic safety rules, such as traffic accidents. We will continuously strive to develop and build safety values for our employees and suppliers.

## Safety Culture Activities

It is our goal to create a zero-accident business site through the 'safety alarm system' that motivates employees to change their behavior patterns voluntarily. Employees participate in 20 safety cultural activities according to their characteristics. The activities include improving the 'action-based safety computer system' to prevent injuries that may occur due to unsafe acts on site. SK hynix also spreads safety awareness and culture, through fire drills and virtual safety experience training at the SHE Experience Education Hall for employees, suppliers, and the local community. Due to the increasing accidents caused by mistakes, we vigorously pursue to propel various safety cultural activities.

# **Near-Miss Management**

Since April 2019, SK hynix has been operating a Near-Miss Accident Management System to systematize the discovery of potential hazard factors and cultivate a voluntary safety culture. The same system runs on all business sites, and the employees are rewarded monthly and the suppliers guarterly for discovering potential risks. A total of 1,515 risk factors and 4,824 risks were discovered and improved in 2019 and 2020 respectively(SK hynix: 1,721 cases, suppliers: 3,103). As such, encouraging our employees and suppliers to prevent accidents by rewarding them on a regular basis has proved its effect.

# Safety Culture Roadmap

#### 2020 People-focused Safety Management

- Close management through leadership change
- Diversify communication / empathy
- Introduce action-based safety management

#### 2021 Responsibility-Based Safety Management

- · Recognize responsibility and perform roles
- Introduce the compliance awareness detecting system
- Motivate each organization to taking the lead

#### 2022 System-Based Accident Prevention

- Internalize safe behavior / risk assessments
- Evaluate safety culture levels
- Manage periodic data-based changes

80

# **Healthy Business Site**

# Occupational Health Advancement Sustainability Committee

The Occupational Health Advancement Sustainability Committee aims at establishing the world's first occupational health system and puts this into practice under three divisions(health, environment, and justice). The committee is a joint organization of labor, management, and academia that is comprised of SK hynix's management, labor union, and external professors. It prioritizes health and safety of employees through plenary meeting, the working-level committee, and the Occupational Health Advancement Sustainability Committee TF. Furthermore, it maintains a sustainable occupational health advancement system through close cooperation between its relevant committees.

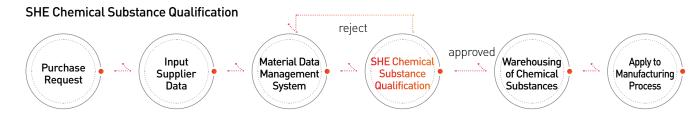


# Chemical Hazards Management

SK hynix manages chemical hazards based on safety, health, and environmental policies. Through our legal manager, we inspect and evaluate chemical hazards management plans to execute emergency response training in case of accidents based on the emergency risk management plan(RMP) and process safety management(PSM). We also reduce the basic unit of chemicals(quantity consumed compared to volume) to create a safe working environment by enhancing procedures that minimize the detrimental effects of contaminants.

#### SHE Chemical Substance Qualification System

We create a safe working environment by complying to domestic and overseas regulations on the use and management of chemicals harmful to our employees, and create products with an eco-friendly manufacturing process. We analyze a total of 49 types of toxic chemicals to prevent the use of highly hazardous substances and thus ensure a safe working environment for all employees.



# Enhancement in Chemical Hazards Management and Handling Safety

SK hynix shares the status of hazardous chemical use to all employees on a regular basis through the MSDS\* kiosk and a mobile app. Training courses are also provided to educate employees on how to handle such chemicals and take appropriate action in case of emergencies. We also share the chemical substance management status and emergency response plans with the community through the Local Council for Chemicals. Moreover, we fostered a community with other participating companies to discuss and exchange relevant laws and information. To strengthen chemical hazards management and handling, SK hynix practices various activities related to safety operation procedures and emergency action plans. We actively prevent potential risks through security habituation, leakage inspection, specialized training for suppliers, and emergency contact.

Appendix

# Risk Exposure Management

#### **Exposure Management Activities**

SK hynix practices various exposure management activities to prevent health risks in advance. We systematically measure various by-products from scrubbers to evaluate the level of harm exposed to employees from electromagnetic waves and make necessary improvements. Also, we collect, analyze, and evaluate factors that impact the workplace, such as chemicals, dust or air pollutants, noise pollution, and high temperatures.

### Big Data-based Exposure Management, JEM System

SK hynix's Job Exposure Matrix(JEM) system is an integrated big data-based exposure system. SK hynix is the first semiconductor company in Korea to computerize various health information at business sites. We collect multiple exposure information to prevent occupational diseases within the workplace by managing employee health and minimizing health risks at work. 1,169 chemical unit processes are registered on the JEM System, enabling us to better understand the chemicals and improve the work environment accordingly. Through the JEM system, we track the history of each exposure and take prompt measures against each cases that might lead to occupational diseases, thus ensuring a safe business site and health for our employees.

# Health Management for Employees

SK hynix provides various health promotion programs to discover and improve potential health risks along with legally mandatory items to guarantee a safe business site with zero health risks.

#### SHE(SK hynix Employees) Cohort

SHE Cohort, an organization that manages employee health and prevents diseases in advance, through stable operation, receives positive feedback from certain academic communities for the purpose of the private corporate cohort study. Since its founding in 2017, SHE Cohort has been continuously expanding its database connection and occupational epidemiology research through an in-depth analysis of health statuses.



25,491(90.9% agreed) Number of

SHE Cohort employee participants (accumulative, 2020)



Research cases by

SHE Cohort (accumulative, 2020)



Briefing sessions by SHE Cohort

(accumulative, 2020)

#### Health Care for Musculoskeletal Pains

In order to preemptively prevent as well as to prevent from worsening musculoskeletal disorders, we select employees who are suffering from occupational musculoskeletal pains in advance by conducting an annual health survey on musculoskeletal symptoms. We monitor those who suffer from musculoskeletal pain and provide them with educational content on health guidelines.

#### **Health Promotion Program**

SK hynix carries out annual health promotion programs to motivate its employees and improve their health. Due to the COVID-19 pandemic in 2020, we offered online programs for employees upon successful completion of the previous year's program. We plan to provide more online programs in the future to allow our employees to actively participate in health promotion, anywhere.

Progran	m	Goal	Details
	Anti-Nicotine Program ('Nico-Bye')	Successful smoking cessation among employees	- Provide prescribed medication in place of nicotine for successful applicants - Reward successful employees, verified by nicotine tests
	Doctor's Liver Program (moderate drinking)	Prevent personal and corporate losses caused by excessive drinking Habituate a healthy lifestyle	<ul> <li>Platform for successful employees to share their experience and offer advice</li> <li>Engage employees with non-face-to-face activities such as alcohol awareness quizzes</li> <li>Reward excellent participants on weekly assignments</li> </ul>
→)·(←	Anti-Fat Program (obesity)	Promote voluntary weight loss and encourage self-care	- Set targets on weight loss and offer healthy diet tips for successful applicants - Self-checklist on tracking weight and competition upon successful completion of the goal



#### Case Mobile Healthcare

Walk-on App is SK hynix's non-face-to-face health promotion program that supports anti-smoking and a healthy lifestyle. Using Cognitive Behavioral Therapy(CBT), the app suggests health missions for individuals and offers incentives to encourage a continuously healthy lifestyle.

#### **Anti-Smoking Campaign**

Smoking leads to severe illness, raises mortality rate, and even increases the likelihood of contracting COVID-19. We provide a variety of anti-smoking campaigns by having employees sign a two-month contract, post pictures of finger bands, and participate in Quit Smoking Picketing Campaign! In addition, we offer alternative activities for employees to avoid cravings. We created an anti-smoking video and held a Coloring Book Contest using illustrations to create a non-smoking environment inbusiness sites.

By operating an anti-smoking clinic at our affiliated clinic, we provide prescribed treatments such as drug prescription and individual consultations to encourage anti-smoking.

#### Mental Health Promotion Program

SK hynix offers a customized meditation program to lessen work stress and ensure the well-being of employees. In 2020, we promoted mental health via a professional meditation app that provides meditation, cognitive education, and sleep content, despite restrictions from COVID-19.

SK hynix's Counseling Room, 'My Mindwalk,' offers a mental fitness campaign to ensure employee's mental health. It fully recognizes the importance of mental health and has contributed to positive change among employees. An online mental fitness campaign 'Mind: ON' was practiced in 2020 to help employees overcome stress arising from the pandemic. We also created a meditation video 'Meditation: ON' to help employees overcome the Corona Blue(depression from COVID-19).

**Appendix** 

# Safety and Health Management for Suppliers

SK hynix performs various safety and health programs to achieve Shared Growth with suppliers.

# **New Supplier SHE Competence Evaluation**

With an aim to prevent potential SHE risks from the strengthened Occupational Safety and Health Act and suppliers, SK hynix conducts preliminary SHE competence evaluations for new suppliers. We determine whether to sign a contract with a potential supplier by considering the results of the evaluation, and the New Suppliers' SHE Competence Evaluation Process was established in order to enhance the supplier's SHE competence. In 2020, SHE eligibility assessment was conducted on 96 companies in accordance with the target criteria. Through the assessment, we are contributing to enhancing the industrial disaster prevention systems of suppliers and the company.

#### **New Supplier SHE Competence Evaluation Process**



#### Systematization of Supplier Safety Index

SK hynix introduced the Passing System to enhance the safety management of its suppliers through a quantitative assessment through the use of a safety index. The Passing System is a supplier safety management and index evaluation system based on the SHE management system. After signing contracts, regular inspections are conducted based on the Passing System criteria, and support activities for the improvements are also offered.

#### SHE Consulting

We offer technical guidance to diagnose the potential risks of suppliers and resolve related risks through the SHE consulting program. We also provide customized technical support to improve compliance among suppliers who are financially and technically burdened. In partnership with the Work Environment Health Center, we also provide occupational health services, such as consulting on health and occupational accidents by occupational health professionals, occupational disease prevention and health promotion activities, and work environment improvement programs. In addition, we established a SHE information exchange network among targeted suppliers to achieve Shared growth and provided education on enhancing SHE competency. In 2020, we performed the program for 71 companies, and plan to further expand the scope and field in 2021.



# SHE Education on Strengthening Capacity

SK hynix offers various education services to improve its supplier's safety and health, such as Occupational Safety and Health Act and SHE Code of Conduct, Advanced Course on Standard Operating Procedure Risk Assessment, and Comprehension and Practice of Accident Investigations. We also provide education and evaluation specialized for each duty to support suppliers with SK hynix's safety capacity. We plan to offer more education courses and strengthen our suppliers' expertise in safety management.

#### **Number of Education Recipients**

1616

Occupational Safety and Health Act and SHE Code of Conduct(2020)

Advanced Course on SOP Risk Assessment [2020]

Comprehension and Practice of **Accident Investigations** [2020]

# Co-prosperity & Cooperation Program

SK hynix operates the Co-prosperity & Cooperation Program with the Korea Occupational Safety & Health Agency(KOSHA) to support safety and health practices throughout the supply chain. The program focuses on building a cooperation system, strengthening and supporting competency, and conducting risk assessments in order to prevent accidents and improve safety and health practice management throughout the supply chain. In 2020, the Icheon business site received an S Grade for two consecutive years in the Co-prosperity & Cooperation Program hosted by the Ministry of Employment and Labor and KOSHA. It also received the Grand Prize from the Ministry of Employment and Labor for its excellent performance at the National Best Practices Contest of the Co-prosperity & Cooperation Program. Through our Co-prosperity & Cooperation Program, we plan to give continuous support for our suppliers with the goal to achieve same levels of safety management.

## Support for Health Capacity Enhancement

To further support health management for our suppliers, SK hynix evaluated the EHP of subsidiaries and contractors and performed an 8-week nonface-to-face lifestyle improvement program with the mobile health care app applied to each company.

More education programs relevant to health management are practiced to strengthen SK hynix suppliers' capabilities. In 2021, we plan to distribute health management guidelines to a larger audience and build a post-management support system while providing capacity building education.

#### Center for Working Environment Health

Established in 2019, the Center for Working Environment Health is a public industrial health center to alleviate the safety, health, and environmental issues of suppliers and small local enterprises. At the Center, we provide industrial health services not only for our suppliers but also for workers at local enterprises.

By analyzing harmful risk factors, the Center offers high-risk business sites with industrial health services such as counseling on preventing or alleviating occupational diseases, cardiovascular diseases, work stress, and musculoskeletal disorders.

# Center for Working Environment Health Status and Achievements



731 participants

Number of Work Environment Health Center participants(2020)



Health Center programs(2020)

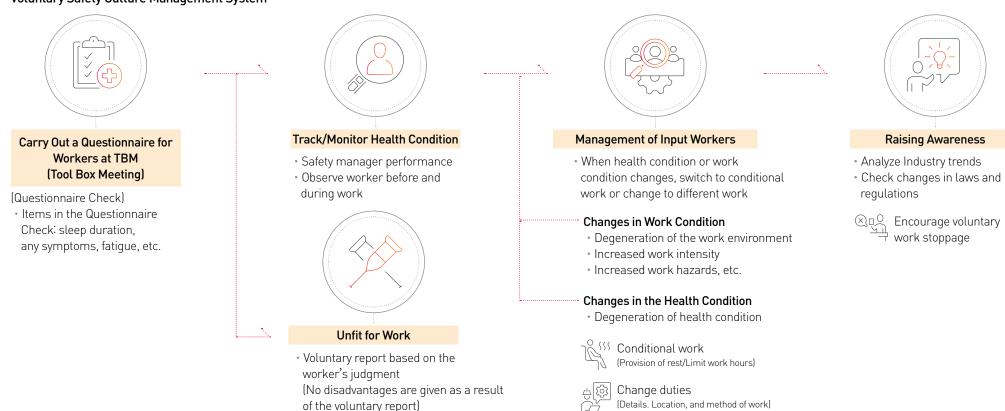
• Deemed unfit for work by a supervisor

Appendix

# **Voluntary Condition Check Culture**

SK hynix takes care of health of our suppliers' employees by cultivating a culture of 'voluntary condition check.' We conduct an employee health check process with a safety manager in early morning meetings to decide whether their roles need adjusting or whether they are capable of being put to work. We take customized measures for individual employees by categorizing the checklist in detail to include headache, fever and sweating, and musculoskeletal pain.

#### Voluntary Safety Culture Management System



Link to SDGs







# Establishing a Sustainable Supply Chain through Risk Management

Responsible supply chain issue:

SK hynix works closely with suppliers from diverse fields, including equipment, materials, and parts. With the growing competition in the global semiconductor market, it is our goal to establish a responsible and balanced supply chain, and to grow mutually with our critical suppliers.

ESG Focus 7. Responsible Supply Chain

#### Our Approach

As SK hynix is aware of the value of win-win growth that represents links between the growth of the company and our suppliers, we operate various support programs to enhance suppliers' competence. We strive for Shared growth with our suppliers by managing supply chain risks together in consideration of sustainability in terms of the ESG at all stages, including supply chain selection and evaluation.



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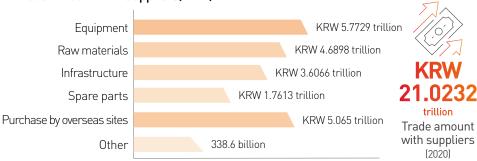
# **Sustainable Supply Chain Management**

SK hynix applies ESG management principles in their management of the supply chain. We are building a sustainable supply chain by strengthening our competitiveness with a system in line with international standards with a capacity to meet the needs of external stakeholders.

#### Sustainable Supply Chain Management Strategies



#### Trade Amount with Suppliers (2020)



# **Supplier Selection and Evaluation**

We strive for Shared growth and management of supply chain risks together with our suppliers by applying the ESG management principles at all stages, including supplier selection, evaluation, and management. To achieve this, we guickly grasp the current status of our supply chain and manage high-risk supply chains through an ESG evaluation.

#### Supplier Selection and Evaluation Management

SK hynix aims to lay a solid foundation by selecting and evaluating suppliers suitable to the business approach. We consider ESG sustainability during the selection and evaluation process, and 'strategic partners' are managed intensively through analysis in diverse elements, such as sales, scale, friendliness, irreplaceability, core technology provision, and price competitiveness. We register new suppliers only after passing the credit rating and SHE competence evaluation based on safety, health, environmental due diligence, and whether any hazardous substances were included. Furthermore, we conduct annual evaluations based on multiple criteria, including credit rating, technology, quality, price, delivery date, and cooperation, to analyze risks and reflect the results in our supplier management strategies. We also establish internal standards for fair and transparent trades and disclose them to the public via the SK hynix Win-win portal. We plan to take more responsibility in supply chain management activities by identifying ESG risks through frequent monitoring and due diligence.

#### **Supplier Evaluation Management Process**

Analyze supplier and

derive a risk profile



Assessment and audit of the environment, Monitoring and Feedback safety, labor, and human rights (Corrective Action)

# Securing Stable Supply Chains through Critical Supplier Management

SK hynix's critical suppliers are selected based on the year-long trade experience, annual purchase amount of more than KRW 500 million, or quality impact, regardless of the purchase rate. As of 2020, SK hynix traded with 1,638 critical suppliers.

While trading with suppliers, SK hynix utilizes the terms and conditions under the standard agreement presented by the Korea Fair Trade Commission(KFTC). Furthermore, we try to establish a stable supply chain ecosystem through continuous inspection and improvement of policy implementation.

# **Supplier Code of Conduct**

SK hynix implements mandatory Supplier Code of Conduct to all suppliers to ensure full compliance and in order to protect its stakeholders and employees. We also strive to reduce supply chain risks by using legal raw materials and managing environmental impact through our Supplier Management System. The Supplier Code of Conduct is established based on the SK hynix Code of Ethics, and stipulates labor, human rights, SHE, ethical practice, conflict minerals, and management system. The relevant document is available to access on our website and Win-win portal.

Supplier Code of Conduct



Percentage of Supplier Code of Conduct complying suppliers

# **ESG Management in Supply Chains**

#### Identification and Analysis of Supply Chain Risks

SK hynix identifies social and environmental risks in business sites by analyzing sustainable management issues and global trends. We implement suppliers' ESG management during the evaluation process by providing business consulting based on the stakeholders' needs and obtaining guaranteed compliance to the sustainable management code. We determine supply chain risk level based on comprehensive evaluation results and request improvements to suppliers accordingly.

1880 / 65%

Number of critical suppliers evaluated for ESG risks / Proportion of all supplier evaluations  $(2018 \sim 2020)$ 

**719,44**%

Number of critical suppliers evaluated for ESG risks / Proportion of critical supplier evaluations [2020]

Number of suppliers with high ESG risks / Proportion (2020)

Percentage of high-ESG risk suppliers who fulfilled corrective action plans [2020]

# Risk Improvement through ESG Consulting

SK hynix established an ESG evaluation system for its domestic and overseas suppliers to identify potential ESG risks according to stakeholders' needs and changes in regulation. We evaluated SHE and Human rights & Labor based on the Supplier Code of Conduct. Personalized solutions are provided to high-risk suppliers through ESG consulting, and their improvements are monitored regularly. We plan to computerize self-assessment systems for our critical suppliers and conduct more on-site assessments.

The ESG evaluation results are applied in the selection and evaluation process. By providing specialized consulting for each sector, including SHE, Human rights & Labor, and Ethics, we aim to enhance the working environment to clearly identify and resolve ESG risks. We motivate suppliers by rewarding them upon their improvements.

## Risk Management Process through ESG Consulting

#### Site Evaluation Analyze Information Self-evaluation Apply Results Online self-evaluation Analyze supplier On-site ESG consulting Set targets for site

- information
- Set targets for self-evaluation (critical suppliers)
- evaluation (high-risk suppliers)
- Identify improvement tasks
- Interview managers
- Monitoring of improvement task implementation
- Reward incentives to suppliers with excellent performance and improvements

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#### **RBA Briefing Session**

In 2020, SK hynix visited its suppliers upon request to hold the RBA Briefing Session according to their business type, size, and employees. The session has helped us better understand the practical challenges involved. In response, we launched a 24-hour channel to provide suppliers with practical support. In 2021, we plan to cooperate with external specialized agencies and provide free on-site consulting services regarding human rights and labor issues of high disputes within suppliers, such as occupational accidents, working hours, and minimum wage.

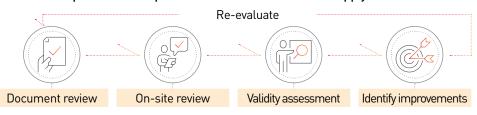
#### SHE Audit(Wuxi Business Site)

The Wuxi business site has been implementing the SHE Audit since 2019 to create social value and reduce supply risks from legal violations. Wuxi business site screens SHE-related management and operation status, such as safety, firefighting, and workplace sanitation, and supports consulting services for improvements. In 2020, 33 companies have made improvements while successfully completing 59% of the targeted improvements.

# Inspection and Improvement of the Raw Material Supply Chains

SK hynix conducts regular inspections to enhance the competence of suppliers that provide raw materials and carries out monitoring for improvements. For the purposes of both inspection and system improvements, we reviewed and complemented the basic operating system established for training. inspection, and information management as well as the response system that manages the history of accidents that have occurred. This systems helps us prevent, review, and manage the use of hazardous substances by raw materials suppliers in order to prevent any risks associated with complaints raised by customers and violation of regulations. We plan to share exemplary practices derived from on-site reviews across the supply chain to enhance suppliers' hazardous substances management capabilities.

#### Process of Inspection and Improvement of the Raw Material Supply Chains



# Support for Reducing Environmental Impact

SK hynix launched 'ECO Alliance' in 2019 to solve environmental issues and help suppliers respond to the rapidly changing environmental regulations.



#### Case ECO Alliance

In order to build a eco-friendly semiconductor ecosystem, jointly launched ECO Alliance, an alliance of semiconductor related industries, in 2019 to resolve environmental issues together. ECO Alliance aims to take proactive measures and strengthen the competitiveness of environmental issues. Companies who have participated have set mid- to long-term goals to reduce environmental impact over the next three years and achieve common environmental goals by holding regular meetings, small group activities, ECO conferences, and publishing ECO Alliance Newsletters. In addition, the alliance aims to build an ecofriendly semiconductor ecosystem by strengthening the connection and providing SV measurement services and rewards to suppliers.

Number of suppliers in ECO Alliance (2020)

#### Key Activities of ECO Alliance



#### Small Environmental **Group Activities**

Knowledge-sharing sessions between member companies regarding waste, GHG, and others(per quarter)



#### ECO Alliance Newsletter

Company visits, showcase of outstanding SHE improvement cases, issues, proposals and joint liability measures, legal trends, SHE expert contribution, and new technology business ideasharing



#### **Education & Consulting**

Customized education and consulting to meet clients' needs

- Achieving environmental goals
- Personalized education and consulting on compliance



#### ECO Workshop and Performance Sharing

Showcase of excellent environmental achievement cases and approaches (performed annually)

- Special lectures from environmental experts
- Announcement and sharing of SK hynix's environmental practices

# **Responsible Management of Mineral Resources**

Overview

#### **Conflict Minerals Policy**

- SK hynix strives to manage legal mining procedures and establish related infrastructure systems
- SK hynix keeps track of domestic and international conflict minerals policies and acts appropriately
- SK hynix prevents the use of conflict minerals by monitoring raw materials in line with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas
- SK hynix identifies and eliminates risk factors in advance to comply with the conflict minerals policies and establish healthy supply chain ecosystem

# **Conflict Minerals Due Diligence Process**

SK hynix will continue to manage suppliers' conflict minerals and expand the scope into responsible management of mineral resources.



- management policies
- (GPMS) information based mineral information survey
- Distinguishing conflict mineral risk supplier
- the targeted suppliers
- Notify the plan for monitoring in writing and request for data
- Examine the data

- smelters
- Have the improvement plans submitted by suppliers
- Monitor the improvement status

# Approach to Conflict Minerals

When changing raw material suppliers, SK hynix checks whether the used raw materials are certified and secures data to verify the country of origin. We draft and provide a 'warranty form(conflict minerals report template)' hinged on the information provided by the supplier.

Based on the substance data in the Green Product Management System(GPMS), we periodically conduct a status survey to renew the warranty form, and review whether the purchased raw materials contain conflict minerals to guarantee that our purchased raw materials are mined legally and humanely. We provide RBA consulting to our raw material suppliers to help raise their awareness on the importance of management, in accordance with the RBA, customers and international organizations.

# Conflict Minerals Program ( )



The Responsible Minerals Initiative(RMI) is Joint Council for Collective Response which regards conflict minerals. It enhances the collection, management, and disclosure of information such as the origin and usage in relation to conflict minerals within the global supply chain. As a company member of the RMI, SK hynix manages conflict minerals supply chains to ensure a transparent tracking of the supply chains and strives to address SHE and human rights and other issues that are related to the global supply chains.

**Shared Growth** 

# **Shared Growth System**

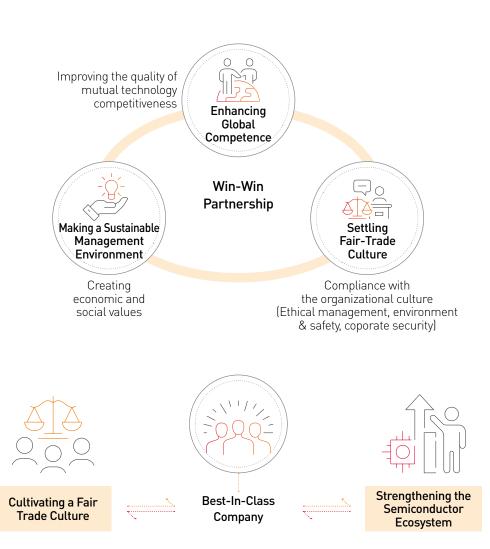
We launched the Suppliers Collaboration Team under the Procurement Strategy Department to align our Shared growth policy and supply chain communication channels with our purchase strategies. Additionally, the Compliance and the SV Department manages fair practice and the social and environmental impact management of suppliers, respectively, to ensure Shared growth practices in line with our strategic directions.

#### Shared Growth Goals

SK hynix and its suppliers work together to create a sustainable environment that enhances technological competitiveness and creates economic and social values. We cultivate a fair-trade culture to upgrade the supply chain and enhance the competitiveness of suppliers within the industry that further strengthens the semiconductor ecosystem through Shared growth.

## **Expanded Support for Non Primary Suppliers**

SK hynix works to further strengthen Shared growth even for suppliers that are not considered primary suppliers, who we do not have a direct business relationship with. We created a KRW 300 billion worth Shared growth Fund to promote Shared growth throughout the supply chain ecosystem, and a Shared Growth Fund worth KRW 70 billion to support non primary suppliers. We have participated in the Industrial Revolution Movement led by the Korea Chamber of Commerce and Industry to strengthen our suppliers' competitiveness within the lower tiers. As part of the movement, we selected non primary suppliers who were recommended by their primary suppliers. We plan to provide management consulting and support for SHE management and provide certificates for the relevant suppliers.



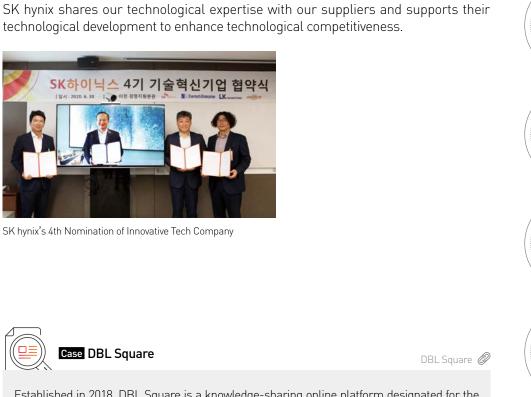
ESG Focus

SK hynix provides a specialized program in 4 specific criteria: technology, management, training, and finance.

#### **Technical Support**

technological development to enhance technological competitiveness.





Established in 2018, DBL Square is a knowledge-sharing online platform designated for the suppliers to provide technological information and services. It was upgraded to ver. 2.0 in 2020. The upgraded version engages employees to optimize communication online. It is now recognized as a semiconductor-specialized portal site. Currently, about 8,400 employees from 300 different companies have joined DBL Square to develop talents and strengthen their technological competitiveness. With DBL Square, we plan to achieve sustainable and shared growth and enhanced competitiveness within the semiconductor industry.



IPR Sharing and Support Center

As a knowledge-sharing platform that enhances suppliers' competitiveness by sharing SK hynix's knowhow on tangible and intangible intellectual properties(IP).

> **62** suppliers, **817** employees participated (accumulative, 2020)



Pattern Wafer Support

SK hynix provides suppliers with the fine-patterned wafers, which are produced using SK hynix's process equipment, as development samples.

Provided 6, 114wafers(accumulative, 2020)



**Technological** Development Fund

SK hynix directly provides support through a technological development fund with no interest for a next-generation technology development project which is expected to generate synergy with SK hynix.

Supported KRW 3 billion(accumulative, 2020)



Analysis/ Measurement **Support Center**  SK hynix shares its core assets and professional technologies with its suppliers to enhance their technical skills.

**68** suppliers, **37** 160 cases(accumulative, 2020)



Innovative **Tech Company**  SK hynix selects businesses with technological potential as 'innovative tech company' and provides support.

Selected 12companies(accumulative, 2020)

# Management Support

SK hynix has elevated our quality by enhancing the competitiveness of suppliers and pursuing sustainable growth through recruitment and management consulting services.



Revolution Movement Through the industrial revolution movement, SK hynix supports innovative activities of suppliers to improve their productivity.

> Supported 32 suppliers (accumulative, 2020)



Growing Up Together Consulting supports Shared growth with its suppliers and enhance their capabilities and productivity.

> Supported **58** suppliers (accumulative, 2020)



SK hynix provides on-site training and internships to young talent and recommends eligible candidates to its suppliers. From 2018 to 2020, a total of 521 young talented individuals completed our training course and 312 completed our internship program.

> Switched **211** employees to full-time (accumulative, 2020)



SK hynix provides joint job fairs to help suppliers hire outstanding talent.

> Supported 36 suppliers (accumulative, 2020)

# **Training Support**

Appendix

SK hynix provides various educational support programs, including courses that strengthen the management capacity of the employees of suppliers.



Shared growth Seminar for CE0s

The CEOs of primary suppliers are given with opportunity of networking and expanding their insights in management, economics, humanities, and society.

> Participated by 481 CEOs (accumulative, 2020)



Win-Win Semiconductor Seminar for CE0s

SK hynix provides semiconductor lectures to strengthen the capabilities of the CEOs of secondary suppliers.

> Participated by 253CEOs (accumulative, 2020)



Middle Manager **MBA** 

We practice various programs including strategic planning, accounting, finance, marketing, and HR training to primary suppliers' middle managers to enhance their work capacities.

> Participated by 148 mangers (accumulative, 2020)



SK hynix's full-time professor provides lectures to improve suppliers' semiconductor technical skills.

> Online course total views: 89,210 views (accumulative, 2020)

## Financial Support

SK hynix manages potential risks in the supply chain by supporting stable growth among suppliers with efficient fund management.



#### **Shared Growth Committee**

**Appendix** 

SK hynix has strengthened communication by establishing a Shared growth Committee with competent suppliers from subcommittees and designating a 'Shared growth Day'.

# Communication with Internal Suppliers

We engage our communication activities not only with external partners but also with subcontractors among the internal suppliers. With field managers as the subjects, we hold a win-win meeting on a quarterly basis to resolve on-site issues. Furthermore, we also put efforts in managing employees' working hours to ensure a healthy work-life balance.

#### Number of Companies participated in the Shared Growth Committee



2020

Link to SDGs











# **ESG Focus 8. Social Contribution**

Connecting humans with technology for the happier future

Community Engagement and Impact issues

SK hynix will reestablish its roles and responsibilities to serve communities and will strive to become an industry that creates social values.

### Our Approach

To achieve our SV vision of 'Connecting humans with technology for the happier future', SK hynix creates SV and provides activities such as win-win growth and donations. We engage in various activities based on three main aspects including solving ICT-based social issues, developing future talents, and employees' voluntary participation.



# **Social Contribution Strategies**

To achieve our SV vision of 'Connecting humans with technology for the happier future' we have selected three main aspects including solving ICT-based social issues, developing future talents, and employees' voluntary participation.



SKHY CSR	Connecting humans with technology for the happier future					
Domain	Susciety <sup>11</sup> (Solving ICT-based social issues) Heinstein <sup>21</sup> (Developing Future Talents)		Talenteer <sup>a</sup> (Employees' voluntary participation)			
Short-term Directions (by 2023)	Identify Community Issues and Provide Support  Support for ICT-based senior citizen problems solutions Provide support for the developmentally disabled	Reduce the Learning Gap and Cultivate Scientific Culture  • Reduce learning gap in the ICT field for low-income children and expand STEAM education • Spread scientific culture • Establish a safety net for low-income children / teenagers	Establish a Foundation for Employees' to Donate Talent through Activities  Organize a new talent volunteering group Promote talent / capacity-linked volunteering activities  Upgrade 'Happy Dreaming' Upgrade stakeholders' Connecting Platform(also known as 'Happiness Sharing')			
Mid- to Long-term Directions(by 2030)	Support the community with ICT-based solutions and social safety nets	Build a global ICT talent retention platform	Practice industry's top-tier Talenteer volunteering group			
Goals	100,000 ICT social safety net beneficiaries	100,000 Heinstein Care beneficiaries	300,000 hours of employees' volunteering activities KRW 50 billion of Happiness Sharing Fund			
	1) Derived from 'sustainable' and 'society'.	2) Derived from 'hynix' and 'Einstein'.	Derived from 'talent' and 'volunteer'     (implies employees' voluntary contribution).			

Appendix

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Green Management · Talent Management · R&D and Quality · Corporate Security · Ethical Management and Compliance · Safety and Health · Responsible Supply Chain · Social Contribution

# **Solving ICT-based Social Issues**

#### Silver Friend

SK hynix solves social issues using our biggest strength, ICT-based solutions. 'Silver Friend' utilizes ICT technology to guarantee healthier lives for the elderly that are in need of help. With an Al speaker function, Silver Friend helps elderlies to overcome loneliness, practice healthier lifestyles, and cope with emergencies. It also inputs the user's personal habits and characteristics into its database to provide customized services and accumulate optimal strategies. Silver Friend has been used by 2,800 households nationwide, mostly located in the local community, and created five times worth of social value than its initial investment. Silver Friend is recognized globally, along with the UN, for its pioneering and have made progress to the point of receiving invitations to global events.

# KRW 3.49 billion

Total investments for Silver Friend (accumulative, 2020)

# 2.800 households

No. of elderlies living alone who were benefited with Silver Friend (accumulative, 2020)



Silver Friend project to soothe lonely elderly members of society

#### Happy GPS

As a leading semiconductor memory company, SK hynix provides innovative solutions to age old societal issues. For example, we use the Happy GPS to prevent losses or missing case of disadvantaged elderlies and children with developmental disabilities. As a result, it took 10% less time to find reported missing people(from 11 hours to 1 hour), enhancing the work efficiency of police officers and giving assurance to respective family members.

# KRW 1.77 billion

Total investments for Happy GPS (accumulative, 2020)

# Approx. 20.000

No. of elderly suffering dementia and children with developmental disabilities who benefited from Happy GPS (accumulative, 2020)

No. of missing persons found by Happy GPS (accumulative, 2020)



'Happy GPS'

#### ICT Sarangbang

SK hvnix installed a new center named ICT Sarangbang to connect elderlies to the world. Established in 2018 as part of the Silver Friend project. ICT Sarangbang is mainly comprised of four centers: 1) 'Happy Room' that consists of Care Robots and ICT devices, 2) 'Healthy Room' that provides personal health monitoring services through customized smart healthcare programs and wearable devices, 3) 'Energy Room' that offers engaging VR/AR games, and 4) 'Knowledge Room,' that offers digital education on how to use modern technologies such as kiosks and tablet computers. By utilizing ICT devices in each room efficiently, the center aims to support the elderlies who feel left behind in this heavily digitalized society. We will upgrade the system into an integrated care service by further integrating with the Silver Friend project.



ICT Sarangbang that connects elderlies to the world

ESG Focus

# **Developing Future Talents**

#### Heinstein

In order to develop talent within the scientific field that will develop the future, SK hynix puts emphasis on education. We practice the Heinstein Program that offers coding and robot programming courses to children and teenagers in vulnerable groups. Each year, approximately 1,000 local children and teenagers receive coding lessons and participate in competitions to win an opportunity to go to scientific excursions. The courses were offered online in 2020 to give everyone a chance to access to Heinstein.

KRW 2.5billion

Total investments for Heinstein (accumulative, 2020)

Children and teenagers who participated in Heinstein (accumulative, 2020)

#### Heinstein Investments





SK hynix Heinstein Olympiad

#### **SKHidea**

'SKHidea' is a public start-up idea contest held at the business site in Wuxi, China. It aims to solve the country's social issues, establish organizations, and attract talent. The contest supports outstanding start-up ideas proposed by the general public and college students, as well as social contribution activities by civic groups and NGOs. Shortlisted projects are then promoted to the community with the Chinese government's support.



Approx. 0.16 million

No. of SKHidea Contest viewers in real-time



SKHidea Contest held in Wuxi, China

## **Happy Dreaming**

Established in 2018, 'Happy Dreaming' encourages middle and high school students to pursue their dreams in the science field. Our employees visit schools to offer career counseling and quality education related to Fourth Industrial Revolution technologies, such as VR, IoT, and Al.



No. of employees who participated in Happy Dreaming [accumulative, 2020]

# Happy IT Zone

SK hynix creates a healthy and creative learning environment with IT devices and renovated facilities for teenagers within the community. Happy IT Zone provides necessary infrastructure for ICT education, such as computers, VR devices, and 3D printers. In 2020, we have enhanced the learning environment through 'Makerspace' to meet the demands of the Fourth Industrial Revolution



No. of welfare facilities with Happy IT Zone (accumulative, 2020)

Global Challenge

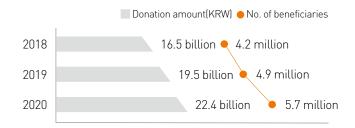
Our Business

# **Employees' Voluntary Participation**

#### Happiness Sharing Fund

Happiness Sharing Fund uses the Matching Grant method of donation, which guarantees that the exact amount employees bestow is the final donation amount. This project involves employees' voluntary participation. The donation amount from 2011 to 2020 was approximately KRW 22.4 billion, with a total of 49,000 beneficiaries. In 2020, many employees joined the Happiness Sharing Fund to help people overcome COVID-19. We plan to further expand the scope of Happiness Sharing Fund project to Gyeonggi-do and Chungcheongbuk-do Provinces beyond Icheon and Cheongju and reach out to more beneficiaries.







# Case Job Support for the Vulnerable

ESG Focus

Green Management · Talent Management · R&D and Quality · Corporate Security · Ethical Management and Compliance · Safety and Health · Responsible Supply Chain · Social Contribution

#### ICT Infrastructure Eco Project

'ICT Infrastructure Eco Project' recycles and reuses electronic waste in cooperation with the social enterprise 'Happy ICT'. At Happy ICT, 40% of its 60 employees are socially vulnerable and 34% of them are disabled. ICT Infrastructure Eco Project aims to provide high-quality jobs to the disabled by designing special projects. Happy ICT inspects degenerated ICT devices from SK hynix, disintegrates reusable resources, then re-commercializes by donating or selling them at second-hand markets. SK hynix donated a total of 25,000 old ICT devices. We provide high-quality jobs to the vulnerable and contribute to establishing a sharing culture by protecting the environment and reusing outdated products.



SV Business Team, CSV Business Headquarters of Happy ICT

#### Baking Factory for the Disabled

SK hynix opened a baking factory for the disabled through 'Happy Moa', a subsidiary workplace for the disabled. Happy Moa operates the factory using the support fund from SK hynix, while supporting financial stability and economic independence for the disabled by offering refreshments in the corporate cafeteria, such as bread and cookies produced in the baking factory.



Business agreement for job creation and economic independence of the disabled

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Materiality Assessment · ESG Data · SASB · TCFD · GRI Index · Awards, Recognition and Association Memberships · Third-party Verification Statement · Verification Statement on Greenhouse Gas · UN Global Compact · About This Report

# **Materiality Assessment**

SK hynix has identified a pool of ESG issues that are highly likely to have an impact by conducting surveys and analysis. In this Sustainability Report, we have identified risks and opportunities associated with material issues and details of the related activities and performances.

#### **Materiality Assessment Process**



We created an ESG issue pool by identifying material issues through company status analysis and environmental analysis (media, benchmarking).



We analyzed the potential internal and external issues of the company.

- Media risk, internal response level. and stakeholder awareness

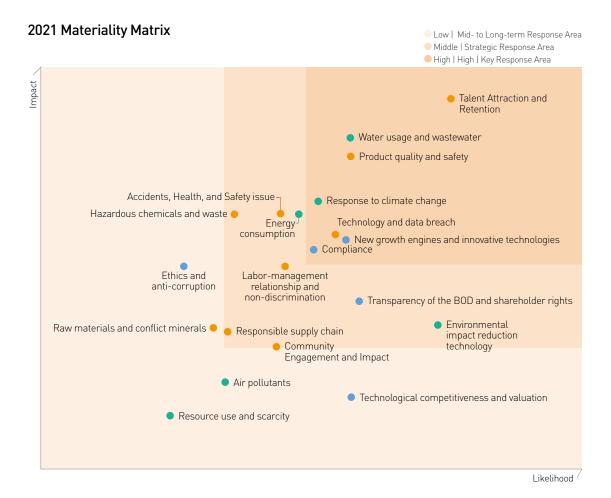


We analyzed the impact of each issues using evaluation factors and issues that can affect corporate value.

- Standards and evaluation results, industry, and stakeholder awareness



We derived Material Issue Selection in 2021 based on the results of analysis on the likelihood (X-axis) and the impact(Y-axis) of each issue.



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# Stakeholder Engagement

SK hynix has categorized key stakeholders into six groups based on their accountability, influence, dependence, and interest. We analyze the interests, issues, and demands, and strive to actively communicate and cooperate with the stakeholders regarding the issues.

#### Customer

- Customer-oriented QI activities
- Product exhibition
- Homepage
- CSC[Customer Service Center]
- QBR(Quarterly Business Review)
- QTR(Quaterly Technical Review)

# **Employee**

- Management briefing
- Labor-Management Committee
- Communication bulletin board(e.g., Hytong)
- Junior Board, 1:1 Meeting
- SK hynix Culture Survey

# Shareholder / Investor

- Earnings results conference calls and disclosure
- Electronic Voting system
- · General shareholders' meeting
- Investor meetings and participation in broker conferences
- IR website & telephone hotline for shareholders



# Supplier

- Shared infrastructure portal
- Regular suppliers' meeting of the Shared **Growth Committee**
- Shared Growth Day
- Win-Win Semiconductor Seminar for CEOs
- Win-Win Academy
- ESG consulting

# **Local Community**

- Work Environment Health Center
- Happiness Sharing Fund Operating Committee
- Local Council for Chemicals

# Government / NGO

- Korea Chamber of Commerce and Industry
- Council
- Policy talk
- Korea Semiconductor Industry Association
- SHE Advisory Council
- UNGC Korea
- Association for Supporting the SDGs for the UN





Overview

Materiality Assessment - ESG Data - SASB - TCFD - GRI Index - Awards, Recognition and Association Memberships - Third-party Verification Statement - Verification Statement on Greenhouse Gas - UN Global Compact - About This Report

# **ESG Data**

# **Financial Highlights**

#### Key Financial Performance

(Unit: KRW billion)

Classification	Details	2018	2019 <sup>1)</sup>	2020
	Sales	40,445	26,991	31,900
	Gross profit	25,264	8,172	10,811
Income	Operating profit	20,844	2,719	5,013
Statement	Profit before corporate tax	21,341	2,433	6,237
	Corporate tax	5,801	424	1,478
	Net profit	15,540	2,009	4,759
Balance Sheet	Total Assets	63,658	65,248	71,174
Datance Sheet	Total Borrowings	5,282	10,524	11,252

Global Challenge

1) We changed the accounting policy in the fiscal year commencing on January 1, 2020 by adopting the accounting method according to the decision on the item of 'lease term and useful life of leasehold improvements' announced by the IFRS Interpretations Committee on December 16, 2019. As a result of the impact of the accounting policy change, the consolidated statement of financial position, consolidated statement of comprehensive income, consolidated statement of changes in stockholders' equity, and consolidated cash flow statement of 2019 have been rewritten and the results disclosed.

# Shareholders' Status

Appendix

(Common stocks, as of the end of 2020)

Classification	No. of Stocks	Shareholding(%)
SK Telecom and 2 others	146,100,000	20.1
National Pension Service	79,883,313	11.0
Others	458,018,482	62.9
Treasury Shares	44,000,570	6.0
Total	728,002,365	100.0

#### Stock Types and Voting Rights

Classification	Issued Stocks	Ratio	Remarks
Preferred stocks	0	0.0%	No voting right
Common stock with voting right	684,001,795	94.0%	Voting right
Common stock - Treasury stock	44,000,570	6.0%	No voting right
Total	728,002,365	100.0%	-

## Shareholding by Executives and Special Affiliated Investors

Classification	Name	No. of stocks
CEO	Park Jung-ho	2,090
CEO	Lee Seok-hee	42

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Appendix

#### Key Financial Performance by International Region(2020)

(Unit: KRW billion)

Company Name	Country	Type of Business	No. of Employees (persons)	Sales	Profit Before Tax	Corporate Tax (Accrual Basis)	Corporate Tax(Cash Basis) (Amounts with - for Refund)
SK hynix Semiconductor(China) Ltd.		Semiconductor	4,294	3,936.77	394.05	-90.62	13.37
SK hynix Semiconductor(Chongqing) Ltd.	Oh:	production	2,751	699.56	85.96	12.91	12.97
SK hynix Semiconductor(Shanghai) Co. Ltd.	— China		240	62.33	11.65	4.05	3.62
SK hynix (Wuxi) Semiconductor Sales Ltd.		_	3	10,423.7	120.41	30.1	36.32
SK hynix America Inc.	U.S.	Semiconductor resale	246	12,761.91	71.23	17.78	- 0.88
SK hynix Deutschland GmbH	Germany		27	250.35	2.12	0.78	0.76
SK hynix U.K. Ltd.	U.K.		12	994.3	1.33	-	-
SK hynix Japan Inc.	Japan		55	551.89	- 1.58	-1.4	0.33
SK hynix Asia Pte. Ltd.	Singapore		29	1,858.09	2.9	- 0.15	-
SK hynix Semiconductor Hong Kong Ltd.	Hong Kong		19	1,746.16	6.15	- 0.17	- 0.01
SK hynix Semiconductor Taiwan Inc.	Taiwan		57	1,917.1	5.82	1.17	1.76
SK hynix Semiconductor India Pvt. Ltd.	India		6	31.95	1.66	0.22	0.22

#### **Governance**

CEO Rate of Remuneration	(As of the end of 2020)

Total CEO Remuneration(A)	Average Remuneration per Person(B) <sup>11</sup>	Rate of Remuneration (A/B)
KRW 2,427 million	KRW 70 million	34.7 times

<sup>1)</sup> Average salary for all employees except for the CEO

#### **BOD Remuneration**

(As of December 2020 / Unit: KRW million)

Classification	No. of Directors (persons)	Total Remuneration <sup>1)</sup>	Average Remuneration Per Person <sup>2</sup>
Executive Director	3	3,616	1,205
Independent Director (excluding members of the Audit Committee)	2	189	84
Members of the Audit Committee	4	318	84

<sup>1)</sup> Total Remuneration: Total accumulated remuneration paid

#### [Ref.] BOD Performance and Remuneration

With reference to Article 388 of the Commercial Act and the Articles of Incorporation, SK hynix remunerates the directors as approved by the BOD according to the base annual salary and performance-based bonus within the limit set at the general shareholders' meeting.

Executive directors' remuneration is determined based on the indicators consisting of financial performance in the previous year, achievement of mid- to long-term goals, leadership, and contribution to the company within a certain limit.

For independent directors, only the base salary and travel expenses are paid without any performance-based compensation to ensure their independence.

<sup>2)</sup> Average Remuneration per Person: Calculated by dividing total remuneration amount with average number of directors during the corresponding period

# **Environment**

#### **Energy Consumption**

Classification		Unit	2018	2019	2020
	LNG		4,818,131	2,100,857	2,026,936
Consumption by	Electricity	0.1	78,421,166	78,617,897	83,403,131
energy source	Steam <sup>1)</sup>	GJ -	739,437	4,551,895	4,733,947
	Total <sup>2)</sup>		83,978,734	85,270,649	90,164,014
Consumption by intensity <sup>3 </sup>	LNG		11.91	7.78	6.35
	Electricity	GJ/	193.90	291.28	261.45
	Steam <sup>1)</sup>	KRW 100 - million	1.83	16.86	14.84
	Total		207.64	315.93	282.64

<sup>1) 2018 -</sup> Wuxi / 2019 - Icheon, Wuxi

## Renewable Energy Generation

Classification	Unit	2018	2019	2020
Volume	kWh	=	485,620	967,999
Capacity	kW	-	Solar Power: 641 Small Hydro Power: 45	Solar Power: 641 Small Hydro Power: 45

<sup>\*</sup> Calculated based on the annual volume of renewable energy production capacity, exceeding the 2020 target of 960,852kWh

#### **Greenhouse Gas Emissions**

Classificatio	n Unit		2018	2019	20201)
	CO <sub>2</sub>	-	254,988	103,208	106,640
	CH <sub>4</sub>		4,086	6,540	515
	$N_2O$		113,306	151,415	146,593
Caana 12	HFCs		131,402	171,672	236,172
Scope1 <sup>2</sup>	PFCs <sup>3</sup>		420,583	671,204	1,036,958
	SF <sub>6</sub>		152,365	169,250	232,692
	NF <sub>3</sub>		881,814	852,883	951,838
	Total <sup>4)</sup>		1,958,542	2,126,171	2,711,409
	CO <sub>2</sub>	tCO₂eq ·	3,948,968	4,706,167	4,829,381
Coope 22	CH <sub>4</sub>		798	1,257	1,317
Scope2 <sup>2</sup>	$N_2O$		6,082	5,875	6,221
	Total <sup>5)</sup>		3,955,848	4,713,299	4,836,920
	Overseas transport(import)		58,992	33,565	26,849
	Overseas transport(export)		20,650	23,598	29,447
Caana 26	Waste		8,481	6,655	6,197
Scope3 <sup>6</sup>	Overseas business trip		2,136	1,687	167
	Employee commute		18,841	23,454	37,105
	Total		109,100	88,959	99,765
Scope1	Emissions Intensity/	tCO₂eq/	4.84	7.88	8.50
Scope2	— Emissions Intensity <sup>71</sup>	KRW 100 million	9.78	17.46	15.16

- 1) Process F-GHG emissions based on the U.S. Electronic Environmental Assessment Tool(EPEAT): 2,768,899 tCO;eq
- 2) Data scope: Icheon, Cheongju, Bundang, Wuxi, Chongqing
- 3) Target PFCS emissions in 2020: 797,744 tCO2eq
- 4) Target emissions of Scope 1 in 2020: 2,297,566 tCO2eq
- 5) Target emissions of Scope 2 in 2020: 4,726,662 tCO2eq
- 6) Data scope: Icheon, Cheongju, Bundang
- 7) Based on the Annual Report's sales on the consolidated financial statements
- \* GWP: AR5 applied

<sup>2)</sup> Consumption goal by energy source in 2020: 83,386,968GJ

<sup>3)</sup> Based on the Annual Report's sales on the consolidated financial statements

<sup>\*</sup> Data scope: Icheon, Cheongju, Bundang, Wuxi, Chongging

<sup>\*</sup> Energy sales volume: None

<sup>\*</sup> Data scope: Icheon

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# **Environment**

Overview

[Unit:ton]

Classificati	ion	2018	2019	2020
	SOx	12.3	8.8	6.8
	NH₃	21.1	46.8	33.1
	NOx	29.6	100.1	363.5
Icheon	HF	5.5	2.7	1.7
	HCI	5.3	8.6	5.6
	VOC <sup>1]</sup>	0.2	0.8	-
	Dust	0.3	0.1	0.0
	SOx	0.9	3.4	4.8
	NH₃	8.6	34.2	21.2
	NOx	210.8	347.1	341.7
Cheongju	HF	2.3	1.9	2.1
	HCI	1.7	8.0	10.4
	VOC <sup>2]</sup>	0.2	1.8	-
	Dust	12.1	35.9	32.1
	SOx	0.3	3.3	3.3
	NH₃	6.1	9.1	10.6
	NOx	0.3	7.9	4.7
Wuxi	HF	0.7	1.1	0.2
	HCI	3.8	12.2	13.4
	VOC <sup>3</sup>	17.3	10.6	9.7
	Dust	-	-	-

Classification	on	2018	2019	2020
	SOx	0.0	0.1	0.0
	NH <sub>3</sub>	-	-	-
	NOx	1.1	1.4	6.9
Chongqing	HF	-	_	-
	HCI	3.4	3.7	0.4
	VOC	0.8	0.6	0.2
	Dust	8.6	3.8	9.8

<sup>1)</sup> Legal emissions standards met at all business sites

<sup>2)</sup> This is not a substance used in the production process and the emission concentration is insignificant. Therefore, it was decided not to affect the pollutant emissions, and thus has been excluded from substances subject to air pollution management for Icheon and Cheongju since 2020.

<sup>3)</sup> The VOC emission goal of Wuxi in 2020 was 10.7 tons

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ESG Focus

# **Environment**

Water Withdr	rawals			[Unit: 1,000m³)
Classification	1	2018	2019	2020
	Municipal water	29,064	34,910	36,162
Domestic	Surface water	33,718	30,950	30,960
production sites	Reclaimed water <sup>1)</sup>	0	0	0
	Total	62,782	65,860	67,123
	Municipal water	14,146	18,777	21,272
Overseas	Surface water	0	0	0
production sites	Reclaimed water	3,906	5,919	7,320
	Total	18,052	24,696	28,592
	Municipal water	43,210	53,686	57,434
Total	Surface water	33,718	30,950	30,960
	Reclaimed water	3,906	5,919	7,320
	Total	80,834	90,556 <sup>2)</sup>	95,714

Global Challenge

Our Business

Water Co	nsumption <sup>11</sup>
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Classification	2018	2019	2020
Domestic production sites	11,725	11,470	10,423
Overseas production sites	2,129	3,242	2,369
Total	13,854 <sup>2)</sup>	14,712³¹	12,792

<sup>1)</sup> Water consumption = water withdrawals - wastewater discharge

#### Wastewater Discharge

[Unit: 1,000m<sup>3</sup>]

Classification	2018	2019	2020
Domestic production sites	51,057	54,390	56,699
Overseas production sites	15,923	21,454	26,223
Total	66,980 <sup>1)</sup>	75,844 <sup>2)</sup>	82,922

<sup>1)</sup> Unifying the standards for calculating the amount of wastewater discharge from overseas production plants(excluding the amount discharged to an external sewage treatment plant) to the domestic plants(including the amount discharged to an external sewage treatment plant) and the difference in the amount of wastewater discharge from overseas production plants, the 2018 number reported(unit: 1000m3) has been changed from 66,603 to 66,980

#### Ultra Pure Water Consumption

[Unit: 1,000m<sup>3</sup>]

Classification	2018	2019	2020
Domestic production sites	23,242	25,376	27,437
Overseas production sites	7,121	8,925	9,936
Total	30,363 <sup>1)</sup>	34,301 <sup>2)</sup>	37,373

<sup>1)</sup> Unifying the standards for calculating the amount of ultra pure water used from overseas production plants(flow of ultra pure water) to the domestic amount(amount of ultra pure water used) the 2018 number reported(unit 1000m³) has been changed from 32,870 to 30,363

<sup>1) &#</sup>x27;Reclaimed water' previously included in municipal water was displayed as a separate withdrawal source.

Reclaimed water, as defined by SK hynix, refers to water treated at an external wastewater treatment plant, etc. and reused as water for scrubbing and domestic use within business sites. Currently, reclaimed water is used only in Wuxi. The use will be further expanded to other business sites.

<sup>2) 84,638,</sup> the value in Sustainability Report 2020, changed to 90,556. For the reporting in 2020, the amount of reclaimed water used in Wuxi(5,919) had been omitted in the course of data calculation. This was included in this year's report.

<sup>2) 2018</sup> reported data 14,231 changed to 13,854 as a result of change in wastewater discharge standards

<sup>3) 2019</sup> reported data 9,448 changed to 14,712 as a result of change in withdrawals and wastewater discharge standards

<sup>2) 2019</sup> reported data (unit: 1000m³) 75,190 changed to 75,844 for the same reason as above

<sup>2) 2019</sup> reported data(unit: 1000m³) 34,298 changed to 34,301 for the same reason as above

<sup>\* 2020</sup> goal of Ultra Pure Water Consumption(unit: 1000m³): 38,000

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# **Environment**

#### Water Reuse<sup>11</sup> and Reuse Rate

Classification		Unit	2018	2019	2020
Water Reuse	Domestic production sites		18,644	21,631	26,932
	Overseas production sites	1,000m <sup>3</sup>	8,650	10,991	13,554
	Total	_	27,2942)	32,6223	40,487
Water Reuse Rate	Domestic production sites		27	28	32
	Overseas production sites	%	35	34	34
	Total	_	29	30	33

<sup>1)</sup> Criteria for estimation of water reuse in overseas business sites were unified with those in Korea. For the business site in Wuxi, the amount of UPW reuse and the amount of reuse in production process had not been included. These, however, were included according to the criteria applied in Korea.

#### Freshwater Consumption<sup>1)</sup>

Classification	Unit	2018	2019	2020
Freshwater consumption	1,000m³	9,948	8,792	5,472

<sup>1)</sup> Freshwater consumption = municipal water + surface water + ground water - wastewater discharge

#### Wastewater Discharge Quality<sup>11</sup>(based on the total quantity)

Classificatio	n	Unit	2018	2019	2020
Domestic production	Chemical oxygen demand(COD)	183.6 172.5 2.0 1.6 ton 117.1 106.0 76.6 69.4	204.8	235.6	234.2
	Biological oxygen demand(BOD)		183.6	172.5	140.7
sites <sup>2)</sup>	Total phosphorus(T-P)		1.6		
	Suspended solids(SS)	ton	117.1	3.6 172.5 2.0 1.6 7.1 106.0 5.6 69.4	113.8
production Fluorine(F) <sup>a</sup>	Chemical oxygen demand(COD)	-	76.6	69.4	365.9
	Fluorine(F) <sup>3)</sup>		6.0	7.7	19.2
	Ammonia nitrogen(NH <sub>3</sub> -N)		3.2	11.3	65.6

<sup>1)</sup> Criteria developed according to water quality management criteria of countries in which SK hynix' business sites are located(Korea, China).

#### Water Stressed Area<sup>1)</sup>

[SASB] TC-SC-140a.1.5 | TC-SC-140a.1.6

Classification	Unit	2018	2019	2020
Withdrawals with 'High' or above water stress area	- 1,000m³ -	57,732	60,790	64,552
Consumption with 'High' or above water stress area		9,223	9,544	8,705
Withdrawals with 'High' or above water stress area ratio	% -	71	67	67
Consumption with 'High' or above water stress area ratio	70 -	67	65	68

<sup>1)</sup> Business sites with 'high' water stress: Icheon business site and Wuxi business site

<sup>2) 2018</sup> reported data 25,692 changed to 27,294 for the same reason above

<sup>3) 2019</sup> reported data 31,025 changed to 32,622 for the same reason above

<sup>\* 2020</sup> freshwater consumption goal(unit: 1,000m³): 5,600

<sup>2)</sup> In line with Korean 'Good Water' quality, we established a wastewater discharge quality system.

<sup>3)</sup> Only the value of Wuxi was listed because there is no fluorine discharge in Chongqing.

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## **Environment**

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#### Waste Generation amount

Classification		Unit	2018	2019	2020
Non-hazardous waste	Domestic		167,213 <sup>1)</sup>	164,7042	182,162
	Overseas		20,386	48,741	58,266
	Total		187,599	213,445	240,428
	Domestic		206,78031	226,0594	220,118
Hazardous waste	Overseas	tons	47,516	74,863	111,589
	Total		254,296	300,922	331,707
Total	Domestic		374,104	390,904	402,280
(General + Designated)	Overseas		67,903	123,604	169,854
	Total		442,007	514,508	572,134

- 1) 2019 data changed from 169,481 to 167,213(unit: tons) 2) 2019 data changed from 161,556 to 164,704(unit: tons) 3) 2019 data changed from 206,690 to 206,780(unit: tons) 4) 2019 data changed from 226,057 to 226,059(unit: tons) Data above has been corrected by retrieving data that was not reported in 2019
- \* The amount of waste generation increased as a result of a rise in the new Fab production volume. SK hynix dedicated the utmost effort to recycling the waste generated.
- \* 2020 target for non-hazardous waste, hazardous waste, and total combined waste was 247,772 tons, 331,707 tons, and 589,432 tons respectively.

#### Waste Treatment Volume

Classification		Unit	2018	2019	2020	
	General	Incinerated		2,502	3,310	3,079
	General	Recycled		123,599	117,722	119,544
Icheon		Incinerated·Neutralized		12,231	5,579	4,654
Designated	Landfilled·Solidified		169	91	308	
		Recycled	tons	154,511	166,798	157,133
	General	Incinerated	toris	1,766	1,818	1,582
	General	Recycled		39,346	41,854	57,957
Cheongju		Incinerated·Neutralized		874	1,149	795
	Designated	Landfilled-Solidified		2	37	11
		Recycled		38,994	52,405	57,216

## Waste Recycled and Recycling Rate

	Unit	2018	2019	2020
Domestic <sup>1]</sup>		356,4492	378,780 <sup>3)</sup>	391,851
Overseas <sup>4]</sup>	tons	42,379	97,268	153,464
Total <sup>5)</sup>	_	398,828	476,048	545,315
Domestic		95	97	97
Overseas	%	62	79	90
Total	_	90	93	95
	Overseas <sup>4</sup> Total <sup>5)</sup> Domestic  Overseas	Domestic¹¹ Overseas⁴¹ tons  Total⁵¹  Domestic Overseas %	Domestic¹¹         356,449²¹           Overseas⁴¹         tons         42,379           Total⁵¹         398,828           Domestic         95           Overseas         %         62	Domestic¹¹         356,449²¹         378,780³¹           Overseas⁴¹         tons         42,379         97,268           Total⁵¹         398,828         476,048           Domestic         95         97           Overseas         %         62         79

- 1) Target recycled waste generation in 2020(Korea): 279,032 tons
- 2) 2019 data changed from 359,117 to 356,449(unit: tons)
- 3) 2019 data changed from 375,666 to 378,780(unit: tons)

The above was recalculated by identifying missing values in the data calculation process when reporting in 2019

- 4) Target recycled waste generation in 2020(overseas): 158,089 tons
- 5) Target recycled waste generation in 2020(total): 437,121 tons

## Hazardous Waste Recycling Rate<sup>1)</sup>

[SASB] TC-SC-150a.1.2

Classification	Unit	2018	2019	2020
Icheon		92.6	96.7	96.9
Cheongju		97.8	97.8	98.6
Wuxi	— % ——	52.1	69.6	86.5
Chongqing		36.8	33.7	30.7

<sup>\*</sup> Scope of hazardous waste varies depending on regulations for relevant location.

<sup>1)</sup> Hazardous waste recycling = (amount of hazardous waste recycled/amount of hazardous waste generated) x 100

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## **Environment**

#### Raw Materials Used

Classification	Unit	2018	2019	2020
Wafer		848,429	912,544	946,477
Lead frame & substrate		182,220	244,818	335,935
PCB		185,872	251,962	321,773
Other	KRW million —	2,390,617	3,370,611	3,742,728
S/P, supplementary materials		2,701,272	2,537,559	2,864,019
Total		6,308,410	7,317,495	8,210,931

### **SHE Investment Result**

Classification	Unit	2018	2019	2020
Invested capital	KRW million	102,398	103,611	82,456

<sup>\*</sup> Scope of data collection: Domestic business sites

#### Breach of Environmental Laws\*

Classification	Unit	2018	2019	2020
Breach of law	Cases	0	0	0

<sup>\*</sup> Subject to heavy fine(USD 10,000) or equivalent punishment

<sup>\*</sup> Investment to reduce environmental impacts such as GHG emission reduction and investment to create eco-friendly business sites

<sup>\* &#</sup>x27;SHE expenses' data were previously reported on a budget basis, with reporting based on results from this report.

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## **Employees**

### **Employee Status**

Classification	Details	Unit	2018	2019	2020
Number of employees	Total		33,190	36,205	36,854
Executives and	Male	_	13,052	14,832	15,096
employees	Female	_	2,881	3,257	3,458
Decil aliancia and an ana	Male	Persons	7,377	7,663	6,448
Production site employees	Female	_	9,786	10,317	9,878
Contractual anaplayage	Male	_	49	71	1,497
Contractual employees	Female		45	65	477
Ratio of permanent employees	Total	%	99.7	99.6	99.6
Employees by region	Korea		25,972	28,246	29,008
	Americas	_	450	552	484
	China	Persons	6,455	6,934	6,888
	Asia	_	51	184	176
	Europe	-	262	289	298
	Below 30s		-	-	27.1
Employees by age group <sup>1)</sup>	30s - below 50s	_	-	-	67.6
	50s and above	_	-	-	5.3
Foreign nationals in domestic business sites <sup>11</sup>	Total	_	-	-	0.2
	Korea	% -	-	-	99.79
	U.S.	_	-	-	0.15
Employees by nationality <sup>2</sup>	China	_	-	-	0.02
	India	_	-	-	0.01
	Malaysia	_	-	-	0.01

<sup>1)</sup> Scope of data collection: Domestic business sites, new data, disclosed since 2020

## **Employee Diversity**

Classification	Details	Unit	2018	2019	2020
	Total		37.8	36.3	35.5
	Female managers <sup>2)</sup>		21.6	20.3	20.0
	Entry-level female managers <sup>3)</sup>		23.7	21.9	21.5
Ratio of female employees <sup>11</sup>	Female employees at departments generating profits <sup>4</sup>	0/	26.3	27.15	25.9
	Female managers at departments generating profits <sup>4</sup>	%	3.35	6.5	7.5
	Female employees in STEM(Science, Technology, Engineering and Math)-related positions <sup>4)</sup>		-	-	16.2
Employees with disabilities <sup>7]</sup>	Domestic, Wuxi		124	152	1718
National veterans	Domestic	Persons	287	306	319
Senior employees <sup>9]</sup>	Domestic		106	151	193

<sup>1)</sup> Scope: Domestic business sites

<sup>2)</sup> Scope of data collection: Domestic business sites(based on nationality, including those issued with citizenship), new data, disclosed since 2020

<sup>2)</sup> Manager: TL/PL/head of independent part/unit leader/group leader/executive

<sup>3)</sup> Entry-level manager: TL/PL/head of independent part/unit leader/group leader

<sup>4)</sup> Departments generating profit: Marketing, sales, etc.

<sup>5)</sup> Retrieved data that was not reported in 2019

<sup>6)</sup> New data, disclosed since 2020

<sup>7)</sup> Standard business sites of subsidiaries excluded, standard number for estimation of share of expenses for employment of the disabled

<sup>8)</sup> All business sites

<sup>9)</sup> Persons aged 55 years or older whose employment period is at least one year

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# **Employees**

#### **Job Creation**

Classification	Details	Unit	2018	2019	2020
Job creation rate <sup>1)</sup>	Total	%	13.4	9.12	1.8
Employment cost / FTE	Domestic	KRW	886,894	664,182	1,028,229
	Korea		3,060	2,898	1,387
	Americas		143	115	88
No. of recruits	China	Persons	2,462	1,722	903
	- Asia <sup>3)</sup>		25	28	13
	Europe		59	54	31
Internal recruitment		%	94	95	97
No. of dismissed employees	-	Persons	1	2	11
Turnover rate	- Domestic		2	2.3	2.1
Voluntary turnover rate <sup>4</sup>	Domestic	%	1.6	2.1	1.9
Non-voluntary turnover rate <sup>5]</sup>	_	_	0.4	0.2	0.3
Average length of service		Years	10.9	10.8	11.4

1)[No. of employees in the year - No. of employees in the previous year] / No. of employees in the previous year x 100

- 2) Data of previous year(8.8%) corrected
- 3) Korea and China excluded
- 4) Retirees other than non-voluntary retirees
- 5) Non-voluntary retirees: Contract expiration, death, dismissal, retirement age, recommended resignation

## Gender/Age Breakdown of New Hires/Resignees

Classification	Details	Unit	New	Retired
	Male		1,128	432
	Female		259	199
	Below 30s	Persons	1,079	301
	30s - below 50s		291	267
	50s and above		17	63

<sup>\*</sup>Scope of data: Domestic business sites

## Starting Salary of New Employees

Classification	Unit	2018	2019	2020
Starting salary to legally required minimum	%	223	175	174

<sup>\*</sup> Scope of data: Domestic business sites

### Wage by Position

Classification	Details	Unit	2020
Executive level(base salary)	Ratio(= Average base pay for female		100
Management level(base salary)	employees / average base pay for	%	99
Non-management level(base salary)	male employees)		101

<sup>\*</sup> Scope of data: Domestic business sites

## **Working Hours**

Classification	Unit	2018	2019	2020
Annual working hours <sup>1)</sup>	House	2,137	2,035	2,236
Average weekly working hours <sup>21</sup>	– Hours –	41	40	43
No. of employees on flexible working <sup>3)</sup>	Persons	12,107	14,394	15,344

<sup>\*</sup> Scope of data collection: Domestic business sites

## Labor Union Membership\*

Classification	Unit	Icheon	Cheongju	Wuxi	Chongqing
Membership rate	%	96.80	98.90	99.99	99.96

<sup>\*</sup> The contents of group negotiations between labor and management apply to all employees(100%)

<sup>\*</sup> Wage ratio of executives(base pay + other cash incentives) 100%

<sup>\*</sup> Wage ratio of management positions(base pay + other cash incentives) 99%

<sup>1)</sup> Annual working hours per person

<sup>2)</sup> Annual working hours/52 weeks

<sup>3)</sup> Employees on self-immersion time, pregnant part-time employees, employees on flextime

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## **Employees**

## Use of Maternity and Childcare Leaves

Classification	Unit	2018	2019	2020
No. of employees who used maternity leave	Persons -	656	742	662
No. of employees who used childcare leave <sup>1)</sup>	Persons -		1,025	908
Rate of return to work after childcare leave <sup>2</sup>		99.1	98.4	99.1
Rate of working for at least 12 months after return to work <sup>3</sup>	% n to work³¹		92.5	92.3

- \* Scope of data: Domestic business sites
- 1) Employees who started the use of childcare leave in the year
- 2) Employees who returned/are scheduled to return to work in the year(excluding overlapping persons)
- 3) Employees who had returned to work in the previous year and worked for at least 12 months (excluding overlapping persons)

### Use of Childcare Leaves by Gender (2020)

Classification	Unit	Male	Female
No. of valid employees for childcare leave <sup>1)</sup>		7,588	4,856
No. of employees who used childcare leave <sup>2</sup>		98	810
No. of employees who returned to work after childcare leave <sup>31</sup>	Persons	74	820
No. of employees who worked for at least 12 months after returning to work <sup>4</sup>		50	816

- \* Scope of data: Domestic business sites
- 1) No. of employees with children below elementary 6th grade
- 2) Employees who started the use of childcare leave in 2020
- 3) Employees who returned to work after childcare leave in 2020
- 4) Employees who had returned to work in the previous year and worked for at least 12 months

## **Ethical Management Reports**

Classification	Unit	2018	2019	2020
Total reports	Co.o.o.	116	126	191
Valid reports	Cases	40	41	57
Measures against unethical conduct(heavy sanctions)	Persons	34(15)	91(45)	86(51)

<sup>\*</sup> Measures against unethical conduct: Including those implemented through self-monitoring & collection system other than ethical management reporting

## **Employee Training Status**

Classification	Unit	2018	2019	2020
Total trainees	Persons	208,024	283,680	302,430
Total training hours	Hours	1,974,191	2,667,967	2,140,8271
Total training expenses	KRW billion	72	75	532
Training hours per person	Hours/person	76	94	74
Investment cost per person <sup>2</sup>	KRW 1,000/person	277	265	1,835

<sup>\*</sup> Scope of data: Domestic business sites

## Employee Engagement - SK hynix Culture Survey

Classification	Unit	2018	2019	2020
Engagement	%	71	72	72

## Engagement by Gender and Job Position - SK hynix Culture Survey

Classification		Unit	2020
Gender	Male		72
Gender	Female		68
Job Position	Entry-level <sup>11</sup>	%	71
	Intermediate-level <sup>2</sup>		76
	Senior-level <sup>3)</sup>		78

<sup>1)</sup> Entry-level administrative position: All employees excluding team leaders and executives

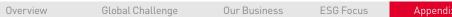
<sup>\*</sup> Heavy sanctions: Wage cut, suspension, demotion, dismissal

<sup>1)</sup> In 2020, training hours decreased as a result of the COVID-19 pandemic, however, high-quality educational content was provided through the common education platform, mySUNI, along with other investments in non-face-to-face training

<sup>2)</sup> To exclude duplicates, starting from 2020 the formula will change to(total training hours/domestic employee number)X100, and therefore the 2019 reported data has been changed.

<sup>2)</sup> Intermediate-level administrative position: team leaders

<sup>3)</sup> Senior-level administrative position: executives



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## **Customers and Quality**

## **Customer Satisfaction Survey Results**

Classification	Details	Unit	2018	2019	2020
Overall score	Customer satisfaction		4.46	4.43	4.60
Level by Application  Level by Subsidiary	Computing DRAM		4.32	4.38	4.66
	Mobile DRAM		4.57	4.67	4.72
	Mobile Solution		4.52	4.30	4.69
	Storage Solution	points	4.60	4.58	4.62
	China	(out of 5 — points) —	4.52	4.29	4.56
	Americas	- μοιπτέ) —	4.19	4.69	4.72
	Japan		4.20	4.63	Not conducted
	Domestic		4.68	4.58	Not conducted

#### **Product Recall Incidents**

Classification	Unit	2018	2019	2020
No. of recalled products	Cases	0	0	0

## **Corporate Security**

## **Compliance to Information Protection**

Classification	Unit	2018	2019	2020
Compliance rate to information protection pledge	%	97.2	97.6	96.7

## **Safety and Health**

## Occupational Safety Management

Classification	Target		Unit	2018	2019	2020
Industrial Accident Rate	Employee	Icheon		0.09	0.10	0.11
		Cheongju		0.08	0.16	0.12
		Wuxi	·	0.13	0.11	0.07
		Chongqing	70 ·	0.10	0.00	0.00
	Sunnlier —	Icheon		0.02	0.06	0.05
		Cheongju		0.07	0.08	0.09
Lost Time Injuries	Employee Supplier Dome	Damastia	Cases/1 million	0.37	0.50	0.54
Frequency Rate(LTIFR)		Domestic	working hours	0.36	0.40	0.42

## Safety Management System Certifications

Certification	Icheon	Cheongju	Wuxi	Chongqing
ISO 45001	Jan. 7, 2021 ~	Jan. 7, 2021 ~	Aug. 15, 2018 ~	Jan. 19, 2019 ~
150 45001	Jan. 6, 2024	Jan. 6, 2024	Aug. 14, 2021	Jan. 18, 2022
KOSHA18001	Nov. 7, 2018 ~	Nov. 16, 2018 ~		
NUSHA10001	Nov. 6, 2021	Nov. 15, 2021		

## Safety Training

Classification	Target	Unit	2018	2019	2020
Training hours	Employee	— Hours –	12,459	12,644	2,579
Training hours	Supplier	— nours —	31,635	64,916	56,225
No. of employees who	Employee	Darsana	116,319	103,698	104,455
completed the training	Supplier	— Persons -	27,808	68,111	27,469

## Status of Support for Employees Health Screenings

Classification	Unit	2018	2019	2020
No. of employees who received health checkup	persons	33,949	36,809	39,935
Expenses supported for employees' health checkup	KRW 100 million	62	64	67

<sup>\*</sup> From 2020, 2019 reported data has been corrected as the scope of medical examination support for members has been adjusted from 5 types(general, special, comprehensive, post-placement, employment examination) to 3 types(general, special, comprehensive examination).

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ESG Focus

## **Supply Chain Management**

## Transaction status with Suppliers

Classification	Unit	2018	2019	2020
No. of suppliers		2,842	2,878	2,902
No. of critical suppliers <sup>1)</sup>	Componies	1,466	1,381	1,638
No. of new suppliers	Companies	86	95	124
No. of suppliers that agreed with the Code of Conduct		1,195	1,238	1,353
Total purchase amount <sup>21</sup>	KRW 100 million	233,842	193,692	212,342

<sup>1)</sup> Transaction amount of KRW 500 million or more

#### Purchase Details

Classification	Unit	2018	2019	2020
Equipment	KRW 100	85,991	45,982	57,729
Raw materials		35,606	39,315	46,898
Infrastructure		37,591	29,645	36,066
Spare parts		21,423	18,008	17,613
Purchase by overseas production sites <sup>1)</sup>	THILLION	47,294	54,390	50,650
Other		5,937	6,351	3,386
Total		233,842	193,691	212,342

<sup>1)</sup> Based on Wuxi business site and Chongqing business site

## **Supplier Safety Training Performance**

Classification	Unit	Persons
Basic Safety Training		14,500
Signaler Safety Training		758
Fire Watchman Training	_	189
Superintendent Training		2102
Training on Chemicals Handling	Persons	542
Training on Access to Confined Spaces		43
(Capacity Building) Occupational Safety and Health Act and SHE Code of Conduct 2020		1,616
(Capacity Building) Advanced Course on SOP Risk Assessment		1,452
(Capacity Building) Comprehension and Practice of Accident Investigations		1,378

## Educational/Technological/Financial Support Programs

Classification	Unit	2018	2019	2020
Patterned wafers	Sheets	913	1,141	1,050
Technological Development Fund	KRW 100 million	0	10	20
Industrial Innovation Movement		2411	15	17
Growing Up Together Consulting	Companies	30	28	-
Shared Growth Job Fair	_	20	16	0
Shared Growth Seminar for CEOs		34	36	65
Win-Win Semiconductor Seminar for CEOs	Persons	47	105	101
Middle Manager MBA		28	29	-
Delivery Payment Support Fund		36	78	80
Shared Growth fund for primary suppliers	KRW 100	1,016	1,464	1,407
Shared growth fund for secondary and tertiary suppliers	million	92	288	311

<sup>1)</sup> Secondary suppliers

#### **Shared Growth Promotion Performance**

Classification	Unit	2018	2019	2020
Total amount of Shared Growth support	KRW 100 million	1,752	2,685	2,705
No. of companies on Shared Growth Agreement	Carananias	108	117	123
No. of companies that joined Shared Growth Committee	Companies —	61	79	79

<sup>\*</sup> Data scope: Domestic business sites

<sup>2)</sup> ICT, outsourcing, expense agreement excluded

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Our Business Appendix

## **Social Contribution**

#### Social Contribution Activities

Classification	Unit	2018	2019	2020
Social contribution expenditures <sup>11</sup>		618.9	614.0	736.4
Total amount of donations	<ul><li>KRW 100 —</li><li>million —</li></ul>	606.4	447.8	563.6
Cash Contribution <sup>2</sup>		602.0	439.7	559.2

- 1) Company donations + employee donations + social contribution budget
- 2) Cash Contribution out of total donations
- \* Cash Contribution in 2020: KRW 437 million
- \* Operating expenses of social contribution activities project in 2020: KRW 293 million

## Employees' Participation in Volunteering Activities

Classification	Unit	2018	2019	2020
Time spent on volunteering activities	Hours	18,897	16,737	13,027
No. of employees who participated in volunteering activities	Persons	5,088	4,884	1,991
Time spent on volunteering activities per employee	Hours	0.731	0.59	0.45
No. of participations	Times	698	659	176
Participation rate <sup>2 3 </sup>	%	19.6	17.3	6.9

<sup>1)</sup> Data for time spent on volunteering activities per employee corrected from 0.77 to 0.73

### Happiness Sharing Fund

Classification	Unit	2018	2019	2020
Amount raised	KRW 100 million	30	29	28

#### Contributions to Relevant Institutes

Classification	Unit	2018	2019	2020
Total amount of donations to relevant institutes	KRW 100 million	19.9	22.4	22.1

<sup>\*</sup> According to the Political Funds Act and the Commercial Act of the Republic of Korea, political donations are prohibited and fund for lobbying, political fund, or voting-related election fund is not provided.

## Donation Expenditures to Relevant Associations (2020)

Classification	Unit	2020
Korea Semiconductor Industry Association		537.5
Semiconductor Industry Association(US)	KRW million	185.6
RBA		53.5

<sup>2)</sup> As the 2019 reported data represents the participation rate of service groups in volunteering activities, it has been modified with a new formula starting from 2020 (Number of employees who participated in volunteering activities/total number of employees) X100

<sup>3) 2020</sup> participation rate in volunteering activities has been reduced due to the restrictions imposed on participation from COVID-19.

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# **SASB**

## Sustainability Disclosure Topics & Accounting Metrics

Classification	Disclose Index	Code	Page	Note
	(1) Gross global Scope 1 emissions and (2) amount of total emissions from perfluorinated compounds	TC-SC-110a.1	p.105	
GHG Emissions	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	TC-SC-110a.2	p.121	
Energy Management	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	TC-SC-130a.1	p.105	
Water Management	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress		p.107-108	
Waste Management	Amount of hazardous waste from manufacturing, percentage recycled	TC-SC-150a.1	p.109	
Forder and Hould 9 Coffee	Description of efforts to assess, monitor, and reduce exposure of employees to human health hazards	TC-SC-320a.1	p.75-82	
Employee Health & Safety	Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violations	TC-SC-320a.2	-	Reference 1.
Recruiting & Managing a Global & Skilled Workforce	Percentage of employees that are (1) foreign nationals and (2) located offshore	TC-SC-330a.1	p.111	
Product Lifecycle	Percentage of products by revenue that contain IEC 62474 declarable substances	TC-SC-410a.1	p.51	
Management	Processor energy efficiency at a system-level for: (1) servers, (2) desktops, and (3) laptops	TC-SC-410a.2	p.50-51	
Materials Sourcing	Description of the management of risks associated with the use of critical materials	TC-SC-440a.1	p.90, 110	
Intellectual Property Protection & Competitive Behavior	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	TC-SC-520a.1	-	Not applicable

Reference 1. 2020 Annual Report complies with '3. Sanctions status and other details (333p)', the data is irrelevant to fine and settlement payment for violation of employee safety and health regulations.

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# **TCFD**

SK hynix discloses climate-change related information to its stakeholders in line with recommendations by the Task Force on Climate-related Financial Disclosures (TCFD).

TCFD Requirements		Response of SK hynix	CDP Index
Governance	a) Describe the board's oversight of climate- related risks and opportunities	As the top decision-making body for corporate strategy and management, the board of directors(BOD) guides and oversees whether ESG factors are reflected in the company's long-term business strategy. In particular, climate change is considered as an area of significant importance by the BOD and accordingly, SK hynix has refined the decision-making process on climate change through biannually reporting climate change-related issues to the Sustainability Management Committee, a sub-committee of the BOD, and having these issues reviewed on a yearly basis by the BOD.	CC1.1b CC1.2a
		Climate change-related issues such as Net Zero may pose a significant impact on corporate business and financial strategy and it is essential to discuss their impact in-depth within the BOD. SK hynix ensures that our climate change response strategy is in alignment with our mid-to-long-term business strategies to achieve synergy and value creation. Our strategy, goals, and performance management details are also reported to the BOD on a regular basis.	
	b) Describe management's role in assessing and managing climate- related risks and	SK hynix has continuously improved our internal decision-making process on climate change by proactively responding to climate change-related issues in order to uncover value-creation business opportunities as well as to mitigate risks. Specifically, in 2021, we initiated the ESG Management Committee organized by ESG Strategy, an ESG-dedicated organization.	
	opportunities	The committee functions as the corporate-wide decision-making body related to climate change and is composed of more than ten senior executives including the CEO and the Head of GSM(also a member of the Sustainability Management Committee of the BOD); other key executives are from various departments including manufacturing/technology, SHE(Safety, Health, and Environment), corporate support, etc	
		The Committee holds meetings on a monthly basis to have in-depth discussions on ESG agendas, such as Net Zero, that can affect long-term business strategies. We also organized a working-level consultation group on climate change and discuss relevant issues such as GHG emissions and renewable energy usage prior to ESG Management Committee meetings in order to ensure company-wide collaboration in implementing climate change initiatives.	

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TCFD Requi	rements	Response of SK hynix	CDP Index
Strategy	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	SK hynix identifies climate change-related risks and opportunities that affect the company's business operation, strategies, and financial plans and classifies them as transitional risks and physical risks. For further information, please refer to p.20.	CC2.3a CC2.4a
	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	The cost of facilities and insurance for natural disasters, such as heavy rain, cold waves, heat waves, and drought, is expected to rise due to climate change. In addition, the demand for environmental regulations and disclosure of climate change action is growing. Due to the growing demand for industries to trade carbon credits and adopt renewable energy, the costs of carbon credits and renewable energy are also expected to increase. Nevertheless, it can be an opportunity for us to improve and replace the production fab facilities with high-efficiency production equipment and we are working on cost-saving measures such as electricity conservation and energy cost reduction. To optimize the overall production facility and maximize energy saving, we aim to gain energy efficiency through enhancing automatic systems and running preventive measures on equipment in line with the ISO 50001 energy management systems standard.  SK hynix's products are used as the components for major electronic items, such as servers, computers, smartphones, and TVs, while customers' demand for low-power and high-efficiency products is growing. Despite the increasing cost of R&D to continuously develop low-power, high-efficiency products, we try to reduce our financial burden by expanding our business and securing price premiums through actively engaging with customers and responding to their demands.  We also leverage sustainable financing in order to respond to increasing investment requirements; a total of 1 billion USD in green bonds were issued in January 2021, which are to be used for projects related to water quality management, energy efficiency, pollution prevention, and ecological restoration, along with other various projects that consume less power, such as expanding the development of SSD(Solid State Drive, NAND-based storage device) to further reduce carbon emissions within the IT industry.	CC2.5 CC2.6
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	As a semi-conductor company where PFCs are generally used in fabrication plants, SK hynix has been reviewing our climate change scenarios in line with the national Emission Trading Scheme(ETS) since 2015.  Specifically, the organizational boundary is set at domestic business sites(Icheon/Cheongju) with the scenarios reviewed by the ETS task force; we set annual reduction targets for GHG emissions in response to the ETS. Furthermore, through our commitment to the RE100 initiative of 2020, we plan to replace all energy sources with 100% renewable energy by 2050. In order to achieve this goal, we organized a cross-functional task force to develop and implement the short-term, mid-term, and long-term reduction plans.  Moreover, with our RE100 commitment, we also announced a Net Zero commitment by 2050 to achieve zero GHG emissions and are currently establishing an implementation plan. As a start, we installed solar power and small hydropower plants at our production sites that generated a total of 968MWh of power in 2020 while reinforcing our goal of reducing GHG emissions and energy use into all our employees. We also have established an energy saving task force to further support consumption reduction activities. The task force continuously innovates and implements reduction activities by monitoring energy use in real-time. In 2020, we reduced electricity use during the winter season and saved a total of KRW 11.31 billion in energy costs by developing big data-based algorithms to find the optimal operating point for facilities.	CC3.1d

TCFD Requirements		Response of SK hynix	CDP Index
Risk Management	a) Describe the organization's processes for identifying and assessing climate-related risks	SK hynix identifies material ESG issues and prioritizes them by conducting an annual materiality assessment. We assess and evaluate the likelihood and impact for each ESG issue by considering leading ESG standards, stakeholder survey results, and the specific context of the semiconductor industry. Particularly, we conduct assessments in order to identify issues related to climate change risks, such as policies and regulations on climate change and activities for enhancing energy efficiency and resource conservation. In addition, operational risks from climate change at the asset and facility level are identified and evaluated through the SHE management system operated by the SHE department which periodically measures and manages GHG emissions. The climate change-related risks and opportunities identified in such assessment procedures are classified in accordance with the TCFD framework.	CC2.2b
		As the market demand for low-carbon and high-efficiency products increases due to climate change, SK hynix makes full use of the 'Biz plus' system in which different departments such as marketing, R&D, manufacturing, and cost planning and analysis collaborate with each other and provide information on product development status to allow early-stage analysis of market trends and timely adjustments to the product development portfolio. Moreover, SK hynix offers products to our customers through active collaboration with outside business partners from the initial stage of R&D.	
	b) Describe the organization's processes for managing climate-related risks	SK hynix manages climate change-related risks by linking the SHE management system, which measures GHG emissions periodically, with the Hi-Finance system under the Finance department's internal control team to manage climate change-related issues. The Hi-finance system recognizes GHG emissions that exceed the permit as a liability and thus calculates an estimated cost of carbon credits for the following year. Major climate change risks including those relevant to ETS are discussed and reviewed by the ESG Management Committee.	CC2.2d
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	SK hynix systematically manages climate change-related risks, including environmental operational risks, based on the internationally recognized and widely adopted ISO management systems standard. Specifically, we operate an environmental management system in line with ISO 14001. Based on this, we quarterly review compliance with the established operational policies on management of chemical substances, water and air pollutants, waste disposal, and energy. Furthermore, we have obtained the ISO 50001 energy management system certification to guarantee efficient energy management.	CC2.2



TCFD Requirements		Response of SK hynix	CDP Index
Index and Reduction Target	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	In order to evaluate risks and opportunities related to climate change, SK hynix manages indicators of GHG emissions, GHG emissions intensity, energy consumption, renewable energy production, waste generation, waste recycling, water withdrawals and consumption, etc. Response to climate change is integrated into the CEO's KPI, and the 'Imagination Town' program is utilized by all employees to help manage the performance of projects related to reducing GHG emissions, conserving energy, and increasing efficiency.	C4.2
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas(GHG) emissions, and the related risks	Each year, GHG emissions and emissions intensity are disclosed through the Sustainability Report and CDP response. In 2020, SK hynix emitted 2,711,409tCO <sub>2</sub> eq of direct GHG emissions(Scope 1) and 4,836,920tCO <sub>2</sub> eq of indirect emissions(Scope 2). The detailed data on annual GHG emissions and emissions intensity over the last three years can be found on page 105 of the Sustainability Report.	CC6.1 CC6.3 CC6.5
	c) Describe the targets used by the organization to manage climate-related risks	SK hynix has been working to reduce GHG emissions intensity by 40% from the 2016 BAU level of 29.7 tCO $_2$ eq./KRW 100 million to 17.8tCO $_2$ eq./KRW 100 million by 2022. We have been on track to achieve this goal, and succeeded in lowering the GHG emissions intensity in 2020 by 20% to 23.7tCO $_2$ eq./KRW 100 million, compared to the 2016 BAU level. We continue to strive our efforts to reduce GHG emissions and achieve our targets by 2022.	C4.1 C4.1a
	and opportunities and performance against targets	In addition, SK hynix has set goals to reduce GHG emissions(Scope 1 & Scope 2) and emissions intensity to Net Zero by 2050 as a response to climate change. Under the goal of achieving RE100 by 2050, we first plan to focus on our overseas plants and source renewable energy for 100% of their energy needs by 2022. We will continuously update our roadmaps and implementation plans to achieve RE100 and Net Zero and disclose our plans and efforts to respond to climate change.	

 $Materiality Assessment \cdot ESG \, Data \cdot SASB \cdot TCFD \cdot \textbf{GRI Index} \cdot Awards, Recognition \, and \, Association \, Memberships \cdot Third-party \, Verification \, Statement \, or \, Greenhouse \, Gas \cdot \, UN \, Global \, Compact \cdot \, About \, This \, Report \, About \, Abou$ 

# **GRI Index**

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Overview

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Green Management				
GRI 103: Management Approach 2016	103-1,2,3	Management Approach	35-51	
GRI306: Effluents and	306-2	Management of significant waste-related impacts	109	
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GRI 103: Management Approach 2016	103-1,2,3	Management Approach	75-80	

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Supply Chain Manageme	nt			
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# Awards, Recognition and Association Memberships

## Awards in 2020

Awards	Organization	Commendation	Prize Winners	Department
Korea's Best Company for Job Creation	Ministry of Employment and Labor	Presidential Commendation	Group Award	SK hynix
		Industrial Packaging	Executive Choi Young-man	Canopus TF
Science day		Commendation from Prime Minister	TL Lee Jae-gyun	Mobile PMO
The Engineer of Korea Award	Ministry of Science and ICT	Commendation from Minister	TL Lee In-no	Etch PI, Manufacture/Technology
IDEO Jana Vouna abil Aurand		Commendation from Minister	TL Lee Eun-shik	PKG Equipment Development & PKG Development Team
IR52 Jang Young-shil Award		Commendation from Minister	Captain Oh Ji-hwan	PKG Equipment Development & PKG Development Team
		Industrial Packaging	Executive Choi Jung-san	Mobile Solution
Korea National Quality Award		Presidential Commendation	Group Award	SK hynix
		Commendation from Minister	Executive Han Sang-shin	Test Manufacture Technology
Too do Dou		Bronze Tower Order of Industrial Service Merit	Executive Kim Seok	GA Operation
Trade Day	Ministry of Trade,	Commendation from Minister	PL Son Sang-ho	AL/DE Yield
	Industry and Energy	Silver Tower Order of Industrial Service Merit	Executive Kim Jin-gook	Future Technology Research Assistant
Semiconductor Day		Commendation from Minister	PL Jung Jin-joong	NAND TQI
		Commendation from Minister	TL Choi Jong-ho	PKG Technology Development
Industrial Innovation Movement		Commendation from Minister	Executive Lee Sang-yeop	Sales, Sales Strategy
Commerce and Industry Day Day		Presidential Commendation	Kim Cheon-sung	SKHYA
Mutually Beneficial Cooperation Merit	Ministry of SMEs and Startups	Silver Tower Order of Industrial Service Merit	Executive Kim Kwang-wook	Sales
lavantana' Dav	Variable Intelligence   Decrease Office	Gold Tower Order of Industrial Service Merit	Chief Officer Jin Kyo-won	Development Manufacture Manager
Inventors' Day	Korean Intellectual Property Office	Industrial Packaging	Executive Lee Nam-jae	ISS PI

Appendix



## **Association Memberships**

Classification	Name of Organization	Classification	Name of Organization		
Marketing	SEMI(Semiconductor Equipment and Materials Institute, Inc)		SATA-IO(Serial ATA International Organization)		
Production	Seoul Metropolitan committee of Chemistry Safety Community		SCIEN(Stanford Center for Image System Engineering)		
	Chungbuk Environmental Engineers Federation		Si2(Silicon Integration Initiative)		
	Chungcheong Green Company Association		Si2 OAC(Open Access Coalition)		
	Chungcheong committee of Chemistry Safety Community		SNIA(The Storage Networking Industry Association)		
	Korea Occupational Hygiene Association	Research	T10		
	Korean Standards Association(Icheon)		T13		
	Korean Standards Association(Cheongju)		TCG(Trusted Computing Group)		
	Korea Chemicals Management Association		UFSA(Universal Flash Storage Association)		
	Korea Environmental Preservation Association Chungbuk Branch		UNH-IOL(University of New Hampshire - Inter Operability Laboratory)		
	Korean Semiconductor Industry Association		VCCI(Voluntary Control Council for Interference)		
	The Institute of Semiconductor Test of Korea		Korea Industrial Safety Association(Seongnam)		
	Korea Intellectual Property Association		Korea Industrial Safety Association(Chungbuk)		
	CCIX(Cache Coherent Interconnect For Accelerators)		Semiconductor Industry Association		
	CXL(Compute eXpress Link)		Icheon Chamber of Commerce & Industry		
Research	Gen-Z Consortium		Occupational Health Association		
Research	JEDEC(Joint Electron Device Engineering Council)	Support(Mandatory)	Cheongju Chamber of Commerce & Industry		
	KMEPS(The Korean Microelectronics and Packaging Society)		Korea Semiconductor Industry Association		
	MIPI(Mobile industry processor interface)		Korea Fire Safety Institute(Icheon)		
	NVMe(Non Volatile Memory express)		Korea Fire Safety Institute(Cheongju)		
	Open CAPI(Open Coherent Accelerator Processor Interface)		Korea Electric Engineers Association(Icheon)		
	PCI-SIG(Peripheral Component interconnect Special interest group)		Korea Electric Engineers Association(Cheongju)		

Global Challenge

## **Association Memberships**

Overview

Classification	Name of Organization				
	Gyeonggi Employers Federation				
	Eastern Gyeonggi Manufacturing Safety Managers Association				
	Korean National Quality Award corporate council of winnners				
	The Institute of Electronics and Information Engineers				
	Semiconductor Engineering Society				
	Ministry of Trade, Industry and Energy Emergency Plan Committee				
	Chungbuk Employers Federation				
	Korea Authorized Economic Operator				
	Korea Forum of Chief Information Officers				
	Korea Investor Relations Service				
Support	Korea Enterprises Federation				
(Discretionary)	Korea Fair Competition Federation				
	National Academy Engineering of Korea				
	Korea Customs Logistics Association				
	Korea International Trade Association				
	Korea Association of Industrial Technology Protection				
	Korea Industrial Technology Association				
	Korea Listed Companies Association				
	Korea Human Resources Management Association				
	Korea Integrated Logistics Association(KILA)				
	Korean Society for Quality Management				
	Korean Society for Quality Masters				

Classification Name of Organization		
	AIIA(Artificial Intelligence Industry Association)	
	CompTIA(The Computing Technology Industry Association)	
,	GSA(Global Semiconductor Alliance)	
	KBCSD(Korea Business Council for Sustainable Development)	
Support (Discretionary)	RBA(Responsible Business Alliance)	
(Biseretionary)	TCG(The Climate Group)	
	UN SDGs Association	
	UN Global Compact	
	WSTS(World Semiconductor Trade Statistics)	

# Third-party Verification Statement

## LR Independent Assurance Statement

## Relating to SK hynix Inc.'s Sustainability Report for the 2020 calendar year

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

Lloyd's Register Quality Assurance Limited(LR) was commissioned by SK hynix Inc. to provide independent assurance on its 'SK hynix Sustainability Report 2021' ('the report') against the assurance criteria below to a 'moderate level of assurance and materiality' using 'AccountAbility's AA1000AS v3', where the scope was a Type 2 engagement.

Our assurance engagement covered the operations and activities of SK hynix Inc. in Korea and China and specifically the following requirements.

- Evaluating adherence to the AA1000 AccountAbility Principles of Inclusivity, Materiality, Responsiveness and Impact
- Confirming that the report is in accordance with GRI Standards and core option
- · Evaluating the accuracy and reliability of data and information for only the selected indicators listed below
  - GRI 200(Economic): 201-2, 205-1, 205-2
  - GRI 300(Environmental): 302-1, 302-3, 303-1, 303-2, 303-3, 303-4, 303-5, 305-1, 305-2, 305-3, 305-4, 305-5, 305-7, 306-2, 306-3, 307-1
  - GRI 400(Social): 401-1, 401-3, 404-1, 404-2, 405-2, 419-1

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

LR's responsibility is only to SK hynix Inc. LR 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.

#### LR's Opinion

Based on LR'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.

## LR's approach

LR'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.

<sup>1)</sup> https://www.accountability.org

<sup>2)</sup> https://www.globalreporting.org

# Third-party Verification Statement

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.

#### **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. established the sustainability management committee at the board level and the ESG management committee at the senior management level. It is expected that these decisionmaking processes and structures will be able to facilitate the integration of ESG principles and practices through the organization and the performance will be reported in detail in the future.
- Impact
- SK hynix Inc. is in the stage of developing its own process for human rights impact assessment. It is expected that SK hynix Inc. expands the scope of human rights impact assessment to the supply chain and reflects the identified risk into organizational strategies, goals, performance management and operation process in order to effectively address human rights impacts through all value chains.
- Reliability
- SK hynix Inc. has reliable data management systems for the indicators in the report.

## LR's standards, competence and independence

LR 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.

LR 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.

LR is SK hynix Inc.'s certification body for ISO 27001. We also provide SK hynix Inc. with a range of training services related to management systems. The verification and certification assessments, together with the training, are the only work undertaken by LR for SK hynix Inc. and as such does not compromise our independence or impartiality.

Dated: 12 June 2021 Tae-Kyoung Kim LR Lead Verifier On behalf of Lloyd's Register Quality Assurance Limited 17th Floor, Sinsong Building, 67 Yeouinaru-ro, Yeongdeungpo-gu, Seoul, Korea

LR reference: SE000000814



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P274 Product procedure Revision 2, 20 January 2020

## Verification Statement on Greenhouse Gas

## SK hynix INC.

Domestic Operation Sites under greenhouse gas emission verification

- Icheon Campus, Cheongiu Campus & Bundang Campus

#### Scope:

- The annual GHG emission for the 2020 calendar year inclusive
- The physical scope is limited within the boundary of Domestic Area for SK hynix INC.
- 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) instead of the Second Assessment Report, 1995(SAR) applied to the National Greenhouse Gas Emission Trading Scheme.

#### Data verified:

Scope 1 and Scope 2 GHG emissions of domestic sites in 2020 with GWP of AR5 are as follows. [Unit: tCO.e/y]

Scopes	Icheon Campus C	heongJu Campus	Bundang Campus	Total
Direct Emissions(Scope 1)	200,313	666,792	622	867,727
Indirect Emissions(Scope 2)	2,475,884	1,360,491	7,577	3,843,952
Optional Information(Used the NF3)	426,588	347,543	-	774,131
Total	3,102,785	2,374,826	8,199	5,485,810

Emissions	of each greer	nhouse ga	as in 2019 v	with GWP	of AR5 are	as follows		[Unit: tCO2 <sub>2</sub> /y]
GHG	CO <sub>2</sub>	CH₄	N₂O	HFC	PFC	SF،	NF₃	Total
Emissions	3,927,397	1,354	108,457	71,890	527,747	74,833	774,131	5,485,809

Scope 3 GHG Emissions in 2019 with GWP of AR5 are as follows.

[Unit: tCO2<sub>2</sub>/v]

Category	International transport(Export)	International transport(Import)	Waste disposal	Business trip	Employee commuting	Total
Emissions	26,849	29,447	6,197	167	37,105	99,765





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#### 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(2019-245)
- The GHG Protocol of the WRI/WBCSD Revised 2015
- IPCC Guideline for National Greenhouse Gas Inventories Revised 2006
- IPCC Fifth Assessment Report, 2014(AR5)
- ISO14064 Part 1 & 3 Issued 2006
- · 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'.
- · 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: 04/05/2021

Managing Director Korea, K. S. Song



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# **UN Global Compact**

The UN Global Compact(UNGC) was designed to encourage businesses around the world to adopt sustainable and socially responsible business activities consisting of ten principles in four business management areas. SK hynix upholds the ten Principles of the UN Global Compact and commits to comply with the principles across its business operation.

## The Ten Principles of the UN Global Compact

Classification	Principle	Reporting Contents
Lluman Dighta	Principle 1	Businesses should support and respect the protection of internationally proclaimed human rights.
Human Rights -	Principle 2	Businesses should make sure that they are not complicit in human rights abuses.
	Principle 3	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
Lahaun	Principle 4	the elimination of all forms of forced and compulsory labour;
Labour -	Principle 5	the effective abolition of child labour; and
-	Principle 6	the elimination of discrimination in respect of employment and occupation.
	Principle 7	Businesses should support a precautionary approach to environmental challenges;
Environment	Principle 8	undertake initiatives to promote greater environmental responsibility; and
-	Principle 9	encourage the development and diffusion of environmentally friendly technologies.
Anti-Corruption	Principle 10	Businesses should work against corruption in all its forms, including extortion and bribery.



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.

Materiality Assessment · ESG Data · SASB · TCFD · GRI Index · Awards, Recognition and Association Memberships · Third-party Verification Statement · Verification Statement on Greenhouse Gas · UN Global Compact · About This Report

# **About this Report**

Overview

#### **Overview**

SK hynix has been publishing sustainability reports annually since 2008 to provide relevant information to our stakeholders in a transparent manner, while creating economic, environmental, and social values. We conducted a materiality assessment for stakeholders to collect their opinions and selected key material issues through interviews. This Sustainability Report includes SK hynix's efforts and major achievements.

## Reporting Period

The reporting period ranged from January 1, 2020 to December 31, 2020. Important breakthroughs made after that period were included for those of the first half of 2021 as well. In terms of quantitative performances, the data of the past three years(from 2018 to 2020) are shared to enable a comparative analysis.

## Reporting Boundaries

The purpose of this report is to share the sustainability management activities and achievements of all domestic business sites(such as Icheon, Cheongiu, and Bundang) and the Chinese sites(including Wuxi and Chongging). The activities of the Wuxi and Chongging production sites in China are partially included while also specified with the information boundaries by each data category.

## Reporting Standards

**Appendix** 

The basis of this report is the core standards of the GRI(Global Reporting Initiative) Standards, which is the global guideline for sustainability report publication. Other principles we referred to include the ISO 26000 and UN Global Compact, SASB standards, and TCFD recommendations. Financial data is provided on a consolidated basis. The reporting criteria and definitions are in accordance with the K-IFRS standard. We also made sure to apply the fiscal year basis of the nonfinancial information according to the corporate disclosure system. Data regarding energy consumption amounts and GHG (greenhouse gas) emissions were completed according to the verification results about the actual emission amount. In the event of further major changes, we have stated them separately in the relevant chapter.

## **Reporting Verification**

By relying on a third-party verification of our report's contents, we ensured the reliability and fairness of the writing process, disclosed data, and content. Detailed verification comments are provided in the Appendix.

## For Additional Information and Inquiries

SK hynix ESG Strategy sustainability@skhynix.com

