

# **SUSTAINABILITY REPORT 2020**

# SK hynix Sustainability Report 2020

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### ABOUT THIS REPORT

#### Overview

SK hynix has been publishing its sustainability reports annually since 2008 in order to provide relevant information to our stakeholders in a transparent way while achieving economic, environmental, and social value creation. We conducted a materiality assessment for stakeholders in the course of the report to collect their opinions, and selected the material reporting issues by interviewing them. This report conveys SK hynix's efforts and achievements in the ongoing management report with our stakeholders.

#### Reporting Period

The reporting period ranged from January 1, 2019 to December 31, 2019. Important breakthroughs made after that period were included for those of the first half of 2020 as well. In terms of quantitative performances, the data of the past three years (from 2017 to 2019) are shared to enable a comparative analysis.

#### Reporting Standard

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

#### Reporting Boundaries and Scope

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 non-financial 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

We have consulted with the DNV GL, a verification institute, to enhance both the internal and external credibility of this report. 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 inquires

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# CEO's Message



## Overcoming the Crisis For the Happiness of All of Our Stakeholders

In 2020, the global pandemic caused by COVID-19 forced all companies around the world to face a crisis they had never before experienced. “Sustainability” has become a pressing issue for every company as well as for the planet Earth. Likewise, the semiconductor industry’s business environment also faces enormous uncertainties. In the midst of these challenges, SK hynix is committing its greatest efforts for the opportunity to turn this crisis into valuable and sustainable growth.

We want to secure our competitive advantage by pursuing the Double Bottom Line (DBL) Management Principles that do not settle for economic value but also create social value. These endeavors to fulfill our responsibilities are how SK hynix will survive as we pursue our vision of becoming the world’s best semiconductor manufacturer. We are certain that this is the way for all stakeholders including our customers, shareholders, business partners, the local community, and governments to be satisfied.

This pandemic of unprecedented scale should serve as the inflection point of the true Fourth Industrial Revolution. We aspire towards even more differentiated technological innovation as a company that serves as the starting point of future technologies and is itself a technology-driven company that responds to the flow of change and contributes to the world. We are strengthening our competitive edge, which is critical for a semiconductor producer, by using cutting-edge nano/micro processing and cost cuts, in addition to doing our utmost to develop next-generation technologies and reduce greenhouse gas emissions that surpass the physical limits of current technology. At the center of these changes and our business are our employees. SK hynix plans to overhaul all its processes and management systems that encompass the environment, society, and governance by prioritizing the happiness of all of our stakeholders.

Change begins with informational disclosure, based on transparent communication and a sense of responsibility. SK hynix’s 2020 Sustainability Report has been prepared to serve as a channel to share our commitment and efforts to realize our new values. We would like to ask you for your continued interest and support in helping SK hynix become a company that strives towards its ultimate goal of bringing happiness to all. Thank you.

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# DBL AT A GLANCE

## Sustainability Management Drive System



### Environmental Protection

#### 2022 ECO<sup>1)</sup> Vision

Pursuing values focused on people and the environment

#### ECO Alliance

Creating an eco-friendly semiconductor ecosystem with suppliers

1) ECO: Environmental & Clean Operation



### Supply Chain Sustainability Management

#### ESG Consulting & Youth Hy-Five

Support programs designed to promote the sustainable management of suppliers and recruit talented professionals

#### Center for Working Environment Health

Health support and advice for suppliers and the socially vulnerable in local communities



### Glocal<sup>2)</sup> Contribution

#### Social problem resolution and sharing of happiness by employees

Providing solutions for social issues and donating our employees' talent by establishing an ICT-based sharing platform

#### Local community-based social contribution

Social contribution activities at global business sites focused on solving local community issues

2) Glocal: Global + Localization



### Diversity and Inclusion Culture

#### Diversity and Inclusion Center

Establishing a creative and healthy organizational culture in which our employees' diversity is recognized and they are able to freely demonstrate their abilities

[more info](#)  
Sustainability Management Activities

## DBL Management System

The DBL Management System represents SK's management principles committed to growing with the community by creating EV and boosting SV in all its management activities.



### Double Bottom Line

It implies going beyond the 'single bottom line', which refers to the net profit indicated at the bottom of the accounting records, and the pursuit of both EV and SV simultaneously.

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

As a guidebook for SK staff's SV creation, DBLMS also serves as a detailed action plan for SKMS (SK Management System). It carries an advance evaluation system for SV creation and a plan to use it.

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

We measure the DBL awareness & implementation in different divisions and provide improvement plans by conducting annual diagnostic surveys by establishing the diagnostic system called DBL RI.

### SV criteria reflected in the KPI evaluation for all company executives

Starting in 2020, we have included the SV criteria in the evaluation of all company executives to stress its company-wide importance.

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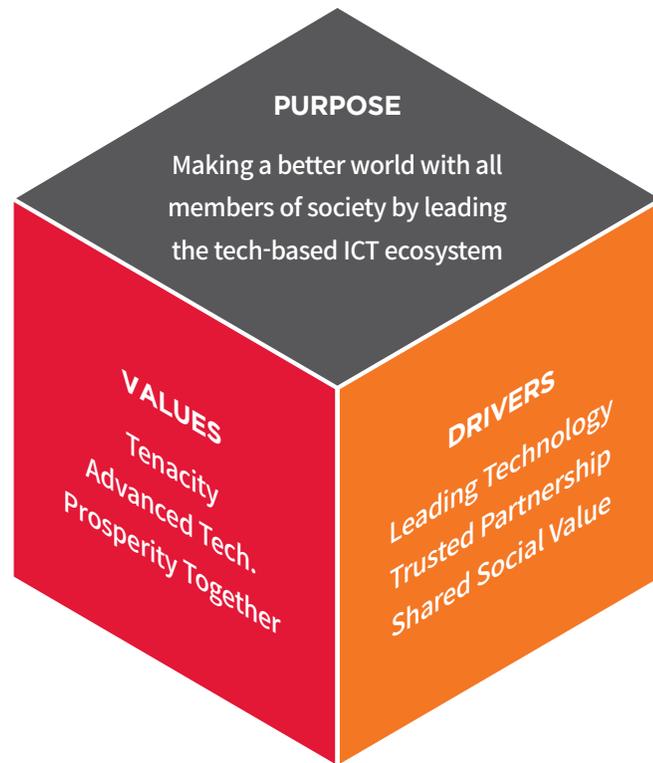
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# Corporate Profile



Brand Identity

## Technology Innovator for a Better World

Brand Slogan



In the digital world, semiconductors serve as the basis of the ICT industry and play a critical role within it. Semiconductors are critically important parts that determine the performance of ICT products. SK hynix produces memory semiconductors, including DRAM, NAND Flash, and system semiconductors CIS, which are essential for a variety of ICT devices, such as mobile and computing devices. In 1984, since beginning trial production of the first Korean 16K SRAM in 1984, we have launched innovative semiconductor products which were the world's first/smallest/fastest/minimum voltage and solidified our technological leadership.

Just as smartphones and tablet PCs have become familiar tools to the public today, new ICT machinery, which used to exist only in films, will continue to stream into our lives. New digital products and the growth of the IoT environment are gradually expanding the area and demand for semiconductors, and SK hynix has continued profit-centered management and qualitative growth using market-leading technology.

As ICT devices become smart and mobile tools, they demand even more high-tech semiconductors. In response, SK hynix is strengthening its technological leadership and ramping up product competitiveness in the high value-added premium product market. This is why we are continually striving to secure leadership in fields where the importance of mobile devices, servers, and storage solutions is increasing. SK hynix will also lead the new market by preparing New Memory technologies.

**Company Name** — SK hynix Inc  
**CEO** — Lee Seok-Hee  
**Establishment** — February 1983  
**Business Domain** — Manufacturing and sales of semiconductor devices  
**Headquarter** — 2091, Gyeongchung-daero, Bubal-eup, Icheon-si, Gyeonggi-do, South Korea  
**Products and Services** — Memory semiconductors: DRAM, NAND flash, MCP, etc. System semiconductors: CIS etc.

more info

**Promotional video of SK hynix**

Corporate promotion video | Icheon | Cheongju

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# Global Network



● Production Sites	● R&D Subsidiaries	● Sales Subsidiaries	● Sales Offices
1 Icheon	1 Zhubei city	1 Weybridge	1 Dublin
2 Cheongju	2 San Jose	2 Raunheim	2 Paris
3 Wuxi	3 Minsk	3 Noida	3 Helsinki
4 Chongqing	4 Milano	4 Singapore	4 Penang
		5 Hong Kong	5 Hanoi
		6 Wuxi	6 Xi'an
		7 Shanghai	7 Beijing
		8 Taiwan	8 Chongqing
		9 Tokyo	9 Shenzhen
		10 San Jose	10 Osaka
			11 Seattle
			12 Austin
			13 Houston
			14 Raleigh



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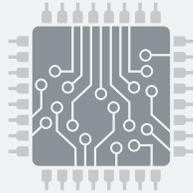
## Customers

Research and Development

**1z Nano** DRAM

**128-layer** NAND

**460 GB/s Data Processing** HBM2E



Occurrence of process quality issue

Decreased by **19%**  
(Compared to 2018)

Customer Satisfaction Score

**4.43** points  
(Out of 5 points)

## Investors

Sales

**26,990.7** billion (KRW)

Operating profit  
**2,712.7** billion (KRW)

Net profit  
**2,016.4** billion (KRW)

**SASB** public announcement

**TCFD** public announcement

Dividend  
**684** billion (KRW)

Capital expenditures (Capex)  
**12,747** billion (KRW)

## Employees

Total Number of Employees

**28,244** people



Newly incorporated  
**Happiness Culture Committee**

Newly recruited employees  
(Domestic and overseas combined)  
**4,817** people

Average compensation  
per person  
**120** million (KRW)

## Local Communities



Social Contribution Expenditure

**61.4** billion (KRW)

Number of ICT based  
social contribution beneficiaries  
(accumulative as of 2019)

Happy GPS **13,000** people

Silver Friend **2,100** people

Happiness Sharing  
Fund **2.88** billion (KRW)

Number of Happiness Sharing  
Fund beneficiaries **4,553** people

Tax and dues **507.7** billion (KRW)

## SHE



Greenhouse Gas Emissions<sup>1)</sup>

Korea **4,950,738** tCO<sub>2</sub>eq

Overseas **1,888,732** tCO<sub>2</sub>eq

<sup>1)</sup> Total of Scopes 1 and 2

Waste

**511,216** tons

Myanmar cookstove supply project

Reduced **300,000** tons  
of Greenhouse Gas Emission

Product Carbon Footprint/Water Footprint

1X DRAM 8Gb :

**507** g CO<sub>2</sub>eq./each · **9.38** L H<sub>2</sub>Oeq./each

1X DRAM 6Gb :

**405** g CO<sub>2</sub>eq./each · **6.26** L H<sub>2</sub>Oeq./each



SHE Investments  
(Based on domestic worksites)

**180** billion (KRW)

## Suppliers

Amount of contribution to win-win growth

**268.5** billion

Suppliers in the Shared Growth Partnership

**117** companies

Number of beneficiaries from Wage Sharing

**8,170** people

Total Number of Suppliers

**2,878** suppliers

Total Purchase

**19,369.2** billion (KRW)



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# Customers

## MANAGEMENT APPROACH

### Quality Assurance at Customer Contact Points

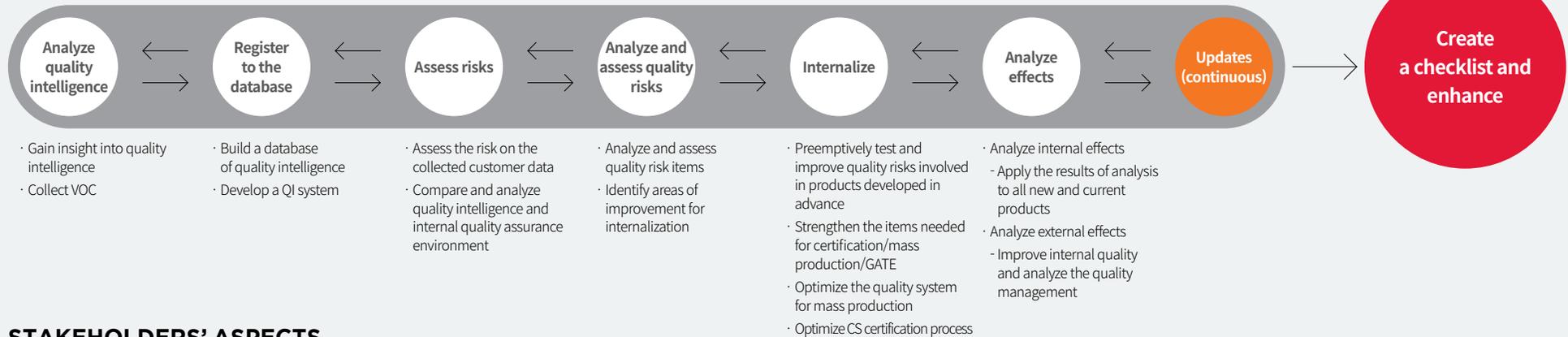
SK hynix places customer satisfaction as our top priority as we strive to achieve customer-oriented QI (Quality Intelligence) quality management.

**Server Products** — To minimize defects that could occur during the production process from the Original Development Manufacturer (ODM), SK hynix carried out on-site assurance and evaluations while providing prompt feedback. By doing so, we managed to reduce inefficiency in communication and prevent additional defects during production.

**Mobile Application** — We are engaged in quality control throughout the development process and conduct defect tests at each stage. Through these efforts, we reflect the test level that clients desire and promptly respond to their feedback.

**eSSD** — We engage in quality management across the entire process, from handling raw materials to production. We also commit ourselves to customer-oriented quality management through the raw material IR (Incident Report) analysis, operation of the independently developed OSV (On Site Verification), providing feedback in relation to the SMART (Self-Monitoring Analysis and Reporting Technology) and IO (Input/Output) profiles, and homogeneity management.

### QI Work Flow



## STAKEHOLDERS' ASPECTS

The Responsible Business Alliance (RBA) Code of Conduct is established to promote safe working environments, respect for employees, and eco-friendly and ethical business operation in producing electronic products or product components, including semiconductors. Adoption of the RBA Standards and the assessment of supply chain based on the RBA is widespread and on the rise within the semiconductor industry, prompting the company's effort to meet these needs. Every company must be ready to meet the increasing need for quality management in server products, mobile applications, and semiconductors, such as eSSD. The

demand for enhanced customer satisfaction, through improved product yield and quality assurance and advancement of management systems in the entire process from technological innovation and product sales, is also on the rise. As a member of RBA, SK hynix endorses RBA's Code of Conduct and actively complies with the Code's standards. By doing so, we strive to fulfill our social and environmental responsibilities, as well as to enhance the satisfaction of our customers through advanced quality assurance at customer contact points.

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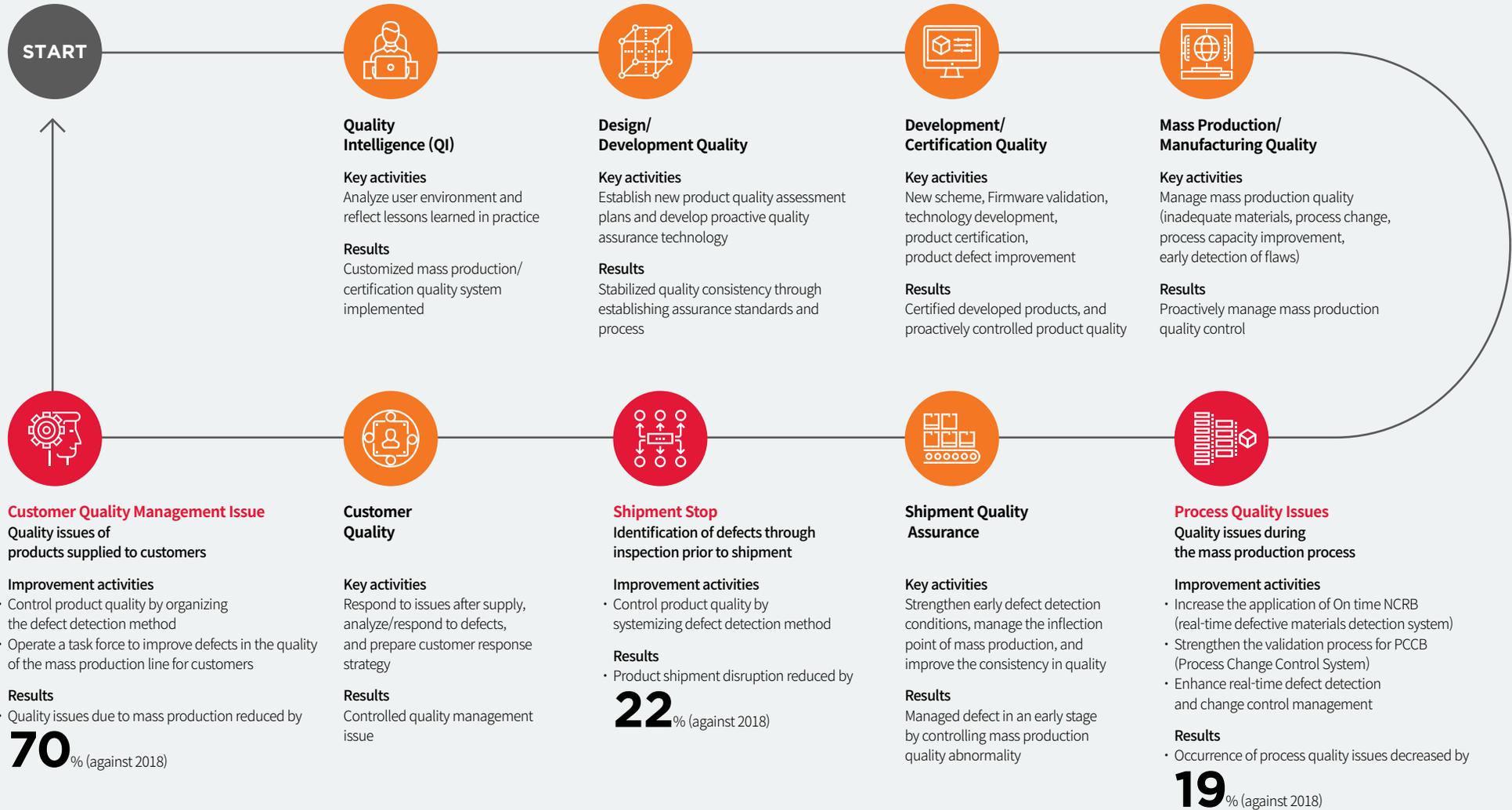
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## KEY PERFORMANCE AND PLAN

### Quality Assurance System Throughout the Value Chain

SK hynix is committed to customer satisfaction through sustainable production and sales. From technological breakthrough to product sales, we implement quality assurance throughout the value chain to supply reliable products to our end consumers.



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# Investors

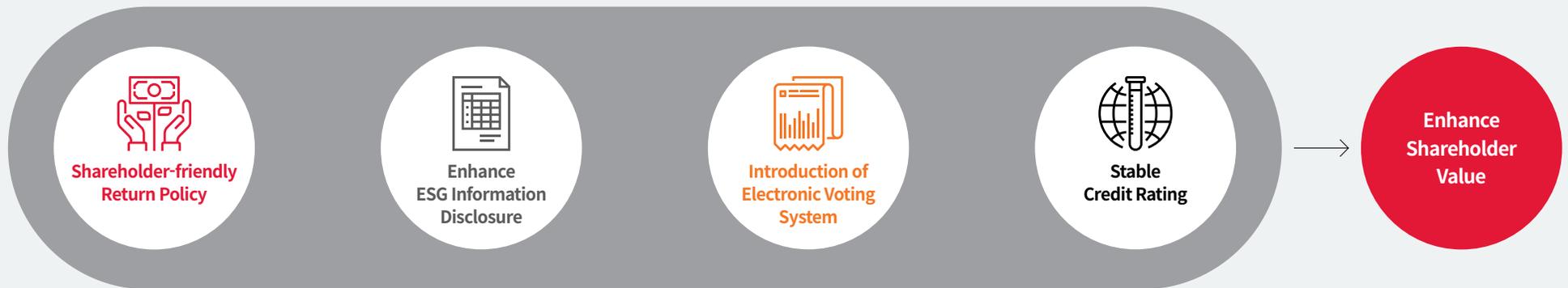
## Enhancing Shareholder Value

SK hynix recognizes the potential for enhancing shareholder value through active interactions with shareholders and transparent disclosure of our business environment. To this end, we communicate the overall trends and situation in the IT industry including impact on the memory industry and our company. Further, we internally relay the demands of an external rise in responsible investment to increase our disclosure of relevant information.

By maintaining a stable shareholder base and listening to the voices of shareholders

and investors, we strive to achieve an appropriate market valuation through the effective and strategic two-way communication between investors and company to support management's and investors' decision-making.

In order to provide information disclosed through the earnings call in a more timely and broadly-available manner, we added a real-time webcasting service for our quarterly earnings results calls in 2019.



## STAKEHOLDERS' ASPECTS

With a wider practice of responsible investment in the financial markets, our IR practices are also changing to meet market demands. In addition to traditional investment practices, responsible investment practices include broad strategies that consider ESG factors and eventually enable sustainable growth by managing corporate ESG risk factors from a long-term perspective.

In particular, global investors are more actively engaging with companies for improved sustainability through ESG management. Investors are engaging on ESG

issues that have potential to impact the economic, operations and/or reputation of the company. Global investors are also using proxy voting as a way to take the company to task over material issues.

SK hynix is actively responding to investor's engagement on ESG issues by gauging investors' demands and providing internal feedback so that investor opinions can be reflected in management activities. Thereby, we can firm the base for long-term growth and enhance shareholder value by raising corporate value.

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**KEY PERFORMANCE AND PLAN**

**Shareholder Return Policy**

SK hynix announced a new dividend policy to improve predictability in forecasting dividend amount while accounting for earnings fluctuation from memory market cycles. With this new dividend policy, we fixed the Annual Cash Dividend at a base amount of KRW 1,000 per share (Minimum dividend amount) for FY 2019 to FY 2021. We will also use 5% of Annual Free Cash Flow to pay an additional variable dividend amount (Additional Dividend based on earnings results). Going forward, SK hynix will continue to look into ways to improve our dividend policy.

**Enhancing ESG Information Disclosure**

SK hynix is striving to improve the quality of ESG information disclosed that is increasingly used by investors in their investment decisions. SK hynix disclosed the Corporate Governance Report (CGR report) in an English version for the convenience of our foreign investors who hold around 50% of our shares. This CGR report disclosure is mandatory since 2019 for KOSPI-listed companies with assets equal or more than KRW 2 trillion.

As a global corporate citizen with a responsibility to combat climate change, we expanded the disclosure of information under the requirements of TCFD. (Task Force of Climate-related Financial Disclosures) We also transparently disclose information according to the Semiconductors Industry Index of SASB. (Sustainability Accounting Standards Board)

more info  
SASB, Appendix

more info  
TCFD, Appendix

**Use of Electronic Voting System**

Starting from the 2019 Annual General Shareholders meeting, SK hynix used the Electronic Voting System to enable shareholders' more convenient and efficient vote by online proxy.

The Electronic Voting System provides an online platform where shareholders' registry and shareholder items can be registered, thus allowing shareholders to cast proxy vote through the online system.

We have further protected shareholder rights through the use of the electronic voting system. As a result, minor shareholders' use of proxy voting has increased.

**Stable Credit Rating**

Based on our improved profitability, thanks to the increased demand of major customers, SK hynix has maintained stable credit ratings. SK hynix has a BBB- credit rating with S&P and maintains a Baa2 credit rating with Moody's.

**SK hynix Credit Rating Status**

(Credit Rating Agency, Credit Rating assessment date)

**AAO**

NICE Investors Service, February 3<sup>rd</sup>, 2020

**AAO**

Korea Ratings, February 3<sup>rd</sup>, 2020



**Baa2**

Moody's, July 30<sup>th</sup>, 2019

**BBB-**

S&P, June 27<sup>th</sup>, 2019



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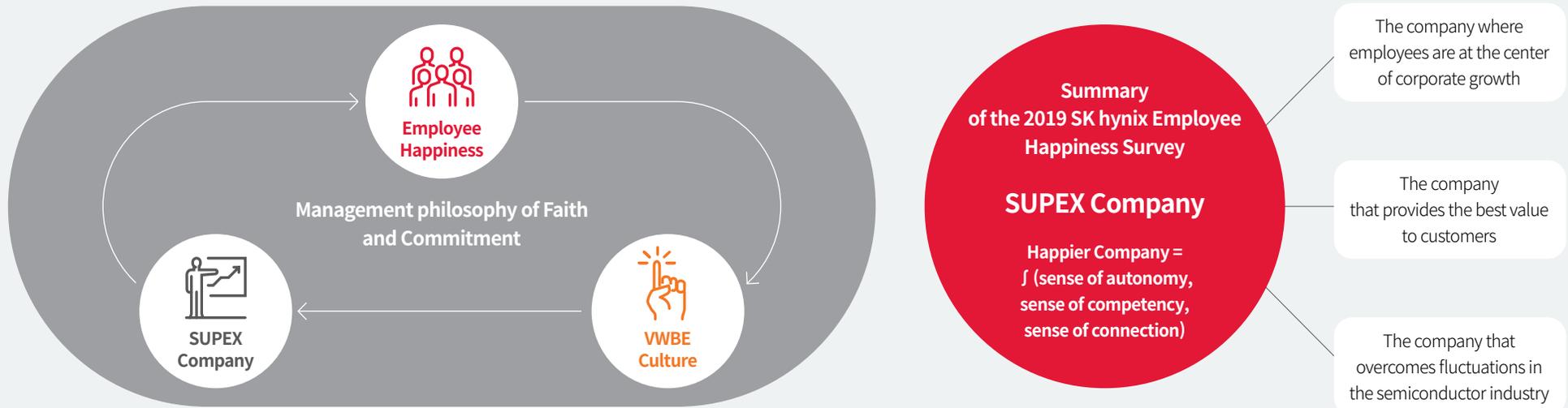
# Employees

## MANAGEMENT APPROACH

### Drive Happy Management

To overcome challenges and secure sustainability in the rapidly changing management environment, there must be solidarity among our staff as we strive toward common goals. To achieve this unity, SK Group and SK hynix declared the happiness of our employees and stakeholders as the ultimate goal of business

operation, and amended and codified our SKMS (SK Management System). SK hynix will continue to grow while leading the future of the ICT environment, promoting the happiness of our employees and stakeholders through a virtuous cycle of happiness.



## STAKEHOLDERS' ASPECTS

The core of SK hynix's happiness management is to suggest happy ideas, presented by employees, and design strategies to realize them. The happiness felt by employees must be identified and translated into data, which is then scrutinized to identify routes that employees take to achieve happiness. In addition, an environment where employees can be motivated to freely think must be created by operating an efficient work system and policy.

We sense that the first step towards major, positive change has been taken from the growing number of employees discussing happiness within the company. Going forward, we wish for more participation from employees and stakeholders in this initiative so that happiness management can firmly take root and a happy work environment can be built for our employees.

- J, Employee

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## KEY PERFORMANCE AND PLAN

### Virtuous Cycle of Happiness

Putting happiness as the top priority of business operation empowers the VWBE (Voluntarily Willingly Brain Engagement) culture, which maximizes voluntary brainstorming and motivation among employees. If employees who practice VWBE pursue SUPEX (Super Excellent Level), they can create a SUPEX company that creates economic and social value as well as employee happiness. Through this virtuous cycle of happiness, SK hynix will continue to grow and develop.

### Newly Incorporated Happy Culture Committee

SK hynix designs the happiness of our employees with a focus on fieldwork. We believe that the principal agents that lead SK hynix into a happier world are our employees. Based on our management principle of putting employees in the center of changes, we organized the “Happy Culture Committee,” which promotes our happiness strategy with our employees at business sites. Through this committee, we encourage our employees to design their own happiness. With the Happy Culture Secretariat under the Happy Culture Committee, we will tear down the walls between employees, management, and operational groups and carry out site-centered happiness strategies by expanding and reorganizing our communication channels.

### Establish and Implement Happiness Strategy

Setting this year as the first year for the SK hynix’s Happy Management, we will establish a system to build and execute a happiness strategy with the Happy Culture Committee. In addition, we plan to reorganize regular and constant assessments of happiness and the employee idea suggestion platform. We will continue to host the Happy Talk event for the employees and leaders of SK hynix, including the CEO, building a management system fit for a BIC (Best In Class) company by discovering and improving factors that hinder the happiness of our employees and stakeholders.



CEO Happy Talk

The annual number of Happiness Talks implemented

**100** talks



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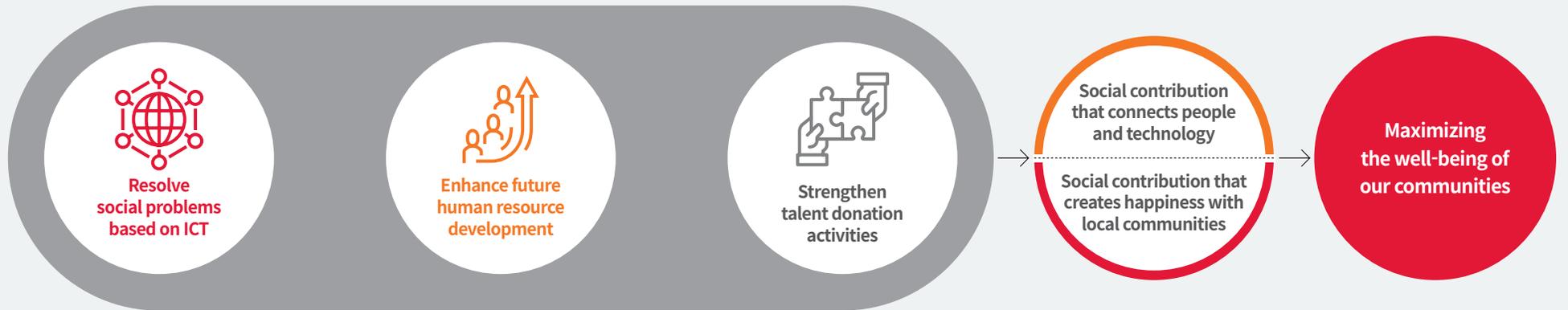
# Local Communities

## MANAGEMENT APPROACH

### Create Values for Local Communities

SK hynix strives for active communication with our local communities to create social values through sharing. We build a healthy ecosystem where we give back to society by carrying out social contribution activities that bring happiness to both the contributor and beneficiary. In particular, we commit to maximizing social

values by operating contribution activities that are closely related to the local environment at domestic and overseas worksites, and we resolve social issues with our technological capabilities.



## STAKEHOLDERS' ASPECTS

The social contribution activity with SK hynix itself is an experience that creates a sense of pride. In particular, the ICT-based social contribution activities fit for the leading semiconductor company provides great help to the vulnerable members of the community.

SK hynix's enthusiastic participation which is shown in distributing Happy GPS and A.I. speakers to the senior citizens who live alone and the elderly with dementia

inspires us to have a greater passion for social contribution activities. We hope SK hynix will continue to concentrate on the social activities that are in line with their business characteristic as an IT company, while gradually expanding the target and the area coverage. The voluntary and active participation of employees is deemed critical to enhancing the ripple effect of such social contribution activities, and we hope SK hynix will achieve cooperation with stakeholders as well.



Center for Comprehensive Support for the Solitary Senior Citizens  
**Manager Eung Cheol Kim**

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## KEY PERFORMANCE AND PLAN

### Creating the Safety Culture for Local Communities

SK hynix has been consistently performing talent donation activities to promote a fire safety culture in local communities. We donated items such as fire extinguishers, smoke detectors, and signs to people who are vulnerable to fire hazards and carried out interactive safety classes using the SHE Experience Center for three local elementary schools. In 2019, we conducted 14 interactive safety classes, and we plan to expand to 16 classes in 2020. In addition, we performed 20 safety and fire inspections in 2019 in cooperation with the Icheon and Cheongju fire departments. We received BLSTS (Basic Life Support Training Site) certification, thanks to our consistent and wide range of local community support activities. Going forward, SK hynix will invigorate the safety culture of local communities by expanding the target and scale of talent donation activities.

#### Number of interactive safety classes given using SHE Experience Center



#### Number of safety and fire inspection activities carried out with fire departments



## Major social contribution activity performance in 2019

### The range extension of ICT-based care for the socially vulnerable (seniors and the disabled)



### Expand from local communities to the entire nation



### Shift from labor volunteers to voluntary Pro Bono<sup>1)</sup>



1) Free volunteering for the public interest

2) College students volunteer group of SK

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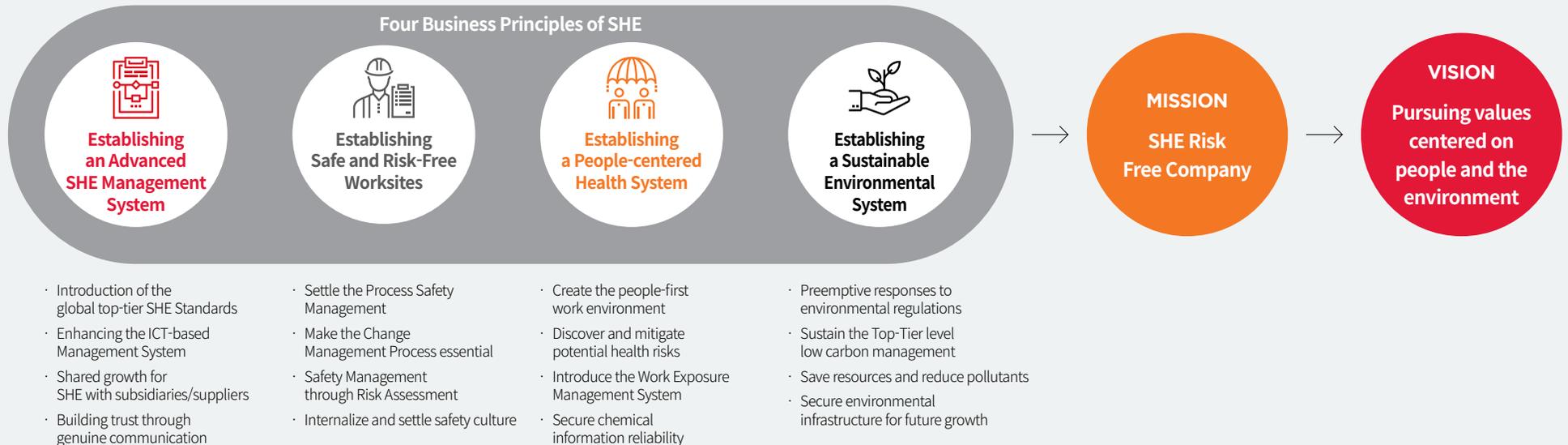
# SHE

**MANAGEMENT APPROACH**

**SHE (Safety-Health-Environment) Policy**

SK hynix works to realize human and environmental values as our top priority. To this end, we set the establishment of an advanced SHE management system, safe and risk-free worksites, people-oriented health system, and sustainable environmental

system in our pursuit of our Four SHE Principles to achieve sustainable company growth by making improvements in safety, health, and environment and securing the public's trust.



**STAKEHOLDERS' ASPECTS**

There are growing stakeholder demands in relation to safety, employee health, and the environment. In particular, the creation of eco-friendly worksites and the health and safety of employees are recognized as the most critical values that a company must pursue. The content of RBA's Codes of Conduct also include responses to industrial safety and emergencies, industrial hygiene, health, and safety communication, the management of hazardous substances and water resources, greenhouse gas emissions, etc.

SK hynix recognizes that indifference to safety and health is a risk factor that causes irreversible impacts on our business. In addition, we spread the idea among shareholders that the thorough prevention of potential risks reduces actual accidents and serves as a foundation for the company's sustainable growth. Based on our philosophy of "Non-exceptional Safety First," we actively promote the safety culture within our workplaces and carry out Green Management to pursue people and environment-centered values.

STAKEHOLDER HIGHLIGHTS

DBL HIGHLIGHTS

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Investors

Employees

Local Communities

**SHE**

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KEY PERFORMANCE AND PLAN

Establish the Non-exceptional Safety-First Culture

SK hynix recognizes the safety culture as the most fundamental factor in sustaining the semiconductor industry. To this end, the top management established and announced “Non-exceptional Safety First” as the highest priority for Hi-Gineers to show SK hynix’s commitment towards safety management. By establishing the Safety Culture Subcommittee, we strive to pursue happiness culture through communication and sympathy and enhance safety awareness through strengthened safety culture activities. SK hynix and the employees of our suppliers stipulated written safety practice plans that contain pledges for personal safety to spread the safety culture. In addition, we carry out diverse activities including discovering near-miss accidents and granting promotions for exemplary cases and ideas.

Building a SHE Cohort

SK hynix established a SHE (SK hynix Employees) cohort with the commitment of the management and participation of our employees. As a leader of the cohort research led by a private-enterprise we are also getting positive feedback from academic circles. In 2019, the first year of the SHE cohort growth, we proved the value of the cohort research results as an health indicator by expanding the range of connection for the cohort database and verifying its reliability. Furthermore, we are focusing on an in-depth analysis of employees’ health conditions and identifying health management points by applying the patterned risks derived from the algorithm developed for the monitoring of the high-risk group. The SHE Cohort will continue to discover site-related research tasks that reflect the voices of employees, and carry out system improvements through verifying the reliability of the current monitoring system.

Acquired Company-wide Certification of Zero Waste to Landfill

At the end of 2019, SK hynix's Chongqing campus acquired the ZWTL (Zero Waste to Landfill) certification. With this achievement, we completed the company-wide establishment of worksite waste management systems, including overseas campuses. Going forward, we will enact corporation-wide efforts to maximize the recycling of wastes into resources and minimizing environmental impacts.

Responses for infectious disease (COVID-19)

Established guidelines for overseas visits and business trips



Shut-down crowd facilities within the company



Special maternity leave



Extended hours for cafeteria and seat designation



Preemptive identification and self-quarantine of confirmed cases and those who made contact with confirmed people



Implementing integrated guidelines for visitors

Compulsory to wear a mask when entering, conducting total inspection by the campus for measuring body temperature, etc.



Compassionate leave for those with underlying illness



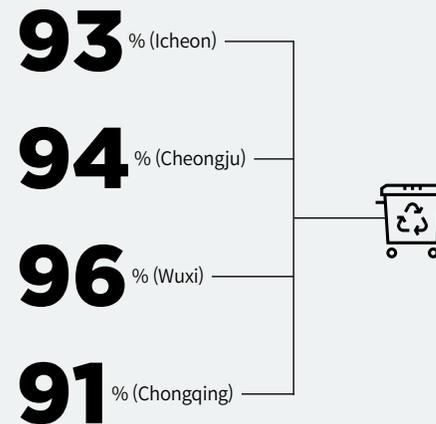
Response to COVID-19

SK hynix has been actively responding since the early stages of the COVID-19 pandemic, which started in December 2019. We perform company-wide prevention and control activities, including our overseas manufacturing subsidiaries, by organizing the response TF under the supervision of the general development and manufacturing management division. Setting the safety of employees as our top priority, we have been preemptively carrying out control measures such as the establishment of the proactive response system, prevention of virus inflow, prevention of virus spread, response and countermeasures for the spread of the virus within the company, and acting according to the national response level (Yellow, Orange, Red). While not disclosing the real names and the movement routes of suspected cases, we determine the scope of disclosure of confirmed cases, following the advice of health authorities to protect the labor and human rights of the infected or individuals suspected of infection.

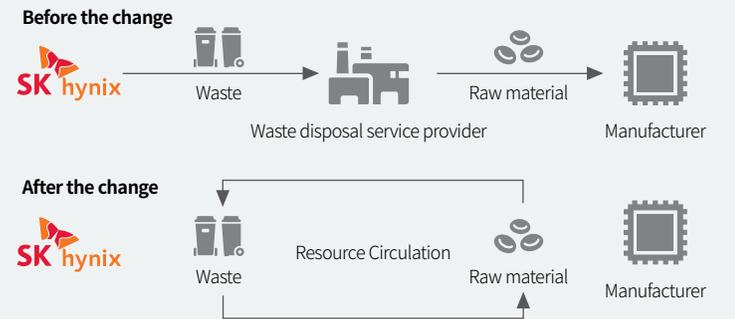
Discovering the Resource Recycling

In 2019, SK hynix acquired the Resource Recycling Certification for IC-Tray. Our domestic worksites are discharging about 1,440 tons of IC-Trays annually, which are used to transfer products at the last stage of wafer production. Before the implementation of the resource recycling approval system, those IC-Trays were disposed of as waste. With the implementation of this system, the items that meet 11 criteria including economic feasibility, harmlessness, and others, are recognized as resources instead of waste and can be sold as materials. To this end, SK hynix has reduced annual waste by 1,440 tons.

Rate of Waste Recycling by Worksite and Campus



IC-Tray Disposal Process



**STAKEHOLDER HIGHLIGHTS 6**

# Suppliers

**MANAGEMENT APPROACH**

**Shared Growth Strategy for the Supply Chain**

To align our shared growth policy and supply chain communication channels with our purchase strategies, SK hynix organized the Partner Collaboration Team under the Purchase Strategy Team. In addition, the Compliance Team and the SV

Implementation Team are in charge of fair practices and social and environmental impact management of suppliers to ensure shared growth in line with our strategic directions.



**STAKEHOLDERS' ASPECTS**

As a true win-win partner, Eugene Technology understands SK hynix's supplier Code of Conduct. Through participation in the shared growth programs including the existing patterned wafer support project, supplier CEO seminars, and semiconductor technology training, we have been receiving tremendous tangible and intangible support.

All suppliers in partnership as well as SK hynix must actively participate in ESG consulting: regardless of size, no company is completely safe from safety issues.

From the long-term perspective, the opportunities to receive regular consultations, to review potential SHE-related issues within a supplier company and make preparations accordingly, will be helpful to both SK hynix and the supplier. In the future, we hope that a virtuous cycle will help suppliers as well as SK hynix grow to create economic and social values through the clear establishment of a supply chain, shared growth strategy, and expansion of its target range.



Eugene Technology Executive  
Managing Director SH Shim

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## KEY PERFORMANCE AND PLAN

### ESG Consulting

SK hynix provides an independently developed risk checklist to identify the potential labor, human rights, and SHE risks in the supply chain and also to support our suppliers to resolve those risks. In 2019, we provided consultations to 81 suppliers who applied for ESG consulting and enhanced the level of compliance with additional customized consultations for suppliers that were evaluated as high risk. In addition, we laid the ground-work for win-win cooperation by providing additional expenses for each supplier for making safety, health, and environmental improvements. In 2020, we will contribute to the voluntary improvement of the suppliers' SHE capability with more systematic and detailed support enabled by the categorization of the supplier's types of business, work, and hazardous risk factors.

### Environmental Consulting for Overseas Suppliers

SK hynix has been providing consultations to identify SHE risks and give relevant support for our overseas suppliers. In 2019, we have provided consultations to 16 suppliers and conducted re-audits for high-risk suppliers to improve their SHE management level and share improvement measures. For the risks that were discovered, we are providing continuous support to suppliers to make improvements. Furthermore, we provided SHE training to 98 people from 62 suppliers across three training sessions. We plan to expand these SHE consultations for overseas suppliers in 2020.

### Social Value Creation by Suppliers

SK hynix created a total of KRW 1.4 billion worth social value through the ESG consultation and operation of the Center for Working Environment Health. This amount is created for the suppliers of SK hynix, one of our major stakeholders, and is critical to achieving medium to long-term shared growth. In 2020, we plan to continue to provide systematic and specialized consultations for suppliers in our designated supplier management division.

### Center for Working Environment Health Programs

#### Counseling on occupational diseases and health issues



- Counseling on prevention of occupational diseases and job-related health issues
- Counseling on post-examination measures based on general and special health checkups

#### Counseling on prevention of musculoskeletal diseases



- Examination of musculoskeletal symptoms
- Tests and counseling on work posture
- Provide customized exercise programs
- Provide rehabilitation programs before/after returning to work

#### Counseling on prevention of cerebral and cardiovascular diseases



- Tests and counseling on the risk of cerebral and cardiovascular diseases
- Operational support for health programs at the workplace
- Health promotion programs for nutrition and cessation of smoking and drinking

#### Counseling on job stress



- Tests and counseling on job stress
- Personal counseling on emotional health
- Counseling on interpersonal relationship and coworkers
- Personal counseling on personality and adaptation
- Psychoanalysis and counseling on interpretation
- Group programs for self-development, etc.

#### Counseling on job (working) environment



- Guidance on the Occupational Safety and Health Act and related information
- Counseling for improvement of the work environment and chemical control
- Counseling on MSDS (Material Safety Data Sheet)
- PPE (Personal Protective Equipment) training and practice

### The Status and Performance of the Center for Working Environment Health (2019)



### Center for Working Environment Health

The Center for Working Environment Health is a public industrial health center established by SK hynix to alleviate the safety, health, and environmental issues of suppliers in the semiconductor industry. It also works to improve the safety and health of the workplaces in local communities. At the Center, we provide industrial health services not only for our suppliers but also for workers at local small businesses. Occupational and environmental medicine specialists, industrial nurses, industrial hygienists, psychological counselors, physical therapists, and other specialists reside at the Center for Working Environment Health. Various programs are available, including one-on-one health consulting, safety and health training, information about industrial disasters and disease prevention, industrial disaster consulting, and work condition improvement programs. In addition, the center provides various types of programs that are specialized for various workplaces, for example, the operation of "Visiting Prevention Consulting and Training Service" for small worksites located far from the center.

The Center for Working Environment Health serves as an employee health protector by operating together with ESG Consulting to analyze supplier risks and handling health issues that are not included in their legal risks. SK hynix will continue to take the lead in resolving the safety and health issues in our local communities through building a network in the local community, public and private institutions, etc.

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**SOCIAL VALUE**

**SOCIAL VALUE**

**Social Value**

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# Social Value

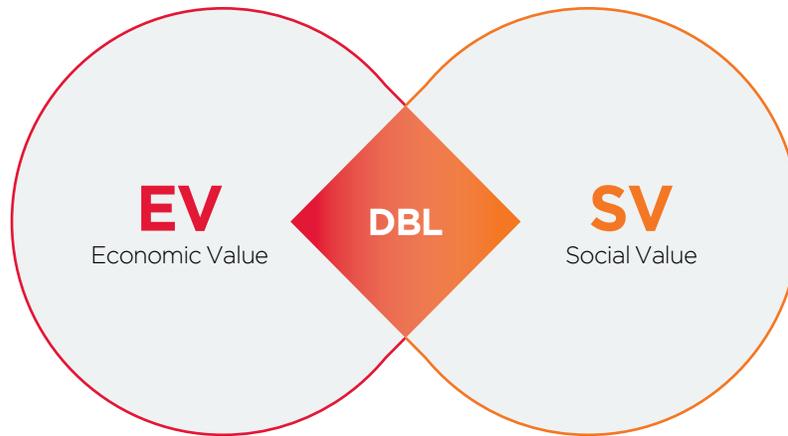
SK hynix has declared that the creation of our social values comes from the pursuit of employee happiness and contribution to resolving social issues. Recently, we expanded the meaning of social value to include happiness for all stakeholders.

**The 14<sup>th</sup> revised SKMS (Feb, 2020)**

“All values created by the company for the happiness of stakeholders are social values,”  
 “Increase economic value by creating social value, and continue to build a relationship of trust with stakeholders”

## DBL (Double Bottom Line) Management Concept and the Background of its Operation

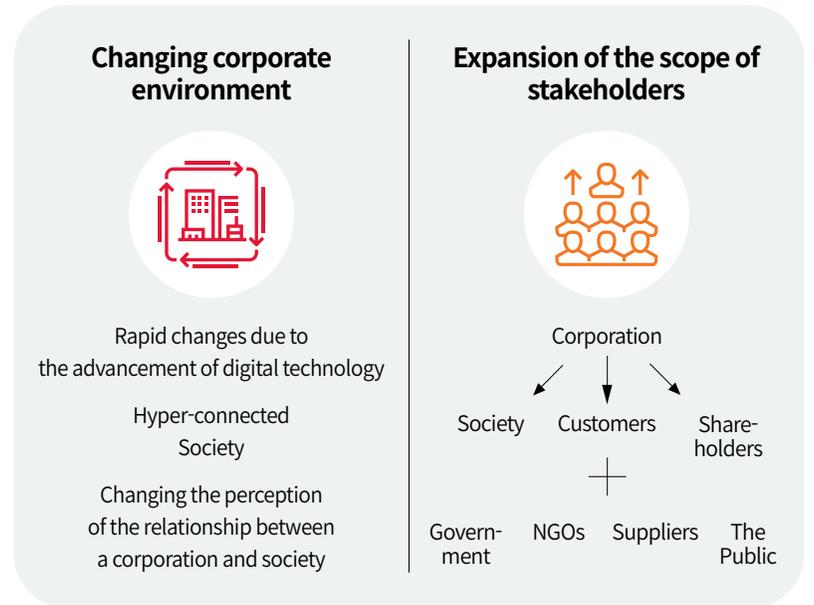
DBL management refers to SK hynix’s management principle that strives to achieve shared growth with society by creating economic values (EV) and enhancing social values (SV) in all business activities.



**Double Bottom Line**

This refers to the need to go beyond the “Single Bottom Line,” which represents the net profit positioned at the bottom of the ledgers; now, both EV and SV must be simultaneously pursued.

As the corporate environment continues to change and the scope of stakeholders and the demand for corporate social responsibility grows, we are motivated to create various values in addition to economic value.



## SOCIAL VALUE

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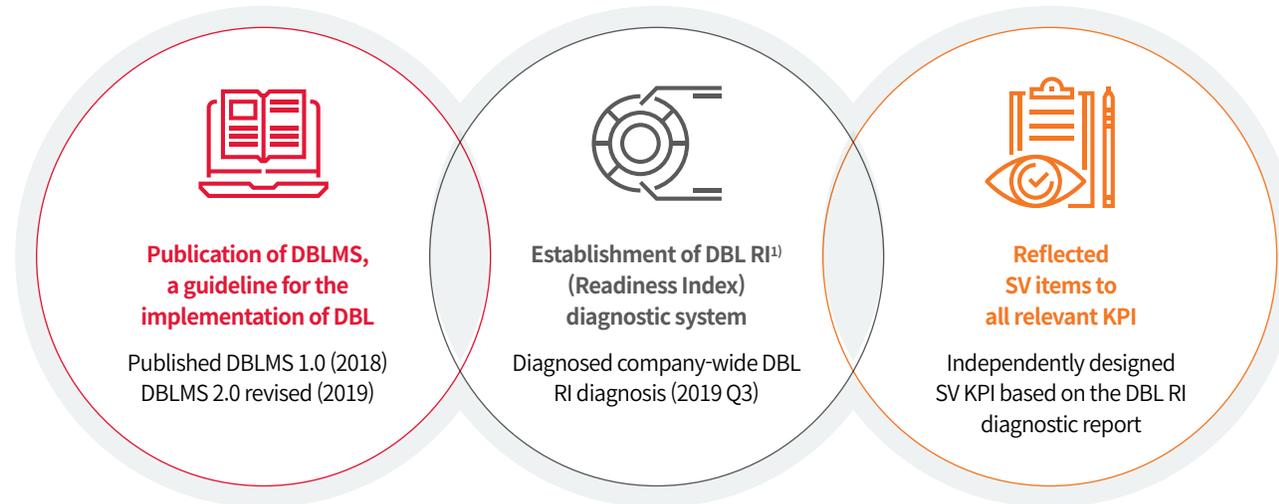
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# DBL Management System

SK hynix has established the DBL management system to internalize and realize the DBL management philosophy.

For the balanced pursuit and realization of DBL we established a separate management system guideline, "DBLMS (DBL Management System)."

Based on this, we have been developing a business plan and building a system based on action-reward-assessment, thereby strengthening our DBL management system.



1) DBL RI:

The leading index and standard that assesses the attitude and level of readiness of the organization and its employees for the creation of SV

## DBL Cases

### Water-Free Scrubber (WFS)

Moving beyond the existing method, which cools high-temperature gas with direct injections, we have developed and applied the indirect cooling technique that uses the circulation of coolant. By doing so, we have reduced 79,000 tons of affluent per day, which is the equivalent of the amount of water used in a city with a population of 240,000.

Amount of effluents reduced through the water free scrubber

**79** thousand tons/day 

### HiGarage

HiGarage is an employee-targeted in-house venture support project that has been carried out by SK hynix to discover and develop new DBL business models. The goal of this project is to innovate semiconductor technology while creating social values, as well as to spread a corporate culture that encourages the employees to freely demonstrate their creativity. Followed by the four teams that successfully launched their new business in 2019, we have selected and have been supporting the second batch of 6 teams in the second half of the year.

First HiGarage Venture

**4** Teams 

### Establish the Win-win Semiconductor Cluster

SK hynix confirmed the plan to create the Semiconductor Win-win Cluster worth KRW 1.22 trillion to achieve win-win cooperation with its suppliers and enhance the semiconductor ecosystem. Through this project, we plan to raise the Win-win Fund, establish the Win-win Cooperation Center, operate Win-win programs, and provide joint R&D support with suppliers.

Amount of investment in the Win-win Cluster

**1.22** trillion (KRW) 

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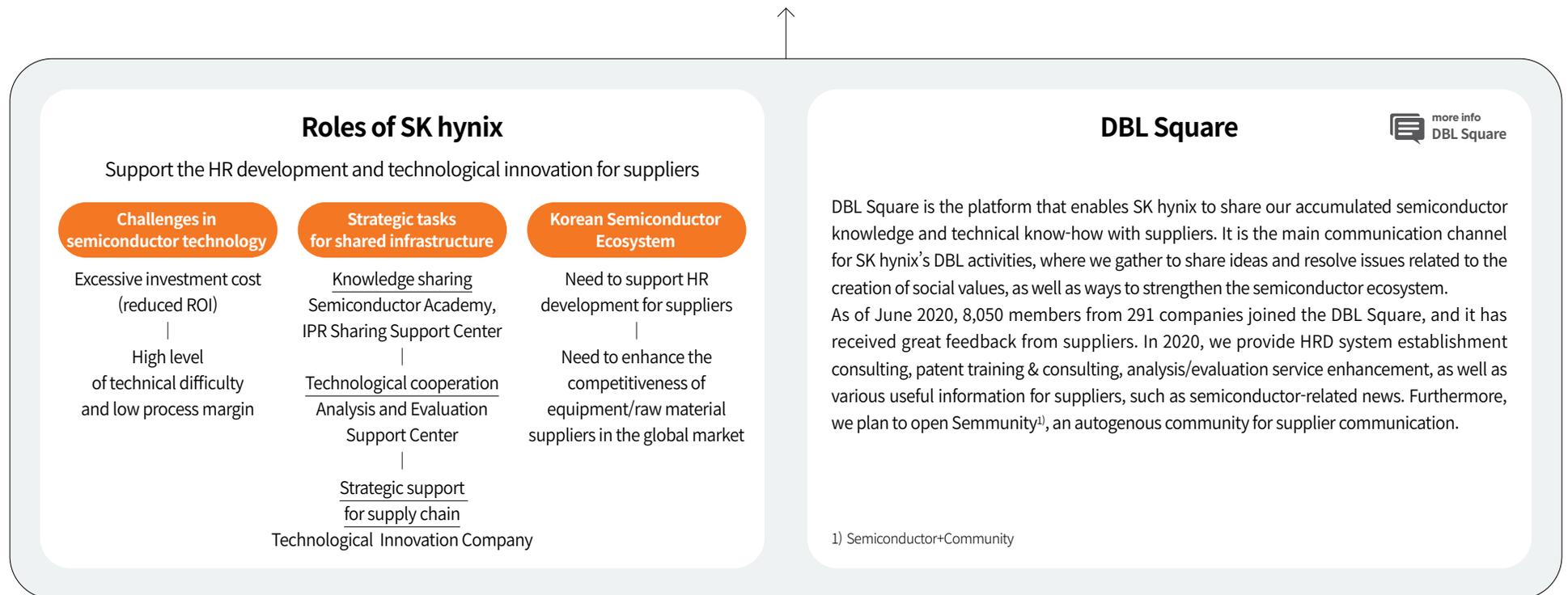
## Strengthen the semiconductor ecosystem through DBL management

### Shared Infrastructure Program

SK hynix is committed to solving social issues and strengthening the domestic semiconductor ecosystem using the “Shared Infrastructure” platform by making both tangible and intangible assets available for transactions.

### Direction for the Development of Shared Infrastructure

#### Strengthening the Domestic Semiconductor Ecosystem by Sharing Infrastructure



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## Shared Infrastructure Platform



### Semiconductor Academy

#### Semiconductor Academy

SK hynix launched the Semiconductor Academy to develop human resources and enhance the competitiveness of suppliers, sharing our semiconductor expertise and know-how that we have accumulated over the past 37 years. The Semiconductor Academy offers a total of 291 specialized semiconductor courses (86 offline courses and 205 online courses) including the production process and use of devices and automation. A total of 277 supplier companies have participated in the training, and as of February 2020, about 3,700 participants completed the offline training. In addition, we provide an independent human resource management system for free to suppliers to encourage them to independently support the growth of their employees. Going forward, we will strengthen the semiconductor ecosystem by expanding our training courses to cultivate semiconductor specialists.



### Analysis and Evaluation Support Center

#### Analysis and Evaluation Support Center

In order for a supplier to develop and provide semiconductor equipment, parts, and materials, we must review and verify the operations of on-site product lines. To do so, we have been contracting with external organizations and conducting internal evaluations, but this has resulted in problems with functions and quality due to limitations in external technology capabilities of the specialized semiconductor industry and discrepancies with our actual circumstances. In response, SK hynix has operated the “Analysis and Evaluation Support Center,” a technological cooperation platform, since April 2018. We have provided a total of 13,400 analysis and evaluation services to 45 suppliers in 2019. SK hynix provides high-quality analysis results including analytical opinions from expert semiconductor analysts by conducting physical analysis, chemical analysis, and measurement with the newest equipment. Through this, we ultimately contribute to the growth of the semiconductor ecosystem by strengthening supplier technology competitiveness and intrinsic quality management.



### IPR Sharing Support Center

#### IPR Sharing Support Center

SK hynix has established a support center that shares hands-on experience, knowledge, and expertise to protect the suppliers' intellectual property rights and make them more viable in terms of IP. The IPR<sup>1)</sup> Sharing Support Center shares IP expertise on training & consulting and establishes the network of IP staff of suppliers to boost their IP competitiveness. Furthermore, the center protects the technology of suppliers and supports their sustainable growth by jointly filing patents with suppliers and sharing its equipment and materials-related patents for free with them.

1) IPR: Intellectual Property Resource



### R&D Center for Joint Agenda

#### R&D Center for Joint Agenda

We have established a collaborative business model by sharing our infrastructure and creating a joint agenda based on various ideas from external institutions. To verify the potential of the new cooperation Biz Model, we drove a joint agenda of the “Open CIS Development Platform”, which focused on the expandability of diverse-ranging applications using our CIS (CMOS Image Sensor) in 2019. We then shared resources and cooperated to improve core infrastructure owned by partners to turn them into businesses.

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**ECO Alliance**

SK hynix jointly launched the ECO Alliance with our suppliers to resolve environmental issues within the semiconductor industry through three major tasks: establishing the environmental goals by the participating company, establishing the common environmental goal of the eco-alliance, and discovering a new eco-friendly business model.

The participating suppliers set medium to long-term reduction plans for greenhouse gas emissions, discharged water, and wastes while SK hynix provides specialist institution consulting and regular supervisor training. In addition, we share all major and minor environmental issues found in the semiconductor industry through small meetings and workshops to collaborate on solutions. We'll also provide support to realize timely responses through links to specialist networks. Through the regularly published newsletters we share useful information such as trends and benchmarks. By doing so, we will lay the foundation for DBL management that creates social values and secure competitiveness within the ecosystem. The ECO Alliance began with 30 membership suppliers, and it will attract the participation of the second-tier and third-tier suppliers as well as overseas suppliers, thereby developing differentiated competitiveness and contributing to the creation of social values.

**The Exhibition of the Best Social Value Practices by Suppliers**

To spread the concept of social value to our suppliers, SK hynix has been hosting “the Best Social Value Competition” among suppliers since 2020. When a supplier presents an idea on the social value creation or an exemplary case of value creation, we select the best practice and reward it with SV Points<sup>1)</sup>. The discovered exemplary cases of reduced resource consumption and shared growth through reduced environmental pollution are shared with suppliers to promote greater value creation. With the enthusiastic participation of suppliers who actively seek to understand and apply social value, the first exhibition received a minimum of 30 cases from 17 supplier companies.

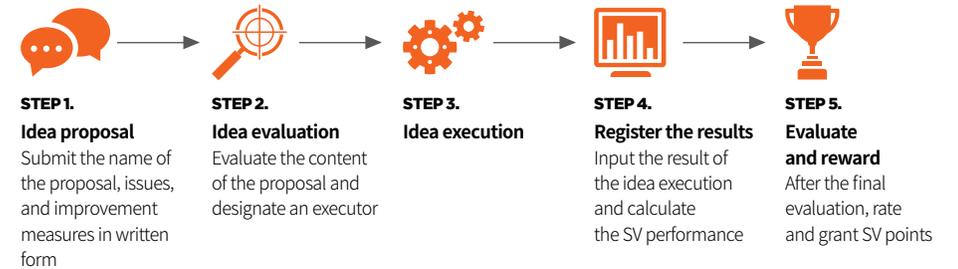
1) SV Point: Cash points that can be used in the SV Point Mall to purchase products that have social value.



more info  
SV Best Practice Contest

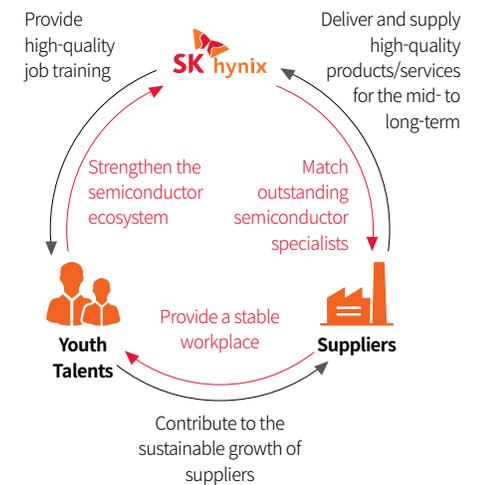
**The DBL Imagination Town**

The DBL Imagination Town is a platform where the employees of SK hynix can freely suggest their ideas. We have revamped the existing Imagination Town into the new DBL Imagination Town to foster the creation of economic value as well as social value. When an employee suggests and applies to their work more of SV Imagination, that is, ideas to solve social problems, they can earn SV Points, which increases the voluntary participation of our employees. And if an idea is executed, we convert the created economic and social values into a value amount, which is given to the employee as SV Points. Through this platform, we encourage the voluntary participation of employees to enact positive change. In addition, we reward the SV performance of employees by allowing them to purchase SV products in the SV Point Mall with their SV Points. The SV products are produced by social enterprises, so even the use of SV Points is a chance to create social value.



**Youth Hy-Five**

SK hynix operates Youth Hy-Five, an employment support program that develops tailored human resources and matches them with suppliers who need them. By matching suppliers that are experiencing difficulties in securing excellent human resources with young talents who find it difficult to enter the semiconductor industry due to a lack of information and opportunities for specialized education, we have been supporting our suppliers' future growth while alleviating youth unemployment. In 2019, 46 suppliers participated in the program and turned 95 temporary jobs into permanent positions. In consideration of the worsening employment market conditions due to the COVID-19 pandemic in 2020, we plan to increase the internship program, which was implemented once a year through 2019, to twice a year.



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# Measuring Social Value

SK hynix measures social values to provide visible indications and points of reference in the context of business innovation engines and their processes. The areas subject to this measurement include the indirect economic contribution performance, business social performance, and social contribution performance.



	<b>Finance</b> Total assets	<b>64,789.5</b> billion (KRW)
Pursuing healthy corporate growth based on the capital of shareholders and investors		
	<b>Manufacturing</b> Facility	<b>39,949.9</b> billion (KRW)
Improving productivity and cost efficiency through continuous investment in infrastructure		
	<b>Intelligence</b> R&D	<b>3,188.5</b> billion (KRW)
Strengthening intellectual properties through R&D and becoming a leading global semiconductor company based on open innovation		
	<b>Human Resources</b> The expense for employees' salaries and benefits	<b>3,624.7</b> billion (KRW)
Investing in human resource development including the recruitment of talents		
	<b>Environment</b> SHE Expenses	<b>180.0</b> billion (KRW)
Investing in the reduction of environmental impact and GHG (Greenhouse Gas) emissions to create an eco-friendly workplace		
	<b>Society</b> Support for communities and suppliers	<b>329.9</b> billion (KRW)
Creating social values based on mutual growth with stakeholders such as the local community and suppliers		

OUR VALUE CHAIN







R&D

Procurement of raw materials & energy resources

Product Production

Sales & product application

Customer use

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SUSTAINABILITY STRATEGY



**Environmental Protection**

2022 ECO Vision  
ECO Alliance



**Supply Chain Sustainability Management**

ESG Consulting  
Youth Hy-Five  
Center for Working Environment Health



**Glocal Social Contribution**

Social problem resolution  
Happiness sharing of employees  
Local community-based contribution



**Diversity and Inclusion Culture**

Diversity & Inclusion Center

**Achievements in indirect contribution to the economy**  
Value contributed to economy indirectly through business activities

<b>Employment</b>	<b>2.8996</b> trillion (KRW)
<b>Dividend</b>	<b>684.0</b> billion (KRW)
<b>Tax payment</b>	<b>475.7</b> billion (KRW)
<b>4.0593</b> trillion (KRW)	

**Business achievements in social performance**  
Social value generated through product development, production, and sales

<b>Environmental (Process)</b>	<b>-817.7</b> billion (KRW)
<b>Products/Services</b>	<b>11.8</b> billion (KRW)
<b>Social (Labor/Shared growth)</b>	<b>266.0</b> billion (KRW)
<b>-539.8</b> billion (KRW)	

**Achievements in social contribution**  
Values generated through social contribution activities for local communities

<b>Social contribution</b>	<b>25.7</b> billion (KRW)
<b>Volunteer work</b>	<b>200</b> million (KRW)
<b>Donation</b>	<b>43.4</b> billion (KRW)
<b>69.3</b> billion (KRW)	

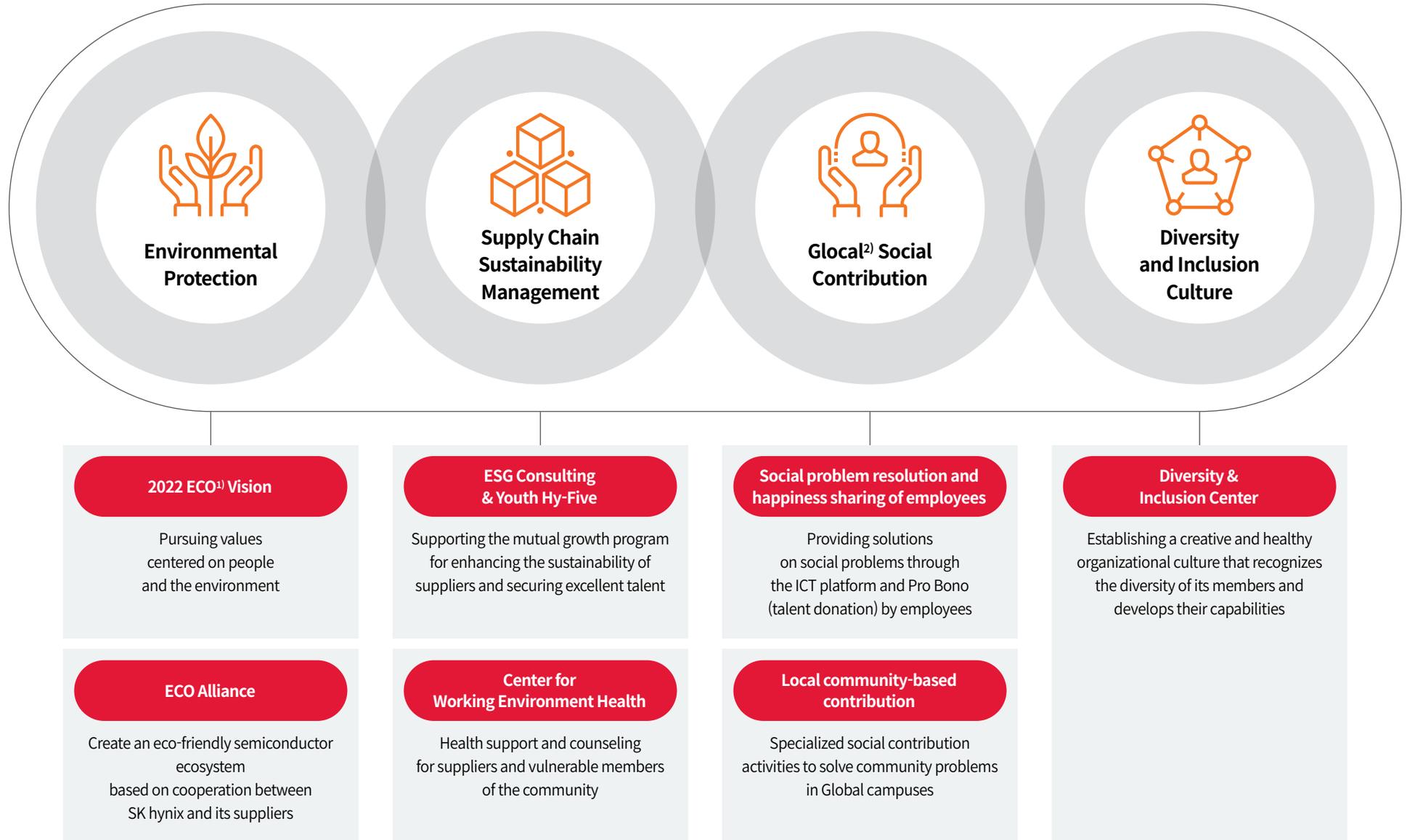
**EV in 2019**

<b>Revenue</b>	<b>26.9907</b> trillion (KRW)
<b>Operating profit</b>	<b>2.7127</b> trillion (KRW)
<b>net profit</b>	<b>2.0164</b> trillion (KRW)

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# Sustainability Strategies



1) ECO: Environmental & Clean Operation

2) Glocal: Global + Localization

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# Sustainability Activities

We are committed to creating economic and social values based on our sustainable management system and fulfilling our corporate social responsibilities through the implementation of SDGs.

Sustainability Strategy	Main field of promotion	Main task	2019 Result	2022 Plan	SDGs
 <b>Environmental Protection</b>	2022 ECO Vision	GHG Emissions Reduction	Commenced the support for reduction projects in developing countries	Reduce greenhouse gas emissions by 40% (compared to 2016 BAU) Support reduction projects in developing countries (300,000t CO <sub>2</sub> eq)	
		Waste recycling	Certified company-wide Zero Waste Landfill Built a new waste sulfuric acid disposal chain	Achieve 98% waste recycling	
		Renewable energy use expansion	Installed P&T4 solar power module (641.52kW)	"RE100" in overseas campuses Use renewable energy production in domestic worksites	
		Water Resource Management	Operated a water-recycling system Saving water by reusing 42,000 tons of water daily	Achieve 20 million tons annually Expanding water recycling and upgrading wastewater treatment	
		Clean Campus	Introduced a garbage separation process in residence	Declare household disposables-free worksite and campus	
 <b>Supply Chain Sustainable Management</b>	Suppliers Strengthening sustainability management capacity	ESG Consulting	Provided consulting service to 81 suppliers	Establish healthy and safe semiconductor ecosystem Expand consulting targets (150 cases)	
		Youth Hy-Five (Securing talent for suppliers)	Implemented and operated of Youth Hy-Five programs · Participated by 44 suppliers · Provided pre-employment job training for 230 youth job applicants and internship program for 134 interns · Turned 95 temporary jobs into permanent positions	Build a talent development program · Secure a talent pool through pre-employment training for youth job applicants · Provide support to secure talents for job recruitment · Establish local programs to increase job opportunities for youth in local areas	  
		Center for Working Environment Health	Secured 12 full-time professionals Visited by 2,754 people for consultation 97% of users answered "Satisfied" for the satisfaction survey	Develop an expansion model for other regions Strengthen response to new occupational health issues (platform labor, work./life balance, new occupational diseases, Return to work, etc.) Stabilize the collaboration framework between private and public organizations	
 <b>Glocal Social Contribution</b>	Drive for social problem resolution	Provide ICT-based innovative solutions	Distributed 3,000 units of "Happy GPS" (13,000 units in total) Provided to 2,100 households nationwide for "Silver Friend" (in total) Discovered new projects such as multiculturalism among elderly people	Preoccupy of new social issues and branding social contribution	 
		Promotion of social contribution close to the local environment	7,242 "Happy Bus" beneficiaries in the vulnerable group 57,232 "Happy Umbrella" recipients 6,000 "Philanthropic Support Insurance" beneficiaries 1,510 "SK Light of Hope" beneficiaries 1,677 Youth Education Project Beneficiaries	Establish a community-based social contribution platform	
		Establish a platform to share members' talents	4,884 Happiness Sharing Volunteer Group participants 4,553 Happiness Sharing Fund beneficiaries	Establish a platform to discover and share volunteer talent	
 <b>Diversity and Inclusion Culture</b>	Corporate Diversity and Gender Inclusion	Establishment and operation of a diversity and inclusion center 	Conducted semiconductor-specialized direction research through professional consulting with the academia	Eliminate cultural conflicts based on gender, generation, religion, nationality, etc.	

31 Establish a Semiconductor Cluster to strengthen the domestic semiconductor ecosystem

32 Increased production capacity by completing construction of C2F at Wuxi, China

33 Enhance cost competitiveness and customer satisfaction by securing new technologies

34 Enhance R&D to secure global competitiveness

35 Manage business continuity for rapid and effective risk response

36 Strengthen industry security to protect technological knowledge and information resources

# TECH PERFORMANCE

# Establish a Semiconductor Cluster

## to strengthen the domestic semiconductor ecosystem

### 01 Establish a Semiconductor Cluster



Semiconductors are the core component of all IT products, such as smartphones. With a wide range of applications, more semiconductors are expected to be used in the major technologies of the Fourth Industrial Revolution era, such as automotive vehicles, A.I., and Big Data servers. To respond to this global demand, SK hynix plans to construct the Semiconductor Cluster that covers an area of 4,480,000m<sup>2</sup> at Yongin, Gyeonggi-do. This complex will be built as a large-scale win-win cooperation cluster that includes a memory production facility, a manufacturing and research facility for the ultrahigh-speed, non-volatile next-generation memory that combines the strengths of existing semiconductors, and a SMEs cooperation facility. We expect to create synergy that will enhance the semiconductor ecosystem as well as about 25,000 quality jobs from the operation. We also plan to provide support for the semiconductor FAB, and increase employment at equipment, material, and parts suppliers.

### 02 Raise Win-win Fund

SK hynix plans to raise a total of KRW 300 billion for the “Win-win Fund,” which includes KRW 200 billion for the Semiconductor Happy Fund and KRW 100 billion for the Equity Investment Fund in line with the construction of the FAB within the first Cluster in 2022. The funds raised will be used for the interest-free business loan, startup funding, and mid-to long-term share investment to support Technological Innovation Companies with growth potential in the equipment, material, and parts areas.



### 04 Providing joint R&D supports to suppliers

SK hynix has allocated a total of KRW 280 billion over the next 10 years to support cooperative R&D with suppliers. SK hynix plans to enhance cooperative R&D by expanding the targets for technological innovation, from the existing three companies, in line with the completion of the FAB within the first Cluster.

### 03 Establishment of the A.I.-based Win-win Cooperation Center and Driving Win-win Program

SK hynix has been driving AI-based shared growth by providing KRW 638 billion to the establishment of the “Win-win Cooperation Center (provisional name: We Do Tech Center)” and the operation of the Win-win Program. In addition, we plan to provide KRW 48 billion for the establishment of the Win-win Cooperation Center, which will be used for its conference room, training facilities, and research area for the large corporation and SMEs startups within the complex. We will also construct safety training facilities specialized for the semiconductor industry and an energy minimization infrastructure. At the same time, we will provide KRW 590 billion for the next ten years to the Win-win Program designed for the development of the future A.I. and IoT-based ecosystem, as well as the enhancement of semiconductor capabilities. Detailed programs include localization support (KRW 36 billion per year), support for the semiconductor/A.I. ventures (KRW 8 billion per year), development of semiconductor talent (KRW 10 billion per year), supplier employment support (KRW 1 billion per year), SHE support (KRW 3 billion), management support such as industrial security (KRW 1 billion), and others.

### Support for Building a Semiconductor Win-win Cluster



# Increased production capacity by completing construction of C2F at Wuxi, China



A view of Wuxi FAB, China



## 01 The Establishment of C2F in Wuxi, China

SK hynix has constructed C2F in Wuxi, China, to resolve the lack of space caused by the refinement in the production process for semiconductors. C2F is an expansion of C2, the existing DRAM production line. It is a single-floor FAB with a similar building area of 58,000m<sup>2</sup> (length: 316m, width: 180m, height: 51m) as the previous C2 plant. Part of the cleanroom construction has been completed, and DRAMs are being manufactured with the equipment that has been moved in. Additional investments in the future will be made flexibly in accordance with market conditions. SK hynix operates C2F and the existing C2 plants in “One FAB” to maximize production efficiency and will continue to strengthen the market competitiveness of DRAMS.

## 02 The Completion Ceremony

In April 2019, we hosted the C2F completion ceremony with the theme of “A New Leap Forward and the New Future.” The event was attended by approximately 500 stakeholders including Li Xiaomin, the Secretary of Wuxi, Guo Yuanqiang, the Governor of Jiangsu Province, Choi Youngsam the Consul General of Shanghai, Lee Seok-Hee the CEO of SK hynix, customers, and the CEOs of supplier companies.

## 03 The History of the C2F Construction

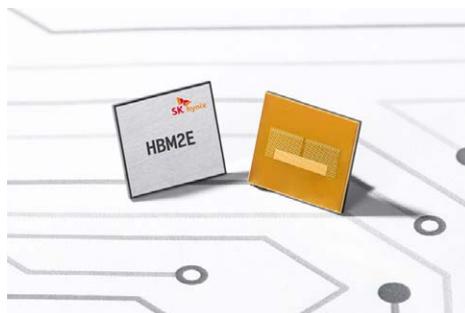
SK hynix began its relationship with Wuxi by signing the agreement to construct a local plant at Wuxi, Jiangsu Province in 2004, beginning the manufacture of DRAMs in 2006. The C2 FAB, which was established then, was the first 300mm FAB of SK hynix, and it has been playing a major role in the growth of our company. However, to respond to the increased number of processes and enlargement of equipment due to refinements in the production process, we completed the C2F to secure additional space to produce semiconductors. Going forward, SK hynix will execute decisive investments at the right time to respond to the rapid changes in the semiconductor industry and strengthen our market competitiveness.

# Enhance cost competitiveness and customer satisfaction by securing new technologies

## 01

### Development of the Fastest HBM2E in the Industry

In August 2019, SK hynix successfully developed the fastest HBM (High Bandwidth Memory) 2E DRAM in the industry. HBM refers to a high-bandwidth memory that has an unprecedentedly faster data processing speed than existing DRAMs. This HBM2E DRAM is a next-generation model of the HBM: it has a 50% faster processing speed than the previous HBM2 model at 460 GB/s. With this capacity, 124 full-HD movie files that are 3.75 GB in size can be downloaded within one second. In terms of storage capacity, we connected 8 individual 16 Gb chips vertically to create a 16 GB volume. HBM2E is a high-capacity memory solution that is suitable for Fourth Industrial systems such as the high-specification GPUs that require ultrahigh-speed, machine-learning, supercomputers, and A.I. Starting in 2020, SK hynix plans to commence full-scale mass-production and strengthen our position as the leader in the premium memory market.



## 02

### Development of the 3<sup>rd</sup> Generation 10nm-class (1z) DDR4 DRAM

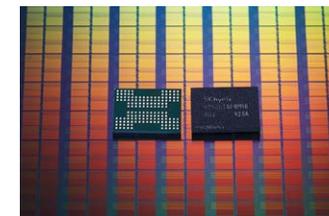


In October 2019, SK hynix developed 16 Gb DDR4 DRAM by applying 3<sup>rd</sup> generation 10nm-class nano/microprocessing. This product is equipped with top-class capacity and speed as well as energy efficiency, suitable for the changing demands of customers who are looking for high-spec and high-capacity DRAM. It provides stable operation on 3,200Mbps, which is of the highest DDR4 standard. The product also boasts the largest total memory capacity produced per wafer with 16 Gb capacity; this is also the highest capacity in the industry per individual chip. The power efficiency has also been greatly improved it consumes 40% less power compared to a 2<sup>nd</sup> generation 8 Gb product module with the same storage capacity. For the 3<sup>rd</sup> generation products, we maximized capacitance, the core factor for DRAM operation, by applying a new substance which wasn't used for earlier generation models. Furthermore, we increased operation stability with the adoption of a new design technique. We will proactively respond to the market demand by commencing the mass production of the 3<sup>rd</sup> generation 10nm-class DDR4 DRAMs within this year.

## 03

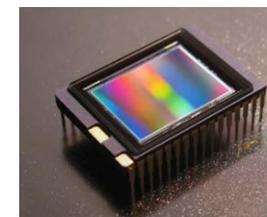
### Development of the World First 128-layer 1Tb TLC 4D NAND

In June 2019, SK hynix proved its true strength by introducing the world's first 128-layer 1Tb TLC 4D NAND Flash. The 128-layer 1Tb TLC 4D NAND Flash stores 3 bits in a single chip. We applied innovative technologies, such as the super-even vertical etching technology, high-reliability multi-layer thin-film cell formulation technique, and ultrahigh-speed and low-power circuit design, to our independently developed 4D NAND technology. Compared to the existing 96-layer 4D NAND, productivity and investment efficiency have been improved by 40% and 60%, respectively. This is highly meaningful as this development has been achieved merely 8 months after the development of the 96-layer product. 128-layer 1Tb TLC NAND will be used in super high capacity smartphones, A.I., and cutting-edge cloud data centers specialized in Big Data environment, strengthening SK hynix's market competitiveness in the NAND Flash sector.



## 04

### Strengthen CIS R&D Capability



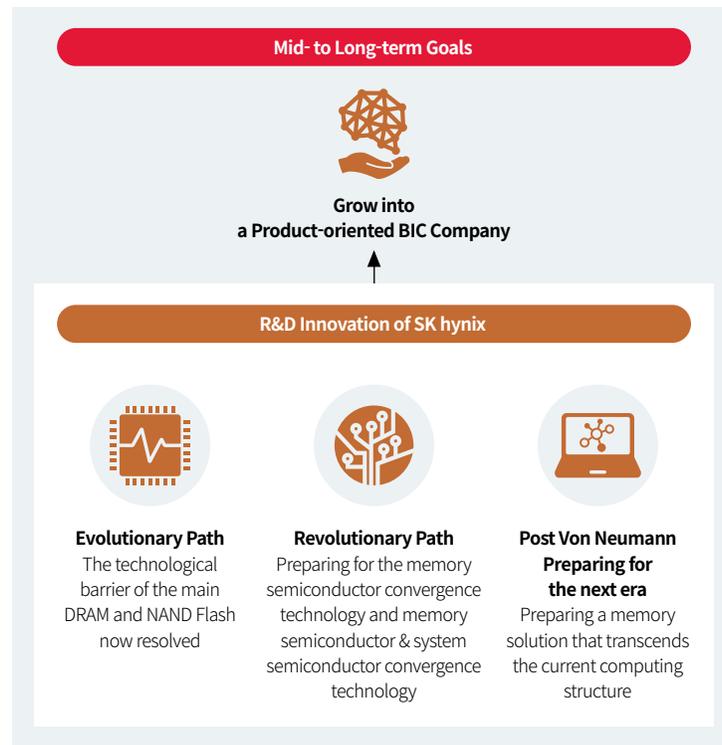
CIS (CMOS Image Sensor) is the most critical component in the sensor semiconductor market and can be used in diverse areas including smartphones, vehicles, medical care, security, etc. It is a core component that is required in the Fourth Industrial technologies such as AR (Augmented Reality) and VR (Virtual Reality). The demand for this tech is rapidly increasing as the prevalence of multi-camera smartphones is expanding. In line with this market growth, SK hynix strives to secure our competitiveness in the CIS area by developing products with advanced specifications. As a part of this effort, we opened an R&D Center in Japan (JRC) in September 2019 to develop the next-generation CIS. This decision was made to exploit various CIS resources concentrated in Japan, a major force in the image sensor sector. In addition, we completed a new lineup of products that applied the "Black Pearl" technology, and are proactively targeting the rapidly changing smartphone camera market. To this end, we aim to deliver the best values to our customers in the CIS area.

# Enhance R&D to secure global competitiveness

## 01

### Establish mid- to long-term R&D goals

SK hynix has been spurring the development of next-generation memory technology to lead the semiconductor market. We will secure technological competitiveness to supply innovative products in a stable manner and increase customer satisfaction.



## 02

### Patent Management Process

To drive growth engines and strengthen our competitive advantages through technological innovation, we are building a strong patent portfolio. In addition, to secure new patents in the areas with a high level of applicability, we are engaged in various development programs that promote cooperation with the R&D segment from the Business/product planning stage. For patents developed through this program, we provide incentives for invention and patent applications. Meanwhile, we are expanding our portfolio by acquiring patents from external sources and R&D performance through industry-academic cooperation to secure efficient technologies and strengthen patent competitiveness. Currently, we have 13,315 registered patents and plan to enhance their scope and competitiveness with a focus on next-generation technologies and a wide range of applications.

## 03

### Employee Training on Intellectual Property Rights

SK hynix adopted employee training programs to raise awareness and promote patent development. Online and offline training programs are given by both outside and in-house experts to improve employees' capacities in the patent areas, develop patent specialists, and to build a foundation for sustainable growth.

## 04

### Intellectual Property Management Process for Prevention of Infringement

SK hynix is responding to a number of disputes related to intellectual property. We actively respond against global patent-infringement lawsuits to minimize risks. When the possibility of future resource outflow is high and the amount of loss can be reliably estimated, we recognize and manage the dispute as a liability.

SK hynix has entered a number of patent license agreements in relation to production and sales. The license fees are paid in the form of a lump sum or a running royalty. A lump-sum royalty is calculated by dividing the amount based on the term of the patent license agreement as an expense; a running royalty is paid based on a certain percentage of the sales it makes.

Number of Intellectual Property Rights

(As of the end of December 2019)

**13,315** cases



# Manage business continuity for rapid and effective risk response

## 01

### Efforts for Business Continuity Management

SK hynix has acquired ISO 22301 certification, the global standard for the business continuity management, for all our sites including the Icheon worksite, Cheongju worksite, Wuxi campus, and Chongqing campus. ISO22301 is the global standard for business continuity management issued by the ISO in May 2012, certifying the corporate capacity to normalize business activities within the shortest period when business operations are suspended by various disasters and accidents. Through the regular renewal of the ISO 22301 certification, we are laying the groundwork to maintain stable business operation through the restoration of our production, labor, and logistics infrastructure with an established plan in case of disasters and accidents, such as fire and natural disasters, that impact production activities.



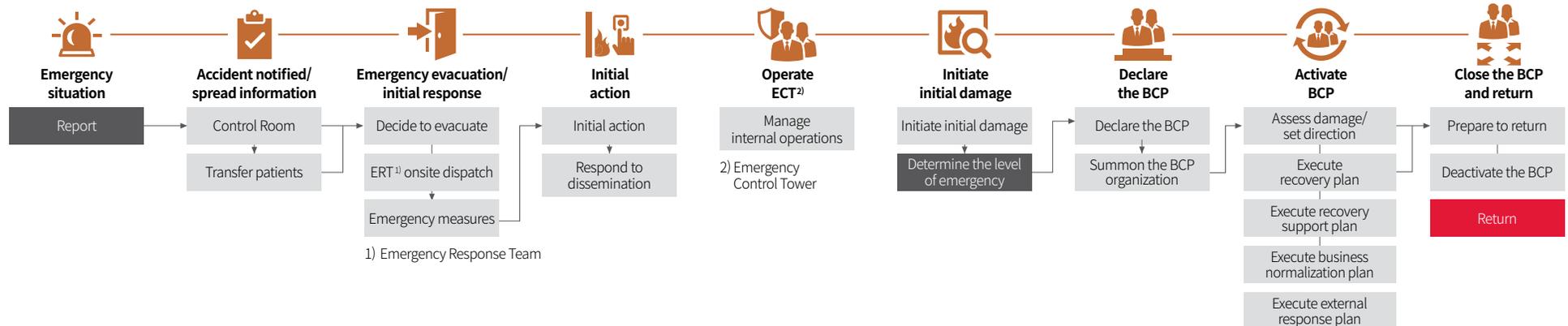
## 02

### Expanding the scope of BCP managements

SK hynix expands the scope of the BCP (Business Continuity Plan) to the supply chain to enable our suppliers to enhance risk response capability on their own. We held the “Suppliers BCP Seminar” with six suppliers with a strong impact on our operation in case of a discontinued supply of raw materials. Through this, we shared our know-how on building a BCP system to enhance their risk response capability, thereby strengthening the win-win system creating a sustainable management environment with our suppliers.



### BCP Operation Process



# Strengthen industrial security to protect technological knowledge and information resources

## 01 Establishing the Industrial Security Management System

SK hynix has been establishing security management system that complies with the BIC standard, and preventing risks through security monitoring and audits. In addition, we have established a systematic industrial security system by arranging dedicated task groups by function such as security planning, physical security, and IT security. We've also expanded the industrial security group from a team to a group. In 2020, we plan to enact activities such as the innovation of the information asset management system, the elimination of weak links through security audit and inspections, etc.

**Industrial Security Organization**

**Security Planning**

- Audit the implementation and establishment of company-wide security policy
- Provide response to external inspections and security policy guidelines

**Physical Security**

- Establish a physical security policy for each worksite
- Oversee the physical security policy and its operation

**IT Security**

- Establish and operate IT security solutions
- Operate a control center against external hacking threats

## 03 Driving Security Campaigns

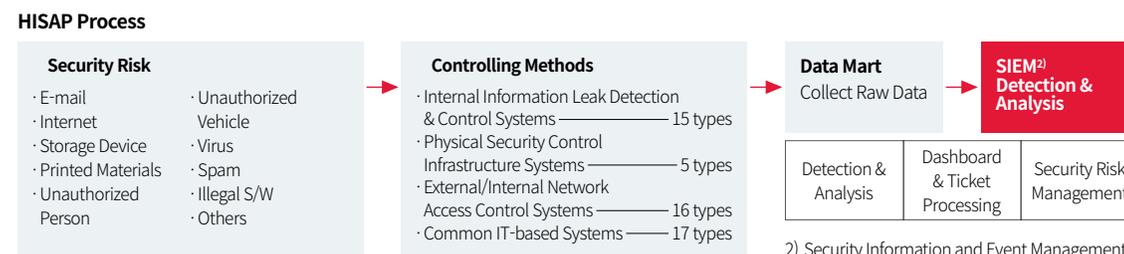
To enhance the security awareness of our employees, SK hynix spreads major security regulations and issues in various ways through security training and promotion. By doing so, we expect to prevent hacking through malicious code and prevent the leakage of trade secrets.

	2019 Performance	2020 Activity Plans
<b>Security Training</b>	<ul style="list-style-type: none"> <li>· Provided company-wide online training for all employees (25,512 people)</li> <li>· Provided Visiting Security Training (46 sessions in total, 1,958 people)</li> </ul>	<ul style="list-style-type: none"> <li>· Select and focus training target priority based on the security control importance</li> </ul>
<b>Security Promotion</b>	<ul style="list-style-type: none"> <li>· Sent a weekly security promotion e-mail to security officers, team leaders, and managers</li> </ul>	<ul style="list-style-type: none"> <li>· Establish a code of conduct by turning the security rules into messages and promote it in various forms (campaign song, event, sending reminders, operation of report bulletin, etc.)</li> </ul>

## 02 Operation of the Security System

To prevent the leakage of internal information and respond to hacking, SK hynix operates various security solutions. In addition, we manage security logs that are collected through each system via the HISAP (hynix Integrated Security Analysis Platform). Further, we independently develop anomaly scenarios by risk type and apply the detection policy to respond to security incidents. In 2019, we enhanced the security anomaly detection scenario with the introduction of the Big Data Analysis System, and we plan to further strengthen our security system lineup by adopting new security solutions such as EDR<sup>1)</sup>. We are also developing a new secret document box to innovate our information asset management system.

1) Endpoint Detection Response: A next-generation security solution that can respond to unknown security threats in relation to network-connected end devices.



## 04 Privacy Protection

SK hynix complies with the relevant domestic laws and regulations as well as overseas privacy protection regulations such as EU GDPR<sup>3)</sup> when processing information of third parties including customers, employees, and suppliers. We have been subscribing to liability insurance to monitor and reflect the amendments of regulations relevant to privacy protection, as well as to fulfill the liability for damages in the case of personal information leakage. In 2020, we plan to carry out company-wide diagnosis and improvement activities for all our departments and system that handle personal information, and further enhance the level of privacy protection.

3) EU General Data Protection Regulation: A legislation of the European Union stipulating the protection of general personal information

## 05 Security personnel competency program

We distribute security manuals and organize training for security personnel to prevent sexual harassment and promote disability awareness as part of our efforts to prevent human rights violations. In addition, we organize monthly job and security system training at our facilities with the same standards as our security checkpoints and introduced an incentive system to motivate better performance and improve security. In 2020, we plan to add security guard opinion management and training implementation status in the assessment for the security services assessment. Furthermore, we will expand the incentive system standards for security agents, based on the payment records in 2019, as well as for field opinions from security agents.

38	40	41	43	44	58	63	66	69	70	73	74
Corporate Governance	Stakeholder Engagement	Ethical Management	Compliance Management	SHE Management	Responsible Supply Chain	Human Rights & Labor	Talent Management	R&D	Social Contribution	Taxation	ESG Data

# DATA REPORTING

## Corporate Governance

Stakeholder Engagement  
 Ethical Management  
 Compliance Management  
 SHE Management  
 Responsible Supply Chain  
 Human Rights & Labor  
 Talent Management  
 R&D  
 Social Contribution  
 Taxation  
 ESG Data

# Corporate Governance

## SK hynix's Approach to Governance

SK hynix recognizes that a healthy governance structure lays the groundwork to secure the trust of all of our stakeholders as well as to conduct honest and responsible business operations. We set the direction to realize a transparent governance structure and diversity and expertise in the Board of Directors and implement measures.

Classification	Name/Date of appointment	Position in the BOD	Tenure
Executive Director	Lee Seok-Hee March 20, 2020 (reappointed)	CEO, Member of the Council for Recommending Candidates for Independent Directors Member of the Investment Strategy Committee	4 years
	Oh Jong-Hoon March 22, 2019 (newly appointed)	Member of the Sustainability Management Committee	2 years
Non-executive Director	Park Jung-Ho March 20, 2020 (reappointed)	Chairman of the BoD	4 years
	Shin Chang-Hwan March 20, 2020 (reappointed)	Member of the Board of Inspection, etc.	4 years
Independent Directors <small>more info</small>	Song Ho-Keun March 28, 2018 (newly appointed)	Member of the Sustainability Management Committee, etc.	3 years
	Cho Hyun-Jae March 28, 2018 (newly appointed)	Member of the Outside Director Recommendation Committee, etc.	3 years
	Yoon Tae-Hwa March 28, 2018 (newly appointed)	Member of the Audit Committee, etc.	3 years
	Ha Yung-Ku March 22, 2019 (newly appointed)	Member of the Audit Committee, etc.	2 years
	Han Ae-Ra March 20, 2020 (newly appointed)	Member of Audit Committee, etc.	1 year

### Operation of the BoD

As the top decision-making institution of SK hynix, the BoD determines the company's core management goals and policies. In order for the BoD to make decisions that enable SK hynix to continue to manage, we consider and practice measures to build a sound governance structure and enhance the expertise of the BoD through evaluations. In 2019, we separated the titles of CEO and Chairman of the BoD to strengthen the BoD's roles of monitoring and controlling management and enhance the professionalism of the BoD so its members might fulfill their duties. On the other hand, we ensure that the diverse voices of our stakeholders are reflected in the management activities through the introduction of the senior outside director system. We also derive much help to the top management's decision-making by operating the council of outside directors for the purpose of previewing the BoD agenda and reviewing major current management issues.

### Composition and Roles of the BoD

As the BoD is the company's highest decision-making body, we work to ensure that BoD may fulfill its functions in supervising the top management. In an alignment with the management philosophy that pursues SV in tandem with EV, in 2018 the company created the Sustainable Management Committee. This committee was tasked with establishing and reviewing the company's sustainable management strategies in line with the management philosophy that pursues SV together with EV. Further, in 2020, the company created the Compensation Committee composed of all its outside directors to strengthen the supervision of the remuneration of directors and top managers. Also, by creating the Investment Strategy Committee, the company ensured professional and in-depth reviews of major investments for management activities. In 2020, we also achieved gender diversity in BoD by appointing female independent directors.

### Supporting the BoD's participation in management

For the BoD to make reasonable decisions, we establish and operate the Board of Directors System. The system helps the board understands SK hynix's management environment and agendas accurately and make necessary decisions at that point in time. In addition, we enhance the board's expertise in the semiconductor industry and our company by conducting the new senior director orientation, semiconductor technology training, visits to global workplaces, and regular workshops for directors.

### Independence of the BoD

SK hynix established a transparent governance structure to create values for our shareholders, customers, and employees. The independent directors, in particular, are appointed with independent persons who are distanced from the management and shareholders based on the local regulations where the worksite is located and our internal regulations. First, SK hynix excludes those who are serving as a current fulltime employee/non-executive director of SK hynix or its affiliated companies or those who have served in the same positions in the past 2 years. In addition, a candidate must have no record of appointment as a director of the company or its parent or subsidiary company in the past 2 years. Moreover, they must not have served as a partner or an employee of the company's external auditor. Furthermore, we set a clear standard in this matter. For instance, we examine the candidate's transactional relationship with major customers, suppliers, and NGOs that receive considerable donations to make sure they do not have any conflicting interests with the company.

### Appointment of Directors

In its appointment criteria for executive directors and independent directors, SK hynix does not consider any discriminatory factors, such as nationality, gender, religion, and ethnicity, as a restrictive element in selection process. Directors are appointed through regular general shareholders' meetings, and the proportion of executive directors is maintained at a majority of all directors in order to strengthen the independence of the board of directors. Independent directors, in particular, are appointed at the AGM through a strict screening process as well as a transparent and fair recommendation by the Council for Recommending Candidates for Independent Directors based on qualification criteria set forth in the applicable laws, including the Commercial Act, and professionalism and independence for adequacy in performing their duties.

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Human Rights &amp; Labor

Talent Management

R&amp;D

Social Contribution

Taxation

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## Committees within the BoD

### Board of Inspection

In charge of overseeing business management and financial reporting, the Board of Inspection plays the role of ensuring transparent and fair accounting practices. To this end, it has the authority and responsibility to request sales reports from the BoD and investigate the financial state of the company. To maintain its independence, it applies a stringent standard to the qualification and job requirements to compose and operate the board. The Board of Inspection, in particular, is composed of only independent directors and it plays the role of maintaining the independence of independent directors. In 2019, the board held ten meetings and reviewed financial results, ethical practices, and the internal accounting system. Furthermore, in March 2020, the board increased the number of its members from three to four persons, thereby enhancing its independence and expertise. The board also established and is operating a new board support group in order to support its activities.

### Council for Recommending Candidates for Independent Directors

The council which recommends candidates for executive directors follows the process in a fair and transparent manner and standards of commercial law and other related laws. This allows us to recommend candidates with expertise in semiconductors, accounting, management, and social fields that meet the necessary qualifications. In addition, the company has conducted an in-depth review of its interests, expertise, and ethics with the company or its controlling shareholders to achieve independence and expertise. Furthermore, they recommend qualified executive directors to ensure transparency and balance through supervision, advice, and checks on management.

### Sustainability Management Committee

To further strengthen the creation of social values, we established the Sustainability Management Committee within the BoD which is our top decision-making body. Composed of one executive director and three independent directors with expertise in social values, the committee is dedicated to maintaining the highest level of transparency and professionalism in our decision-making process when it comes to social value creation and sustainable practices.<sup>1)</sup> In 2019, it held 4 meetings to discuss and review the results of SV creation including the implementation of the ECO Alliance, sustainability strategy implementation status, and Happiness Sharing Fund.

1) As of June 2020, In 2019 the committee included two independent directors and one executive director

### Operational Performance of the Committees within the BoD

(As of the end of 2019)

Committees	Composition	Performance in 2019
Board of Inspection	3 Independent Directors	10 times
Council for Recommending Candidates for Independent Directors	2 Independent Directors, 1 Executive Director	1 time
Sustainability Management Committee	2 Independent Directors, 1 Executive Director	4 times

Classification	Number of directors	Total Remuneration <sup>1)</sup>	Remuneration per Director <sup>2)</sup>
Registered Directors	3 persons	3,958 million (KRW)	1,319 million (KRW)
Independent Directors (excluding Members of the Board of Inspection)	3 persons	233 million (KRW)	84 million (KRW)
Member of the Board of Inspection	3 persons	252 million (KRW)	84 million (KRW)

1) Total amount paid: Refer to the total accumulated amount paid annually.

2) Per person average: Calculated by dividing the total remuneration amount by the average number of persons in the corresponding period.

### Remuneration Committee

In 2020, we newly established the Remuneration Committee to review agendas such as the limit for director remuneration, the grant of stock options for the registered directors and unregistered directors, and other board remunerations. The Remuneration Committee is made up of three independent directors.

### Investment Strategy Committee

In March 2020, we newly established the Investment Strategy Committee to review the major strategic alliance investments, the investments with less than 1.5% equity proportion that the CEO deems important and requires a review, and other major agendas related to the company's operations. The committee consists of two independent directors and one executive director.

### Performance and Compensation of the BoD

We compensate our directors based on the base annual salary and performance-based bonus within the limit set at the Annual General Meeting in accordance with Article 388 of the Commercial Code and the Articles of Incorporation. Their remuneration is determined based on the indicators consisting of financial performance in the previous year, the achievement of mid- to long-term goals, leadership, and contribution to the company within a certain limit. For independent directors, only the base pay and travel expenses are paid without any performance-based compensation to ensure their independence.

### Annual Rate of Compensation

(As of the end of 2019)

CEO Remuneration Amount (A)	Average employee wage in Korea (B)	Rate of Compensation (A/B)
2,783 million (KRW)	117 million (KRW)	23.7 times

### ESG Evaluation

(By the Korea Corporate Governance Service (KCGS))

2017	2018	2019
A	A	A

DATA REPORTING

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# Stakeholder Engagement

## Stakeholder Communication Channels



- Corporate Governance
- Stakeholder Engagement
- Ethical Management**
- Compliance Management
- SHE Management
- Responsible Supply Chain
- Human Rights & Labor
- Talent Management
- R&D
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# Ethical Management

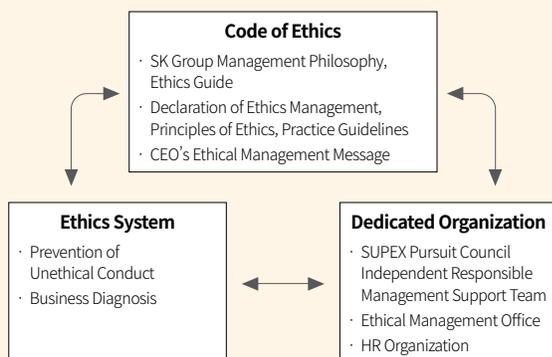
## SK hynix's Approach to Ethical Management

SK hynix practices ethical management to prevent unethical actions by the company and its employees and protects human and capital resources. In addition, we are enhancing the company's ethical standard to earn trust from stakeholders and pursue continuous growth and development.

### Management System and Direction

SK hynix updates our "Code of Ethics" on a regular basis to reflect ethical trends at home and abroad and provide a standard for making ethical decisions. Currently, we have the 11<sup>th</sup> version of the Code which was revised in July 2019. Every year, all of our employees voluntarily sign the written pledge on practicing ethics as they recognize its importance and commit to behaving in an ethical manner. The Ethical Management Office is in charge of our ethical practices and it operates directly under the CEO to secure its independence and strengthen the authority to perform its responsibilities. The Board of Inspection reports on our ethical management more than once per quarter and incorporates it into our practice.

### Ethical Management System



## Ethical Risk Monitoring

### Vigilance System for Potential Ethical Risks

An internal inspection is carried out every year with the focus on our business practice to identify and prevent ethical risks. We monitor five major areas—personnel, costs, receivables, purchases, and suppliers and special risks management. This is done not only for domestic workplaces but also overseas production and sales corporations. In addition, to efficiently prevent unethical practices, we have integrated the ethics management portal "Ethics Plus" as part of our risk prevention measures.

### Ethical Management Practice Survey

We are conducting Ethics Surveys 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 was conducted for overseas sites and subsidiaries as well as our domestic sites. The results were then used to improve our ethical management system and practice.

### Participation in the Ethics Survey (2019)

Classification	Number of participants
Domestic Sites	<b>20,696</b> persons
Overseas Sites	<b>6,000</b> persons
Subsidiaries (System IC and 2 other companies)	<b>2,641</b> persons
<b>Total</b>	<b>29,337</b> persons

### Counseling and Reporting System

SK hynix operate online and offline communication channels to ensure that our stakeholders can freely report on ethics-related issues and receive consultations. We operate the informant protection program, which guarantees the anonymity of all informants, 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 2019, we imposed stricter disciplines in the confirmed unethical practice cases in order to establish an upright ethical management culture, and thereby enhanced employees' awareness about this matter.

### Reports and Disciplinary Actions for Ethical Practice (Unit: case)

Classification	2017	2018	2019
Total reports	117	116	<b>126</b>
Valid Reports <sup>1)</sup>	47	40	<b>41</b>
Measures Against Unethical Conduct (Serious Disciplinary Actions)	65 (37)	34 (15)	<b>91 (45)</b>

1) Excluding simple complaints, general inquiries, advertisements, and groundless slanderous reports

[more info](#)  
Integrated Ethics Management Portal

[more info](#)  
SK Ethics Management Online Reporting System

[more info](#)  
Regulations to Protect Informants

**DATA REPORTING**

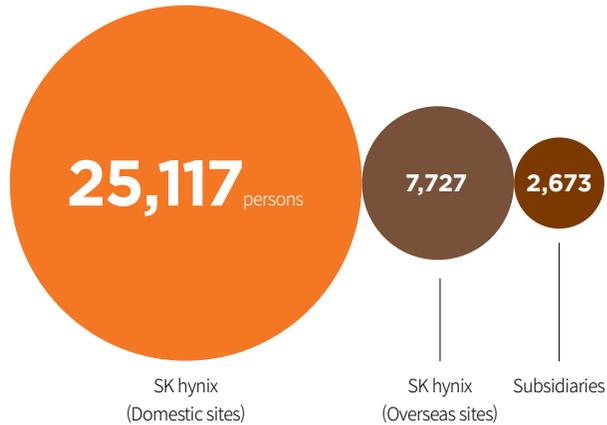
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# Spreading the Culture of Practicing Ethics

## Online training

Our yearly online training program provides education in basic common areas and creates an enhanced consensus for ethical practice through case studies of unethical practices. To make the training effective, we provided content specialized for each job group. This particular content includes the need for ethical management practice, points of consideration when working with suppliers, and instructions on how to use the reporting website as the mandatory training content. In addition, we made the content available in Chinese and English to expand the training target scope to our global employees.

### The Number of Online Training Participants



## Debate Training Led by Leaders

To improve employees' ethical decision-making and performance, we hold the "Debate Training led by Leaders" every year. In the debate, the participants discuss the ethical dilemmas that may arise within the organization. In this way, we support our employees to easily internalize and apply SK hynix's Code of Ethics in their work through this experience. The training is also available for the employees of our subsidiaries and overseas offices.

### Participation in the Debate Training led by Leaders

Number of groups	Total number of participants
<b>896</b> groups	<b>22,704</b> persons
<b>47</b> groups	<b>6,421</b> persons
<b>30</b> groups	<b>2,523</b> persons

## Visiting Ethics Class

SK hynix organizes a standing Visiting Ethics Class to proactively provide ethical management training for our working organizations. Based on a risk analysis in ethical management by division, we provide compulsory training content for our employees. In 2019, 77 sessions were held for 5,479 employees.

### Number of Training Sessions for the Visiting Ethics Class



## Spreading Ethical Management for Suppliers

To achieve the joint practice of ethical management with our suppliers, SK hynix has continuously been spreading our 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," through which we share the key ethical policies and information that interests our suppliers. Individual e-mail messages are sent to sales managers who are in close contact with our employees while information about GPIS (Global Procurement Integrated System) is provided to spread and promote ethical standards. In cooperation with our suppliers, we will continue to create an ethical ecosystem and raise awareness of our ethical responsibility.

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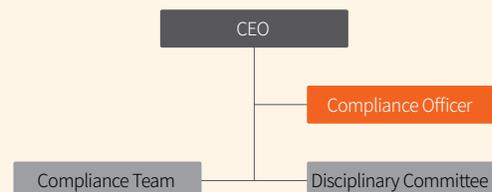
# Compliance Management

## SK hynix's Approach to Compliance Management

Recognizing that compliance management is an integral part of our corporate philosophy for sustainable growth, SK hynix operates and practices our compliance system. Our compliance principles are based on the customers' requirements and characteristics of the semiconductor industry, as well as local laws and international codes. Together, these all serve as guiding principles and standards for our employees.

The Global Compliance Program, in particular, encompasses compliance activities in key areas including antitrust, anti-corruption, information security, and strategic materials. SK hynix currently assigns a compliance officer for compliance control, the dedicated Compliance Team, and Disciplinary Action Committee to review the compliance activities and any breaches before reporting to the CEO.

### Compliance Management Organization



#### General Operation and Support for Compliance Programs

- Compliance Program planning
  - Training & consultation
  - Prevention and supervision
  - System improvement
  - Publishing guidebooks, etc.
- Review and take disciplinary actions against legal violations
  - Review and take disciplinary actions against each instance of violation

## Prevention of Unfair Transactions

### Preemptive Management of Unfair Transaction Risk

SK hynix has been continuously improving our antitrust-related compliance system in line with international standards. To manage antitrust risks in our major overseas sales subsidiaries, we carefully analyzed subsidiaries' sales activities and the country's legal and regulatory trends. We made separate guidelines based on this effort, and we are managing each subsidiary so that it may comply with the guidelines and relevant antitrust regulations. The Compliance Team conducts annual professional antitrust training for our employees working at the head office and local subsidiaries. The team also leads proactive and preemptive compliance activities such as the establishment and revision of the guidelines and periodic self-evaluations.

### Fair Trade Compliance

In transacting with suppliers and stakeholders, SK hynix conducts internal reviews and monitoring of individual transactions. We also set relevant guidelines and provide relevant departments with training for the related regulations and guidelines to comply with fair trade standards. In particular, we continuously strive together with the related departments to avoid violating suppliers' rights in transactions. SK hynix will make its best efforts to maintain and

disseminate our fair trade compliance culture by continuously introducing advanced systems, awareness-raising training, and Compliance Letters.

### Unfair Transaction Reporting Channel

SK hynix identifies unfair transactions through the online reporting system on our official website. We immediately respond to the reports to remedy them, and we are constantly promoting the reporting channel to our employees through the Compliance Letter in order to encourage them to instantly report any internal unfair transactions. In addition, we guarantee the anonymity of the informant/whistleblower for their protection and maintain the related information in strict confidentiality. Furthermore, we share the progress and result of the registered report with the whistleblower to improve unfair trade.



## Anti-corruption

SK hynix operates anti-corruption programs and implements system-strengthening activities in order to maintain a transparent and cooperative relationship with various stakeholders. We are enhancing employees' awareness of ethical management by monitoring global anti-corruption risks in advance and providing professional training.

As the anti-corruption regulations in China tighten, we are establishing and revising the guidelines to comply with them as well as providing relevant training. We carried out a pledge to comply with the "Improper Solicitation and Graft Act" with all our employees in 2019, maintaining our commitment made in the previous year, and we are implementing specialized training to internalize anti-corruption in our employees. Going forward, we will immediately respond when revisions are made in relevant regulations and provide new guidelines to employees in our key departments.

### CASE Establishment of Tech Data Value System (TVS)

In 2019, SK hynix established the Tech Data Value System (TVS) to prevent technology leakages in transactions with suppliers and protect suppliers' rights. We also provided relevant training to the employees who will use this system. This system includes various functions that are aimed to comply with the Fair Transactions In Subcontracting Act and protect our suppliers' technology. SK hynix will commit efforts to protect the SME suppliers' technologies through smooth operation of the system and continuous monitoring.

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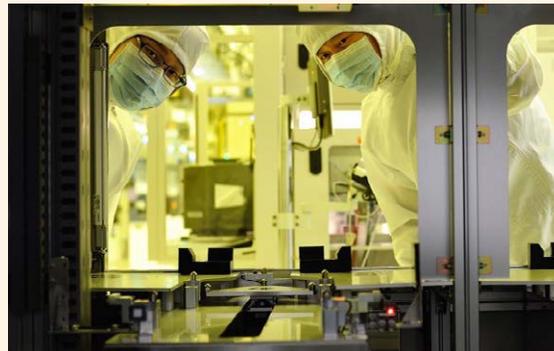
# SHE Management

## SK hynix's Approach to SHE Management

SK hynix continues to implement innovation and safety culture activities in SHE areas based on our philosophy of "Human & Environment-Centered Management." To proactively respond to the stakeholders' demand for environmental safety, we operate the dedicated SHE Management Committee and SHE Advisory Committee. In addition, we operate the Safety and Health Management System (ISO45001/KOSHA18001), Environmental Management System (ISO14001), and process safety management (Occupational Safety and Health Act, Article 49-2). We then monitor and improve the influence factors that are identified through the operation of these systems. Furthermore, we conduct an integrated evaluation of safety, health, and the environment by our internal regulations, and take measures to improve any identified issues to ensure a sound SHE management system.

### SHE investment (domestic)

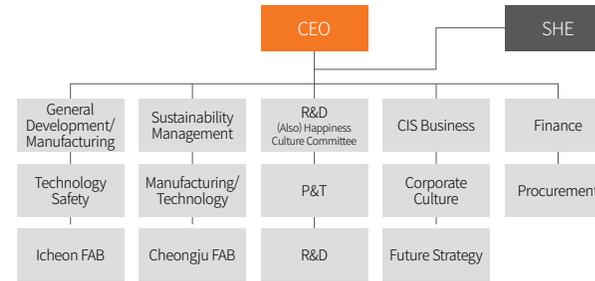
**180** billion (KRW)

## SHE Management System

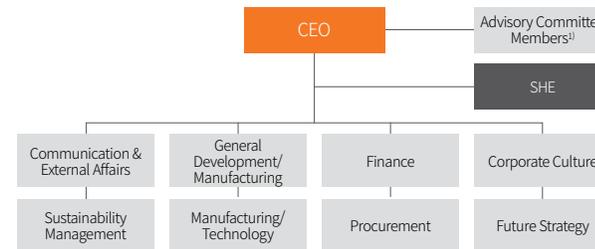
### SHE Management Committee

The SHE Management Committee is a decision-making body organized to ensure that our SHE strategy is realized at the field-level in a prompt top-down manner. This committee helps top-level management make strategic decisions in consideration of SHE-related issues and empowers SHE leadership and execution through meetings on a monthly basis.



### SHE Advisory Committee

The SHE Advisory Committee is made up of academic and external agencies and serves as the window of communication with the external environment, as well as the role of a technical advisor. The committee meets quarterly to utilize the secured technological capability in SHE to enhance the credibility of SK hynix's SHE activities while minimizing various risks related to the operation of SHE.



1) Comprised of seven external experts

### Worksite Environment Management System

SK hynix has systematic and stable environmental management capabilities with its advanced environmental management standard, which is applied to all our worksites. We gained an ISO14001 certification to respond to international and government regulations as well as to the demands of customer companies. We established a set of management policies for chemical control, pollutant emissions, waste treatment, and energy while conducting reviews of our compliance with the requirements every quarter and annual SHE internal reviews.

	2018	2019	2020	2021	2022	2023
<b>Icheon</b>			2020.01.31- 2023.01.30			
<b>Cheongju</b>			2020.01.31- 2023.01.30			
<b>Wuxi</b>		2018.08.15- 2021.08.14				
<b>Chongqing</b>		2019.01.18- 2022.01.18				

### Occupational Health Advancement and Sustainability Committee

SK hynix launched the Occupational Health Advancement and Sustainability Committee as it needs a future-oriented committee specializing in health. The committee is a labor-management-university council that comprises the top management of SK hynix, the labor union, and university faculty. Operating with the plenary session and the specific consultative bodies such as the working groups and advancement & sustainability taskforces, the committee aims to establish the system for the sustainable advancement of occupational health and prioritizing the health of the members of the organization in all of the company policies.



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# SAFETY Improving Workplace Safety

## Settling the Safety-First Culture

The safety culture is a major way through which an organization reaches its goal of “safety,” and it represents the safety values and norms of behavior shared by employees. In fact, most accidents that occur in the field are caused by unsafe actions. “Safety,” in particular, is the most integral factor in many industries, including the semiconductor industry. A lack of awareness about compliance and practice of safety regulations can cause accidents and serious losses.

SK hynix continues to strengthen its compliance culture with the safety regulations in order to systematically prevent safety accidents. We have applied international safety rating systems and are undergoing an objective evaluation of our safety and health system and safety culture. In addition, all of our employees, including the top management, continuously strive to foster upright safety values and make positive changes in their behaviors.

## Achievements in Safety Training for Suppliers (2019)

Training curriculum	Icheon	Cheongju
Basic safety training	28,901 people	14,444 people
Signaler safety training	1,191 people	1,388 people
Fire monitor training	445 people	374 people
Work conductor training	3,311 people	2,519 people
Chemical substance handling training	1,729 people	2,781 people
Confined space access training	812 people	794 people

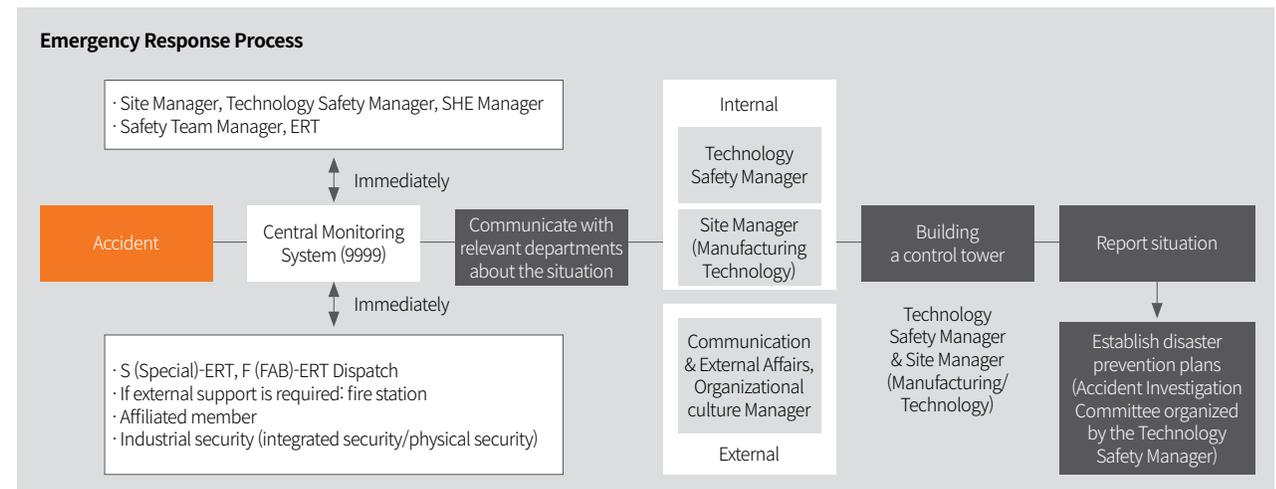
## Safety and Health Management System Certification

Certification	Icheon	Cheongju	Wuxi	Chongqing
ISO45001	2020.01.28~ 2021.01.06	2020.01.28~ 2021.01.06	2018.08.15~ 2021.08.14	2019.01.18~ 2022.01.18
KOSHA18001	2018.11.07~ 2021.11.06	2018.11.16~ 2021.11.15	-	-

## Emergency Response System & Training

SK hynix established an emergency response system in case of emergencies. Monitoring is performed 24 hours a day by the ECT (Emergency Control Tower) to prevent the spread of damage with a prompt initial response that is carried out by the ERT (Emergency Response Team), which is quickly dispatched to the site of the emergency. Depending on the emergency situations, classified as fires, gas leakages, chemical spills, utility accidents, power failures, injuries, earthquakes, or floods, scenarios and emergency response procedures have been established. Each business site maintains and repairs emergency response equipment for each type of accident and conducts regular emergency response

training. The Icheon campus organized and is operating G-ERT (General-ERT), a group specializing in evacuation guidance, to improve the evacuation environment. In 2019 G-ERT carried out 805 sessions of internal evacuation drills at the Icheon worksite and 1,382 sessions at the Cheongju worksite. These numbers include independent/integrated drills as well as the evacuation/response drills that are in line with the department-specific on-site processing hazard evaluation and scenario. All employees at these sites participated in these drills in order to minimize potential damage through repeated training. Furthermore, we continuously strengthened Fab-ERT and ECT-linked drills and also carried out joint emergency response drills with in-house suppliers.



## Operation of the Occupational Safety & Health Committee

SK hynix operates the Occupational Safety and Health Committee, where the labor union and the top management jointly review and decide on safety and health agendas to prevent risks and health problems for employees.

The committee is composed of twenty members in total, consisting of ten members each from the management and labor union, including a representative of employees and a representative of the company. The committee discusses ways to make industrial

disaster prevention plans and areas to improve. They discuss and make decisions on things such as employee medical check-ups and assessment of the working environment, as well as preventive measures against risks and hazards and strives to secure employee’s safety and health. In 2020, SK hynix will create a culture of communication and shared consensus through the Occupational Safety & Health Committee and strive to make a safe and healthy workplace with the joint effort of the management and the labor union.

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### Safety Culture in Overseas Campuses

In 2019, our Wuxi subsidiary conducted “SHE Mind Set” safety training for all its 236 employees. The subsidiary operates a communication and safety committee with its suppliers to spread and promote the safety culture, and the committee was held 27 times in 2019. When the communication and safety committee is in operation, we share the construction supervision index and corrective measure plans as well as the standards of supervision, supporting our suppliers to create their own safety culture. In 2019, all employees of the Chongqing subsidiary made a written pledge to the safe production responsibility system and shared the emergency response measures, chemical substance storage standard, and personal protective gear wearing standard through the monthly regular safety training. In addition, we conduct the monthly SHE committee meeting with the employees of in-house suppliers to share the establishment and revisions in the SHE system and internal and external accidents and also to reduce accident risks through joint safety inspections.

#### Wuxi Subsidiary Safety Training Program Status

Training target	Training details	Frequency
Employees (SHE hands-on training)	Fire extinguisher trial, protective gear wearing activity, etc.	Once/year
Access safety training for visitors to suppliers	Industrial security, safety training, cleanliness, etc.	Twice/day
Waste service provider (subcontractor)	Industrial security, ethical management, and safety training	Once/month
Waste service provider (disposal service provider)	Standard/system and on-site safety risk cases	After signing the contract
Waste service provider (others)	Detailed work procedures	Before work
Local communities (safety and fire prevention social contribution activities)	Examination of fire prevention facilities and training for fire knowledge	Once/quarter

### Safety Culture with the Local Community

SK hynix is spreading the safety culture in our local communities. In an effort to raise fire safety awareness, we distributed fire extinguishers, installed fire alarms, and provided SHE experience education with an MOU we signed with local elementary schools. In 2019, we performed a signboard hanging ceremony with personnel from the Icheon Fire Station, Icheon Community Health Center, and local elementary schools after we earned BLS<sup>1)</sup> certification from the Korean Association of Cardiopulmonary Resuscitation. In addition, we plan to implement training to improve the public confidence in CPR<sup>2)</sup> training and foster experts, and also provide the members of local communities with talent donation for CPR training, SHE hands-on training, and safety emergency drills.

1) Basic Life Support

2) Cardiopulmonary Resuscitation

#### Visiting Safety Training

To address the inefficiency caused by the lack of information on safety standards and processes that reach field-level work, we are providing visiting safety training. We carry out weekly “Team Manager One-on-One,” a leader-hosted risk consulting activity, and monthly “Shift Training” as visiting safety training programs. We conducted safety training for 26 teams and 132 groups in 2019 in total, and we plan to extend this training to include new employees who have been in the company for less than one year. Further, the training topics will include processing systems and risk factors, as well as the existing safety standards and cases of accidents.

#### Team Manager Safety Compliance Card (SCC) for the Establishment of Safety Management Culture

SK hynix is creating a field-led safety management culture by utilizing the Team Manager’s Safety Compliance Card (SCC) that fits the characteristics of each team. Based on the SCC cards filled out by each team, we identify the individual team’s safety risks. By doing so, we are making practical improvements to the safety risk factors and carrying out emergency response drills, safety training, and on-site inspections in order to continuously manage risks.

### Enhancement of Near-Miss Accident Management

Since April 2019, SK hynix has been operating a Near-Miss Accident Management System to systematize the discovery of potential hazard factors and secure a voluntary safety culture. The system is run with the same standard at the Icheon, Cheongju, and Wuxi campuses, and we run a monthly and quarterly rewards system for discovering potential hazard factors for the company and suppliers. We found that employees became more motivated to prevent accidents after we introduced the system, and it has also brought positive impact on the detection and prevention of accidents with increased employee engagement. Great or small, we manage all hazardous factors that threaten the safety of our employees.

Also, as cross-campus standardized hazard evaluation can be done by doing this same work, we carry out a company-wide horizontal development of excellent cases for worksites that have yet to apply this kind of accident management. We also provide field-level coaching to prevent the occurrence of similar accidents. By doing so, we are not only effectively preventing accidents but also establishing a safety culture that attracts employee engagement.

#### Near-miss accident management performance (domestic sites)

**4,196** cases (Total accumulated cases) 

**181** cases (Total accumulated excellent practices) 

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# Enhancing Supplier Safety Management

## Regular Safety Assessment with Suppliers

SK hynix organized a council to support the creation of a safe and hazard-free work environment by suppliers and operates it on a regular basis. Through the committee that is made up of the CEOs of each company, we share the safety rules and regulations of where the worksite is located as well as cases of safety-related accidents. In addition, we conduct quarterly joint inspections with suppliers to identify their safety and health conditions and enact improvement measures for identified issues.

## Co-prosperity & Cooperation Program

SK hynix operates the Co-prosperity & Cooperation Program with the Korea Occupational Safety & Health Agency to support safety and health practices in 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 in the supply chain. In 2019, the Icheon worksite received an S grade in the Co-prosperity & Cooperation Program hosted by the Ministry of Employment and Labor and Korea Occupational Safety & Health Agency. Going forward, we plan to provide support using the Co-prosperity & Cooperation Program so that all our suppliers become capable of implementing safety management on par with SK hynix.

### Co-prosperity & Cooperation Program Performance

**48** times (Icheon/Cheongju) 

Regular Council Meeting

**110** companies (Icheon/Cheongju) 

Target company

**S** grade (Icheon) 

Co-prosperity & Cooperation Program grade

## Safety Training for Suppliers

SK hynix operates a Safety Training Completion System in order to raise our supplier employees' safety awareness and enhance their safety capabilities. In addition, we conduct specialized training and assessment by work type so that suppliers can manage their safety at the same level as our standard. Going forward, we plan to establish more training courses and strengthen specialized training so that suppliers can perform advanced safety management on their own.

## Wuxi Subsidiary Hazard Assessment Competition

In 2019, Wuxi subsidiary carried out the "Hazard Assessment Contest and Safety Resolution Rally" to enhance suppliers' safety and health management capability. In the event, we supported the enhancement safety management capability of all suppliers by sharing the safety management practices and details of improvements from each supplier and benchmarking the best practices.



Wuxi Subsidiary Hazard Assessment Competition and Safety Resolution Rally

## SHE Consulting for External Suppliers

SK hynix comprehensively recognizes its external suppliers' trade, work types, and hazard factors and categorizes them to provide customized SHE consulting. In 2019, we selected a total of 69 companies to provide consultation and also guided and supported them to identify legal risks and implement improvement measures. We were involved from the design stage for ten of the companies to give them focused consulting. We also provided improvements in their working condition and funded related activities.

In addition, we linked this project with the Center for Working Environment Health, which was established in 2019, to enhance health management and raise the safety and health standards for our suppliers and small local enterprises. The center provides preventative consultations for fundamental illness, musculoskeletal illness, cardiovascular illness, and work-related stress. In 2020, we plan to operate a more effective and detailed program by expanding it to provide more support for additional business trade and operate a council to share SHE information across trades.

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**New Supplier SHE Competence Evaluation**

In line with the tightened Occupational Safety and Health Act, SK hynix conducts advance SHE evaluations for suppliers who have newly entered into a business contract with us. We determine whether to enter into a contract with a potential supplier by considering the result of the evaluation, and the New Suppliers' SHE Competence Evaluation Process was established in order to enhance the supplier's SHE competence. This process, which has been in action since January 2020, contributes to enhancing the industrial disaster prevention systems of suppliers and the company by conducting the Basic Evaluation of SHE Competence through visits to supplier companies.

**Systematization of the Supplier Safety Index**

SK hynix introduced the Passing System to enhance the safety management of its suppliers through a quantitative assessment by using 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.

The first-tier suppliers undergo safety assessments based on safety and health management documents, on-site safety management, and safety and health management plans of subcontractors. The second-tier suppliers are assessed using the Safety and Health Management Plan composed of 28 items in 14 categories. Going forward, we plan to strengthen safety management practices in our supply chain by expanding the mileage system of the Passing System.

**In-House Supplier Safety Management Support**

In 2019, SK hynix selected 34 companies who are exposed to high risks of handling chemical substances and chemical exposure from in-house suppliers who work at our worksites. We then identified their SHE capabilities with hazardous risk factors, safety culture awareness, interviews, and surveys.

Collective training for safety and health and customized one-on-one consultations were provided based on the result of the first evaluation, and safety leadership enhancement training was also offered through external agencies. By making improvements in the level of safety awareness and identifying areas of improvement, we saw an average increase of 24% in the safety management competence of target companies in the second round of evaluation. In particular, we conducted a quantitative evaluation of whether the employees wear their respiratory protective gear in the correct way with Fit Test<sup>1)</sup> to inform our employees about the correct way to wear protective gear and raise their awareness in such matters.

1) Fit Test: Respiratory protective gear fit test

**New Supplier SHE Competence Evaluation Process**



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# HEALTH Employee Health and Healthcare

## Health Programs for Employees

SK hynix is dedicated to improving employees' physical and mental health through various health enhancement programs. We offer the "Nico-Bye," "Doctor Liver," and "Fat-Bye" programs for employees who need to quit smoking, moderate their drinking, and control their weight. We also provide exercise programs such as the "Wellness Program" and "Healthy Exercise Class." In addition, we have prepared "One-on-One counseling" which is run by a professional counselor, "Work Stress Management," "Insomnia Management," and "Hu-Program" and "Breathe," which are meditative relaxation programs.

Furthermore, we guided more of our employees to participate in these programs than the offline programs with a mobile-based health program, "Walk On," which is designed to encourage the employees to lead healthier lifestyles.

As employees' interest in health continues to grow, we are offering regular health seminars in which anyone can participate. In these seminars, the participants can learn about health issues in our daily lives such as fine dust (PM10 and PM2.5), obesity and diet, and musculoskeletal diseases with participating experts. In 2019, approximately 300 people participated.



Employee Health Improvement Program



Mind Tree Program Activity



Mind Tee Program activity

## "Hu" Programs for the Prevention of Work Stress

SK hynix operates a customized meditation program to prevent work-related stress and enhance employees' mental stability. We separate the targets of the program into three categories by work characteristic. We then organized each program with different content and methods to provide the best hands-on meditation programs. In terms of the stress reduction of the program participants, approximately 62.2% of the total participants answered that they experienced alleviated work stress and insomnia and relaxation in both mind and body, compared to before joining the program. Going forward, we plan to increase employees' participation in this program by adjusting the program hours in consideration of participants' demand and introducing the integrated use of props and new sequences to encourage follow-up management and promotion.

### Overview of the "Hu" Program

Classification	Key target	Objective	Contents	Method
Hu-REST	Flexible/Regular groups	Stress relief through mind and body relaxation training	<ul style="list-style-type: none"> <li>· Various resting positions</li> <li>· Mindfulness meditation</li> </ul>	Monthly recruiting 3 - 5-week program
Hu-BALANCING	Shift groups	Relieve sleep disorders and unbalanced biorhythms caused by irregular sleep patterns	<ul style="list-style-type: none"> <li>· Insomnia relief training</li> <li>· Mind relaxation training</li> <li>· Training using props</li> </ul>	Recruit by shift group One-day class training details
Hu- SPECIAL DAY	All employees	Strengthen the bond with partners through massage and relieve stressed muscles	<ul style="list-style-type: none"> <li>· Aromatherapy</li> <li>· Upper body and foot massage</li> <li>· Relaxation</li> </ul>	Recruit from the entire employees One-day class training details

## Visiting Mind Stroll

SK hynix operates site-visiting programs to encourage employee participation and operate the in-house counselors on a demand basis. We provide support to enhance employees' self-esteem, sense of bonding with colleagues, and sense of belonging through the visiting Mind Tree and Mind Tea programs. Additionally, we achieved a higher number of participants and participation rate through a separated promotion to all workgroups. Going forward, we plan to expand employees' participation opportunities by running the programs on a regular basis and using waiting list notifications to increase their availability.

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**Doctor Liver Program**

SK hynix operates the “Doctor Liver” program to prevent personal and corporate losses caused by excessive drinking. The program is run once for each half of the year, and the participants aim to moderate their drinking. As a part of the program, we provide the participants with healthy drinking training, drinking habit correction, consultation with a specialist, and treatments. We plan to add team-unit services added to the existing individual-unit service in consideration of departments with frequent work-related dinners. Further, we will enhance employee motivation and participation with appropriate rewards.

**Fat-Bye Program**

SK hynix operates the “Fat-Bye” program through which employees can voluntarily reduce their weight and enhance their health management. We select those who wish to join the program among the employees who have a BMI of more than 25 and motivate them by giving rewards upon the successful completion of weight loss. We also give them priority in the circulation exercise assignment. Going forward, we plan to add a three-month follow-up program to prevent the yo-yo effect. For the Chongqing subsidiary, we run a fund-type Fat-Bye program for 21 employees in 2019. In this program, the participants made their own decision on the amount of the reward, and we provided an additional 100% of the rewards upon their successful completion of the goals. This method proved to be highly effective in motivating the employees. In 2020, as an alternative for those who received abnormal findings in health checks, we plan to provide the “Pharmaceutical Support Program.” In this program, which will be linked with the Fat-Bye Program, we will aim to improve the fundamental health of our employees by identifying key illnesses on an annual basis and providing pharmaceutical provisions as well as regular training.

**Nico-Bye Program**

SK hynix runs the “Nico-Bye Program,” which is established to help our employees quit smoking. The program is run once for each half of the year, and the participants aim to quit smoking for six months while getting nicotine reliance assessments, doctor’s consultations, and continuous counseling. We encourage our employees to quit smoking by motivating them through rewards upon successfully quitting.

**Healthy Exercise Class and Wellness Program**

SK hynix runs the Healthy Exercise Class and Wellness Program to encourage our employees to form healthy exercising habits and improve their health. The Healthy Exercise Class provides Pilates and exercises focusing on various body parts during lunchtime, and the Wellness Exercise Program mostly provides cardiovascular and weight exercises. The result of body mass analyses against the entire participants of 2019 showed that they had positive changes after the program. The participants also indicated their high satisfaction with the program, and we plan to extend the duration of the program and offer more classes in the future.



Healthy Exercise Class activity

**The number of participants in the 2019 Health Promotion Programs**

<b>Doctor Liver Program</b> <b>202</b> persons	<b>Fat-Bye Program</b> <b>354</b> persons	<b>Nico-Bye Program</b> <b>141</b> persons	<b>Healthy Exercise Class</b> <b>1,346</b> persons	<b>Wellness Program</b> <b>557</b> persons
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**Doctor Liver Program Description**

<b>Targets</b> <b>High-risk drinkers</b>	<b>Duration</b> <b>Once/semiannual</b>	<b>Object</b> <b>Drink moderation</b>
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**Program Description**

- Healthy drinking training/drinking habit correction
- Consultation with a doctor in regard to the illness and prescription of medicines
- Treatment for high-risk drinkers in connection with specialized clinics

**Fat-Bye (obesity) Program Details**

<b>Targets</b> <b>150</b> a BMI of 25 or higher 150 applicants in the company	<b>Duration</b> <b>Once/semiannual</b>	<b>Object</b> <b>10%</b> Reduce 10% of weight within 20 weeks
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**Program Description**

- Analysis of personal health conditions
- Priority in joining the Wellness Circulation Exercise
- Send monthly newsletter with obesity/nutrition/exercise information
- Provide health-promoting products

**Nico-Bye Program Details**

<b>Targets</b> <b>Smokers</b>	<b>Duration</b> <b>Once/semiannual</b>	<b>Object</b> <b>6</b> Quit smoking for 6 months
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**Program Description**

- Measure the carbon monoxide concentration and fill in a smoking cessation registration card
- Evaluate nicotine reliance and doctor’s consultation/prescription of smoking cessation aids
- Continuous consultation and provision of cessation aids and action-motivating goods
- Provided with a prize upon success

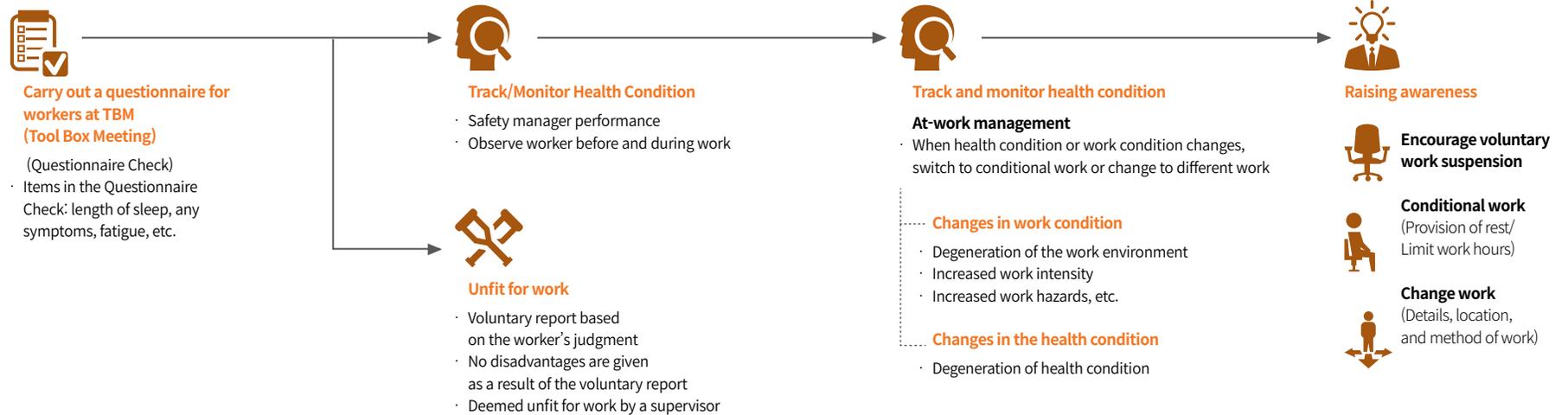
**DATA REPORTING**

- Corporate Governance
- Stakeholder Engagement
- Ethical Management
- Compliance Management
- SHE Management**
- Responsible Supply Chain
- Human Rights & Labor
- Talent Management
- R&D
- Social Contribution
- Taxation
- ESG Data

**Voluntary Condition Check Culture**

The Wuxi subsidiary established a “Voluntary Condition Check Culture” to manage the health of its suppliers’ employees. We conduct an employee health check process with a safety manager in the morning meeting to decide whether to adjust their role or put them to work. We take customized measures for individual employees by categorizing the checklist in detail to include headache, fever and sweating, musculoskeletal pain, etc.

**Voluntary Safety Culture Management System**



## DATA REPORTING

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# ENVIRONMENT Reduction of GHG Emissions

## Climate change

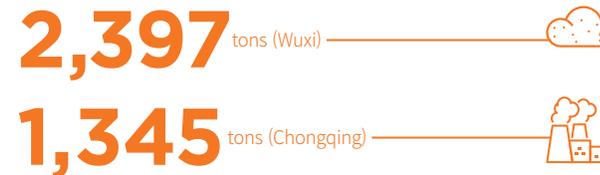
SK hynix strives to actively engage in the response to climate change, following the demands of international society. We continuously monitor the trends in global/regional climate change and their impact on the company under the management of our Environment Team and Environment Strategy Team with the SHE Management Committee serving as the watchtower. In addition, the departments in charge review GHG emissions, achievement against the mid and long-term targets, and performance of energy efficiency activities and make regular reports. Furthermore, we operate a management system that complies with the recommendations of TCFD (Task Force on Climate-related Financial Disclosures) and disclose the relevant information.

## Reduction of GHG Emissions at Overseas Sites

In 2019, the Wuxi subsidiary saved 2,397 tons of GHG emissions through activities to reduce such emissions. In addition, we retain certification of energy and GHG emissions such as ISO14064 and ISO50001 every year and have formed a Renewable Energy TF to implement consistent and effective GHG emissions reduction activities. In 2019, the Chongqing subsidiary saved approximately 1,345 tons of GHG emissions and 360,639m<sup>3</sup> of natural gases. In 2020, we plan to increase the amount of reduction by implementing additional effective reduction activities while maintaining the existing measures.

The GHG emissions reduction activities at overseas sites are not only placing SK hynix in an advantageous position for the emissions limit, which will be imposed by the GHG emissions trading credit scheme in the future, but also enable us to easily establish the reduction target by WSC (World Semiconductor Council) through an analysis of the past data. We will commit to implementing proactive responses to climate change and carry out our reduction activities through continuous monitoring and analysis of GHG emissions.

## Performance of GHG Emissions Reduction at Overseas Sites



The cookstoves supplied to Myanmar

## Myanmar Cookstove Supply Project

SK hynix engages in activities to reduce GHG emissions in order to address climate change caused by GHG, which is a global issue. In 2019, we commenced a project through which we distribute cookstoves to the residents in the north-central region of Myanmar. The use of cookstoves that have superior heat conductivity results in reduced firewood use, thus reducing GHG emissions. We expect to see GHG emissions reduced by 300,000 tons on an annual basis in the future, and this is equivalent to planting 50 million 30-year-old pine trees.<sup>1)</sup>

SK hynix plans to distribute approximately 900,000 units of cookstoves across Myanmar by 2025, in a course of five years. Through this effort, we will not only secure carbon emissions credits but also create social value enhancing the quality of life of the people of Myanmar, as well as preserve the environment.

1) The amount of carbon dioxide absorbed by a 30-year-old pine tree per year: 6kg

## DATA REPORTING

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## Energy Management

### Saving Process Energy

To achieve the energy savings target, SK hynix is improving its energy efficiency through system extensions, replacement of outdated equipment, and system optimization. We are operating our management system based on ISO50001 (Energy Management System) to ensure efficient energy management across our business while monitoring the energy consumption in real time through the energy portal.

**CASE**
**Optimization of Outdoor Air Conditioner (OAC) Operation Based on AI Analysis**

SK hynix analyzed the past data of OAC using AI technology and derived an optimal operational model. In June 2019, we completed the development of the OAC algorithm and carried out initial implementation at the M14 plant before expanding it to the new plants. As a result, we saved KRW 2.75 billion worth energy in 2019.

### Key cases of process energy efficiency

Classification	Case	Content	Outcome
	Optimal management of freezer performance coefficient	Applied the optimal operation management system based on data analysis	Saved KRW 2.77 billion in electricity costs
Icheon	Derive the optimal operation model for outdoor air handling units	Derived the optimal operation model for outdoor air handling units based on an AI analysis of past operational data	Saved KRW 2.75 billion in operational costs
	Replaced inefficient freezers with new models	Replaced two outdated and inefficient freezers with models with better efficiency	Saved KRW 85 million in electricity costs Reduced CO <sub>2</sub> emissions by 400 tons <sup>1)</sup>
Wuxi	Installation of a screw compressor with variable frequency Optimal operation of photo and WT production equipment	Installed screw compressor with variable frequency, replaced lights with LED, removed heating facility at the rear of the pump, and optimal operation of photo and WT production equipment	Power consumption 788MWh saved
Chongqing	Expand the lighting management area	Expand the lighting management area within the worksite	Power consumption 943,317kWh saved

1) Based on the annual uptime of 4.5 months, it is the equivalent to planting approximately 40,000 trees.

### Renewable Energy Plant

To comply with the “Energy Use Rationalization Act” and implement sustainability strategies, we are actively adopting renewable energy. We installed a solar power generator with 641kW capacity at the P&T4 plant at the Icheon worksite in order to increase the proportion of renewable energy at use. Through this, we produce on average 60MWh of renewable energy per month, and we supply this energy to power our cafeteria and lighting. Through solar power generation, we can save KRW 72 million<sup>1)</sup> in electricity costs, and this is equivalent to turning 6,338 LED lamps off. In addition, the Korea Energy Agency certified that we meet the requirements of the “Energy Use Rationalization Act.”

1) 60,000kWh × 100 won × 12 months

### Capacity of Solar Power Generator

**641.52** kW 

### Output of Solar Power Generator

**60** MWh/month 

## Air Quality Management

### Air Pollutants Control

SK hynix recognizes the need to manage and improve air pollution, a rising major environmental issue. As the interest and demand of the local communities in improving air quality grow, we are actively engaging in activities to reduce air pollutants through the management of air pollutant emissions. In 2019, we adjusted the processing range of the dust collection facility from 1 μm to 0.1μm, hence enabling it to process even smaller air pollutant particles. As a result, we reduced 4,094kg of ultra-fine dust (PM1.0) in 2019 and also saved KRW 40 million in annual operational costs by cleaning the internal fan and extending the operation cycle.

### Amount of Ultra-fine Dust (PM1.0) Reduced (2019)

**4,094** kg 

### Fine Dust Control

To respond to the intensifying concentration level of fine dust, SK hynix declared its 2022 ECO Vision to carry out preemptive activities to reduce secondary fine dust-generating substances. In 2019, we completed the development of new technology to reduce environmental pollutants and plan to make full-scale investments for environmental equipment starting in 2020. For the Icheon worksite, we signed a “Plant in the Forest MOU” with Gyeonggi Province and plan to plant approximately 1,800 trees that are effective in reducing fine dust, thereby offsetting the negative environmental impact. Through this effort, we will provide a part of the forest area to the residents as a rest area. In addition, we were recognized for our effort in this project and it was selected as the Outstanding Site for Gyeonggido’s Plant in the Forest Project at the end of 2019.

Going forward, we will actively develop and apply promising new technologies to minimize our environmental impact and also commit to the management of local communities’ air quality.

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# Water Resource Management

Considering that manufacturing semiconductors require a significant amount of water, SK hynix requires a large amount of water consumption. To this end, we recognize the importance of managing the amount of effluents processed and pollutant emissions. To manage water resource risks, we established an efficient water resource management plan through RTDB (Real-Time Database)-assessed information while ensuring the stable operation of water supply facilities. In addition, we appointed the CEO as the chief of water resource management and formed a separate water/effluent reduction TF to reduce the use of water and effluents and improve their recyclability. The TF aims to recycle 62,000 tons of water per day by 2022 and to carry out appropriate activities to achieve this goal. Going forward, we will be the leader in realizing our 2022 ECO Vision and securing a healthy ecosystem through continuous water/effluent reduction and increased water recyclability.

## Reduction of Water Consumption and Water Recycling

The Icheon and Cheongju worksites of SK hynix established a water/effluent reduction TF to reduce the ever-increasing water consumption and the volume of discharged water. This will also increase their recyclability, thereby carrying out detailed action plans for facilities that demand a high volume of water such as production plants, air pollution prevention facilities, and air conditioning facilities. In particular, we are conducting an activity that identifies the level of pollution in water which previously was simply discharged, and recycling effluents that can be reused through recycling facilities. In 2019, we recycled approximately 40,000 tons of water and effluents per day through the water-saving TF activities and investments in facilities<sup>1)</sup>. We saved 2.4 million tons of water consumed by semiconductor production equipment as well as utilities. Going forward, SK hynix will continue to operate the Water/Effluent Reduction TF and will expand investment in effluent recycling facilities.

1) The total of domestic worksites

## Reduction of Effluents

When a production facility evaluates the pollution level of its effluents as low, it sends the water to a reuse facility and water recycling facility. The air pollution prevention facilities use an optimal volume of water to process air pollutants, and we are reducing water consumption with the development of an air pollution prevention facility that does not use water. For air conditioning facilities, we are efficiently reducing the amount of effluents through investments in the recycling system and management of concentrated drainage.

In 2019, the Wuxi campus added two effluent processing facilities as it expanded the plant in 2019, and is strictly complying with the water quality standards. In addition, the Wuxi campus has jointly established and is operating TMS (Tele Monitoring System), a system that checks effluent concentration in real time, with Chongqing campus. Through this, we transfer information regarding effluent processing and management to government environmental protection authorities and make transparent disclosures of such information. In addition, we continue to expand company-wide effluent discharge reduction and management activities, for instance, by categorizing effluents by characteristic to treat them at specialized water treatment facilities before discharging.

## Recycled Water/Effluent Through Facility Investment

**40,000** tons 

## Water Saved by Production Equipment and Utilities

**2.4** million tons 

## Wuxi Campus Water Recycle Performance (2019)

**33** % (Improvement against previous year) 

## Water Resources Risk Management

Due to the characteristics of semiconductor manufacturing, SK hynix consumes a large volume of water in the course of product manufacturing. We also recognize water resource risks that may be caused by a disruption in the water supply as key management targets. In particular, we stipulate disruption in the water supply as a BCP management risk and have established a countermeasure for the issue. We run emergency restoration measures when leakages occur due to pipe damage and take action by providing water supply with a high-capacity water supply lorry. At the Icheon worksite we established the RTDB-based system to efficiently manage water resources while organizing a company-wide TF to reduce water consumption and increase recyclability.

Wuxi campus utilizes reused water to counteract the water scarcity risk. The water recyclability of the campus was increased by 33% year-on-year.

## Awarded with the 2019 Grand Award in the “Water Management” by CDP

SK hynix received a “Leadership A” rating in the “Water Management” category of the “2019 CDP Korea Award” that is hosted by the Carbon Disclosure Project (CDP) Korean Committee and was given a Grand Award.

This award is granted to companies that showed outstanding performance in water resource management, such as in water recycling and water-saving. We analyze this achievement as a result of receiving a high appraisal of our various efforts including saving of 2.4 million tons (based on domestic sites) of water annually and the enhancement of the monitoring system for water treatments. Going forward, we will continue our sustainable “Water Management” through the reduction of water consumption and effluent emissions and water resource management.

## DATA REPORTING

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## Preservation of the Water Ecosystem

SK hynix places more stringent standards than the legal requirements on our effluent treatment plants, and practices strict management of discharged pollutants. In addition, we closely monitor the impact of discharged pollutants on local communities. For the Icheon worksite, we periodically examine the ecosystem surrounding the stream where effluents are discharged in order to identify the environmental impact of effluents. The examination result shows the discovery of legally protected species such as various fauna and flora and endangered wild animals. To this end, we installed and are operating a real-time wildlife monitoring system in 2019 to identify the impact of effluents on living organisms in the water.

Along with this effort, we are striving to reduce effluents in order to minimize the impact on living organisms in the water. For instance, the Icheon worksite recycled approximately 20,000 tons of effluents per day in 2019. Moreover, we plan to continuously increase the volume of recycling in 2020.

In the future, we will continue to reduce water consumption and discharged effluents to minimize the impact on living organisms in the water and invest in reducing pollutants.

### The volume of effluents recycled at the Icheon worksite

**20,000** tons/day (As of 2019) 

## Waste Management

As the demand for recirculation of waste resources rapidly increased following the establishment of the Framework Act on Resource Circulation, SK hynix has been consistently striving to build a resource circulation system. In 2019, 290,000 tons and 97,000 tons of wastes were generated at the Icheon and Cheongju worksites respectively, and we recycled 95.3% and 96.9% of wastes at each worksite. SK hynix's goal is to enhance the quality of recycling through activities that reduce waste generation and enhancing suppliers' recycling capability. In 2019, we were certified with recycled resource<sup>1)</sup> and thereby we increased the value of reusing wastes resources and reduced annual waste generation by 1,500 tons. In addition, we improved the internal on-site management process in line with the government's enhancement policies for environmental management and also provided environmental consulting to 105 suppliers. Furthermore, in December 2019, we acquired Zero Waste to Landfill certification for all our worksites, including overseas sites to continue our effort in reducing landfill wastes. In 2020, we will strive to increase the value of waste resources by improving the waste discharging process and developing a new waste recycling technology to build a resource circulation system.

1) Recycled Resource Certification System: A system that certifies wastes to be used as resources free from the legal regulations.

### Waste recycling Rate



### Waste Generated



- OVERVIEW
- STAKEHOLDER HIGHLIGHTS
- SOCIAL VALUE
- TECH PERFORMANCE
- DATA REPORTING**
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# Chemical Hazards Management

## SHE Qualification System

SK hynix introduced the SHE Qualification System through which the company implements stringent management of hazardous chemical substances to secure a safe working environment for employees, protect the environment of local communities, and comply with RBA requirements. We prevent risks associated with employee health and the legal obligations of the company by establishing an inspection system through which the characteristics and usage risks of materials are reviewed in advance before their introduction to the production process. The system is kept up-to-date with regular updates of substance regulation information. Substances that failed to pass the SHE Qualification standard are prevented from entering the company by the evaluation officers.

We set the scope of banned substances at the introductory stage of new substances in consideration with the local regulation, customer demands, and voluntary agreements. The validity of the list of banned substances is reviewed on a regular basis. Going forward, we will continuously update information regarding substance risks, health risks, and environmental risks, monitor the introduction of new substances and their usage, and consistently manage newly developed chemical substances.

## Chemical Hazards Management through Internal/External Communications

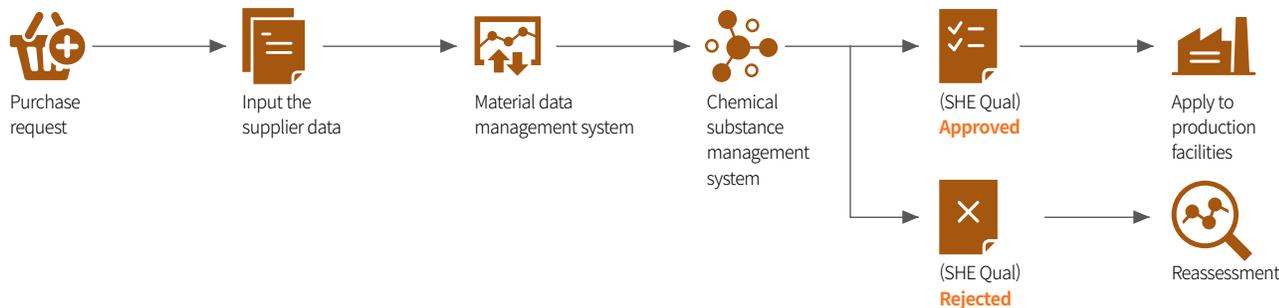
SK hynix has been implementing internal and external communication activities in order to internalize the management of hazardous substances and enhance cooperative relationships with external suppliers.

Internally, we established a system that enables us to frequently share the status of hazardous chemical uses and take immediate actions in case of emergencies through substance handling training.

In addition, we are sharing our chemical substance management status and response plans for emergency situations with local governments, external experts, and residents of Icheon and Cheongju through the Chemical Substance Council. Furthermore, we are operating a chemical safety council that comprises large, medium, and small enterprises that handle hazardous chemical substances in the Gyeonggi and Chungcheong Provinces.

As the founding president of the Metropolitan Committee of Chemistry Safety Community, Chungcheong Committee of Chemistry Safety Community, and the Model Manager of Chemical Substances near Han River and Geum River, we take preemptive activities to lay relevant legislation, resolve management issues, and share information among the participating companies.

## Preliminary Chemical Substance Assessment System



# Eco-friendly Products

## Increasing Eco-Labeled Products

Eco-labeling including carbon footprints and water footprints is achieved through a national certification system managed by the Korea Environmental Industry & Technology Institute of the Ministry of Environment. This organization analyzes and discloses the environmental impact throughout the entire production process from raw material supply to manufacturing. SK hynix has been choosing our major products every year, and working on receiving Environmental Product Declaration (EPD) certification for products since the industry first achieved certification in 2013. In 2019, two 10nm-class DRAM products were certified for carbon footprints and water footprints. We plan to expand the range of eco-labeled products in 2020.

## Eco-labeled Products 2019

Classification	Carbon Footprint	Water Footprint	Certification Agency
1X DRAM 8Gb	507g CO <sub>2</sub> eq/unit	9.38L H <sub>2</sub> Oeq/unit	Korea Environmental Industry & Technology Institute (KEITI)
1X DRAM 6Gb	405g CO <sub>2</sub> eq/unit	6.26L H <sub>2</sub> Oeq/unit	



**DATA REPORTING**

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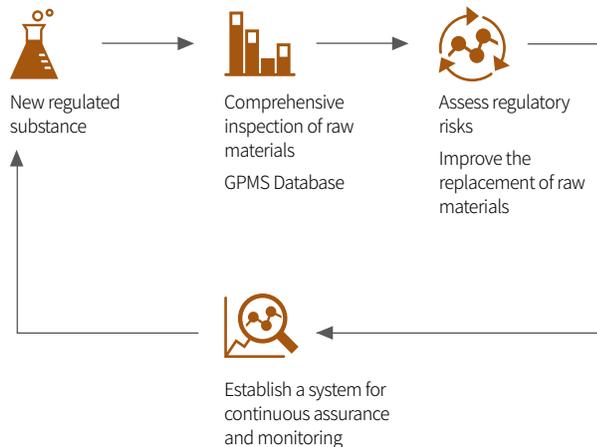
**Enhancing the Qualification Process of New Regulated Substances**

SK hynix has been preemptively preparing for the demand on risk qualification and response measures in line with the expanding electrical and electronics products and additional regulated substances such as RoHS<sup>1)</sup> and REACH<sup>2)</sup>. In 2019, 10 environmental regulations including REACH and a total of approximately 100 regulated substances are added. To this end, we conducted risk assessments by carrying out a comprehensive inspection of hazardous substances in raw materials based on the substance data in GPMS (Green Product Management System). The materials that are identified with abnormality underwent research, received improvement measures, and were listed as a managed substance in the database Interlock.

With these efforts, we continue to strengthen the qualification process for new regulated substances along with compliance with environmental regulations and advance qualification and securing of substance safety.

1) RoHS: Restriction of Hazardous Substances.  
 2) REACH: Registration, Evaluation, Authorization, and Restriction of Chemicals.

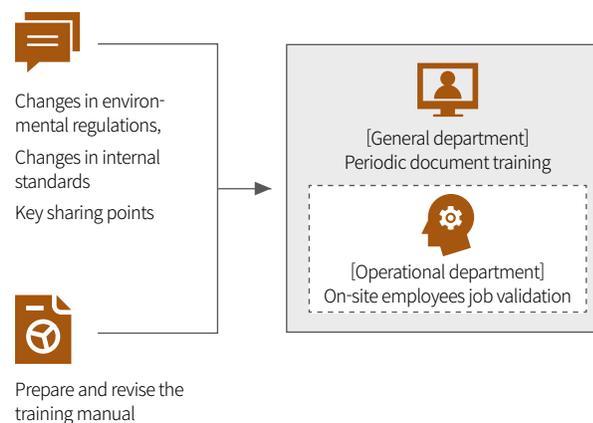
**New Regulated Substance Qualification and Assurance System**



**Company-wide Product Eco-Friendliness Training System and Awareness Raising**

In line with the strengthened international environmental regulations and requirements, SK hynix established routine training for internal personnel who handle eco-friendliness related works and provide specialized training to the relevant departments. In 2019, we established procedures such as periodic document-based training for general departments and training review, specialized training for business departments, and duty validation. We plan to complete the eco-friendly duty validation system for business departments and conduct routine training for general departments in 2020. We expect to see advance identification and prevention of environmental risks as the content of training includes the current regulation and changes in the standard, responses for issues in eco-friendliness, and detailed procedures in work practice and precautions. In the future, we plan to expand this system to raw material suppliers.

**Product Eco-friendliness Training System**



**Environmental Training**

SK hynix designates an environmental officer for each team and conducts periodic training in waste management and emissions standards. In addition, we hold seminars for our suppliers' employees who visit our worksites for work to train them in safe work procedures and guidelines within worksites. By doing so, we enhance the safety awareness of suppliers' employees and prevent safety-related accidents that may occur within the complex.

**Target**  
 **Environmental officer of each FAB**

**Target**  
 **Supplier workers**

**Training Details**  
 **Waste discharge methods and cases of accident**

**Training Details**  
 **Worksite safety work procedure**

**Frequency**  
 **Once/twice per year, Year-round**

**Frequency**  
 **Once/year**

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# Responsible Supply Chain

## SK hynix's Approach to a Responsible Supply Chain

As SK hynix is aware of the value of win-win cooperation that represents links between the growth of the company and our suppliers, we operate various support programs to enhance suppliers' competence.

Firstly, to select suppliers that can create shared value with SK hynix, we are building a sustainable supply chain by verifying not only the quality of suppliers, but also their competence in sustainability. In addition, we are providing technical, financial, and training programs to foster suppliers' global competitiveness. Furthermore, we are seeking to enhance various win-win cooperation systems including councils and seminars to encourage our suppliers to internalize fair trade, safety, security, and an ethical management culture.

## Selection of Suppliers

### Suppliers Selection and Evaluation Process

We select and evaluate suppliers to match our business direction through a fair process and establish a solid foundation for cooperation. We establish internal standards for fair and transparent transactions with suppliers and publish them on the Win-win Portal on the SK hynix website. When dealing with suppliers, we utilize standard contracts that comply with the provisions provided by the Fair Trade Commission and establish a sound supply chain ecosystem by continuously checking and improving the implementation of policies.

### Suppliers and their transactions

Among our suppliers, we designate two types of suppliers as critical 1<sup>st</sup> tier suppliers: 1) suppliers with a purchase performance of more than KRW 200 million per year with a record of more than one year of transactions, and 2) those with a significant impact on product quality regardless of the purchase amount. In 2019, 1,381 critical 1<sup>st</sup> tier suppliers transacted with SK hynix, and we made a total of KRW 19,369.2 billion purchase from those suppliers. In addition, we encourage the purchase of local products to share our business performance with the community.

## Risk Management in Supply Chain

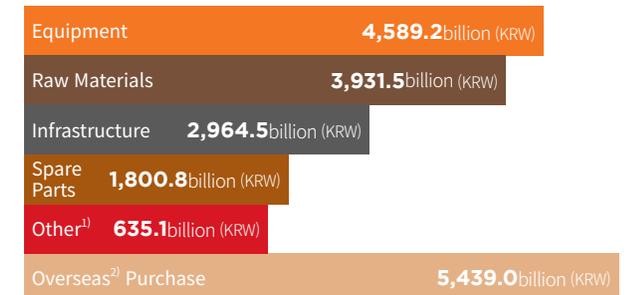
### Risk Management Principles & Procedures

Based on a multifaceted analysis of sales, scale, preference, irreplaceability, core technology, and price competitiveness, we select "Strategic Suppliers" for in-depth management. New suppliers are required to pass the assessment on credit rating, SHE due diligence, and hazardous chemical content. An annual risk analysis is also carried out on credit ratings, technology, quality, price, delivery, and cooperation. The results of this analysis are reflected in our supplier management strategy. To manage the social and environmental risks of our suppliers, we have established the Code of Conduct for our suppliers and ensure full compliance through standard contracts. The content of the Supplier Code of Conduct is available to access through our website and the Win-win Portal, including the labor, human rights, SHE, ethical practice, conflict minerals, and management system.

### Purchase Analysis

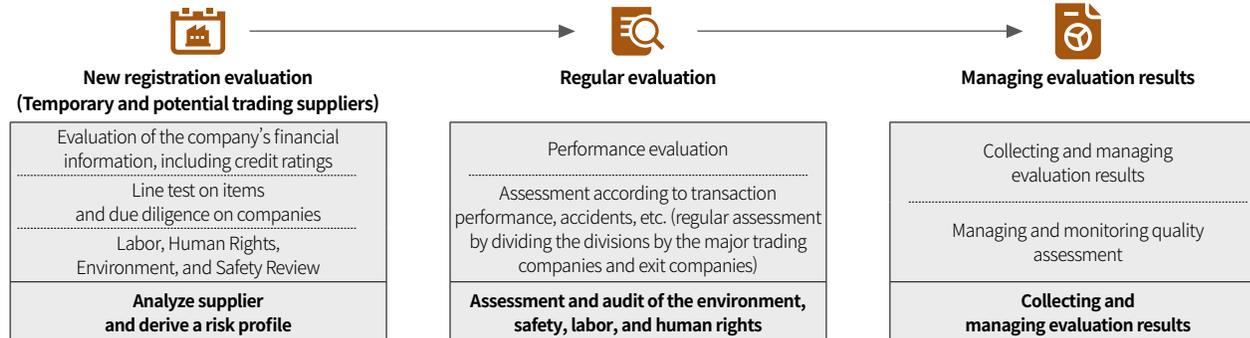


### Purchase Details in 2019



1) Miscellaneous: IT  
2) Wuxi, Chongqing

### Supplier Evaluation Management Process



**DATA REPORTING**

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**Inspection and Improvement of the Raw Material Supply Chain**

Recognizing that the basis of production is raw materials, SK hynix conducts regular inspections to enhance the competence of suppliers that provide raw materials and carries out monitoring for improvements. In 2019, we carried out a document-based system inspection for 70 suppliers that are currently transacting with us and implemented on-site inspections and improvement activities for 20 domestic and overseas suppliers. 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 occurred. With these systems in place, SK hynix prevents, reviews, and manages the use of hazardous substances by raw materials suppliers in order to preemptively prevent any risks that are associated with complaints raised by customers and violation of regulations. Moving forward, we plan to share exemplary practices that are derived from on-site reviews across the supply chain to enhance suppliers' capabilities to manage hazardous substances.

**Inspection and Improvement Process of the Raw Material Supply Chain**



**Risk Identification & Analysis within the Supply Chain**

SK hynix is carrying out risk identification and analysis focused on sustainability issues and global trends as well as social and environmental factors of local communities. We carry out supplier consulting and due diligence based on stakeholder demands<sup>1)</sup> and suppliers' competence in SHE standards implementation is reflected in their assessment. The result of the assessment is comprehensively analyzed to determine the level of risk, and we demand that the supplier identify items for improvements and implementation of improvement measures.

1) Customers' compliance with the sustainability codes, pledge for compliance, and domestic/overseas regulatory changes

**Supplier ESG Assessment and Major Improvement Efforts**

SK hynix provides free ESG consulting for suppliers according to an annual schedule. In 2019, we increased the number of target suppliers from 41 companies (previous year) to 81 companies and provided consultations. We provide solutions to suppliers that have been evaluated to have a high risk in labor and SHE and monitor them so that the solutions can be implemented. We conduct revisits to verify whether the risks have been alleviated. Depending on the suppliers' requests, we provide ESG relevant improvement tools and expert training to suppliers so that they can perceive their ESG risk and make internal improvements.

Classifi- cation	Supplier ESG Risk Assessment		
	Number of Suppliers Subject to ESG Risk Assessment within 3 Years	Assessment Ratio (%)	Number of Suppliers with High ESG Risk (Ratio) (%)
Suppliers	<b>1,133</b>	<b>39.4</b>	<b>187/6.5</b>

Classification	2019 Ratio (%)
Percentage of suppliers with high risk that established corrective action plans	<b>100</b>
Percentage of suppliers with corrective action plans that realized improvement in ESG performance within 12 months	<b>96</b>

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## Response to Conflict Minerals

### Approach to Conflict Minerals Regulations

SK hynix agrees on the social significance of the restriction of conflict minerals and we take systematic measures to prevent the use of conflict materials in the process of production. We define conflict materials as 3TG minerals, including gold, tungsten, tin, and tantalum that are mined in the Democratic Republic of Congo or its neighboring countries, and established a conflict minerals management process.

To this end, we are conducting a periodic inspection on the status of the use of conflict minerals within the supply chain, and in the future, we will continue to commit ourselves to increase the number of CFS<sup>1)</sup> certified smelters in the suppliers' supply chain.

1) Conflict-Free Smelter (CFS)

### Conflict Minerals Audit Process



**Step 1. Select targets**

- Investigate mineral information based on the product BOM (Bill of Material) information
- Identify suppliers that pose a conflict minerals threat

**Step 2. Inspection**

- Establish written audit plans for target suppliers
- Notify and request information for written audits
- Review information

**Step 3. Improvement management**

- Request improvement to non-CFS accredited smelters
- Submit suppliers status reports and improvement plans
- Monitor the improvement status

### Conflict Minerals Management System



**Procurement**

- Supply Chain SURVEY
- Supplier assessment management

**Sustainability management**

- Establish policy
- Establish a management system
- Supply chain audit

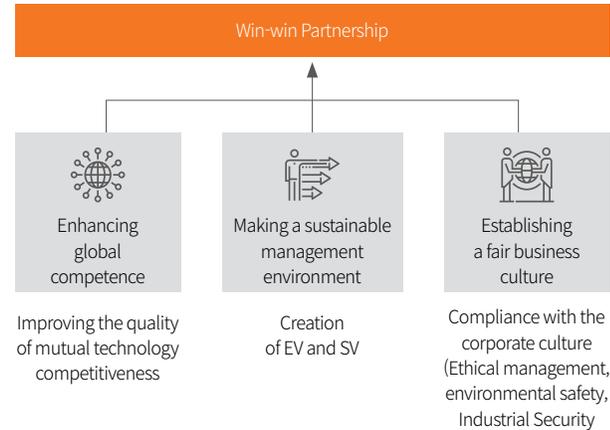
**Quality assurance**

- Conflict minerals DB management
- Supplier MAPPING

## Building a Foundation for Shared Growth

### Shared Growth System

To align our shared growth policy and supply chain communication channels with our purchase strategies, we organized the Partner Collaboration Team under the Purchase Strategy Team. In addition, Compliance and Sustainability CV Promotion are in charge of fair practice and the social and environmental impact management of suppliers, respectively, to ensure shared growth practices in line with our strategic directions.



Improving the quality of mutual technology competitiveness

Creation of EV and SV

Compliance with the corporate culture (Ethical management, environmental safety, Industrial Security)

### Increasing Support for 2<sup>nd</sup> and Lower Tier Suppliers

In addition to 1<sup>st</sup> tier suppliers, we are increasing our support for our 2<sup>nd</sup> and lower tier suppliers with whom we have no direct business transactions. In order to support the overall growth of the supply chain ecosystem, we have raised a Shared Growth Fund of approximately KRW 300 billion to support the 1<sup>st</sup> and 2<sup>nd</sup> tier suppliers while the payment support fund of KRW 70 billion was raised and operated to support the 2<sup>nd</sup> and 3<sup>rd</sup> tier suppliers. In addition, we joined the Industrial Innovation Campaign organized by the Korea Chamber of Commerce to help our lower tier suppliers strengthen their competitiveness. As part of the campaign, we selected 2<sup>nd</sup> tier suppliers based on recommendations from 1<sup>st</sup> tier suppliers. Thereafter, we follow up by providing consulting services for management, SHE practices, and certifications.

### Domestic Mutual Cooperation Performance

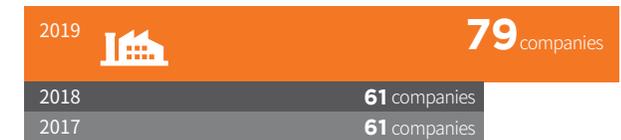
Total financial support for shared growth



Number of companies in the Shared Growth Partnership



Number of companies in the Shared Growth Council



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# Shared Growth Support Program

## Technical support

Recognizing that technological competitiveness is an integral part of suppliers' growth, we share our technological expertise with our suppliers as well as support their technological development. Furthermore, we help them gain competitive advantages through various programs to develop and foster small and medium-sized companies with strong potential for growth.

## Development of Technological Innovation

SK hynix launched the "Technological Innovation Companies" program to support suppliers with strong potential for technological innovation. Suppliers selected for the program are provided with financial, technological, and management support for two years, and the developed products are guaranteed to be purchased to minimize financial risks. We set up a dedicated team to support these companies and ensure that their products are subject to prior assessment at our production line. We will continue to help strengthen the foundation for the growth of the semiconductor ecosystem by fostering prospective small and medium-sized companies.

## Financial Support

SK hynix operates financial support programs for suppliers' financial management. Efficient financial management serves as a basis for growth and reduces potential risks in SK hynix's supply chain. Going forward, we will increase the number of financial support programs and the amount of funds to lay the foundation of shared growth with suppliers.

## Technical Support Program

### Diversification activities

Co-develop technologies for systems, parts, and raw materials with suppliers

**1,701** billion (KRW), in line with purchase

### Financing Technological Development

Finance the development of next-generation technologies with potential for synergy without interest

**10** billion (KRW) per year in 2019 (1 company)

## Financial Support Program

### Shared Growth Fund

Provide low-interest loans for 1<sup>st</sup> tier suppliers for financing operation and facilities (1~1.5% compared to market rate) to support their efficient financial operation

**212.5** billion (KRW) in line with purchase

Provide low-interest loans for 2<sup>nd</sup> and 3<sup>rd</sup> tier suppliers for financing operation and facilities (1.5 - 1.8% compared to market rate) to support their efficient financial operation

**80.3** billion (KRW) in line with purchase

### Network Loan

Determine the credit line based on the performances and provide loans without any supporting documents to support their financial operation

**1** billion (KRW)

### Technical Data Escrow

Store core technological data with Large, Medium, and Small Cooperation Foundations for protection (SK hynix bears the cost)

**19** cases per year

### Technological Innovation Companies

Select technologically innovative SMEs to foster and support them to grow into companies that are capable of sustainable growth

**9** companies

### Semiconductor Fund

Equity investments in promising small and medium-sized semiconductor companies to support their growth

Size of investment: **38.9** billion (KRW)

Equity investments in growing small and medium-sized companies to support the semiconductor ecosystem (2017 - 2032)

Actual investment: **28.8** billion (KRW)

### Payment Support Loan

Improve payment terms for suppliers through interest-free loans of delivery funds to 1<sup>st</sup> and 2<sup>nd</sup> tier suppliers

Size of Fund: **70** billion (KRW)

### Patterned Wafer Support

Supply fine-patterned wafer produced using our process equipment as a development sample to help suppliers improve their development expertise

**5,064** wafers

### Performance Assessment Project

Use systems, materials, and parts from small and medium-sized companies for our production line to support verification/validation

**61** cases

### Win-win Payment System

2<sup>nd</sup> tier suppliers are guaranteed to receive payment from 1<sup>st</sup> tier suppliers and cash in their bonds at the credit rating of a large company

Total **169** companies of 1<sup>st</sup> and 2<sup>nd</sup> tier suppliers

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**Training Support**

Enhancing the competencies of employees is an integral part of strengthening our suppliers' competitiveness. SK hynix offers various training support programs for the employees of SMEs.

**Training Support Program (Performance in 2019)****Mobile/Semiconductor Academy**

Provide job specialization training, leadership, and e-learning training to the employees of suppliers

**8,183** participants completed

**SK Shared Growth CEO Seminar**

Improve the CEO's competence and network in the areas of management, the economy, humanities, and society for 1<sup>st</sup> and 2<sup>nd</sup> tier suppliers

**35** participants from 1<sup>st</sup> tier suppliers

**140** participants from 2<sup>nd</sup> tier suppliers

**Semiconductor Win-win CEO Seminar**

In 2018, we organized the Semiconductor Win-win CEO Seminar to enhance the competency of the CEOs of our 2<sup>nd</sup> and lower tier suppliers with which we have no direct business transactions. Starting in July this 2018, the seminar was held eight times in 2019, where more than 100 CEOs including 2<sup>nd</sup> tier suppliers and 1<sup>st</sup> tier suppliers of our group's affiliates attended. We will continue to create an ecosystem to promote mutual growth through seminars and other initiatives.

**MBA for Mid-level Managers**

Provide competency enhancement training for suppliers' mid-level managers in strategy, accounting, finance, marketing, HR, and organization

**29** participants completed

**SHE Consulting**

Provide consultation and share activities for legal compliance and strengthen the SHE practices and management of supply chain

**69** companies

# Supplier Communication

**Listening to VOCs**

Procurement officers or win-win cooperation officers visit 1<sup>st</sup> tier suppliers in person in the first and second half of the year to listen to the VOCs and provide feedback on the improved areas. In addition, the CEO of SK hynix or executive in charge of procurement visits 2<sup>nd</sup> tier suppliers to expand technology exchanges and discuss difficulties.

**Shared Growth Council**

SK hynix runs the Shared Growth Council with its suppliers that possess key competence in each area of business on an annual basis, enhancing its strategic partnership with suppliers. In 2019, we held a regular general meeting of the Shared Growth Council with the executives from 80 suppliers, and we focused, in particular, on the enhancement of 2<sup>nd</sup> and 3<sup>rd</sup> tier suppliers' business competitiveness. We organize the Shared Growth Day every October in order to promote communication and develop a sense of pride. In 2019, representatives from 85 suppliers joined the event which was held under the theme of "Beyond Shared Growth, Become a Family," while we presented awards to 14 suppliers for their excellent performance. In addition, we hold environmental safety and health committee meetings on a monthly basis to discuss major SHE issues with suppliers in the industrial complex. We also hold Win-win Program Seminars with suppliers to promote our support programs every year.

**Communication with In-house Suppliers**

To manage the risks in our supply chain more effectively, SK hynix keeps close communication with our suppliers as well as subcontractors that are internal suppliers. Our site managers identify on-site problems through Win-win Council Meetings and work to resolve conflicts. Furthermore, we are supporting improvements in work hours in order to maintain a healthy work-life balance for our employees.

**Win-win Cooperation Wage Sharing**

SK hynix has been promoting win-win cooperation wage sharing since 2015 with the aim of improving and raising the wage level of our suppliers. We have expanded our win-win participation by sharing some of our employees' salaries, rather than directly raising funds. So far, we have provided KRW 5.9 billion for wage increases and KRW 700 million for medical welfare at our suppliers. In 2019, we shared wages with 8,170 employees of our suppliers and subsidiaries.

**Total Beneficiaries of Win-win Cooperation Wage Sharing**

**8,170** people 

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# Human Rights & Labor

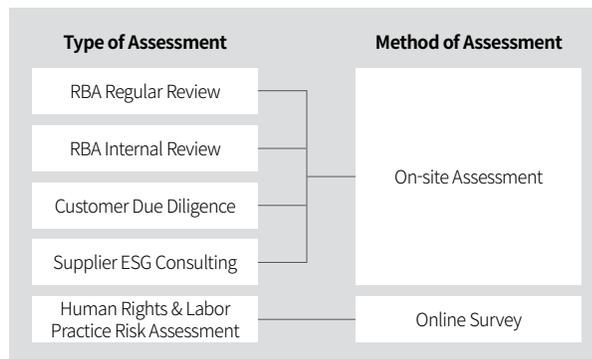
## SK hynix's Approach to Human Rights & Labor

SK hynix established and promoted "Human Rights & Labor Policy of SK hynix" in order to contribute to the protection of human rights and raise awareness throughout our business operation. The policy includes a total of ten guiding principles of respect for human rights: the prohibition of forced labor, the prohibition of child labor, work of minors, work hours, wage, non-discrimination, freedom of association, responsible procurement of minerals, and protection of stakeholder information. SK hynix also supports the UN UDHR (Universal Declaration of Human Rights) and respects the UN Human Rights Commission's guidelines on business and human rights, as well as DACA (Deferred Action for Childhood Arrivals). We comply with the labor relations legislation of each and every country in which we operate our business and follow the RBA principles.

 [Human Rights & Labor Policy of SK hynix](#)

 [Anti-Slavery and Human Trafficking Statement](#)

### Type of Human Rights & Labor Practice Assessment



## Human Rights & Labor Management System

### Management of Human Rights & Labor Impact Management

SK hynix established a risk assessment process to analyze risks associated with human rights and labor practices in the supply chain and plan for improvement. The OECD established the OECD Due Diligence Guidance for Responsible Business Conduct to present a framework for due diligence. Due diligence clarifies the procedures for conducting the activities to identify and prevent negative impacts across the enterprises. Accordingly, SK hynix established a human rights and labor policy in 2013 while conducting assessments of the areas of violation of human rights and labor practices based on stakeholder and RBA code in the company and its supply chain.

### Human Rights & Labor Practice Assessment Process



### Employee Human Rights Training

To respect the human rights of employees and raise awareness of human rights management, SK hynix is establishing an additional human rights training program. Employees will be provided with online human rights training organized by UN Global Compact Network Korea. Through this, we will raise awareness of human rights management that adheres to international standards. In addition, we plan to establish programs that explore the topics of ESG, SDGs, and climate change to enhance employees' understanding of sustainability management and promote social values across the company.

### Human Rights and ESG Training Program

Training program	Program format	Schedule	External partner
What is Human Rights Management?	Online	May - December (year-round)	UN Global Compact Korea
What is ESG?	Online	May - December (year-round)	Consulting companies/ financial companies
What are the SDGs?	Online	June - December (year-round)	UN Global Compact Korea
The Global Trend of Climate Change	Online	October - December (year-round)	UN Global Compact Korea

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**Human Rights Ombudsman Channel**

SK hynix has an anonymous bulletin in our intranet where employees can report human rights issues. We encourage victims or witnesses to immediately report any issues through the bulletin, and when issues are identified, we take appropriate actions under relevant regulations after conducting investigations.

**Human Rights Complaint Process**



# Human Rights Impact Assessment Results

SK hynix conducts annual assessments of human rights and labor practices in both domestic and overseas worksites based on the key stakeholder and RBA items while taking necessary improvement measures against identified risks.

**Human Rights & Labor Practice Risk Assessment**

In addition to periodical RBA assessments of both domestic and overseas worksites, SK hynix conducts internal self-assessments. These assessment processes are established to carry out an in-depth analysis of the risks associated with human rights and labor practices and strengthen the level of follow-up actions, and create a safe working environment. The internal assessment in particular is performed in conjunction with the official review process (document review, on-site validation, and interview) to standardize the risk assessment process and identify the level of risk and the gap in awareness between field personnel and managers.

In 2019, we identified the failure of the emergency lights and non-compliance with working hours with the suppliers while insufficient reflection of the RBA requirements in the internship contract was found in our worksite. Going forward, we will further raise awareness and improve implementation through training with the focus on the RBA and customer code while strengthening the validation on site to assess the application in practice.

**Labor & Human Rights Impact Management in the Supply Chain**

SK hynix manages labor and human rights risks throughout its supply chain based on the RBA VAP (Validated Audit Process). ESG Consulting includes standards for key aspects of the RBA code and domestic laws and provides consultation to our suppliers in managing the risks associated with human rights and labor practice (including safety, health and environment) in the supply chain. In 2019 in particular, a survey was conducted to identify the areas of consultation while requests for participations were accepted. Based on the survey results, 81 suppliers were selected, including the risk group, group to be consulted, and resident suppliers, and ESG consultation was provided.

Based on the results, we identified the areas of improvement in youth employee protection regulations, requirements for employment contracts, working hours, and employment rules. The level of these risks and the need for improvement were communicated to suppliers' managers and solutions were proposed. For internal suppliers, we conducted in-depth interviews based on RBA checklists along with training on consultation and requirements for personnel who committed violations.

In 2020, we will establish a training program to enhance the understanding of suppliers and raise awareness of the RBA code and changing environment, based on which we will improve the level of self-assessment of our suppliers.

**RBA VAP** based Supply Chain Management



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## Advance Assessment of Human Rights &amp; Labor

Classification	Key Human Rights Issues	Description	Improvements and Remedies are taken in 2019
<b>Employees</b>	Working hours	In Korea, where major business sites are located, long working hours are becoming a major issue with recent regulations imposed by the government	<ul style="list-style-type: none"> <li>· Maintain a healthy work-life balance</li> <li>- Ensured efficient management of working hours e.g., Discretionary holidays and flexible work hours</li> <li>- Reduced unnecessary work and overtime and operate programs to improve productivity within legal working hours</li> <li>· Support the improvement of working hours for suppliers' employees</li> </ul>
	Behavioral issues in the workplace	Resolve issues such as offensive conduct, insults, and sexual harassment in the workplace	<ul style="list-style-type: none"> <li>· Conduct training on human rights for all employees e.g., prevention of sexual harassment and disability awareness</li> </ul>
	Stress management	Exposure to offensive conduct and unreasonable treatment from external stakeholders e.g., customers	<ul style="list-style-type: none"> <li>· Operate "Hu" programs (e.g., Visiting Mind Stroll) to prevent work-related stress (62.2% of the total participants reported relief from work stress and insomnia)</li> </ul>
	Occupational safety & health	Exposure to physical danger and hazardous materials	<ul style="list-style-type: none"> <li>· Operate governance to discuss safety issues with internal and external stakeholders, such as the Industrial Safety and Health Committee and the Industrial Health Advancement Committee</li> <li>· Internalize the Safety First culture, Establish a SHE cohort, operate emergency response systems, and organize training and IoT-based prevention activities to promote the employee safety</li> </ul>
<b>Suppliers</b>	ESG assessment	Vulnerabilities and legal violations associated with human rights, labor practices, safety, health, and the environment	<ul style="list-style-type: none"> <li>· Visit to suppliers and risk consulting</li> <li>- Provide consultation for suppliers with a high level of ESG risk or those who wish to have it</li> <li>- Assess the level of risk and present solutions for working conditions</li> </ul>
	Working conditions	Poor conditions for those with unstable working conditions such as long-term relocation	<ul style="list-style-type: none"> <li>· Improve working conditions and the environment based on consultation with the labor union each year</li> <li>· Raise the pay and provide medial welfare support through Win-win Cooperation Wage Sharing (wage KRW 5.9 billion, medical support KRW 700 million)</li> </ul>
	Behavioral issues for security guards	Resolve issues such as offensive conduct, insults, and sexual harassment that may arise in the course of worksite security processes	<ul style="list-style-type: none"> <li>· Organize training for security personnel for the prevention of sexual harassment and disability awareness as part of efforts to prevent human rights violations</li> </ul>
	Conflict Minerals	Of the four major conflict minerals used in the product, the minerals produced in Congo and nearby areas cause problems such as child labor	<ul style="list-style-type: none"> <li>· Established a policy and annual inspection process to prohibit the use of conflict minerals (Use of conflict minerals in 2019: 0)</li> </ul>
	Occupational safety & health	Exposure to safety and health risk factors that may arise in worksite or external manufacturing sites	<ul style="list-style-type: none"> <li>· Conduct joint safety inspections with suppliers and organize the Safety Golden Bell (Regular Council Meeting in 2019: 49 times, Co-prosperity &amp; Cooperation Program: Grade S)</li> <li>· Provide SHE consulting for external suppliers (For 69 suppliers in 2019)</li> </ul>
<b>Customers</b>	Customer Personal Information	Internal information leakage or personal information breach by external hacking attacks	<ul style="list-style-type: none"> <li>· No case of customer personal information breach</li> <li>· Subscribing to liability insurance to meet the obligations caused by a personal information breach</li> </ul>
	Customer satisfaction	Customer damage caused by the occurrence of unfit quality in products or the inclusion of gravely hazardous substances in the product.	<ul style="list-style-type: none"> <li>· Monitor the data of substances in products through Green Product Management System (GPMS)</li> <li>· Implement activities to enhance customer satisfaction, such as Quality Management throughout the entire process (product quality issues reduced by 70%)</li> </ul>

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# Talent Management

## SK hynix's Approach to Talent Management

SK hynix believes that the company's growth and development depend on the discovery and growth of our employees' competence. To this end, we operate customized programs that develop competence and make company-wide efforts to create a corporate culture in which individual employees can demonstrate their competence. Based on talent cultivation and a healthy corporate culture, we will continue to make investments in securing our global competitiveness

### Result of the "employees' passionate practice" section of the Culture Survey

Motivation



Challenging higher goals



Efforts to develop competence



## Developing Semiconductor Experts

### Customized Adaptation Programs for New Employees

To encourage new recruits' adaptation, SK hynix is enhancing our On-Boarding Program. In 2019, we expanded engagement/discussion type classes in consideration of the characteristic of Millennials and operated the site-oriented training program "Group Intensive Course" which is designed to provide field-level work know-how, thereby supporting new recruits to quickly adapt to their duty. We also provide an environment where recruits can carry on their self-directed development through the mentoring of senior employees, participation in SKHU (SK hynix university), and use of "Smart Cookie," video content for continuous learning. Ultimately, we strive to grow all our employees as "World-best semiconductor experts" through these efforts.

### Enhancement of the Mentoring Program

SK hynix operates a mentoring system to help new recruits with their technical capability improvements, a better understanding of the company, and stable adaptation. In particular, we enhanced the program and restructured it into Hi-Mentoring 3.0. With its online content, Hi-Mentoring 3.0 clearly presents the purpose of mentoring and the roles of mentor/mentee and shares tips for activities. Through this, we are providing support for mentees' effective learning and quick adaptation to their work.

As a result of our effort in talent cultivation, we saw higher scores compared to the previous year in the three items—motivation, challenging higher goals, and efforts—to develop competence within the "employees' passionate practice" section of the culture survey.

### SKHU

To enhance the fundamental technological competitiveness of engineers, SK hynix is providing expert technical training to foster all its employees as experts in semiconductor technology. Equipped with a systematic curriculum that is designed to enhance our technological prowess, SKHU is also contributing to internalizing employees' self-directed learning as a corporate culture. In addition, SKHU provides specialized training in various areas including AI and DT (Digital Transformation) as well as semiconductor technologies in order to lay the foundation to cultivate convergent talent. From 2020, we plan to expand lectures given by expert professors to encourage our employees to acquire a high level of technical skills.

Furthermore, SKHU has developed VR content to help employees' accurate understanding of the principles of technologies. Understanding of semiconductor products requires a capability in comprehending the principle of its 3D form. The VR content developed by SKHU, therefore, enables an indirect experience of the technological mechanism and principles. In the future, we plan to develop content that resolves technical challenges with the help of VR and provide it to our employees.

### Training Performance

Total training hours



Total training cost



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# Improving the Organizational Culture



Employees sharing their opinions in the Junior Board and Happiness Design Group

## The Junior Board

To realize the happiness of our field employees, SK hynix is operating the Junior Board. Based on this Junior Board, we are bringing changes and innovation to corporate culture by relaying opinions for the system establishment and improvement directly to the management and also by freely communicating with them. The Junior Board consists of three subgroups - system improvement, nexus with generation MZ<sup>1)</sup>, and efficient work, along with 12 group-specific channels and discusses various topics. In 2019, the program achieved major results including improvement of the flexible work hour operation and diversification of commuting bus operation hours. In addition, we held a Communication Day to promote communication and consensus among the Junior Board members where all members of the Junior Board participated in a lecture to discuss management performance, direction of further development (To-be model), and improvement for communication techniques. In the future, we plan to discuss items that need to be improved and developed from a corporate perspective and enhance the understanding in New SKMS and identify the ways to practice it through the program.

1) Generation MZ: Millennials and generation Z (the digital generation born between mid 1990s to early 2000s).

## Happiness Design Group

We are operating a group in which junior employees who have been in service for two to five years and women (working mothers) in their thirties who juggle both work and child-rearing can carefully consider and design their happiness. Through regular meetings, the group discussed various topics including how to mentor new recruits, the need for the development of female leaders, and corporate culture with consideration and dignity. Some of the discussions underwent additional discussions in the Junior Board and were implemented as corporate culture enhancing activities. In the second half of 2019, the group carried out an in-house broadcasting culture campaign on the topic of consideration and respect among employees and achieved an improvement of the work diligence of pregnant employees in 2020. Going forward, along with the Junior Board, the Happiness Design Group plans to voice their opinion in the subcommittee while carrying our more active communications and preparing for new ventures for employee happiness.

## Retiree Support Program

SK hynix operates the “Retiree Support Program” to support employees who are to retire for their successful retirement life design, career development, and exploration of their field of interest. In this program, retirees receive various support including personal diagnoses and customized consultations as well as workshops to encourage their stable adaptation to the retired life. In addition, we provide customized support that take individual retiree's circumstances in consideration, thereby striving to foster a strong sense of belonging in our employees and soon-to-be-retired employees so that they practice VWBE for greater happiness in their lives.

## Organizational Culture Deep Change 2020

As part of this activity, we promote 1-on-1 programs for the enhancement of communication with leaders, conduct 100 sessions of Happy Talk per year, and competence enhancing training for leader performance, labor-management relationship, and task management. In terms of employee growth support, we continue to strengthen technological competence and develop potential leaders through the enhancement of SKHU. Further, from the perspective of the HR system, we are operating the organization in a transparent and performance-based manner through regular manager dismissal/appointment system, eradication of four major unethical practices, management of legal risks, and compliance with RBA code. To innovate work culture into one in which work-life balance is respected, we plan to develop various activities such as reforming the internal infrastructure for horizontal communication and creating an “Agile meeting/report culture.”

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## Employee Communications

### Employee Satisfaction Level

SK hynix uses various communication channels including the Culture Survey, Labor Risk Assessment, an anonymous forum on the Intranet, and periodical interviews to listen to the voices of our employees and monitor their satisfaction level on jobs and the organizational culture. We are developing a way to build a flexible organizational culture to create an environment where employees, our most valuable assets and source of competitiveness, can focus on their jobs while having faith in the company.

### SK hynix Culture Survey

SK hynix conducts a culture survey for the improvement of organizational culture every year to all its employees. The survey consists of “Performance Boosting Organizational culture” and “SKMS (SK Management System)” with questions specific to leaders and members for effective analysis. We expanded and diversified the areas of “employees’ passionate practice” and “employee happiness” to better listen to our employees’ opinions regarding the organizational culture and communication.

### Happy Talk

SK hynix held “Happy Talk” hosted by the CEO as an effort to become a company where employees are happy to work. In the event, the CEO and employees met to freely discuss happiness and sought the ways to make SK hynix a happier company. Specifically, discussions included conditions that make a company that employees feel proud and happy to work at, such as “fairness of the appraisal system” and “flexible work hours.” By doing so, we shared a consensus to create happy SK hynix. We also plan to hold the “Happy Talk” in 2020 to provide an opportunity for the CEO and employees to gather and share ideas to create a happy company.

## Global Campus Talent Development

While local employees account for 94% of the workforce at Wuxi subsidiary, Korean employees who are expatriated to Wuxi take up the remaining 6%, showing that the local employees are expanding to more positions. 91% of the local employees are generation MZ, and, in particular, generation Zhuringhao<sup>1)</sup> takes up 50% of the workforce, representing the rapid generational shift. To this end, we are implementing the “Organizational Culture Deep Change 2020” project to change the organizational culture into one that fits generation MZ, based on the understanding of generational characteristic. The purpose of Deep Change 2020 lies in the creation of a performance-oriented horizontal organizational culture which the Wuxi subsidiary aims to achieve, with a focus on the direction of four changes across “enhanced leadership, employee growth, HR system, and innovation of the work culture.”

2) Generation Zhuringhao: A generation of youth born after 1990

### Development of Semiconductor Talent Using Wuxi SKHU

In March 2019, SK hynix established Wuxi SKHU for the strategic development of talent in line with the rapidly changing environment of the Chinese semiconductor industry. Wuxi SKHU consists of four departments—Process, Equipment, Yield, and Quality. New recruits can participate in customized training programs by checking his/her development roadmap from the moment of joining the company. Through this, they can become aware of the vision of their growth as well as the improvement of their technical competence. In addition, we are sharing theoretical knowledge by vitalizing the lectures given by competent staff through the training curriculum specialized for each department. In 2020, we plan to provide lively training that encompasses theoretical knowledge as well as various 3D experience and practices by developing equipment practice processes through the introduction of VR content and the establishment of an equipment training center. We will add more content to the SKHU training program and thereby enhance the semiconductor competence of the whole Wuxi subsidiary.

### Establishment of the Semiconductor Talent Development Platform in Jiangsu Province

In 2019, SK hynix established a semiconductor talent development platform in a consortium organized with the government of Jiangsu Province, Nanjing University in Jiangsu, and vocational college of information technology at Nanjing, Huai’an, Cangzhou, and Jiangsu. The platform is designed to allow universities and vocational colleges within Jiangsu Province to recruit students in semiconductor studies and we provide a training curriculum in semiconductor and specialized lectures. In 2019, we successfully developed 110 semiconductor talent through this platform, and in 2020 we plan to expand the scope and size of the operation by adding South East University and Wuxi Vocational College of Information Technology to the platform for more recruits.

### No. of semiconductor talent fostered by the Semiconductor Talent Development Platform in Jiangsu Province

**110** people 

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## R&amp;D

## SK hynix's Approach to R&amp;D

SK hynix strengthened its competitiveness as a global semiconductor company with technology research and the development of innovative products. In addition, we continuously expanded investment in R&D activities to enhance customer satisfaction through improved product quality, and provided opportunities for our employees where they can actively engage in R&D and suggest and realize their idea through programs such as "Open Innovation" and the "In-house Venture Accelerating Program." As we are aware of the fact that sustainable growth is realized by consistent R&D, we will establish and implement mid- and long-term goals and continue to create the value that our customers want.

## R&amp;D

**3.1885** trillion (KRW) 



## Discovering Innovative Ideas



The Third Semiconductor Innovative Idea Contest Award Ceremony

## Open Innovation

SK hynix is aware of the ever-increasing technical demands and roles of semiconductors in line with the shifting ICT paradigm, namely the Fourth Industrial Revolution. To address this trend, we are carrying out Open Innovation, an open activity that promotes external cooperation with customers, suppliers, and general experts, as well as internal cooperation. As a key activity, we hold the annual Semiconductor Innovative Idea Contest at which anyone can participate. The winning ideas of this contest are applied for intellectual property rights. The ideas that require additional research will receive research investment from SK hynix and will be developed as an academy-industry research task. In 2019, we granted a total of KRW 265 million to 17 teams that presented their outstanding ideas. As a result of receiving ideas for a total of five categories with the newly added IT category (devices and process, design, solution, CIS, and IT), in particular, the number of ideas submitted doubled compared to 2018. The quality of submitted ideas greatly improved as well, and two Grand Award-winning ideas were selected for the first time since the establishment of the contest.

## HiGarage In-house Venture Accelerating Program

SK hynix operates a venture support project to spread the corporate culture in which employees can be free of the fear of failure and use creativity to create new values. With this program that guarantees reemployment in case of venture failure, independent business space, and venture consultations, we have established a foundation on which employees can boldly challenge for business model innovations.

A total of 240 teams applied for the first recruitment held in the first half of 2018, and we selected six teams among the applicants and granted KRW 200 million per team. In 2019, four teams successfully started their venture business, and we are currently undergoing the development process for the six teams selected among the 74 teams that have applied for the second round of the program.

## HiGarage Generation 1 Venture Team's status

Team	Key business content	Expected effects
Garage Engineering	Development and manufacturing of cryogenic chiller	Recycling of coolant with reprocessing
RC tech	Reconstruction and development of semiconductor equipment	Reduce the amount of cleaning solution used for equipment
MHD	Develop materials for semiconductor processing	Reduction of cost through simplification of the semiconductor production process
Alsemi	Development of an AI-based semiconductor Modeling of application software	Secure domestic fundamental technology in line with the progress in AI technology

Number of teams applied/selected  
for the 2019 In-house Venture Accelerating Program

**74** teams applied — **6** teams selected 

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# Social Contribution

## SK hynix's Approach to Social Contribution

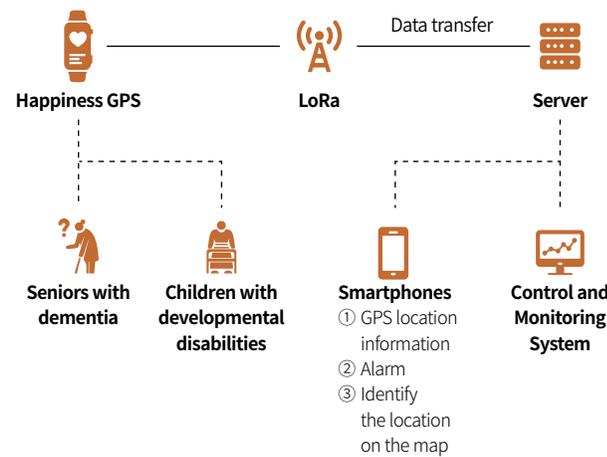
SK hynix operates under the social contribution mission to “make local communities a better place to live.” To this end, we engage in various social contribution activities through which we keep both donors and beneficiaries satisfied, seek to have win-win relationships with local communities, and create SV. We established two principles: “social contribution that connects people and technology” and “Social contribution that creates happiness with local communities.” Based on these principles, we plan to carry on our various activities in 2020, with an aim to ① perform ICT-based resolutions of social problems, ② enhance the development of future talent, and ③ strengthen talent donation activities.



## Resolution of Social Issues with ICT

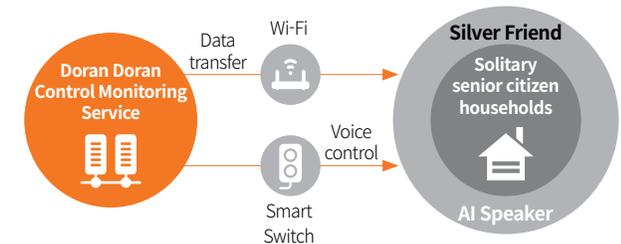
### Preventing the Disappearance of Seniors with Dementia and Children with Developmental Disability with “Happy GPS”

As we enter into a super-aging society, there are a growing number of disappearance cases of seniors with dementia, putting more families into distress. In order to prevent such disappearances and alleviate families suffering, we developed and distribute “Tracking Device for Missing Persons - Happy GPS,” as a leading company in the memory technology. In 2019, we expanded the scope of the project to include children with developmental disabilities, who are also vulnerable to disappearance cases. In 2019, we provided Happy GPS to a total of 3,000 beneficiaries, and as a result, all reported missing persons were found and the average time spent to find the missing person shortened. This also brings relief to the missing persons’ families, and the police reported increased efficiency in searching for missing persons.



### Improving solitary senior citizens' quality of life

To address the rapid increase of solitary senior citizen households and the associated social issues, SK hynix established a support system for solitary senior citizens based on ICT, a core technology of the Fourth Industrial Revolution. “Silver Friend” is an activity aimed to effectively manage the health of senior citizens by providing AI speakers and IoT products to senior citizens and relaying their use of the system to designated life managers. Through this activity, we are improving senior citizens’ quality of life with immediate responses in emergencies, fundamental alleviation of loneliness, and customized services based on the “databasification” of daily life patterns. As of 2019, the total number of senior citizens who benefited from Silver Friend is 2,100. We are planning to expand the operation of Silver Friend program based on the region where suppliers and our worksites are located.



The number of solitary senior citizens who benefited from Silver Friends

**2,100** persons (2019 cumulative)

No. of solitary senior citizens and children with developmental disabilities who received “Happy GPS”

**13,000** persons (2019 cumulative)

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## Development of Future Talent

### Career Mentoring Happy Dreaming

SK hynix provides a mentoring service through which our employees provide middle and high school students of the local communities with insight into their work and careers in the semiconductor industry, as well as careers in science and engineering. We are running various training programs related to the Fourth Industrial Revolution such as AI, IoT, and VR. In the future, we will newly prepare a career mentoring program in which leaders (researchers, team leaders, and project leaders) of our company participate. In this way, we will invigorate employee-led talent donation volunteer activities.

### “Heinstein,” Educating Future Science Talent

SK hynix provides software (coding) education to underprivileged children and youth in local areas in Korea with relatively poor IT educational infrastructure in order to foster them as future science progenies. For outstanding contest winners, we grant overseas science tours. In 2019, we expanded the program to Seoul and Seongnam including Icheon and Cheongju, where the program was limited, to lay a foundation for the program’s nationwide expansion. In 2020, we plan to provide more training programs by newly establishing additional advanced programs for the previous winners of contests.

### Happiness IT Zone

SK hynix is fostering future science talent by supporting the youth welfare centers of local communities with poor science educational infrastructure to create IT education spaces. We provide better educational spaces to children and youth who use the facilities by providing IT education infrastructure such as PCs, beam-projectors, VR equipment, and 3D printers, as well as the renovation of outdated facilities. In the future, we will create new IT Zones where citizens and students of local communities can demonstrate their creativity, thereby contributing to the development of future talent.

## Talent Donation & Sharing Fund Activities

### Happiness Sharing Volunteer Group

Employees of SK hynix engage in volunteer activities by organizing the “Happiness Sharing Volunteer Group” in order to communicate with local communities and practice the sharing of happiness. The Happiness Sharing Volunteer Group consistently perform volunteer activities by visiting social welfare centers for children, senior citizens, and people with disabilities. Further, the group also participates in programs such as career mentoring, Silver Friend Volunteer group, and Junior Engineering Class that create greater SV with their talent. In 2019, we diversified volunteer programs by newly establishing an engaging talent donation volunteer program where employees learn skills and perform volunteer work based on their new skill.

#### No. of participants in Happiness Sharing Volunteer Group

**4,884** persons

No. of volunteer sessions

**659** sessions

No. of institutes visited

**23** institutes

Total volunteer hours

**16,737** hours

No. of Happiness Sharing Volunteer Group

**182** groups

### Happiness Sharing Fund

SK hynix operates the Happiness Sharing Fund which is created through the voluntary participation from our employees and the matching grant program. With the fund, we run various social contribution projects that are aimed at fostering future talent and resolving social issues in Icheon and Cheongju. In 2019, we raised KRW 2.88 billion, and in 2020 which marks the 10th anniversary of the fund, we expect to reach a cumulative KRW 20 billion in the fund. The fund is entrusted to the Community Chest of Korea in Gyeonggi and Chungbuk for transparent management. Every year, the Happiness Sharing Fund Workshop and Meeting is held for business planning and performance review, thereby realizing the continuous development of the project.

#### Number of Happiness Sharing Fund beneficiaries

**4,553** persons

No. of employee participants

**16,012** persons

Amount of funds raised

**2.88** billion (KRW)



A picture of Heinstein activities and an internal view of Happiness IT Zone

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## Social Contribution in Global Campuses



"Happiness Bus" home visits



A happy companion "Happy Umbrella"



Grand Award in the CSR Creative Innovation category

### MAKE DRAM, MAKE DREAM (social contribution at Wuxi region)

**Happiness Bus** Wuxi subsidiary of SK hynix in China is implementing local community-based activities to resolve social issues. "Happiness Bus" is a mobile medical clinic that provides free health checkups for residents, including low-income populations, who are in the blind spot of medical services. Equipped with ICT-based cutting-edge medical facilities, Happiness Bus provides free health checkups and medical consultation two to three times per week to agricultural regions, resident groups, and senior citizens in nursing homes. In 2019, a total of 7,242 people received the benefit of free health checkups.

**Happy Umbrella** Happy Umbrella Wuxi subsidiary decided that an accident prevention campaign is needed for the elementary students in regions where traffic accidents frequently occur. To this end, we distributed Happy Umbrellas (transparent umbrellas) to school teachers and residents with disabilities in the region to promote the prevention of traffic accidents. The Happy Umbrellas are, under the agreement with the local government, made with fluorescent materials that reflect light to protect pedestrians' safety at night as well as to improve the visibility of the students that use the umbrellas. In 2019, we distributed Happy Umbrellas

#### Happiness Bus - Free Mobile Medical Service Project Beneficiaries

**7,242** people/year 

#### Happy Umbrella - Local Accident Prevention Campaign Beneficiaries

**57,232** people/year 

#### Philanthropic Support Insurance - Underprivileged Adolescent Support Project Beneficiaries

**6,000** people/year 

#### SK Light of Hope - Cataract Surgery Project Beneficiaries

**1,510** people/year 

#### Philanthropy - Youth Education Support Project (Children in Poverty) Beneficiaries

**1,677** people/year 

to 57,232 people, which is an increase of about 16,000 people. We also plan to distribute Happy Umbrellas to senior citizens, connecting the campaign to the Happiness Bus campaign. In addition, we carry out various local social contribution activities such as "Philanthropic Support Insurance," a support program for underprivileged minors, "SK Light of Hope," a cataract surgery project, and the "Philanthropy" youth education project.

### Global Social Contribution Performance

The Wuxi subsidiary of SK hynix in China carried out activities to resolve the issues of local communities based on our DBL management principle, and as a result, received the Presidential Commendation for Global CSR at "7<sup>th</sup> The Company Loved by Korea Government Awards" in 2019. Furthermore, we were selected as the Model CSR Korean Corporate in China (Grand Award in the Creative Innovation category) by the CSR Forum in 2019 and presented a best practice case of CSR. At the CSR photo exhibition held in conjunction with the event, we received the 2019 Excellence Award for "Firefighting Social Contribution" followed by the reception of the Grand Award for "Happy Umbrella" in 2018. Such awards prove that SK hynix is well recognized for our outstanding performances in customized local social contribution activities.

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# Taxation

## Direction for Taxation

SK hynix deeply recognizes its social responsibility in taxation as our business can leave serious economic and social impacts. Therefore, we strive to comply with the tax legislation of each and every country we operate our business in and fulfill our social responsibility. To achieve this, we aim to:

- Understand and comply with the intent of tax legislation.
- Recognize an appropriate amount of tax to each and every tax jurisdiction<sup>1)</sup> 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 taxation authorities.
- Employ appropriately trained and qualified tax professionals who have knowledge and understanding of our business
- Actively utilize external tax advisers when specialized expertise is required for sophisticated and uncertain tax issues.

1) Tax jurisdiction: All tax jurisdictions in which each constituent entity of the Group resides for taxation purposes.

### Approach to Tax Risk Management and Governance

**Compliance with Global Taxation Principles** — We aim to comply with the tax regulations at each and every country we operate our businesses in. We faithfully report and pay taxes under the local tax laws and provide information in a timely manner when requested by taxation authorities.

**Transparent Transactions** — We have established a Transfer Pricing policy based on the “arm’s length pricing method” under the OECD guidelines that are commonly accepted by all tax jurisdictions, and we endeavor to pay the legitimate amount of tax in all tax jurisdictions where income is generated. The CFO takes the responsibility of the administration, preparation, revision, and approval of our Transfer Pricing policy. The Global Taxation Division reports to the Board of Inspection if there is any material revision of the pricing policy.

**Preparation of BEPS Documentation** — In accordance with the BEPS<sup>2)</sup> action plan set by the OECD, a considerable number of countries revised their tax laws. We understand the intent and purpose of the BEPS declaration and comply with the policies and processes revised by the law. We faithfully comply with the instructions of the Country-by-Country Report.

2) BEPS: Base erosion and profit shifting

### Our Position to Tax Planning

We do not engage in any abusive taxation activities including the use of tax haven or low-tax rate tax jurisdiction. We adhere to the principle of faithful practice as a responsible taxpayer and also strive to achieve efficient tax management to create maximum value and social contribution. We endeavor to avoid any conflict of interest between stakeholders including the society, shareholders,

employees, and taxation authorities. Internal transactions within the Group are performed based on the arm’s length pricing principle, which is regularly updated in consideration of changes in the business environment.

### Management of the Acceptable Level of Tax Risk

We comply with the tax laws at each and every tax jurisdiction in which we operate our businesses. However, we are well aware that the total elimination of tax risk is impractical due to the complexity and differences in the interpretation of tax laws. To address this issue, we commit ourselves to identify and monitor material tax risks and seek advice and guidance from professional tax advisors on a group level. In addition, we endeavor to recognize the new establishment and revision of international tax laws in a timely manner and strive to actively respond to such risks.

We put our focus on preemptive monitoring and identification of uncertain tax issues. Where any tax law that is uncertain or may be subjected to interpretation and it imposes a material impact on our business, we will engage with external tax advisors and communicate with taxation authorities in order to resolve any issues that may arise.

### Approach to Taxation Authorities

Cooperation with the tax authorities is an important and essential part of tax-related activities. We will cooperate with the taxation authorities in a transparent, honest, and professional manner as we believe that this is the most efficient practice to alleviate or eliminate any uncertainties. Upon the request of taxation authorities, we will provide relevant information at the right time and place. We will commit all our effort to draw mutual agreement should a disagreement arise with the tax authority.

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# ESG Data

## Financial Highlights

### Key Financial Performance

(Unit: KRW billion)

Classification	Details	2017	2018	2019
Income Sheet	Sales	30,109	40,445	<b>26,991</b>
	Gross profit	17,408	25,264	<b>8,165</b>
	Operating profit	13,721	20,844	<b>2,713</b>
	Profit before corporate tax	13,440	21,341	<b>2,443</b>
	Corporate tax	2,797	5,801	<b>426</b>
	Net profit	10,642	15,540	<b>2,016</b>
Balance Sheet	Total assets	45,418	63,658	<b>64,789</b>
	Total borrowings	4,171	5,282	<b>10,524</b>

### Financial Performance by Region

(Unit: KRW billion)

Classification	Sales	Operating income	Cash-basis tax amount due
Korea	27,787	2,115	5,119
Asia	20,213	307	35
U.S.	8,516	75	3
Europe	1,170	6	2
<b>Total</b>	<b>57,686</b>	<b>2,503</b>	<b>5,159</b>

### Creating Economic Values

(Unit: KRW million)

Classification	Details	2017	2018	2019
Employees Local communities	Wage	2,824,241	3,379,207	<b>2,943,846</b>
	Retirement allowance	172,782	190,055	<b>217,826</b>
	Welfare benefits	394,634	498,095	<b>680,875</b>
Local communities	Taxes and dues	2,831,429	5,848,097	<b>507,749</b>
	Donations	76,195	62,041	<b>59,522</b>
Supplier	Raw materials	2,813,574	3,720,087	<b>4,938,205</b>
	Consumables/repair	4,260,362	4,313,317	<b>5,741,929</b>
	Outsourcing	896,281	1,072,222	<b>1,201,938</b>
Company	Reserves value	9,936,216	14,513,980	<b>1,332,389</b>
Shareholders and investors	Interest costs	123,918	94,635	<b>238,508</b>
	Dividends	706,002	1,026,003	<b>684,002</b>

### Shareholders

(Common shares, As of the end of 2019)

Classification	No. of stocks	Shareholding (%)
<b>SK Telecom</b>	146,100,000	20.07
<b>National Pension Service</b>	74,571,776	10.24
<b>Others</b>	463,330,019	63.65
<b>Treasury Shares</b>	44,000,570	6.04
<b>Total</b>	<b>728,002,365</b>	<b>100.00</b>

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## Customers

### Customer Satisfaction Survey Results<sup>1)</sup>

Classification	Details	2017	2018	2019
<b>Customer Satisfaction Level</b>		4.44	4.46	<b>4.43</b>
	Computing DRAM	4.31	4.32	<b>4.38</b>
<b>Customer Satisfaction Level by Application</b>	Mobile DRAM	4.47	4.57	<b>4.67</b>
	Mobile Solution	4.50	4.52	<b>4.30</b>
	Storage Solution	4.51	4.60	<b>4.58</b>
	China	4.44	4.52	<b>4.29</b>
<b>Customer Satisfaction Level by Company</b>	America	4.39	4.19	<b>4.69</b>
	Japan	4.03	4.20	<b>4.63</b>
	Korea	4.57	4.68	<b>4.58</b>

1) Out of 5 points

## Environment

### Greenhouse Gas Emissions<sup>1)</sup>

Classification	Details	Unit	2017	2018	2019 <sup>5)</sup>
	CO <sub>2</sub>		208,939	254,988	<b>103,208</b>
	CH <sub>4</sub>		3,237	4,086	<b>6,540</b>
	N <sub>2</sub> O		85,849	113,306	<b>151,415</b>
<b>Scope 1<sup>2)</sup></b>	HFCs		123,899	131,402	<b>171,672</b>
	PFCs		370,911	420,583	<b>671,204</b>
	SF <sub>6</sub>		154,000	152,365	<b>169,250</b>
	NF <sub>3</sub>		762,795	881,814	<b>852,883</b>
	Total		1,709,628	1,958,542	<b>2,126,171</b>
	CO <sub>2</sub>	tCO <sub>2</sub> eq	3,372,407	3,948,968	<b>4,706,167</b>
<b>Scope 2<sup>2)</sup></b>	CH <sub>4</sub>		656	798	<b>1,257</b>
	N <sub>2</sub> O		5,014	6,082	<b>5,875</b>
	Total		3,378,076	3,955,848	<b>4,713,299</b>
	Overseas transportation (Import)		66,030	58,992	<b>33,565</b>
	Overseas transportation (Export)		19,314	20,650	<b>23,598</b>
<b>Scope 3<sup>3)</sup></b>	Waste		9,379	8,481	<b>6,655</b>
	Overseas business trip		2,414	2,136	<b>1,687</b>
	Employees' commute to work		14,197	18,841	<b>23,454</b>
	Total		111,334	109,100	<b>88,959</b>
<b>Scope 1</b>	Intensity <sup>4)</sup>	tCO <sub>2</sub> eq/ KRW 100 million	5.68	4.84	<b>7.88</b>
<b>Scope 2</b>			11.22	9.78	<b>17.46</b>

1) The verification schedule is delayed by the COVID-19 outbreak and the figures may change in the later verification progress.

2) Based on Icheon, Cheongju, Bundang, Wuxi, and Chongqing Campus.

3) Based on Icheon, Cheongju, and Bundang Campus.

4) Based on the Sales in 2019 Annual Report.

5) Process F-GHG emissions based on the U.S. Electronic Product Environmental Assessment Tool (EPEAT): 2,120,495 tCO<sub>2</sub>eq.

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# Environment

## Energy Consumption

Classification	Details	Unit	2017	2018	2019
Consumption by energy source <sup>1)</sup>	LNG	GJ	4,144,315	4,818,131	<b>2,100,857</b>
	Electricity		65,601,501	78,421,166	<b>78,617,897</b>
	Steam <sup>3), 4)</sup>		678,999	739,437	<b>4,551,895</b>
	Total		70,424,815	83,978,734	<b>85,270,649</b>
Intensity <sup>2)</sup>	LNG	GJ/KRW 100 million	13.76	11.91	<b>7.78</b>
	Electricity		217.88	193.90	<b>291.28</b>
	Steam <sup>3), 4)</sup>		2.26	1.83	<b>16.86</b>
	Total		233.9	207.6	<b>315.93</b>

1) Based on Icheon, Cheongju, Bundang, Wuxi, and Chongqing Campus.

2) Based on the Sales in 2019 Annual Report.

3) Based on Wuxi in 2017 and 2018, and Icheon and Wuxi in 2019.

4) The data collection method was switched to 'steam purchase' instead of 'steam-produced boiler LNG consumption' from 2019.

## Raw Materials Used

(Unit: KRW million)

Classification	2017	2018	2019
Wafer	551,942	848,429	<b>912,544</b>
Lead Frame & Substrate	166,763	182,220	<b>244,818</b>
PCB	137,241	185,872	<b>251,962</b>
Others	1,866,459	2,390,617	<b>3,370,611</b>
S/P supplementary materials	2,161,079	2,701,272	<b>2,537,559</b>
Total	4,883,484	6,308,410	<b>7,317,495</b>

## SHE Expenses

(Unit: KRW 100 million)

Classification	2017	2018	2019
Total	2,833	2,766	<b>1,800</b>

## Waste Recycling

Classification	Business Site	Unit	2017	2018	2019
Recycled Waste	Domestic worksites	ton	219,418	359,117	<b>375,666</b>
	Overseas worksites		31,653	42,379	<b>97,268</b>
	Total		251,072	401,495	<b>472,934</b>
Recycling rate	Domestic worksites	%	91	95	<b>97</b>
	Overseas worksites		58	62	<b>79</b>
	Total		85	90	<b>93</b>

## Waste

Classification	Business Site	Unit	2017	2018	2019
Common waste	Domestic worksites	ton	112,971	169,841	<b>161,556</b>
	Overseas worksites		17,413	20,386	<b>48,741</b>
	Total		130,385	190,227	<b>210,297</b>
Designated waste	Domestic worksites	ton	128,972	206,690	<b>226,057</b>
	Overseas worksites		37,246	47,516	<b>74,863</b>
	Total		166,218	254,206	<b>300,920</b>
Total (Common+ Designated)	Domestic worksites	ton	241,943	376,531	<b>387,612</b>
	Overseas worksites		54,659	67,903	<b>123,604</b>
	Total		296,603	444,433	<b>511,216</b>

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## Environment

### Water Supply and Use<sup>1)</sup>

Classification	Details	Unit	2017	2018	2019
Water withdrawal	Waterworks <sup>2)</sup>		43,289	47,116	<b>53,688</b>
	Surface water		30,528	33,718	<b>30,950</b>
	Underground water	1,000m <sup>3</sup>	0	0	<b>0</b>
	Total		73,817	80,834	<b>84,638</b>
<b>Total water consumed<sup>3)</sup></b>	Total		11,607	14,231	<b>9,448</b>

1) The previous data was modified due to changes to the calculation standards.

2) Including reused water.

3) Water withdrawal - wastewater discharge.

### Water Recycling<sup>1)</sup>

Classification	Business Site	Unit	2017	2018	2019
Recycled water	Icheon		7,161	11,804	<b>14,323</b>
	Cheongju		7,410	6,840	<b>7,308</b>
	Wuxi	1,000m <sup>3</sup>	7,037	6,898	<b>9,176</b>
	Chongqing		112	150	<b>218</b>
	Total		21,720	25,692	<b>31,025</b>
Water Recycling rate <sup>2)</sup>	Icheon		19.1	25.8	<b>31.1</b>
	Cheongju	%	30.1	28.7	<b>24.3</b>
	Wuxi		34.1	32.5	<b>32.0</b>
	Chongqing		9.4	11.1	<b>12.1</b>

1) The previous data was modified due to changes to the calculation standards.

2) Water recycle ratio = Recycled Water / (Recycled water + Discharged wastewater).

### Ultra-pure water

Classification	Unit	2017	2018	2019
Ultra-pure water usage	1,000m <sup>3</sup>	27,442.6	32,870.0	<b>34,297.6</b>

### Wastewater Discharge<sup>1)</sup>

Classification	Business Site	Unit	2017	2018	2019
Wastewater discharged	Icheon		30,327	34,030	<b>31,675</b>
	Cheongju		17,215	17,027	<b>22,715</b>
	Wuxi	1,000m <sup>3</sup>	13,590	14,340	<b>19,220</b>
	Chongqing		1,078	1,206	<b>1,580</b>
	Total		62,210	66,603	<b>75,190</b>
Intensity <sup>2)</sup>	Icheon		0.101	0.084	<b>0.117</b>
	Cheongju	100 m <sup>3</sup> / KRW	0.057	0.042	<b>0.084</b>
	Wuxi	100 million	0.045	0.035	<b>0.071</b>
	Chongqing		0.004	0.003	<b>0.006</b>

1) The previous data was modified due to changes to the calculation standards.

2) Based on the Sales in 2019 Annual Report.

### Water Quality Management

Classification	Details	Unit	2017	2018	2019
Icheon	Chemical Oxygen Demand (COD)		100.27	85.70	<b>96.40</b>
	Biochemical Oxygen Demand (BOD)	ton	66.50	68.73	<b>51.00</b>
	Total Nitrogen (T-N)		556.25	504.64	<b>467.30</b>
	Fluorine (F)		36.02	42.31	<b>45.90</b>
Cheongju	Chemical Oxygen Demand (COD)		103.53	112.31	<b>133.04</b>
	Biochemical Oxygen Demand (BOD)	ton	99.88	109.52	<b>116.96</b>
	Total Nitrogen (T-N)		388.22	457.01	<b>539.37</b>
	Fluorine (F)		126.59	122.96	<b>149.53</b>
Wuxi	Suspended Solids (SS)	mg/l	3.31	2.91	<b>2.08</b>
	Chemical Oxygen Demand (COD)		17.39	18.23	<b>50.43</b>
	Fluorine (F)	ton	3.76	5.96	<b>7.72</b>
	Ammonia Nitrogen (NH <sub>3</sub> -N)		3.61	2.96	<b>10.93</b>
Chongqing	Chemical Oxygen Demand (COD)		6.90	22.09	<b>33.20</b>
	Biochemical Oxygen Demand (BOD)	ton	1.51	19.75	<b>1.51</b>
	Total Nitrogen (T-N)		3.23	3.47	<b>4.76</b>

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## Environment

### Air Pollutant Emissions<sup>1)</sup>

Classification	Details	Unit	2017	2018	2019
Icheon	SOx		12.62	12.33	8.77
	NH <sub>3</sub>		5.87	21.12	46.81
	NOx		17.91	29.62	100.09
	HF	ton	1.92	5.49	2.69
	HCl		0.95	5.31	8.55
	VOC		0.09	0.18	0.82
	Dust		0.40	0.33	0.08
Cheongju	SOx		3.11	0.92	3.40
	NH <sub>3</sub>		2.30	8.61	34.22
	NOx		9.31	210.82	347.14
	HF	ton	2.77	2.31	1.85
	HCl		0.64	1.69	8.00
	VOC		0.08	0.23	1.82
	Dust		3.93	12.14	35.91
Wuxi	SOx		2.98	0.33	3.29
	NH <sub>3</sub>		6.45	6.05	9.10
	NOx		0.47	0.26	7.92
	HF	ton	0.86	0.69	1.13
	HCl		7.28	3.79	12.17
	VOC		1.46	17.27	10.60
	Dust		0.28	0.00	0.06
Chongqing	SOx		0.28	0.00	0.06
	NH <sub>3</sub>		2.42	1.10	1.40
	NOx		0.06	N/A	N/A
	HF	ton	0.26	3.37	3.68
	HCl		0.88	0.82	0.63
	Dust		1.75	8.55	3.82

1) Meets legal emissions standards of each work site

## Safety and Health

### Support for Employees' Health Checkup<sup>1)</sup>

Classification	Unit	2017	2018	2019
No. of employees who had health checkup	person	43,170	48,472	47,231
Expenses supported for employees' health checkup	KRW billion	60	70	64

1) The previous data was modified due to changes to the calculation standards.

### Rate of Industrial Accidents

Classification	Details	Unit	2017	2018	2019	
Rate of Industrial Accidents	Employees	Icheon		0.04	0.09	0.10
		Cheongju		0.14	0.08	0.16
		Wuxi	%	0.14	0.13	0.11
	In-house supplier <sup>1)</sup>	Chongqing		0.00	0.10	0.00
		Icheon		0.04	0.02	0.06
		Cheongju		0.13	0.07	0.08
Lost-Time Injuries Frequency Rate (LTIFR)	Employees	Domestic	Case/1 million	0.32	0.37	0.50
Occupational Illness Frequency Rate (OIFR)	Employees	Domestic	Work Hours	0.02	0.00	0.14

1) This figure has been reported in compliance with the Integrated Occupational Accidents Management System set by the Ministry of Labor in 2019. The calculation standard may differ from the previous figure.

### Safety Training

Classification	Details	Unit	2017	2018	2019
Total training hours	Employees	Hours	10,002	12,459	12,644
	Supplier		13,030	31,635	64,916
Total No. of Completed	Employees	Person	102,746	116,319	103,698
	Supplier		13,218	27,808	68,111

### Safety Management System Certifications<sup>1)</sup>

Certification	Icheon	Cheongju	Wuxi	Chongqing
ISO45001	2020.01.28~2021.01.06	2020.01.28~2021.01.06	2018.08.15~2021.08.14	2019.01.18~2022.01.18
KOSHA18001	2018.11.07~2021.11.06	2018.11.16~2021.11.15	-	-

1) The aforementioned certified Safety and Health Management Systems are applied to the employees and in-house suppliers' employees at applicable worksites.

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# Employees

## Employment Status

Classification	Details	Unit	2017	2018	2019
<b>Number of employees</b>	Total		29,262	33,190	<b>36,205</b>
<b>Executives and technical office positions</b>	Male		10,969	13,052	<b>14,832</b>
	Female		2,478	2,881	<b>3,257</b>
<b>Full-time employees</b>	Male	Person	6,408	7,377	<b>7,663</b>
	Female		9,297	9,786	<b>10,317</b>
<b>Contractual employees</b>	Male		72	49	<b>71</b>
	Female		38	45	<b>65</b>
<b>Ratio of permanent employees</b>	Total	%	99.6	99.7	<b>99.6</b>
	Korea		23,415	25,972	<b>28,246</b>
<b>Employees by region</b>	U.S.		394	450	<b>552</b>
	China	Person	5,169	6,455	<b>6,934</b>
	Asia <sup>1)</sup>		52	51	<b>184</b>
	Europe		232	262	<b>289</b>

1) Excluding Korea and China.

## Employee Diversity (Domestic)

Classification	Details	Unit	2017	2018	2019
<b>Ratio of female employees</b>	Total		40.4	38.3	<b>37.7</b>
	Ratio of female managers <sup>1)</sup>		25.2	21.6	<b>20.3</b>
	Ratio of entry-level female managers <sup>2)</sup>	%	27.4	23.7	<b>21.9</b>
	Ratio of female employees at department generating profits <sup>3)</sup>		23.4	26.3	<b>N/A</b>
	Ratio of female managers at department generating profits <sup>3)</sup>		N/A	N/A	<b>6.5</b>
<b>Employees with disabilities<sup>4)</sup></b>	Domestic, Wuxi		129	124	<b>152</b>
<b>National veterans</b>	Domestic	Person	271	287	<b>306</b>
<b>Senior employees<sup>5)</sup></b>	Total		80	106	<b>151</b>

1) (Job Competency Level 4 or above) / (Company-wide Job Competency Level 4 or above + Full-time Officer) × 100.

2) Based on technical office managers and above.

3) The scope of data collection was modified (representing the total number of female employees in marketing, sales, and sales subsidiaries in 2017 and 2018, and the total number of female managers in marketing, sales, and sales subsidiaries in 2019).

4) Excluding the subsidiaries' standard worksites, based on the calculation of the handicapped employment levy.

5) Employees aged 55 or above who has been in employment for more than 1 year.

## Job Creation

Classification	Details	Unit	2017	2018	2019
<b>Job creation rate<sup>1)</sup></b>	Total	%	6.5	13.4	<b>8.8</b>
	Korea		1,713	3,060	<b>2,898</b>
	America		85	143	<b>115</b>
<b>No. of recruits</b>	China	Person	1,625	2,462	<b>1,722</b>
	Asia <sup>2)</sup>		18	25	<b>28</b>
	Europe		32	59	<b>54</b>
	Domestic		3	1	<b>2</b>
<b>Number of dismissed employees<sup>3)</sup></b>	Domestic		3	1	<b>2</b>
<b>Turnover rate<sup>3)</sup></b>	Domestic	%	2.2	2.0	<b>2.3</b>
<b>Average length of service<sup>4)</sup></b>	Domestic	Year	11.14	10.85	<b>10.81</b>

1) (No. of employees for the year - No. of employees for the previous year) / No. of employees for the previous year × 100.

2) Excluding Korea and China.

3) Based on domestic worksites. The previous data have been modified due to changes to calculation standards.

4) Based on domestic worksites.

## Employee Training

Classification	Unit	2017	2018	2019
<b>Total trainees</b>	person	175,373	208,024	<b>283,680</b>
<b>Training hours per person</b>	hour/person	7.8	9.5	<b>9.4</b>
<b>Training expenditure per person</b>	KRW 1,000/person	33	35	<b>27</b>

## Labor Union Membersihp<sup>1)</sup>

Classification	Icheon	Cheongju <sup>2)</sup>	Wuxi	Chongqing
<b>Labor union enrollment rate (%)</b>	98.6	100	100	99.8

1) 100% of employees are subject to the agreement entered into with the Labor Union.

2) 43 employees at the Incheon worksite belong to the Cheongju Union.

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### Use of Maternity Leave and Childcare Leave<sup>1)</sup>

Classification	Unit	2017	2018	2019
<b>Rate of return to work after childcare leave</b>	%	98.4	99.1	<b>98.4</b>
<b>No. of employees who used maternity leave</b>	Person	731	656	<b>742</b>
<b>No. of employees who used childcare leave</b>		919	1,155	<b>1,025</b>
<b>Rate of working for over 12 months after return to work</b>	%	90.9	93.2	<b>92.5</b>

1) Based on domestic worksites.

### Level of Starting Salary of New Employees

Classification	2017	2018	2019
<b>Classification Starting Salary as % of Legally Required Minimum<sup>1)</sup> (%)</b>	265	223	<b>175</b>

1) Based on domestic worksites.

### Working Hours<sup>1)</sup>

Classification	Unit	2017	2018	2019
<b>Annual working hours<sup>2)</sup></b>	Duration/ frequency	2,116	2,137	<b>2,035</b>
<b>Average weekly working hours<sup>3)</sup></b>		41	41	<b>40</b>
<b>No. of Employees Who Joined the Flexible Working System<sup>4)</sup></b>	person	3,115	12,107	<b>14,394</b>

1) Based on domestic worksites.

2) Annual working hours per person.

3) Weekly working hours per person based on annual working hours per person for 52 weeks.

4) Job-absorbing employees, pregnant employees, and flextime employees.

## Supply Chain Management

### Transactions with Suppliers

Classification	Unit	2017	2018	2019
<b>No. of suppliers</b>	Company	2,681	2,842	<b>2,878</b>
<b>No. of key suppliers<sup>1)</sup></b>		1,164	1,466	<b>1,381</b>
<b>Total purchase<sup>2)</sup></b>	KRW 100 million	184,416	233,842	<b>193,692</b>

1) Transactions of more than KRW 500 million.

2) Excluding contracts for ICT, outsourcing, and guards.

### Purchase Details

(Unit: KRW 100 million)

Classification	2017	2018	2019
<b>Equipment</b>	82,062	85,991	<b>45,982</b>
<b>Raw Materials</b>	27,512	35,606	<b>39,315</b>
<b>Infrastructure</b>	28,962	37,591	<b>29,645</b>
<b>Spare Parts</b>	17,151	21,423	<b>18,008</b>
<b>Purchase by overseas sites<sup>1)</sup></b>	23,650	47,294	<b>54,390</b>
<b>Others<sup>2)</sup></b>	5,080	5,937	<b>6,351</b>

1) Based on Wuxi and Chongqing Campus.

2) IT suppliers, etc.

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## Supply Chain Management

### Domestic Win-win Cooperation Performance

Classification	Unit	2017	2018	2019
<b>Fund spent on supporting shared growth<sup>1)</sup></b>	KRW	1,593	1,752	<b>2,685</b>
<b>No. of suppliers agreed upon shared growth</b>	100 million	67	108	<b>117</b>
<b>No. of suppliers joined the Shared Growth Council</b>	Company	61	61	<b>79</b>

1) Fund spent on supporting shared growth: Equipment localization costs + patterned wafer support + contribution to the Industrial Revolution 3.0 + contribution to the Semiconductor Fund + loan supports through the Shared Growth Fund Network Loan and Shared Growth Insurance.

### HRD Programs for Suppliers in 2019<sup>1)</sup>

Classification	Unit	2019
<b>No. of supplier's employees who have received worker training</b>		<b>44,285</b>
<b>No. of supplier's employees who have received signaler training</b>	person	<b>2,963</b>
<b>No. of supplier's employees who have received supervisor training</b>		<b>5,955</b>

1) Based on domestic worksites.

## Social Contribution

### Social Contribution Activities

(Unit: KRW 100 million)

Classification	2017	2018	2019
<b>Social contribution expenditures<sup>1)</sup></b>	765.1	618.9	<b>614.0</b>
<b>Total amount of donations</b>	751.5	606.4	<b>447.8</b>
<b>Cash donations<sup>2)</sup></b>	728.6	602.0	<b>439.7</b>

1) Company donations + employee donations + social contribution budget.

2) Cash donations out of total donations.

### Employee Participation in Volunteer Activities<sup>1)</sup>

Classification	Unit	2017	2018	2019
<b>Time spent on volunteer activities</b>	Hours	22,357	18,897	<b>16,737</b>
<b>No. of employees who have participated in volunteer activities</b>	Person	5,920	5,088	<b>4,884</b>
<b>Volunteer hours per employee</b>	Hours	1.01	0.77	<b>0.59</b>
<b>No. of times participated</b>	Times	673	698	<b>659</b>
<b>Participation rate</b>	%	27	31	<b>22</b>

1) Based on domestic worksites.

### Fundraising Status of the Happiness Sharing Fund<sup>1)</sup>

(Unit: KRW 100 million)

Classification	2017	2018	2019
<b>Amount of fund</b>	27	30	<b>29</b>

1) Based on domestic worksites.

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# SK hynix Sustainability Guidelines

SK hynix has been developing its Sustainability Management based on SKMS, the management execution principle of SK Group. To this end, we have enacted the SK hynix Sustainability Guidelines and our subcontractors, suppliers, and JV members, as well as all members of SK hynix and subsidiaries transacting with us, hereby pledge to comply with it.

## Declaration of Sustainability Guidelines

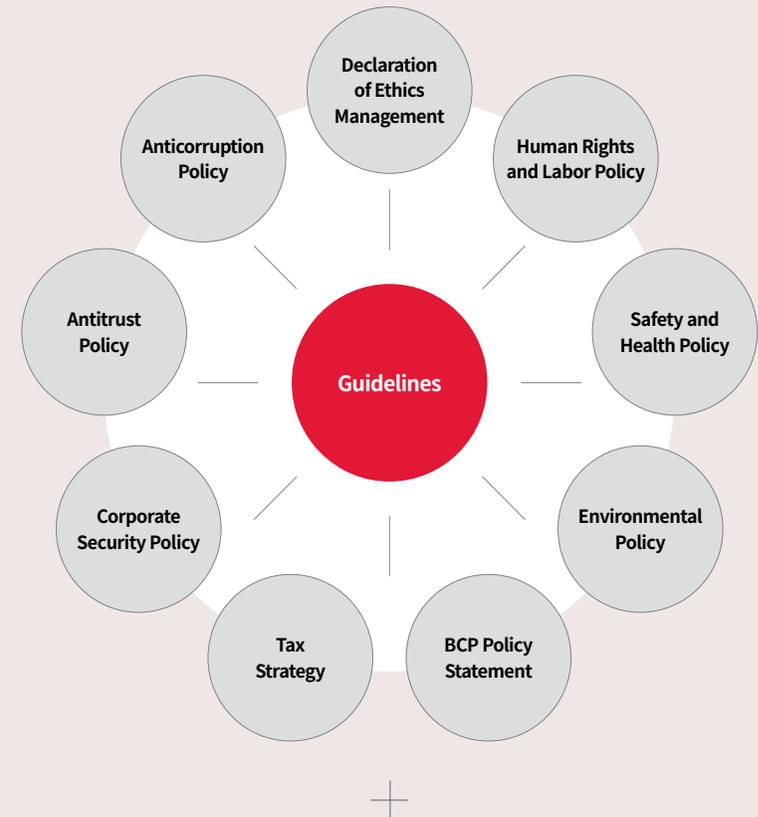
Even in a rapidly evolving business environment, SK hynix, based on its business operation principle, SKMS, strives to bring happiness to all stakeholders including customers, employees, shareholders, local communities, and suppliers, and to contribute to the economic growth and happiness of humanity. We established the SK hynix Sustainability Guidelines in order to grow into a sustainable company. We hereby declare that our employees, subsidiaries, subcontractors, suppliers, and J/V employees will comply with the SK hynix Sustainability Guidelines.

In addition, with the Universal Declaration of Human Rights, SK hynix supports and respects various global organizations' human rights and labor protection standards, including the OECD Guidelines, 10 Principles of the UN Global Compact, UN Convention on the Rights of Children and ILO. Furthermore, SK hynix is a pioneer company in complying with globally accepted policies such as the California Transparency in Supply Chain Act and the UK Modern Slavery Act. Also, as a member of RBA (formerly known as EICC), SK hynix observes the RBA Code of Conduct. Moreover, SK hynix employees are in compliance with all applicable legal standards in the places where it operates its business.

## Declaration of Ethics

SK hynix recognizes that ethical management is a generational responsibility. We conduct work in an ethical and lawful manner to establish an order of fair trade and to build a clean and transparent organizational culture to fulfill our social responsibilities.

1. All business operations are to comply with the regulations and customs of the country and global society based on an ethical value system.
2. Root out antitrust and anti-corruption by firmly establishing an order of trade that is transparent and fair.
3. Integrate ethical operations as an organizational culture and spread the culture to suppliers.
4. Allocate an organization solely in charge of ethics management. Build a system of practice and continuously improve it.
5. Publicize the declaration to stakeholders so they may effectively comply with it.



Supplier Code of Conduct / Conflict Mineral Policy / Slavery and Human Trafficking Statement

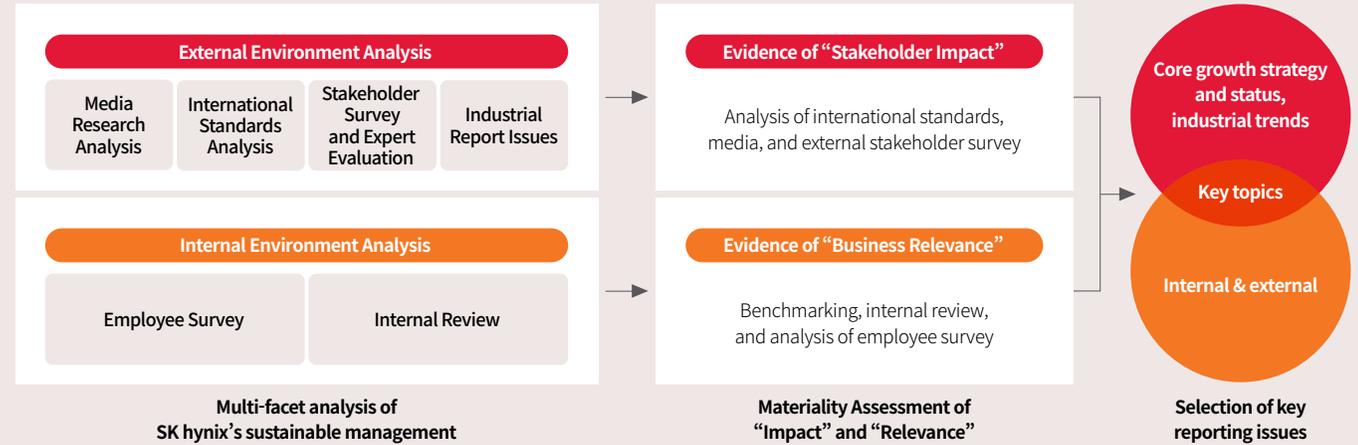
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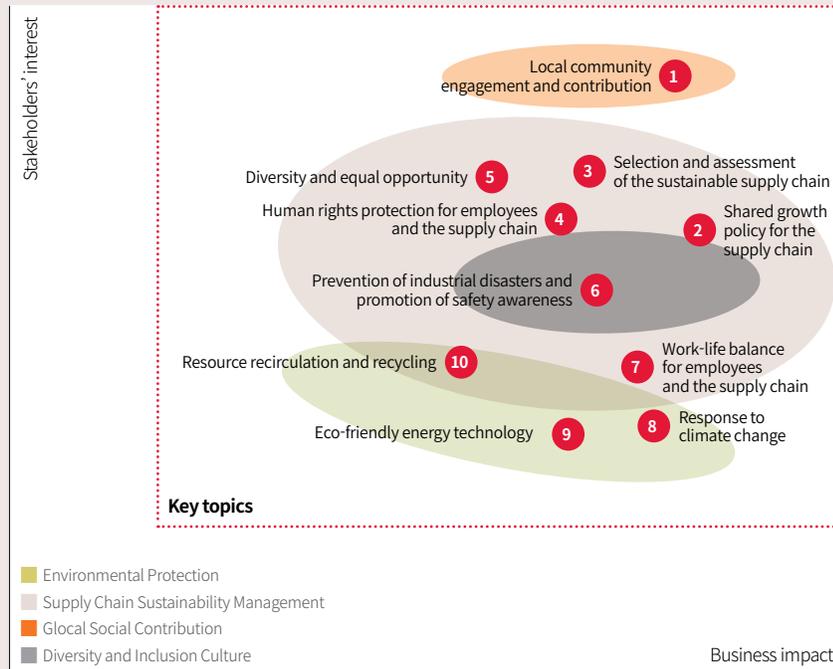
# Material Issue Management

## Materiality Assessment

SK hynix selects material issues through a Materiality Assessment that takes into consideration the effect on its internal and external stakeholders, and industries, and includes them in its sustainability report. We also identify the areas of focus for sustainability management based on business materiality and the effect on stakeholders as well as interests when establishing sustainability management strategies.



## 2020 Materiality Assessment Results



Sustainability Strategy	Material Issues	Stakeholders	GRI Index	Impact <sup>1)</sup>	Page
<b>Environmental Protection</b>	Climate change	Customers, Government, NGOs	302-1, 2, 3	Risk	30, 53, 76
	Eco-friendly energy technology	Customers, Government, NGOs	305-1, 2, 4, 7	Operation	8, 75, 78
	Resource recirculation and recycling	Customers, Government, NGOs	306-2	Operation	76
<b>Supply Chain Sustainable Management</b>	Shared growth policy for the supply chain	Suppliers, Government, NGOs	414-2	Operation	58~62
	Select and evaluate the sustainable supply chain	Customers, suppliers	414-1	Finance	58~59
	Human rights protection for employees and the supply chain	Employees, Suppliers, Government, NGOs	412-1	Operation	63~65
	Work-life balance for employees and the supply chain	Employees, Suppliers, Government, NGOs	412-1	Operation	63~65
<b>Glocal Social Contribution</b>	Prevention of industrial disasters and promotion of safety awareness	Employees, Suppliers, Government, NGOs	403-8	Operation	45~51, 78
	Local community engagement and contribution	Local communities, Government, NGOs	203-1	Risk	8, 15~16, 28, 30, 81
<b>Diversity and Inclusion Culture</b>	Diversity and equal opportunity	Employees	405-2	Operation	29~30, 79

1) Financial Impact: An impact linked to short-term direct or indirect financial gains or loss of the company.  
 Operational Impact: An impact on value-creating business activities and processes.  
 Risk Impact: An impact on the reliability and reputation of the company from the perspective of stakeholders such as local communities and customers.

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# Awards, Recognition and Association Memberships

## Association Memberships

Classification	Name of organization
<b>Marketing</b>	SEMI (Semiconductor Equipment and Materials Institute, Inc)
	Korean Standards Association (Icheon)
	Korean Standards Association (Cheongju)
	Korea Occupational Hygiene Association
<b>Production</b>	Korea Chemicals Management Association
	Seoul Metropolitan committee of Chemistry Safety Community
	Chungcheong committee of Chemistry Safety Community
	Chungcheong Green Company Association
	Chungbuk Environmental Engineers Federation
	Korea Environmental Preservation Association Chungbuk Branch
	Korea Invention Promotion Association
	Korea Intellectual Property Association
	UFSA (Universal Flash Storage Association)
	SATA-IO (Serial ATA International Organization)
TCG (Trusted Computing Group)	
<b>Research</b>	PCI-SIG (Peripheral Component interconnect Special interest group)
	SNIA (The Storage Networking Industry Association)
	T13
	NVMe
	T10
	UNH-IOL
	ECC (Edge Computing Consortium)
	Open CAPI
	Korea Semiconductor Industry Association

Classification	Name of organization
<b>Research</b>	Si2 (Silicon Integration Initiative)
	VCCI (Voluntary Control Council for Interference)
	KMEPS (The Korean Microelectronics and Packaging Society)
	MIPI (Mobile Industry Processor Interface)
	SCIEN (Stanford Center for Image System Engineering)
	The Institute of Semiconductor Test of Korea
	JEDEC (Joint Electron Device Engineering Council)
	Gen-Z Consortium
	CCIX (Cache Coherent Interconnect For Accelerators)
	CXL (Compute eXpress Link)
OpenPower Foundation	
<b>Support (Mandatory)</b>	Icheon Chamber of Commerce & Industry
	Cheongju Chamber of Commerce & Industry
	Korea Electric Engineers Association (Icheon)
	Korea Electric Engineers Association (Cheongju)
	Korea Fire Safety Institute (Icheon)
	Korea Fire Safety Institute (Cheongju)
	Korea Industrial Safety Association Seongnam Branch
	Korea Industrial Safety Association Chungbuk Branch
	Korea Industrial Nursing Association
	Korea Semiconductor Industry Association
	Semiconductor Industry Association
<b>Support (Discretionary)</b>	Korea Authorized Economic Operator
	Korea Customs Logistics Association
	Korea Integrated Logistics Association (KILA)
	Korea Listed Companies Association
	Korea Investor Relations Service
	National Academy Engineering of Korea

Classification	Name of organization
<b>Support (Discretionary)</b>	CompTIA
	Korea Fair Competition Federation
	Korea International Trade Association
	Korea Industrial Technology Association
	WSTS
	AIIA (Artificial Intelligence Industry Association)
	GSA (Global Semiconductor Alliance)
	Korea Forum of Chief Information Offices)
	Eastern Gyeonggi Manufacturer Safety Manager Association
	Korea Enterprises Federation
	Gyeonggi Employers Federation
	Chungbuk Employers Federation
	Korea Association of Industrial Technology Protection
	Ministry of Trade, Industry, and Energy emergency plan committee
	Korean Society for Quality Masters
	Korean National Quality Award corporate council of winners
	Korean Society for Quality Management
	Korea Society for Engineering Education
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# Awards, Recognition and Association Memberships

## Awards in 2019

Awards	Organization	Prize Winner	Award Details	Date	Relevant Departments
<b>Inventors' Day</b>	Korean Intellectual Property Office	TL Kyunghoon Kim	Stone Tower Order of Industrial Service Merit	May 27, 2019	DRAM Design
<b>Commendation</b>	Ministry of Environment	Group award	Minister of the Environment Award	June 5, 2019	Cheongju Environment Team
<b>2019 Gyeonggi Province Grand Environment Prize</b>	Gyeonggi Province	Environment and Safety sector	Participation Award	June 15, 2019	Environment Team
<b>PyeongChang Olympic</b>	Ministry of Culture, Sports and Tourism	Group award	Presidential Commendation	September 27, 2019	CR Team
<b>Korea Industrial Technology Association 40th Anniversary Commemoration Government Prize</b>	Ministry of Science and ICT	Manager Seung-ho Pyi	Bronze Tower Order of Industrial Service Merit	October 2, 2019	R&D Process
<b>Semiconductor day</b>	Ministry of Trade, Industry and Energy	Manager Gihwa Lee	Industrial packaging	October 24, 2019	D-TEST Technology
<b>Semiconductor day</b>	Ministry of Trade, Industry and Energy	Manager KI Moon	Commendation from Minister	October 24, 2019	Development of the next generation PKG
<b>Semiconductor day</b>	Ministry of Trade, Industry and Energy	Manager Sung-hoon Lee	Commendation from Minister	October 24, 2019	HARC PJT
<b>Semiconductor day</b>	Ministry of Trade, Industry and Energy	TL Tae-hwan Kim	Commendation from Minister	October 24, 2019	Equipment Development Team 2
<b>Semiconductor day</b>	Ministry of Trade, Industry and Energy	TL Sang-hyeon Lim	Association President Award	October 24, 2019	CR Team
<b>Merit for development of material parts-root industry</b>	Ministry of Trade, Industry and Energy	PL Hwang Hur	Presidential Commendation	October 30, 2019	PT 1T QLC
<b>The Engineer of Korea Award</b>	Ministry of Science and ICT	TL Koungmok Back	Commendation from Minister	November 8, 2019	DMI Technology Innovation Team
<b>Rewards for the person of merit in climate change response and GHG emissions reduction</b>	Ministry of Trade, Industry and Energy	TL Eunkyung Choi	Commendation from Minister	November 12, 2019	Environment Team
<b>Merit commendation for planting trees to cleanse fine dust</b>	Gyeonggi Province	Group award	Outstanding Site for Gyeonggido's Plant in the Forest	November 28, 2019	Environment Team
<b>Trade Day</b>	Ministry of Trade, Industry and Energy	Manager Myoungsoo Park	Bronze Tower Order of Industrial Service Merit	December 5, 2019	Business in the Americas and Europe
<b>Trade Day</b>	Ministry of Trade, Industry and Energy	TL Hyunjoon An	Commendation from Minister	December 5, 2019	D RAM Manufacturing and Operation Team
<b>The Company Loved by Korea</b>	Ministry of Trade, Industry and Energy	Group award	Presidential Commendation	December 11, 2019	Organization
<b>Merit for Industrial Technology Promotion (Korea Technology Awards)</b>	Ministry of Trade, Industry and Energy	Manager Jin-won Park	Commendation from Prime Minister	December 13, 2019	Rigel TD PJT
<b>Participation Award for the Performance Sharing Conference of the Committee of Chemistry Safety Community</b>	The Geum River Basin Environmental Office	Participation Award for the Performance Sharing Conference of the Committee of Chemistry Safety Community	Geum River Basin Environment Office Director Award	December 13, 2019	Cheongju Environment Team
<b>Merit for Agricultural and Fishing Village Win-win Fund</b>	Ministry of Agriculture and Forestry	Spencer Moon	Commendation from Minister	December 20, 2019	Partner Collaboration Team
<b>The Organization or Person of Merit for Protecting the Solitary Senior Citizens</b>	The Ministry of Health and Welfare	Group award	Commendation from Minister	December 22, 2019	Social Contribution Team
<b>The Organization or Person of Merit for Protecting the Solitary Senior Citizens</b>	The Ministry of Health and Welfare	Manager Yongkun Park	Commendation from Minister	December 22, 2019	CR Strategy
<b>Commendation</b>	Ministry of Environment	Group award	Minister of the Environment Award	December 31, 2019	Cheongju Environment Team
<b>2019 CDP Korea Award</b>	CDP Committee of Korea	Group award	Excellent Award in "Water Management"	April 28, 2020	Environment Team

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# GRI Standards Index

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<b>Supplier Environmental Assessment</b>	308-1	The proportion of new suppliers that were screened using environmental criteria	58~59	
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<b>Non-discrimination</b>	406-1	Incidents of discrimination and corrective actions taken	-	No such incidents
<b>Freedom of Association and Collective Bargaining</b>	407-1	Worksite or suppliers that are deemed to have the potential to gravely harm workers' freedom of association and collective bargaining.	-	No such sites
<b>Child Labor</b>	408-1	Operations and suppliers at significant risk of incidents of child labor	-	No such sites
<b>Forced or Compulsory Labor</b>	409-1	Operations and suppliers at significant risk of incidents of forced or compulsory labor	-	No such sites
<b>Security Practices</b>	410-1	The proportion of security agents who are trained in human rights policy and procedures related to the business	38	
<b>Rights of Indigenous People</b>	411-1	Incidents of violations involving rights of indigenous peoples	-	No such incidents
<b>Local community</b>	413-1	The operating proportion of local community engagement, impact evaluation, and development programs	8, 15~16, 70~72	
	413-2	Worksites that have grave actual or potential negative impacts on the local community	-	No such sites
<b>Public Policy</b>	415-1	Political contributions	-	Under Article 31 of the Political Funds Act, we do not contribute to political funds
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## Sustainability Disclosure Topics & Accounting Metrics

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	Scope 1 Mid- to long-term strategy or plan that includes management of emissions amount, reduction target, and performance analysis.	TC-SC-110a.2	30, 52	
<b>Energy Management</b>	The proportion of total energy consumption, green electricity usage status, and renewable energy	TC-SC-130a.1	76	
<b>Water Resource Management</b>	The proportion of the total amount of water supplied, the total amount of water used, and areas that have a high or intense water stress level	TC-SC-140a.1	77	
<b>Waste Management</b>	The rate of generation and recycling of harmful wastes in the manufacturing process	TC-SC-150a.1	76	
	Employee safety and health management and monitoring and the policy to reduce safety and health risk factors	TC-SC-320a.1	45~51	
<b>Employee Safety and Health</b>	Fine and settlement payment for violation of employee safety and health regulations.	TC-SC-320a.2	-	2019 Annual Report '3. Sanctions status and other details'
	<b>Global Talent Recruitment and Management</b>	The proportion of local recruitment	TC-SC-330a.1	79
<b>Product Life Cycle Management</b>	The proportion of products that contain the International Electrotechnical Commission (IEC) report material 624741).	TC-SC-410a.1	56	
	Processor energy efficiency ①server ②desktop ③laptop	TC-SC-410a.2	56	
<b>Supply of Raw Materials</b>	Risk management associated with the use of key raw materials.	TC-SC-440a.1	58~60	
<b>Protection of Intellectual Property Rights and Competitive Behavior</b>	Total amount of fine imposed in relation to unfair competition and sanctions status	TC-SC-520a.1	-	Not applicable

1) International Electrotechnical Commission (IEC) 62474: A declaration of regulated materials for electrical and electronics products

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# TCFD

SK hynix complies with the relevant regulations, improves energy efficiency, and establishes a carbon-reduction target in order to systematically respond to climate change. Moreover, SK hynix continuously monitors the trends in global/regional climate changes and their impact on the company under the management of our Environment Team and Environment Strategy Team with the SHE Management Committee as the watchtower. The departments in charge review GHG emissions, achievement against the mid- to long-term targets, and performance of energy efficiency activities and make regular reports. As we consider the potential financial impact that the climate risk may impose on the company, we hereby disclose the threats and opportunities that are identified using the guidelines to TCFD announced by FSB.

TCFD Requirements	Response of SK hynix	CDP Index
<b>Governance</b>		
Disclose the organization's governance structure regarding the threats and opportunities that are related to climate change.		
<b>A. Explain the supervision of the BOD.</b>	SK hynix grants the highest responsibility and the authority to make final decisions in regards to climate change to the CEO who serves as a member of the BOD and the Chairman of the SHE Management Committee. The SHE Management Committee, which is directly responsible for climate change and environmental management, is held quarterly, and it reviews and establishes a broad range of key environmental management strategies and policies including the domestic emissions trading system and the GHG reduction target. The SHE department monitors the competence of GHG reduction activities, assesses the progress of our initiatives in climate change response, and reports the results on a quarterly basis to the CEO. In addition, we supervise climate-related issues through the quarterly held SHE Management Committee and the issues reviewed by the committee are reported to the Sustainability Management Committee under the BOD. In the SHE Management Committee meeting held in August 2019, we reported a roadmap for GHG reduction and procurement based on prospective emissions trading once in two to three years. In addition, at the SUPEX Pursuit Council we resolved to participate in the Myanmar CDM Project. The SHE Advisory Committee which comprises of external experts verifies the effectiveness of our SHE-related activities. The Chair of the SHE Management Committee is the CRO and one of its roles is to report climate change agenda in the weekly meeting.	CC1.1a CC1.2a CC1.1b
<b>B. Explain the role of the BOD that evaluates and manages risks and opportunities related to climate change.</b>		

TCFD Requirements	Response of SK hynix	CDP Index
<b>Strategy</b>		
Disclose the actual and potential impacts on the organization's business, strategy, and financial plans when information regarding the risks and opportunities of climate change is substantially material.		
<b>A. Explain the climate change-related risks and opportunities that the organization has identified over the short-, mid- to long-term timespan.</b>	In the short run, SK hynix recognizes serious changes in climate such as typhoons, floods, and fine dust as risk factors. In the mid- to long-run, we identify the changes in the requirements and regulations for the existing products and services, an increase in the cost of raw materials and energy, reduced product and service demands caused by the changes in customer preferences as risk factors. Furthermore, we consider the development of low-carbon products and services, the introduction of new technology, participation in renewable energy programs, and adopting energy efficiencies as the risks and opportunities of climate change. The financial impacts caused by such climate changes are managed through the Hi-Finance system. The risk management of the Hi-Finance system includes focused management risks, potential risks, and intellectual asset risks, and we define, identify, and score them according to their importance.	CC2.3a CC2.4a
<b>B. Explain the impact on the business, strategy, and financial plans of the organization</b>	Climate change affects the behaviors of customers, especially the demand for energy-efficient products. Product sales are affected if this demand is not met and the market share falls. On the contrary, if SK hynix successfully secures our competitiveness in energy-efficient DRAMs and NANDs to the competitors by leading the development of the technology, it will become an opportunity for us to increase sales and our market share. In particular, as of 2017 we have taken a 28.7% market share of the USD 72.8 billion worth of the global DRAM market. Given the increase in market share by 10%, we can enhance our sales by more than USD 73 billion. To achieve this, we are developing high-performance energy-efficient products and improving our product plans and the supply chain management process. Typhoons that are caused by climate change lead to blackouts and these may cause critical damage to products. Therefore, it may lead to product disposal and reduced productivity, in turn causing a loss in sales. To reduce such risk factors and gain opportunities to create profit, we can increase the supply of renewable energy and introduce the RPS (Renewable Energy Portfolio Standard) System. SK hynix installed an Uninterruptible Power Supply (UPS), introduced a central monitoring system, and enhanced the surveillance system, thereby creating a double electricity system.	CC2.5 CC2.6
<b>C. Explain the resilience of organizational strategy</b>		

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TCFD Requirements	Response of SK hynix	CDP Index
	<p>Due to climate change, precision equipment used in the manufacturing of semiconductors becomes more prone to failure, and productivity decreases with the inflow of fine dust. However, the growing uncertainty of climate change can also be an opportunity as it may lead to the expansion of the market for smart devices and IoT solutions as well as an increase in semiconductor sales. To this end, SK hynix is responding with the enhanced operation of clean rooms, hygiene training for employees, and enhancements in non-memory sectors such as CIS.</p> <p>To tackle climate change, the government is tightening energy regulations and existing taxation policies, and this leads to increased energy costs in manufacturing semiconductor memories. However, it may provide an opportunity to improve or replace the FAB equipment with high-efficiency production equipment, thereby leaving a financial impact with a reduced use of electricity and energy costs. To this end, SK hynix established ISO500001, developed GHG emissions measuring technology, and is now discovering energy-saving items.</p> <p>We expect to secure a surplus license if we purchase high-efficiency equipment through a comparison between eliminators and develop an on-site PFC measuring technology that can manage such equipment. Given the successful procurement of a technology that reduces an additional 10% of PFC gas, we predict to gain an approximate cost-benefit of KRW 894 million from domestic sites in 2018, assuming the price of the license to be 28,000 per ton.</p> <p>SK hynix recognized the total allowable emissions as a liability. If the GHG emissions increase or the reduction target fails to be met, it will lead to an increase in liability and will impose a negative impact on the company's financial operation. To this end, SK hynix predicts the amount of reduction in 2017 based on global emissions in 2016 and strives to reduce the use of electricity and fuel.</p>	CC2.5 CC2.6
<b>C. Explain the resilience of organizational strategy</b>	<p>SK hynix has been reviewing climate change scenarios to set up plans for emissions trading since 2015 as we use greenhouse gases such as PFC. We have set the boundary of the organization to include domestic sites (Icheon/Cheongju) and the emissions trading-related TF reviewed the scenario. We use our unique scenario analysis tool, setting the long-term time span to more than ten years, and short-term span as one year. Our mid- to long-term target is to reduce the 2014 intensity of GHG emissions to 20% lower than the BAU emissions by 2025. In addition, we established a plan to respond to the emissions trading system on an annual basis and carry out GHG emissions reduction activities.</p> <p>In order to reduce 2 million tons of GHG emissions in 2019, we improved the primary scrubber's PFC processing efficiency to 95% from 85%. In addition, we are committed to improving N<sub>2</sub>O gas processing efficiency up to 10% with even lower electricity use.</p> <p>Furthermore, we established a Sustainability Management organization and identified activities that create social values. To quantify such values, we also developed a methodology to convert the GHG reduction performance to social values.</p>	CC3.1d

TCFD Requirements	Response of SK hynix	CDP Index
	<p><b>Risk Management</b></p> <p>Disclose how the organization identifies, evaluates, and manages climate change-related risks.</p>	
<b>A. Explain the process to identify and evaluate climate change-related risks</b>	<p><b>1) Definition of risk and opportunity:</b> Risks and opportunities are defined as substantial changes caused by issues related to climate change that may impact the organization's business, operation, profit, and expenses.</p> <p><b>2) Evaluation of risk and opportunity at the corporate level:</b> SK hynix conducts annual evaluations (the first half of the year &amp; year-round) of risks and opportunities that are related to climate change and reports the results to the SHE Management Committee. By doing so, we identify and analyze the risks that may cause serious financial damage and impact on the company-wide sales activities such as GHG emissions and product regulation, physical climate variables such as fine dust and typhoons, and changes in customer behavior towards energy-efficient products. The risk manager identifies potential risks and opportunities and analyses these with their financial and non-financial impacts, and reports the results to the SHE Management Committee. SK hynix is fully committed to leading the low-carbon economy by introducing a series of eco-friendly products with a focus on energy-efficient products that customers prefer, and we believe that we can offer diverse opportunities to become the market leader. For instance, we are enabling the development of a systematic decision-making framework for the product portfolio by identifying the market trend in advance, and the final analysis is presented to the management in the future product strategy conference. Risks and opportunities are evaluated in a qualitative and quantitative manner and are updated in a regular meeting which is held to discuss business performance.</p> <p><b>3) Evaluation of risk and opportunity at the asset level:</b> We can identify and evaluate the operational risks caused by climate change through the asset and facility-level SHE Management System. The SHE Management evaluation within the system identifies potential risks such as safety and utility failures or power failures, and serves a core role that provides critical information when making decisions on the operation of risk management.</p> <p><b>4) System-based Integrated Management:</b> To systematically manage company-wide risks, SK hynix introduced IT systems to identify and manage potential risks. We have various IT systems in operation, such as Hi-Finance (annual/semiannual, financial impact that is more than 3% of the profit before corporate tax), G-ERP system set for the integrated management of company-wide financial risks, SHE Portal for the integrated SHE risk management, G-PIS for the integrated management of supply chain risks, and EthicsPlus for the internal management of ethical management. Based on such a system, we enhance the advance inspection system, monitor risks on a regular basis, and identify physical and technical weak spots to make improvements.</p>	CC2.2b

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TCFD Requirements	Response of SK hynix	CDP Index
<b>B. Explain the process to manage climate change-related risks</b>	<p>To report GHG emissions in accordance with 「The Guidelines for Domestic GHG and Energy Target Management」 (hereafter Target Management Guidelines), we set the target using the national 2030 GHG Reduction Roadmap and past data (GHG emissions, unit level, and output). The linear regression analysis model was applied to best reflect the past emissions trends and current productivity. SK hynix set the mid-term (by 2025) and long-term (by 2050) absolute targets based on the 2014 emissions and established its business plan based on these targets. Business plans are established in consideration of its impact on the business activities, development of new products, and responsibility in climate change. We establish business plans by discussing them with the Business Planning Team and budget GHG reduction project based on business plans. In addition, the Hi-Finance System, a system used by the Internal Control Team, manages climate change risks. The risk management system of Hi-Finance encompasses and evaluates the materiality of focused management risks, potential risks, and intellectual asset risks. Risks are defined, identified, and scored in accordance with their materiality. The climate change risk is managed within the concept of SHE legality along with emissions control. By doing so, SK hynix established a green management portfolio and focused on the development of energy-efficient products to lead the changes in the market in response to climate change in a positive way and dominate the market in advance. To this end, we promptly respond to the changes in the market environment through the Bizplus System, prepare a basis for systematic product portfolio decision-making based on this, and report to the management at a future product strategy meeting. The recent increase in the PM concentration caused by climate change is having a negative impact on the conditions of clean rooms and employees' health.</p> <p><b>Decision-making Process for the Priority of Risks and Opportunities:</b> Risk managers identify financial/non-financial impacts of risks and opportunities and verify the urgency of such risks and opportunities. They prioritize verifying if there are any legal regulations involved, and after that the priority is set according to the financial impacts. Stage 1: No financial impact, Stage 2: 3% of Profit before corporate tax, Stage 3: 5% of Profit before corporate tax</p>	CC2.2d
<b>C. Explain how the above-mentioned processes integrate into the overall risk management of the organization.</b>	SK hynix evaluates risks and opportunities related to climate change every year and reports the result to the SHE Management Committee. SK hynix identifies and analyzes risks that may lead to significant financial losses, such as GHG and product regulations, physical climate variables including fine dust and typhoons, and changes in consumer behavior towards energy-efficient products. The risk manager identifies potential risks and opportunities, analyzes these by their financial and non-financial impacts, and finally reports the results to the SHE Management Committee.	CC2.2

TCFD Requirements	Response of SK hynix	CDP Index
<p><b>Index and the Reduction Target</b> If the information is financially material, the indicator and reduction target used in evaluating and managing the related climate change risks and opportunities are disclosed.</p>		
<b>A. Disclose indicators used in the evaluation of risks and opportunities associated with climate change</b>	<p>GHG emissions, GHG emissions intensity, and energy consumption are used as indicators to evaluate risks and opportunities related to climate change. The GHG reduction target is integrated to the remuneration policy as it is reflected in the CRO's KPI performance target. Moreover, we operate the "Imagination Town," which manages employees in their project performance in GHG emissions reduction, energy-saving, and increased efficiency. Projects are quantitatively evaluated according to their contribution to the business and economic effects, and the creativity, application range and standardization, and final score derived from such evaluations are reflected in the remuneration. In particular, we remunerate in accordance with the effects measured by the SK Group's SV measurement methodology.</p> <p>As our carbon emissions exceed the free allowance granted by the domestic emissions trading scheme, we are pricing the internal carbon emissions at the level of the emissions trading price. In the future, the internal carbon emission price will be reviewed upon the introduction of the domestic priced emissions allowance scheme.</p>	C6 C8
<b>B. Scope 1, Scope 2, and Scope 3 Disclosure of GHG emissions and related risks</b>	The GHG emissions data is disclosed through the Sustainability Report and the copy of CDP responses.	
<b>C. Explain the goal of the organization</b>	SK hynix sets a target for the absolute value and intensity of GHG emissions. As an absolute goal to be achieved by mid-2025, SK hynix has set the target to maintain its emissions level to the same level as in 2014 despite the increase in emissions due to the construction of additional plants. The mid-term goal by 2025 is to achieve an 80% reduction from the 62.57 tCO <sub>2</sub> /petabit, which was recorded in 2014. In 2019, we achieved 90% against the intensity target.	C4

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# Independent Assurance Report

## Introduction

SK hynix Inc. (“SK hynix”) commissioned DNV GL Business Assurance Korea Ltd. (“DNV GL”), part of DNV GL Group, to undertake independent assurance of the Sustainability Report 2020 (the “Report”). The directors of SK hynix have sole responsibility for the preparation of the Report. The responsibility of DNV GL in performing the assurance work is to the management of SK hynix in accordance with the terms of reference. DNV GL’s assurance engagements are based on the assumption that the data and information provided by the client to us as part of our review have been provided in good faith. Scope and Basis of assurance based on non-financial data and sustainability activities and performance data of 2019 generated from SK hynix, we have evaluated the adherence to AA1000 Accountability Principles 2019 and assessed the quality of sustainability performance information. We have reviewed that the topic-specific disclosures of GRI Sustainability Reporting Standards 2016 which are identified in the process for defining report content;

No.	Material topic	GRI Disclosure	No.	Material topic	GRI Disclosure
1	Climate change	302-1, 2, 3	6	Human rights protection for employees and the supply chain	412-1
2	Eco-friendly energy technology	305-1, 2, 4, 7	7	Work-life balance for employees and the supply chain	412-1
3	Resource recirculation and recycling	306-2	8	Prevention of industrial disaster and promotion of safety awareness	403-8
4	Shared growth policy for the supply chain	414-2	9	Local community engagement and contribution	203-1
5	Selection and assessment of sustainable supply chain	414-1	10	Diversity and equal opportunity	405-2

We performed our work using AA1000AS 2008 and DNV GL’s assurance methodology VeriSustain™<sup>2)</sup> (Version 5.0) which is based on our professional experience, and international assurance best practices. DNV GL provides Type 1 (Type 2 assurance was applied to some performance indices) and the moderate level of assurance. The assurance was carried out from April until June 2020. The site visits were made to SK hynix’s Headquarters in Icheon, Korea, and Bundang worksite. We undertook the following activities as part of the assurance process:

- Challenged the sustainability-related statements and claims made in the Report and assessed the robustness of the underlying data management system, information flow and controls
- Interviewed representatives from the various departments within SK hynix
- Conducted document reviews, data sampling and interrogation of supporting databases and associated reporting system as they relate to selected content and performance data
- Reviewed the materiality assessment report
- Collected data by visiting domestic sites and tested processing procedures

## Limitations

The engagement excludes the sustainability management, performance, and reporting practices of SK hynix’s subsidiaries, associated companies, suppliers, contractors, and any third parties mentioned in the Report. We did not interview external stakeholders as part of this Assurance Engagement. Data disclosed in the Financial Statement of SK hynix, the website of Korea Financial Supervisory Service (<http://dart.fss.or.kr>) and CDP (Carbon Disclosure Project), as well as SK hynix’s website ([www.skhynix.com](http://www.skhynix.com)) were not included in the scope of assurance. These documents, financial statements, and announcements are not included in this Assurance Engagement. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. We reviewed the data collection and estimation process to draw up economic performance. For the environmental and social performance data, the collected data are used for the verification. This statement has been published for the management of SK hynix under the contractual agreement, and DNV GL expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement. SK hynix bears the responsibility for the content of the Report, and our responsibility for the task of assurance is limited within the terms of the contract and the scope of duty stipulated under the contractual agreement.

## Conclusion

On the basis of the work undertaken, nothing came to our attention to suggest that the reported data and information disclosed in the Report does not give a fair representation of SK hynix’s related sustainability performance. Additionally, the opinion on the principles stipulated in AA1000AP (2018) is as follows:

1) AA1000 Accountability Principles 2018: The four principles established by AccountAbility which guide the responsibility and sustainability performance of the report publishing entity to be used in the evaluation, management, improvement, and communication.

2) VeriSustain protocol can be viewed at the website of DNV GL ([www.dnvgl.com](http://www.dnvgl.com)) upon request

3) AA1000 Assurance Standard 2008 with 2018 Addendum: Statement Verification Standard established by AccountAbility

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### The Principle of Inclusivity

SK hynix has identified internal and external stakeholder groups such as Customers, Employees, Shareholders/Investors, Suppliers, Local Communities, and Government/NGO. SK hynix engages with the stakeholders at the company and business unit levels through various channels. The definition of stakeholder and the examples of approaches to engage with selected stakeholders are described in the Report. In particular, SK hynix operates Stakeholder Accounts in order to actively identify stakeholders and converge their opinions. SK hynix declared Double Bottom Line (DBL), which considers economic value and social value, and measures and improves the mid- to long-term performance of sustainable management based on SK Group's social value assessment model to report the results to its stakeholders.

### The Principle of Materiality

SK hynix has conducted the materiality assessment to prepare the Report. Various issues have been derived by analyzing the topics covered in various global initiatives and standards, reviewing industry peers' reports, and media reports. The issue pools were used on internal and external stakeholder surveys to rate the material topics and subsequently nine material topics in four areas are prioritized. We have reviewed the materiality assessment process and noted relevant material topics prioritized from the process are addressed in the Report. SK hynix has presented the management approach and major performances for each stakeholder issue in the Report.

### The Principle of Responsiveness

SK hynix has developed strategies and goals for material sustainability topics under the SK hynix Sustainability Guidelines. We help the readers to understand our sustainability management through the explanation of our sustainability management strategies for the creation of social values given in the report. The Sustainability Management strategies are also managed in conjunction with UN SDGs. In addition, the Report discloses the business results, decisions, key performance, and future plans on material topics in terms of sustainability during the reporting period. In particular, we introduced the performance of material action by stakeholders in order to enhance the responsiveness to performance and increase its clarity.

### The Principle of Impact

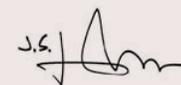
The Report presents the direct and indirect impacts of material topics identified in the materiality assessment. We have reviewed that SK hynix identifies, monitors, and assesses the impacts of material topics. Each impact was considered with a concept of social value and measured as a financial figure. The areas of measurement comprise of direct economic contribution performance, business social performance, and social contribution to social performance.

### Reliability of Specific sustainability performance information

In addition to the aforementioned performance of the Type 1 assurance to review whether the company follows the principles of AA1000AP (2018), we also have conducted a Type 2 review to verify the reliability of certain sustainability performance indicators, namely water consumption, waste generation, emission of GHG, PFCs (Perfluorocarbons) and VOCs (Volatile Organic Compounds). We compared the emissions amount stated in the Sustainability Report against the figures in the emissions amount statement and the verification statement on greenhouse gas provided by the independent assurance agency. We have interviewed the person in charge, reviewed the process of gathering and processing data, and verified data collection and its processing procedure, reference, and records on a sampling basis. The person in charge of individual data can explain the source and process of the data identified above, which is considered retraceable. The intentional error or misstatement is not noted from the data and information disclosed in the Report. Data owners were able to demonstrate the origin and interpretation of the data in a reliable manner and the data was identifiable and traceable.

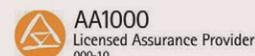
### Competence and Independence

DNV GL applies its own management standards and compliance policies for quality control, in accordance with ISO/IEC 17021:2011 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements. We have complied with the DNV GL Code of Conduct 2 during the assurance engagement and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of sustainability assurance professionals. DNV GL was not involved in the preparation of statements or data included in the Report except for this Assurance Statement. DNV GL has no other contract with SK hynix and did not provide any services to SK hynix that could compromise the independence or impartiality of our work.



June 2020  
Seoul, Korea

Country Representative **Jang Sup Lee**  
DNV GL Business Assurance Korea Ltd.



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# Verification Statement on Greenhouse Gas

## SK hynix INC.

Domestic Operation Sites under greenhouse gas emission verification

- Icheon Campus, Cheongju Campus & Bundang Campus

### Scope:

- The annual GHG emission for the 2019 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 2019 with GWP of AR5 are as follows.

(Unit: tCO<sub>2</sub>e/y)

Scopes	Sites	Icheon Campus	Cheongju Campus	Bundang Campus Sub	Total
Direct Emissions (Scope 1)		177,858	401,268	680	579,806
In-direct Emissions (Scope 2)		2,409,197	1,264,036	6,745	3,679,978
Optional Information (Used the NF3)		397,479	293,475	-	690,954
Total		2,984,534	1,958,779	7,425	4,950,738

Emissions of each greenhouse gas in 2019 with GWP of AR5 are as follows.

(Unit: tCO<sub>2</sub>e/y)

GHG	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFC	PFC	SF <sub>6</sub>	NF <sub>3</sub>	Total
Emissions	3,769,804	1,307	116,147	34,475	292,179	45,871	690,955	4,950,738

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

(Unit: tCO<sub>2</sub>e/y)

Category	International transport (Export)	International transport (Import)	Waste disposal	Business trip	Employee commuting	Total
Emissions	33,565	23,598	6,655	1,687	23,454	88,959

### 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 (KM007)

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”.



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**UN Global Compact**

# UN Global Compact

Initiated by then-UN Secretary-General Kofi Annan, the UNGC was designed to encourage businesses around the world to adopt sustainable and socially responsible business activities consisting of 10 principles in the four business management areas of human rights, labor, the environment, and anti-corruption. SK hynix upholds all 10 Principles of the UN Global Compact and commits to comply with the principles across its business operation.

## 10 Principles of the UN Global Compact

Classification	Reporting Contents	Page
<b>Human Rights</b>	Principle 1 Businesses should support and respect the protection of internationally proclaimed human rights	63-65
	Principle 2 Businesses should ensure they are not complicit in human rights abuses	
<b>Labor Standards</b>	Principle 3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	63-65
	Principle 4 Businesses should uphold the prohibition of all forms of forced and compulsory labor	
	Principle 5 Businesses should uphold the effective abolition of child labor	
	Principle 6 Businesses should uphold the elimination of discrimination in respect of employment and occupation	
<b>Environment</b>	Principle 7 Businesses should support a precautionary approach to environmental challenges	44, 52-57
	Principle 8 Businesses should undertake initiatives to promote greater environmental responsibility	
	Principle 9 Businesses should encourage the development and diffusion of environmentally friendly technologies	
<b>Anti-corruption</b>	Principle 10 Businesses should work against corruption in all its forms, including extortion and bribery	43

1) International Electrotechnical Commission (IEC) 62474: A declaration of regulated materials for electrical and electronics products



