

A large, stylized graphic of the letter 'S' is formed by numerous concentric, curved lines. The lines on the left are light orange and fade into a gradient of red and orange on the right. A solid rectangular box is positioned in the center of the 'S'.

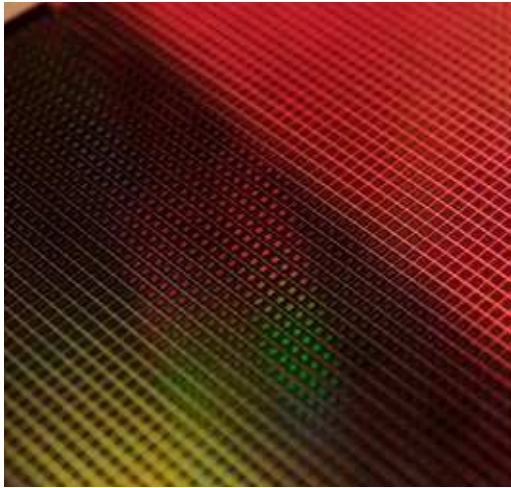
**TECHNOLOGY,**

*for*

**A BETTER  
WORLD**

**SK hynix Sustainability Report 2019**

## CONTENTS



### OVERVIEW

- 03 CEO Message
- 04 Corporate Profile

### SUSTAINABILITY

- 07 Measuring Social Value
- 09 Sustainability Strategy
- 10 Our Promise & Activities
- 11 Strategic Commitment
  - 11 Environmental Protection
  - 17 Supply Chain Sustainable Management
  - 20 Glocal Social Contribution
  - 24 Diversity and Inclusion Culture

### PERFORMANCE

- 26 Environment
  - 26 SHE Management
- 36 Society
  - 36 Responsible Supply Chain Management
  - 44 Respect for Human Rights
  - 46 Talent Management
  - 51 Customer Satisfaction
- 53 Governance
  - 53 Corporate Governance
  - 55 Stakeholder Communication
  - 56 Ethical Management
  - 58 Compliance Management
  - 60 Risk Management
  - 64 R&D

### APPENDIX

- 67 SK hynix Sustainability Guidelines
- 68 Material Issue Management
- 69 ESG Data
- 77 Awards, Recognition and Association Memberships
- 78 GRI Standards Index
- 80 Independent Assurance Report
- 82 Verification Statement on Greenhouse Gas
- 83 UN Global Compact
- 83 About This Report



# CEO Message



## Making the world a better place to live through technological innovation is the new strategy and goal of SK hynix.

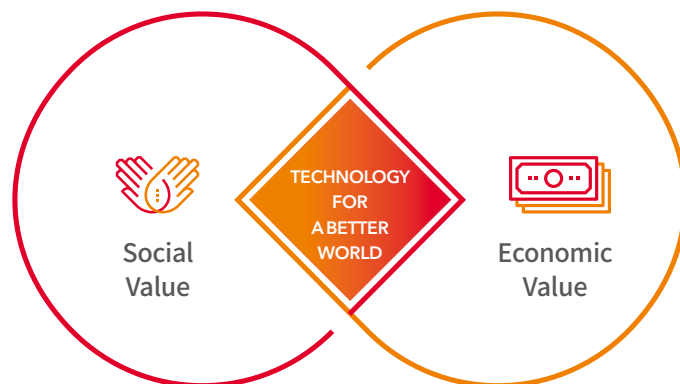
Growing into a leading global semiconductor manufacturer, SK hynix achieved record-breaking earnings for two consecutive years moving towards its vision of becoming the world's best semiconductor manufacturer. However, there is a deep obligation for us to turn our financial success into sustainable growth. As the ideal of global citizenship matures, there is a growing demand for social responsibility not only from customers, shareholders, and government but also from stakeholders outside the market such as the local community and NGOs.

SK hynix recognizes social responsibility as an integral part of gaining the trust of our stakeholders and taking our corporate value to the next level. We have already declared the DBL(Double Bottom Line) Management Principles in pursuit of both economic and social value creation and have taken initiatives to balance these two values while gaining competitive advantages.

Every change at SK hynix is driven by "technological innovation". While focusing on reducing costs based on scaling and yield ramp-up as a key part of memory technology, we are committed to expanding the partnership with our customers to create new values through technological breakthrough and innovation.

At the same time, we are making corporate-wide efforts for **① environmental protection, ② supply chain management to strengthen the semiconductor ecosystem, ③ social contribution with the focus on solving problems in the local community, and ④ creating a diverse and inclusive corporation that promotes equal opportunities**. Through this process, the total social value created by the company is measured and we can visualize the results.

SK hynix is moving towards our ultimate goal of achieving maximum satisfaction of our stakeholders by maintaining a healthy balance between economic and social values, and is disclosing our commitments and progress in embedding sustainability into our daily operations through this 2019 Sustainability Report. We would like to ask for your continued interest and support in making SK hynix a company that everyone could take pride in.



Lee Seok-Hee  
CEO of SK hynix



# Corporate Profile



SK hynix is ushering in a new future by leading the technology-based ICT ecosystem. With tenacious commitment and technological innovation, SK hynix is striving to make a future where all stakeholders and members of society enjoy shared growth. By establishing a system of a new brand identity, SK hynix is aiming to become a maker of a better world at the core of advanced technology.

## Semiconductor is the driving force and the future of the ICT industry.

The advent of new digital devices, such as AI and self-driving, and the expansion of the IoT environment are gradually spreading the semiconductor sector and the demand for it. SK hynix has introduced innovative solutions by producing a lot of system semiconductors like CIS, mainly focusing on the memory semiconductors, including DRAM and NAND Flash, which are essentials in a variety of ICT devices such as mobile, server and storage solutions.

Since the first test production of 16Kb SRAM in 1984 for the first time in the country, we have put countless research and development efforts into securing the world's first, smallest, ultra-high-speed, and low-power high-value product portfolio. In 2018, we surpassed the biggest management performance in the country for two consecutive years with each generating KRW 40.4 trillion in sales and KRW 20.8 trillion in operating profit, ranking SK hynix as the world's third-largest semiconductor company. With the industry's best technological competitiveness, SK hynix will lead the global semiconductor market by providing innovative products to customers at the right time.

PR video clips of SK hynix



Brand Film



PR Film

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: CMOS image sensor(CIS), etc.



AI



SERVER



MOBILE



AUTOMOTIVE



COMPUTING

Stock Exchange Listings Korea Exchange, Luxembourg Stock Exchange



● Sales Offices

1	Dublin	UK	8	Chongqing	China
2	Paris	France	9	Shenzhen	China
3	Helsinki	Finland	10	Osaka	Japan
4	Penang	Malaysia	11	Seattle	USA
5	Hanoi	Vietnam	12	Austin	USA
6	Xian	China	13	Houston	USA
7	Beijing	China	14	Raleigh	USA

● Sales Companies

1	Weybridge	U.K.	6	Wuxi	China
2	Raunheim	Germany	7	Shanghai	China
3	Noida	India	8	Taiwan	China
4	Singapore	Singapore	9	Tokyo	Japan
5	Hong Kong	China	10	San Jose	USA

● Production Companies

1	Icheon	Korea
2	Cheongju	Korea
3	Wuxi	China
4	Chongqing	China

● R&D Companies

1	Zhubei city	China
2	San Jose	USA
3	Minsk	Belarus
4	Milano	Italy

*Sec.02*

# SUSTAINABILITY

## Social Value Creation

SK hynix pursues financial growth with social innovation, measures the social values it creates and shares them with its stakeholders every year.

· Economic Indirect  
Contribution Performance  
KRW **9,887.4** billion

· Business Social Performance  
KRW **-457.5** billion

· Social Contribution  
Performance  
KRW **76** billion

## Sustainability Strategy

SK hynix sets its sustainable management strategies to drive social value creation, strengthens the semiconductor ecosystem through effective supply chain management, contributes to solve social issues, and promotes diversity and inclusion to create a healthy organizational culture.

· 4 Areas  
**13** Projects

· Support for SDGs  
**10** Goals

# Measuring Social Value

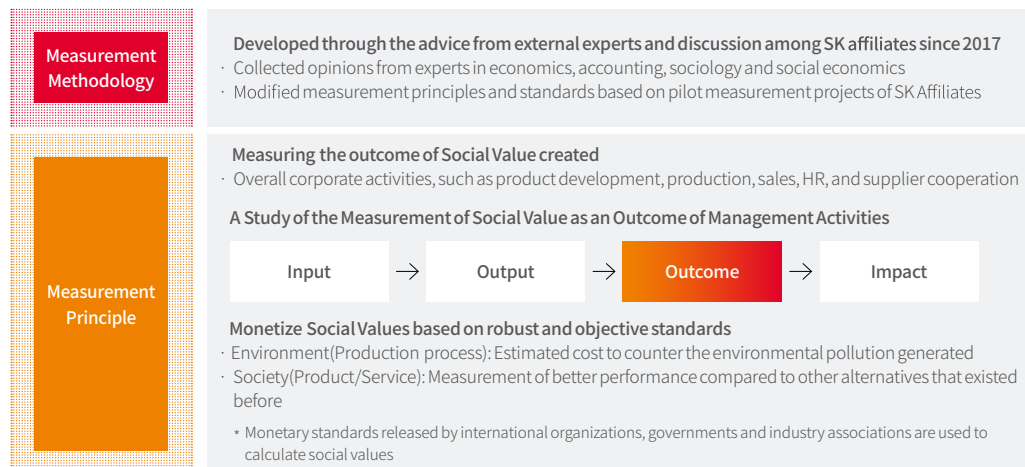
## Social Value

### Approach to Social Value

Based on the Social Value measuring system of the SK Group, we measure and improve both financial and social performances sharing the results with our stakeholders



### Measuring Social Value



### Story of SK hynix DBL(Double Bottom line)

DBLMS is a method used by SK hynix to achieve its business view by playing a key role in social and economic development. It contributes to human well-being as a guideline for its management system for balanced pursuit and achievement of social values(SV) and economic value(EV). Based on DBLMS, SK hynix is making a sincere effort to establish and upgrade its business plan, implement, assess and compensation system. In addition, all members strive to internalize the organizational culture of SV and EV in their original work based on DBLMS.



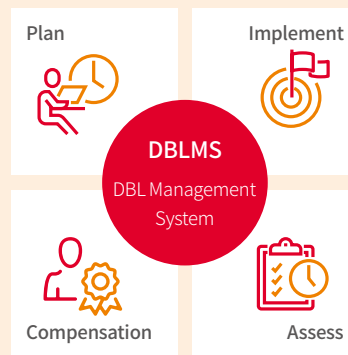
Story of SK hynix DBL(Double Bottom Line)

### DBL Management System is a guideline for Social and Economic Value creation of SK hynix employees

Action Plan for Realizing SKMS: "Companies not only contribute to economic development, but also grow with society through the creation of social values."

#### Transforming the way we establish business plan

Including social value creation measures when planning new business projects



#### Encouraging break-through thinking and trying

Members' voluntary pursuit of social values and the role of the leaders

#### Compensating based on DBL

Establishing direct and indirect compensation system based on the achievement of social value creation

#### Establishing detailed DBL assessment system

Equalizing social value-creation performance with economic performance

DBL is maximizing both Economic Value and Social Value



## DBL Value Chain

### 6 CAPITALS



#### Finance

Total assets

KRW 63,658.3 billion

Driving healthy corporate growth based on capital of shareholders and investors



#### Manufacturing

Facility

KRW 34,952.6 billion

Improving productivity and cost efficiency through continuous investment in infrastructure



#### Intelligence

R&amp;D

KRW 2,895 billion

Strengthening intellectual properties through R&D and becoming a leading global semiconductor company based on open innovation



#### Human resource

Expense for employees' salaries and benefits

KRW 3,877.3 billion

Investing in human resource development including recruitment of talents



#### Environment

SHE Expenses

KRW 276.6 billion

Investing in reduction of environmental impact and GHG (Green House Gas) emissions to create eco-friendly workplace



#### Society

Support for communities and suppliers

KRW 237.1 billion

Creating social values based on mutual growth with stakeholders such as local community and suppliers

### PROCESS & METHOD

#### OUR VALUE CHAIN



R&amp;D



Procurement of raw materials & energy resources



Product production



Sales & product application



Customer use

#### SUSTAINABILITY STRATEGY

##### Environmental Protection



2022 ECO Vision, ECO Alliance

##### Supply Chain Sustainability Management



ESG Consulting  
Sharing Hope for Youth  
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

### SOCIAL VALUE

#### Indirect Economic Contribution Performance

Salary	KRW 3,028.6 billion
Dividend	KRW 1,026 billion
Tax	KRW 5,832.8 billion
	KRW 9,887.4 billion

#### Business Social Performance

Environment <sub>(process)</sub>	KRW -643.6 billion
Environment <sub>(Product &amp; Service)</sub>	-
Society	KRW 186.1 billion
Governance	-
	KRW -457.5 billion

#### Social Contribution Social Performance

CSR program	KRW 20 billion
Donation	KRW 55.8 billion
Volunteering	KRW 0.2 billion
	KRW 76 billion

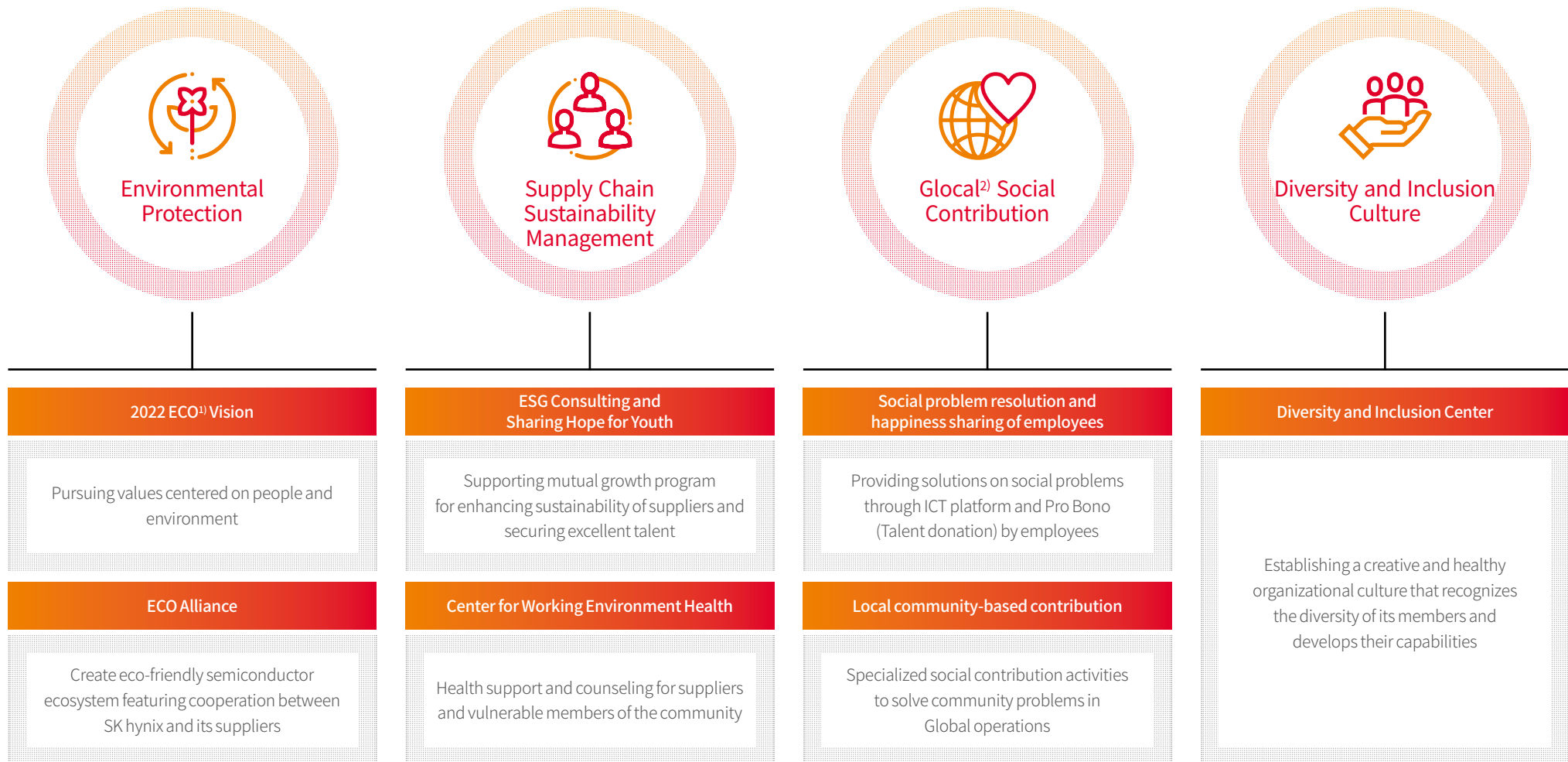
### ECONOMIC VALUE

Sales	KRW 40,445.1 billion
Operating profit	KRW 20,843.8 billion
Net profit	KRW 15,540 billion



# Sustainability Strategy

SK hynix incorporates the DBL(Double Bottom Line) management system into its practice in pursuit of both economic and social value creation. In response to the changing industrial environment, we established a sustainability strategy to promote mutual growth with our suppliers, local communities and employees through environmental responsibility, social contribution and value creation.



1) ECO: Environmental & Clean Operation

2) Glocal: A combination of Global and Localization.  
It represents SK hynix's commitment to extend its social value globally as well as in the local community.

Measuring  
Social ValueSustainability  
StrategyOur  
Promise & ActivitiesStrategic  
commitment

# Our Promise & Activities

## Supporting SDGs and Social Value Creation

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	2018 Result	Level of Achievement	2019 Plan	2022 Plan	SDGs
Environmental Protection	[2022 ECO Vision] Establishing strategies and goals for reducing environmental impact	Reducing greenhouse gas emissions	· Reviewing the external greenhouse gas reduction projects		· Launching reduction support for developing countries · Reducing 2.4 million tCO <sub>2</sub> eq	· Reducing greenhouse gas emissions by 40%(compared to 2016 BAU) · Supporting reduction projects in developing countries(300,000t CO <sub>2</sub> eq)	
		Waste recycling	· Development of PASS for wastewater treatment agglutination		· Silver Certification of Zero Waste Landfill · Achieving 95% waste recycling	· Achieving 95% waste recycling	
		Renewable energy use expansion	· Installation of two hydropower generators using the discharge water of the integrated wastewater treatment plant(193 MWh/yr)		· Installing solar power generation(815 MWh/yr)	· "RE100" in overseas business sites · Using renewable energy production in domestic operations	
		Water resource management	· Application of expanded use of waste water reduction TF · Establishment of a water-recycling facility		· Recycling approximately 35,000 tons of water	· Achieving 20 million tons annually · Expanding water recycling and upgrading wastewater treatment	
		Clean Campus	· Implementation of the Clean Campus plan		· Implementing a SV practice campaign	· Declaring a place of business for free disposable products	
	[ECO Alliance] Establishment of eco-friendly semiconductor ecosystem	ECO Alliance	· Specification of ECO Alliance Implementation Plan		· More than 30 companies participating in the ECO Alliance · Announcing ECO Alliance launch ceremony and vision · Establishing and implementing mid- to long-term environmental goals for each participating company · Conducting regular activities(conducting regular sessions, training, excellent activities, etc.)	· Expanding ECO Alliance participation(Global partners, customers, IT companies, etc.) · Discovering and promoting the new DBL Biz in the environmental field	
Supply Chain Sustainable Management	Suppliers Strengthening sustainability management capacity	ESG Consulting	· Expansion of risk assessment targets and conduction of consulting(41 cases)		· Enhancing ESG consulting process and raising supplier awareness · Expanding consulting targets(80 cases)	· Establishing healthy and safe semiconductor ecosystem · Expanding consulting targets(150 cases)	
		Sharing Hope for Youth (Securing talent for suppliers)	· Implementation and operation of the Sharing Hope for Youth programs · Participated in by 34 suppliers · Provided pre-employment job training for 179 youth job applicants and internship program for 105 interns · Turned 79 temporary jobs into permanent positions		· Increase the program participants and job applicants by 25% · 43 participating suppliers, training for 225 applicants · Plan to enhance the program for mid- to long-term operation	· Build a talent development program · Secure a talent pool through pre-employment training for youth job applicants · Provide support to secure talent for job recruitment · Establish local programs to increase job opportunities for youth in local areas	
	Improvement of the level of safety and health	Center for Working Environment Health	· Establishment of plan for the Center for Working Environment Health		· Establishing Center for Working Environment Health · Expanding individual services of suppliers and small businesses	· Developing an expansion model for other regions · Strengthening response to new occupational health issues (platform labor, work and life balance, new occupational diseases, Return to work, etc.) · Stabilizing the collaboration framework between private and public organizations	
Global Social Contribution	Drive for social problem resolution	Innovative solutions using ICT	· 4,000 units of "Happy GPS"(10,000 units in total) · Provision of 2,000 households nationwide for "Silver Friends" · Discovery of new projects such as multiculturalism among elderly people		· Planning ICT-based New SV Creation Project · ICT Sarangbang Center · "Social Network + Silver Care + Job Creation"	· Preoccupying of new social issues and branding social contribution	
	Community-based social contribution	Promotion of social contribution close to the local environment	· Establishing a hospital and a school		· Improving social value creation programs · Localizing social contribution programs at the headquarters	· Establishing a community-based social contribution platform	
	Happiness Sharing Fund and Volunteer Group	Utilize the talent of the members Shared platform	· Development of new volunteer activities centered on the use of members' talents (Career Mentoring: 8 high schools, 897 students)		· Area expansion and qualitative growth · Encouraging optional volunteer activities by establishing a talent donation platform	· Encouraging optional volunteer activities by establishing a talent donation platform	
Diversity and Inclusion Culture	Establishment of diversity and inclusion center	Establishment and operation of a diversity and inclusion center	· Establishment of a diversity and inclusion center		· Studying the recognition of members related to diversity and inclusion of organizational culture · Establishing of diversity and inclusion center · Planning and operating cultural settlement activity programs	· Achieving zero cultural conflicts according to gender, generation, religion, nationality, etc.	

Measuring  
Social ValueSustainability  
StrategyOur  
Promise & ActivitiesStrategic  
commitment

## STRATEGIC COMMITMENT 1

# Environmental Protection

## Management Approach

Business operations without consideration of sustainability may have a profound impact on the global ecosystem. With an increasing demand for environmental responsibility, the greenhouse gas emissions and the environmental management system of a company become important factors to consider in making investment and signing contracts. As a result, there is a strong emphasis on how companies manage and minimize environmental impacts of their production process. We are committed to our social responsibility by actively responding to these external demands.

## Principle & Strategy

With record-breaking sales in 2018, our greenhouse gas emission, generation of waste and consumption of water increased slightly due to an increase in production volume. As a consequence, we strengthened our environmental management at the workplaces to reduce the environmental impact despite the growing production by including environmental impact reduction activities in our sustainability strategy. Furthermore, we are helping our supply chains to acquire better capabilities to resolve environmental issues as part of our effort to build an eco-friendly semiconductor ecosystem.

## INTERVIEW



Environment Team  
Lee Yong-Je TL

Semiconductors, which are rapidly increasing in demand due to the development of the fourth industry, require a large amount of chemicals and water for production. This requires active efforts to reduce usage as well as ensure proper disposal of contaminants. SK hynix established ECO 2022 Vision by reflecting on the characteristics of manufacturing semiconductor products rather than simply dealing with contaminants and implementing regulations. In the future, ECO 2022 Vision will serve as a compass for environmental affairs and contribute to achieving happiness for stakeholders and local communities.

## 2022 ECO Vision

Pursuit of  
Human & Environment-  
Centered Values



### Reducing GHG Emissions

- Reduce GHG emission by 40% (compared to BAU<sup>1)</sup> in 2016)
- Support GHG reduction projects in developing countries (300,000 tCO<sub>2</sub>eq)



### Recycling Wastes

- Achieve 95% waste recycling rate



### Increasing the Use of Renewable Energy

- Achieve "RE 100<sup>2)</sup>" at overseas operating facilities
- Produce and use renewable energy in domestic facilities



### Creating a Clean Campus

- Declare a disposable-free workplace



### Saving Water

- Recycle 20 million tons of water per year
- Enhance material analysis system and wastewater treatment technology

1) BAU(Business As Usual): total projected amount of emissions without any artificial measures to reduce greenhouse gas emissions

2) RE 100(Renewable Energy 100%): Use of 100% renewable energy

## ECO Alliance

Strengthening  
social support to  
create SV through  
voluntary efforts in  
the semiconductor  
industry



### Corporate Alliance to Build an Eco-friendly Semiconductor Ecosystem

#### Participants

- Voluntary participation of first tier suppliers (including affiliates and subsidiaries)
- Strive for participation of second and third tier suppliers, global suppliers, and IT partners in the future

#### Activities

- Each company establishes mid- to long-term goals(3 years or more) to improve environmental impact
- Participants pursue joint activities to achieve goals
  - Share technological expertise/know-how
  - Promote joint environmental protection initiatives, etc.

Measuring  
Social ValueSustainability  
StrategyOur  
Promise & ActivitiesStrategic  
commitment
**7.3** ten thousand Nm<sup>3</sup>

Amount of natural gas used in Chongqing campus


**158.79** tCO<sub>2</sub>eq

Amount of greenhouse gases decrease in Chongqing campus



## 2022 ECO Vision

### Reducing GHG Emissions



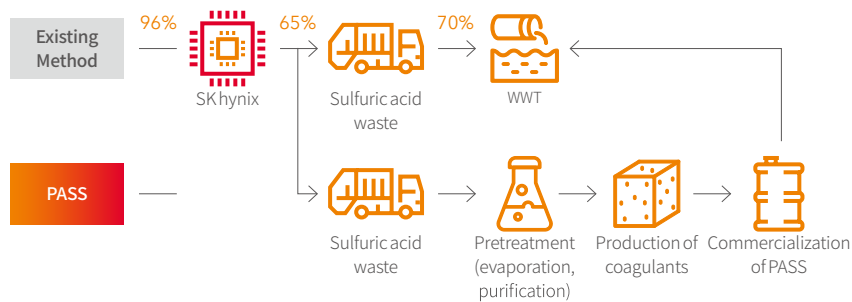
We are committed to managing our greenhouse gas emissions to minimize environmental impact. Since 2015 when designated as a subject to emission credits, SK hynix has monitored and managed our greenhouse gas emissions through our Emissions Trading Scheme TF and four working groups including internal reduction, emission trading, emission calculation, and external reduction. As a result, we achieved the GHG Emissions Trading Scheme Target and joined the Hall of Fame selected by the Carbon Disclosure Project(CDP) Korean Committee for six consecutive years while maintaining our competitive edge by reducing emission risks. With the aim to reduce 190,000 tCO<sub>2</sub>eq in 2019, we are working to improve the processing efficiency of the POU(Point On Unit) Scrubber PFC while developing new GHG emission reduction projects.

At our Chongqing campus, SK hynix has managed GHG emissions to ensure full compliance with government regulations. To reduce GHG emissions in 2018, we installed two additional small-sized furnaces(4tons/h, 2tons/h), saving 73,516Nm<sup>3</sup> of natural gases and 158.79tCO<sub>2</sub>eq. Our plan is to save 613MWh of electricity per year and reduce internal noise by upgrading the air blowers at the water treatment facilities. In addition, we will analyze our energy consumption and GHG emissions on a monthly basis while exploring new ways to save energy to meet our 2019 GHG reduction target.





#### Developing New Water Treatment Agent 'PASS'



#### Expanding Waste Heat Recycling System

Energy Saving Project	Before	After	Annual Performance		
Expansion of M10A Cooling Water Waste Heat Recovery System (completed in Dec. 2018)	Used a large volume of steam due to an increase in hot water consumption	Save the cost of steam energy used to increase the temperature of water for outdoor air handling units	Saved 4,000 tons of steam	Saved KRW 210 million in energy cost	Reduced 600 tCO <sub>2</sub> eq
Optimization of M14 Ph-1 Cooling Water Waste Heat Recovery System (To be completed in Sep. 2019)			Saved 7,012 tons of steam	Saved KRW 370 million in energy cost	Reduced 1,000 tCO <sub>2</sub> eq
Installation of WSS(Water Shower System, to remove water-soluble gas) for the control of Clean Room AMCs(Airborne Molecular Contaminations) (completed in Dec. 2018)	A chemical filter is required for removal of contamination	Reduce the use of steam with humidification of WSS	Saved 103,007 tons of steam	Reduced 13,685.9 tCO <sub>2</sub> eq	

## Recycling Wastes



### Going for Zero Waste Worksites

With a growing interest in waste management, there is an increasing emphasis on waste reduction measures. SK hynix became the first Korean company and 14<sup>th</sup> in the world to obtain the Zero Waste to Landfill Silver validation certified by UL<sup>1)</sup> in 2019. We are committed to minimizing waste production through maximizing recycling of resources as part of our efforts to reduce our environmental impact. We plan to include Wuxi and Chongqing campus into our waste management system to turn “wastes into resources”.

1) UL: Underwriters Laboratories

### Improving the Waste Treatment Process

In 2018, the regulatory requirements on waste management became more stringent under the government's Comprehensive Waste Management Policy and the Framework Act on Resource Circulation. The growth in semiconductor production increases the generation of waste sulfuric acid, and recently our generation record also shows a rising trend. Furthermore, there is a growing concern about the waste sulfuric acid emission as the market for waste sulfuric acid recycling has reached its limit. To overcome this situation and minimize the environmental impact, SK hynix is working on improving our waste treatment process.

As part of our effort to improve the waste treatment process, we supported the development of wastewater treatment coagulants that use waste sulfuric acid to build a resource circulation chain and developed PASS(Poly Aluminum Sulfate Silicate), a new water treatment agent for replacing the existing wastewater treatment plant coagulant PAC(Poly Aluminum Chloride). PASS is easier to neutralize due to its wide pH application range and lower Cl(Chlorine) emission compared to PAC. At present, the waste sulfuric acid concentration and PASS Pilot design is complete while the lab tests for PASS and biotoxicity are in progress. SK hynix will continue our research efforts to reach zero waste at our workplaces.

## Increasing Renewable Energy



SK hynix built renewable energy generation facilities at our complex. In 2018, with two new small-size hydro generators that use the water discharged from the wastewater treatment plant, we are able to generate 22KWh of electricity per hour on average and 193MWh annually. 641KWh photovoltaic generators with an annual capacity of 815MWh are expected to be completed in 2019, which will allow us to save KRW 81 million per year in costs.



KRW **81** million  
Cost reduction via solar facilities



## Creating Clean Campus



SK hynix is conducting “small social value(SV) practice” to solve social problems that occur around them. To reduce the amount of waste generated by the campus, we use disposable or new multi-luxury products or even replaceable products. We use brown bags instead of plastic bags for recycling.

We also run the “Green Tray” system, a dedicated table for those who want to eat small amounts, to reduce food waste so that they can choose their own meals. In 2019, all members will work together to conduct campaign activities to increase the separation collection rate of living waste and reduce the total amount of emissions.

Measuring  
Social ValueSustainability  
StrategyOur  
Promise & ActivitiesStrategic  
commitment

## Water Resource Management



Due to the nature of the semiconductor industry and a growing product demand, risk management on water consumption, wastewater treatment, and total amount of increasing contaminant became an integral part of business management. To this end, we established an efficient water resource management plan through RTDB<sup>1)</sup>-assessed information while ensuring a stable operation of supply facilities. A corporate-wide TF was organized to reduce wastewater and improve recyclability with the aim to recycle 62,000 tons of water. In addition, we plan to secure supply of water through operation of water collection/purification plant and partnership with K-water while reducing water consumption through continuous efforts to increase recycling and reuse by organizing relevant TF.

1) RTDB(Real Time Database)

### Wastewater Recycling Management Target

by 2022



· Recycle

**62,000** tons of water

· Increase recyclability by

**400** % (compared to 2017)



### Reduction of Water Consumption

Considering that manufacturing semiconductors requires a significant amount of water, resource management is a key part of our efforts to improve environmental impact. At our Icheon campus, we organized a TF to reduce water consumption and wastewater discharge during the production process at air pollution prevention facilities, and air-conditioning facilities which require a large amount of water. The TF has made progress reducing the unnecessary use of water in the manufacturing process since 2018, and with stricter requirements, plans to recycle about 40,000 tons of waste water to reduce water consumption of all parts of the operation in 2019. By doing so, we expect to stabilize our water and wastewater infrastructure operation, and our production line while optimizing our operational basis.

The Wuxi campus is monitoring its water resource supply in response to the water shortage risk in addition to stabilizing the water supply in the manufacturing process. Furthermore, since we entered into a partnership with Deobausa on the reused water recycling in 2008, we have increased our water-recycling rate. In 2018, we used 10,700 tons of reused water per day due to the increased operation of C2F

at Plant 2 of the Wuxi campus. In the future, we are going to further reduce our wastewater production by increasing the scope of reuse in addition to securing the water supply.

### Wastewater Reduction

The Chongqing campus systemically manages wastewater through water quality refinement and unit level management. The WWT Environmental Analysis Office conducts self-assessment of 5 items at 10 different locations twice a day. Based on the wastewater quality standards, we analyze the output and wastewater production while managing the amount of chemical consumption at the unit level. In 2019, we will reduce the Suspended Solids internal target from 100mg/L to 20mg/L for wastewater production. In addition, real-time monitoring of water quality will be carried out for immediate response while optimizing the chemical usage based on the tests conducted by the analysis lab on a regular basis. In 2018, we managed to save CHY 36 thousand in wastewater treatment cost compared to 2017. In 2019, we are going to improve the Suspended Solids concentration level of wastewater quality through PAC quality improvement in the condition that the cost of the unit level treatment remains at the current level.



Measuring  
Social ValueSustainability  
StrategyOur  
Promise & ActivitiesStrategic  
commitment

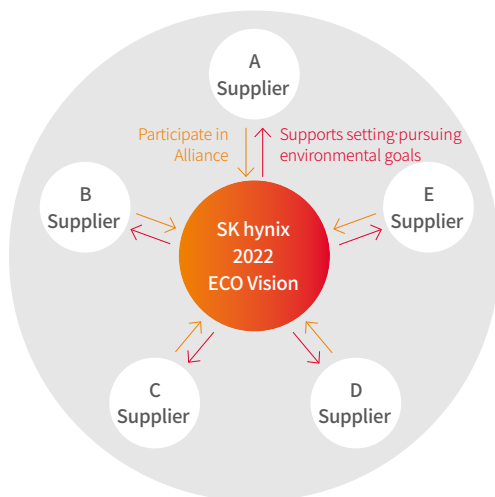
## ECO Alliance

Strengthening corporate alliance  
to build a strong eco-friendly  
semiconductor ecosystem



### Eco-friendly semiconductor ecosystem with suppliers

SK hynix will achieve our company's environmental goal of "2022 ECO Vision" as well as create an eco-friendly semiconductor ecosystem with suppliers. Suppliers that wish to participate in the ECO Alliance are to build a mid to long-term environmental goal such as our "2022 ECO Vision" and drive towards that goal of their own volition. To achieve this, SK hynix helps suppliers to improve the skills and abilities of their environment-related workforce and analyze the demands of global companies, NGOs and other organizations so that suppliers can proactively create social value in the environment field. Furthermore, we will not only focus on our own company, but also share the know-how of environment-friendly technology with suppliers in the ECO Alliance, create and drive a joint vision and environment goals for ECO Alliance to be the leader in building an eco-friendly semiconductor ecosystem.



Regular Meeting  
(Quarterly)

- Sharing the status of environmental goals implemented by companies
- Sharing the latest issues related to environmental regulations
- Training related to SHE, additional consulting, etc.



Promotion of Joint  
Environmental Goals

- Establishing and implementing common vision and environmental goals for the Alliance
- Promoting social value creation activities in the environment sector linked with suppliers



ECO  
Conference

- Announcing Alliance Performance
- Announcing best practices by technology, know-how and suppliers regarding environment

• 30 Companies Participated

### Guide for Environmental Goals

Guides to establish mid- to long-term environmental goals  
in each sector

Category	Key Points
Using renewable energy	Introduction of renewable energy
Reducing GHG emissions	Reduce emission and sell low-carbon certified products
Saving energy	Save energy and produce energy-efficient products
Saving water	Reduce water consumption and obtain water footprint certifications
Reducing wastewater	Reduce the production of wastewater
Reducing general wastes	Reduce general waste output and increase recycling rate
Reducing designated wastes	Reduce designated waste output and increase recycling rate
Developing eco-friendly products	Produce energy-efficient low-power products

• Establishment of one or more goals required

### An alliance of semiconductor-related companies for the establishment of eco-friendly semiconductor ecosystem

Participation target	Main activities
SK hynix and its suppliers	Establishment and implement of mid- to long-term goals (more than three years) to reduce the impact of each company's environment
<p>Future expansion to secondary and global partners, customers, and IT industries</p>	<p>ECO Alliance Joint Activities</p> <ul style="list-style-type: none"> <li>· Sharing of eco-friendly technology and expertise</li> <li>· Joint response to environmental laws and regulations</li> <li>· Development and implementation of DBL Biz. in environmental areas</li> </ul>



## STRATEGIC COMMITMENT 2

# Supply Chain Sustainability Management

## Management Approach

Building strong partnerships with suppliers is an integral part of improving cost efficiency and competitiveness. We are held responsible when our suppliers produce substandard products or violate human rights, which may have negative impacts on our corporate value and reputation. Thus, the relationship with our suppliers goes beyond the customers and providers into a partnership for mutual success.

## Principle & Strategy

In order to create social value, it is important to integrate social responsibility throughout the supply chain. SK hynix is committed to building a healthy ecosystem for our suppliers based on strong partnerships by monitoring their environment, safety and labor practice and helping them make necessary improvement.

## INTERVIEW

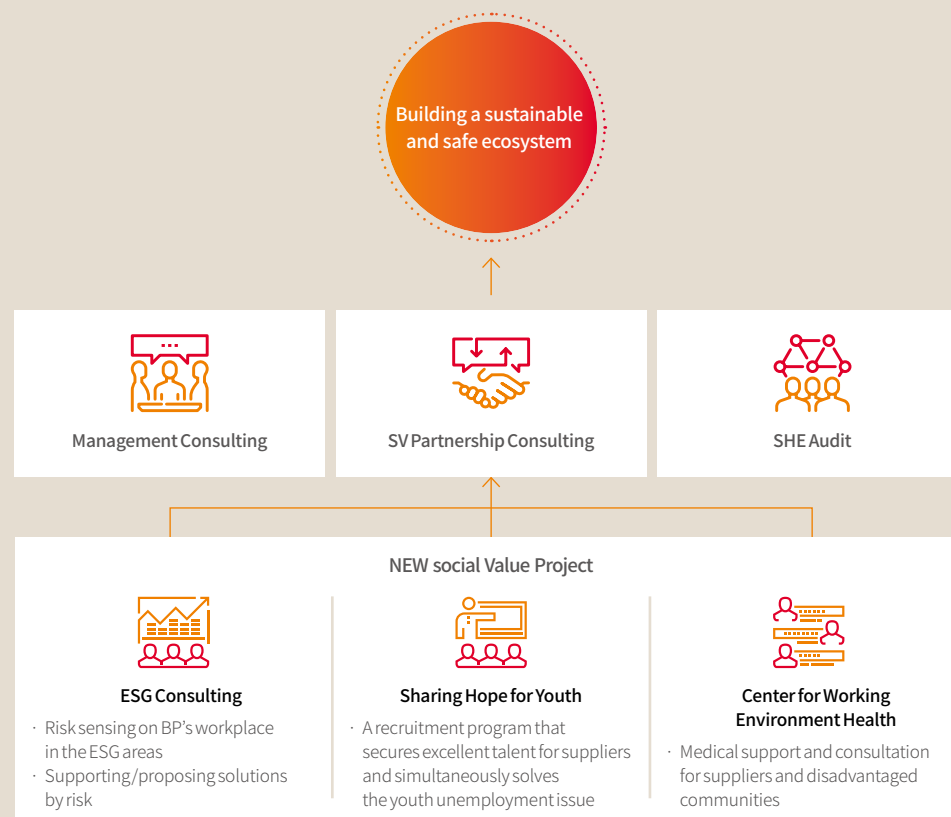


SV Infra Support Center  
Lee Won-Kyun TL

Safety, environment and health sectors within the industry cannot be overemphasized, as workers are constantly exposed to the risks of work accidents and occupational diseases. It is especially regrettable to find small business workers working in poor conditions without proper protective gear, or safety standards not being observed due to lack of awareness of regulations and proper working guidelines. To address this problem, the Center for Working Environment Health provides free industrial health support services to SK hynix suppliers and disadvantaged communities. As this is the first time SK hynix has operated this center, there is considerable pressure and expectations to meet a high level of outside interest. However, as a leading role model in industrial health cooperating with other companies and government agencies, we will continue to work hard to create a safe working environment for the company, suppliers, companies, and communities.

## Amplifying Supply Chain Sustainability Management

SK hynix is maintaining a healthy ecosystem for more than 700 suppliers based on win-win strategic partnerships as we provide support for sustainable operation and growth as well as manage risks in our supply chain by disseminating sustainable practices. In 2019, we will implement "SV Partner Consulting" to further strengthen our support for sustainable practice.



## ESG Consulting



SK hynix reviews the potential workforce, human rights and SHE risk in the supply network to recommend solutions by risk to the according supplier. In 2019, SK hynix will conduct ESG surveys targeting suppliers that are involved in business transactions with us to provide consulting services to suppliers who show high risk in the survey. We anticipate that this will not only solve the potential risk of suppliers and improve their level of regulatory compliance, but also raise suppliers' awareness of ESG. SK hynix is aiming for suppliers to internalize ESG through its own abilities.

### CASE. Environmental Consulting for Suppliers of Wuxi campus

In Wuxi, we provide an environmental consulting service for small suppliers having difficulties managing their environmental practice in cooperation with the Chinese government. We provided resources and expertise for environmental management to help them with permit/license acquisition, facilities investment, and compliance with environmental laws and regulations. Through these efforts, we improved their commitment to reduce environmental impacts around their workplace and the local environment while strengthening partnerships with the government and suppliers and building a strong corporate reputation. In the second half of 2018, we provided consultation for five companies and plan to increase it to sixteen companies in 2019.



## Sharing Hope for Youth



SK hynix runs Sharing Hope for Youth, a collaborative practical talent cultivation program that offers practical semiconductor training to applicants and provides internships and employment for outstanding suppliers in order to resolve youth unemployment and alleviate the labor shortage in small and medium companies. We select subjects for training and internship from applicants aged 34 or under through resume evaluation, online aptitude testing and interviews. In 2018, 179 out of 1,200 personnel received training. All applicants were interviewed at their desired company and were given internship opportunities. A total of 76 trainees succeeded in full-time employment. Selected subjects not only received practical semiconductor training from workers in the industry but also gained internship and employment opportunities. We plan to select 250 trainees for our second term and we will do our best to build the groundwork to improve competitiveness of the semiconductor ecosystem.

### Process



SK hynix "Sharing Hope for Youth"

## Center for Working Environment Health



To improve health and safety standards for employees of our suppliers and small local companies in Cheongju, we established the “Center for Working Environment Health” in 2019. Various SHE(Safety, Health and Environment) support programs will be carried out for suppliers in the semiconductor industry, including one-on-one health consulting, safety and health training, industrial disaster consulting, and workplace improvement. They are also expected to serve the public good by providing on-site medical service, sharing information about industrial disasters and disease prevention, and building public and private network in local communities. SK hynix will continue to make our society and workplace healthier and safer through the Center for Working Environment Health.



### 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 checkup



#### Counseling on prevention of musculoskeletal diseases

- Examination of musculoskeletal symptoms
- Test 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

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



#### Counseling on job stress

- Test 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 work environment and chemical control
- Counseling on MSDS (Material Safety Data Sheet)
- PPE(Personal Protective Equipment) training and practice

## STRATEGIC COMMITMENT 3

# Glocal Social Contribution

## Management Approach

SK hynix recognizes that maintaining close communication with our society and solving social issues are a key part of our business. As semi-conductors play a central role in improving the quality of our lives, we bear the responsibility to build a healthy ecosystem that we give back to society. From this perspective, social contribution is a way to create social values and a channel to communicate with society.

## Principle & Strategy

In order to make local communities a better place to live, we engage in various social contribution activities, keeping both donors and beneficiaries satisfied. Furthermore, we are continuously making improvements by quantifying and measuring our performance to generate better social values. Our primary goal is to maximize social values through sustainability programs tailored to the needs of local communities while solving social issues through innovation and ICT.

## INTERVIEW



Wuxi Sustainability Management Team  
**Son Je-Duk TL**

We are committed to grow alongside with society in social values, structures and social contributions. I believe it is our responsibility to empower responsible corporate's movement. Happiness is like sprinkling perfume. Now, I will take the lead in implementing global social contributions as if I would sprinkle perfume so that everyone can smell it. We will plant the seeds of happiness together to provide happiness to those who need help, and grow up with the community and expand the infrastructure of society.

## Creating Values for Local Communities



Mutual Growth with  
Local Communities



Happiness of  
Donors & Beneficiaries



Creating  
Social Values



### NEW Social Value Projects



#### Solving Social Issues

Innovative solutions utilizing ICT

- Improving the quality of life of senior citizens living alone through "Silver Friend"
- Creating ICT-based senior communities with "ICT Sarangbang"
- Preventing missing senior citizens with dementia with "Happy GPS"



#### Customized CSR for Local Needs

Social contribution programs to solve social issues at global business sites

- Building hospitals and schools
- HAPPY-MORE(HAPPY-MORE INC.)<sup>1)</sup>



#### Happiness Sharing Fund/ Volunteer Group

Building a platform for communication, trust building, and talent sharing

- Heinstein / Happy ICT Zone
- Career Mentoring Program called Happy Dreaming

1) To provide stable jobs for disabled, SK hynix set up a subsidiary-type standardized social enterprise in October 2017. HAPPY-MORE manufactures and cleans dust-free garment and carries out work related to materials for clean rooms.

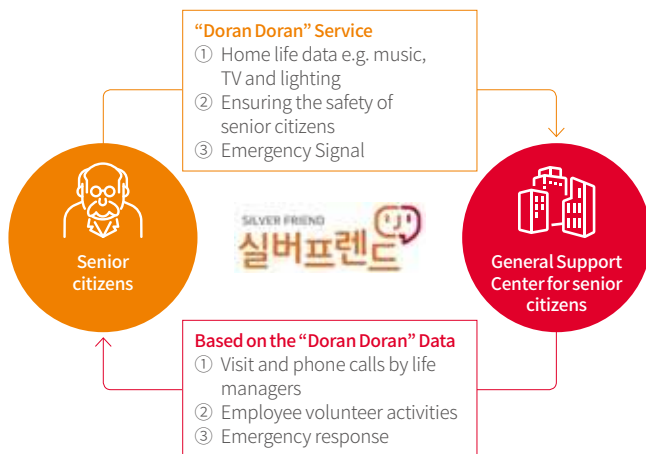


## Solving Social Problems



### “Silver Friend”, Improving the Quality of Life of Senior Citizens

As we enter into the super-aged society, the rapid growth of elderly population has resulted in an increasing social problems related to the senior citizens. To support social welfare for them, SK hynix has been increasing ICT-based social contribution programs. “Silver Friend” is a program through which we provide AI speakers and IoT products for seniors, and social welfare workers can check the seniors’ health conditions for effective management. In 2019, we established “Silver Friend Doran Doran” to ensure prompt responses to emergency situations and to build a database of their daily activities and patterns to provide customized welfare services. By the first half of 2019, 2,000 units were distributed in communities where our business sites and affiliates are located. SK hynix will continue to improve the quality of life for the elderly and solve problems of aging populations.



Dreaming of the world of living together(“Happy GPS”)



# 2,000

The number of senior citizens who received Silver Friends



# 10,000

The number of senior citizens with “Happy GPS”

### Helping People with Dementia and Developmental Disability with “Happy GPS”.

A growing number of patients suffering memory loss and missing cases has caused difficulties of their family members and has increased social expense. To resolve this issue, SK hynix developed “Tracking Device for Missing Persons - Happy GPS” based on our memory business. The devices were provided to more than 6,000 dementia patients in 2017 and 10,000 patients by 2018. All of the 135 people using the device who went missing were found and came back safely, and the average time to find a missing person was dramatically reduced from 12 hours to 1 hour, contributing to the operation of finding missing people.

### ICT-based Senior Community “ICT Sarangbang”

We plan to build the ICT-based senior community, “ICT Sarangbang” where we help seniors by improving the quality of living, providing health management, and creating jobs.

Promoting a “silver community center” to support ICT-based community for senior citizens

#### Urban Regeneration by Remodeling

##### Social Network

- Support for community activities (Silver Friend Classroom, Singing Room, etc.)
- Mitigate the gap between generations (e.g. movies, high-tech games, etc.)

##### Silver Care

- Improve basic physical strength and provide health checks
- Dementia prevention class (using robots)

##### Job Creation

- Expansion of jobs for senior citizens (Happy School uniform, Silver Cafe)
- Support for job counseling

#### Infrastructure

Shuttle bus operation for reclusive elderly living alone

Self-Care and entry management system

Create a clean environment based on a feedback system

## Customized CSR for Local Needs



### Creating Social Values by Building Shared Infrastructure

#### Fulfilling Social Responsibility as We Grow

##### Happy Bus

At our business sites in China, we operate “Happy Bus,” a mobile medical clinic for low-income populations, senior citizens and people with disabilities. The bus is equipped with cutting-edge medical facilities, and runs 2-3 times a week to provide free medical services based on the partnership with medical professionals. In 2018, we provided KRW 400 million worth of medical services to the vulnerable group.

##### Building a Medical Complex

We are building a “Health & Wellness Center” to provide medical services, with a focus on providing necessary medical support for local communities of our business sites in China. The facilities will be equipped with the latest medical technology and systems as well as qualified professionals, and ultimately serve as a future-oriented medical complex that encompasses education, research and innovation. It will establish a research ecosystem combining medical technology and clinics that can provide quality medical services and improve the quality of life.

##### Establishing Educational Infrastructure

In response to the increasing needs for high-quality education from our employees and the local communities for their children, SK hynix has been working to establish a prestigious private school targeting to open in September 2021. It is part of our CSR efforts to develop talents and contribute to the local economy in a long term.

#### Sharing Know-how in Environment and Safety

##### Expanding Fire Safety Education

SHE Experience Center provides fire safety training for local residents in our business sites in China. The program includes prevention of fire hazards, evacuation drills and safety trainings. By doing so, it raised the awareness of fire-fighting safety and improved our corporate reputation as a safety driven company. In cooperation with local fire departments in China, we provide inspections of fire-fighting facilities, evacuation trainings and fire safety experience programs for local elementary schools. With these efforts, we raised awareness of fire safety for children and replaced obsolete or outdated facilities and equipment.



### Performance



**4,500** people/year

“Happy Bus” Free Mobile Medical Service Project  
Vulnerable groups



**6,800** people/year

Wuxi Philanthropic Support Insurance-Adolescent Support Project  
Adolescents & guardians



**1,800** people/year

“SK Light of Hope” Cataract Surgery Project Beneficiaries



**300** people/year

“Happy Home” Elderly Welfare Project Beneficiaries  
(over 60 years of age)



**260** children in poverty/year

“Philanthropy” Youth Education Project Beneficiaries

Measuring  
Social ValueSustainability  
StrategyOur  
Promise & ActivitiesStrategic  
commitment

## Happiness Sharing Fund · Volunteer Group



### Happiness Sharing Fund

With voluntary participation from our employees and matching grant program, SK hynix created Happiness Sharing Fund to donate goods to children and elderly people from vulnerable groups in Icheon and Cheongju and to organize various volunteer activities. 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. KRW 18.5 billion has been raised from 2011 to 2018 and it will be used for various projects for vulnerable groups in the community. At our Chongqing campus, the “Aeshim” fund raised by our employees was donated to employees in financial difficulties and those who suffered from accidents. A total of CHY 253 thousand was raised with donations from 1,269 employees as of February 2019.

### Happiness Sharing Volunteer Group

In addition to volunteering at welfare facilities, “Happiness Sharing Volunteer Group” engages in “Silver Friend Volunteering” and “Happy Dreaming Career Mentoring,” where our employees use their talents to create social values. In 2018, 5,088 employees of 96 teams spent 18,897 hours on volunteer activities. The employees can volunteer during work hours with subsidies for transportation and expenses.

### “Heinstein,” Educating Future Science Talents

“Heinstein” is a talent development program for children and youths in local areas in Korea with poor educational infrastructure. Every year, we support for coding education for more than 1,000 students, and about ten contest winners are granted overseas tours. In 2018, they participated in the Maker Fair in Taiwan.

### Happiness Sharing Volunteer Group



Total **5,088** employees



**18,897** hour

Happy Plus  
Nutritious Meal



862 employees

3,351.5 hours

Silver  
Friend



59 employees

280.55 hours

“Happy  
Dreaming” Career  
Mentoring



122 employees

1,342 hours

Volunteer  
Activities  
for the Local  
Communities



3,967 employees

13,621 hours

Junior  
Engineering Class



78 employees

301.5 hours



## STRATEGIC COMMITMENT 4

# Diversity and Inclusion Culture

## Management Approach

With rapid globalization, diversity and inclusiveness in workplaces play a major role when it comes to sustainable business practices. The values of individual employees form an organizational culture while the creative and collaborative workplace environment promotes innovation and growth.

## Principle & Strategy

SK hynix respects human rights and labor standards while ensuring compliance with local regulations in the regions where we operate our business. We also support individual freedom and human rights of our employees and respect their diversity. We respect their personal life and make sure that they maintain a healthy balance between their personal values and work performance.

## INTERVIEW

Growth Design Team  
Choi Ji-Eun TL



Many members of SK hynix are collaborating to produce one semiconductor product. SK hynix is definitely a company that needs to deal with diversity, and inclusion is more important than in any other company. When diverse members speak out and play their part, they can make smart decisions and be competitive and continue to grow. To this end, SK hynix is gradually preparing to identify and improve its current level of diversity and inclusion. We will continue to develop a more inclusive organizational culture and create a working environment in which diverse people can happily immerse themselves in.

## Diversity and Inclusion Culture



### Foundation for Cultural Diversity

- Research and Analyze cases to promote diversity
- Campaign and event for employees



### Cultural Awareness Activities

- Survey employees' acceptance to cultural diversity
- Lecture on leadership for creating diversity and inclusion culture
- Host forums for gender equality joined by both male and female employees



### System & Programs

- Declare guarantee of diversity acceptance and improve the system for the prevention of discrimination
- Develop program to create a female-friendly work environment
- Manage manuals and processes for handling sexual harassment

## Foundation for Cultural Diversity



Diversity & Inclusion Center will be established to strengthen the cultural and institutional environment so that all members can live in an equal manner based on gender, race, nationality, religion, etc. By doing so, SK hynix will introduce an organizational culture in which its members can work fairly without discrimination. To this end, we will establish direction and strategy of the center and set the business direction. Because diversity and inclusive culture requires a lot of thought and efforts from all members, SK hynix

took a survey for all office workers and in-depth interview with individuals from different division, age, gender and background. The result will be used to analyze the attitudes and perceptions of our employees along with the best practices of diversity, inclusion system and human resource process of advanced companies. Based on the basic data survey, the company will plan systems and programs that include diversity and inclusion of organizational culture in SK hynix's strategy and implement them next year.

## Assessment process of cultural diversity and inclusion

### Quantitative Survey

- Development of questionnaires in 15 areas, including the scale of inclusion, diversity awareness, etc.
- Utilize statistical techniques and identify the relationship and influence factors between organizational culture diversity variables

### In-depth Interview

- Analyze member experience not captured in quantitative survey with context, intent, and meaning
- Professional interpretation of member's field experience

### Case Analysis

- Benchmark cases of major domestic and foreign companies and establish measures to introduce them in-house



## Sec.03

# PERFORMANCE

## Environment

Focus on SHE(Safety, Health and Environment) management to minimize impact on environment and safety through sustainable operation of workplace in the value chain.

- Sustainable GHG emissions management

Reduced by  
**15%** (Scope 1)

Reduced by  
**13%** (Scope 2)

(Based on intensity compared to 2017)

## Society

Respect social and environmental values to drive sustainable growth with our employees, suppliers, and local communities.

- Distribution of economic performance

Increased by  
**39%**  
(Based on the intensity compared to 2017)

## Governance

Ensure ethical and legal compliance and fair practice through efficient and transparent BoD, operation and sustainable governance.

- Board meeting attendance by independent directors

Increased by  
**100%**

# ENVIRONMENT | SHE Management

## SK hynix's Approach to SHE Management

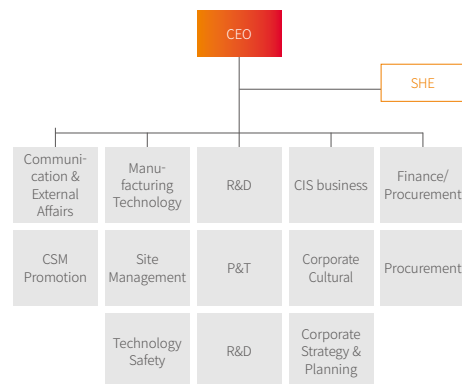
SK hynix is committed to reducing risks related to SHE (Safety, Health and Environment) in our business operations. To this end, we have taken a proactive approach in responding to stakeholders' demand for environmental protection and safety while complying with local regulations in the regions we operate our business. In order to minimize our impact on the environment, we are creating a healthy ecosystem through innovation of pollutant processing technology and resource recycling while reducing GHG emissions and waste production. In addition, we have promoted safe culture programs for our employees and the supply chain with the aim to create a "Risk-Free Workplace".

## SHE Management System

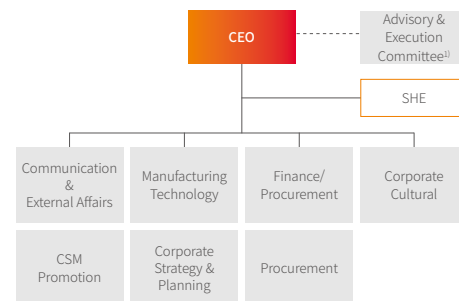
### SHE Organization

To take a systemic approach to SHE management, we have SHE Management Committee and SHE Advisory Committee.

#### SHE Management Committee Organization



#### SHE Advisory Committee Organization



1) Composed of 6 outside experts

**SHE Management Committee** SHE Management Committee is a decision-making body organized to ensure that our SHE strategy is delivered to the field-level in a prompt top-down manner. SHE Management Committee is to help top level management make strategic decisions considering SHE related issues and to empower SHE leadership and its execution through meetings on a monthly basis.

**SHE Advisory Committee** SHE Advisory Committee is to acquire technical expertise from academics and agencies outside of our company, and also serves as a communication channel with stakeholders. The technological expertise secured through quarterly meetings is used to build trust on our SHE activities and minimize SHE related risks.

### A Global Environment Management System

We have established an environmental management system based on ISO 14001 (International Standardization Organization Environment Management System) in response to demands from international agreements, governments, and customers. We have established a set of management policies for chemical control, pollutant emission, waste treatment and energy while conducting reviews of our compliance with the requirements every quarter and SHE internal reviews twice a year. We also organize regular training programs to raise our employees' awareness.

#### Environment Management System Certifications

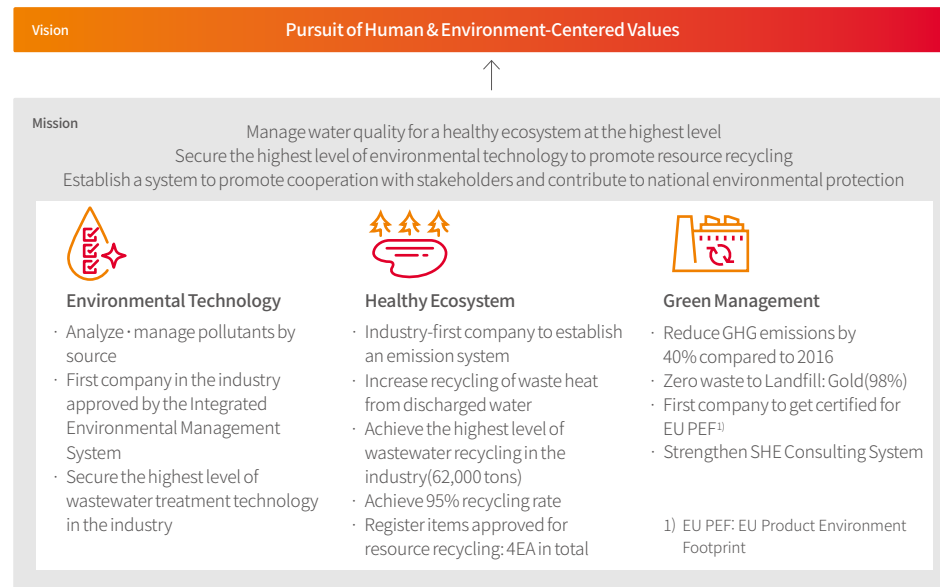
Certification	Icheon	Cheongju	Wuxi	Chongqing
ISO14001	2018.02.08~ 2020.01.30	2018.02.08~ 2020.01.30	2019. 01.18~ 2022.01.18	2018.08.15~ 2021.08.14

### Expansion of Investment in SHE

We have continuously increased our investment in SHE. In 2018, we established "Korea Safety Health Environment Foundation" to nurture SHE experts and leaders, with the budget of KRW 35 billion over the next 10 years. Our aim is to build an independent organization to draw and educate talents in SHE area through scholarship programs, research activities to develop solutions for SHE-related issues and joint support and collaboration projects with our stakeholders including local communities, academics, and industries.

## Green Management

SK hynix set “2020 ECO Vision” with the aim to build eco-friendly production facilities. Strategic goals were established in three areas and we are engaging in various activities to reduce our environmental impact and maximize the recycling of resources while monitoring the entire process of electricity, GHG emission and waste.



## Energy Use Management

### Energy Consumption Monitoring

Since 2012, SK hynix has run various energy-saving programs through corporate-wide TF and maintained ISO50001(Energy Management Systems) certification. Our energy management status, such as consumption and reduction progress is under real-time monitoring through an energy portal according to the ISO50001 Energy Monitoring(4.6.1 Monitoring, measurement and analysis) specifications. Based on this data, energy consumption is projected and TF teams are assigned with specific goals. Also infor-

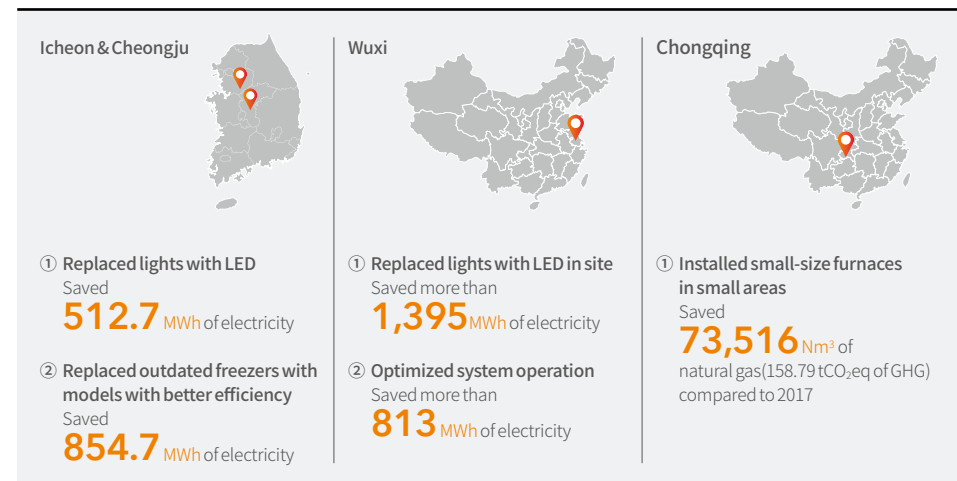
mation on energy consumption by production process, equipment and parts are fed back to the related teams to develop better solutions for energy saving, so decisions for investments are made with priorities based on the ROI, projected reduction amount against the target, feasibility, and urgency.

In the Wuxi campus, SK hynix controls the energy consumption of production facilities and systems. In 2018, we managed to save more than 813 MWh of electricity as the power supply of 63 facilities was shut down when they were not in use, and the employees are encouraged to use stairs and turn off PCs and lights at night.

### Process Energy Saving

SK hynix has set energy management as top priority in all our business sites with the aim to achieve our energy reduction targets. To this end, we improved our energy efficiency by optimizing and expanding our systems and replacing outdated ones. At our Icheon campus, LED lights were installed in the new buildings and existing lights were replaced by LEDs depending on their condition to save energy and improve work efficiency. In 2018, 5,316 lamps were replaced saving 512.7MWh of electricity, and all lamps will be replaced by LEDs in the future.

### Energy Saving Performance by Site



## Air Quality Management

### Fine Dust Control

With growing concern for fine dust, we join our efforts for reduction under the 2022 ECO Vision. Since 2018, we have developed, tested and introduced new post-processing technology to improve efficiency of facilities for reduction of Nitrogen Oxide and Ammonia, which are precursors for fine dust. By taking a proactive approach to increasingly stringent emission limits, we managed to reduce our operational risks. By 2022, SK hynix plans to invest KRW 120 billion to build air pollution prevention facilities at our Icheon and Cheongju Campuses. SK hynix will actively support the environmental rights of citizens and the government policies on fine dust and contribute to environmental protection through technological innovation.

### Reduction of Air Pollutants Emissions

Chongqing campus ensures compliance with local laws and regulations as well as in-house waste disposal procedures for the air quality management. Air pollutants emissions are subject to external inspections on a quarterly basis, and we achieved 100% compliance rate in 2018. Every year we identify and update the source of air pollutants emissions and perform SHE qualification procedures on new equipment as well as new chemical substances. We also review the possibility of replacing toxic substances with low toxic ones to reduce volatile chemical substances and the concentration level of air pollutants. In 2018, scrubbers and small furnaces were installed at our test facilities to reduce natural gas consumption and air pollutants emissions. In 2019, we will continue to implement new measures to minimize the use of natural gas and reduce pollutants.



CHY **170** thousand  
Saved for natural gas consumption



**509,000** Nm<sup>3</sup>  
Reduced of air pollutants emissions

## Preservation of the Fresh Water Ecosystem

Our Icheon campus must meet strict emission standards as it is located in the water source conservation area. To meet the requirements, we keep the safety level for hazardous substances and monitor the ecotoxicity with daphnia (water fleas). According to the ecotoxicity test in 2017 and 2018, our discharged water had no impact on the ecosystem in the area. We are going to establish our own monitoring system for regular and frequent tests to preserve the ecosystem in 2019. We will continue to take a preemptive approach through impact analysis based on direct and indirect data collection and continuous environmental impact monitoring.

## Waste Management

SK hynix separates general and designated waste materials from the moment they are produced, and disposes, sells and recycles each type of waste materials through professional service providers. At our Icheon and Cheongju campuses, 278,361 tons and 80,963 tons of wastes were produced respectively, and 95% and 96.7% were recycled. To ensure proper disposal, we conducted a preliminary assessment and environmental audit on 62 disposal service companies, and managed to reduce environmental impacts worth KRW 633 million through on-site improvement in 29 cases.

In Chongqing, we perform regular inspections of hazardous wastes and provide waste management training for all employees including those from our partner companies. We developed safety work procedures for loading hazardous wastes and provided training for all workers. Furthermore, we conduct on-site inspections and assessments when hiring and renewing contracts with disposal service providers. Our recycling rate in 2018 was 90%, a 19% increase from 2017.





## Chemical Hazards Management

### Strengthening Chemical Hazards Management through Internal· External Communications

SK hynix organizes employee training programs to improve its chemical hazards management capabilities and uses councils as an external communication channel to build trust with the local community. For our employees, we provide information on hazardous chemical usage status and training on the safe handling. We inform our employees about accidents while handling hazardous chemicals and about actions and procedures they should take to handle emergency situations through monthly newsletters. In addition, we maintain close communication with our stakeholders through “Gyeonggi Province Chemical Substance Council” composed of local governments and resident representatives of Gyeonggi-do and Icheon-si and chemical substance experts. At the council meeting, we share the current status of chemical safety management, the scope of impact and emergency response plans in case of accidents, such as evacuation and recovery process. Furthermore, we established the Small-Medium-Large Chemical Safety Council with six companies located nearby. A cooperation system was set up to support a joint response to emergency situations and exchange of plans to ensure compliance with the Chemical Control Act between the sites. Since 2018, we have served as a Chair Company of “Council of Chemical Safety Community in the Metropolitan Area,” facilitating communication and representing the council when dealing with companies handling chemical substances near the Han River.

## Environmental Training and Certifications

### Raising Environmental Awareness through Training

As part of its social value creation, SK hynix is improving the environmental aspects of our business sites. In 2018, we provided trainings on waste disposal and regulations for 60 waste managers. In Chongqing, we conduct training to prevent environmental accidents and raise awareness for employees and suppliers in line with local laws and regulations, and the internal SHE management training policy. In 2018, we provided training on hazardous wastes for all employees of our company and in-house sub-contractors, and training on stormwater management and water pollutants for the teams in charge of stormwater management in our company and in-house sub-contractors.

### Environmental Training at Wuxi campus

Training Target	Training Subjects	Frequency
All employees	Waste disposal procedures and systems	Once/year
New employees	Overview of wastewater/disposal/waste operations	As needed
In-house sub-contractors	Waste disposal procedures and systems	Once/year

### Environmental Certification

To oversee legal compliance and social responsibility at our business sites in China, SK hynix conducts “Environmental Credit Assessment” by the government every year. The areas of assessment include pollution prevention systems, environmental management, emissions by source, and information disclosure. SK hynix Chongqing campus received the highest rating (Excellent Environmental Protection Company) in 2018.



## Safety & Health Management

### Safety & Health Strategy

SK hynix is building human-centered safety and health system, and creating “Safety&Health Risk-Free Workplace”. To continue our innovation and strengthen the foundation for our safety and health practices, we established a Safety & Health Policy and implemented mid- to long-term improvement plans.

### Operation of the Occupational Safety & Health Committee

SK hynix operates the Occupational Safety and Health Committee, where both labor union and top management conduct joint reviewing and decision-making to prevent risks and health problems of employees. The committee is composed of twenty members, consisting of ten members each from management and labor, including the chairman of the Labor Union as a representative of employees and Safety & Health Director as a representative of the company. The committee is to discuss ways to make industrial disaster prevention plans and areas to improve including medical check-ups of employees and assessment of the working environment as well as preventive measures against risks and hazards. SK hynix will continue to improve communication through the Occupational Safety and Health Committee as a way to closely cooperate between management and labor for better work environment.

### Safety Management System Certifications

Certifications	Icheon	Cheongju	Wuxi	Chongqing
ISO45001	OHSAS18001 → ISO45001 transition to be reviewed			2019.01.18~2022.01.18
OHSAS18001	2018.01.06~2021.01.06	2018.01.06~2021.01.06	2018.08.15~2021.03.11	-
KOSHA18001	2018.11.07~2021.11.06	2018.11.16~2021.11.15	-	-

### Establishing Safety Culture

Safety is one of the integral parts in most industries including the semiconductor, without which serious disasters and substantial loss may occur. SK hynix has internalized safety culture, taking a systematic approach to preventing accidents. Since 2017, we have applied international safety rating systems and introduced safety cultures of global top tier companies while assessing our safety and health systems and workplace culture. To meet the needs to raise safety awareness for all employees including executives, we perform assessments and consultations on a continuous basis.

### Promoting Safety Culture in the Workplace

At our Wuxi campus, all employees signed the safety pledge as part of the Safety Pledge Signing campaign in 2018. Through the company website, we promoted 43 weekly sessions of safety standards and published Safety Guidebooks that introduced basic safety standards. A total of 2,300 guidebooks were distributed to the employees of SK hynix and its suppliers. Safety campaign banners were installed on our shuttle buses and at the entrances to our buildings, and safety training videos were shown, covering emergency response plans and chemical storage instructions.

### Promoting Safety Culture with the Local Community

In addition to the employees of our company and suppliers, SK hynix is promoting a safety culture in our local communities. At the Icheon campus, we organized a fire safety awareness campaign with an MOU we signed with local elementary schools to raise safety awareness and distributed fire extinguishers and alarms as part of our fire safety programs. In the future, SK hynix plans to proceed the volunteer activities of our staff members for fire safety training and practice, and support emergency training programs in the future.



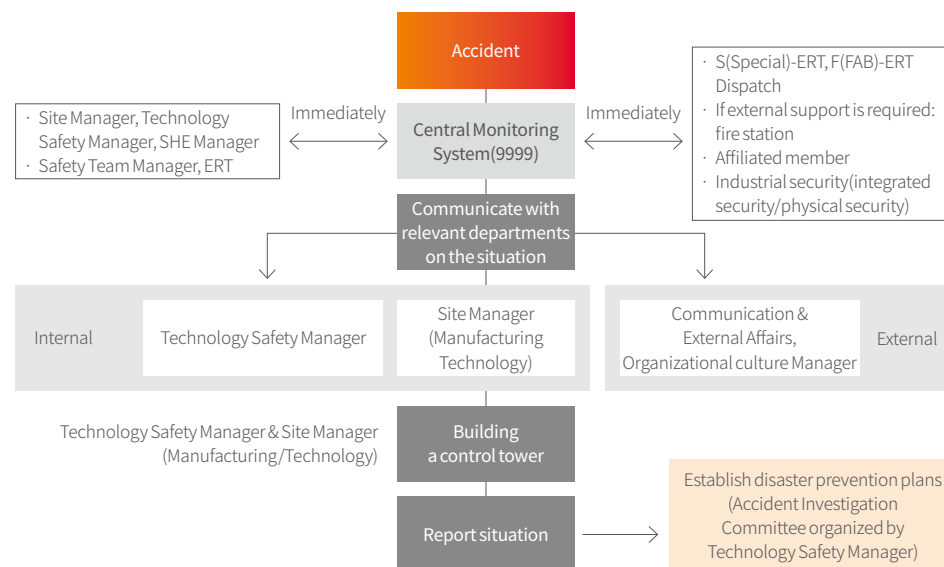
## Improving Workplace Safety

### Emergency Response System & Trainings

SK hynix established an emergency response system to minimize damage in case of emergency. At each workplace, monitoring is performed 24 hours a day by the ECT(Emergency Control Tower) to ensure prompt initial response when emergency occurs while on-site response and communication are expedite by the ERT(Emergency Response Team). The team also analyzes accidents and develops measures to prevent them as part of the efforts to reduce risk factors. Depending on the emergency situations, classified as fire, gas leakage, chemical spills, utility accidents, power failures, injuries, earthquakes and floods, scenarios and emergency response procedures have been established.

In addition, each business site maintains and repairs emergency response equipment for each type of accident and conducts regular emergency response training. Icheon campus organized and operated G-ERT, a group specializing in evacuation guidance, to improve the evacuation environment. The evacuation professional group G(General)-ERT conducted 1,034 internal evacuation drills and emergency situation response drills in 2018. Cheongju campus conducted 908 evacuation and response drills for each department according to the site process risk assessment and scenario. In particular, we conducted a total of 15 'Workplace Comprehensive Training' expecting the worst-case scenario and conducted joint emergency response training with our residential suppliers.

### Emergency Response Process



### Safety Simulation Drills

SK hynix conducts Safety Simulation Drills to prevent personal injuries and minimize property damages. In 2018, we carried out Environmental Safety Simulation Drills 18 times and Electric System Emergency Simulation Drills 192 times. We will continue to identify risk factors in all types of accidents and make necessary improvements through these simulation drills.

### Operation of S-Helper

Since 2018, SK hynix has operated the PSM<sup>1)</sup> S-Helper program at each business site. The PSM S-Helper program includes a manual training on eight work processes, identification of work performance on a regular basis, guideline on future plan and improvement, skill-up for voluntary safety management, and PDCA<sup>2)</sup> promotion, and it is designed to identify the level of performance and improve daily work process. At our Cheongju campus, we held regular on-site inspections by production facility for three times and seminars on eight action items for new SHE managers for four times.

1) PSM: Process Safety Management

2) Plan, Do, Check, Act

### Safety training performance of business sites in domestic

Classification	Area	Training hours <sup>1)</sup>	Completed(person)
Workplace Safety Training	Domestic	2,226	60,471
SHE Experience Training	Icheon	75	1,195

1) Training hours per class x Number of Classes

### Wuxi Safety Training Program

Recipients of Training	Training Content	Frequency
68 employees of suppliers	Safety standards and system operation	4 times/month
Waste service providers	Industrial security, ethical management, and safety training	Once/month
Waste service providers	On-site safety risk cases and standard/system	After signing contract
Waste service providers	Detailed work procedures	Prior to work

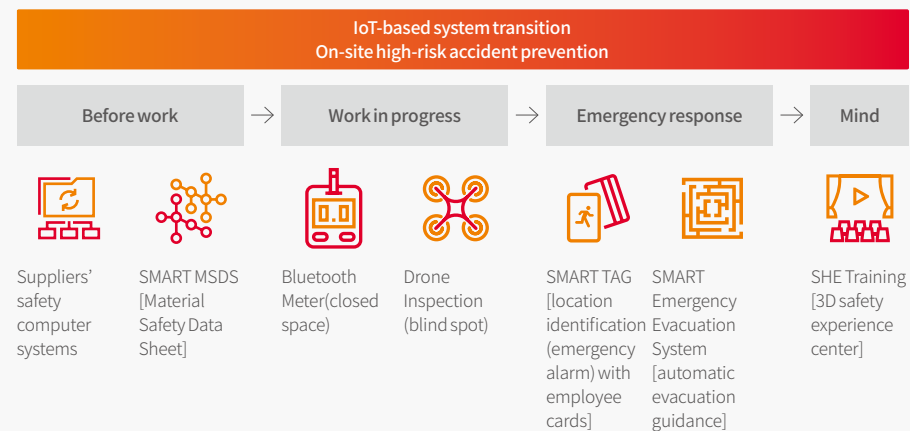
## CASE. Prevention of Accidents Using IoT Technology

SK hynix uses IoT-based technology to prevent accidents. Using such technologies as Smart MSDS<sup>1)</sup>, Bluetooth Meter, Drone Inspection, Smart Tag and Smart Emergency Evacuation System, we identify the vulnerabilities in our workplace and take proactive measures to prevent serious industrial disasters.

1) MSDS: Material Safety Data Sheet

Technology	Risk Factor	Description
Bluetooth Meter	Closed Space	Real-time monitoring of gas and communication between workers in a closed space and outside supervisors
Drone Inspection	Blind Spot	Eliminate potential risk factors through inspection of restricted areas
Smart Tag	Emergency Evacuation	Identify the number of people isolated using the employee cards
Smart Emergency Evacuation System	Emergency Evacuation	Deliver real-time action guidelines to the site through analysis of emergency situations

## Application of IOT Technologies



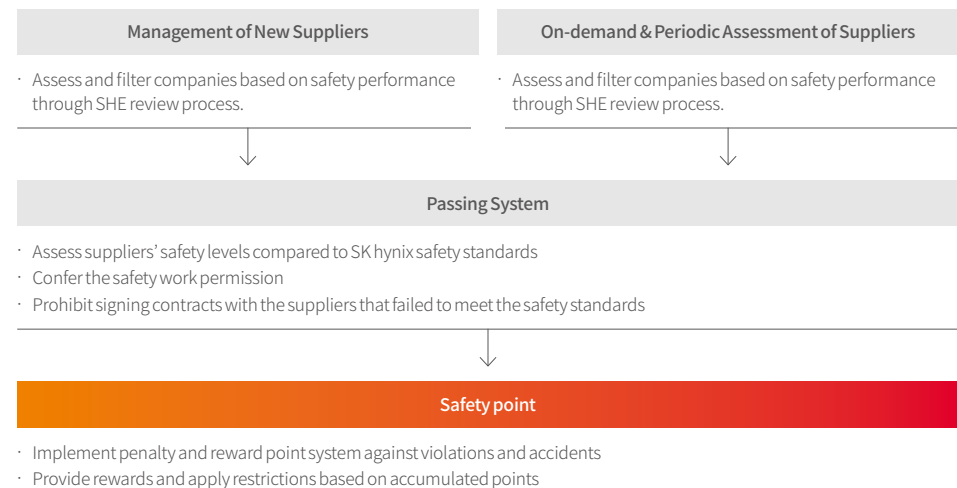
## Safety and Health of suppliers in the Supply Chain

### Implementing the Safety and Health Index System of Suppliers

SK hynix introduced the Passing System to enhance safety management of its suppliers through quantitative assessment by using a safety index. The system is designed to assess the safety management performance of suppliers using an index based on our SHE management system. All suppliers are required to reach the same safety level as to SK hynix in order to start business with us. After signing contracts, inspections are conducted based on the Passing System criteria, and improvement and monitoring processes are implemented as well if needed.

First-tier suppliers undergo safety assessments based on safety and health management documents, on-site safety management, and safety and health management plan of subcontractors while second-tier suppliers are assessed using the Safety and Health Management Plan composed of 28 items in 14 categories. We will continue to promote and strengthen safety management practice in our supply chain by expanding the Safety Point Program and Passing System Mileage Program in the future.

### Passing system





### Joint Safety Assessment with Suppliers

In addition to legal compliance, it is our social responsibility to create a safe and healthy work environment for suppliers. SK hynix holds council meetings with suppliers to prevent accidents on a regular basis. The council is composed of representatives of each company and review the laws and regulations of the countries that their business sites as well as regulatory trends and actual cases of accidents. A joint review is conducted every quarter to keep track of safety and health practice and make necessary improvements.

### Co-prosperity & Cooperation Program

SK hynix operates the Co-prosperity & Cooperation Program with the Korea Occupational Safety & Health Agency to support safety and health practice in the supply chain. The program focuses on building a cooperation system, strengthening and supporting competency, and conducting risk assessment in order to prevent accidents and improve safety and health practice management in the supply chain. Using the program, we will continue to help our suppliers maintain the same level of safety and health management to ours.

#### Co-prosperity & Cooperation Program Performance

Classification	Icheon campus	Cheongju campus
Regular Council Meeting	49 times	9 times
Safety Training	61,666 person	43,521 people

### CASE. Safety Quiz Festival

SK hynix held “Challenge! Safety Golden Bell” with our suppliers as part of our efforts to raise safety awareness and improve safety practices at our workplace. More than 300 employees working with manufacturing and technology facilities as well as E&C shared their ideas and learned about regulatory requirements and internal safety policies. We will continue to promote the social value of safety and help our suppliers improve their safety performance through safety awareness campaigns.



## Employee Health Enhancement

### Health Programs for Employees

SK hynix is dedicated to improving employees' health and managing stress through various health enhancement programs. The programs developed by the Health Management Office includes alcohol cessation program “Doctor Liver Program,” quit-smoking program “Nico-Bye Program,” obesity clinic “Fat-Bye Program,” fitness programs “Wellness Program” and “Healthy Exercise Class.” Managing employees' health is an integral part of improving their productivity and job performance as well as individual health. To reduce and prevent work-related stress, we established “Mind Walk Center” where 9 professional counselors provide one-on-one counseling in Icheon and Cheongju. The center also offers psychological examinations, regular job stress management, insomnia programs, meditation programs designed for specific job groups “Hu-REST” and Hu-BALANCING programs. More than 1,500 employees complete the programs every year. We also focus on preventing post-traumatic stress after occupational accidents and managed to save social and economic costs incurred by the accidents.

In 2018, we installed additional medical devices such as low/middle/high-frequency treatment devices and massage chairs to help prevent musculoskeletal diseases. We also focus our resources on building emergency response facilities and operating emergency response system for the safety of our employees. In 2018, we installed 10 defibrillators at the main entrances of our buildings in case of emergency cardiac arrest.



9

professional counselors



## CASE.

**Occupational Health Enhancement Committee**

With the “Occupational Health Enhancement Committee” as a health management system, SK hynix is committed to improving working environment and health of employees. The committee was organized to take care of employees’ health in line with “Occupational Health Assurance Committee” and “Occupational Health Support Compensation Committee.”

This committee is a joint council body between labor, management, and academics and composed of executive officers, managers and labor union. Its purpose is to reflect balanced opinions in our health policy and promote our management practice

through internal and external communication channels, and build trust. Through committee activities, we announced the results of our study of metabolic syndrome of shift workers at EPICOH(International Epidemiology in Occupational Health) in 2017, and we are going to introduce building the SHE cohort for SK hynix employees, which is one of our key projects we are undertaking through health-environmental-justice subcommittee. Going forward, we will continue to work towards making our company “the safest and healthiest workplace in the world” with the Occupational Health Enhancement Committee.

**Building SHE Cohort<sup>1)</sup>**

SK hynix recognized that limited research and short-term studies conducted in 2014 by the Occupational Health Validation Committee were not enough to respond to the occupational issues. In order to identify the link between working environment and diseases, we built a cohort through long-term observation based on exposure classification. The cohort, which was reviewed and approved by the National Bioethics Committee, has allowed us to reduce the uncertainty of disease occurrence and to prevent them and provides customized healthcare. We held more than 200 seminars for our employees and obtained their written consent to join the cohort.

We can gain the insight of working environment information which is not available to identify in a short period by establishing a link between acquired information through the cohort<sup>1)</sup> and analyzing the results related to the disease with complicated causes or low incidence. This information can be used as a basis to establish a preemptive response system suited for semiconductor production facilities. We can also identify the cause of the disease by focusing on problems and group-level improvement rather than the health management on an individual level. It is also possible to provide customized health management programs by designating groups with a similarly high level of disease patterns and trends within the group, as high-risk groups. These efforts will contribute to build our reputation as a leading company in a cohort study in private sectors and set an example for the industry while resolving conflict and anxiety of employees in their health management practice through innovation.

1) Cohort: A study method to determine the cause of a disease by comparing and analyzing information from groups exposed to disease factors and control groups



## Eco-friendly Product Development

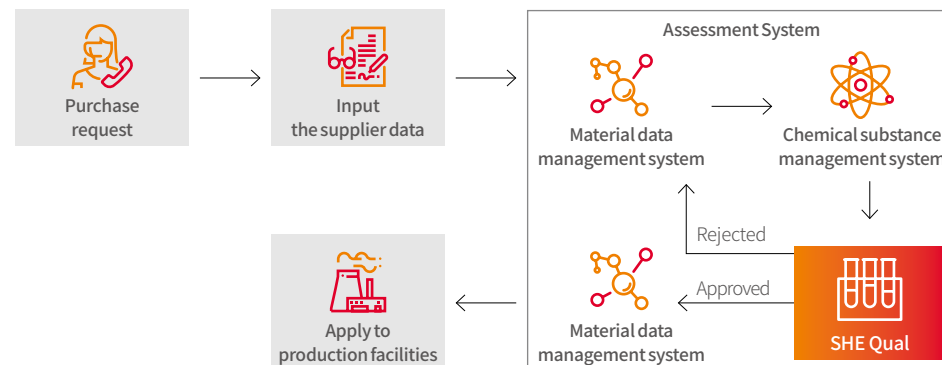
### SHE Qualification System

SK hynix operates the SHE Qualification System as part of its chemical management policy, to ensure safety and compliance in handling chemical substances. SHE Qualification is our pre-assessment system for all SHE(safety, health and environment) practices, where we carefully examine whether chemical substances cause any occupational disease, or there is a risk of fire or explosion upon exposure. Based on the system, a process has been implemented for proactive risk management. We also continuously enhance the system in response to trends in chemical issues. We make sure to meet both domestic and global requirements for chemical management, considering safety and health of employees as our top priority, so we earn the trust as a safe and reliable workplace from the community.

### Hazardous Substance Management in Products

With the environmental validation and monitoring system in place, SK hynix manages hazardous substances in our products throughout the entire production process from importation of raw materials to product shipment. In the product development stage, we make sure that only the materials whose conformity has been validated through content analysis report and other environmental data verification are used and the cause of contamination is identified and prevented. SK hynix also carries out inspections on hazardous substances to verify their environmental conformity and minimize environmental impact in the disposal process by using eco-friendly packaging materials. In 2018, we further improved our system by operating a precision analysis room, improving the analytical process of hazardous substances such as phthalate, and acquiring international certifications. To prevent non-certified materials in the development and certification stage, we established an Interlock System. In addition, we introduced a quarterly unit-focused management system for raw materials to maintain a high level of environmental conformity in our mass production process. In 2019, we plan to develop and test substitutes

### Preliminary Chemical Substance Assessment System



for the materials that are expected to expire under the RoHS in 2021, and build a system for proactive identification and response to new hazardous materials.

### Increasing Eco-Labeled Products

Eco-labeling such as carbon footprint and water footprint is a national certification system managed by the Korea Environmental Industry & Technology Institute of the Ministry of Environment, which analyzes and discloses the environment impact throughout the entire production process from raw material supply to manufacturing. SK hynix have been choosing our major products every year, and working on receiving Environmental Product Declaration(EPD) certification for the products since the industry first achieved the certification in 2013. In 2018, two NAND products were certified for carbon footprint and water footprint. In 2019, we will focus on our DRAM and NAND products for carbon and water footprint certifications.

### Eco-labeled Products

	Carbon Footprint	Unit	Water Print	Unit	Date of Certification	Certification Agency
V3 NAND Flash 256G TLC	1,610	g CO <sub>2</sub> -eq/unit	20.8	L H <sub>2</sub> O-eq/unit	Jan. 25, 2019	Korea Environmental Industry & Technology Institute
1Z NAND Flash 128G TLC	717	g CO <sub>2</sub> -eq/unit	15.6	L H <sub>2</sub> O-eq/unit	Jan. 25, 2019	Korea Environmental Industry & Technology Institute

Chongqing SHE  
 Lee Seong-Je TL

INTERVIEW

With the technological advancement of the Fourth Industrial Revolution, a more careful management system is required. With the various effects of poor SHE management becoming visible, we will do our best to upgrade the prevention system appropriate to local requirements and situations.

Cheongju Safety Team  
 Han Jung-Hwan TL

Recently, the national and social level of safety required is increasing due to major disasters and the revision of the Industrial Safety and Health Act. In order to meet these demands, we will strive for the safety of SK hynix's business environment, such as strengthening the responsiveness of regulations, improving the safety level of its members, and upgrading the management system of its suppliers.

# SOCIETY | Responsible Supply Chain Management

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

We select and evaluate the supply chain to align with the strategy of SK hynix through a fair process to establish a solid foundation for cooperation. As the company understands the win-win value that suppliers' growth leads to the stability of SK hynix products, it operates various support programs to enhance their capabilities.

First, in order to select partners that can generate shared value with SK hynix, we continuously verify not only quality of suppliers but also the level of their sustainability management. We support technology, finance and education to help our suppliers improve their global competitiveness. Also, the company has strengthened various win-win cooperation systems, including conferences and seminars, to help suppliers establish fair trade, safety, security and ethical management.

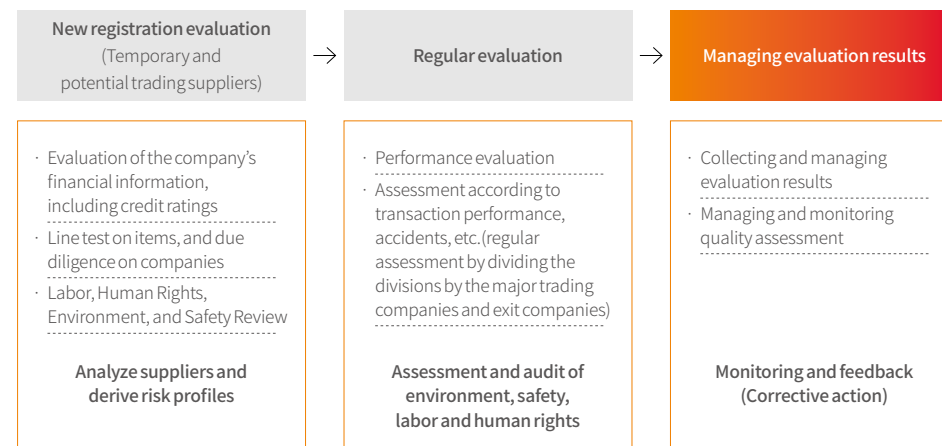
## Selection of suppliers considering society and environment

### Suppliers Selection and Evaluation Process

We select and evaluate suppliers to match the direction of SK hynix 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 at the Win-win Portal on the SK hynix website. When dealing with suppliers, we utilize standard contracts that comply with the standard contract provisions provided by the Fair Trade Commission and strive to establish a sound supply chain ecosystem by continuously checking and improving the implementation of policies.

### Suppliers and their transactions

Among our suppliers, we call two types of suppliers as critical tier 1 suppliers; 1) suppliers with a purchase performance of more than KRW 200 million per year with record of more than one year of transactions, and 2) those with a significant impact on product quality regardless of the purchase amount. In 2018, there are 677 critical tier 1 suppliers with SK hynix. We purchased a total of KRW 9,064 billion (39% of equipment, 24% of raw materials, 21% of infrastructure, and 14% of spare parts) from its suppliers. Also, the company encourages local product purchases to share its business performance with the community.





## Risk Management in Supply Chain

### Risk Management Principles & Procedures

Based on 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, and annual risk analysis is carried out on credit ratings, technology, quality, price, delivery and cooperation. The results of this analysis are reflected in our supplier management strategy. In order 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 labor, human rights, SHE, ethical practice, conflict minerals and management system. We also developed and distributed the guidelines for the Supplier Code of Conduct to promote understanding and encourage them to fulfill their social and environmental responsibilities by signing the pledge for compliance each year.

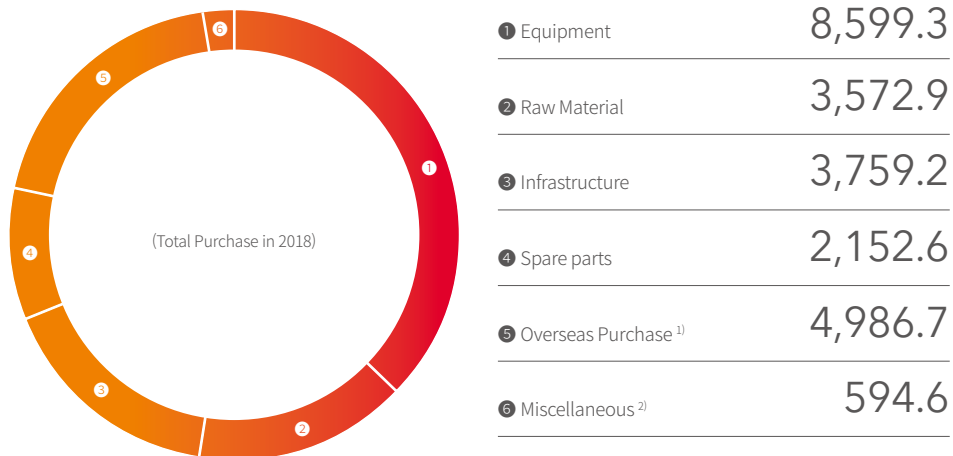
### Purchase Analysis

Purchase Amount(KRW billion)



### Purchase Details in 2018

(Unit: KRW billion)



1) Based on Wuxi and Chongqing Campus

2) Facility, sub modules, packaging materials, services, environmental safety, part, etc

### 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 community. In particular, we identify the overall risk level based on stakeholders' demands (customers' compliance with the CSR codes, pledge for compliance, domestic/overseas regulatory changes, materiality assessment, etc.), consultation and due diligence. Then, based on the results, we develop the areas of evaluation and improvement, and incorporate the level of their SHE compliance into the evaluation. In 2018, we have identified potential risks in our business partnership and SHE practice and conflict minerals such as cobalt as key risk factors.

Key Risk Factors	Risk Level	Areas of Application
Compliance with labor human rights laws	High	All suppliers
Conflict minerals	Low	Raw material suppliers
Violation of environmental laws	High	Cleansing, chemical, and waste materials service providers
Occupational safety and health	High	Internal suppliers and waste materials service providers

Code of Conduct for Supplier

Win-win Portal

Environment

**Responsible Supply Chain Management** · Respect for Human Rights · Talent Management · Customer Satisfaction

Society

Governance

### Supplier ESG Assessment and Major Improvement Efforts

SK hynix provides ESG consulting for suppliers according to an annual schedule. In 2018, we provided ESG consulting to 41 suppliers in the cleaning and chemical fields. We provide solutions to suppliers that have been evaluated to have high risk in labor and SHE, and monitor them so that the solutions can be implemented in a stable fashion. We also conduct revisits to verify whether the corrective action plans are executed and the risks have been alleviated. Depending on the suppliers' requests, we provide ESG relevant improvement tools and expert training to according suppliers so that they can perceive their ESG risk and make internal improvements.

#### Supplier ESG Risk Assessment

Classification	Supplier CSR Risk Assessment		
	Number of Suppliers Subject to ESG Risk Assessment within 3 Years	Assessment Ratio (%)	Number of Suppliers with High ESG Risk(Ratio)
Suppliers	1,108	38.5	111(3.9%)

#### Major Improvement Performance

Classification	2018 Ratio (%)	Major Improvement Activities
Percentage of suppliers with high risk that established corrective action plans	94.3	· Improve HR policies on labor and human rights, and manage work hours
Percentage of suppliers with corrective action plans that made improvement in ESG performance within 12 months	100	· Share expertise on working in confined spaces and raise safety awareness through safety workshops

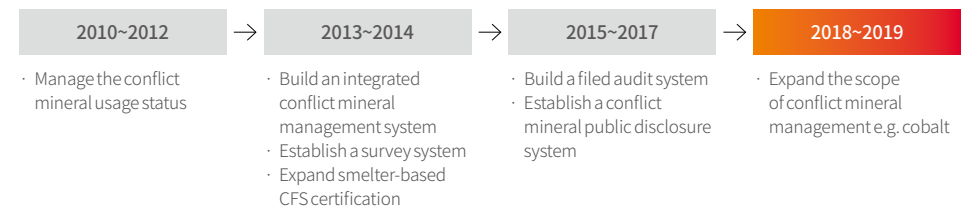
## Response to Conflict Minerals

### Approach to Conflict Minerals

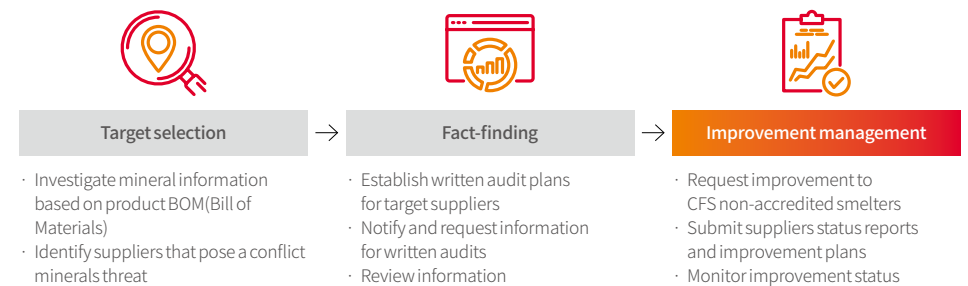
SK hynix certifies its compliance with the conflict mineral regulations under Article 1502 of the Financial Regulatory Reform by establishing a management system in accordance with the OECD standards. On an annual basis, we inspect the status of conflict mineral through TF activities, and advise smelters or raw material suppliers to change their source of conflict minerals to ensure compliance at the procurement stage. In 2018, we validated RMI<sup>1)</sup> certification on smelters and supply chain according to the OECD guidelines and RMI<sup>1)</sup> investigation form while encouraging RMI certification for those that have not been certified. We also identified the use of raw materials in relation to the additional conflict mineral regulatory plan on cobalt in 2019. By encouraging certification before the regulations take effect, we plan to maintain our conflict mineral response system.

1)RMI: Responsible Mineral Initiatives

#### Policy change in Responding to Conflict Minerals



#### Conflict Minerals Audit Process



## Building Foundation for Shared Growth

### Shared Growth System

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

### 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 240 billion to support the 1<sup>st</sup> and 2<sup>nd</sup> tier suppliers while payment support fund of KRW 100 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 Ministry of Trade, Industry and Energy and the Korea Chamber of Commerce to help our 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 and are going to provide consulting services for management, SHE practices as well as certifications.



### 2018 Domestic Mutual Cooperation Performance

Classification	Unit	2016	2017	2018
Total financial support for shared growth <sup>1)</sup>	KRW billion	128.1	159.3	175.2
Number of suppliers in the Shared Growth Partnership	Companies	63	67	108
Number of companies in the Shared Growth Council	Companies	60	61	61

1) Total financial support for shared growth: purchase for equipment localization+pattern wafer support+contribution to industrial innovation 3.0+contribution to semiconductor fund+shared growth fund, network loan and shared growth insurance policy loan support

## 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 and Support for 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 for purchase 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 semiconductor ecosystem by fostering prospective small- and medium-sized companies.

### Technical Support Program

Program	Details	2011-2018 Accumulated
Diversification Activities	Co-develop technologies for systems, parts, and raw materials with suppliers	In line with the purchase (KRW 134.3 billion)
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
Pattern Wafer Support	Supply fine-pattern wafer produced using our process equipment as a development sample to help suppliers improve their development expertise	3,977 wafers
Financing Technological Development	Finance the development of next-generation technologies with potential for synergy without interest	KRW 1 billion per year (2 companies)
Technological Innovation Companies	Select technologically innovative small- and medium-sized companies for sustainable growth programs	6 companies
Performance Assessment Project	Use systems, materials and parts of small and medium-sized companies for our production line to support certification/validation	46 cases

Environment

**Responsible Supply Chain Management** · Society · Respect for Human Rights · Talent Management · Customer Satisfaction

Governance

## 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 supply chain of SK hynix.

### Financial Support Program

Program	Details	2011-2018 Accumulated
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 efficient financial operation	KRW 166.4 billion
	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 efficient financial operation	KRW 72.5 billion
Semiconductor Fund	Equity investments in promising small- and medium-sized semiconductor companies to support their growth	Size of investment: KRW 40 billion Actual investment: KRW 34.7 billion
	Equity investments in growing small- and medium-sized companies to support semiconductor ecosystem(2017-2032)	
Network Loan	Determine the credit line based on the performances and provide loans without any supporting documents to support financial operation	KRW 1 billion
Payment Support Loan	Improve payment terms for suppliers through interest-free loans of delivery funds to primary and secondary suppliers	Fund size: KRW 100 billion
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	223 1 <sup>st</sup> tier and 2,210 2 <sup>nd</sup> tier suppliers joined the system

### Financial Support SV Performance

(Unit: KRW 100 million)



13

(Combined support) loans provided through the 1<sup>st</sup> tier Shared Growth Fund



32.8

(Combined support) loans provided through 2<sup>nd</sup>/3<sup>rd</sup> tier Shared Growth Fund



2.65

(Combined support) loans provided through Payment Support Fund

## Training Support

Enhancing the competencies of employees is an integral part of strengthening our suppliers' competitiveness. SK hynix offers various training support programs for employees of small- and medium-sized companies, including the Semiconductor Win-Win CEO Seminar introduced in 2018.

**Semiconductor Win-Win CEO Seminar** In 2018, we organized Semiconductor Win-Win CEO Seminar to enhance the competency of CEOs of our 2<sup>nd</sup> and lower tier suppliers with which we have no direct business transaction. The seminar consists of Business Insight courses with the focus on business management and Tech. Insight courses on semiconductor. Started in July this year, it was held five times until November, attended by more than 70 CEOs including 2<sup>nd</sup> tier suppliers and 1<sup>st</sup> tier suppliers of our group's affiliates. We will continue to create an ecosystem to promote mutual growth through seminars and other initiatives.

### Training Support Program

Program	Details	2011-2018 Accumulated
SHE Consulting	Provide consultation and share activities for legal compliance in SHE practice and improved SHE management of suppliers	41 companies
SK Shared Growth CEO Seminar	Improve CEO's competence and network in the areas of management, economy, humanities and society for 1 <sup>st</sup> tier suppliers	221 1 <sup>st</sup> tier suppliers 70 2 <sup>nd</sup> tier suppliers
MBA for Mid-level Managers	Provide competency enhancement trainings for suppliers' mid-level managers in strategy, accounting, finance, marketing, HR and organization	148 people completed
Win-Win Academy	Provide job and leadership training, and e-learning programs for suppliers' employees	6,104 people completed





Environment

**Responsible Supply Chain Management** · Society · Respect for Human Rights · Talent Management · Customer Satisfaction

Governance

## Management Support

SK hynix provides various management support to help its suppliers achieve sustainable growth. As part of our efforts to provide opportunities to grow, we provide consultation to drive innovation and improve productivity.

**Growing-up Together Consulting** Our new consulting program is designed to improve the competency and productivity of not only 1<sup>st</sup> tier suppliers but also 2<sup>nd</sup> tier suppliers by providing in-depth and differentiated consulting services. The participants are selected from 2<sup>nd</sup> tier suppliers recommended by 1<sup>st</sup> tier suppliers and consultations are tailored to the size and needs of the suppliers. The program covers three areas including certification support, Patrol Doctor for supporting management issues, and 1<sup>st</sup> and 2<sup>nd</sup> tier cooperation consulting for maximizing performance.



### Certification Support

Provide in-depth programs for quality, SHE, and smart factory and support certifications



### Patrol Doctor

Support management issues of suppliers, and identify and meet their needs



### 1<sup>st</sup> and 2<sup>nd</sup> Tier Cooperation

Maximize performance and support development through consultation between 1<sup>st</sup> and 2<sup>nd</sup> tier suppliers

## Management Support Program

Program	Details	2011-2018 Accumulated
Industrial Innovation Program	Support development through productivity improvement and innovation consulting for 2 <sup>nd</sup> tier suppliers	KRW 3.5 billion
Shared Performance Program	Share joint innovation performance subject to the conditions agreed between SK hynix and suppliers	Purchase support for 22 projects with 10 companies (KRW 5.2 billion)

## 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 transaction.

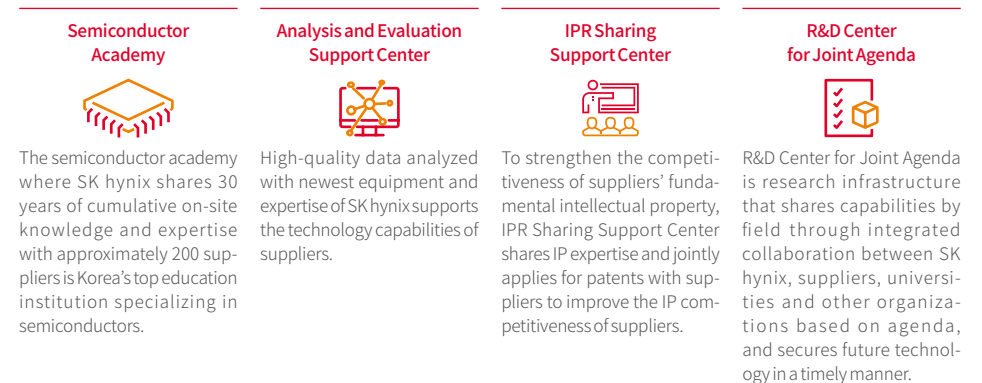
### Directions for the Development of Shared Infrastructure

**Directions for the Development of SK hynix's shared infrastructure**  
Strengthening Domestic Semiconductor Ecosystem by Sharing Infrastructure



### Shared Infrastructure Platform

In order to enhance its technological expertise and support human resource development for its suppliers, SK hynix has built the Shared Infrastructure Platform based on which it shares more than 30 years of know-how and forms win-win relationships with suppliers.



Environment

**Responsible Supply Chain Management** · Respect for Human Rights · Talent Management · Customer Satisfaction
**Society**

Governance

### Semiconductor Academy

SK hynix launched the “Semiconductor Academy”, a knowledge-sharing platform to cultivate talent and improve competitiveness for suppliers, through which we have been sharing our semiconductor expertise and know-how that we have accumulated over more than 30 years. The semiconductor academy provides 205 specialized semiconductor contents(71 offline contents, 134 online contents) including the production process and use of devices and equipment. The offline curriculum is gaining popularity from suppliers with 1,100 enrollments from 67 suppliers within 6 months since the launch. In 2019, we plan to increase the number of offline participants to more than 2,000 to cultivate more semiconductor experts.

### Analysis and Evaluation Support Center

In order for a supplier to develop and provide semiconductor equipment, parts and material, we must review and verify the operations of the on-site product lines. To do so, we have been contracting external organizations and conducting internal evaluations, but this has resulted in problems with functions and quality due to limitations in external technology capabilities on the specialized semiconductor industry and discrepancies with our company circumstances. In response, SK hynix has operated the “Analysis and Evaluation Support Center” as a technological cooperation platform since April 2018. We supported the analysis and evaluation of 3,700 items from 19 suppliers in 2018. SK hynix provides high-quality analysis results including analytical opinions from expert semiconductor analysts by conducting physical analysis, chemical analysis and MI 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.

### R&D Center for Joint Agenda

We have established a collaboration business model by sharing our infrastructure and creating a joint agenda with various ideas from external institutions. This allows timely procurement of future technology through integrated collaboration with various partners centering on agenda. We also overcome the following limitations: sharing infrastructure and capabilities through collaboration by each sector and lack of synergy. In order to review the possibilities of the new collaboration business model, we consider the expansion capacity of various applications using our company CIS<sup>1)</sup>. We are also reviewing various joint agenda for execution through “Open CIS Development Platform” where we share our core infrastructure of venture companies and suppliers of each field.

1) CIS(CMOS Image Sensor) : Low-consumption powered imaging device with CMOS structure. It acts as a kind of electronic film in electronic digital devices, such as camera phones, web cameras and small medical filming equipment

### IPR Sharing Support Center

SK hynix has established a support center that provides total solutions to strengthen the competitiveness of its suppliers' fundamental intellectual property. The Intellectual Property Resource(IPR) Support Center shares IP expertise and jointly applies for patents with suppliers to improve the IP competitiveness of suppliers. Furthermore, the company has established a network of IP managers and shared patents of equipment and materials free of charge with its suppliers to protect and sustain the technology.

#### IPR Sharing Support Center

	<b>Free customized training and consultation</b> <ul style="list-style-type: none"> <li>Experts(SK hynix, SK affiliates, attorneys) provide customized training and consultation on-site</li> <li>Share online consulting and training materials through Shared Infra Portal (<a href="https://sharing.skhynix.com">https://sharing.skhynix.com</a>) and SK Group IP Center (<a href="https://sklegalnet.sk.com/">https://sklegalnet.sk.com/</a>).</li> </ul>
	<b>Establish training courses for Semiconductor Academy</b> <ul style="list-style-type: none"> <li>Offline course, one-day Entry Level(Jun.), Practice(Aug.) and Advanced(Oct.) programs</li> <li>Online course, 25 common programs are available on an ongoing basis</li> </ul>
	<b>Joint patent application for co-developed projects</b> <ul style="list-style-type: none"> <li>Provide intensive development support through strategic selection of suppliers</li> <li>Develop items and jointly apply for patents</li> <li>Provide financial support and expertise(patent service)</li> </ul>
	<b>Seminar · workshop</b> <ul style="list-style-type: none"> <li>Organize seminars and workshops to share information and expertise</li> <li>Operate Shared Infra Portal(<a href="https://sharing.skhynix.com">https://sharing.skhynix.com</a>) CommunityChannel</li> </ul>
	<b>Free transfer of patents</b> <ul style="list-style-type: none"> <li>Free transfer and licensing of equipment and material patents</li> </ul>

### CASE. Shared Infrastructure Portal

This is an online site that SK hynix created to share its tangible and intangible assets with suppliers. Through this platform, we deliver technologies and expertise on semiconductors that we have accumulated over more than 30 years and provide a program for suppliers to internally train their employees. As of June in 2019, suppliers have reacted proactively with 4,700 members joining the portal from 237 suppliers since the launch in April 2018, and participating in online, offline courses and services in analysis and evaluation. We plan to expand the portal in online and offline training, technology consulting and providing evaluation equipment in 2019.


**Shared Infrastructure Portal**

## Communication with Suppliers

### VoC Activities

Managers in charge of purchase and shared growth visit our 1<sup>st</sup> tier suppliers to collect VoC and provide feedback for improvement while our CEO or executive officers in charge of purchase visit 2<sup>nd</sup> tier suppliers to promote technological cooperation and discuss challenges.

### Council Operation

Every year, we hold Shared Growth Council Meeting with suppliers with core competencies in each field to share our internal and external management status and strengthen our strategic partnerships. In May 2018, we held General Council Meeting with representatives of more than 60 suppliers. This year in particular, we focused on our support for 2<sup>nd</sup> and 3<sup>rd</sup> tier suppliers to help them improve their competitiveness. We organize the Shared Growth Day every October in order to promote communication and develop a sense of pride. In 2018, representatives from 61 suppliers joined the forum on the topic of quality management and big data, and presented awards to 14 suppliers for excellent performance. In addition, we hold environmental safety and health committee meeting on a monthly basis to discuss major SHE issues with suppliers in the industrial complex. We also hold Win-Win Program Seminar with suppliers to promote our support programs every year. As of now, the seminar was last held in February 2019.



### Communication with Internal Suppliers

To manage the risks in our supply chain more effectively, SK hynix keeps close communication with our subcontractors which are internal suppliers as well as suppliers. Our site managers identify on-site problems through Win-Win Council Meetings and work on resolving conflicts. Furthermore, in order to maintain a healthy work-life balance for employees of our internal suppliers, we changed more than 90% of jobs to 3 shifts with 4 teams according to 52 hours per week system.

### 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 for suppliers and KRW 700 million for medical welfare for suppliers. In 2018, we executed 5,764 employees of our suppliers and subsidiaries.



# 5,764

Total Beneficiaries of  
Win-Win Cooperation Wage Sharing

Partner Collaboration Team  
Kim Jae-Won TL

INTERVIEW

In the midst of the difficulties of the Fourth Industrial Revolution and the new 5G era, a fine balance needs to be struck to ensure mutual growth with suppliers who can work together. We will continue to work toward co-prosperity and cultivate our relationship with our suppliers from Business Partner to Business Family.

# SOCIETY | Respect for Human Rights

## SK hynix's Approach to Respecting Human Rights

SK hynix is careful to avoid violating human rights throughout its business operations.

SK hynix supports the UN's Universal Declaration of Human Rights and respects the UN Human Rights Commission's guidelines on business and human rights; Ruggie Framework, and the Dhaka Principles for Migration with Dignity. In addition, the company complies with labor-related laws in each country where the workplace is located and follows the principles of the Responsible Business Alliance(RBA) (formerly EICC). To that end, the "Human Rights & Labor Policy of SK hynix" was enacted, which contained eight major issues including the general principle of respect for human rights, the prohibition of forced labor, the prohibition of child labor, the working hours, the wage, the prohibition of discrimination, and freedom of association.



## Labor and Human Rights Impact

### Impact Assessment Process

SK hynix is establishing an impact assessment process in order to better diagnose labor and human rights risks across the value chain and to understand the direction of improvement. The OECD established the OECD Due Diligence Guidance for Responsible Business Conduct(2018.5.31) to present framework for due diligence. The 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 and checks whether there are human rights violation elements in the entire value chain, including members of the company and its suppliers.

## 2018 Impact Assessment Results

### Management of Labor and Human Rights Impacts in Workplaces

SK hynix manages labor and human rights risks throughout its supply chain based on the RBA VAP(Validated Audit Process). In 2018 in particular, we took preemptive measures against potential risks by consulting on labor and human rights issues in addition to risk assessment and due diligence. Environmental and safety inspections as well as reviews of labor practice and human rights were carried out on suppliers handling hazardous chemicals. Based on the results, we established plans to improve the application of extra training hours for OT and probation period, and ensured its compliance by implementing a follow-up process. We also conducted interviews and inspections on the suppliers operating within our company, and made necessary improvements on a lack of awareness and ethics training, and minimum wage compliance. In 2019, we will increase the number of suppliers that are subject to our risk management compared to last year and strengthen our consulting programs to overcome challenges in the supply chain.



Environment

 Responsible Supply Chain Management · **Society**  
 · **Respect for Human Rights** · Talent Management · Customer Satisfaction

Governance

## Pre-Impact Assessment of Labor and Human Rights

no	Key Human Rights Issues	Assessment target	Vulnerable Groups	Description	Relevant Policy	2018 Improvement Measures
1	Conflict minerals	Raw material suppliers	Suppliers (children)	Of the four major conflict minerals used in the product, the minerals produced in Congo and nearby areas cause problems such as child labor	SK hynix Sustainability Guidelines: Conflict Minerals Policy	· Established a policy and annual inspection process to prohibit the use of conflict minerals (Use of conflict minerals in 2019: 0)
2	Working hours	SKHY, all suppliers	Employees, suppliers	In Korea, where major business sites are located, there are increasing issues with long working hours	SK hynix Sustainability Guidelines: Human Rights and Labor Policy	· Maintain a healthy work-life balance · Ensured efficient management of working hours e.g. flexible operation and working hours · Reduced unnecessary work and overtime and operate programs to improve productivity within legal working hours · Communication with internal suppliers: Changed to 3 shifts with 4 teams to ensure compliance with 52-hour-work system
3	Working conditions	SKHY, construction suppliers	Dispatched employees, construction suppliers	Long-term dispatched employees and others are subject to poor working conditions	SK hynix Sustainability Guidelines: Human Rights and Labor Policy	· Improve working conditions and environment based on consultation with the labor union each year · Raise the pay and provide medial welfare support through Win-Win Cooperation Wage Sharing (wage KRW 5.9 billion, medical support KRW 700 million)
4	Behavioral issues in the workplace	SKHY, all suppliers	Employees, security suppliers	Resolve issues such as offensive conduct, insults, and sexual harassment	SK hynix Sustainability Guidelines: Declaration of Ethics Management, Human Rights and Labor Policy	· Conduct training on human rights for all employees e.g. prevention of sexual harassment and disability awareness · Security personnel competency program: organize training for security personnel for prevention of sexual harassment and disability awareness as part of efforts to prevent human rights violations
5	Stress management	SKHY	Employees, all suppliers	Exposure to offensive conduct and unreasonable treatment from external stakeholders e.g. customers	SK hynix Sustainability Guidelines: Declaration of Ethics Management, Human Rights and Labor Policy	· Health program: operate Maeum Walk Program to prevent and reduce job-related stress
6	Occupational safety & health	SKHY, all suppliers	Employees, suppliers	Exposure to physical danger and hazardous materials Pregnant women who exposed to high risk work	SK hynix Sustainability Guidelines: Safety and Health Policy	· 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 · Establish a SHE cohort, operate emergency response systems, and organize training and IoT-based prevention activities to promote safety of employees · Conduct joint safety inspection with suppliers and organize Safety Golden Bell

## Labor &amp; Human Rights Impact Management in the Value Chain

SK hynix manages labor and human rights risks throughout its supply chain based on the RBA VAP (Validated Audit Process). In 2018, in particular, we took preemptive measures against potential risks through consulting on labor and human rights issues. Environmental and safety inspections as well as labor and human rights reviews were carried out on high-risk suppliers handling chemicals. Based on the results, plans were established to improve overtime, extra training hours for OT and probation period and follow-up process was taken to ensure its compliance. We also conducted interviews and inspections of

suppliers operating within our company, and corrective measures were taken against RBA training, and ethics training. In 2019, we will focus on dealing with social and environmental risks in the supply chain by expanding the scope of our consultation.

Areas of Assessment	Ratio of Labor & Human Rights Assessment for Past 3 Years(%)	Ratio of Labor & Human Rights Risks Identified(%)	Ratio of Risk Improvement(%)	Scope of Survey(%)
Our Management Activities <sup>1)</sup>	100	70.5	100	100
Suppliers	38.5	3.9	94.3	100

1) SK hynix does not own joint venture companies with more than 51% of ownership. (2019. 05)

Chongqing Human Resources  
Kim Young-Seop TL

INTERVIEW

I believe that respect for human rights is a duty that must be observed not only for society but also for the sustainable development of businesses. In the case of our global operations, pre-checking is necessary to ensure that not only the members of our headquarters but also Global Staff are not involved in human rights violations throughout our business operations in all regions. We will also ensure that all members work in a happy environment through appropriate measures, such as checking major risks and solving expected problems in advance.

# SOCIETY | Talent Management

## SK hynix's Approach to Talent Management

SK hynix believes that promoting diversity in the workplace and providing opportunities to improve individual performance is what drives sustainable growth. We also recognize that fair performance assessment and support for talent development provides a foundation for securing competitive advantages. To this end, we are committed to fostering global expertise in the semiconductor sector, creating a healthy and open-minded organizational culture, and multi-dimensional performance assessment to step up as a Best-in-Class(BIC) Company.



### Employee Training Performance in 2018



**91,069** Person  
Total No. of Trained Employees



**120** Hours/Person  
Training Hours per Person



**1,062** KRW 1000/Person  
Training Cost per Person

## Developing Semiconductor Experts

### Customized Adaptation Programs for New Employees

In response to growing demands for tech talents and HR management, SK hynix offers On-Boarding Program for new recruits with improved and diversified approaches. With a new employee curriculum tailored to millennial generation, we encourage voluntary participation in our learning process that consists of "Idea Speak-up" programs. We present a systematic vision for growth and provide an on-site learning process through customized intensive courses for each organization. We also offer mentoring and leader 1-on-1 programs to help new recruits adapt to their teams.

### SK Hynix University(SKHU)

In order to develop engineers specializing in semiconductors, we provide systematic eight year job training for new recruits of technical office staffs. At SKHU, they gain basic and in-depth knowledge in semiconductors. There are ten colleges in SKHU and each one consists of various departments and majors. Professors of SKHU are composed of our internal experts and retired industry experts.

### Personalized Learning Blog

The My Page section of the SKHU system was improved to a form of a blog for a personalized learning experience. Employees can use this My Page to set the areas of their interest and receive recommendations on training programs and notifications for new programs via e-mail.

### Female Leadership Development Program

We have increased the number of female employees eligible for our female leadership development programs. The Core HR Development Program is designed to develop top-level engineers by setting goals while creating a sense of motivation through close communication between members and leaders. Participants are provided with various training programs needed for development and minimal restrictions, and these programs are linked to each other to support their development. It allows us to retain our talented female employees and develop their leadership.

Environment

 Society  
 Responsible Supply Chain Management · Respect for Human Rights · **Talent Management** · Customer Satisfaction

Governance

### Virtual Master's Program

SK hynix has signed an MOU with KAIST to introduce the Virtual Master's Program for our employees. We implemented a remote video learning system in Daejeon and Icheon so our employees can take courses given by KAIST professors. They can take classes remotely and need to attend classes on KAIST campus only once a week to receive the Master's degree while managing work and classes. Through this program, our employees can advance their careers while working and achieve a high level of theoretical understanding and interpretation as a result. From the company's perspective, we can maximize their potential and boost their performance. Currently, we are looking into increasing the number of participants and building additional long-distance video-learning facilities in Daejeon and Icheon in 2019.

### App-based Technology Training

With our always-on learning system app designed to improve the device expertise of our employees, we provide opportunities to gain theoretical knowledge and on-site practice. This helps employees improve their expertise and productivity while reducing our internal training cost and instructor fees by replacing offline training programs with online ones. In 2018, the participation rate of Maintenance workers for the program reached 11.5% with 36,815 views of the videos.

### GSM(Global Sales & Marketing) College

GSM College is SK hynix's education program under SKHU, designed to develop market-leading experts who create values for customers based on their understanding of technology and business. In response to the growing importance of marketing practice, we established the Advanced Product Planning Course and Computing Architecture Course in 2019 in order to improve their understanding of computer-based marketing practice. In the future, we plan to expand the areas of advanced course such as marketing, sales, and marketing strategy, and develop 2020 GSM College curriculum with the focus on the needs of our employees.



### One-Stop Mentoring System

Through our mentoring system, leaders can select mentors and mentees to help them grow. While mentors can visually check the progress of their mentees, mentors can write comments to give feedback to their mentees, and mentees can ask questions and talk about the help they need through the Heart-to-Heart Talk.

## Global Talent Development

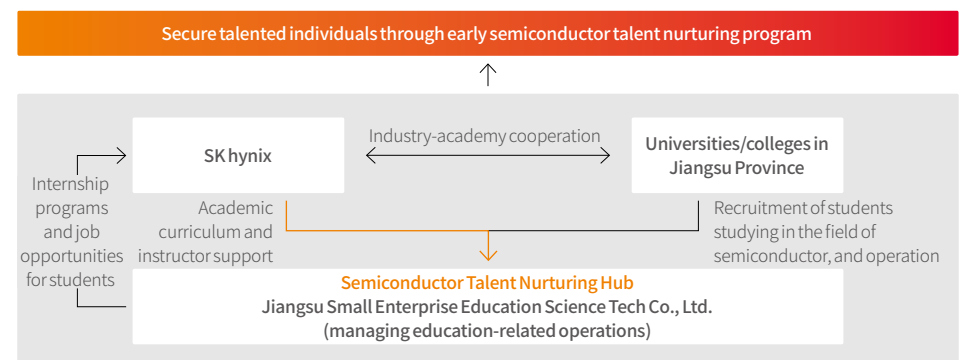
### Talent Nurturing in Wuxi College

SK hynix founded Wuxi College to strategically develop human resources in response to the fast-changing market environment in China. By focusing on improving the expertise and retention of our employees, we present a career roadmap from the phase of hiring to that of promoting to a director, providing a vision for the future. Started on March 1, 2019, the college consists of four departments – Process, Equipment, Yield and Quality. Tailored to each job, the high-quality academic programs are provided by full-time in-house professors and instructors.

### Semiconductor Talent Nurturing Platform in Jiangsu Province, China

We are building a semiconductor HR development platform in Jiangsu Province in China based on the agreement between the Jiangsu Province and SK Group on the joint research initiative. Our plan is to secure talented individuals in the semiconductor industry by adding semiconductor programs to the existing curriculum based on the partnership with four colleges in Jiangsu Province and Jiangsu Small Enterprise Education Science Tech Co., Ltd.

### Semiconductor Cooperation Model in Jiangsu Province



Environment

 Society  
 Responsible Supply Chain Management · Respect for Human Rights · **Talent Management** · Customer Satisfaction

Governance

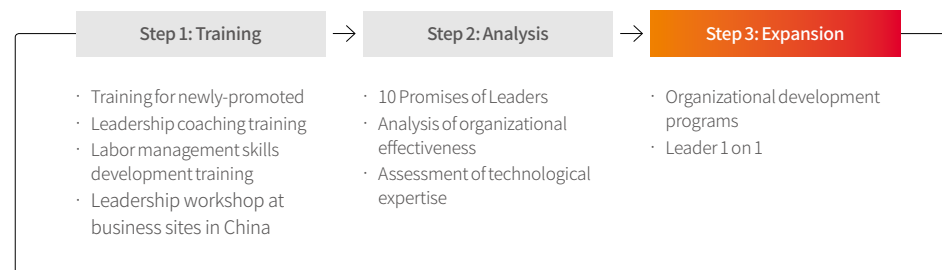
### Sharing Educational Infrastructure with the Wuxi campus

To ensure efficient business operations as a business hub for SK Group and SK hynix in China, we plan to provide educational infrastructure, such as Talent Nurturing Center and SKHU as well as instructors and educational contents to sales companies and System IC in Wuxi. We will share the educational infrastructure of Wuxi campus with Jiangsu Project and partner schools to secure talents and maximize the synergy of collaboration between academics, governments and corporates.

### Enhancing Leadership Development as a Change Agent

To move forward as a Best-in-Class(BIC) Company, it is important to enhance the competence of leaders as they will serve as change agents. However, as most of the members of Wuxi campus are junior leaders, we are focusing on developing their competency and leadership through a 3-step leadership development program. Our goal is to address their weaknesses and improve their leadership skills through knowledge learning and know-how sharing, analysis for validation and promotion, while helping them to grow into global leaders for BIC Company by creating a virtuous cycle of education, analysis and expansion.

#### Leadership Development Frame



### Millennial Employees Analysis at the Wuxi campus

In order to gain insight into generational gaps and differences in values between organization and individuals, we conduct analysis of the characteristics of millennial employees at Wuxi. Based on the results and understanding of generational traits, we plan to pursue organizational innovation for Wuxi.

## Improving the Organizational Culture

### Speak-up Culture

We are committed to creating Best-in-Class(BIC) organizational culture through close communication between our employees and management. We have discussed diverse plans to meet the expectations of our employees such as a flexible work schedule program and a new performance evaluation system.

In 2019, we introduced a new work system where senior engineers can continue to work based on their expertise even when they reach the retirement age. Thanks to this new system, employees can still work past their retirement age and contribute to our technological expertise. We also changed the job titles to TL(meaning both Technical Leader and Talented Leader) to encourage employees to share their ideas and promote communication between generations, positions and job groups. Later on, we are going to establish a “Diversity and Inclusion Center” and build a strong foundation for culture and systems to create a workplace where all employees have equal opportunities regardless of their background and characteristics.

### Equality in the Organizational culture

SK hynix promotes diversity and inclusion in the workplace by establishing systems and making necessary improvements. To this end, we are operating various communication channels to promote understanding between employees and management, and make improvements to the system, led by the employees.

**Wak Concert** In the second half of 2018, we organized a concert for more than 400 employees in order to create an employee-led culture and promote participation in the BIC Company Project. Participants gave TED Speech with topics of SK hynix's past, present and future and shared their commitment to the BIC Company.

**Junior Board** As part of our efforts to innovate our organizational culture, SK hynix encourages our employees to share their ideas for improvement with the management to ensure that their input for change are well reflected. In 2018, we benchmarked global companies for organizational culture and identified ways to make improvements, which were proposed to the board of directors. In 2019, in addition to proposing ideas for improvement, we expanded the roles of the Junior Board to promote their participation in the policy-making process.

**1-on-1 Meeting** To increase communication between leaders and members, we are focusing on improving leaders' 1-on-1 communication skills to promote 1-on-1 meetings. At the Manager Leadership Workshop, all team managers/PL learn how to take advantage of the meetings and prepare action plans. In addition, executive officers discuss their roles in creating an environment to support their actions and increase the effectiveness of the program at the Executive 1-on-1 Workshop.





Environment

Society

Responsible Supply Chain Management · Respect for Human Rights · **Talent Management** · Customer Satisfaction

Governance

### Cooperation in the Organizational culture

SK hynix is promoting cooperation in workplace through the “HyThanks” system, which was introduced to our business sites in Wuxi and Chongqing and other overseas sales offices as well, allowing us to send “Thanks” to our employees and suppliers. When employees receive “Thanks” from others, they earn I-Points convertible to the wage, or they can choose to donate it to charity. Up to now, KRW 6.13 million has been donated from HyThanks.

### Maintaining a Healthy Work-Life Balance

We are committed to boosting the creativity and work performance of our employees by helping them to have a variety of experiences outside their work. Overtime and working on a holiday are limited to average 12 hours per 4 weeks, and we ensure flexibility in work schedule in case of urgent matters. Any projects with more than 52 hours of overtime are subject to written report and review, and unnecessary or extra work is kept to a minimum. We plan to recommend optional leave for those who have worked more than 52 hours a week and include 52-hour work management in leaders’ responsibilities as part of our efforts to support the system.

### Analysis of Organizational Effectiveness at Global Business Sites

At our Wuxi campus, organizational effectiveness is measured and analyzed in order to establish team development strategies. Based on the factors that have an effect on team performance, managers’ leadership performance as well as the team’s strengths and weaknesses are identified. We plan to analyze more than 4,400 employees and Directors. The organizations with low performance based on results will be provided with organizational development programs to make necessary improvements.

**Monitoring the 10 Promises of Leaders** To promote changes in our organizational culture through the 10 Promises of Leaders, we are working on the “Monitoring of 10 Promises of Leaders.” By conducting quarterly surveys on leadership performance for Section Managers and higher-level managers, we encourage them to keep their promises. Since the 2Q, 2018, the survey has been performed three times and the rating given by employees increased from 4.0(2Q) to 4.2(4Q).

## Employee Communications

### Employee Satisfaction Level

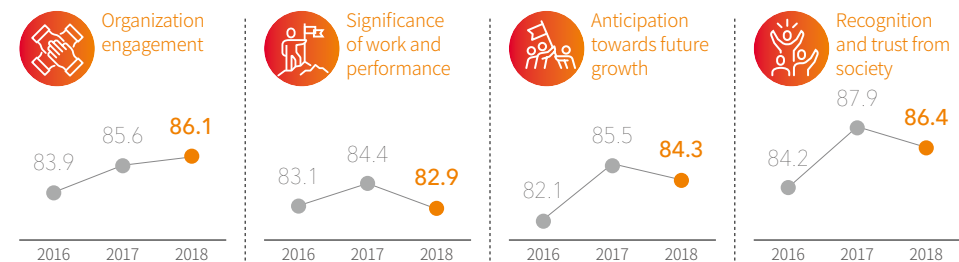
SK hynix uses various communication channels including Culture Survey, Labor Risk Assessment, anonymous forum on the Intranet, and periodical interviews to listen to voices of our employees and monitor their satisfaction level on jobs and organizational culture. We are also promoting flexibility in our organizational culture to build employees’ trust and keep them focused on their jobs.

### SK hynix’ Culture Survey

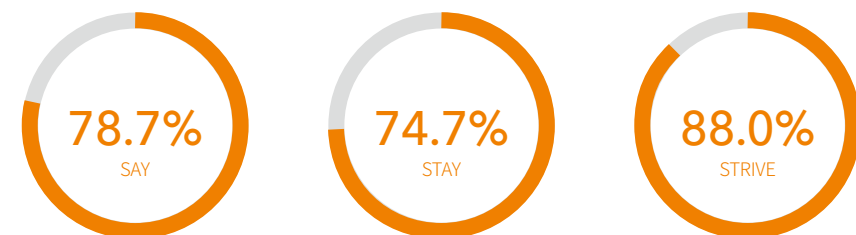
Every year, we conduct the “SK hynix Culture Survey” for all employees as part of our efforts to improve organizational culture. The survey consists of “Performance Boosting Organizational culture” and “SKMS(SK Management System)” with questions specific to leaders and members for effective analysis. In addition, new questions were prepared based on 3S(Say, Stay, and Strive) to measure the level of engagement and the areas of improvement were identified by measuring and analyzing the factors that affect their engagement.

#### Positive Response Rate in the Culture Survey

(Unit: %)



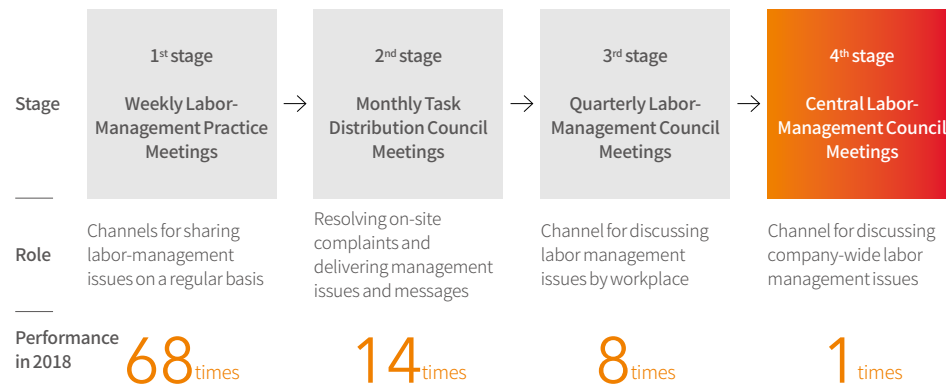
#### Positive Response Rate in the Engagement Measurement



### Various Communication Channels for Labor Relations

Based on the spirit of “No Sa Bul Ui(the company and labor are intertwined and cooperate with each other),” we promote mutual trust and harmony in our labor-management relations. At our Icheon and Cheongju campuses, we share our roles in social value creation and ideas for improving work environment and conditions while reflecting their input in our operation through 4-stage labor management communication channels. At our Wuxi campus in particular, we promote understanding of business operation through active communication and presentation of our policies and in Chongqing, we focus on strengthening labor-management communication through monthly seminars. For the 36 years of operation since our incorporation, there have been no labor disputes or strikes.

#### 4-Stage Labor-Management Communication Channels in Workplaces in Korea



## Zero

labor disputes for more than 10 years  
at Wuxi campus



## 2018

Wuxi campus selected for  
Nation's Most Exemplary Labor Relationship in 2018

### Performance Evaluation

#### Performance Evaluation Principles & Policies

SK hynix provides systematic support to its employees to help them achieve their individual performance target and align theirs with corporate strategies. To this end, we ensure that continuous feedback and coaching are provided based on e-HR performance management system, while good performance is rewarded through a fair and consistent evaluation process. Furthermore, in response to increasing diversity in performance creation systems and human resource, we take a more flexible approach to our performance management to help our employees boost their performance. We plan to make continuous improvements to our performance management system to support individual development and performance enhancement with the focus on improving our ICT system to promote feedback-based systems.

#### Performance Evaluation Process

SK hynix conducts a comprehensive evaluation for our technical office staffs once a year, taking into consideration year-round business performance, corporate value creation, competency assessment of performance level, and peer evaluation. The evaluation is designed to promote their engagement and motivate them to boost their performance. We also ensure a fair evaluation process by establishing an Audit System to minimize errors to improve its credibility and transparency.

SKHU Team  
Kim Min-Joon TL

INTERVIEW

The power to get through a crisis in a difficult situation lies in technology based on solid knowledge. We will strengthen SK hynix's engine so that we can go even further through education, which is the very foundation of the development and growth of technology.

SKMS Team  
Noh Young-Soo TL

In 2019, the first year where “Hygieneer’s pursuit of happiness” is the priority. So we will establish a detailed action plan to help the members find happiness in their workplace. In addition, with the changing business environment and the growing importance of the Millennial generations, we will spread and expand the new basic rule of “Hygieneer’s Strong Concentration Tenacity” that revised the existing “SK hynix member’s Strong Behavior” so that Hygieneers can accept it more easily and use it in real life.

# SOCIETY | Customer Satisfaction

## SK hynix's Approach to Customer Satisfaction

SK hynix is committed to customer satisfaction through sustainable production and sales.

In particular, from technological breakthrough to product sales, we implement quality assurance throughout the value chain to supply reliable products to consumers.

### Quality Assurance at the Customer Contact Points

SK hynix pursues continuous quality innovation to achieve the highest level of customer satisfaction. Throughout the entire process from customer certification to mass production, we apply stringent evaluation criteria to recognize potential defects and make necessary improvement with our QI(Quality Intelligence) system. In 2018, we implemented a management system to identify and respond to the needs of our customers in a more efficient way.

**Server Products** To minimize defects at customer contact points, SK hynix carried out on-site assurance and evaluations while providing prompt feedback on defects which occurred at ODM. By doing so, we managed to reduce inefficiency in the collection and delivery of our products, and prevent additional defects during that period.

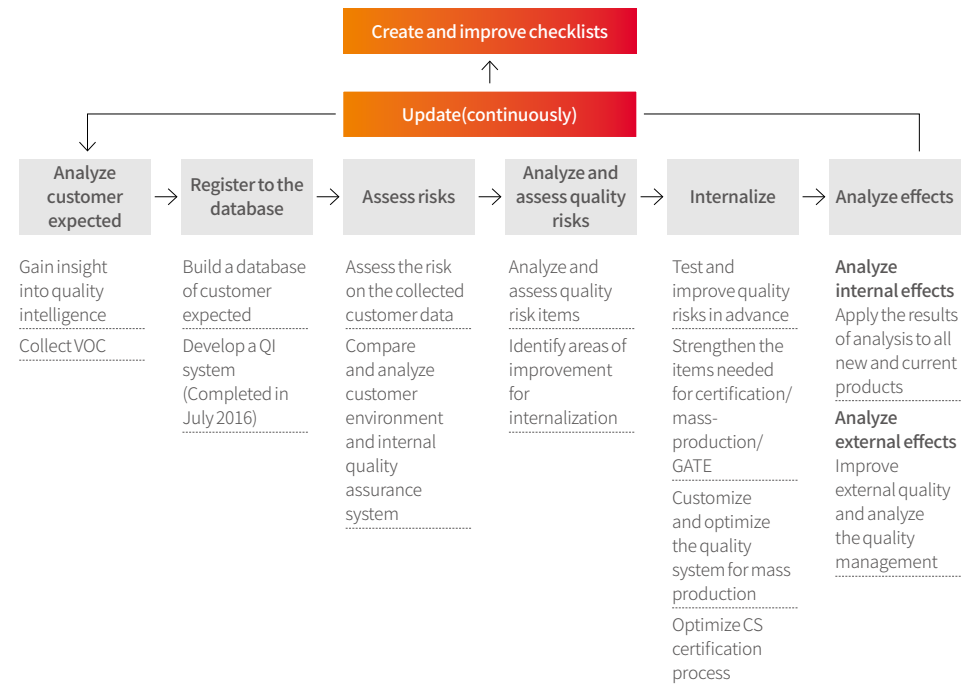
**Mobile Application** We engage from the development process and conduct tests at each stage to reflect customers' needs at the test level while taking prompt actions to improve results and the level of their satisfaction.

**SSD** SK hynix built a database to gain insight into user patterns and save them to the products to ensure that they can get the products they need. We use customer-oriented quality management to identify and remove defects in advance and increase customer contact points to tailor our service to their needs.

### Customer Satisfaction Survey

SK hynix conducts customer satisfaction surveys every year to achieve customer satisfaction. The targets of the surveys are selected by considering financial information and prospects of each application field. The customer satisfaction survey is evaluated by dividing it into quality, customer response time, defect cause analysis, cooperation, intimacy, and technology. In the future, the company plans to conduct a

### QI Work Flow



workshop based on the results of a preliminary survey conducted in the first half of the year to produce improvements and to analyze the difference between excellent and insufficient suppliers in order to provide the highest-quality products.

Customer Quality  
Nam Jae-Min TL

INTERVIEW

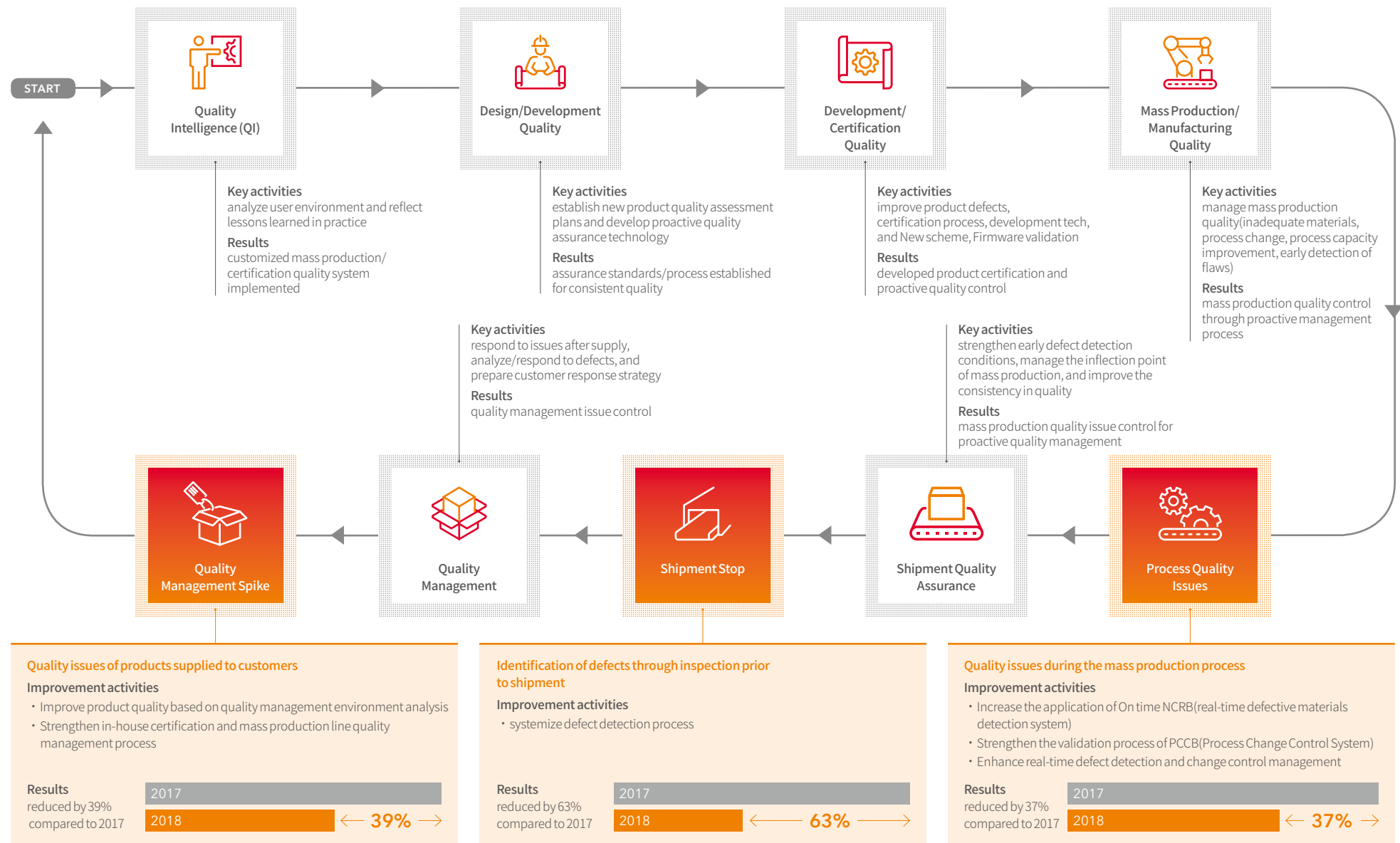
The level of quality expected by customers is gradually increasing. Therefore, we will identify the root cause rather than the level that controls the customer's defect so that we can achieve the best level of quality management.

Environment

 Society  
 Responsible Supply Chain Management · Respect for Human Rights · Talent Management · Customer Satisfaction

Governance

## Quality Management throughout the Entire Process





# GOVERNANCE | Corporate Governance

## SK hynix's Approach to Governance







A healthy governance structure lays the groundwork to secure the trust of all stakeholders and to conduct honest and responsible business operations. SK hynix sets the direction of a healthy governance structure and executes it to achieve our ultimate vision to become the top semiconductor specialist.

## Operation of the BoD

As the top decision-making BoD(Board of Directors) of SK hynix, the BoD determines the company's core management goals and basic management policies. In order for the BoD to make decisions that enable SK hynix to manage continuously, we consider and practice measures to build a sound governance structure and enhance the expertise of the BoD through evaluation of the BoD. In 2019, we separated the titles of CEO and Chairman of the BoD to protect the rights and interests of our shareholders and increase our corporate values while strengthening the BoD's roles of monitoring and controlling management. In order to enhance the professionalism of the BoD, we upgraded the board information service system

### Composition of the BOD

(As of April 2019)

Classification	Name	Tenure	Position in the BoD
Executive Directors	Lee Seok-Hee	3Years	CEO, Member of Sustainability Management Committee
	Oh Jong-Hoon	1Years	Vice President
Non-executive Director	Park Jung-Ho	3Years	Chairman of the BoD
Independent Directors	Choi Jong-Won 	6Years	Lead Independent Director, Chair of Board of Inspection, Chair of Council for Recommending Candidates for Independent Directors
	Shin Chang-Hwan 	3Years	Member of Board of Inspection
	Song Ho-Keun 	2Years	Chair of Sustainability Management Committee
	Cho Hyun-Jae 	2Years	Member of Council for Recommending Candidates for Independent Directors, Member of Sustainability Management Committee
	Yoon Tae-Hwa 	2Years	Member of Board of Inspection
	Ha Yung-Ku 	1Years	-

and diversified the education of the directors. In addition, the electronic voting system was adopted to protect minority shareholders' rights and enhance shareholder value.

### Composition and Roles of the BoD

By separating the CEO from the chairman of the BoD, we objectively strengthen the management activities and enhance transparency in the management of the BoD. The BoD reviews pending management issues through a regular board meeting and a temporary board meeting held as required. In 2018, we held 12 board meetings to review and approve 45 agendas with an average attendance rate of independent director of 100%.

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

### Independence of the BoD

In March 2018, SK hynix introduced the lead independent director system to reflect our stakeholders' input in our business practice. The lead independent director can organize independent directors' meetings to support their roles and request major status report from management. From April of 2018, we held 14 independent directors' meetings to review 50 agendas. Unlike the general term of lead independent director, we set the same term for their term that of independent director to ensure their independence and continuity of job performance. We give our lead independent director the authority to evaluate the operation of the BoD to strengthen their supervision and monitoring of independent directors.

### 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 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 transparent and fair recommendation by the Council for Recommending Candidates for Independent Directors based on qualification criteria set forth in applicable laws, including the Commercial Act, and professionalism and independence for adequacy in performing their duties. In addition, to make sure that the BoD represent stakeholders and support social values in business operation and decision-making process, we consider diversity in their experience and background. Based on this policy, we appointed independent directors based on their expertise in economy and finance in 2019.

## Committees within 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 practice. To this end, it has the authority and responsibility to request sales reports from the BoD and investigate business operation and assets of the company. To maintain its independence, the members are required to meet both qualification criteria and job requirements for appointment and board operation. The Board of Inspection, in particular, is composed of only independent directors and it plays the role of maintaining the independence of independent directors. Also, we selected a committee of inspection with a CPA and enhanced the expertise of the board. In 2018, the board held nine meetings and reviewed financial results, ethical practice, and internal accounting system.

### 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 and we recommend candidates with expertise in semiconductor, accounting, management, and social fields that meet necessary qualifications. In addition, the company has conducted in-depth review of its interests, expertise, and ethics with the company or its controlling shareholders to achieve independence and expertise and recommended qualified executive directors to ensure transparency and balance through supervision, advice and checks on management. Currently, SK hynix's Council for recommending candidates for executive directors has two executive directors to ensure its independence.

### Sustainability Management Committee

To further strengthen our social value creation, we established the Sustainability Management Committee within the BoD which is our top decision-making body. Composed of one executive director and two 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 practice. In 2018, it held 4 meetings to discuss and review the establishment of SHE Foundation, sustainability strategy, and social value creation performance.

### 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, achievement of mid- to long-term goals, leadership and contribution to the company within a certain limit. For independent directors, only base pay and travel expenses are paid without any performance-based compensation to ensure their independence.

### Operational Performance of Committees within the BoD

(As of the end of 2018)

Committees	Composition	Roles	2018 Performance
Board of Inspection	3 Independent Directors	Audit on accounting and business operation, and review of the appointment of independent directors	9times
Council for Recommending Candidates for Independent Directors	2 Independent Directors	Nomination of candidates for independent directors in accordance with applicable laws and regulations, and BoD Guidelines	1times
Sustainability Management Committee	2 Independent Directors, 1 Executive Director	Review of donations exceeding KRW 1 billion, and establishment and review of sustainability strategy	4times

### Remuneration of Directors

(As of the end of 2018, Unit: KRW million)

Classification	Number of Directors	Total Remuneration	Remuneration per Director
Registered Directors	3	5,341	1,780
Independent Directors (excluding Members of the Board of Inspection)	2	147	73.5
Members of the Board of Inspection	3	288	96

### Annual Rate of Compensation

(As of the end of 2018, Unit: KRW million)

Classification	2016	2017	2018
Highest Remuneration Amount(A)	1,649	1,893	3,510
Average employee wage in Korea(B)	96	85	107
Rate of Compensation(A/B, multiples)	17.2	22.3	32.8

### ESG Evaluation

(Korea Corporate Governance Service(KCGS))

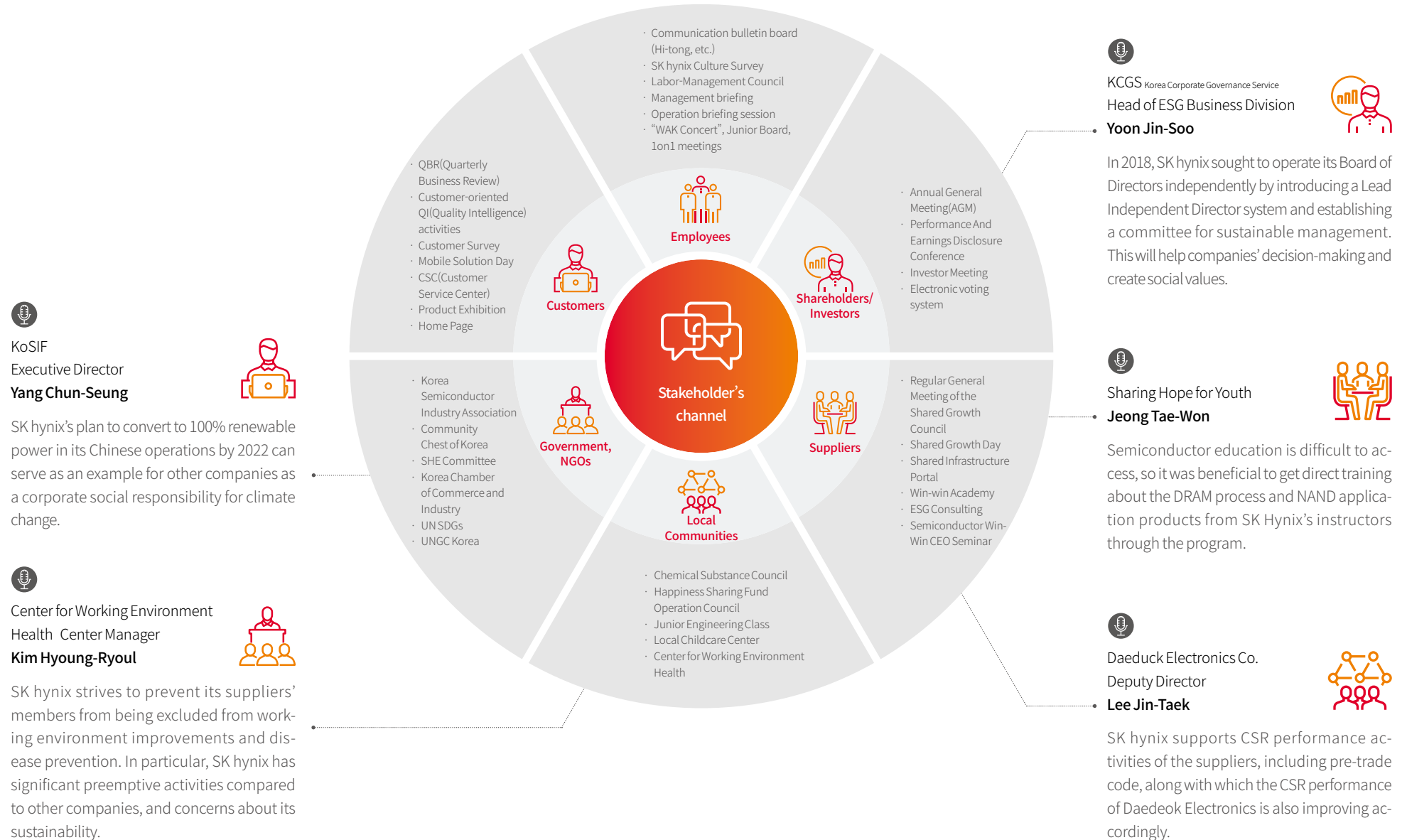
Classification	2016	2017	2018
Class	B+	A	A

Environment

Society

**Governance**  
 Corporate Governance · Ethical Management · Compliance Management · Risk Management · R&D

## Stakeholder Communication



# GOVERNANCE | Ethical Management

## SK hynix's Approach to Ethical Management

We believe that corporate social responsibility is to improve logical factors and achieve business objectives in a stable and healthy method. SK hynix prevents the unethical practices of the organization and employees through ethics management to protect our human and material resources.

## Ethical Management System

SK hynix has established a "Code of Ethics" to ensure a rational and transparent decision-making process. The code is updated on a regular basis to reflect ethical trends and the current version (10th revision) was updated in October 2016. All our employees recognize the importance of ethical management and sign the pledge on practicing ethics. The Code of Ethics and the pledge on practicing ethics are also applied to employees at our overseas companies, subsidiaries and suppliers to raise awareness of ethical practice throughout the semiconductor ecosystem. The Ethical Management Office is in charge of our ethical practice and operated under the CEO to secure its independence and strengthen the authority to perform its responsibilities. The Board of Inspection reports on our ethical management every quarter and incorporates it into our practice.

### Ethical Management System



## Ethical Risk Monitoring

### Vigilance System

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, cost, receivables, purchase, and suppliers and special risks management; not only on domestic workplaces but also overseas production and sales corporations. In addition, we have integrated the ethics management portal "Ethics Plus" as part of our risk prevention measure.

### Ethics Survey

We conduct ethical practice surveys on a regular basis to identify the company's ethical standards and derive improvement directions. The survey is also conducted for employees of our overseas companies and subsidiaries. In 2018, 23,761 employees took the survey and the results were used to improve our ethical management system and practice.

### Counseling and Reporting System

SK hynix secured various online and offline communication channels to ensure that our stakeholders can report on ethics-related issues. We operate the informant protection program, which guarantees anonymity of all informants, as a measure to prevent retaliation, including 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 2018, 116 cases were reported, valid 40 cases of which were investigated, and 34 employees were subject to disciplinary action. Based on continuous monitoring activities, we are creating an environment where informants are protected and encouraged to report unethical conduct.

### Participation in Ethics Survey

Classification	Number of Respondents
Domestic Sites	16,478
Overseas Sites	5,337
Subsidiaries(System IC and 2 other companies)	1,946

### Reports and Disciplinary Actions for Ethical Practice

Classification	Unit	2016	2017	2018
Total Reports	case	104	117	116
Valid Reports <sup>1)</sup>	case	44	47	40
Measures Against Unethical Conduct (Serious Disciplinary Actions)	Person	60(18)	65(37)	34(15)

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



## Spreading the Culture of Practicing Ethics

### Ethical Management Training

Every year, SK hynix provides ethical management training programs both online and offline for all our employees and training contents are developed in English and Chinese for the employees of our overseas companies. Online program focuses on basic common areas and case studies of unethical practice to raise awareness. In particular, it covers the need for ethical practice, dealing with suppliers, and reporting procedures to become required courses. Additionally, the contents were customized for the unique characteristics of technical office staffs and production employees to improve its effectiveness.

#### Participation in Online Training

Classification		Number of People
SK hynix	Domestic Sites	22,541
	Overseas Sites	6,226
Subsidiaries(System IC and 2 other companies)		2,308

### Debate Training led by Leaders

To improve employees' ethical decision-making and performance, we hold "Debate Training led by Leaders" every year. Participants discuss ethical dilemmas in a workplace and internalize the Code of Ethics. Based on the results, practice guidelines are established for each organizational unit for ethical practice. The training is also available to employees of our subsidiaries and overseas offices.

#### Participation in Debate Training led by Leaders

Classification		Participants
SK hynix	Domestic Sites	22,144 employees from 887 organizations
	Overseas Sites	1,101 employees from 65 organizations
Subsidiaries(System IC and 2 other companies)		1,372 employees from 59 organizations

### Visiting Ethics Class

SK hynix organizes a Visiting Ethics Class on an occasional basis as part of its ethical management training. Based on risk analysis in ethical management, we provide training contents for our employees. In 2018, 51 sessions were held for 4,228 employees.

### Ethical Management for Suppliers

We are creating an ethical organizational culture with our suppliers. To this end, we introduced monthly Q&A sessions "Let's learn about ethical management" where we share our ethics policy and information with the employees of 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 disseminate ethical standards. At the Wuxi campus, an ethical management seminar was held for 34 suppliers in 2018 to promote our ethical practice. In cooperation with our suppliers, we will continue to create an ethical ecosystem and raise awareness of our ethical responsibility.

#### Ethical Training Hours per Person

(Unit: Hour)

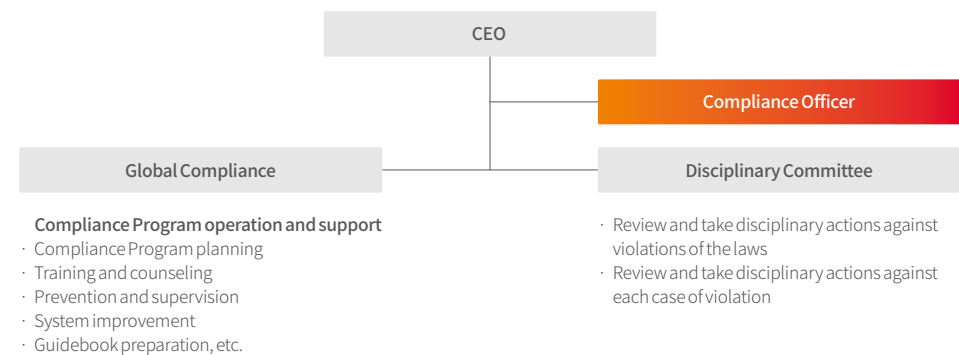
2016	0.72
2017	1.46
2018	1.46

# GOVERNANCE | Compliance Management

## SK hynix's Approach to Compliance Management

Recently, the social demands for fair trade and anti-corruption are becoming more stringent all around the world. SK hynix continues to voluntarily strengthen our existing principles on compliance management in order to comply with laws and regulations targeting society, market and the government. SK hynix complies with overall domestic and international fair trade laws along with its efforts to compete in a fair and liberal manner to secure fair trade orders in the semiconductor industry.

### Compliance Management Organization



## Compliance Management Principles

Recognizing compliance management as an integral part of our corporate philosophy for sustainable growth, SK hynix has strengthened our compliance system and practice. Our compliance principles are based on the customers' requirements and characteristics of the semiconductor industry, as well as local laws and international codes, which serve as guiding principles and standards for our employees. The Global Compliance Program, in particular, encompasses compliance activities in key areas including antitrust, anticorruption, information security, and strategic materials. In addition, we have formed a Global Compliance, Disciplinary Committee which is a compliance officer and a dedicated organization for compliance control of SK hynix in order to review compliance with the principles and report to the CEO.

## Strengthening the Antitrust System

SK hynix reviews fair trade procedures and details of major sales subsidiaries every year, and make necessary improvements. We also carry out preventive antitrust training to raise our employees' awareness. In 2018, we conducted compliance reviews and training of major overseas companies in China, America and Germany. We identified the differences in antitrust laws and the degree of enforcement in each country in which we operate our business, and developed and distributed antitrust guidelines by work process and area. These are robust regulatory requirements set to ensure compliance with the laws of all countries. We also organize seminars consisting of one-on-one counseling and Q&A sessions with a panel of our internal lawyers and antitrust lawyers to maximize the effectiveness of training.

## Strengthening the Anti-corruption System

SK hynix strictly prohibits any forms of corruptive practice and bribery in every country in which we operate our business. All our employees pledge and take online training programs for the prevention of violations in the course of performing their job under the Improper Solicitation and Graft Act("Graft Act"). In addition, we provide anti-corruption internalization training on a consistent basis and keep our employees informed of any changes in laws and regulations.

## Fair Trade Compliance Program

SK hynix established the internal policy based on the Fair Trade Act and the Subcontracting Act to apply it to our preliminary review process when dealing with affiliates and subcontractors. We also provide training on compliance with the Fair Trade Act and the Subcontracting Act for those who are in charge of the trade. In 2018, we included our subsidiaries for the training program and tailored it to their needs to strengthen our foundation for fair and transparent practice.

## Consultation and Reporting of Unfair Transactions

With the trading system for the contract tender in place, we monitor and prevent unfair transactions through various channels including e-mail, phone, and online reporting system<sup>1)</sup>. The online reporting system, in particular, is designed to protect the identity and information of whistleblowers to prevent any unauthorized disclosure. We also keep the whistleblowers informed of the progress and maintain close communication to prevent unfair transactions.



1) Reporting of Unfair Transactions

### CASE. Response to the EU-GDPR

We established a system in response to the EU-GDPR(General Data Protection Regulation), the privacy protection regulations which apply to the companies operating in EU and those providing goods or services to EU residents. Its violations are subject to penalties up to 4% of annual sales. SK hynix implemented the system to ensure compliance with the EU-GDPR, where we designate a person in charge of privacy protection at each workplace, and formed the Global Privacy Protection Committee to establish monitoring and improvement plans through discussion and review.

<b>Work process that protects the rights of information owners</b>	Establish a work process to handle requests from information owners to protect 8 rights to access, correct, delete, restrict processing and relocate information
<b>Building GDPR Dashboard System to protect the rights of information owners</b>	Instruct major contents of GDPR and rights guarantee, System registration and processing function if information controller practices its rights, Personal information processing history record keeping function as information controller
<b>Ensuring transparency in personal data processing</b>	Ensure transparency in the notification and consent process for collecting, storing and using personal data to protect information owners' rights to know

# GOVERNANCE | Risk Management

## SK hynix's Approach to Risk Management

We prevent various uncertainties and possible damage that may occur during business operations which we effectively evaluate and control in order to maximize company value based on sustainable and stable growth.



## Enterprise Risk Management

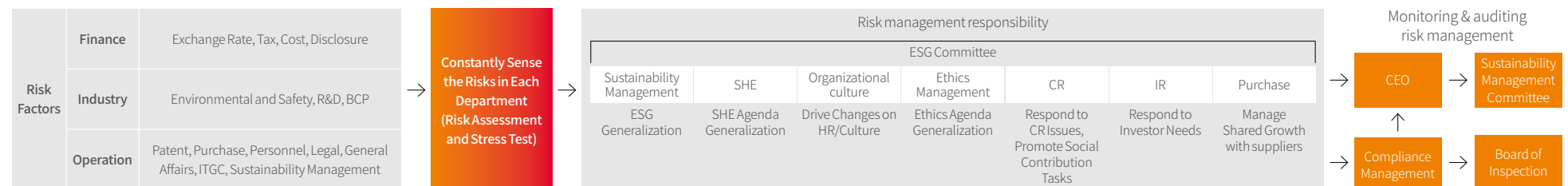
SK hynix operates an integrated risk management system to preemptively detect and respond to risk factors that may have negative impacts on achieving management goals. The management organization and consultative councils of each risk area are taking control of risk recognition, dissemination, and the establishment of response strategies.

### Operation of Various Risk Management Councils

We currently operate a wide range of management consultative bodies to efficiently handle complex risks that require collaboration with each managing department. We manage the non-financial areas as well as those classified as financial risks on a company-wide level in an integrated manner through the ESG Committee, BCP(Business Continuity Plan) Committee, and internal control CoE.

**ESG Management Reinforcement** Established in 2019, the ESG Committee aims to proactively identify and respond to ESG-related issues and smoothly implement a sustainability strategy system on the basis of “Co-work” to help eliminate management risks in the ESG sector, creating a favorable business environment. To facilitate the implementation of ESG and sustainable management strategies, we hold a monthly committee meeting consisting of executives from 7 key ESG-related organizations(Sustainability Management, SHE, Organizational culture, Ethics Management, CR, IR, Purchase)

### Risk Management Structure



**Response to Disaster and Crisis** In the event of a disaster or crisis, we run the BCP Committee to respond to the crisis on a company-wide level and swiftly recover from the disaster and resume work. Upon receiving reports about the situation, the Committee discovers, reviews, and approves policies and plans for the quick resumption to work. In 2018, we conducted a simulation drill for crisis management by selecting the topic of production shutdown and gas leakage, which may occur due to safety accidents. We are re-examining our global crisis response capabilities and improving vulnerabilities that have the potential to cause large-scale damages.

**Internal Control** We operate an internally controlled CoE to consolidate our management system that can effectively drive the process leading up to the financial outcomes, and support our unique operations for the company's revenue generation. In order to stabilize regulations and procedures for system operation and to establish an evaluation system as well as permanent and regular inspections, we identify work flows with a Plan-Do-See system, and financial risks through procedure-based task analyses. We also implement control measures by risk type and efficiently manage them.

### Integrated Management via Systems

To systematically manage corporate-wide risks, we actively introduced IT systems to identify and manage potential risks. A variety of IT systems we are currently operating are: the Hi-Fi for integrated management of corporate financial risks, HRMS for comprehensive ESG risk management, SHE portal for integrated health and safety management, G-PIS for integrated supply chain risk management, and EthicPlus for internal control of ethical management. Other efforts include monitoring the risks and enhancing physical and technical vulnerabilities.

#### Potential Risk Management

	Description of Risk	Potential Business Impact	Response Activity
Increase of human rights risks during labor for raw materials such as cobalt	<ul style="list-style-type: none"> <li>Recently, global NGOs have identified Cobalt as a new conflict mineral that supports rebels in Congo and urged to act.</li> <li>Companies with China-Korea production value chains need a high level of supply chain risk control, with Korea classified as the main importer of Cobalt.</li> </ul>	<ul style="list-style-type: none"> <li>Increased interest among governments and civil society in conflict minerals can lead to a negative corporate brand image.</li> <li>Regulations on conflict minerals are becoming stricter, especially in the U.S. and EU.</li> <li>Using conflict minerals can have a negative effect on the results of due diligence as assessments of major customers' suppliers are being intensified.</li> </ul>	<ul style="list-style-type: none"> <li>Request the disclosure of usage information on Congolese Cobalt to stop its use in rebel-occupied mines</li> </ul>
Information Protection and Hacking	<ul style="list-style-type: none"> <li>Increased risk of information leakage, theft, and cyber attacks as the digital transition, such as AI, is in full swing.</li> <li>As factories are becoming more advanced, financial damage from cyber attacks can occur.</li> </ul>	<ul style="list-style-type: none"> <li>Damage of industrial information, such as leakage of internal R&amp;D results, may hinder mid- to long-term growth of companies.</li> <li>Cyber attacks on high-tech factories can lead to reduced productivity, financial loss, and industrial accidents.</li> </ul>	<ul style="list-style-type: none"> <li>Establish industry security policies, increase security awareness among members and develop voluntary security activities through campaigns and training</li> <li>Strengthen the computer security system, such as SIEM(Security Information &amp; Event Management)</li> </ul>

## Business Continuity Management

In order to ensure business continuity in case of emergency, build trust with customers and strengthen our leadership position in the industry, we implement the BCP. We identified 56 risk factors based on internal and external environmental analysis and studies conducted by NFPA(National Fire Protection Association), EM-DAT(Emergency Events Database), FEMA(US Federal Emergency Management Agency) and the Ministry of Public Safety and Security. From them, we selected risk factors that are subject to the BCP management and incorporate it in our BCP. Based on the identified risk factors and the resources required for recovery, we set strategies for normalization of business operation. We are committed to improving the effectiveness of our crisis response and recovery process through annual company-wide simulation training.

### ISO22301, International BCP Standards

Since 2014 when we acquired ISO22301 certification for Icheon and Cheongju Campuses, we earned certifications for all our campuses including Wuxi in 2015 to Chongqing in 2017. ISO22301 is an international business continuity management standard of the International Organization for Standardization(ISO), which became effective in May 2012. It certifies the company's ability to normalize their operation as soon as possible in case of disaster or emergency. By renewing ISO22301 certification on a regular basis, we plan to strengthen our foundation for recovery and expedite recovery process for production, human resource and logistics within the target period in case of fire or natural disasters in accordance with our plans.

#### BCP Framework

Business Continuity Plan			
Analysis	Prepare	Test	Planning
<ul style="list-style-type: none"> <li>Monitoring</li> <li>Risk assessment</li> <li>Business impact analysis</li> </ul>	<ul style="list-style-type: none"> <li>BCP strategy planning based on resource acquisition and replacement analysis</li> </ul>	<ul style="list-style-type: none"> <li>Drill Exercise</li> <li>Internal inspections</li> <li>Executive reviews</li> <li>Continuous improvement</li> </ul>	<ul style="list-style-type: none"> <li>New BCP Developments</li> <li>BCP Updates</li> </ul>



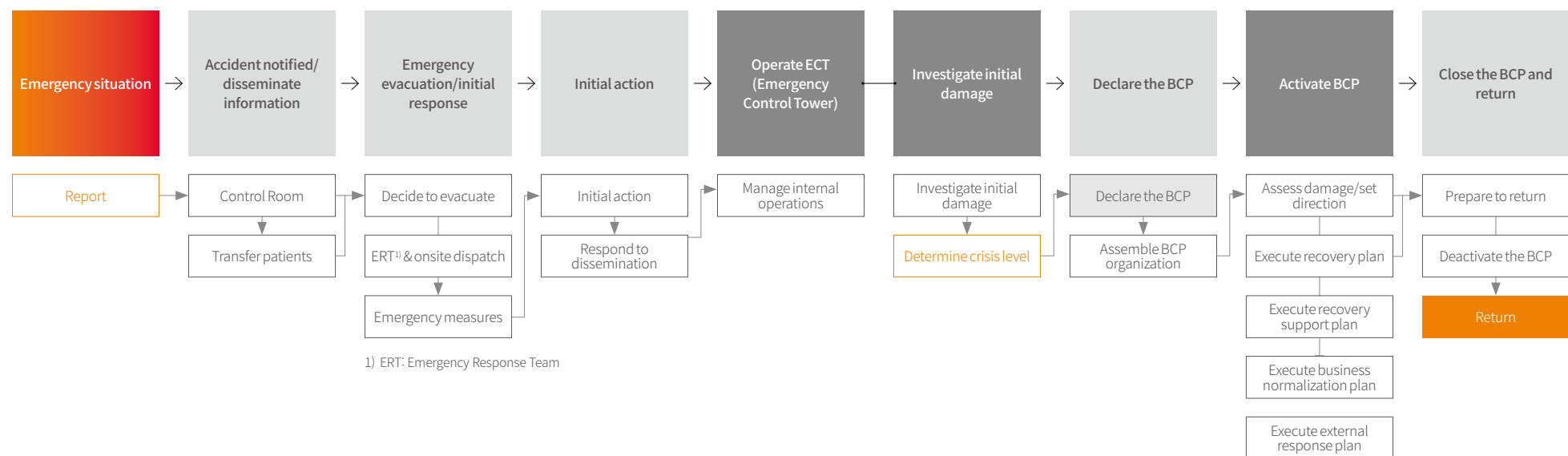
### Expansion of BCP Management Areas

While undergoing the ISO22301 certification process, SK hynix recognized how suppliers' supply can affect our operation and the need for a proper response system in place. In addition to SK hynix's BCP management, the company has expanded the BCP management area to support the supply chain in order to enhance its suppliers' ability to cope with risks. We analyzed the demands for suppliers with a strong impact on our operation in case of discontinued supply of raw materials and held "Suppliers BCP Seminar" with six of them, where we shared our know-how on how to build a BCP system and reminded them of the importance of BCP in crisis response management. By sharing our knowledge and infrastructure in this way, we aim to promote SV to the supply chain, and created a sustainable business ecosystem for mutual success with our suppliers. We will continue to expand the scope of application for our BCP initiative and strengthen business continuity throughout our value chain.

### Detailed Strategic Direction and Action Plan

- ① Securing BCP implementation capacity: validate BCP system through R&R establishment in case of emergency and regular simulation training
- ② Strengthening response capability to customers: achieve the global BCP level by maintaining ISO22301 certification and successfully responding to customer inquiries and audits
- ③ Internalizing BCP DNA: internalize the BCP DNA by promoting a culture in workplace and continue to make improvement on BCP

### BCP Operation Process



## Reinforcement of Industrial Security

### Industrial Security Policy

SK hynix is committed to enhancing the security culture at our workplace to promote sustainable growth, recognizing all the tangible and intangible assets of our company including key talents and intellectual properties as a source of gaining a competitive edge, and keeping in mind that industrial security contributes to the protection of national interests as well as our corporate future. Once a month, we hold an IT security meeting to discuss and review IT/security policy, and security of new systems with relevant teams in order to optimize our efficiency and the process of building security/IT operation environment. Every year, we appoint a security officer in each department to identify security risks in our ongoing security policies and take preemptive measures to enhance our security regulations. In 2018, we established a new IT security team to improve our IT security environment in the areas with growing security threats.

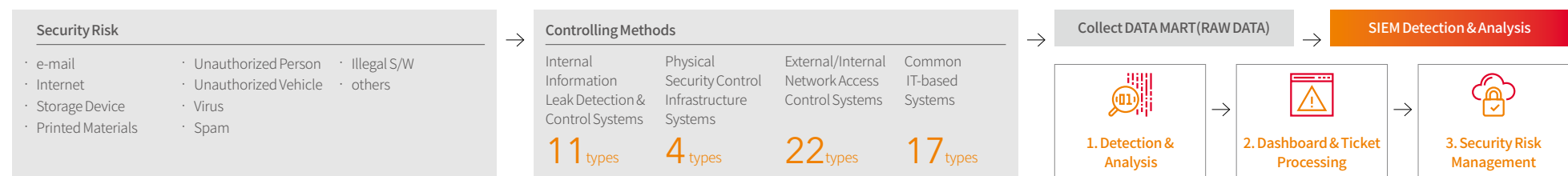
### IT Security Awareness Campaign

SK hynix has raised our employees' security awareness and has strengthened a security culture in our workplace through security awareness programs. As part of this initiative, we distribute a security letter program called "Security Day" on a weekly basis and organize training using the contents we developed while sharing the results with all employees. Leveraging the high level of security awareness, our employees report security vulnerabilities playing an important role in prevention of security breaches. In 2019, we plan to provide online training on key security regulations and case study for our employees.

### Privacy Protection

Recognizing the leakage of personal information may result in not only legal liability of the company but also serious damage to individuals. In response, we thoroughly comply with the compliance regulations in and out of the country and identify and respond to the related laws and regulations. In 2018, we reviewed the European Union's privacy protection system in line with the implementation of the EU's to establish a response system to resolve compliance issues that may occur when transferring personal data to our head office. We also carried out inspections of 19 personal information service providers in the areas of health, welfare, and training, and made sure that proper security measures were taken when it comes to collecting, using, disclosing and destroying personal data we provide.

### SIEM Process



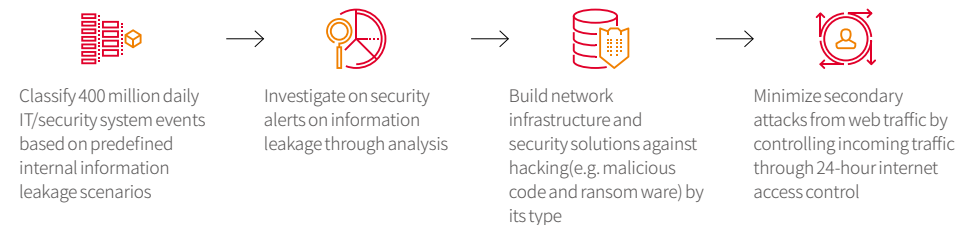
### Capacity Enhancement of Security Personnel

In line with the enhanced industrial security standards, we distributed the "Security Work Process Manual" to our security personnel and conducted training on sexual harassment and disability awareness as part of our efforts to prevent human rights issues. In addition, we organize monthly job and security system training at our facilities with the same conditions to security checkpoints in order to protect our technologies and company assets. We also introduced an incentive system for security personnel to motivate them to boost their performance and improve security. In 2018, we increased their pay rate and established a payment policy for new employees, records of violation, and individual payments to improve their morale and motivation.

### Computer Security System

In order to predict and respond to information leakage and security threats, SK hynix introduced a robust computer security system. We also separated the FA (Factory Automation) network from the office network and strengthened the network separation by implementing the VDI (Virtual Desktop Infrastructure) to enhance our business continuity and security. Abnormal behaviors are managed using the SIEM based on individual computer system and the coordination between internal production/manufacturing and R&D systems in addition to security solutions are expanded to advance the detection performance of data leakage. In 2019, we plan to introduce big-data solutions to automate our detection process and facilitate data analysis in multiple systems.

### SIEM Process



# GOVERNANCE | R&D

## SK hynix's Approach to R&D

SK hynix invests efforts to touch the hearts of our customers by providing sustainable products that reflect our expertise in technology.

We secure technology competitiveness to supply customers with innovative products that are reliable in use, so that the value that customers desire connects with the product value of SK hynix.

## Reinforcement of R&D

### Setting Mid- to Long-term R&D Goals

To lead the semiconductor market, we are driving technological innovation in the next-generation memory sector.

Mid- to Long-term Goal

Building infrastructure for the development of next-generation memory in preparation for the era of A.I.



Action Plan



Securing the expertise to extend DRAM and NAND technologies



Setting a roadmap for the technology for the next 30 years



Organizing specialized workforce for future technology



Building R&D facilities and new R&D Fabs

### Patent Management Process

To drive growth and strengthen our competitive advantages through technological innovation, we are building a strong patent portfolio. In order 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 Business/product planning stage. For patents developed through this program, we provide incentives on invention and patent application. Meanwhile, we are expanding our portfolio by acquiring patents from external sources such as various industry-academic cooperation programs and improving their competitiveness. Currently we have 12,588 registered patents and plan to enhance their scope and competitiveness with the focus on next-generation technologies and a wide range of application.

### Intellectual Property Management Process for Prevention of Infringement

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 while a running royalty is paid based on a certain percentage of the sales it makes. We are responding to several disputes over intellectual property rights including infringement cases with Netlist and Elm. We take a proactive approach in our responses and negotiations to minimize the risks. If there is a high risk of loss in our resources and the amount can be estimated, we recognize the amount as liability.

### 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 develop expertise, specialize in the patent areas, and to build a foundation for sustainable growth.



**12,588** Cases

Number of Intellectual Property Rights  
(As of the end of December 2018)

### Innovation from Cooperation

We promote technological and quality innovation through active cooperation among our employees. As a starting point, we created “Imagination Town”, an online site to share suggestions for operational and cultural improvement, in which more than 70% of our production workforce have taken part. Adopted in 2014, the system collects ideas for improvement through the intranet and incorporates them in our practice. By 2018, about 420,000 ideas were suggested and 70% of them, which is about 290,000 cases, were applied. In addition to economic values it generates, we plan to upgrade the site to indicate social values, so that employees can understand DBL better and apply it more.

### Open Innovation

With the growing importance of semiconductors as ICT paradigm shifts with the Fourth Industrial Revolution, the level of technological expertise required from companies is rising, and we promote Open Innovation through close cooperation among customers, suppliers and experts. As part of this initiative, we held a Semiconductor Innovation Idea Contest that anyone, either from inside or outside of our company, can enter. As a result, we applied 15 ideas for patent registration and are going to finance any additional research required.

### CASE. Participating in the World's Largest ICT and Home Appliances Exhibition CES 2019



By setting up a joint booth with SK's major stakeholders, we introduced future mobility technology under the theme of “Innovative Mobility by SK”. Under the concept of “Memory-Centric Mobility”, SK hynix showcased DRAMs and NAND Flash memories that are essential for self-driving, Advanced Driver Assistance Systems(ADAS), infotainment and telematics. In a self-driving environment, data create new value such as

improved driving experience and reliability, and memory chips are the most important part of the data flow. In line with this, we introduced DRAM, HBM(High-bandwidth Memory), and Enterprise SSDs that are used for communication and data analysis between vehicle and data centers. In addition, among the participants in the 2019 CES, global companies in the data center, cloud, storage, and chipset sectors led by the fourth industrial revolution were consulted to explore ways to work together to develop the global ICT ecosystem.

### CASE. R&D Project Failure Award



SK hynix held a contest for failed R&D projects to recognize innovative challenges, encourages them to identify the cause of failure and learn from it. Introduced in 2018, the contest is designed to promote the idea that failure is a great asset in the R&D process and open to projects where technologies were not available at the time or innovative ideas were not applied to product development.

From 456 cases added to the database through the contest, two organizations and five employees received the award. They cover all R&D areas including “Competency/Infrastructure”, “Economy”, “Mass Producibility”, “Human Miss”, “Strategy/Planning”, “Change Management”, “Line Operation”, “Analysis/Gauge”, and “Future Technology”. Using failure as a foundation for innovation, we are dedicated to overcoming technological challenges and pushing the limit.

### CASE. HiGarage, In-house Venture Accelerating Program



SK hynix launched HiGarage, an in-house venture accelerating program, based on the SK Group's management philosophy of “a basic premise of innovative growth has to be on the tolerance to failure.” In the HiGarage program, six in-house venture teams were selected out of 240 ideas that could produce both economic and social values. With KRW 200 million and a separate work space, each team is endeavoring to develop their ideas

to a viable businesses. If they succeed in developing prototypes in the near future, they will be allowed to choose either spinning off their businesses or making their projects in-house. SK hynix will continue to give our employees to make double bottom line businesses with innovative ideas and provide full support to create both economic and social values.

*Sec.04*

# APPENDIX

---

01

SK hynix  
Sustainability  
Guidelines

02

Material Issue  
Management

03

ESG Data

04

Awards, Recognition  
and Association  
Memberships

05

GRI  
Standards Index

06

Independent  
Assurance  
Report

07

Verification  
Statement on  
Greenhouse Gas

08

UN  
Global Compact

09

About  
This Report



# SK hynix Sustainability Guidelines

SK hynix has progressed Sustainability Management based on SKMS, the management execution principle of SK Group.

For this, we enact the SK hynix Sustainability Guidelines and hereby subcontractors, partners and JV members as well as all members of SK hynix and subsidiaries transacting with us 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 economic growth and happiness of humanity. SK hynix has established 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 SK hynix Sustainability Guidelines.

In addition, with “Universal Declaration of Human Rights” SK hynix supports and respects various global organizations' human rights and labor protection standards, including 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 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 RBA Code of Conduct. SK hynix employees are in compliance with applicable legal standards in the places where it operates its business.

## Declaration of Ethics Management

SK hynix recognizes that the 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 anticorruption by firmly establishing an order of trade that is transparent and fair.
3. Integrate ethical operations as a 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 on it.
5. Publicize the declaration to stakeholders so they may effectively comply with it.

### Attachments

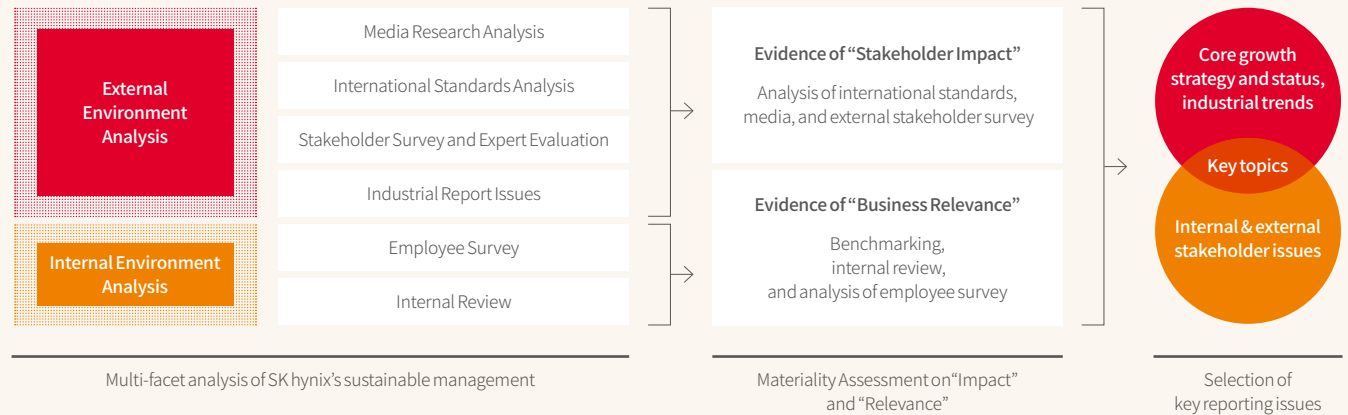
- Supplier Code of Conduct
- Conflict Mineral Policy
- Slavery and Human Trafficking Statement



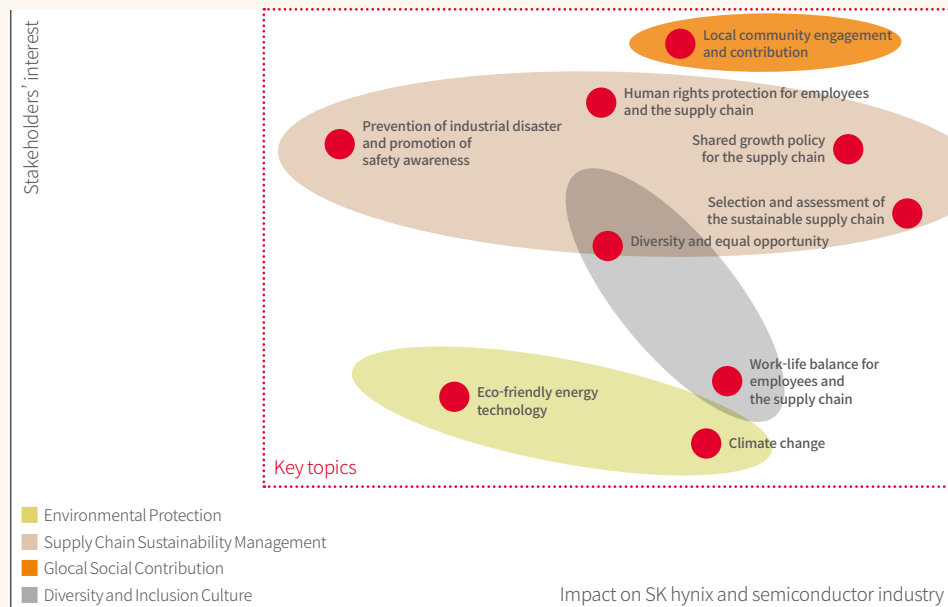
# Material Issue Management

## 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 the business importance and the effect on stakeholders as well as interests when establishing sustainability management strategies.



## 2019 Materiality Assessment Results



Sustainability Strategy	Material Issues	Stakeholders	GRI Index	Impact <sup>1)</sup>	Page
Environmental Protection	Climate change	Customers, Government, NGOs	302-1, 2, 3	Risk	11~16
	Eco-friendly energy technology	Customers, Government, NGOs	305-1, 2, 4, 7	Operation	
Supply Chain sustainability Management	Shared growth policy for the supply chain	Suppliers, Government, NGOs	414-2	Operation	39~43
	Selection and assessment of the sustainable supply chain	Customers, Suppliers	414-1	Operation	36~38
	Human rights protection for employees and the supply chain	Employees, Suppliers, Government, NGOs	412-1	Operation	44~45
	Work-life balance for employees and the supply chain	Employees, Suppliers, Government, NGOs	412-1	Operation	44~45
Global Social Contribution	Prevention of industrial disaster and promotion of safety awareness	Employees, Suppliers, Government, NGOs	403-1	Operation	30~34
	Local community engagement and contribution	Local Communities, Government, NGOs	203-1	Risk	20~23
Diversity and Inclusion Culture	Diversity and equal opportunity	Employees	405-2	Operation	24

1) Operational Impact: An impact on value-creating business activities and processes (increasing market share, customer retention, new business diversification, productivity, etc.)

Risk: Gain or loss of trust from stakeholders (diffusion of negative publicity in the media and SNS, scores received through external evaluations, etc.)

# ESG Data

## Financial Highlight

### Key Financial Performance

(Unit: KRW billion)

Classification		2016	2017	2018
Income Sheet	Sales	17,198	30,109	40,445
	Gross profit	6,411	17,408	25,264
	Operating profit	3,277	13,721	20,844
	Profit before corporate tax	3,216	13,440	21,341
	Corporate tax	256	2,797	5,801
	Net profit	2,960	10,642	15,540
Balance Sheet	Total assets	32,216	45,418	63,658
	Total borrowings	4,336	4,171	5,281

### Creating Economic Values

(Unit: KRW billion)

Classification	Details	2016	2017	2018
Employees	Wage	1,988	2,824	3,379
	Retirement allowance	211	173	190
	Welfare benefits	387	395	498
Local communities	Tax and dues	288	2,831	5,848
	Donations	52	76	62
Suppliers	Raw materials	2,458	2,814	3,720
	Consumables/repair	3,635	4,260	4,313
	Outsourcing	786	896	1,072
Company	Reserves value	2,537	9,936	14,514
Shareholders and investors	Interest costs	120	124	95
	Dividends	424	706	1,026

### Financial Performance by Region

(Unit: KRW billion)

Classification	Sales	Operating Profit	Tax and Dues
Korea	41,507	20,664	3,451
Asia	26,343	262	116
U.S.	14,441	52	1
Europe	2,042	4	0
Total	84,333	20,982	3,568

### Shareholders

(Unit: Common shares, As of the end of 2018)

Classification	NO. of stocks	Shareholding
SK Telecom	146,100,000	20.07%
National Pension Service	65,890,385	9.05%
Others	472,011,410	64.84%
Treasury Shares	44,000,570	6.04%
Total	728,002,365	100.00%

[SK hynix  
Sustainability  
Guidelines](#)
[Material Issue  
Management](#)
[ESG  
Data](#)
[Awards, Recognition  
and Association  
Memberships](#)
[GRI  
Standards  
Index](#)
[Independent  
Assurance  
Report](#)
[Verification  
Statement on  
Greenhouse Gas](#)
[UN  
Global  
Compact](#)
[About  
This Report](#)

## Customer

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

(Unit: Point)

Classification		2016	2017	2018
Customer Satisfaction Level		4.23	4.44	4.46
Customer Satisfaction Level by Application	Computing DRAM	4.16	4.31	4.32
	Mobile DRAM	4.29	4.47	4.57
	Mobile Solution	4.17	4.50	4.52
	Storage Solution	4.37	4.51	4.60
Customer Satisfaction Level by Company	China	4.20	4.44	4.52
	America	4.10	4.39	4.19
	Japan	3.95	4.03	4.20
	Korea	4.66	4.57	4.68

1) Out of 5 points

## Environment

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

Classification	Details	Unit	2016	2017	2018
Scope 1 <sup>2)</sup>	CO <sub>2</sub>		61,899	208,939	254,988
	CH <sub>4</sub>		3,361	3,237	4,086
	N <sub>2</sub> O		235,205	85,849	113,306
	HFC <sub>s</sub>		129,864	123,899	131,402
	PFC <sub>s</sub>		445,563	370,911	420,583
	SF <sub>6</sub>		171,811	154,000	152,365
	NF <sub>3</sub>		853,867	762,795	881,814
	Total		1,901,570	1,709,628	1,958,542
Scope 2 <sup>2)</sup>	CO <sub>2</sub>		3,284,705	3,372,407	3,948,968
	CH <sub>4</sub>	tCO <sub>2</sub> eq	643	656	798
	N <sub>2</sub> O		4,687	5,014	6,082
	Total		3,290,035	3,378,076	3,955,848
Scope 3 <sup>3)</sup>	Overseas transportation (Import)		42,947	66,030	58,992
	Overseas transportation (Export)		15,910	19,314	20,650
	Waste		3,845	9,379	8,481
	Overseas business trip		1,115	2,414	2,136
	Employee's commute to work		9,938	14,197	18,841
	Total		73,755	111,334	109,100
Scope 1	Intensity <sup>4)</sup>	tCO <sub>2</sub> eq/KRW	11.06	5.68	4.84
Scope 2		100 million	19.13	11.22	9.78

1) The previous data have been modified due to changes to calculation standards.

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

3) Based on domestic worksites

4) GHG emissions per Sales

## Environment

### Energy Use

Classification	Details	Unit	2016	2017	2018
Use by energy source <sup>1)</sup>	LNG	GJ	1,249,146	4,144,315	4,818,131
	Electricity		60,401,956	65,601,501	78,421,166
	Steam		2,950,408	678,999	739,437
	Total		64,601,509	70,424,815	83,978,734
Intensity <sup>2)</sup>	LNG	GJ/ KRW 100 million	7.26	13.76	11.91
	Electricity		351.21	217.88	193.90
	Steam		17.16	2.26	1.83
	Total		375.6	233.9	207.6

1) Reported major energy consumption in Icheon, Cheongju, and Bundang Campus in Korea and Wuxi Campus in China

2) Energy use per Sales

### Raw Materials Use

(Unit: KRW billion)

Classification	2016	2017	2018
Wafer	488	552	848
Lead Frame & Substrate	156	167	182
PCB	127	137	186
Others	1,608	1,866	2,391
S/P supplementary materials	1,432	2,161	2,701
Total	3,810	4,883	6,308

### SHE Expenses

(Unit: KRW billion)

Classification	2016	2017	2018
Total	106	283.3	276.6

### Waste Recycling

Classification	Business Site	Unit	2016	2017	2018
Recycle waste	Domestic worksites	Ton	154,790	219,418	359,117
	Overseas worksites		26,059	31,653	42,379
	Total		180,849	251,072	401,495
Recycling rate	Domestic worksites	%	95	91	95
	Overseas worksites		56	58	62
	Total		86	85	90

### Waste<sup>1)</sup>

(Unit: Ton)

Classification	Business Site	2016	2017	2018
Common waste	Domestic worksites	85,806	112,971	169,841
	Overseas worksites	16,596	17,413	20,386
	Total	102,402	130,385	190,227
Designated waste	Domestic worksites	77,217	128,972	206,690
	Overseas worksites	29,885	37,247	47,516
	Total	107,102	166,219	254,206
Total	Domestic worksites	163,023	241,943	376,531
	Overseas worksites	46,481	54,659	67,903
	Total	209,504	296,603	444,433

1) The previous data have been modified due to changes to calculation standards.



## Environment

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

(Unit: 1,000m<sup>3</sup>)

Classification	Details	2016	2017	2018
Water withdrawal	Waterworks <sup>2)</sup>	40,505	43,289	47,116
	Surface water	23,646	30,528	33,718
	Underground water	0	0	0
	Total	64,151	73,817	80,834
Total water consumed <sup>3)</sup>	Total	8,541	11,607	14,231

1) The previous data have been modified due to changes to calculation standards

2) Including reused water

3) Water withdrawal - waste water discharge

### Water Recycling

Classification	Business Site	Unit	2016	2017	2018
Recycled water	Icheon	1,000m <sup>3</sup>	6,072	7,161	11,804
	Cheongju		7,096	7,410	6,840
	Wuxi <sup>2)</sup>		5,834	7,037	6,898
	Chongqing		94	112	150
	Total		19,096	21,720	25,692
Water recycle ratio <sup>1)</sup>	Icheon	%	19.5	19.1	25.8
	Cheongju		29.0	30.1	28.7
	Wuxi <sup>2)</sup>		32.0	34.1	32.5
	Chongqing		10.2	9.4	11.1

1) Recycled Water/(Recycled water + Discharged wastewater)

2) The previous data have been modified due to changes to calculation standards

### Ultra-pure water

(Unit: m<sup>3</sup>)

Classification	2016	2017	2018
Ultra-pure water usage	25,194,827	27,442,559	32,870,370

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

Classification	Business Site	Unit	2016	2017	2018
Wastewater discharged	Icheon	1,000m <sup>3</sup>	25,069	30,327	34,030
	Cheongju		17,344	17,215	17,027
	Wuxi		12,370	13,590	14,340
	Chongqing		827	1,078	1,206
	Total		55,610	62,210	66,603
Intensity	Icheon	1,000m <sup>3</sup> / KRW 100 million	0.146	0.101	0.084
	Cheongju		0.101	0.057	0.042
	Wuxi		0.072	0.045	0.035
	Chongqing		0.005	0.004	0.003

1) The previous data have been modified due to changes to calculation standards

### Water Quality Management <sup>1)</sup>

Business Site	Classification	Unit	2016	2017	2018
Icheon	Chemical Oxygen Demand(COD)	Ton	92.50	100.27	85.70
	Biochemical Oxygen Demand(BOD)		52.85	66.50	68.73
	Total Nitrogen(T-N)		438.20	556.25	504.64
	Fluorine(F)		25.00	36.02	42.31
Cheongju	Chemical Oxygen Demand(COD)	Ton	118.57	103.53	112.31
	Biochemical Oxygen Demand(BOD)		95.17	99.88	109.52
	Total Nitrogen(T-N)		342.49	388.22	457.01
	Fluorine(F)		127.87	126.59	122.96
Wuxi	Suspended Solids(SS)	mg/L	3.41	3.31	2.91
	Chemical Oxygen Demand(COD)		12.10	17.39	18.23
	Fluorine(F)		3.50	3.76	5.96
	Ammonia Nitrogen(NH3-N)		4.50	3.61	2.96
Chongqing	Chemical Oxygen Demand(COD)	Ton	6.45	6.90	22.09
	Biochemical Oxygen Demand(BOD)		4.30	1.51	19.75
	Total Nitrogen(T-N)		1.90	3.23	3.47
	Ammonia Nitrogen(NH3-N)		1.90	3.23	3.47

1) All sites satisfy under legal emissions standards

## Environment

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

(Unit: Ton)

Business Site	Classification	2016	2017	2018
Icheon	SOx	17.77	12.62	12.33
	NH <sub>3</sub>	5.70	5.87	21.12
	NOx	16.11	17.91	29.62
	HF	5.71	1.92	5.49
	HCl	1.01	0.95	5.31
	VOC	0.05	0.09	0.18
	Dust & particulate matter	0.00	0.40	0.33
Cheongju	SOx	0.00	3.11	0.92
	NH <sub>3</sub>	5.43	2.30	8.61
	NOx	2.53	9.31	210.82
	HF	4.34	2.77	2.31
	HCl	0.85	0.64	1.69
	VOC	0.18	0.08	0.23
	Dust & particulate matter	23.48	3.93	12.14
Wuxi	SOx	1.33	2.98	0.33
	NH <sub>3</sub>	6.32	6.45	6.05
	NOx	0.26	0.47	0.26
	HF	1.75	0.86	0.69
	HCl	5.22	7.28	3.79
	VOC	0.00	1.46	17.27
	Dust & particulate matter	0.00	0.28	0.00
Chongqing	SOx	0.00	0.28	0.00
	NOx <sup>2)</sup>	1.63	2.42	1.10
	HF	0.04	0.06	N/A
	HCl	0.74	0.26	3.37
	VOC	0.12	0.88	0.82
	Dust & particulate matter	0.15	1.75	8.55

1) All sites satisfy under legal emissions standards

2) The previous data have been modified due to changes to calculation standards

## Safety & Health

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

Classification	Unit	2016	2017	2018
No. of employees who had health checkup	Person	40,618	43,710	48,472
Expenses supported for employees' health checkup	KRW billion	6.3	6.0	7.0

1) The previous data have been modified due to changes to calculation standards

### Rate of Industrial Accidents

Classification	Details		Unit	2016	2017	2018
Rate of Industrial Accidents	Employee	Icheon	%	0.02	0.04	0.09
		Cheongju		0.03	0.14	0.08
		Wuxi		0.18	0.14	0.13
		Chongqing		0.23	0.00	0.10
	In-house supplier	Icheon	0.02	0.04	0.02	
		Cheongju	0.03	0.13	0.07	
Lost-Time Injuries Frequency Rate(LTIFR)	Employee	Domestic	Case/ 1 million	0.12	0.32	0.37
Occupational Illness Frequency Rate(OIFR)			Work Hour	0.00	0.02	0.00

### Safety Trainings

Classification	Details	Unit	2016	2017	2018
Total Training hours	Employee	Hour	8,213	10,002	12,459
	Supplier		8,799	13,030	31,635
Total No. of Completed	Employee	Person	91,222	102,746	116,319
	Supplier		10,194	13,218	27,808

SK hynix  
Sustainability  
GuidelinesMaterial Issue  
ManagementESG  
DataAwards, Recognition  
and Association  
MembershipsGRI  
Standards  
IndexIndependent  
Assurance  
ReportVerification  
Statement on  
Greenhouse GasUN  
Global  
CompactAbout  
This Report

## Employee

### Employment Status

Classification	Details	Unit	2016	2017	2018
Number of employees	Total		27,488	29,262	33,190
Executives and technical office positions	Male		9,936	10,969	13,052
	Female		2,372	2,478	2,881
Production employees	Male	Person	5,804	6,408	7,377
	Female		9,303	9,297	9,786
Contract employees	Male		42	72	49
	Female		31	38	45
Rate of permanent workers	Total	%	99.7	99.6	99.7
	Korea		22,255	23,415	25,972
Employees by region	U.S.		393	394	450
	China	Person	4,574	5,169	6,455
	Asia <sup>1)</sup>		51	52	51
	Europe		215	232	262

1) Excluding Korea and China

### Employee Diversity(Domestic)

Classification	Details	Unit	2016	2017	2018
Ratio of female employees			42.6	40.4	38.3
Ratio of female managers <sup>1)</sup>			31.3	25.2	21.6
Ratio of entry-level female managers <sup>2)</sup>	Domestic	%	34.8	27.4	23.7
Ratio of female managers at departments generating profits <sup>3)</sup>			23.5	23.4	26.3
Employees with disabilities <sup>4)</sup>	Domestic, Wuxi	Person	132	129	124
National veterans	Domestic		257	271	287
Senior employees <sup>5)</sup>	Total		61	80	106

1) Female managers and above/Total managers and above×100

2) Based on technical office managers and above

3) Based on marketing and sales departments, and sales subsidiaries

4) Excluding HAPPY-MORE INC. employees

5) Person aged 55 or more with an employment period of no less than 1 year

### Job Creation

Classification	Details	Unit	2016	2017	2018
Job creation rate <sup>1)</sup>	Total	%	(1.2)	6.5	13.4
	Korea		684	1,713	3,060
	U.S.		143	85	143
No. of recruits	China	Person	534	1,625	2,462
	Asia <sup>2)</sup>		13	18	25
	Europe		16	32	59
	Domestic		2	3	1
Number dismissed employees <sup>3)</sup>	Domestic	%	3.5	2.2	2.0
Turnover rate <sup>3)</sup>	Domestic	%	3.5	2.2	2.0
Average length of service <sup>4)</sup>	Domestic	Year	11.42	11.36	10.99

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 headquarters

### Employee Training

Classification	Unit	2016	2017	2018
Total trainees	Person	172,236	187,138	91,069
Training hours per person	Hour/Person	81	111	120
Training expenditure per person	KRW 1,000/Person	490	773	1,062

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

(As of the end of 2018, unit: %)

Classification	Domestic		Overseas	
	Icheon	Cheongju	Wuxi	Chongqing
Labor union enrollment rate	98.2	99.3	99.8	97.7

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

[SK hynix Sustainability Guidelines](#)
[Material Issue Management](#)
[ESG Data](#)
[Awards, Recognition and Association Memberships](#)
[GRI Standards Index](#)
[Independent Assurance Report](#)
[Verification Statement on Greenhouse Gas](#)
[UN Global Compact](#)
[About This Report](#)

## Employee

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

Classification	Unit	2016	2017	2018
Rate of return to work after childcare leave	%	96.6	98.4	99.1
No. of employees who used maternity leave	Person	823	731	656
No. of employees who used childcare leave		1,083	919	1,155
Rate of working for over 12 months after return to work	%	91.4	90.9	93.2

1) Based on Icheon, Cheongju, and Bundang Campus

### Level of Starting Salary of New Employees

(Unit:: %)

Classification	2016	2017	2018
Starting Salary as % of Legally Required Minimum <sup>1)</sup>	280	265	223

1) Based on newly hired college graduates at Icheon and Cheongju Campus in Korea

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

Classification	Unit	2016	2017	2018
Annual working hours <sup>2)</sup>	Hour	2,126	2,116	2137
Average weekly working hours <sup>3)</sup>		41	41	41
No. of Employees Who Joined the Flexible Working System <sup>4)</sup>	person	2,093	3,115	12,107

1) Based on Icheon, Cheongju, and Bundang Campus

2) Annual working hours per person; 2016 figure has been corrected

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	2016	2017	2018
Number of suppliers	Company	2,769	2,712	2,879
Critical suppliers <sup>1)</sup>		1,581	1,561	1,778
Total purchase <sup>2)</sup>	KRW billion	11,114.7	18,564.4	23,665.3

1) Transactions of more than KRW 500 million

2) Excluding contracts for IT, outsourcing, and guard

### Purchase Details

(Unit: KRW billion)

Classification	2016	2017	2018
equipment	4,798.4	8,206.2	8,599.3
raw material	2,229.4	2,760.5	3,572.9
infrastructure	1,208.1	2,896.2	3,759.2
spare parts	1,170.0	1,716.6	2,152.6
Purchase by overseas sites <sup>1)</sup>	1,469.0	2,476.6	4,986.7
Others <sup>2)</sup>	239.8	508.3	594.6

1) Based on Wuxi and Chongqing Campus

2) Facility, sub modules, packaging materials, services, environmental safety, part, etc.

[SK hynix Sustainability Guidelines](#)
[Material Issue Management](#)
[ESG Data](#)
[Awards, Recognition and Association Memberships](#)
[GRI Standards Index](#)
[Independent Assurance Report](#)
[Verification Statement on Greenhouse Gas](#)
[UN Global Compact](#)
[About This Report](#)

## Supply Chain Management

### Win-win Cooperation Performance in 2018(domestic)

Classification	Unit	2016	2017	2018
Fund spent on supporting shared growth <sup>1)</sup>	KRW billion	128.1	159.3	175.2
No. of suppliers agreed upon shared growth	Company	63	67	108
No. of suppliers joined the Shared Growth Council		60	61	61

1) Equipment localization costs + pattern 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 2018<sup>1)</sup>

(Unit: persons)

Classification	2018
Number of supplier's employees who have received worker trainings	51,070
Number of supplier's employees who have received signaler trainings	2,657
Number of supplier's employees who have received supervisor trainings	5,972

1) Based on Icheon and Cheongju Campus

## Social Contribution

### Social Contribution Activities

(Unit: KRW billion)

Classification	2016	2017	2018
Social contribution expenditures <sup>1)</sup>	52.28	76.51	61.89
Total amount of donations	50.61	75.15	60.64
Cash donations <sup>2)</sup>	47.70	72.86	60.20

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	2016	2017	2018
Time spent on volunteer activities	Hour	22,298	22,357	18,897
No. of employees who have participated in volunteer activities	Person	5,596	5,920	5,088
Volunteer hours per employee	Hour	1.02	1.01	0.77
No. of times participated	Times	794	673	698
Participation rate	%	26	27	31

1) Based on domestic worksites

### Fund-raising Status of Happiness Sharing Fund

(Unit: KRW billion)

Classification	2016	2017	2018
Amount of fund	3.0	2.7	3.0



# Awards, Recognition and Association Memberships

## Association Memberships

<b>Marketing</b>	SiWEDS Silicon Wafer Engineering and Defect Science	Icheon Chamber of Commerce & Industry
SEMI Semiconductor Equipment and Materials Institute, Inc	SNIA The Storage Networking Industry Association	Business Industry of Sustainable Development
	T10	Korea Business Council for Sustainable Development
<b>Production</b>	T13	Cheongju Chamber of Commerce & Industry
Korean National Quality Award corporate council of winners	TCG Trusted Computing Group	Chungbuk Employers Federation
Korean Standards Association Icheon	UFSA Universal Flash Storage Association	Chungcheong committee of Chemistry Safety Community
Korean Standards Association Cheongju	UNH-IOL	Chungcheong Green Company Association
Korea Occupational Hygiene Association	VCCI Voluntary Control Council for Interference	Authorized Economic Operator
Korea Chemicals Management Association	The Institute of Electronics and Information Engineers	Korea Forum of Chief Information Offices
Chungbuk Environmental Engineers Federation	National Academy Engineering of Korea	Korea Investor Relations Service
Korea Environmental Preservation Association Chungbuk Branch	Korea Semiconductor Industry Association	Institute of Internal Auditors
	The Institute of Semiconductor Test of Korea	Korea Employers Federation
<b>Research</b>	Korea Invention Promotion Association	Fair Competition Federation
ADEPT Agile Design of Efficient Processing Technologies	Korea Industrial Technology Association	Korea Society for Engineering Education
CCIX Cache Coherent Interconnect For Accelerators	Korea Intellectual Property Association	Korea Customs Logistics Association
ECC Edge Computing Consortium		Korea International Trade Association
Gen-Z Consortium	<b>Support</b>	Korea Semiconductor Industry Association
JEDEC Joint Electron Device Engineering Council	GSA Global Semiconductor Alliance	Korea Industrial Nursing Association
KMEPS The Korean Microelectronics and Packaging Society	RBA Responsible Business Alliance	Korea Industrial Technology Association
MIPI Mobile industry processor interface	UN SDGs Association	Korea Listed Companies Association
NVMe	UN Global Compact	Korea Fire Safety Institute Icheon
Open CAPI Open Coherent Accelerator Processor Interface	UNGC Network Korea	Korea Fire Safety Institute Cheongju
OpenPower Foundation	WSTS World Semiconductor Trade Statistic	Korea Electric Engineers Association Icheon
PCI-SIG Peripheral Component interconnect Special interest group	Gyeonggi Employers Federation	Korea Electric Engineers Association Cheongju
RISC-V Foundation	Korea Industrial Safety Association Seongnam Branch	Korea Integrated Logistics Association
SATA-IO Serial ATA International Organization	Korea Industrial Safety Association Chungbuk Branch	Korean Society for Quality Management
SCIEN Stanford Center for Image System Engineering	Semiconductor Industry Association	Korean Society for Quality Management
Si2Silicon Integration Initiative	Ministry of Trade, Industry and Energy emergency plan committee	
	Seoul Metropolitan committee of Chemistry Safety Community	

\* The 2018 amount paid by the association and organization is KRW 19.9 billion. SK hynix does not make political contributions according to Article 31 of the Political Fund Act(restriction on donations).

## Contributions to Policy Institutes

(Unit: KRW)

Classification	2018
Korea Semiconductor Industry Association	465,000,000
Chamber of Commerce(Icheon, Cheongju)	214,500,000
RBA	51,412,500
KBCSD	25,000,000
UN(UNGK Korea, SDGs)	11,000,000

## Awards in 2018

Awards	Organization	Prize Winner	Award Details	Date	All Relevant Departments
Medal of merit for Science day	Ministry of Science and ICT(MSIT)	Chief JungWoo-sik	Commendation from Minister	2018.4.30	DRAM Development Project
Korea Engineering Prize	Ministry of Education and Science Technology	Chief Joo Jae Wook	Commendation from Minister	2018.3.12	Manufacturing/Technology
Medal of merit for Semiconductor day	Ministry of Trade, Industry and Energy	Executive director Ahn Hyun	Industrial Service Medal	2018.10.25	NAND Development Project General Manager
Medal of merit for Semiconductor day	Ministry of Trade, Industry and Energy	Chief Park Chang-hun	Commendation from Minister	2018.10.25	R&D
Medal of merit for Semiconductor day	Ministry of Trade, Industry and Energy	Chief Yoon Hyun-joon	Commendation from Minister	2018.10.25	P&T
Medal of merit for Semiconductor day (Win-win Growth)	Ministry of Trade, Industry and Energy	Chief Jegal Munhyung	Commendation from Minister	2018.10.25	Tech Innovation Equipment Development Team 1
National Quality Award	Ministry of Trade, Industry and Energy	Director Kang Yeongsoo	Iron Tower Order of Industrial Service Merit	2018.11.28	Manufacturing/Technology
National Quality Award	Ministry of Trade, Industry and Energy	Chief Lee Gil-Jae	commendation from prime minister	2018.11.28	Quality Assurance
Medal of merit for Industrial Technology(Korea Technology grand prize)	Ministry of Trade, Industry and Energy	Director Jung Tae-woo	Industrial Service Medal	2018.12.05	R&D
Medal of merit for Industrial Technology(Korea Technology grand prize)	Ministry of Trade, Industry and Energy	Chief Joo Seokjin	commendation from prime minister	2018.12.05	NAND Development Project General Manager
Medal of merit for Trade day	Ministry of Trade, Industry and Energy	Director Kim Hyunjun	Copper Tower Order of Industrial Service Merit	2018.12.07	Marketing/Sales
Medal of merit for Trade day	Ministry of Trade, Industry and Energy	Ma Kyungsoo	commendation from the president	2018.12.07	Manufacturing/Technology
Export Tower medal of merit for Trade day	Ministry of Trade, Industry and Energy	Group award	25 billion USD	2018.12.07	Group

# 2018 GRI Standards Index

Classification	Disclosure	Indicators	Page	Note
<b>Universal Standards(GRI 100)</b>				
Organizational Profile	102-1	Name of the organization	4	
	102-2	Activities, brands, products, and services	4	
	102-3	Location of headquarters	4	
	102-4	Location of operations	5	
	102-5	Ownership and legal form	69	
	102-6	Markets served	5	
	102-7	Scale of the organization	69	
	102-8	Information on employees and other workers	74	
	102-9	Supply chain	75	
	102-10	Significant changes to the organization and its supply chain	-	Annual Report 21p
	102-11	Precautionary Principle or approach	60~63	
	102-12	External initiatives	83	
	102-13	Membership of associations	77	
Strategy	102-14	Statement from senior decision-maker	3	
Ethics and Integrity	102-16	Values, principles, standards, and norms of behavior	56~57	
Governance	102-18	Governance structure	53~54	
Stakeholder Engagement	102-40	List of stakeholder groups	55, 77	
	102-41	Collective bargaining agreements	74	
	102-42	Identifying and selecting stakeholders	55	
	102-43	Approach to stakeholder engagement	55	
Reporting Practice	102-44	Key topics and concerns raised	55, 68	
	102-45	Entities included in the consolidated financial statements	-	Annual Report 3p
	102-46	Defining report content and topic boundaries	68	
	102-47	List of material topics	68	
	102-48	Restatements of information	83	
	102-49	Changes in reporting	83	
	102-50	Reporting period	83	
	102-51	Date of most recent report	83	
	102-52	Reporting cycle	83	
	102-53	Contact point for questions regarding the report	83	
	102-54	Claims of reporting in accordance with the GRI Standards	83	
	102-55	GRI content index	78~79	
	102-56	External assurance	80~82	

Classification	Disclosure	Indicators	Page	Note
<b>Topic-specific Standards</b>				
Indirect Economic Impacts	103-1,2,3	Management Approach	17, 20	
	203-1	Infrastructure investments and services supported	18~19, 21~23	
Energy	103-1,2,3	Management Approach	11, 26	
	302-1	Energy consumption within the organization	12~14, 27, 71	
	302-2	Energy consumption outside of the organization	12~14, 27, 71	
	302-3	Energy intensity	12~14, 27, 71	
Emissions	103-1,2,3	Management Approach	11, 26	
	305-1	Direct(Scope 1) GHG emissions	12, 70	
	305-2	Energy indirect(Scope 2) GHG emissions	12, 70	
	305-4	GHG emissions intensity	12, 70	
	305-7	Nitrogen oxides(NOx), sulfur oxides(SOx), and other significant air emissions	12, 73	
Occupational Health and Safety	103-1,2,3	Management Approach	26	
Diversity and Equal Opportunity	403-1	Workers representation in formal joint management-worker health and safety committees	30~33, 73	
	103-1,2,3	Management Approach	24	
Human Rights Assessment	405-2	Ratio of basic salary and remuneration of women to men	24, 45, 74	
	103-1,2,3	Management Approach	24, 44	
	412-1	Operations that have been subject to human rights reviews or impact assessments	24, 44~45	
Supplier Social Assessment	103-1,2,3	Management Approach	17, 36	
	414-1	New suppliers that were screened using social criteria	36~37	
	414-2	Negative social impacts in the supply chain and actions taken	38, 44~45	

SK hynix  
Sustainability  
GuidelinesMaterial Issue  
ManagementESG  
DataAwards, Recognition  
and Association  
MembershipsGRI  
Standards  
IndexIndependent  
Assurance  
ReportVerification  
Statement on  
Greenhouse GasUN  
Global  
CompactAbout  
This Report

Classification	Disclosure	Indicators	Page	Note
<b>Other Standards</b>				
<b>Economic Performance(GRI 200)</b>				
Economic Performance	201-1	Direct economic value generated and distributed	69	
Indirect Economic Impacts	203-2	Significant indirect economic impacts	69	
Procurement Practices	204-1	Proportion of spending on local suppliers	75	
Anti-corruption	205-1	Operations assessed for risks related to corruption	45, 56	
	205-2	Communication and training about anti-corruption policies and procedures	56~57	
	205-3	Confirmed incidents of corruption and actions taken	56	
<b>Environmental Performance(GRI 300)</b>				
Materials	301-1	Materials used by weight or volume	71	
Water	303-1	Water withdrawal by source	72	
	303-3	Water recycled and reused	72	
Biodiversity	304-2	Significant impacts of activities, products, and services on biodiversity	28	
Emissions	305-3	Other indirect(Scope 3) GHG emissions	70	
	305-6	Emissions of ozone-depleting substances(ODS)	73	
Effluents and Waste	306-1	Water discharge by quality and destination	72	
	306-2	Waste by type and disposal method	71	
	306-3	Significant spills	-	No significant spills
Environmental Compliance	307-1	Non-compliance with environmental laws and regulations	-	No Significant Incidents
Supplier Environmental Assessment	308-1	New suppliers that were screened using environmental criteria	36~38	
	308-2	Negative environmental impacts in the supply chain and actions taken	38	
<b>Social Performance(GRI 400)</b>				
Employment	401-1	New employee hires and employee turnover	74	
	401-3	Parental leave	75	
Labor- Management Relations	402-1	Minimum notice periods regarding operational changes	50	

Classification	Disclosure	Indicators	Page	Note
Occupational Health and Safety	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	73	
	403-4	Health and safety topics covered in formal agreements with trade unions	50	
Training and Education	404-1	Average hours of training per year per employee	74	
	404-2	Programs for upgrading employee skills and transition assistance programs	46~48	
Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	74	
Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	-	No such incidents
Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor	-	No such incidents
Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	-	No such incidents
Rights of Indigenous Peoples	411-1	Incidents of violations involving rights of indigenous peoples	-	No Significant Incidents
Public Policy	415-1	Political contributions	-	Under Article 31 of the Political Funds Act, we do not contribute to political funds.
Customer Health and Safety	416-1	Assessment of the health and safety impacts of product and service categories	35, 52	
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	-	No Significant Incidents
	417-1	Requirements for product and service information and labeling	35, 52	
Marketing and Labeling	417-2	Incidents of non-compliance concerning product and service information and labeling	-	No Significant Incidents
	417-3	Incidents of non-compliance concerning marketing communications	-	No Significant Incidents
Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	-	No complaints or breaches

# 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 2019 (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 2018 generated from SK hynix, we have evaluated the adherence to AA1000 Accountability Principles 2018 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	Work-life balance for employees and the supply chain	412-1
2	Eco-friendly energy technology	305-1, 2, 4, 7	7	Prevention of industrial disaster and promotion of safety awareness	403-1
3	Shared growth policy for the supply chain	414-2	8	Local community engagement and contribution	203-1
4	Selection and assessment of the sustainable supply chain	414-1	9	Diversity and equal opportunity	405-2
5	Human rights protection for employees and the supply chain	412-1			

We performed our work using AA1000AS 2008 and DNV GL's assurance methodology VeriSustain™<sup>1</sup> (Version 5.0) which is based on our professional experience, international assurance best practices. DNV GL provides Type 1 and the moderate level of assurance. The assurance was carried out from April and till June 2019. The site visits were made to SK hynix's Headquarters in Icheon, Korea. 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;
- 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.
- site visit or conference call meeting and test of data gathering process;
  - site visit: Icheon campus, Cheongju campus
  - conference call meeting: Wuxi and Chongqing campus in China

## Limitations

The engagement excludes the sustainability management, performance and reporting practices of SK hynix' 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. Economic performance based on the financial data is cross-checked with internal documents, the audited consolidated financial statements and the announcement disclosed at the website of Korea Financial Supervisory Service (<http://dart.fss.or.kr>) as well as SK hynix's website ([www.skhynix.com](http://www.skhynix.com)). These documents, financial statements and the 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. The baseline data for environmental and social performance are not verified, while the aggregated data at the corporate level are used for the verification. DNV GL expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

## Conclusion

On the basis of the work undertaken, nothing comes to our attention to suggest that the reported data and information disclosed in the Report do not give a fair representation of SK hynix's related sustainability performance. Further opinions with regards to the adherence to the Principles are made below;

<sup>1</sup> The VeriSustain protocol is available upon request at DNV GL Website ([www.dnvgl.com](http://www.dnvgl.com))

### 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 examples of approaches to engage with selected stakeholders and relevant organizations are described in the Report. SK Hynix declared Double Bottom Line(DBL), which considers economic value and social value, and measures and improves the performance of sustainable management based on SK Group's social value assessment methodology to report the results with stakeholders.

### The Principle of Materiality

SK hynix has conducted the materiality assessment to prepare the Report. Various issues have been derived by analysing 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 survey to rate the material topics and subsequently 9 material topics 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. 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. SK hynix developed each of actions for materiality topics and presented the performance of social and economic value along with their respective management approaches in conjunction with the DBL value chain. SK hynix could quantify the assessment criteria of supplier risk assessment to maintain consistency and comparability.

### The Principle of Impact

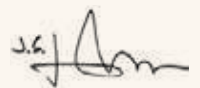
The Report presents the direct and indirect impacts of material topics identified materiality assessment. We have reviewed that SK hynix identifies, monitors and assess the impacts of material topics to stakeholders. SK hynix established ESG Committee in 2019 to identify environmental, social and governance impacts of the company, implement activities to reduce negative impacts in each sector, and manage them in conjunction with UN SDGs. In the future, the impacts could be measured and disclosed in the Report.

### Reliability of Specific Sustainability Performance Information

We have reviewed the reliability of the disclosure data - water consumption, waste generation, emission of GHG, PFCs(Perfluorocarbons) and VOCs(Volatile Organic Compounds). We have interviewed the in charge person, reviewed the process of gathering and processing data and test information on a sampling basis. In charge person can explain the source and process of the data identified above, which is considered traceable. 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. 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<sup>2</sup> 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 maintains complete impartiality toward stakeholders interviewed during the assurance process. DNV GL have no other contract with SK hynix and did not provide any services to SK hynix in 2019 that could compromise the independence or impartiality of our work. DNV GL has conducted the CSR(Corporate Social Responsibility) assessment of SK hynix in 2019, which isn't considered a conflict of interest in the report verification.



June 2019  
Seoul, Korea

**Jang Sup Lee**

Country Representative

DNV GL Business Assurance Korea Ltd.

<sup>2</sup> DNV GL Code of Conduct is available from DNV GL website(www.dnvgl.com)



# Verification Statement on Greenhouse Gas



Verification Statement of  
Greenhouse Gas Emission  
at Wuxi Campus

**bsi.** Verification Opinion

## SK hynix INC.

Domestic operation sites under greenhouse gas emission verification

· Icheon Campus, Cheongju Campus & Boondang Campus

### Scope:

- The annual GHG emission for the 2018 calendar year inclusive
- The physical scope is limited within the boundary of domestic areas for SK hynix INC.
- GHG emissions for Scope 1(Direct-emissions), Scope 2(Indirect-energy related) and partially Scope 3(Indirect-emissions from logistic, waste dispatch & disposal, business trip and employee commuting) as defined in WBCSD/WRI GHG protocol Chapter 4 “Setting Operational Boundaries”

### Data Verified:

- GHG Emissions of domestic sites for the Scope 1 and Scope 2 for 2018 calendar year as follows. [Unit: tCO<sub>2</sub>eq/y]

Scopes	Sites	Icheon Campus	Cheongju Campus	Boondang Campus	Sub Total
Direct Emissions(Scope 1)		387,297	180,286	342	567,925
In-direct Emissions(Scope 2)		2,141,910	1,072,945	2,271	3,217,126
Optional Information(Used the NF <sub>3</sub> )		420,566	296,793	-	717,359
Total		2,949,773	1,550,024	2,613	4,502,410

※ The total Emissions can differ to a cut-off decimal point.

Equivalent emissions of each greenhouse gas for 2018 calendar year as follows. [Unit: tCO<sub>2</sub>eq/y]

GHG	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs	PFCs	SF <sub>6</sub>	NF <sub>3</sub>	Total
Emissions	3,459,101	904	87,909	33,260	157,094	46,783	717,359	4,502,410

GHG emission of the scope 3 as from logistic, waste dispatch & disposal, business trip and employee commuting for 2018 calendar year as follows. [Unit: tCO<sub>2</sub>eq/y]

Category	International transport(Export)	International transport(Import)	Waste disposal	Business trip	Employee commuting	Total
Emissions	58,992	20,650	8,481	2,136	18,841	109,099

※ The total Emissions can differ to a cut-off decimal point

### GHG Criteria & Protocols used for Verification:

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

- GHG · Energy Target Management Operating Guideline(Act No. 2016-255) – Revised Oct 2016
- The Corporate Value Chain(Scope 3) Accounting & Reporting Standard(WRI & WBCSD, 2011)
- IPCC Guideline for National Greenhouse Gas Inventories - Revised 2006
- 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:

As a result of the verification in accordance with the protocols and the best practice listed above, it is the opinion of BSI that:

- The verification was conducted to provide reasonable verification in accordance with GHG Energy Target Management Scheme
- No material misstatement in the GHG emission calculations was detected, related records were maintained appropriately
- The data quality was considered corresponding to the international key principles for GHG emissions verification

For and on behalf of BSI:

Issue: 02/05/2019

Managing Director Korea, **JongHo Lee**

SK hynix  
Sustainability  
GuidelinesMaterial Issue  
ManagementESG  
DataAwards, Recognition  
and Association  
MembershipsGRI  
Standards  
IndexIndependent  
Assurance  
ReportVerification  
Statement on  
Greenhouse GasUN  
Global  
CompactAbout  
This Report

# UN Global Compact



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

## 10 Principles of the UN Global Compact

Classification	Principle	Reporting Contents	Page
Human Rights	Principle 1. Businesses should support and respect the protection of internationally proclaimed human rights	· Respect for human rights and improvement to work environment: Human rights and labor policy	44~45
	Principle 2. Businesses should ensure they are not complicit in human rights abuses	· Respect for human rights and improvement to work environment: Management of impacts on human rights and labor at worksites · Respect for human rights and improvement to work environment: Human rights education and reporting channel · Win-win cooperation: Management of sustainable supply chain	
Labor Standards	Principle 3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	· Respect for human rights and improvement to work environment: Labor-management communication	50
	Principle 4. Businesses should uphold the elimination of all forms of forced and compulsory labor	· Respect for human rights and improvement to work environment: Human rights and labor policy · Win-win cooperation: Management of sustainable supply chain	44~45
	Principle 5. Businesses should uphold the effective abolition of child labor	· Respect for human rights and improvement to work environment: Human rights and labor policy · Win-win cooperation: Management of sustainable supply chain	
	Principle 6. Businesses should uphold the elimination of discrimination in respect of employment and occupation	· Respect for human rights and improvement to work environment: Human rights and labor policy · Respect for human rights and improvement to work environment: Respect for diversity, reasonable work environment	24
Environ-ment	Principle 7. Businesses should support a precautionary approach to environmental challenges	· Climate change response strategy · Minimization of environmental impacts	11~16, 26
	Principle 8. Businesses should undertake initiatives to promote greater environmental responsibility	· Climate change response strategy · Minimization of environmental impacts	
	Principle 9. Businesses should encourage the development and diffusion of environmentally friendly technologies	· Climate change response strategy: Product responsibility	35, 52
Anti-Corruption	Principle 10. Businesses should work against corruption in all its forms, including extortion and bribery	· Transparent management: Ethical management, Compliance management	59

# 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 also performing social value-generating activities across the economic, social and environmental sectors. We conducted an important assessment for stakeholders in the course of the report to collect their opinions, selected important reporting issues through by interviewing them. This report faithfully conveyed SK hynix's efforts and achievements on the ongoing management report.

## Reporting Principle

The reporting period ranged from January 1, 2018 to December 31, 2018. Those important breakthroughs made after that period were included later covering those of the first half of 2019 as well. To enable an understanding of development in our quantitative results, time-series data for the last three fiscal years, from 2016 to 2018, are provided.

## Reporting Boundaries and Scope

The subject of this report is to reveal the sustainability management activities and achievements of all domestic business sites such as Icheon, Cheongju, Bundang worksites and the overseas sites including Wuxi and Chongqing campus in China. Those of the Wuxi and Chongqing campus in China are stated in part only while also specified with the information boundaries by each data category.

## Reporting Standard

The basis of this report is on the core standards of the GRI(Global Reporting Initiative) Standards which is the global guideline when it comes to completing the sustainability report publication. Other principles we referred to include the ISO 26000 and UN Global Compact. Financial data is stated according to the connection standard. The reporting criteria and definitions are in accordance with K-IFRS standard. We also made sure to apply the fiscal year basis of the non-financial information according to the corporate provision system. Data about the amount of energy consumption and greenhouse gas emissions were completed according to the verification results about the actual emission amount. In the event of further major changes, we stated them separately in the corresponding chapter.

## Reporting Verification

We selected and consulted with the DNV GL, the verification institute, to enhance both the internal and external credibility of this report. With the third party verifying the content of our report, we ensured the reliability and fairness of the writing process, public data and contents. You can access the detailed verification comments in Appendix.

**For additional information and inquires**

SK hynix CSM Promotion. sustainability@skhynix.com

