Samsung Electronics
Sustainability Report
2018

INSPIRE ___
THE WORLD

CREATE ___
THE FUTURE

SAMSUNG

INSPIRE   THE WORLD _____

ABOUT THIS REPORT

At Samsung Electronics, we publish an annual sustainability report with an aim to transparently communicate our achievements in creating economic, social and environmental value to a wide array of stakeholders. 2018 marks our 11th annual sustainability report.

REPORTING PERIOD
This report illustrates our economic, social and environmental activities and achievements between January 1st and December 31st of 2017. For a portion of the qualitative achievements, data until May 2018 is included. As for quantitative achievements, this report provides numerical data over the past three years to allow for trend analysis overtime.

REPORTING SCOPE
This report spans all our worksites and supply chains in domestic and global sites. Financial performance data is based on the consolidated K-IFRS basis. Quantitative environmental performance of worksites is based on the data collected from 39 production subsidiaries in domestic and global sites.

REPORTING STANDARDS
This report has been prepared in accordance with the GRI Standards: Core option.

CREATE __THE FUTURE

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CEO MESSAGE

Dear Stakeholders,

I would like to begin by expressing my sincere appreciation for your continuous support of Samsung Electronics.

Grateful for the support from our stakeholders and the efforts of our employees, Samsung Electronics had a very strong finish to a record-breaking year in 2017, and are working to maintain our steady performance in 2018.

The global economic environment, however, remains highly uncertain, and technologies in areas such as artificial intelligence, autonomous driving, big data, and the Internet of Things are rapidly shifting paradigm in the IT sector, posing new challenges that demand innovation.

In response, Samsung Electronics will make full use of its capabilities as a global IT company to cope with new challenges. We will also expand our efforts in improving environmental sustainability, a task that has never been more vital to us all.

Since its inception, Samsung's unique and innovation-centered culture has been at the core of our technology and products. Based on bold initiatives and innovations, we are constantly developing market-leading products and services that transcend the capabilities of existing technology.

Furthermore, we are exploring ways to increase our contribution to society and fulfill our responsibility as a global corporate citizen by creating social value as well as economic value. Samsung Electronics is dedicated to using our technology to create positive value via addressing societal issues. To illustrate, we created Relúmǐno, an application that works in conjunction with the Gear VR to help those living with low vision see the world more clearly; and Ignis, a lightweight thermal imaging device that lessens the burden of firefighters.

We acknowledge our responsibility to the planet, and have thus committed ourselves to minimizing environmental impacts of our operations and products alike. Advancing into a circular economy, we have developed some of the world's most energy efficient products and expanded our efforts to recycle and reuse natural resources in our product components. Furthermore, we plan to increase the use of renewable energy to reduce the carbon footprint of our operations.
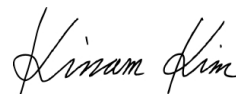
Finally, we will continue to cooperate with stakeholders, who are concerned with sustainable and responsible growth. We will seek advice from investors, NGOs, local communities, governments, and international organizations, and reflect their opinions in our decision-making process.

We follow a simple business philosophy at Samsung Electronics — devote our talent and technology to creating innovative products and services that contribute to a better global society. We fully endorse the UN Sustainable Development Goals, and are thus working to positively affect society and the environment alongside the ongoing development of our business.

To that end, we would like to introduce our 'Sustainability Report 2018'. This year's report consists of five key pillars that lay out our achievements in 2017 and our plans for the future.

We look forward to your continued interest and support.

Thank you.

Kim, Ki Nam
President and CEO
Samsung Electronics Co., Ltd.

MANAGEMENT PHILOSOPHY

At Samsung Electronics, we devote our human resources and technology to create superior products and services, thereby contributing to a better global society. This commitment is guided by our set of values that consist of 'Management Philosophy, Core Values, and Business Principles'. To this end, we translated our five management principles into detailed action plan guidelines to establish the Samsung Global Code of Conduct that all of our employees are guided by. To drive our sustainable growth and define our way forward, we are guided by the following core values, which are instrumental to the way our employees conduct business.

PHILOSOPHY	We devote our human resources and technology to create superior products and services, thereby contributing to a better global society.
BUSINESS PRINCIPLES	1. We comply with laws and ethical standards. 2. We maintain a clean organizational culture with high integrity. 3. We respect customers, shareholders and employees. 4. We care for the environment, health and safety of all. 5. We are a socially responsible corporate citizen.

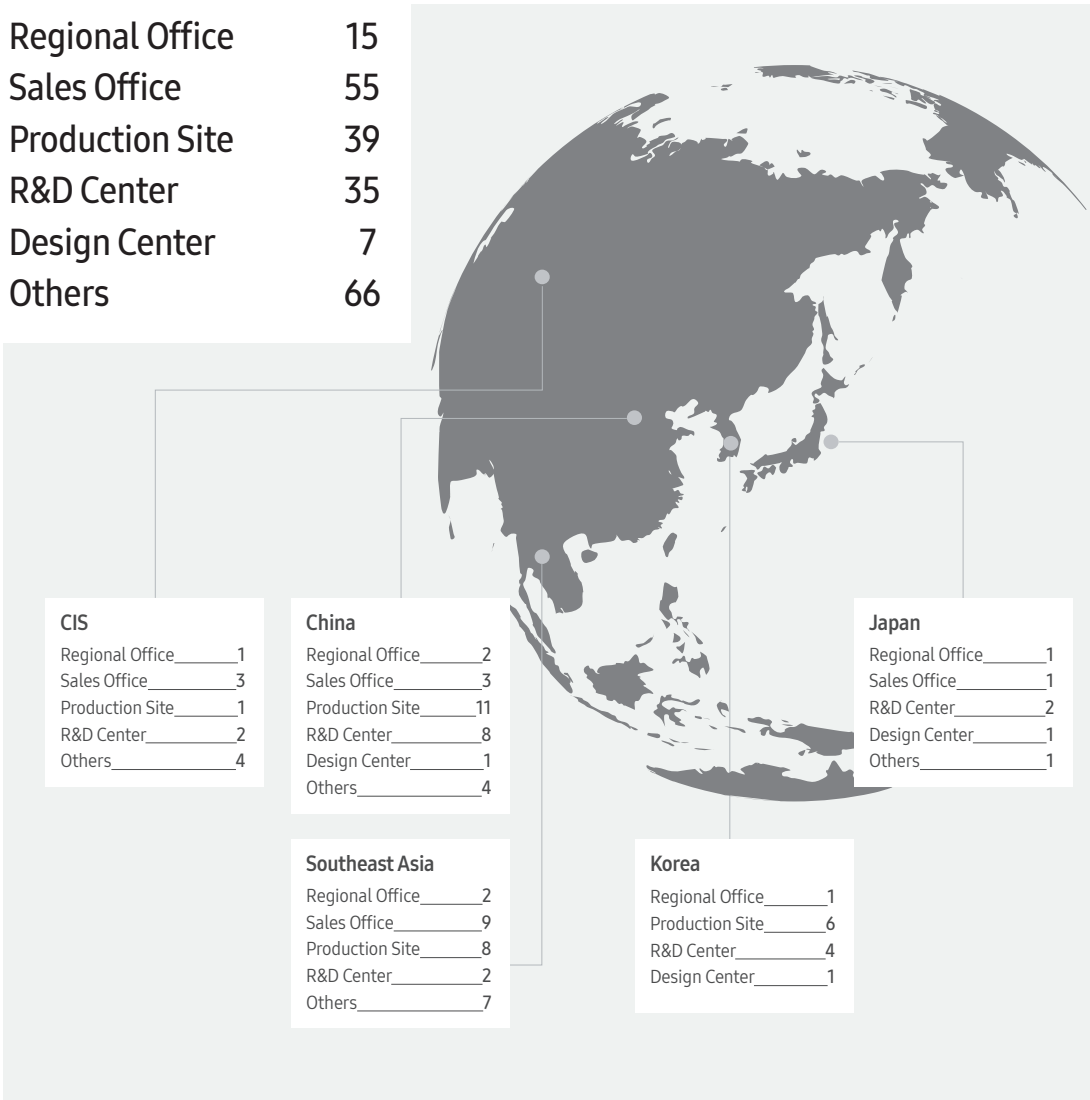| CORE VALUES	PEOPLE	EXCELLENCE	CHANGE	INTEGRITY	CO-PROSPERITY
	We value our people with a strong belief in "A company is its people" philosophy and providing opportunities to perform their full potential.	We give our best efforts with endless passion and a challenge spirit to become world best in every ways.	We rapidly take the initiative in executing change and innovation with risk awareness: we cannot survive if we do not constantly strive to innovate.	We act in a right and ethical way in all manners, ensuring fairness with honor and grace.	We take full responsibilities as a good corporate citizen in pursuit of mutual prosperity with our community, nation and human society.

SAMSUNG IN THE WORLD

Regional Office	15
Sales Office	55
Production Site	39
R&D Center	35
Design Center	7
Others	66

CIS

Regional Office	1
Sales Office	3
Production Site	1
R&D Center	2
Others	4

China

Regional Office	2
Sales Office	3
Production Site	11
R&D Center	8
Design Center	1
Others	4

Japan

Regional Office	1
Sales Office	1
R&D Center	2
Design Center	1
Others	1

Southeast Asia

Regional Office	2
Sales Office	9
Production Site	8
R&D Center	2
Others	7

Korea

Regional Office	1
Production Site	6
R&D Center	4
Design Center	1

Footnotes:

1) Regional classification is based on Samsung's internal management criteria
2) Others : Sales Branches, Service Centers, Distribution Bases, etc.

As of the end of 2017, we had 217 worldwide operation hubs, including our HQ in Suwon, South Korea, manufacturing subsidiaries, sales subsidiaries, design centers and research centers, while operating 15 Regional Offices in Korea, North America, Europe, Southeast Asia, Africa and other regions of the world.

Europe

Regional Office	2
Sales Office	18
Production Site	3
R&D Center	3
Design Center	1
Others	12

Africa

Regional Office	1
Sales Office	4
Production Site	1
Others	4

Middle East

Regional Office	1
Sales Office	7
Production Site	1
R&D Center	4
Others	11

Southwest Asia

Regional Office	1
Sales Office	1
Production Site	2
R&D Center	5
Design Center	1
Others	4

North America

Regional Office	2
Sales Office	2
Production Site	3
R&D Center	4
Design Center	1
Others	9

Latin America

Regional Office	1
Sales Office	7
Production Site	3
R&D Center	1
Design Center	1
Others	10

320,671
Employees

73
Countries

2,436
Suppliers
(First tier)

16.8
R&D Expenditure
(KRW in trillion)

SUSTAINABILITY
HIGHLIGHTS

This section showcases our key achievements and experiences in 2017 that we would like to share with our stakeholders.

Advancing Innovation in Society

Samsung's innovation focus not only drives our entire network, it also inspires us to work toward advancing human progress by contributing to our communities through innovation and investment in society. We are always looking for ways to use our skills, ideas and products to inspire innovation, empower lives and create greater positive societal value.

IGNIS

SAMSUNG ELECTRONICS ILLUMINATES PATH TO SURVIVORS FOR FIREFIGHTERS ACROSS KOREA

Firefighters face many challenges in fighting fires - charging into a burning building or being at risk of being overcome by toxic fumes and the excruciating heat. However, many firefighters cite, perhaps counterintuitively, the darkness as one of the biggest challenges. Often in a fire situation, it is the total lack of vision caused by soot and smoke that engulfs and hides unconscious or disoriented victims.

Imagine yourself as a firefighter. You rush into a burning building to look for survivors. On your back, you are carrying equipment weighing between 20kgs to 35 kgs, you are running up stairs that might give way at any minute, the ceiling above you is collapsing, and the oxygen in your air tank is rapidly being depleted. Struggling against the rising smoke and heat, you have minutes, maybe only seconds, to locate survivors, but there is minimal visibility in the smoke-filled rooms around you.

In a fire, both from a victim's and a firefighter's perspective, the deadliest enemy is the darkness which leaves rescuers virtually blind. To be able to locate survivors in absolute darkness, firefighters must be equipped with thermal observation devices(TODs) or thermal imaging cameras, which illuminate survivors' body heat against the dark.

However, there are several critical issues with the status quo. Firstly, conventional TODs require firefighters to hold them, tying up their hands from actual rescue or water extinguishing work. Secondly, devices in the current market are heavy and unwieldy. Weighing over 1 kg, they are an extra burden for firefighters already carrying heavy loads. Finally, these devices are extremely costly. Costing roughly 2 million KRW or 2,000 USD per device, many fire stations are not able to afford these cameras or perhaps only limited numbers within their existing budgets. If the fire fighting rescue team has access to a TOD, often the team leader will hold it, searching for survivors on behalf of the whole team. The fact that increasingly many fires start in tall buildings further exacerbates the situation.

In February 2016, members of Samsung Electronics' C-Lab (Creative Lab), internal idea incubator, received an entry for Samsung Tomorrow Solution by a firefighter at Dong-ducheon Fire Station in the outskirts of Seoul. The fire-fighter described the difficulties he faced as an emergency responder without access to a TOD and wanted to know if there was a way that Samsung could use its innovative technology to help.

The firefighter described a recent mission in which only after the fire had been fully exterminated he realized that a victim, an old man, had been nearby but he had not been able to see him. It devastated him to contemplate that he could have saved the man if only he had access to a TOD at the time.

To address these difficulties, Samsung partnered with a group of college students to devise a new design. Straight from the conceptual stage, we worked in collaboration with actual firefighters, receiving practical feedback and design ideas. After nine months of development, we announced 'Ignis,' a lightweight, wearable thermal imaging device and gas mask visor for firefighters. Ignis, only weighing 350g, is 70% lighter than currently available models. Being wearable, the new product also frees up rescuer's hands.

When asked about why they took on this project, Samsung C-lab members said that they thought it was quite extraordinary that their knowledge and creativity could meaningfully help people like firefighters - people they viewed as heroes - was quite extraordinary. Samsung has distributed 1,000 Ignis devices across the country's fire stations, safety centers, and National Counter-Terrorism centers, free of cost. We believe that Ignis is a prime example of how we at Samsung aspire to use innovation to create value in society. Creating such positive impact is the number one reason why we will continue to push ourselves to innovate and make a difference in the world around us.

IGNIS
Thermal Imaging Camera

Young-Suh Noh is no ordinary pianist. Footage of him playing Chopin's Ballade No. 1 on the piano inspired renowned composer Maria Leontjewa to dedicate a piano piece to him and to invite him to debut it himself at a concert in Germany. However, it is not just the beautiful sound that Mr. Noh creates on the piano that is extraordinary.

Mr. Noh is visually impaired. Due to the nature of his illness, he can only use his peripheral vision. When practicing music, until he completely memorizes the music, Mr. Noh can only read one note at a time, holding the music score nearly pressed against his eyes.

"When I received the invitation, I couldn't be just happy,' says Mr. Noh. "I was given three months to prepare for the premiere of Leontjewa's tribute piece. For me, it was a very short, almost impossible period of time to prepare. But I could not give up. I desperately wanted to do it. Then I found out about Relúmĭno."
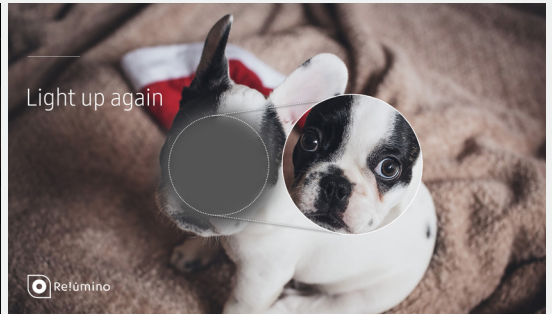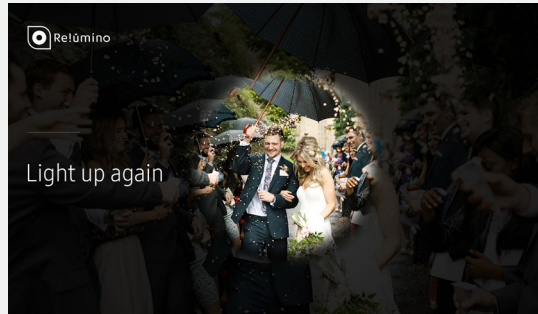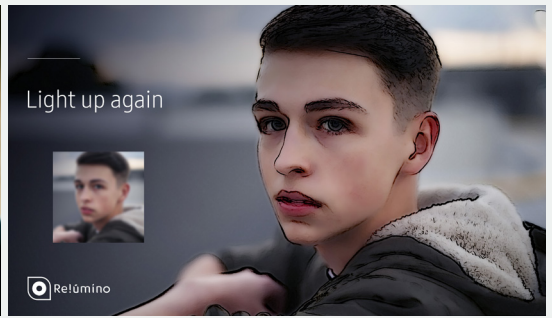
RELÚMĬNO

SAMSUNG LIGHTS UP THE WORLD FOR THE VISUALLY IMPAIRED

Samsung's Relúmĭno, meaning light up again, is an innovative visual aid application that works with the Gear VR created by Samsung's C-Lab to enhance vision for people with low vision. C-Lab members came up with the idea after reading an article saying that 92% of visually impaired people consider watching TV their favorite form of entertainment.

"At first, I thought this must be incorrect," says C-Lab member Jeonghun Cho. "Then I discovered that only 14% (36 million) of the visually impaired are totally blind. The remaining 86%(217 million) have 'low vision' and are able to determine the difference between light and dark."

After learning that there are millions of people worldwide who, like Mr. Noh, have low vision but may have to live life as if they were completely blind due to a lack of access to resources to meet their needs, C-Lab members sought to develop a product that could dramatically improve their quality of life. Mr. Cho says, "I was hopeful that we could improve their residual vision in the way that glasses might by utilizing high-quality visual aids. There is a variety of equipment options on the market today to help aid low vision, but the problem is that most of them are very expensive, costing thousands of dollars. Therefore, we set out to provide something more approachable and affordable by using smartphones and virtual reality(VR) which are both widely used today. Smartphones and Gear VR replace costly visual aid products."

Relúmĭno processes images from videos projected through the rear camera of a smartphone and makes the images visually-impaired-friendly. More specifically, its major features include magnifying and minimizing image; high-lighting the image outline; adjusting color contrast and brightness; reversing color; and screen color filtering. The end effect is that 'Relúmĭno' enables visually challenged people to see images clearer when they are reading a book or viewing an object. Relúmĭno users can set application settings based on their specific issues. The application can automatically place the image that is missing from the user's sight and remap it to the user's visible range.

C-Lab placed central emphasis on meeting the practical needs of actual users. During the development phase, C-Lab conducted clinical trials to get feedback from actually impaired participants. Take the Omnifocal Function, for example. Relúmĭno automatically turns on Color Invert Mode when a user lowers their head to read a book and reverts to Regular Mode when the user lifts their head.

Thus, it enables the user to watch TV from farther distances without having to make additional adjustments.

Wearing Relúmĭno, Mr. Noh knew he was able to prepare for his concert. "I could practice in the right posture, which made me less tired, and see scores pretty clearly," he said. "After using the app for a while, I felt that it would be very convenient if it switched its modes automatically when I look at music and the keys on the piano. I mentioned it to a developer, and he returned the next day with Omnifocal Function."

Mr. Noh says, "Relúmĭno greatly helped me prepare for my concert in Germany. That Leontjewa piece materialized under my fingertips. It was truly a premiere. I still get goosebumps whenever I recall that memory. That was one of the happiest moments of my life."

Relúmĭno drew much attention in Mobile World Congress 2017, the world's largest gathering for the mobile industry. C-Lab received positive feedback for showcasing a technology developed to help people with disabilities through VR devices. Samsung is continuing to improve to the application to help users. Currently, C-Lab is working on a new model in the form of eyeglasses that are as small and convenient as sunglasses.

Samsung hopes that that Relúmĭno will help make everyday living a bit easier for the visually impaired. "We believe Relúmĭno will be the life-changer for 220 million of the visually impaired people around the world and we promise firm and continuing support" said Jaiil Lee, Vice President and Head of Creativity & Innovation Center at Samsung Electronics.

MOLENGEEK

BRINGING SILICON VALLEY TO MOLENBEEK, BELGIUM

The MolenGeek initiative started in the city of Molenbeek, Belgium which gained worldwide notoriety in the months that followed the Paris terrorist attacks in November 2015. The manhunt for the terrorists led investigators to the Brussels suburb of Molenbeek; it was here that three of the Paris attackers were found to be from. The municipality is home to about 100,000 residents, with large immigrant populations from Morocco, Turkey, Pakistan, and Africa. Though it is not far from Brussels, Belgium's capital city and the de facto capital of the European Union, Molenbeek, Belgium has faced severe societal problems including high youth unemployment at over 30%, ties to terrorism, and crime. The city soon came to be widely known as a breeding ground for terror.

MolenGeek, founded by local entrepreneur Ibrahim Ouassari, was born out of a simple yet powerful idea: teaching coding skills to Molenbeek youths gives them a chance to learn skills that would empower them to have greater opportunities out of the restrictions of their environment that might have driven them to radicalization. Ouassari's team set up a center where they taught quality coding skills to local youths that showed motivation and commitment to learn in order to improve their lives. The demand to participate was overwhelming and the initiative swiftly brought about a new dynamic and positive attention to the neighborhood.

The MolenGeek initiative has been recognized as a model program that leverages digital technology to alleviate the social challenges of high youth unemployment due to a lack of skill or education opportunities. Its graduates have already launched 25 startups and another 156 are in incubation. More than 120 students have been trained and have found employment after attending the coding school program, which provides a three month-long, intensive, full-time course on skills that are in high demand such as coding for Android platforms.

In the fall of 2017, Samsung Electronics joined the Belgian government and the founders of the MolenGeek Initiative to present the initiative to the United Nations as a best practice case study of public-private partnership in achieving the UN Sustainable Development Goals(SDGs). The presentation came on the sidelines of the UN General Assembly(UNGA), at an event titled, Technology 4 SDG's: Digital Innovation for Sustainable Societies, organized by the governments of Belgium and Uganda at UN headquarters in New York.

Along with the Belgian government and MolenGeek's founding members, we are providing technical and financial support to program participants. In addition to the physical space and resources they need, our employees also actively participated in organizing events such as Hackathons and an Internet of Things(IoT) Challenge to provide mentorship for Molenbeek's future digital entrepreneurs.


"MolenGeek is a best practice on how we can give young people a positive perspective for their future in a world that is increasingly digital and fast-evolving. This is a success story that the world needs to know" said Alexander De Croo, Deputy Prime Minister and Minister for Development Cooperation of Belgium in his opening remarks during the presentation to the UNGA.

"In a logic of co-creation, Samsung's support helps Molen-Geek and its participants by making accessible a whole new world of technologies. Participants can now have access to the latest technologies for free. They also have access to a new way of skills acquisition based on learning by doing" said Julie Foulon, who is one of the co-founders of MolenGeek.

We believe that by supporting programs like MolenGeek, we can produce many more exciting results and innovations. We are excited to continue our support in order to expand the program and to hopefully bring further positive impact to the lives of young people around the world.

Committing to Renewable Energy and Energy Efficiency
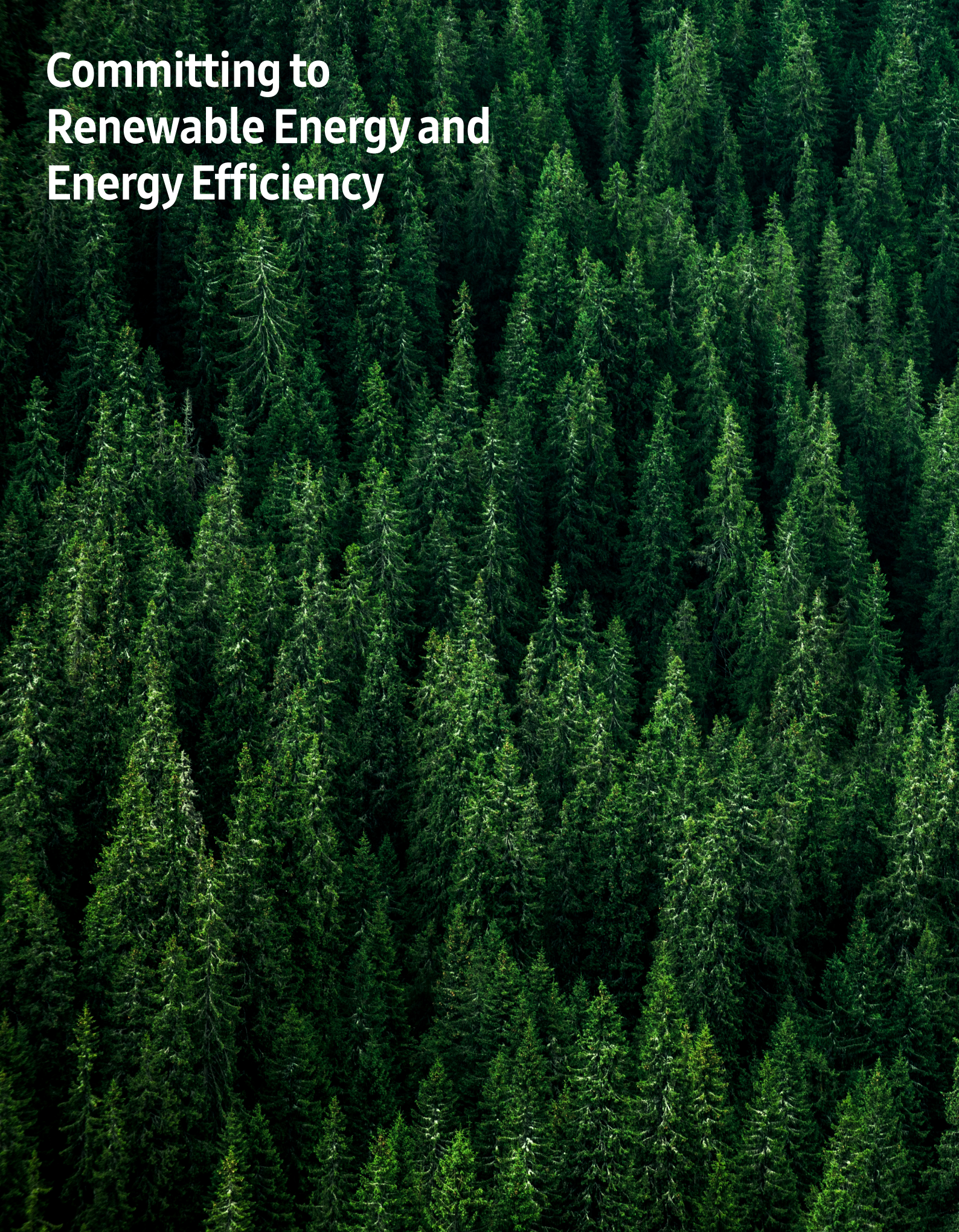
At Samsung, we are dedicated to the preservation of the natural environment. Since June 1992, following our hallmark 'Samsung Environmental Declaration,' we have been continuously looking for ways to reduce our environmental footprint both in our operations and beyond. In everything we do, we always consider resource efficiency. Furthermore, this year, we are taking a step forward by announcing our goal to meet 100% of our energy use through renewable energy in the U.S., Europe and China by 2020. We will achieve this goal by expanding our sourcing of renewable energy in our operations.

**COMMITTING TO RENEWABLE ENERGY AND ENERGY EFFICIENCY**

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RENEWABLE ENERGY

SAMSUNG ELECTRONICS' COMMITMENT TO RENEWABLE ENERGY

As an industry leader, we believe that it is important for us to commit to the use of renewable energy. This year will mark a hallmark year in our efforts to reduce our environmental footprint as we announce our goal to expand our renewable energy use.
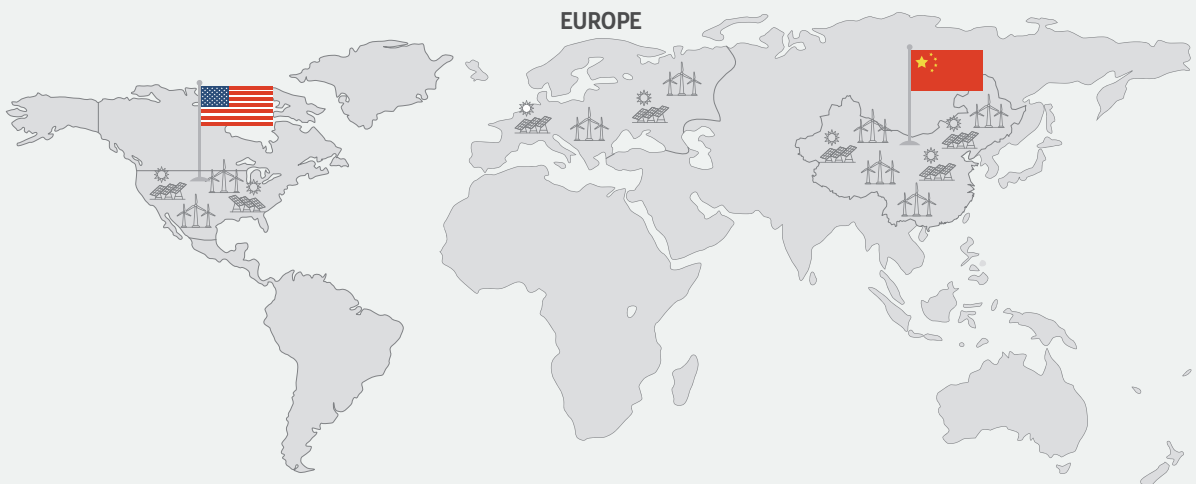
EUROPE

Our Short-term Goals: 100% Renewable Energy in the U.S., Europe, and China

At Samsung Electronics, we are starting our renewable energy journey in regions that are well-equipped with infrastructure for the development and transmission of renewable energy.

Samsung plans to source renewable energy for 100% of the energy used for all of its factories, office buildings, and operational facilities in the United States, Europe and China by 2020.

In Korea, Samsung Electronics fully supports the government's national strategic plan to increase the country's renewable energy use by 20% by 2030. Beginning this year, as an initial commitment, Samsung will additionally install approximately 42,000m^2 of solar panels in Samsung Digital City, its headquarters in Suwon. The company will continue to add approximately 21,000m^2 of solar arrays and geothermal power generation facilities beginning 2019 in its Pyeongtaek campus and 2020 in its Hwaseong campus.

With these efforts in place, Samsung Electronics is positioned to increase its use of renewable energy globally to match the equivalent amount of energy created by an average 3.1GW solar power plant by 2020. This amount of electricity is comparable to the annual energy consumption of about 115,000 four-person Korean households.

As part of our expanded strategy, we will also engage our suppliers in our green power journey. Beginning in 2019, we will join the Carbon Disclosure Project Supply Chain Program and work with our top 100 suppliers to help them set their own renewable energy targets.

Our Medium-to-Long Term Goals: Seeking Ways to Expand Renewable Energy Use

Beyond our 2020 goal, we are working to set up medium-to-long term goals to increase renewable energy use throughout our operations. In setting up our goals, we are taking into account the different renewable energy sourcing conditions in each country where we operate. We are exploring the best available options among purchasing Renewable Energy Certificates(RECs), expanding Power Purchase Agreements(PPAs), making financial investments and building private-public coalitions.
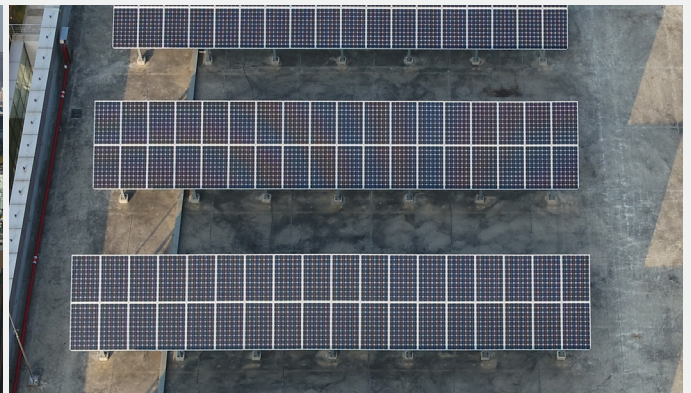In line with this commitment, we have joined the Renewable Energy Buyers' Principles(REBP) and the Business Renewables Center(BRC) as part of our expanded efforts to support renewable energy initiatives.

Challenges and Opportunities

Despite setting ambitious targets, there are challenges ahead. At Samsung Electronics, we currently operate 39 manufacturing locations across the globe. We are committed to setting up specific goals for every region, taking into account each region's renewable energy sourcing systems and conditions.

Particularly in Korea where 65% of our electricity consumption happens, there are currently no available RECs trading systems or PPAs. Korea's physical environment does not lend itself to the development of large scale wind or solar facilities.

Despite the hardships, we will actively cooperate with various stakeholders to expand green power infrastructures.

"WE WELCOME SAMSUNG ELECTRONICS' DECLARATION TO EXPAND THE ROLL-OUT OF RENEWABLE ENERGY ACROSS ITS GLOBAL SITES. THIS IS AN IMPORTANT STEP AND WE LOOK FORWARD TO WORKING WITH SAMSUNG ON FURTHER MEASURES TO REDUCE THE COMPANY'S CLIMATE IMPACT ACROSS ITS VALUE CHAINS."

Jochem Verberne, Global Partnerships Director of World Wide Fund for Nature said,

ENERGY EFFICIENCY

ENERGY EFFICIENCY INNOVATIONS FOR PRODUCTS IN OUR DAILY LIVES

At Samsung, one of the ways in which we are addressing climate change is through the innovative design of energy efficient products. We strongly believe that consumers should be able to purchase energy efficient products that offer savings on energy bills without sacrificing performance, features, and comfort. In 2017, our efforts were recognized by numerous institutions worldwide including the U.S. Environmental Protection Agency(EPA), The International Consumer Electronics Show(CES), and Underwriters Laboratories(UL).

Samsung Products Awarded for Energy Efficiency

In North America, all of the 824 products we released in 2017 were certified by ENERGY STAR®, an EPA backed symbol of energy efficiency and a trusted symbol for energy-efficient products. Among these, 38 products were further certified as Most Efficient, a top distinction that recognized products that deliver cutting edge energy efficiency along with the latest in technological innovation. Samsung's FlexWash and FlexDry models have been recognized as ENERGY STAR®. They also received the 2017 CES Innovation Award, the Techlicious Best of CES award, Reviewed.com's Editor's Choice award, The Verge's Best of CES award and a TWICE Picks award. These products are prime examples of how Samsung designs innovative products that contribute to saving energy in our consumers' daily lives.

Furthermore, 20 models in our newest refrigeration line earned the coveted ENERGY STAR® Emerging Technology Award. They were recognized for their innovative hydrocarbon-based refrigerant system which meets the EPA's demanding performance criteria to reduce energy use and lower greenhouse gas emissions. The hydrocarbon refrigerant R-600a is naturally occurring, with no ozone

depletion potential and very low Global Warming Potential(GWP). R-600a requires less work to be done by the unit's compressor, which not only reduces energy usage by 6.5% but also makes the refrigerator quieter than previous models.

Certifying Institutions and NGOs recognize Samsung as Energy Efficiency Leader

In 2017, UL Environment also recognized Samsung's achievements by granting our products with a joint ECOLOGO/Electronic Product Environmental Assessment Tool(EPEAT) Certification and Registration in a ceremony that took place during the U.S. Samsung and UL annual meeting. UL commended Samsung for achieving the UL ECOLOGO Gold Certification to the UL 110 Standard for Sustainability for Mobile Phones for Galaxy S8/S8+ phones and their inclusion in the EPEAT registry. Samsung is the first company to achieve ECOLOGO Certification to ANSI/UL 110 for mobile phones, and is also among the first companies to appear in the EPEAT Registry for Mobile Phones, which opened July 31, 2017.

"We are honored to be recognized for our efforts in sustainability as we continue to make positive strides in helping our environment," said YH Eom, Executive Vice President & Deputy Head, Samsung Electronics North America. "Sustainable innovation is a strong focus of the Samsung brand, and this achievement supports our commitment to designing environmentally friendly and technologically advanced products for our customers."

The joint ECOLOGO/EPEAT Program is a new way for manufacturers to participate in the EPEAT registry. Manufacturers whose products achieve certification to ANSI/UL 110 are eligible to appear in the EPEAT registry through a streamlined acceptance program. To achieve this joint certification and registration, Samsung Electronics demonstrated that their Galaxy 8/8+ phones met sustainability criteria that address all stages of a product's cycle from design and manufacture to use and end of life.

Our efforts are also noted by NGOs that believe in the potential of energy efficiency to achieve greater economic prosperity, energy security, and environmental protection. "Samsung has been a strong ally to the American Council for an Energy Efficient Economy in supporting energy efficiency programs. We appreciate Samsung's leadership in supporting ENERGY STAR® – an EPA program which benefits the environment by strengthening energy security and reducing stress on the grid. ENERGY STAR® is the trusted source for recognizing energy efficient products and engaging in consumer education, helping consumers save money." Steve Nadel, Executive Director of The American Council for an Energy-Efficient Economy(ACEEE), a nonprofit, organization.

Strengthening Corporate Governance

At Samsung, we are committed to ethical business conduct and integrity. The demand for a more transparent corporate governance structure from stakeholders is increasing. We believe that our corporate governance structure should reflect the values of transparency, independence and diversity. In 2018, there have been significant improvements in corporate governance structure. We have made significant progress in increasing independence by separating the roles of the CEO and the Chairman of the Board. Further, we increased the diversity and expertise of our Board by appointing three new independent directors with diverse experiences and background. Samsung will continuously aim to create a corporate structure in which a culture of performance with integrity can flourish.

INDEPENDENCE

STRENGTHENING INDEPENDENCE OF THE BOARD OF DIRECTORS

Ensuring the independence of the Board of Directors is at the core of transparent corporate governance, and Samsung is dedicated to make further improvements.

To enhance the independence of our Board, we separated the roles of Chief Executive Officer and Chairman of the Board. The Board of Directors appointed Sang-hoon Lee as Chairman of the Board in 2018, further increasing the independence of the Board of Directors. The new chairman will receive feedbacks from both the company and the independent directors enabling the Board to evaluate management more objectively.

As the role of Lead Independent Director has not been institutionalized in Korea, the Company is currently reviewing ways to define such a role. In-Ho Lee, the Company's longest tenured Independent Director, currently represents and coordinates other Independent Directors, similar to those of a Lead Independent Director.

In addition, several key changes in the Board were approved in the share-holder meeting in March 2018. We had formerly selected the successors of the three chief executive officers in charge of Device Solutions(DS), Consumer Electronics(CE), and IT and Mobile Communication(IM) respectively, and found various candidates with diverse expertise in relevant fields to replace outgoing directors. As a result, the positions of the new CEOs of DS, CE and IM were assumed by new successors. They are able to check the management's ability to make more objectives and strategic decisions.

As our business expands and becomes more complex, we are operating committees within the Board to make decisions more efficiently. In 2017, the Governance Committee comprised entirely of independent directors was created to address all matters that affect shareholder value and expand communications with investors. The Committee is also tasked with carrying out the responsibilities previously handled by the Corporate Social Responsibility(CSR) Committee since 2013. Furthermore, the Independent Director Recommendation Committee has been formed by all independent directors since 2018 in order to enhance their independence. This reflects our efforts to go beyond regulatory minimum requirements that only require half of the Independent Director Recommendation Committee to be independent directors.

Additionally, we hold meetings of independent directors without management in order to allow free exchanges of opinions on the overall management of the company.

DIVERSITY AND EXPERTISE

INCREASING DIVERSITY AND EXPERTISE OF OUR BOARD

Samsung Electronics is pursuing diversity and expertise in our Board of Directors so that the Board can make strategic decisions from a comprehensive perspective. To that end, we strive to recruit independent directors who can objectively supervise our company's management from an external perspective.

For Independent Directors, the Independent Director Recommendation Committee, consisting entirely of Independent Directors, evaluates candidates who have demonstrated they are capable of supervising management objectively. Candidates must satisfy

the requirements of related laws(e.g., the Commercial Act in Korea) and show strong leadership skills, an exemplary career history, and extensive knowledge in relevant fields.

We named three independent directors based on recommendations by the Independent Director Recommendation Committee. The committee made its recommendations of candidates without limit to gender, religion, race, country and region of origin, and expertise area. Our aim is to form a Board of Directors with diverse backgrounds and experiences.
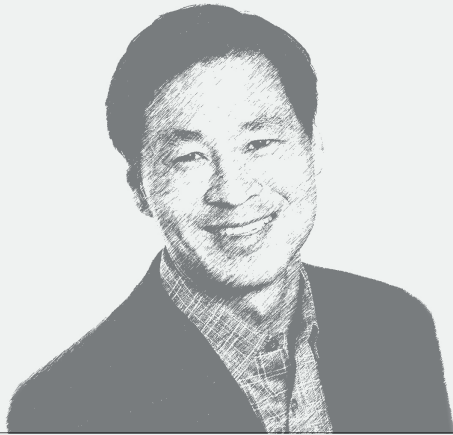
Dr. Jeong Kim is a Korean-American IT expert who founded a successful venture firm Yurie Systems, which listed on the Nasdaq in 1997. He also served as Chief Strategy Officer of Alcatel-Lucent Technology. He has experience in the academia as an Electrical Engineering, Computer Science and Mechanical Engineering professor at the University of Maryland. Currently, he is the Executive Chairman of Kiswe Mobile, an IT firm that provides live media solutions to sports and entertainment content owners. Furthermore, his global Board and R&D leadership experience will strengthen the global perspectives represented in the Board.

Dr. Sun-Uk Kim is a leading authority in law in Korea. She is a former president of Ewha Womens University and served as the Minister of Government Legislation. Currently a professor emeritus at Ewha Law School, her work contributed to protect the rights of underrepresented groups. We believe her experience in the field of law and human rights will provide legal advice and offer objective perspectives in the management and operations of our Board.

Dr. Byung-Gook Park is an expert in the field of semiconductors. He served as the president of the Institute of Electronics and Information Engineers of Korea and is currently a professor of the Department. of Electrical and Computer Engineering at Seoul National University. He is a member of the National Academy Engineering of Korea, an organization that acknowledges and honors engineers that have made outstanding achievements in research and technological development as well as the development of the nation. He also worked in R&D at the world's leading companies such as AT&T Bell Labs and Texas Instruments. We believe Dr. Byung-Gook Park's knowledge and experience will contribute to strengthening the expertise of our Board.
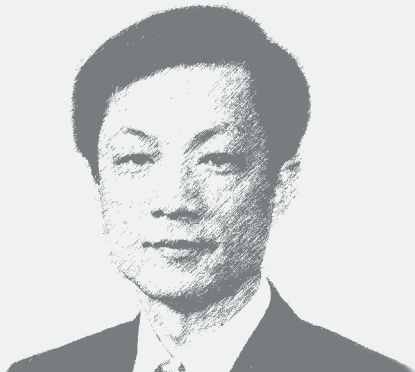
SUSTAINABILITY PILLARS

This section focuses on five areas of sustainability which Samsung can have the biggest impact

In the 21st century, humanity has made great strides in technological advancements and social and political reforms, improving the lives of millions. However, the benefits of these innovations have often been concentrated in certain sections of society. As inadequate access to technology hinders low-income populations from learning the tech skills that are critical to success in today's economy, the technical gap is ever widening the educational divide between the more privileged and the less privileged.

Empowering Society

We believe that the best way we can contribute to society is to leverage our capabilities as an ICT company. We seek to use our innovative technology to create jobs, provide training and STEM education for future generations, and increase digital accessibility while also investing in the competitiveness of our value chain.

Some hallmark achievements thus far include investing 386 KRW billion in communities across the globe, reaching out to over 5 million [1] people to support them in better prepare themselves for their future as well as innovating nearly 2,000 factories [2] of suppliers and small and medium enterprises. These are just some of our efforts to continuously contribute to society using Samsung's innovative culture.

Our Commitment Statement:
Samsung's commitment to having a positive impact on society through innovative technology

Societal Challenges:
Increasing demand for technical innovation and equal digital access for all members of society, such as people with disabilities, veterans, and those living in lowest-income countries

Footnotes:

1) Based on No. of all corporate citizenship programs around the world in 2017
2) Based on No. of suppliers and SMEs with our partner collaboration programs

Empowering Communities Across the Globe

At Samsung, we seek to empower communities by creating jobs and investing in education across the globe. In 2017, we continued to make meaningful achievements working with communities where we have not previously had a strong presence.

In Pyeongtaek, South Korea, we opened the world's largest semiconductor plant. We invested $34.4 billion to set up the facility and infrastructure around the site. The Pyeongtaek plant is now primarily responsible for producing 4th Generation 64-Layer V-NAND. The plant is expected to bring $151.4 billion in production impact and to create 440,000 jobs in Pyeongtaek.

In Vietnam, we have invested a $17 billion in our high-tech complexes located in Thai Nguyen and Bac Ninh as of 2017. Our investments include building R&D facilities and enhancing automation facilities for our plants to further improve employee health and safety. We also created various educational programs and invested in facilities for pregnant women. Our plants in Vietnam have created 100,000 jobs for the community and have been domestically recognized as the 'Most Sustainable Workplaces' by the media.

In Newberry, South Carolina, U.S.A., we invested in a $380M facility to produce some of Samsung's most popular, industry-leading home appliances. The new factory has hired more than 600 local employees and will generate about 400 additional jobs by 2020. These new jobs set

Samsung's U.S.A. employee count to more than 20,000 full-time, contracted and indirect outsourced employees.

Samsung Austin Semiconductor LLC(SAS) in Austin, Texas, U.S.A, is also a great example of Samsung forming a long-term partnership with a community to create economic, environmental, and social prosperity. In 2015 alone, SAS added $3.6 billion to the regional economy of central Texas. During that same time, SAS supported 10,755 jobs in the area and $498 million in annual salaries. Additionally, in 2017, Samsung announced its decision to invest more than $1 billion in SAS. This investment will enhance current System large-scale integration (LSI) production to meet the growing demands in the industry for advanced system-on-chip(SoC) products especially for mobile and other electronic devices. SAS also makes environmental contributions to the region. It has one of the largest private compost programs in the state of Texas, diverting 273 tons of compost from landfills. That's enough to fill the bed of a pickup truck 546 times. In addition, SAS has repurposed 87.7 tons of Styrofoam from landfills, or enough to equal 53,000,000 Styrofoam cups. Since 2015, SAS has recycled 1,165,735,000 gallons of water, or enough to fill 141,301 residential pools.

Furthermore, we also made a series of investments over the past 18 months in the U.S.A., totaling over $10 billion including the acquisition of HARMAN and Dacor and R&D investments in IoT.

C-Lab(Creative Lab)

One way we are closing the digital divide is through our C-Lab in Suwon, South Korea. These in-house incubation programs bring together employees from across the company to nurture creative business ideas. Creative programs started at C-Lab even include ones that have been able to help solve societal problems.

"I'VE BEEN WORKING AS AN ENGINEER AT SAMSUNG SINCE 2011, AND THE CHANGES WHEN IT COMES TO MY DAY-TO-DAY WORK WHILE CHALLENGING MY CREATIVITY AND CAPABILITIES TO THE FULLEST, HAVE BEEN EXHILARATING. NO ONE DAY IS ALIKE. IN THE MORNING, I MIGHT BE DIAGRAMMING A NEW IDEA ON MY OWN. A FEW HOURS LATER, I MIGHT BE VIGOROUSLY DEBATING THE FEASIBILITY OF THAT IDEA WITH SENIOR ENGINEERS AND STAFF THAT IS FRESH OUT OF UNIVERSITY. BY THE END OF THE DAY, I MIGHT BE TINKERING WITH THE IDEA FURTHER. I CREDIT THIS FREEDOM OF CREATIVITY TO C-LAB."

Seung-ryong Jeon, **Creative Leader of C-Lab**

When you think of startups, the first images that likely come to mind are makeshift groups of fresh, enthusiastic innovators, entrepreneurs, and engineers dreaming of creative ideas, and pouring their passion to bring their ideas to life.

At Samsung, a unique startup culture has taken root in both spirit and implementation thanks to a progressive new initiative known as C-Lab.

Established at the end of 2012, C-Lab is one of Samsung's primary innovation programs. The program helps our employees nurture creative business ideas and further encourages employees to unravel society's problems through innovation. So far, C-Lab has supported over 180

projects and has participated in the Consumer Electronics Show(CES), South by Southwest(SXSW), as well as other large-scale global tech gatherings.

In 2015, C-Lab introduced its spin-off policy whereby the most promising projects are launched as fully-fledged external startups. To date, a total of 34 C-Lab alumni startups including 11 in 2017, have been created as a result of Samsung's commitment to investing in employee-driven innovation and supporting the startup ecosystem.

The prospective entrepreneurs were provided with intensive training and preparation on key aspects of running a business with the help of experts before launching their startups. They are also engaged in discussions with former colleagues who have met with success in spinning of businesses.

"Based on our past experience, which has been invaluable in this process, we are planning to build up a more profound and actionable program to nurture employees' ideas and launch new startups," said Jaiil Lee, Vice President and Head of the Creativity & Innovation Center at Samsung Electronics.

C-Lab alumni startups have performed well in recent years, securing additional global funding, increasing company valuation and opening up unexpected business opportunities. SketchOn Inc. was globally recognized as a startup with enormous potential after ranked fourth at Slush - Europe's largest startup conference - in 2016, the highest position a Korean startup has ever achieved. In addition, Salted Venture Inc., Innomdle Lab and WELT Inc. far exceeded their targeted funding goals on the global crowdfunding platfrom, Kickstarter, and plan to introduce their products to the market very soon. Moving forward, we hope to increase our investments in C-Lab to solve societal problems through our innovative culture.

C-Lab PROCESS

01 IDEA DISCOVERY	02 CONCEPT DEVELOPMENT	03 PROTOTYPING	04 CONCEPT VALIDATION	05 EXIT
• Idea Contest • Demo Day • Pitching Day	• Pit-in Camp • Mentoring	• Lean & Agile Process • Feasibility Test	• In-house Exhibition (C-Lab Fair) • Global Showcase	• Spin-off • In-house Transfer

Empowering People through Education

SOLVE FOR TOMORROW(SFT) & TOMORROW SOLUTION(TS)

'Solve For Tomorrow' and its Korean version, 'Tomorrow Solution' are two great examples of our practice of sharing Samsung's innovative culture with society. Both programs receive entries of innovative ideas that offer a solution to a problem in society.

A team of college students won SFT China 2015 by submitting a lightweight but strong load-bearing structure to change the risky way of getting to school for the village children in mountainous Chongqing in Southern China. The organizing committee for SFT China, later invited the team to work on a large scale public welfare project themed 'Build Your Dream Bridge. Walk into the Future Hand in Hand'. The team, using their engineering expertise, built a bridge in the mountainous regions of Zunyi which became a solution to the region's children who face challenges in getting to school everyday.

In the U.S.A., in the seven years that we've deployed SFT nationwide, we have seen tremendous results in every single state in improving issues facing local communities. One notable example regarding the issue of equal opportunity was an entry by a Middle School from Missouri. Recognizing that their special needs peers lacked adequate furnishings in their learning spaces, students developed custom, cost-effective therapeutic assistive devices to improve the lives of their fellow students. These students sought to provide their peers with ways to improve their learning experience by developing adaptive classroom fur-

niture that can increase their comfort and concentration. The students undertook a process of empathic design that ultimately made a positive impact on their peers.

SFT Latin America was launched in 2014 and is operating in Argentina, Brazil, Chile, Dominican Republic, Mexico, and Peru. The program has established partnership with UNESCO, REDUCA(Latin America Network of NGOs of Education), and OEI(Ibero-American States Organization) and several other governmental entities, academia, and NGOs. The program has received more than 11,000 project entries from more than 128,000 students in 7,500 schools. A notable highlight hails from Argentina where students from a local community school developed a low cost emergency alert system to effectively monitor floods for communities that suffer from flood disasters every year. In 2016, their municipality further developed this solution as the official alarm system now managed by the Civil Defense and Fire Fighters.

In 2017, the grand prize of TS in Kazakhstan was for an idea to help nomadic people improve their qualify of life and economic prospects by better managing livestock. The team proposed to set up a livestock management system through low power consumption, long distance telecommunication devices. The application tracks and transmits information to locate and safely manage livestock. The data that has been collected will be used for further improvements for the nomadic tribes. Samsung's C-Lab is planning on further expanding on the idea to create a wearable device for animals.

OUR COMMITMENT TO SKILLS TRAINING IN EUROPE

The focus of our programs in Europe is primarily on education and employment. Some of the biggest challenges Europe faces today are high youth unemployment, which is nearly 20% in the EU, and a significant digital skills gap. It is projected that most jobs in the near future will require digital skills, but 44% of Europeans between the ages of 16 and 74 do not have even basic digital skills.

In 2013, we made a pledge to the European Commission's Grand Coalition for Digital Jobs, committing to directly engage 400,000 young people - people between the ages of 18 and 25 - by the end of 2019 through our Citizenship programs. This pledge is highly valuable for the region as demand for ICT specialists is growing swiftly in Europe.

Samsung's contribution is region specific and reflects the local situation in each country. Programs include mentorships, apps designed to help identify student's vocations, a 2-year training course including one-on-one mentoring and specialized training in programming. At Samsung, we are proud to be a part of such a vast scale of initiatives which prepare thousands of young people for the next stage of their lives.

Our achievements through some programs in Europe include the following:

'Samsung Campus' in France

Samsung Campus is a two-year, free training course designed for 18 to 25 year-olds who did not complete school, but have a real passion for technology. Opened in September 2014, Samsung Campus has already produced two graduating classes and more than a hundred and fifty students, teaching the next generation of programing experts. Samsung Campus's intensive training is implemented by our partners ZUPdeCO, an NGO promoting equal opportunities for disadvantaged young people, and EPITECH, the leading IT school in France, with students also benefiting from one-on-one mentoring with our employees. Out of the first groups of Samsung Campus students who have now graduated, more than 80% have found a web developer position while 15 % have decided to pursue further training to improve their skills. Samsung Campus received in 2016 the 'Grande École du-Numérique' label from the French government, in recognition of the program's pertinence to fight youth unemployment. Every year, we receive more than a thousand applications from those who want to join us and realize their true potential.

'Me&My City' in FInland

The international award-winning Me&My City, an innovation in education, is based on students in Finland spending a full day in an interactive learning environment that simulates how society and the economy works. To power the city's infrastructure, Samsung and Me&MyCity have developed a tablet-based digital gaming system, which has become an integral part of the learning. So far,

• 160,000 pupils have attended the Me&MyCity study module

• The financial knowledge of sixth grade students(12-13 year-olds) improved by 17%

• 70% of all sixth-graders in the country, as well as 2,000 upper elementary schools students, have been reached by this initiative

• 45,000 students and 2,600 teachers from regions

• Municipalities participate in the program every year and are hosted by 1,300 instructors

Our collaboration with Me&MyCity is not only a responsibility, but a privilege, since we are able to meet and work with bright young minds and future employees.

Tech Institute 'Listen Up' in Bulgaria

In 2016, by teaming up with Listen Up Foundation, Samsung Tech Institute in Bulgaria saw an opportunity to address a major social issue in the country. In Bulgaria, more than 120,000 people are hard of hearing. Over 8,000 of them are children or youths. While youth unemployment is a major issue faced by all Bulgarians, those with this disability are even more cut off from employment opportunities. With only three special schools for children who are hard of hearing, and less than 90 sign language translators in the country, Bulgarians who are hard of hearing are faced with challenges including professional development and income inequality.

With Listen Up Foundation, Samsung Tech Institute in Bulgaria developed the first Bulgarian speech-to-text transformation platform, built to fulfill the specific needs of people who are hard of hearing. By using this application, deaf people can lessen their reliance on sign-language translators. They are able to improve their daily lives as well as gain better access to educa-

tion. Greater access to education will in turn, give the people hard of hearing better access to employment opportunities.

Even before its official launch in November of 2017, it was downloaded over 2000 times. Within a year of its launch, the app has inspired the Ministry of Education and Sofia Municipality to use the service in many of their entities. The app has won three significant Awards including:

- Forbes E-volution Awards – First place in 'Responsibility Campaign'
- BAPRA Bright Awards – Second place in 'Debut of the year' category
- PR Priz – Second place in 'CSR Project' category – Business sector

Further, in 2018, the service is expected to expand to cover more schools, universities and organizations.

'Samsung Digi Pass' in Estonia

Unemployment throughout the Baltic States always hits youth the hardest. To tackle this, we created a digital skills program for teachers, Samsung School for the Future, so they can teach their students in a more digitally and technologically advanced way. After a successful three years, we decided to challenge ourselves and bring a new digital education program to Estonia with a focus on vocational school students. In Estonia we created DigiPass, the first digital skills passport. Designed

to give young people a competitive edge in the market, DigiPass is divided into four models and covers a range of skills from paper prototyping to digital tools in the workplace.

Thanks to the DigiPass program, students are able to learn valuable new digital and social skills to build their confidence, realize their full potential, and give them the best chance in a tough, competitive job market.

Investing in the Competitiveness of Our Suppliers and Beyond

We have a firm belief that a win-win cooperation activity is not an option but an investment, not a cost. In recent years, it has moved beyond the competition between companies to a world where the entire supply chain of companies is competing. Therefore, Samsung Electronics depends on strengthening the component competitiveness of suppliers and the corporate ecosystem in the society.

PARTNER COLLABORATION PROGRAMS FOR OUR SUPPLIERS

We have been operating a variety of systematic and win-win cooperation programs to support our suppliers and small and midsize businesses. Through these win-win activities, we will continue to strengthen the supply chain of Samsung Electronics and develop a healthier corporate ecosystem.

SECURING AND TRAINING OUTSTANDING EMPLOYEES	• Support suppliers to hire outstanding employees(employment fair, etc.) • Develop customized training courses and provide free support for suppliers • Operate future management programs to foster next-generation managers * Operation of education facilities for Suwon Business Partners in Gyeonggi Province
FUNDING SUPPORT	• Create win-win funds: 1 trillion KRW for funding such as facility investment and technology development(loans of up to 9 billion won per company) • Build a 500 billion KRW fund to improve payment conditions between the first and second tier suppliers(Support non-interest loans from cash payment partners within 30 days)
ACQUIRING TECHNOLOGY	• New Technology Development Fund to support technology development for small-medium enterprises • Open patents held by Samsung Electronics and allow small-medium enterprises to freely utilize them • Introduction to superior technology in Korea's universities and research institutes
COMPETITIVE ADVANTAGE ACQUISITION SUPPORT	• Support for the construction of Smart Factory for suppliers and small - and medium-sized enterprises • Support industry innovation movement for manufacturing innovation of secondary and tertiary suppliers • Support for improvement of environmental safety vulnerable areas of business partners * Operation of a professional consulting team to support cost, quality, and manufacturing innovation activities
SALES CHANNEL ACQUISITION SUPPORT	• Leverage global network to support export and marketing of best products from partner companies • Open Smart Biz Expo and offer opportunities for domestic and foreign buyers

SUPPLIER COMPETITIVENESS SUPPORT FOR FIRST-TIER SUPPLIERS

At Samsung, we have been supporting production innovation for our suppliers globally. In 2017, we assisted our first-tier suppliers with innovative programs such as on-site consulting services for management, and we helped improve working conditions, quality and production.

First, we supported our suppliers by providing consulting services for their management. We allocated 10 innovation experts to 18 suppliers who were facing challenges in stabilizing profit margins. Our experts helped these suppliers reduce KRW 75 billion worth of expenses. Consequently, four companies were able to switch to a profit making business model.

Among these suppliers, we noticed that DK Co. Ltd., a refrigerator door and washer drum parts manufacturer, was faced with management challenges. Although their sales were increasing, rising production costs caused their operating profits to decrease. In consultation with our experts, DK Co. Ltd was able to reduce KRW 2 billion in expenses and managed to turn their business around.

Second, we endeavor to improve the working conditions of our suppliers. We formed a consortium with 69 first-tier suppliers and 172 second and third-tier suppliers to manage the use of hazardous chemicals in their operations. We allocated 20 safety experts who consulted suppliers to improve the conditions, which resulted in an increase of 50% on average in our supplier evaluation points from 60 points to 90 points.

For example, Jahwa Electronics Co. Ltd., an actuator supplier for our mobile phones, worked with our safety experts to improve working conditions for their downstream suppliers. As a result, we saw an 81% increase in points through our evaluation. We are proud to note that Jahwa Electronics received the Korean Minister of Industry, Trade and Energy's Award on safety management in 2017.

Moreover, we provided consulting services to 28 domestic suppliers with labor shortage issues and provided business insights on manufacturing, quality management, development, and marketing. Suppliers have been providing positive feedback for our support.

For three of our mobile phone Sub PBA suppliers, we have been improving development processes and quality management systems as an effort to improve mainstream product quality. As a result, defect rates in mass production decreased by 71%, a notable achievement for both Samsung Electronics and our suppliers.

Finally, we have worked to increase our suppliers' manufacturing capabilities by providing them with financial support, which suppliers use to obtain expertise on manufacturing and quality management. We helped with consulting fees for 22 of our suppliers, including 10 Korean companies looking to expand overseas in addition to 12 companies in Vietnam.

Among these suppliers, Moodeungh Electronics Co. Ltd, which supplies injection mold parts for refrigerators and washers, was seeking expansion to Poland. However, they faced challenges with production management and asked for our help. We dispatched manufacturing and quality management experts to advise on innovative actions. In result, they raised production efficiency rates up to 95%, decreases in defect rates up to 56% by improving their quality management system, and shortened freight movement distances up to 50% by relocating their facilities in the plant.

SUPPLIER COMPETITIVENESS SUPPORT FOR SECOND-TIER SUPPLIERS AND BEYOND

In an effort to support innovating productivity of non-tier 1 suppliers as well as other companies that do not have business transaction with Samsung, we have joined the Industry Innovation Campaign that initiated by the Korean Ministry of Trade, Industry and Energy since 2013.

Promecca Co. Ltd., for example, is one of our second-tier suppliers that we have assisted through our 'Industry Innovation Campaign.' After launching a new plant in Asan, South Korea, in February 2015, Promecca's management was deeply concerned because the plant's productivity and production quality was not up to their expectations. At the time, LOT Vacuum Co. Ltd., one of our first-tier supplier, recommended that Promecca apply for our 'Industry Innovation Campaign.'

For 3 years, we dispatched consultants to work on increasing productivity and making quality improvements. Our efforts led to several notable achievements at Promecca – we standardized their working environment, achieved 'Clean Workplace Project' certification from Korea Occupational Safety & Health Agency (KOSHA), increased productivity by 30%, decreased customer defect rate from 3% to 1%, and internalized key manufacturing components, which reduced the production cost by 50%.

As a result, their revenues increased 2.1 times from KRW 3.3 billion to KRW 7.2 billion. They were also able to make technological advancements to increase their competitive edge within the components detail processing industry, and received offers from overseas investors which led to business expansion.

SHARING OUR SMART FACTORY TECHNOLOGY WITH SMALL AND MEDIUM-SIZED ENTERPRISES (SME)

In 2017, we partnered with South Korea's Ministry of SMEs & Startups and Gyeongbuk Province to invest KRW 24.1 billion in sharing Samsung's Smart Factory technology with SMEs. Among these companies, 86% were companies that have not been involved in any business transactions with Samsung Electronics.

PJ Electronics Co. Ltd. is a sonogram and printed circuit board manufacturer in South Korea. We do not have any business relationships with PJ. At PJ, we helped establish a real-time monitoring system called 'MES' at their production facilities. The automated system not only provides real-time monitoring services, but also accumulates data that helps eliminate low quality products. The facility improvements resulted in a 31% increase in the accuracy rate of production planning and at the same time decreased production defect rate by 32%.

At Hwajin Industrial Co. Ltd., an industrial land farming functional film manufacturer and a second-tier supplier, we established a Manufacturing Execution System(MES), which enables a multi-varian complex production process through data analysis in every step of production, including in raw material injection, applications, film hardening, wrapping and packaging. Production capacity per day increased 100% and shortened the product manufacturing time by an average of two days per batch. In consequence, the adoption of our Smart Factory program led to a 200% increase in revenue(from KRW 2 billion to KRW 6 billion) and 6 new hires at Hwajin Electronics Co. Ltd.

Furthermore, in order to provide assistance for companies to autonomously manage and maintain our Smart Factory system, we are operating 'Smart Factory Academy' in Gyeongsang Province. So far, we have held training programs for 1,512 CEOs and employees of SMEs, including Smart Factory related courses such as CEO-level management courses, Smart Factory Master courses, and MES.

At Samsung Electronics, we challenge ourselves to answer a simple question: how can we continuously improve our products to reduce the burden on the planet? We believe that Samsung can use its technological expertise and innovative ideas to help the world meet resource needs in a way that drives innovation and growth in an environmentally sustainable way.

Product Stewardship

As a leader of the technology sector, we constantly strive to lead systematic change in product efficiency throughout the product life cycle. We innovate to design energy efficient products and endeavor to eliminate exposure to hazardous materials. We also strive to improve the recycling system to set an example for others to follow.

In 2017, we continued our endeavor to move towards a circular economy in which we create a virtuous cycle by recycling and reusing our resources. We also showcased a new initiative called 'Galaxy Upcycling' to create the future possibility of our customers reusing old Galaxy phones in innovative ways. We believe this is a good example of how Upcycling is helping to maximize the value and functionality of devices.

Our Commitment Statement:
Samsung's commitment to environmental responsibility throughout the product life-cycle

Societal Challenges:
The increase of consumer demand for environmentally responsible products and the rapid depletion of critical natural resources are key drivers assessing the sustainability of products from inception to expiration including raw materials sourcing, design, processes, and outputs

Galaxy Upcycling

We continuously strive to come up with innovative ideas to extend our products' lifespan while creating more value for our consumers. One such example is the pioneering 'Galaxy Upcycling' program.

Numbers of electronic devices are discarded especially in areas where recycling infrastructure is not readily available. Galaxy Upcycling is a new platform that engages consumers, asking them to think about how they can breathe new life and extended value into devices that might otherwise be discarded. The program, created by C-Lab, Samsung Electronics' innovation hub, allows customers to transform Galaxy phones they no longer use into smart devices such as CCTVs, gaming consoles, Desktop PCs, and IoT devices. The program enables consumers to customize for the functionality they want while providing them with necessary software changes and suggested hardware changes that enable new functionality according to their needs.

While there are facilities and programs that help the sustainable management of electronics such as mobile phones, in some countries, a proportion of these devices are not disposed of correctly, increasing CO_2 emissions. More can be done to reduce associated environmental impacts and help recover valuable resources and materials including metals, plastics, and glass from these devices. We estimate that if we can help users repurpose all of their Samsung phones within five years, we can reduce an estimated 1.4 million tons of CO_2.

The goal of Galaxy Upcycling is that Galaxy phone in the world will be upcycled without being discarded prematurely, which will lead to billions of devices having an extended useful life and reduce the call on scarce natural resources.

We aim to mainstream this idea and bring about the associated environmental and socio-economic benefits. We believe Galaxy Upcycling can be expanded and made more impactful as a resource sharing platform for consumers to easily access. As Galaxy Upcycling is open source, it also enables innovation and societal benefits. It is Samsung's hope that society will continue to use our platform to think creatively and act to improve the environment.

It is no surprise that Galaxy Upcycling has quickly gained worldwide recognition. During CES Las Vegas 2018, US Environmental Protection Agency awarded Samsung with the 2017 Cutting Edge Champion Award for its innovative Galaxy Upcycling program. We hope to expand the program to reach consumers next year.

Recycling and Premium Care

SAMSUNG

Re+
Recycling Program

'This represents our leading resource efficiency initiative undertaken under the slogan 'Samsung recycling program, Re+ makes 'PLUS' to the environment'

At Samsung, we understand the environmental and social benefit of responsible recycling as well as that of a great customer care network to provide accessible, technically proficient, safe and secure repairs.

In addition to programs like Galaxy Upcycling, we continue to manage electronics recycling programs around the world. We are a strong supporter of the Individual Producer Responsibility Principle and operate 'Samsung Re+(replus),' our global e-waste take-back and recycling program. Since 2009, we have reinforced recycling during our waste collection stage. Between 2009 and 2017, we collected 3.12 million tons of e-waste on an accumulated basis, and are planning to increase this number to 3.8 million by 2020.

In 2016, our electronics recycling program collected and responsibly recycled 53.6 million kgs of e-waste in the U.S.A., making us as one of the world's biggest collectors of e-waste. US Environmental Protection Agency honored Samsung's U.S.A. e-waste collection efforts with the Gold Tier Award for the fourth consecutive year. In 2017, we went on to collect 56.4 million kgs of e-waste in the U.S.A. To maintain our achievements, we only partner with recyclers who use e-Stewards, the most responsible recyling certi-fication, to prevent incineration, landfill burial and export of waste to developing countries. In addition, in April 2010, Samsung Electronics joined BAN(Basel Action Network), a non-profit toxic watchdog organization of the United States, as an E-Steward Enterprise for the first time in the Korean industry.

Further, our consumer awareness raising efforts on how to safely manage electronic waste are also a key part of our responsible recycling program. In 2017, we partnered with Electronics Recyclers International(ERI) to host an e-waste recycling event at the Consumer Electronics Show to showcase a convenient way to responsibly recycle unwanted consumer electronics.

To allow consumers to maximize usage of our products, in the U.S.A., we provide our mobile phone consumers with our Premium Care program. Through the programs, consumers have access to a team of experts to help them with all aspects of their phone from setup, troubleshooting, repairs and replacements. We are also expanding the program, in partnership with our uBreakiFix program, by increasing our Customer Care Touchpoints, our extensive networks of trust-ed and professional authorized repair providers to ensure high quality and technically proficient repairs and offer our consumers a safe experience. Through uBreakiFix, Samsung customers are now able to bring in their Galaxy mobile devices to more than 300 Samsung Care authorized uBreaki-Fix service locations in the U.S.A. for same-day support, and within two hours or less for most repairs.

The Samsung Care authorized uBreakiFix service locations are in all major U.S.A. metro areas and reach the majority of the continental U.S.A. population. By early 2019, Sam-sung and uBreakiFix plan to add nearly 200 more Samsung Care authorized uBreakiFix service locations to expand customer reach.

"At Samsung, our goal is to provide Samsung Galaxy own-ers with a customer first care experience that is as innova-tive as our products" said Michael Lawder, Senior Vice Pres-ident of Customer Care at Samsung Electronics America. "This announcement marks a fundamental shift in our care offerings to consumers and underscores our commitment to providing Samsung customers with support anywhere, anytime our customers need it."

Green Management

To fulfill our environmental responsibility, we at Samsung officially announced the Environmental Declaration in 1992. In addition, we set Green Management Value System in 2008 and additional goals in the form of our global Eco-Management 2020 plan in 2014 and are endeavoring to create environmental value through numerous initiatives. We strive to minimize the negative impact on the environment by producing products with less resources and reducing greenhouse gas emissions during use

GREEN MANAGEMENT VALUE SYSTEM

PHILOSOPHY

• We contribute to the prosperity of human life and the conservation of the environment by conducting business activities that respect humanity and nature

VISION

• Providing Green Experience, Creating Sustainable Future

• Provide customers with a new green experience and lead a sustainable future in a global society through innovative green products and technologies

Planet First

• Embodies Samsung's commitment to corporate social responsibility and preservation of Earth

• The circular logo shape represents planet earth, while the colors blue and green symbolizes fertile soil and permanence of water respectively

PRODUCT STEWARDSHIP KPIs

• Accumulated GHG emissions reduction in the product use phase between 2009 and 2020

Reach **250** million tons

• Use renewable materials including recycled plastic between 2009 and 2030

Reach **500** thousand tons

• Achieve **90%** Eco-conscious Products out of all developed products by 2020
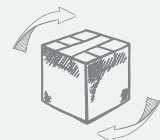
• Accumulate collected e-waste between 2009 and 2030

Reach **7.5** million tons

• Reach **100%** sustainable sourced paper packaging by 2020[1]

Footnotes:

1) Certified sustainable sourced paper and recycled paper(packaging, manuals etc)
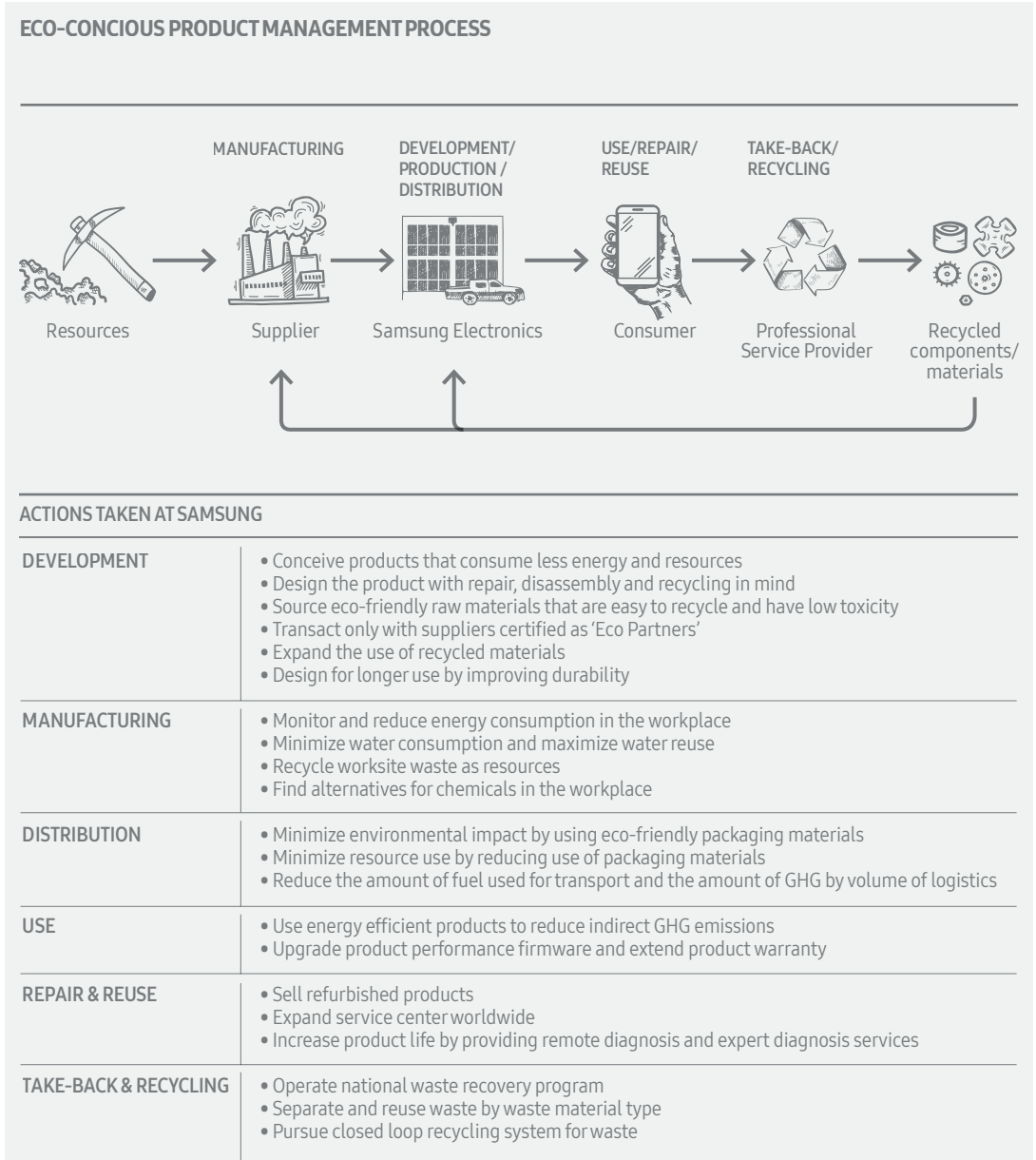
Eco-Conscious Products

We operate an eco-conscious product management process to reduce our environmental impacts by increasing our resource efficiency. We are operating various programs to manage our eco-conscious product lifecycle. We have set up a comprehensive development process to create products with high resource efficiency. In addition, our hazardous substance management system identifies hazardous materials in our components during our purchasing stage. Our programs also include waste recycling in the production phase, firmware upgrade services to extend product life, and recycling programs across the globe.

ECO-CONCIOUS PRODUCT MANAGEMENT PROCESS

MANUFACTURING | DEVELOPMENT/ PRODUCTION / DISTRIBUTION | USE/REPAIR/ REUSE | TAKE-BACK/ RECYCLING

Resources → Supplier → Samsung Electronics → Consumer → Professional Service Provider → Recycled components/ materials

ACTIONS TAKEN AT SAMSUNG

DEVELOPMENT	• Conceive products that consume less energy and resources • Design the product with repair, disassembly and recycling in mind • Source eco-friendly raw materials that are easy to recycle and have low toxicity • Transact only with suppliers certified as 'Eco Partners' • Expand the use of recycled materials • Design for longer use by improving durability
MANUFACTURING	• Monitor and reduce energy consumption in the workplace • Minimize water consumption and maximize water reuse • Recycle worksite waste as resources • Find alternatives for chemicals in the workplace
DISTRIBUTION	• Minimize environmental impact by using eco-friendly packaging materials • Minimize resource use by reducing use of packaging materials • Reduce the amount of fuel used for transport and the amount of GHG by volume of logistics
USE	• Use energy efficient products to reduce indirect GHG emissions • Upgrade product performance firmware and extend product warranty
REPAIR & REUSE	• Sell refurbished products • Expand service center worldwide • Increase product life by providing remote diagnosis and expert diagnosis services
TAKE-BACK & RECYCLING	• Operate national waste recovery program • Separate and reuse waste by waste material type • Pursue closed loop recycling system for waste

ECO-DESIGN

We design our products through a process called 'eco-designing' which measures the eco-friendliness of our products right from the development phase. This comprehensive designing process aligns not only with our quality certification programs, but also with our hazardous substance management system. We are applying an internal eco-product assessment program that applies the same level of scrutiny and criteria as global eco-labeling standards.

ECO-DESIGN PROCESS

ECO-DESIGN

| 01. Goal setting | 02. Evaluation and improvement | 03. Final verification |

EVALUATION CRITERIA

Energy efficiency   Resource efficiency   Environmental Hazardousness

PRODUCT DEVELOPMENT PROCESS

| 01. Product planning | 02. Development planning | 03. Development | 04. Mass production |

PRODUCT ENERGY EFFICIENCY

We constantly strive to design products that meet the highest energy efficiency standards. We hold a bi-annual Eco Council, where environmental experts and management meet to share ideas on environmental regulatory and technological trends and develop high energy-efficient products by investing in energy efficient technology R&D.

As a result, in 2017, we successfully adopted Energy-saving technology including highly-efficient insulation for refrigerators and inverter compressors for air conditioners. This resulted in a 36% reduction in annual energy consumption compared to 2008[1]

To trace our product's environmental impact, we quantified indirect GHG emissions caused by our product usage and power consumption.

Footnotes:
1) Seven major products released in 2017

GHG EMISSIONS REDUCTION IN THE PRODUCT USE PHASE[1]   Unit: MtonCO₂

Accumulated Reduction[2]   Reduction for the Concerned Year

Reduction for the Concerned Year	Accumulated Reduction
2015 32.8	2015 156
2016 32.2	2016 188
2017 28.5	2017 217

Footnotes:
1) Scope of data collection: Selected models in seven major product categories including refrigerators, air conditioners, washer, televisions, monitors, laptops, and mobile devices
2) Since 2009

CONDUCTING LCA

We perform Life Cycle Assessment Assessments(LCA) to identify the potential environmental impact of our products throughout their life cycle. In 2017, we analyzed our mobile phones and tablets for their environmental impact in each phase of the product life cycle and have been using the outcomes in minimizing their negative impact on environment. The following are the global warming impact based on 12 categories from the LCA results of the Note 8 in the pre-manufacturing, manufacturing, distribution, use and disposal phases, and we are determined to use these data to consistently enhance the environmental and sustainable aspects of our products.

RESULT OF GLOBAL WARMING IMPACT ON GALAXY NOTE8

Pre-manufacturing	Manufacturing	Distribution	Use	Disposal
41.0%	**12.4**%	**26.7**%	**18.7**%	**1.2**%

HAZARDOUS SUBSTANCE CONTROL MANAGEMENT

In order to control hazardous substances in our products, we are strictly enforcing our 'Standards for Control of Substances used in products'. our standards are in line with those of international environmental regulations such as the European Union(EU) Restriction of Hazardous Substances Directive(RoHS) and the EU Registration, Evaluation, Authorisation and Restriction of Chemicals(REACH). We are working to ensure that every component and raw material used in our products is subject to thorough inspection and management.

To this end, we created our 'Eco-Partner Certification using Environmental Chemicals Integrated Management System (e-CIMS)'. We continuously assess and verify the environmental impact of our suppliers' components, raw materials including hazardous chemicals as well as their production processes.

Furthermore, since 2005, we operate our environmental analysis lab to analyze harmful substances and volatile organic compounds in 2005, which was certified as an authorized testing lab by the Federal Institute for Materials Research and Testing(BAM) of Germany. The sum of these endeavors improved our credibility in analyzing chemical substances and established our own controlled substance monitoring system.

SUBSTANCES MANAGEMENT TIMELINE

2005	• Developed a Technical-Tree to improve on the use of BFRs[1] (supply chain improvement) • Banned the use of BFRs for packaging materials
2006	• Set plans to reduce the use of BFRs and PVC[2]
2008	• Released mobile phones completely free of BFRs and PVC[2] (some models) • Banned the use of PFOS[3] and antimonides
2010	• Released new mobile phone/camera/MP3 models completely from of BFRs/PVC • Banned the use of cobalt chloride
2011	• Released mobile phones completely free of beryllium compounds
2012	• Banned the use of chlorinated flame retardants in mobile phones and MP3s • Released notebooks, TVs, monitors, and home theater products(some components) completely free of PVC
2013	• Released notebooks, TVs, monitors, and home theater products completely free of phthalates or antimonys
2015	• Banned the use of HBCD[4] and nonylphenol
2016	• Banned the use of four types of phthalates(DEHP[5], BBP[6], DBP[7], DIBP[8]) for new components
2018	• Set framework to ban 17 types of phthalates in all product components by July 2019

Footnotes:

1) BFRs: Brominated Flame Retardants, 2) PVC: Polyvinyl Chloride, 3) PFOS: Perfluoroctanesulfonate, 4) HBCD: Hexabromocyclododecane
5) DEHP: Bis(2-ethylhexyl) phthalate, 6) BBP: Butyl benzyl phthalate, 7) DBP: Dibutyl phthalate, 8) DIBP: Diisobutyl phthalate
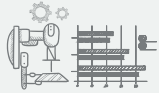
Advancing Into Circular Economy

We endeavor to move towards a circular economy in which we create a virtuous cycle of longevity, repair, reuse and recycling. Through our efforts, we hope to reduce our environmental footprint while reducing costs. In order to follow circular economy principles, we have established the following five strategic principles and conducted various closed loop programs:

SAMSUNG ELECTRONICS CIRCULAR ECONOMY PRINCIPLES

01		Expanding use and purchase of recycled materials at product design stage while minimizing use of raw materials
02		Working towards maximizing product lifespan by designing products based on end customer needs and rigorous quality testing
03		Reducing the use of virgin natural resources and raw materials by maximizing re-use of scrap materials from manufacturing stage
04		Minimizing use of raw materials and maximizing transportation efficiency by creating compact product designs and packaging
05		Extending the product life span and increasing customer satisfaction through a professional repair service network

SAMSUNG ELECTRONICS' CLOSED LOOP PROGRAMS

Beyond those introduced above, we are promoting closed loop programs that enable us to recycle and reuse resources and to break out of a linear economy.

1. Expanding Recycled Plastics Use
As part of our closed-loop program, we are using recycled plastics on a broad array of products including refrigerators, washers, air conditioners, TVs, monitors, and mobile phone chargers. We are also contributing to the reduction in the use of virgin natural resources and related negative environmental impact by using Post Consumer Material (PCM), which is renewed material from disposed water bottles and consumer plastics. In 2017, we used 35.3 thousand tons of PCM, which represents 6.1% of our total plastic consumption.

2. Recycling Key Metal Resources
We are analyzing the materials composition of our main products and also pursuing efforts of circular resources use by analyzing the risks of various aspects such as the stable supply of the material, environmental impacts, and economic and social impacts.

Lithium-ion batteries, which are widely used to power smartphones, are made with cobalt. We consider cobalt as a key resource in our business and recognize that it has a significant environmental, social and economic impact on our supply chain. In order to recycle cobalt, we collect batteries from smartphones and consumer electronics and reuse them in our products. Moreover, we collect scrap materials from not only service and repair centers but also from our manufacturing sites across the globe.

Aluminum also plays a major role in production due to its lightness and durability. In 2017, we successfully built a TV frame from recollected aluminum from disposed mobile phones. We look forward to expanding our closed loop aluminum efforts in 2018.

Copper is also an important material as it is used extensively in most electrical wiring and electronics. We collect

copper from used refrigerators, washers, air conditioner cables, and compressors through our recycling center in South Korea. We then refurbish and use them in our consumer electronic products.

A good example of our efforts to integrate recycling into our global operations is our new recycling initiative for used batteries in Vietnam. The initiative, which will be carried out by Samsung Electronics Vietnam from August 2018, will involve the collecting of key metals including cobalt and nickel from used batteries, fully in compliance with regulatory frameworks. First, we will transport the used-batteries to South Korea while safely preventing the possibility of a short circuit. The batteries will then go through a 4-step process, including perforation, brining, drying, and disassembling. Key metals extracted during this process will be sold for reuse. We hope that this initiative will demonstrate our commitment to reducing our negative footprint on the environment, and our ability to offer valuable resources at a reasonably low cost.

3. Recycling Centers

In South Korea, we collect used home appliances from consumers. We are operating a 'Recycling Center' for copper, aluminum, and plastic from the collected appliances. In 2017, our 'Recycling Center' processed 356,869 used products including refrigerators, washers, and air conditioners. From these products, the center collected 25,365 tons of materials in total, including iron(11,443 tons), aluminum (1,011 tons), copper(4,044 tons) and plastic(7,056 tons).

The plastics were then sent to recycled plastics manufacturers who have the skills and technology to renew the materials to be used in new products. Through this process, we created a closed-loop plastics cycle which enhanced our efforts to recycle and reuse 1,500 tons of recycled plastic in 2017.

4. Minimizing Resource Use and Extending Product Life Span

As we expand our sales network globally, we also strive to expand our repair network and customer service that makes repair of products more accessible. Professionally trained employees providing accurate diagnosis and appropriate measures to meet customer demands at our repair sites contribute extending product lifetime.

In the Netherlands, for example, for mobile phones, we are operating a service called 'Home-Delivery Service'. The service picks up the product that needs repair from the customer's house, repairs the product within 3 days, and delivers it before midnight on the third day. In the U.S.A., we are planning to expand our network of authorized Samsung Care repair centers to 500 locations by 2019.

Moreover, by investing in Artificial Intelligence, we are planning to increase remote care services such as 'Homecare Manager' for household appliances. 'Homecare Manager' will send product operation information to a dedicated server, analyze it through our AI algorithm, and ultimately provide information on the cause of a product malfunction as well as the best solution.

In an effort to increase increase product durability, we are performing product tests starting from the development phase which tests product durability, drop-resistance, and life span. We test our products in real customer usage conditions and rigorously apply lessons learned to fix potential issues. We are testing our products beyond international testing standards to continuously make product improvements. In addition, we are expanding the range of our tests in order to make the product last longer.

Green Products and Recognition

2017 ECO-CONSCIOUS PRODUCT HIGHLIGHTS

Smartphone(Galaxy Note 8)

- High-efficiency charger(20% recycled plastics, Charging efficiency 86%, standby power 0.02W)
- Ultra power-saving mode
- Application of bio-materials(Earphone jack: bio-nylon, Packaging: by-products of sugar cane and bamboo)

LED TV(UE65MU9000)

- EU Energy Label 'A+' grade
- Energy Saving Mode
- Screwless Design(higher productivity and recyclability)
- Accessories Bag made of 20% Sugar Cane

Wall Mounted Air Conditioner (AR07M5170HA)

- World's first wind-free wall mounted air conditioner
- Wind-free 2-step Cooling(Wind-free function reduces energy consumption rate up to maximum 72%)
- Power Saving Digital Inverter equipped
- Energy Consumption Monitoring function
- Air purification Filtering system for PM2.5

Air Purifier(Blue Sky 6000)

- Clean-air circulation/natural humidifying function
- Electrolysis decomposed Pure Water (bacterium eliminated)
- 8-step filtration system(eliminates harmful substances/virus/allergens)
- Filter Saver function(doubles life span of filters)

Refrigerator(DRF427500AP)

- ENERGY STAR® certified
- Triple Metal Cooling+ System
- Flex Temperature alteration function(Cold storage Freezer)
- The hydrocarbon based refrigerant
  - First to apply eco-concious refrigerant to built-in refrigerator in the U.S.A.

Washer(Quick Drive)

- EU Energy Label 'A+++' grade(highest grade)
- Reduced wash cycle duration by 50% by applying automatic rotary valve parts on Drum washers
- Automatic Optimal Wash function-customizes detergent/softener use based on polluted levels of garments

Dryer(DV90M53A0Q*)

- High Efficiency Heat-pump Inverter equipped
- 99.99% air sterilization for dry/wet laundry
- Water level check

Memory(20Nano 8GB HBM2 DRAM 2nd Generation Aquabolt)

- Clean-air circulation/natural humidifying function
- Electrolysis decomposed Pure Water (bacterium eliminated)
- 8-step filtration system(eliminates harmful substances/virus/allergens)
- Filter Saver function(doubles life span of filters)

SSD(512GB BGA NVMe SSD, V-NAND, 1g Package)
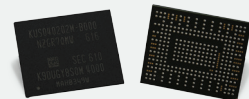
- 2.8 times increase in power consumption efficiency(1500MB/s)
- World's first 1g 512GB SSD(superspeed) (Previous model: 50g 2.5" SATA SSD, passive elements > 300)
- Lowest energy consumption levels in industry(Active < 3W, Idle < 60mW, L1.2 < 5mW)
- Zero-noise/vibration, Ultra power saving

GLOBAL ENVIRONMENTAL LABEL CERTIFICATION

As a way of expanding our green product development, we innovate to meet and contribute to the development of environmental criteria such as the Environmental Protection Agency's ENERGY STAR® program in the U.S.A. Many of our products are eco-certified by a total of 10 governments including South Korea, the U.S.A, and Europe as well as such standards organizations as UL(Underwriters Laboratory) of the U.S.A. and the Canadian Standards Association (CSA). By the end of 2017, a total of 1,632 models obtained these eco-label certifications on an accumulated basis. Furthermore, some of our products are carbon-labeled by third-party accreditation bodies. We identify their carbon emissions throughout the life cycle and we use such data in improving the environmental footprint of our products.

ECO-LABEL

Asia

Korea | China

North America

U.S | UL | CSA

Europe

EU | Grermany | Sweden | Nothern Europe | Russia

Central/Latin America

Brazil

CARBON-LABEL

Korea

(carbon emissions + low-carbon products + carbon-neutral products)

U.K.

Carbon Trust

ENVIRONMENTAL AWARDS GRANTED IN 2017

Governments and organizations across the globe operate diverse environmentally-friendly award programs to raise consumer awareness regarding product innovation and design and to encourage businesses to practice green management. Our commitment to green management has been widely recognized through the following awards granted to our green products – energy-efficient products and easily-recyclable products – as well as our green management initiatives undertaken in respective countries to voluntarily collect and recycle waste products.

ENVIRONMENTAL AWARDS GRANTED IN 2017

Category	Country	Name of Award	Organizer	Time	Description
Company	Russia	All-Russian eco-day 'Green Spring'	V.i. Vernadsky Foundation (Non-governmental environmental Fund)	June 2017	• Best environmentally friendly campaign, event, educational programs(environment purification and preservation projects)
Product	Korea	Energy Winner Awards of the Year	Consumers Korea	July 2017	• High efficient energy products: Wind-free air conditioner, outdoor units for 360 cassette air conditioners, Chef collection refrigerators
		Green Packaging Award	Korea Environmental Packaging Institute	Nov 2017	• Awarded for applying grindstone plastics on mobile phones packaging
	U.S.A.	Environmental Leader Award	Environmental Leader	May 2017	• Awarded for Environmental Educational Program(Project), R600 environmentally friendly refrigerants(Product)
		SMM Electronics Challenge Champion Award	U.S. Environmental Protection Agency	Jan 2018	• Galaxy Upcycling project • Achieved 'Gold Tier' on e-waste collection and recycling
	Canada	ENERGY STAR® Award	Natural Resources Canada	May 2017	• Awarded: - Manufacturer of the Year -Consumer Electronics - Manufacturer of the Year - Appliances

We take this mission seriously. We go above and beyond regulations to meet our stringent procedures and controls. We also take a proactive approach in discussing environmental and social impact issues with our internal and external stakeholders.

Operational Impact

Our Global Environment, Health and Safety(EHS) Center and Global Customer Satisfaction Center, under the direct leadership of the CEO, actively manage EHS and product environmental impact respectively. Our Global Environment, Health and Safety System(G-EHS) establishes an integrated EHS operation and management framework which is underpinned by key performance indicators.

Our operational greenhouse gas(GHG) emissions, consumption of energy and water resources, generation of air and water pollutants, and discharge of wastewater all increased in 2017 due to the establishment of new production sites, introduction of large-scale facilities, and increases in production and product sales. We are committed to reducing the impact of our operations on the environment, including as we expand and grow. We are striving to improve our facilities and systems to reduce the total amount of pollutants generated, increase the use of renewable energy, launch corporate citizenship projects to help our environment, manage our suppliers' environmental impact, and partner with local communities to protect the ecosystem in the vicinity of our worksites.

In 2017, we continued our commitment to gradually increase our use of renewable energy sources. Also we undertake global social initiatives to raise awareness regarding the need to protect the environment as a responsible corporate citizen. Our environmental approach and performance have been recognized as globally leading in addressing climate change. We were ranked in the 2017 Carbon Disclosure Project(CDP) 'A List' in both climate change and water security. In particular, the climate change sector has been on the CDP ranking for eight consecutive years.

In 2017, we spent a total of KRW 951.3 billion in investing and operating EHS facilities, and our annual EHS expenditure is constantly rising as we diligently work to improve our facilities. Additionally, to follow up our efforts on Eco-Management 2020, we are reviewing setting up science-based targets and ways to quantify our operation's financial implications on the environment.

Our Commitment Statement:
Samsung's commitment to the planet by operating responsibly as a leading global company

Societal Challenges:
The physical and transitional risks of a changing climate have environmental, social, economic, and financial implications for electronics manufacturing and are expected to become increasingly disruptive to businesses over time

Cook Stove: Carbon Offset & Offering a Safer and Sustainable Way of Living in Kenya

One way Samsung is minimizing our operational impact on the environment is by actively using various carbon offset programs. In Kenya, we were able to earn carbon credits issued by the Clean Development Mechanism(CDM), certifying the company's commitment to reducing its carbon footprint in developing countries.

In Mombasa, Kenya's second largest city, 80% of the households rely on charcoal for their cooking requirements. Charcoal fuel used for cooking produces toxic fumes when burned, creating health impacts which include early mortality rates. Burning charcoal can also lead to serious air pollution and accelerate deforestation. Since current fuel alternatives such as liquid petroleum gas and kerosene are expensive and are considered a fire hazard, the people of Mombasa have had no viable alternative to charcoal as fuel for cooking purposes.

It is estimated that 2.4 Gton of CO_2e of GHGs, an astounding 7% of global GHG emissions, are emitted annually in the production and use of fuelwood and charcoal. Globally, over 2.4 billion people - about one-third of the world's population - still rely on the traditional use of woodfuel for cooking. The United Nations Food and Agriculture Organization has long been reporting that the woodfuel value chain has considerable room for reducing GHG emissions, especially in cooking.

As part of Samsung's commitment to reduce our carbon footprint in our operations as well helping communities across the globe, we partnered with Green Development to help the people of Mombasa achieve an alternative to charcoal for cooking. In 2017, Samsung invested €1 million to purchase and distribute bioethanol cookstoves and distributed across households in Mombasa.

Unlike charcoal, bioethanol is a renewable, clean energy source, and a byproduct of sugar production. The fuel is six times more energy efficient than charcoal, thus reducing greenhouse gas emissions. The stoves themselves are affordable, safe to use at home and have a reduced impact on the environment. By supplying these eco-friendly stoves, Samsung aims to help the environment and improve the health and safety of the residents of Kenya's second largest city while contributing to their economic sustainability.

Through our efforts, we believe we can reduce 500,000 tons of CO_2e GHG emissions over five years. Already experienced in operational efficiency, Samsung's decision to use bioethanol stoves was largely driven by the relative cost-effectiveness of the energy source, which is produced from fermented molasses waste from local Mombasa sugar refineries.

Samsung and Green Development will provide training for sourcing, production and sales of bioethanol stoves and fuels in Mombasa, thereby positively contributing to revitalizing the community's economic sustainability. This project aims to improve the quality of life for the residents of the community, and to reduce climate change.

"Samsung Electronics is taking further steps to work with the United Nations High Commissioner for Refugees(UN-HCR) to implement this project in refugee camps in Africa" said Haengil Kim, Senior Vice President leading Global Environment, Health and Safety Centre at Samsung Electronics. "The company will continue to help tackle social challenges in local communities and to address climate change."

837 Flagship Showroom, Samsung's Technology Playground in NYC, Earns EPA's ENERGY STAR®

Located at 837 Washington Street in New York City's Meatpacking District, U.S.A., Samsung 837 is the first of its kind technology hub and cultural destination for consumers, creators, tech enthusiasts and community members. A physical manifestation of the Samsung brand, 837 is a flagship experience in how Samsung's signature services and technology – ranging from mobile devices to home appliances – can make life better.

"AT SAMSUNG, WE HAVE A PROVEN TRACK RECORD OF INNOVATION, AND WITH SAMSUNG 837, WE ARE CREATING THE FLAGSHIP OF THE FUTURE" SAID ZACH OVERTON, VICE PRESIDENT AND GENERAL MANAGER OF SAMSUNG 837. "REIMAGINING THE TRADITIONAL STORE EXPERIENCE, 837 IS A FULLY IMMERSIVE CULTURAL CENTER, FEATURING PROGRAMMING WHICH WILL TAP INTO PEOPLE'S PASSIONS SUCH ART, MUSIC, ENTERTAINMENT, SPORTS, WELLNESS, CULINARY, TECHNOLOGY AND FASHION, ALL POWERED AND ENRICHED BY TECHNOLOGY."

The state-of-the-art building is more than a creative expression of Samsung's brand; it is also a prime example of our commitment and ability to incorporate energy efficiency into buildings and operations.

In 2017, Samsung 837 was awarded EPA's ENERGY STAR® certification. The certification is granted to buildings that use 35 percent less energy and generate 35 percent fewer greenhouse gas emissions than similar buildings across the nation.

According to Alliance to Save Energy's new President, Jason Hartke, "Samsung Electronics leads by example with its 837 showroom in New York City – the only ENERGY STAR®-certified office building in New York with a perfect score." He says, "We want to create a world that uses energy more productively to achieve economic growth, a cleaner environment and greater energy security, affordability and reliability. We have worked toward achieving these goals since our founding in 1977, and as much as we've accomplished in recent decades, we have even more opportunity ahead of us. We won't be able to reach our goals without the leadership of companies like Samsung, and we are thrilled to work alongside them to build a more energy-productive future."

According to ENERGY STAR®, an average building similar in size and scope to 837 uses 2,521,137 kWh which or costs $150,000. However, our 837 showroom only uses 623,561 kWh and our electricity fees amount to $37,000. Samsung 837's remarkable performance in energy efficiency was possible because the building was designed with energy efficiency in mind. It achieved LEED Silver(Core and Shell) during renovation and has the necessary systems in place to achieve energy efficiency. The building operators of 837 take great pride in their facility. They understand the systems and ensure all equipment are operating when necessary and curtail usage when the building is unoccupied.

Going forward, we at Samsung look forward to replicating similar energy conscious designs across the globe - in our factories, our office spaces, and our showrooms.

Environmental Management in Our Operations

In reducing our environmental footprint Samsung's Environmental Health & Safety(EHS) Policies are focused on maintaining high environmental, health, and safety standards.

Our green management roadmap identifies four key performance indicators in the areas of certification of EHS management systems, GHG emissions, water resource, and waste management. We are closely monitoring our progress in achieving these goals by 2020. Furthermore, we are setting up our long-term 2030 goals by adding pollutants, renewable energy to our list of performance measures.

Our global manufacturing facilities are certified by the International Organization for Standards(ISO) 14001 environmental management standards, Occupational Health and Safety Assessment Series(OHSAS)18001 occupational health and safety management standards, and International Organization for Standards(ISO) 50001 energy management standards. We ensure that these management systems remain certified through annual recertification reviews. Our system includes an annual post-action evaluation and a renewal evaluation every three years. In 2017, we identified 1,346 tasks as a result of the internal EHS audits.

Our top management is committed to managing our operational impact through the following activities:

COMPANY-WIDE EHS COMMITTEES AND COUNCILS

Committees/Councils	Description	Supervisor	Meeting Schedule
Environment & Safety Committee	Deliberate on company-wide environmental strategy and discuss worksite-related pending issues	CFO	3 times a year
Eco Council	Set development goals and implementation strategies for highly energy-efficient and eco-friendly products	Head of the Global CS Center	2 times a year
IM/CE Division Synergy Committee	Discuss workplace EHS issues, best practices, and healthcare	Head of the Global EHS Center	2 times a year
DS Division EHS Committee	Consult on key EHS issues	CEO	6 times a year
Company-wide EHS Manager Council	Consult on continuing to build a safety culture, regulatory compliance, and chemicals management	Head of the Global EHS Center	6 times a year
Company-wide GHG Council	Select implementation tasks to respond to climate change and manage their progress	Head of the Global EHS Center	2 times a year

OUR GOALS AND ACHIEVEMENTS BY KPI

Certification ratio of EHS management systems[1] (%)

2015	100
2016	100
2017	100
Goal 2020	100

Intensity-based GHG emissions[2] (tCO2e/KRW100 million)

2015	2.64
2016	3.04
2017	3.28
Goal 2020	1.55
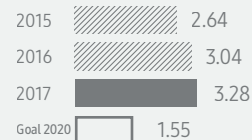
Intensity-based water consumption (ton/KRW100 million)[2]

2015	53
2016	60
2017	59
Goal 2020	50

Recycling of waste (%)[3]

2015	93
2016	95
2017	95
Goal 2020	95

Footnotes:

1) Ratio of obtaining ISO 14001, OHSAS 18001 certifications at 36 global production sites
2) Calculation: Total CO_2e(Scope 1, 2) emissions or total water consumption at global worksites ÷ consolidated global sales ÷ price index
3) Calculation: Amount of recycled waste ÷ total amount of waste generated x 100
   Price index: Producer price index as disclosed by the Bank of Korea for the concerned year(Base: 2005 = 1)
4) Waste Recycled ÷ Waste generation ×100

LEGAL COMPLIANCE AND COMMUNICATIONS

In our environmental compliance management, we apply standards and criteria that are more stringent than required by local regulation. Our environmental targets are on average 80% lower than required. There has been no violation of environmental regulations at any of our production sites globally over the past three years.

We actively communicate with our internal and external stakeholders on environmental issues. For our domestic semiconductor sites, we hold monthly meetings to receive feedback from local citizens. In 2017, we received 2,508 feedbacks from our stakeholders regarding operational impact on the environment and finally resolved 97% of them. In addition, we set up a EHS supporting council for suppliers to audit and improve their facilities.

Climate Stewardship

GHG EMISSIONS MANAGEMENT

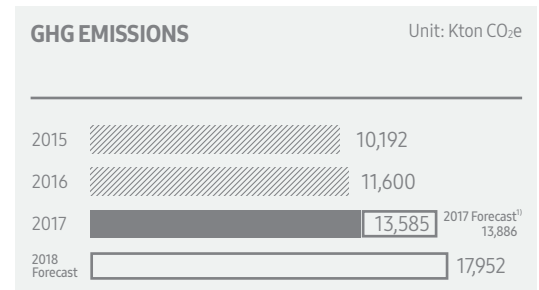The G-EHS system allows us to verify targets and manage outcomes concerning our GHG emissions(Scope 1 and 2) across all of our worksites on a monthly basis. Every year, we set reduction targets for respective worksites and aggressively work on reduction projects. In 2017, we reduced GHG emission by 2.2% of the forecasted amount of 13,886 Kton CO_2e. For Scope 3 emissions, we trace the emissions generated through product logistics and business trips as well as the emissions from our first-tier suppliers

GHG EMISSIONS   Unit: Kton CO_2e

Year	Value
2015	10,192
2016	11,600
2017	13,585 2017 Forecast[1] 13,886
2018 Forecast	17,952

Footnotes:

1) 2017 emission forecast has been recalculated

CLIMATE CHANGE STRATEGY

We established a comprehensive strategy spanning climate change mitigation and adaptation and operate its implementation process accordingly. We prioritize key climate change issues relative to their importance and impact. We later integrate them into our policy decision-making process. The '2017 CDP Climate Change', rated our climate change management system as 'Leadership A'.

• Reducing Occupational Greenhouse Gas Emission
In 2017, we implemented 104 emission reduction projects. These projects, including F-Gas reduction equipment, replacing inefficient facilities, and optimizing facility operations have reduced an aggregate 404,835ton CO_2e.

• Adoption of Renewable Energy
We made it mandatory for our newly constructed facilities to use renewable energy at a predetermined ratio. We are also shifting towards using renewable energy at our worksites including solar power. We continue to increase our purchase of renewably sourced electricity, in countries where adequate infrastructure exists. In other countries, we put in efforts to shape the regulatory framework. In 2017, we replaced a total of 228.5 GWh energy with renewable sources.

• Scope 3 Reduction Projects
In 2017, we operated 36 Scope 3 reduction projects in South Korea. Projects included smart transportation routing systems and solutions to logistics loading inefficiencies. These projects reduced our emissions by a total of 2,254 ton CO_2e in 2017. To reduce GHG emissions generated by our suppliers, we identify and calculate the energy consumption(including power and fuel) of our suppliers on an annual basis. We assist suppliers whose energy management system requires improvement by conducting on-site consulting and identifying energy saving projects. Meanwhile, we introduced a video conferencing system to minimize business trips: a total of 191,741 video-based meetings were held in 2017, which reduced by 9% of GHG emission compared to 2016.

CLIMATE CHANGE RESPONSE PROCESS

IDENTIFY ISSUES

Climate Change Risk and Opportunity

Climate change risks and countermeasures		Turning climate change into opportunities
Regulatory	• Carbon tax: Develop refrigerants with low global warming potential	• International agreement: Undertake CDM(Clean Development Mechanism) projects at worksites, secure emission credits
	• GHG emissions trading scheme: Build a system to reduce emissions and respond to carbon trading	• Product labeling regulations and standards: Expand the acquisition of eco-labeling and energy labeling
	• Product energy efficiency regulations: Develop high energy efficiency products	

ANALYZE RISKS AND OPPORTUNITIES

Physical	• Typhoon/flood: Increase facility investment to prevent and repair from natural disasters	• Impact from climate change: Undertake corporate citizenship projects for climate change adaptation
	• Yellow dust: Set damage prevention and recovery scenarios and invest in heating/air conditioning facilities	• Worsening air pollution: Create new business opportunities for home appliances, such as air purifiers and dryers
Others	• Corporate reputation: Strengthen in-house green initiatives and external communication	• Corporate evaluation: Improve our corporate reputation
	• Changing consumer behavior: Survey consumer propensity and expand the development of green products	• Consumer demand: Proactively respond to demand for green products

SET STRATEGIES

Climate Change Response Strategy

Reduction in GHG emissions at worksites	Expansion of energy management at worksites	Reduction in GHG emissions in the product use phase	Management of Scope 3 emissions	Supplier support

EXECUTE

• Operate F-Gas emission reduction facilities at the semiconductor manufacturing process • Manage energy saving projects and improve energy efficiency	• Develop energy management systems across all worksites and maintain the relevant certification (from 2013 onwards) • Manage worksite specific energy costs and indicators	• Develop and launch products with higher energy efficiency	• Manage GHG emissions from logistics, business trips and others(from 2009 onwards)	• Monitor suppliers' GHG emissions(from 2012 onwards)

ANALYZE OUTCOMES

GHG Reduction Result and Plan

	Reduce gas used for manufacturing	Increase manufacturing process efficiency	Introduce high energy-efficient facilities	Switch to LED lighting	Increase facility efficiency	Others
GHG Emissions Reduced in 2017	52.1%	32.8%	8.8%	2.0%	1.9%	2.0%
GHG Emissions Reduction Plan for 2018	80.7%	0.1%	1.1%	0.2%	14.2%	3.7%

KEY PROJECTS ON CLIMATE CHANGE ADAPTATION

• Research on Climate Change Adaptation

Based on the findings of the 'Climate Change Adaptation' project conducted in partnership with the Graduate School of Environmental Studies at Seoul National University in 2015, we have been working on three major climate change related projects. Firstly, we worked on improving the quality of the drinking water supply in Vietnam. In 2017, we provided drinking water facilities to 10 Vietnamese educational organizations. Secondly, as part of our household energy efficiency improving project, we replaced energy consumption facilities for 61 low-income households in Korea, reducing 43 ton CO_2e carbon emissions. Lastly, we developed educational material on climate change adaptation that was used to train 300 instructors. These instructors were able to conduct educational pilot programs for 2,220 students enrolled in 11 schools.

ENERGY MANAGEMENT

The absolute energy consumption at our worksites is constantly rising as we introduce new production facilities and increase our production volume each year. This prompted our worksites to identify energy-saving and conservation projects, set annual action plans and manage their monthly progress. In 2017, we outperformed our annual energy consumption forecast we consumed 99% of the allotted amount.

ENERGY CONSUMPTION   Unit: GWh

Year	Value
2015	19,478
2016	21,073
2017	23,419 2017 Forecast 23,603
2018 Forecast	31,066
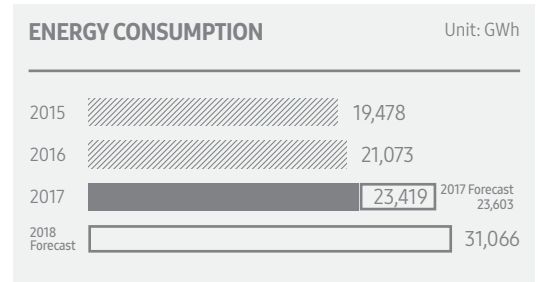
Water and Wastewater Management

WATER RESOURCE MANAGEMENT

We are working towards our goal of reaching 50 tons/KRW 100 million intensity-based water consumption primarily through our '3R Initiatives'(Reduce, Reuse, Recycle) and effluent discharge monitoring activities.

Our water resource risk analysis strategy applies the water resource management methodology suggested by the Food and Agricultural Organization(FAO), World Business Council for Sustainable Development(WBCSD), and the

World Resource Institute(WRI). Of the regions we operate in, our risk analysis identifies five countries - home to 12 of our subsidiaries - as water-stressed. Accordingly, we have set up risk handling strategies based on the CDP Water guidelines to address the problems.

Every year, we actively participate in CDP Water and disclose our water management information in order to increase transparency in our water usage. In 2017, we were recognized on CDP Water A-List, and received the 2017 CDP Water Korea Best Awards.

WATER RESOURCE POLICY

PHILOSOPHY	We recognize the importance of water resources in maintaining a sustainable society and conducting business, and fulfill our social responsibility to protect these valuable resources as a global company.			
ACTION GUIDELINES	1 We strive to minimize water resource risks in our business conduct.	2 We recognize the importance of water resources as part of our corporate culture.	3 We fully cooperate in complying with public water resource policies.	4 We disclose our water resource policies and initiatives.

OUR WATER WITHDRAWAL BY REGION

Unit: Kton

Water Withdrawal by Subsidiary	Subsidiaries	Withdrawal Amount	Discharge	Notes
Total	37	120,619	95,919	-
Water- Stressed[1] Subsidiary	12	78,313	64,163	South Korea(7), India (2), Poland(1), Egypt(1), South Africa(1)

Footnotes:

1) Identified by comprehensively applying the water resource management methodology of 3 organizations - FAO Aquastat, WBCSD GWT, WRI Aqueduct

GLOBAL WATER RESOURCE RISK ANALYSIS AND STRATEGY

COUNTRY	TYPE	STRATEGY
KOREA	Physical risk (floods)	• Create wetlands and dikes in response to floods affecting streams in the vicinity of our worksites • Purchase disaster insurance policies and regularly check flood control equipment
INDIA	Physical risk(water quality degradation)	• Increase the frequency of conducting in-house water quality analysis and the efficiency of water treatment facilities
POLAND	Reputational risk(wastewater leaks)	• Build an emergency response system and conduct regular drills in preparation for wastewater leaks
EGYPT	Physical risk(droughts)	• Secure water tanks to store water sufficient for one day operation of production faciities on average
SOUTH AFRICA	Regulatory risk(discharge)	• Sewage and wastewater from worksites move to the terminal treatment facility within the industrial complex for processing, and thus pose lower risks of environmental accidents(no in-house sewage/wastewater treatment facility under operation)
COMMON	Physical risk(water quality degradation)	• Secure water quality through the pre-intake water treatment process
	Physical risk(water outages)	• Install dual water intake facilities and water collecting facilities to prevent production delays
	Regulatory risk(regulatory change in water use and discharge)	• Abide by the in-house criteria stricter than country-specific legal discharge criteria
	Regulatory risk(enactment of efficiency standards)	• Conduct water efficiency reviews in building new facilities and make facility investment to improve the water efficiency of existing facilities
	Regulatory risk(uncertainty over new regulations)	• Continuously monitor global environmental regulations
	Reputational risk(lawsuits raised due to wastewater)	• Continuously monitor effluent discharge • Build an environmental management system early on for new manufacturers

In order to increase our water reuse, we classify water into 4 categories - sewage, wastewater, industrial water, and ultra-pure water - and manage them separately at each facility. We monitor the reuse rate of each category through our internal system called 'G-EHS.' We calculate the reuse volume by subtracting the amount of water discharged, evaporated, and loss from the total amount of water used at treatment facilities.

FLOW OF WATER RESOURCES Unit: Kton
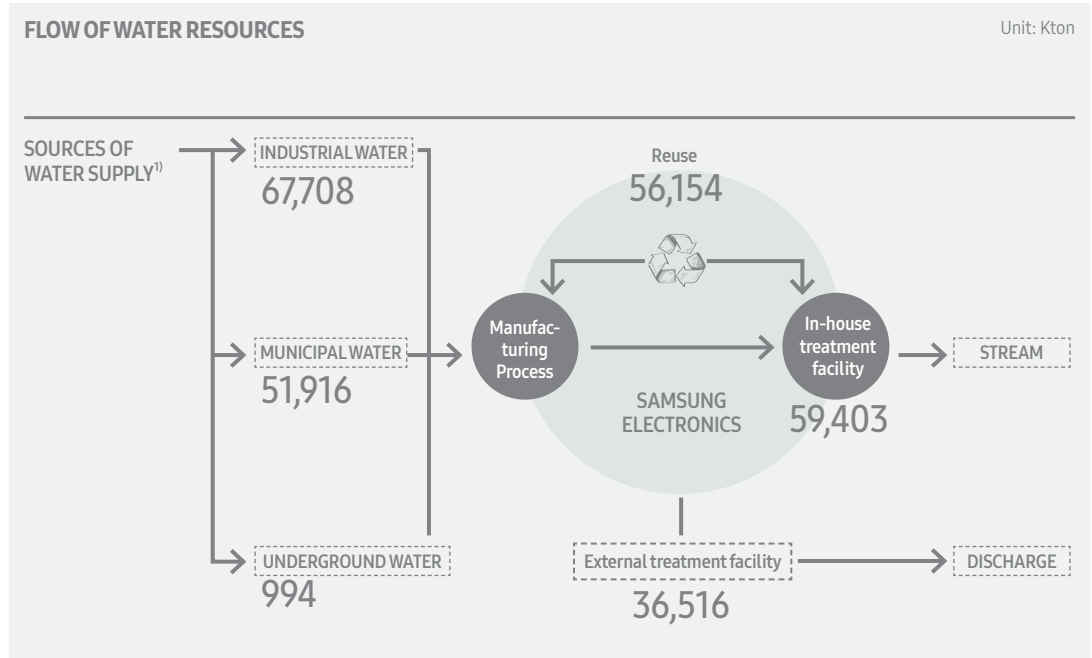
Footnotes:

1) Minimize water resource risks by securing dual water supply pathways and installing water storage tanks

WATER RESOURCE STRATEGY

Our commitment to optimizing the use of water resources spans daily endeavors such as replacing old valves with new ones and improving the control of tower drain valves. Also, our commitment includes structural improvements such as improving the manufacturing process and building a recycling system. The sum of these efforts enabled us to reuse 56,154 thousand tons of water in 2017, up 16.3 % from the previous year.

• Established an Wastewater Treatment Facility
By constructing facilities dedicated to the treatment of wastewater generated from the grinding process, we improved the recycling rate of waste water, reducing industrial water usage by an average of 915 tonnes.

• Optimized Cleaning Facilities
We reduced ultrapure water consumption by 6,450 tonnes per year by reducing cleaning time of equipment during the cleaning process.

• Optimized Acid Alkaline Wastewater Recycling System
We reduced ultrapure water consumption by 310,000 tons per year by optimizing the operation of the acid alkaline wastewater recycling facility.

Waste and Hazardous Waste

At Samsung, waste generated in our facilities is classified according to each country-specific standards. Generated waste is then further classified as either 'General waste' or 'Designated waste' and disposed according to the pre-scribed methods such as reuse, incineration, and landfill. In situations where self-treatment is not possible, we work with third party waste treatment contractors in accordance with laws and regulations in the operating region.

Our goal is to reach 95% generated waste recycling rate by 2020. To meet this goal, we rigorously monitor the amount of waste generated and recycled at all of our worksites on a monthly basis. For those worksites failing to meet their target, we develop separate management plans to reduce the waste generated.

WASTE TREATMENT BY METHOD IN 2017 Unit: Ton

	AMOUNT OF GENERATED WASTE	AMOUNT OF WASTE BY TREATMENT METHOD		
		INCINERATION	LANDFILL	RECYCLE
GENERAL WASTE	760,461	15,544	16,591	728,326
HAZARDOUS WASTE	386,351	16,757	8,941	360,653
TOTAL	1,146,812	32,301	25,532	1,088,979

WASTE MANAGEMENT PLAN

KEY AREAS	MANAGEMENT PLAN
Product Development	• Operate Eco-design evaluation process • Evaluate eco-friendliness in the development phase(e.g. resource efficiency, environmental hazards, energy efficiency)
Waste Discharge	• Set targets in waste recycling ratio • Reduce environmental hazards(develop and switch into lowtoxic substances, neutralize toxic substances, etc.)
Waste Transport	• Comply with conventions on the border control of hazardous waste • Monitor the movement routes of waste-carrying vehicles
Waste Treatment	• Check the waste processing service providers' compliance level through regular visits • Perform annual environmental assessments on processing service providers(operational competency, environmental management, etc.)

POLLUTANT MANAGEMENT

To reduce emissions for air pollutants, we have introduced a Nitrogen Oxide(NOx) reduction system, a catalyst oxida-tion process, and a dust collector and cyclone system. In addition, to reduce the amount of water pollutants emitted, we have improved the production lines and constructed a disposal facility exclusively for wastewater, which enabled us to remove 97.9% of the water pollutants at our Korean worksites(only 6,582Kg were discharged out of the total

incoming pollutants of 315,382Kg).

Our domestic operations fully comply with the Montreal Protocol, which bans the use of CFC(chlorofluorocar-bon)-based materials with high ozone depletion potential. Instead we currently use HCFC(hydro chlorofluorocar-bon)-based substances whose ozone depletion potential is relatively low as refrigerants for freezers and chillers at our worksites and plan on continuously reducing their use.

Biodiversity

BIODIVERSITY CONSERVATION POLICY

OUR BELIEF	We recognize the importance of biodiversity, aim to minimize any negative impact on biodiversity, and fully undertake ecosystem preservation initiatives.

ACTION PLANS	1 All our employees recognize the preservation of biodiversity as a critical value of our green management.	2 We assess and analyze our influence on ecosystems and biodiversity along the life cycle of our products and strive to minimize any negative impacts.	3 We place top priority on the areas whose value of biodiversity is high across all our worksites in domestic and global sites and undertake biodiversity preservation initiatives that cater to local needs.	4 We constantly communicate with employees, local communities, NGOs, and stakeholders to contribute to the preservation of biodiversity in local communities.

ECOLOGICAL IMPACT ANALYSIS ON NEARBY STREAMS

STREAM	ECOLOGICAL STATUS
Wonchenri Stream, Hwaseong	• **Measured by**: Kyunghee University, Korea • **Fish**: 720 individuals from 17 species were confirmed(carp 89%, mudskipper 6%) • **Ecosystem**: Benthic invertebrates were confirmed(insects 50% / non-insects 50%) ⟶ Dominant species: Trichoptera(27%) • **Ecotoxicity**: No impact on the stream was observed as a result of measuring effluent
Osan Stream, Giheung	• **Measured by**: Korea Ecology & Environment Institute • **Fish**: 1,200 individuals from 19 species were confirmed(crucian carp 38%, carp 38%) • **Ecosystem**: Benthic invertebrates were confirmed(insects 71% / non-insects 29%) ⟶ Dominant species: Caddisfly(Cheumatopsyche brevilineata Iwata, 33%) • **Ecotoxicity**: No impact on the stream was observed as a result of measuring effluent
Seojeongri Stream, Pyeongtaek	• **Measured by**: Pyeongtaek University • **Fish**: 84 individuals from 84 species(Dominant species: Crucian carp, subdominant species: oriental weatherfish) • **Benthic invertebrates**: 387 individuals from 19 species(dominant species: Red midge, subdominant species: Physa acuta Draparnaud) • **Attached algae**: Confirmed 20 genera of 36 taxa(Dominant species, subdominant species: diatom)

ENDANGERED SPECIES BY REGION ACROSS KOREAN WORKSITES

Unit: Individual

HABITAT	SUWON	YONGIN	HWASEONG	GUMI	GWANGJU	ASAN
Mamma	1	–	1	2	5	1
Bird	6	–	26	7	6	19
Fish	–	–	–	1	1	–
Amphibian	2	2	3	–	–	3
Insect	–	1	1	–	–	–
Plant	1	–	2	3	1	–
Others	–	–	–	–	–	2

Respecting and protecting human rights - the fundamental and inalienable rights and freedoms to which all people are entitled - is at the core of our labor practices. We also believe that the wellness of our employees directly affects the quality of products and services we offer to our customers around the world. We have implemented strict requirements within our workplaces and for our suppliers to protect the rights of employees and advance wellness.

Labor & Human Rights

At Samsung, we strive to foster a creative, culturally diverse and collaborative work environment. We do not tolerate any kinds of discrimination on the grounds of nationality, race, gender, education, age or religion, and harassment or offensive behaviors of employees.

Our Anti-Discrimination Policy ensures that we provide equal opportunities to all employees and applicants. In terms of labor practices, for each work area, we abide by the regulations of each country as a minimum requirement. We also respect the privacy of all current and former employees; and when they have something to say, we are always ready to listen.

Our policies provide strong support for the global effort to prevent child labor and forced labor. Finally, we recognize the seriousness of human rights violations and environmental pollution caused by the mining of minerals. We do our best to provide our customers with products using minerals sourced in an ethical manner based on the responsible management of the supply chain, and strongly prohibit the use of conflict minerals.

Our Commitment Statement:
Samsung's commitment to protect labor and human rights throughout our operations and business activities

Societal Challenges:
Globally it is recognized that labor and human rights are essential to achieve sustainable development. Labor and human rights are a significant priority for Samsung as we continue to expand operations globally

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For more information on Code of Conduct, please refer to the following link
http://images.samsung.com/is/content/samsung/p5/sg/ir/docs/SAMSUNG_globalcode_of_conduct_2005.pdf

For more information on Business Conduct Guidelines, please refer to the following link
http://images.samsung.com/is/content/samsung/p5/sg/ir/docs/SAMSUNG_business_conduct_guidelines_2016.pdf

Supporting Women's Empowerment

We believe that women's empowerment is key to economic growth, political stability, and social transformation. Because of our commitment to this issue, we go beyond creating policies that reflect our commitment to gender equality. We continuously come up with ways to reach out to women all over the world to help them create better lives. Two such examples are: our work with the Designer's School for Women Entrepreneurship in Nepal, and our Campaign in Italy to support victims of domestic violence.

In September 2017, 25 volunteers from Samsung Electronics travelled to Nepal to run the Designer's School for Women Entrepreneurship, a one-week course that focused on empowering girls and young women with skills in design and technology. As our volunteers soon learned, this program was a life changing experience for many of the Nepali girls and women that participated. They were at first worried that the students might have a hard time keeping up with the curriculum; however, they were surprised to find that the students were overwhelmingly passionate about the opportunity to learn and further advance in the design field.

We believe that it is important to empower young girls and women by showing them what they can achieve with their lives. This is also true for women who have been victims of domestic violence. In Italy, 31% of women between the ages of 16 and 70, comprising a population of 6 million women, suffer violence in their lives. Samsung Electronics Italy raised public awareness regarding this issue through the project Women Run the Show.

Women Run the Show is a project created by our Italian team in collaboration with Telefono Rosa, the leading Italian non-profit association helping women who are survivors healing from violence. The program is supported by the Department of Equal Opportunities of the Presidency of the Council of Ministers and the Ministry of Labour and Social Policy. The project helps female survivors of domestic violence receive psychological support and job training to enable them to gain emotional and financial independence.

The Samsung and Telefono Rosa designed a program aimed to reinforce the strength and confidence of participants through customized job training based on each women's inclination and aptitude. The program also provided support for participants, including child care during class hours and rent payment support, to enable them to attend and fully participate in the training.

The first ten participants recorded a video to raise awareness about the problem of domestic violence. We hope our peers in the industry will join the project to increase the opportunities for women around the world who are survivors of domestic violence.

Samsung Electronics Recognized in Vietnam as One of the Best Enterprises for Employees

Samsung Electronics in Vietnam including Samsung Electronics Vietnam(SEV) and Samsung Electronics Vietnam Thai Nguyen(SEVT) were given the Certificate of Merit and its trophy by Madam Dang Thi Ngoc Thinh, Vice President of Vietnam and Mr. Tran Thanh Man, Chairman of the Vietnam Fatherland Front in the awards ceremony held in Hanoi on November 29, 2017. The Certificate of Merit is awarded to companies that achieved outstanding results in taking care of the well-being of their employees, in addition to protecting their legitimate rights and interests.

Since April 2009, Samsung in Vietnam has more than 100,000 employees working across manufacturing facilities in the Yen Phong Industrial Zone in Bac Ninh Province (SEV) and Pho Yen District in Thai Nguyen Province(SEVT). Both SEV and SEVT made Vietnam's 'Enterprises for Laborers 2017' list, which selectively recognized 74 companies across Vietnam that achieved sustainable development by providing a positive work environment for their employees.

The 'Enterprises for Laborers' rating is based on a specific set of criteria developed by labor and trade experts. The criteria ensure a close reflection of the actual use and treatment of employees in the company in a wide range of standards from vocational training to mental well-being. Special priority is given to enterprises that have in place better welfare for employees and implementation of laws. The listed companies are also consulted on various aspects with the Vietnamese Ministry of Labor – Invalids and Social Affairs(MOLISA). The awardees, including SEV and SEVT, were recognized as companies that exemplify their belief that humans are the core value and the driving force for the development of enterprises.

Among various employee-benefit programs SEV and SEVT worksites provide, 'Enterprises for Laborers 2017' and domestic media channels highly regarded our exclusive maternity support utility areas called 'Mommy room' for pregnant and lactating employees within our worksites. Across these two sites, we installed 22 Mommy rooms to accommodate the needs of 4,000 pregnant and 5,000 lactating employees.

Our maternity care programs are significant because female employees make up over 75% of our Vietnamese employees. Even after receiving these awards, we have continued to make improvements for our pregnant employees by offering in-house gynecologist care, nutritional supplements, and special meals all free of charge. While Vietnamese law grants six months of maternity leave, our operations offer, upon request, a longer maternity leave of up to 14 months. Additionally, we created a separate production line for expectant mothers. Our expectant mothers can also take as many intermittent breaks as needed without an impact on their wages.

As we continue operations in Vietnam, we are planning to play a key role in developing a multi-stakeholder platform on the topic of gender equality, in partnership with external stakeholders and government representatives. We will remain committed to ensuring the well-being of our employees as well as identifying new avenues for their growth and job satisfaction.

Human Rights

SAMSUNG'S APPROACH TO THE UNGPs AND HUMAN RIGHTS DUE DILIGENCE

	POLICY COMMITMENT & MANAGEMENT SYSTEM	IMPACT/RISK ANALYSIS & MANAGEMENT	GRIEVANCE MECHANISMS & STAKEHOLDER ENGAGEMENT
Policy & Approach	The Samsung Code of Conduct and the Business Conduct Guidelines reference our commitment to respect human rights and ethical labor practices. As a member of Responsible Business Alliance(RBA), we duly comply with the RBA Code of Conduct. We support and strive to work in accordance with the United Nations Guiding Principles on Business and Human Rights.	We seek to continuously identify, assess and manage actual and potential human rights impacts with which we may be involved either through our own activities or as a result of our business relationships. We recognize that both internal capacity and process are important cornerstones in effectively addressing adverse human rights impacts. We seek to verify whether adverse human rights impacts are being optimally addressed; and to drive continuous improvements.	Samsung places great importance on listening to stakeholders. Providing individuals – employees and external stakeholders – with access to a grievance mechanism is not only a key part of our commitment to respecting human rights, but also an important source of information for us about potential adverse human rights impacts.
Actions	We have various internal human rights, human resources, labor rights, health and safety policies and operational procedures to support the policies. These policies and procedures are supplemented by management systems and processes to ensure their effective implementation. Their effectiveness is frequently evaluated and revised according to need. To ensure that our human rights policies and operational procedures are duly implemented at our worksites, we provide awareness and improvement training.	We have developed rigorous internal risk and impact assessment systems and auditing systems. These include a monthly assessment that assesses compliance management, a quarterly-based assessment that assesses risks related to internal management and external environment, and an assessment process used for high risk situations. We have identified key vulnerable groups to non-exhaustively include children, apprentices, and migrant workers, who are at heightened risk for adverse human rights impacts. Consequently, we have dedicated special care and attention to these particular groups.	We have various platforms where we engage and communicate with stakeholders(employees but also other stakeholders) in a frequent and systematic manner. As a member of various industry associations, we frequently interact with peers and discuss the human rights aspects raised by external stakeholders that concern industry-wide challenges, as well as typical or salient human rights risks. We also provide employees and other stakeholders with access to complaints or grievance mechanisms in various formats.

POLICY COMMITMENT & MANAGEMENT SYSTEM

Our human rights policies respect the spirit and intention of international human rights principles and standards set forth in the Universal Declaration of Human Rights, the UN Guiding Principles on Business and Human Rights (UNGPs), the Organization for Economic Co-operation and Development's guidelines for multinational enterprises, the UN Convention on the Rights of the Child and the ILO Declaration on Fundamental Principles and Rights at Work. We abide by the laws of the countries where we operate and fully comply with the Responsible Business Alliance's(RBA) Code of Conduct.

All employees must adhere to various internal polices and operational procedures covering human rights, human resources, labor rights, health and safety. Notable in this context are protection of labor rights, for example, prohibition of forced labor and child labor.

Our International Employee Engagement Group, formed as an independent organization to oversee and monitor our workplace environments abroad, conducts periodic assessments on each worksite's compliance level and improvement activities.

IMPACT/RISK ANALYSIS & MANAGEMENT

Risk Identification
We have developed a risk analysis system in order to identify the wide range of factors that could potentially lead to adverse human rights impacts at our worksites. Also, we review the legal compliance of our worksites to identify their environment management level and to make any necessary improvements.

Furthermore, in order to seek objective information about our human rights impacts, we are considering piloting a human rights impact assessment in Vietnam as part of a wider global effort to align our internal practices with the UNGPs.

RISK IDENTIFICATION

Worksite Monitoring System	• Monthly assessments on compliance management and improvement • Assessments on 55 items in 7 areas in 12 languages including, Chinese, Vietnamese, Spanish
Worksite Risk Analysis System	• Quarterly external/internal risk assessments • Analyze 57 indicators - 32 internal management indicators including work environment, labor conditions, human resources operations - 25 external environmental indicators in countries where we operate
Employee Communication	• Operate in-house grievance-handling channels • Host regular discussions and interviews participating executives, managers, employee representative bodies
Networking with External Stakeholders	• Engage with governments, NGOs, and academia to identify diverse risk factors and issues at global worksites

Risk Assessment

Every quarter, based on data registered on our worksite monitoring and risk analysis systems, we identify worksites that are high-risk in terms of worksite management standards. For worksites where we identify concerns, we conduct a more in-depth audit called 'Samsung Expert Diagnoses.' In 2017, eight worksites conducted such audits including four in South East/West Asia, two in Europe, one in China and one in Latin America. A total of 157 improvement tasks were identified, of which 136 tasks(86.6%) have been completed.

To improve overseas worksite management competency and identify risk factors in specific areas such as management of working hours and protection of employees, special diagnoses are performed quarterly under the supervision of respective business divisions. To strengthen our risk analysis we conduct and participate in third-party reviews where such requests are made by our customers. In conducting third-party reviews, we adopt the Responsible Business Alliance(RBA) criteria to objectively analyze risks and make improvements. In 2017, these external third-party reviews have been carried out 13 occasions on a total of 15 domestic and global worksites.

SAMSUNG EXPERT DIAGNOSIS PROCESS(ASSESSMENT)

Select audit targets	• Select 2 to 3 worksites every quarter out of 5 subsidiaries with concerns in the last three months based on a risk analysis system
Organize an audit team	• Designate 6 experts on global labor and human rights[1] from respective business divisions • Perform self-diagnoses on the basis of the review checklist
Self-diagnosis	• Conduct week long on-site audits, including one-on-one interviews with employees and on-site inspections on worksite infrastructure
On-site audits	• Include a total of 120 items[2][3] in the audits, including one-on-one interviews with employees and on-site inspections on worksite infrastructure
Follow-up management	• Share audit outcomes with the worksite management • Develop improvement plans and measures within one week of audits to prevent recurrences • Track monthly progress of improvement tasks through worksite monitoring system

Footnotes:
1) RBA Auditors who completed 'RBA Labor & Ethics Lead Auditor Training' and other global labor and human rights experts
2) 51 items in the fields of labor/human rights, health and safety, environment, business ethics, etc.
3) 53 items in communication, organizational operation, the employee representative body, the emergency response system, and labor/human rights training, etc and 11 items for supplier management, and 5 items classified as 'others'

From March to June 2017, DNV GL, a global quality assurance and risk management firm authorised by RBA, conducted on-site audits on seven of our manufacturing subsidiaries in five countries in South East Asia to control if they are operating in compliance with local laws, regulations and global standards.

Where applicable, we implemented Corrective Action Plans based on the audit findings including making updates on our policies, strengthening management processes for suppliers at each facility, and strengthening the grievance handling mechanisms. We also held training sessions for our employees regarding RBA Code of Conduct, human rights, and labor practice guidelines. Through continuous training sessions and education efforts regarding RBA code of conduct, human rights, and labor practice guidelines, we raised awareness of these issues among employees which was followed by an increase in the Samsung Culture Index (SCI), which tracks employee satisfaction.

In 2018, we plan to conduct additional third-party audits at our worksites in Europe and Latin America in accordance with RBA Validated Assessement Process(VAP) and continuously endeavor to build a safe, fair and healthy working environment.

GRIEVANCE MECHANISMS & STAKEHOLDER ENGAGEMENT

Global Grievance Handling Procedures and Data
Through our Global Grievance Resolution Guideline, we operate four types of grievance-handling channels: a hotline, online channels, offline channels and employee committees. As of April 2018, this totals 290 channels at 29 worksites.

Since 2016, worksite monitoring system tracks down the type of grievances reported, progress status, and handling outcomes while managing such performance indicators as meeting handling deadlines, employee satisfaction, and awareness by grievance type or channel. Notably, our worksites, which hire migrant workers, are obliged to introduce their grievance-handling channels in the mother language of these workers to improve their accessibility. In 2017, we received a total of 13,255 grievance reports, out of which 13,252 or 99.9% were completely resolved within grievance handling deadline.

In consideration of the 'Effectiveness criteria of non-judicial grievance mechanisms' as stipulated in the Clause 31 of the UN Guiding Principles on Business and Human Rights, we are constantly working to ensure that accurate information is provided on grievance handling processes and outcomes. Individuals who raise grievances do not face any unfair disadvantage. Discrimination is prohibited in handling grievances, and we work to protect the substantive and procedural rights of our employees.

DATA ON GRIEVANCE SUBMISSION 2017   Unit: No. of Grievances

Grievance Channel	No. of Grievances	Type of Grievance	No. of Grievances
Hot Line	1,751	Work environment	4,403
Online	3,633	Labor conditions	3,894
Offline	5,208	Personal relationships	2,414
Employee Committee	2,663	Health & safety	1,755
Total	13,255	Change in business practice	550
		Organizational change	139
		Discrimination	36
		Harassment	64
		Total	13,255

WORK COUNCIL

Our Work Councils operate at 47 domestic and global worksites in compliance with country-specific regulations. Employees vote for their representatives under the principles of direct and secret votes, and employee representatives hold discussions or interviews with employees once a week or more. In 2017, 1,340 discussions were held and joined by a total of 25,231 employees. Our Work Councils at respective worksites host regular meetings to consult on such wide-ranging agenda issues as wages, labor conditions, welfare, and other diverse issues related to the promotion of employee rights. The consultation outcomes are then disclosed throughout the company through a bulletin and other channels. In 2017, a total 2,232 of agenda items were raised through these forums globally, out of which 2,112 items(94.6%) were resolved.

WORK COUNCIL BY REGION(AS OF THE END OF DEC. 2017)   Unit: No. of Councils and Members

Category	No. of Work Councils	No. of Employee Representatives	No. of Members
Korea	7	175	88,283
China	15	163	34,979
Southeast/Southwest Asia and Others	14	303	135,352
Europe, North America, Central/Latin America	11	137	21,915
Total	47	778	280,484[1]

Footnotes:

1) 87.5% of total employees(320,671)

WORK COUNCIL AGENDA IN WORK SITES(2017)   Unit: No. of Items, %

Category	Agenda	Ratio
Wage & benefits	415	18.6
Institution & system	155	7.0
Organizational culture	217	9.7
Work hours	92	4.1
Infrastructure	904	40.5
Environment & Safety	239	10.7
Others	210	9.4
Total	2,232	100

Labor and Human Rights Promotion Training

We provide a range of training programs to help employees build capacity through partnership with specialized external expert organizations. Furthermore, we developed training programs as a way to enhance employee awareness regarding labor and human rights, diversity and grievance resolution procedures. These training programs are mandatory for employees worldwide and cater to the unique cultural characteristics of our global workplaces.

Target	All employees at our overseas production subsidiaries
Description	15 courses in a total of six domains, including the vision of our human rights management, our policy to adhere to employee human rights standards(such as ban on forced labor, discrimination, workplace harassment), respect for diversity, strengthened internal communication, mental fitness management, in-house grievance handling channels, etc.
Achievement	Capacity-building training was offered to 211 in-house trainers, approximately 171,000 employees[1] were trained on average for over three hours
2018 plan	Reach 98% or higher in the percentage of employees who complete such training, including our policy to respect human rights and in-house grievance-handling channels as part of the compulsory introduction training for new recruits

Footnotes:

1) Includes redundancies

EFFORTS BEYOND OUR OPERATIONS

Vulnerable Groups Protection

We have identified key vulnerable groups to include children, apprentices, and migrant workers. These groups are at heightened risk for adverse human rights impacts. We have developed various policies to ensure respect for the rights of individuals belonging to these vulnerable groups. Notable in this context is that we have developed the Child Labor Prohibition Policy in China, the Guidelines for Migrant Workers and the Guidelines for Apprenticeship Training.

Samsung Electronics Child Labor Prohibition Policy in China, adopted in June 2014, states a zero-tolerance for child labor and set criteria to protect teenage workers and employ apprentices.

The Guidelines for Migrant Workers, adopted in December 2016, ban the collection of recruitment fee, states that labor contracts shall be provided in the language of the migrant workers, and bans inhumane and discriminatory treatment.

The Guidelines for Apprenticeship Training, adopted by Samsung India in October 2016, aims at ensuring compliance with local regulations on apprentice employment (e.g. recruitment size, and apprentice hours and expenses), and states that expertise improvement training should be offered and grievance handling systems should be developed in order to protect apprentices' rights. Additional global guidelines are currently being developed with the support of external human rights expertise.

We educate the top management and Human Resources officers of our worksites, suppliers and labor supply agencies on the intention and details of our policies and guidelines. In addition to providing policies and guidelines, we developed self-assessment checklists and on-site inspection manuals to verify the violation of human rights – forced labor, discrimination, and unjust treatment – and distribute these checklists and manuals to respective worksites and suppliers. We educated the compliance management officers of respective worksites on such on-site inspection manuals. In January 2017, we translated our migrant worker survey questionnaire into ten languages including Bangladesh, Cambodian, Indonesian, Nepali, Vietnamese, and Myanmar and distributed these questionnaires across all our worksites to help them identify and mitigate the risks these workers face.

Living Wage

Although there is no universally agreed upon method for calculating a living wage, Samsung strongly supports the concept of a living wage. We define a living wage as the income necessary for a worker and their family to meet basic needs. In partnership with the Business for Social Responsibility(BSR), we identified and addressed socio-economic indicators such as family food consumption, transportation and healthcare in the ten countries where our manufacturing plants are located. We used the recognized Richard Anker and Martha Anker's methodology to calculate the amount of living wage. Our calculations for living wages included the following assumptions and methods advised by BSR:

a. Household Expenditure - Food

We considered data related to food consumption and nutrition to determine the model diet and food basket for a living wage. In addition, we have surveyed the cost of food by internal staff in each country to reflect actual cost of food in the market.

b. Household Expenditure - Non-Food

We also used the Classification of individual consumption by purpose(COICOP), which is a reference classification published by the United Nations Statistics Division, or similar statistics released by government, to classify and analyze individual consumption expenditures incurred by households. We also used various other economic indices when there was a lack of sufficient information.

c. Household Expenditure - Savings

We also considered additional expenses for unforeseen family events.

d. Family Size

While a living wage needs to support a worker and his or her family, normally we assumed that the family is composed of four people with two adults and two children.

e. Number of workers

It is appropriate to expect more than one person in a family to work and provide financial support for their family. Thus, we considered various economic indices such as part-time worker and labor force participation rates to calculate this factor.

After calculating the amounts in various countries, we are carefully considering engagement with relevant global initiatives and setting up management systems to remain up to date and to reflect global perspectives on the living wage in our wage policies.

Supplier Responsibility

RESPONSIBLE MANAGEMENT OF OUR SUPPLIER WORK ENVIRONMENT

We apply the same level of scrutiny to our suppliers in regards to labor rights, human rights, health, safety and environmental requirements as we do in our own workplaces.

RESPONSIBLE WORK ENVIRONMENT MANAGEMENT PROCESS

01 Self Assessment	• Annual self-assessment of all first-tier suppliers using 91 criteria selected from RBA criteria. • On-site verifications of 25% of the suppliers to secure the credibility of self-assessments.
02 On-site Audits	• On-site audits conducted on 'Priority suppliers' selected based on location, transaction volume, past track records, self-assessment outcomes, etc. to identify improvement tasks. • On-site audits led by RBA auditors and performed by Supplier Responsibility Group, an independent auditor separate from the procurement organization within Samsung. • Conducted on-site audits on 419 suppliers in 2017.(Excluding 21 suppliers which passed Third-party Audits in 2016 or those on trading suspension) • Interview suppliers' employees for the square root quantity of total employees for each supplier.
03 Third-party Audits	• RBA-certified third-party external audit firm randomly selects suppliers and performs initial audits based on the RBA criteria(214 suppliers on an accumulated basis since 2013). • Conducted 'semi-announced' audits since 2015 in which specific schedules are not provided in advance to prevent any kind of preliminary preparation prior to the inspection and to ensure more accurate verification. • All identified improvement tasks are implemented within three months. • Closure audits conducted to verify the improvement result of improvement tasks(109 suppliers on an accumulated basis since 2013)

According to the Guidelines and policy for Supplier Migrant Workers, we distribute the survey questionnaire to migrant workers not only on our own worksites, but also to suppliers' sites in several countries.

We request our suppliers to prohibit recruitment fees on workers. There are several cases that workers have actually been reimbursed by our suppliers, based on the information they had provided in the survey questionnaire.

In addition, we demand our first-tier suppliers and their subcontractors(such as second-tier suppliers including the recruitment agency) to protect labor and human rights for their employees.

• **On-Site Audit**: For thorough verification, we interview supplier executives and employees and perform examinations of their workplace environment. We devise final improvement tasks and register them with the Suppliers' Work Environment Management System. Suppliers are responsible for implementing improvement measures on their own while Samsung provides support in policy developing and consulting for corrective actions. As a result, 99% of suppliers with corrective action plan according to on-site audit have improved their performance within a year.

As a result, we achieved a compliance rate of 96% at closure audits on our suppliers work environments in 2017. This measure is a key performance measure for risk management in supplier work environment. We will continue to endeavor to achieve a compliance rate of 100%.

• **Third-Party Audit Outcomes:** Third-party audits are performed after self-assessments are completed. On-site audits secure the reliability of the improvement measures. Through a sustained commitment to improvement, compliance rates in key third-party audit issues are improving over the past three years.

COMPLIANCE RATE BY AUDIT AREA[1]

Unit: %

	2015	2016	2017
TOTAL	**95**	**95**	**96**
Labor & Human Rights	92	90	92
Health & Safety	95	96	97
Environment	97	97	97
Ethics	100	100	100
Management System	99	100	98

Footnotes:

1) Figures represent final compliance rates and reflect the results of improvement measures suggested by the third-party audits.

In 2016, due to an increase in production volume and the launch of new models, the compliance rate with standard working hours and guaranteed holidays was relatively low. Despite similar challenges in 2017, we made incremental improvements by strengthening work schedule coordination and streamlining processes and work efficiency through intensive management of overtime work and supply forecast. Considering the continuous increase in production volume, returning to 2015 compliance levels has demonstrated the effectiveness of these improvement efforts. Going forward, we will continue to make improvements.

WORKING HOUR MANAGEMENT[1]

Unit: hours, %

	2015	2016	2017
Workweek average compliance[2]	89	83	87
Average weekly work hours	48	53	52
Maximum average weekly work hours	52	↓ 57	↓ 54
Average work hours of those who work 40 hours or more per week	52	55	54
Compliance with the guarantee of one-day off per week	95	94	97

Footnotes:

1) Based on global suppliers
2) A workweek should not be more than 60 hours per week(RBA criteria).

CORRECTIVE ACTIONS

• Labor & Human Rights

To prevent the employment of underage workers, we train our managers and the HR officers of suppliers on our recruitment process so that identity checks and face-to-face interviews are mandated for all applicants during the recruitment process. In China, we supported the introduction of a facial recognition system in 2014 to prevent the employment of underage workers through identity theft. We also analyze samples of work hour data so that our suppliers abide by work hour regulations and the guarantee off-work days. We also analyze the data on our suppliers' production capacity and production volume to generate data on estimated overtime work as a way to pre-emptively manage work hours. Our suppliers are subject to on-site audits to analyze their extra work management system and the details of individual employee pay slips in an aim to prevent unfair wage payments or any makeshift practices. We maintain zero tolerance for child labor, and suppliers involved in grave regulatory violations(e.g. corruption) are subject to penalties of their comprehensive evaluation grade.

• Business Ethics

We demand that suppliers establish whistle-blower protection, grievance policies and anonymity protection procedures while monitoring their compliance through employee interviews and the review of relevant documents.

• Management System

If the management system of our suppliers is found substandard in identifying, assessing and/or controlling sustainability management risks, we assist them in building the necessary processes, improve their management expertise, and secure the needed financial resources. In addition, we provide all of our supplier employees with work environment training(offered in local languages), at respective worksites with an aim to support suitable training in line with country-specific regulatory standards.

GRIEVANCE HANDLING CHANNELS

We have been operating our hotline system since 2013 to gather reports on violations of work environment standards or human rights infringements happening within our suppliers' operations. The reports are submitted through landline, e-mails or mobile platforms, all of which are reviewed by respective departments to directly verify the facts.

The posters identifying grievance handling channels are placed in offices, corridors, manufacturing sites, dormitories, dining facilities and in other locations where they can be easily found.

Informants are notified of our countermeasures within one week, followed by the review of whether improvements were made. In 2017, we witnessed a decrease in the number of reports regarding the guarantee of holidays and insurance such as housing provident fund payments in China. For all the reports found valid, comprehensive improvement measures have been taken.

TYPE OF HOTLINE REPORTS   Unit: No. of occasions, %

TYPES OF GRIEVANCES	2015	2016	2017
Total No. of reports	127	74	63
Complaints related to managers	52.8%	41.9%	52.4%
Wages	26.0%	20.3%	20.6%
Health & safety, environment	3.9%	16.2%	14.3%
Benefits	11.0%	13.5%	4.8%
Work hours	0.8%	5.4%	1.6%
Others	5.5%	2.7%	6.3%

Responsible Sourcing of Minerals

We are aware of the heightened risk of human rights violations and environmental degradation posed by conflict areas in African and East Asian countries. As part of our commitment to these issues, we have established a responsible supply chain management system. We are encouraging more suppliers to participate.

We strive to source ethically and responsibly throughout our supply chain, and apply the 'OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas'. We also require our suppliers to adopt Samsung's Supplier Code of Conduct, which was developed in line with international human rights guidelines.

Moreover, we require our industry peers and stakeholders to promote the responsible sourcing of minerals through the Responsible Business Alliance(RBA), the Responsible Minerals Initiative(RMI) and GeSI (Global e-Sustainability Initiative). In addition, as a member of the RMI steering committee, we have worked to establish industry-wide governance standards for responsible minerals.

SAMSUNG MINERALS DUE DILIGENCE PROCESS BASED ON OECD GUIDANCE

01	Raise suppliers' awareness	• Secure a commitment from suppliers to ban the use of conflict-affected areas and high-risk minerals from all first-tier suppliers • Distribute the conflict-affected areas and high-risk minerals management guide and support working-level training • Request that lower-tier suppliers expand their policy to ban the use of conflict-affected areas and high-risk minerals and to source ethically and responsibly
02	Inspect the use of conflict-affected and high-risk minerals along the supply chain	• Monitor data on all first-tier's use of conflict-affected areas and high-risk minerals as well as smelters' use of such minerals along the supply chain
03	Conduct reasonable due diligence and verification on inspection outcomes	• Conduct on-site inspections on the data submitted by suppliers • Identify and share best practices in suppliers' management of conflict-affected areas and high-risk minerals
04	Verify and assess risk factors within the supply chain	• Categorize suppliers into four rating groups based on inspection outcomes(based on the credibility of submitted data and the management level of conflict-affected and high-risk minerals)
05	Develop risk improvement plans and report relevant data	• Restrict transactions with suppliers who work with non-third party audited smelters • Recommend smelters along the supply chain to become third party certified.

CONFLICT MINERALS

Samsung considers environmental deterioration and human rights violations in conflict areas in 10 African countries, including Democratic Republic of the Congo (DR Congo), as serious ethical issues.

We ban the use of conflict minerals – including tantalum, tin, tungsten and gold – that are mined unethically in conflict regions.

We manage our supply chain based on the principle of an ethical distribution process. To ensure our suppliers to be held to the highest standards, we conduct thorough examinations on the minerals used in their products.

To establish a conflict-free system, we have implemented a process of due diligence for conflict minerals in line with the 'OECD Due Diligence Guidance'.

Additionally, we encourage suppliers to partner with smelters certified by the RMAP (Responsible Minerals Assurance Process), and require uncertified smelters in our supply chain to become certified by the RMAP. This resulted in the participation of all smelters we do business with in the RMAP certification, and 98% of smelters completed the certification. We will continue to endeavor to make all 100% smelters complete the RMAP certification.

Furthermore, we provide clear guidelines for suppliers, and raise awareness on conflict mineral related issues through providing education and support. We also conduct regular verifications into the use of conflict minerals throughout the supply chain by reviewing information submitted by suppliers, and conducting on-site audits of companies whose systems require additional verification. Also we have systematically blocked transactions for our suppliers to trade with smelters that are not certified by RMAP.

CONFLICT MINERALS-RELATED RMAP CERTIFICATION OF SMELTERS AMONG THE SUPPLY CHAIN

Unit: No. of Smelters

	TOTAL	RMAP Certification Completed	RMAP Certification in Progress
Tantalum	42	42	–
Tin	71	69	2
Tungsten	41	41	–
Gold	101	98	3
TOTAL	255	250	5

Footnotes:

1) As of the end of 2017
2) Smelter List : https://www.samsung.com/us/smg/content/dam/samsung/us/aboutsamsung/sustainability/supply-chain/Smelter%20list.pdf

RESPONSIBLE MINERALS

Responsible minerals are defined as minerals are mined under vulnerable conditions with potential human rights violations or environmental destruction of the worksites.

To illustrate our efforts on cobalt, we have been reviewing the status of our use of cobalt in response to the issue of underage workers in cobalt mines in the DR Congo. We set clear guidelines to our suppliers and raised their awareness about the responsible sourcing of minerals through education and supported while conducting regular investigations into the use of cobalt throughout our supply chain. We have completed mapping our supply chain related to cobalt sourcing in accordance with the second step of the Due Diligence Process.

As member of RMI, we are in the process of incorporating such standards into the internal Due Diligence Process. Samsung is well aware of the corporate responsibilities with problems caused by mining and trading of minerals. We are seeking ways to resolve these challenges by listening to various opinions of our stakeholders and participating in global initiatives.

Human Capital

DIVERSITY AND INCLUSION(D&I)

Our D&I vision is to create the future by developing a diverse and inclusive culture that attracts and grows the world's top talent. We are trying to make this vision a reality by implementing policies and taking actions to support various groups of people, including female employees and diversely-abled employees. Under the main D&I vision and Learning and Development structure, respective subsidiaries have undertaken their own tailor-made initiatives to cater to the country-specific needs and culture.

• Diversity initiatives
The year 2017 marked a major step-up in our efforts to support female employees' networks both regionally and internationally. The first regional International Women's Day(IWD) event was launched in 2017. Each subsidiary prepared an event suited for their local culture, such as 'Wear it purple' campaign in Mexico to involve men in raising awareness about women's care. The Suwon office in Korea also participated in this movement by offering mentoring sessions led by our women executives. We also hosted the first Women Conference in June 2017, an international gathering of women in the technology industry. 141 participants from 11 subsidiaries/affiliates across USA, Canada and Europe were present at the event.

• Policies for Female Employees(Korea)
Samsung has extended childcare leave for up to two years in the Consumer Electronics and IT and Mobile Communications Divisions. They have also expanded in-house childcare including new facilities. Such systems and programs enable our female employees to strike a balance between their career and life, also to minimize their career discontinuation following childbirth.

• D&I Statement(United Kingdom)
Our R&D Center in UK signed up to support the Diversity Charter for technology events and set its own standards regarding participation of technology events. Their members decided to only take part in events that share D&I values.

D&I INITIATIVES IN U.S. AND CANADA

U.S. and Canadian subsidiaries announced their three-year D&I plan in 2016 and shared their 4 key goals - Executive Commitment, Launch Regional D&I Councils, Talent Management, and Formalize and launch Employee Resource Groups(ERG). Specifically, they have focused on D&I training since the beginning of 2017 and have committed to disseminating the concept of D&I and offering career development training for female employees. Their plan is to operate female ERGs at each of their organizational units and continuously strive to strengthen female leadership. U.S. subsidiaries[1] and Canadian subsidiary also operate such ERGs as WISE(Women in Samsung Electronics) and Women@SECA.

Footnotes:
1) Participating subsidiaries in U.S.: Samsung Electronics America, Samsung Research America, Samsung Semiconductor Inc., Samsung Austin Semiconductor

LEARNING & DEVELOPMENT(L&D) STRUCTURE TO FOSTER DIVERSITY & INCLUSION

With our strong belief that diverse ideas and collective efforts will foster an inclusive culture, we established D&I L&D structure under the following three themes.

Build Awareness: Understand the shift in the global D&I landscape our progress
Reframe Mindset: Discover the value of diversity in business and address unconscious bias
Practice Inclusion: Build D&I skills to promote inclusion at all leadership levels
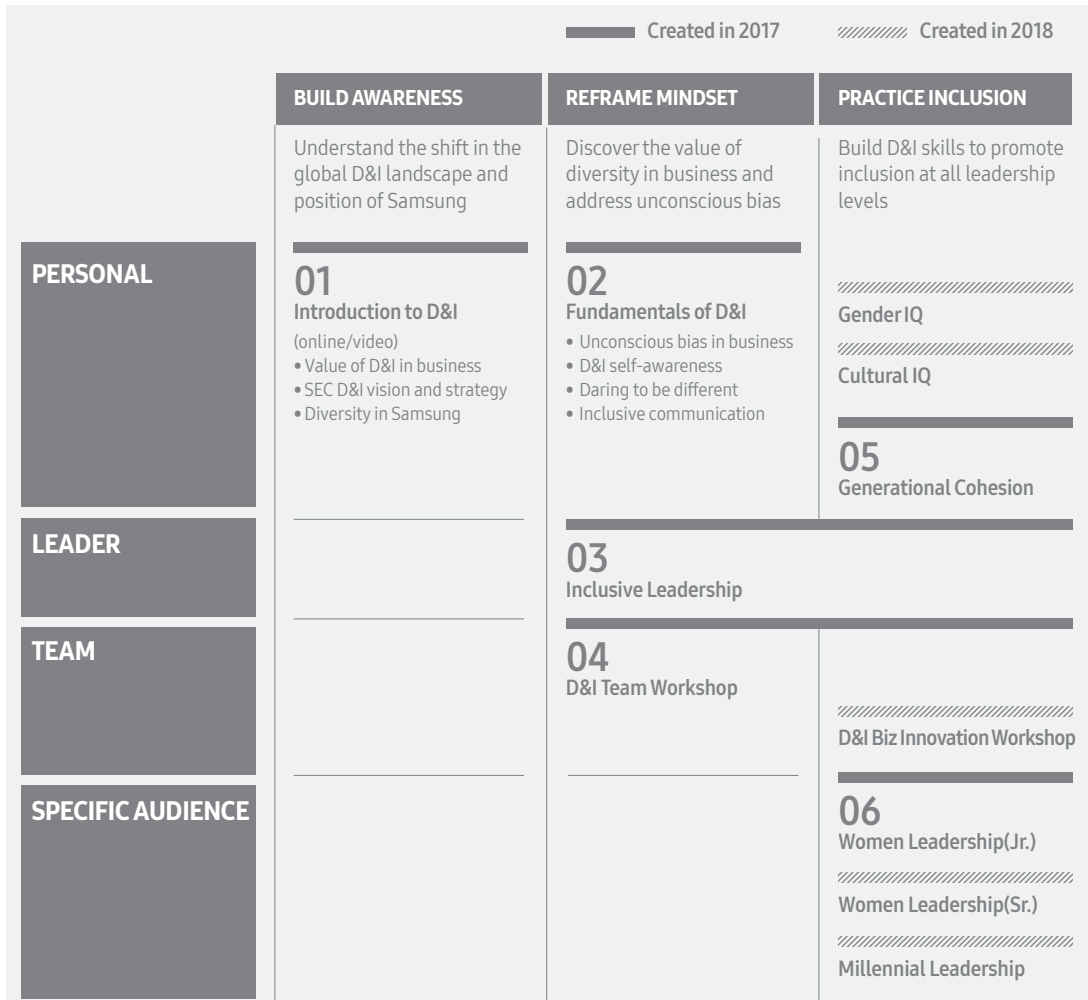
	Created in 2017	Created in 2018	
	BUILD AWARENESS	**REFRAME MINDSET**	**PRACTICE INCLUSION**
	Understand the shift in the global D&I landscape and position of Samsung	Discover the value of diversity in business and address unconscious bias	Build D&I skills to promote inclusion at all leadership levels
PERSONAL	**01** Introduction to D&I (online/video) • Value of D&I in business • SEC D&I vision and strategy • Diversity in Samsung	**02** Fundamentals of D&I • Unconscious bias in business • D&I self-awareness • Daring to be different • Inclusive communication	Gender IQ / Cultural IQ / **05** Generational Cohesion
LEADER		**03** Inclusive Leadership	
TEAM		**04** D&I Team Workshop	D&I Biz Innovation Workshop
SPECIFIC AUDIENCE			**06** Women Leadership(Jr.) / Women Leadership(Sr.) / Millennial Leadership

CAREER DEVELOPMENT PROGRAM IN KOREA

Samsung Talent Review(STaR) Session
STaR Session is a comprehensive talent development process that assists our employees in designing their career growth path with supervisors. It allows our employees to benefit from career enhancement program. In accordance with their career development phase, employees can apply for a wide array of human resources development programs – MBAs, career training, and job skill training. This talent promotion program is aligned with our Expertise Development Process(EDP) which is designed with all our employees in mind.

Job Posting
We provide employees an opportunity to move to different positions within Samsung through our always-on Job Posting program as staffing needs arise. This program follows a systematic in-house process: creating a job posting announcement, receiving applications, paper screening, and interviewing. A total of 2,439 employees were able to move to their desired positions through the Job Posting program over the past three years.

Life Design Training
This program allows our employees to plan for their future in preparation for an extended retirement age and aging society. This program offers an opportunity to eligible employees for self-reflection about their future.

Career Consulting Center
We allow retirees, as well as current employees, to start anew and prepare for future careers. Since 2001, the Career Consulting Center has supported career change training and consulting and external job matching. It also provides career consulting for current employees. Since the establishment of the Center, 5,866 employees successfully began new careers, among approximately 6,900 employees who received the assistance.

SAMSUNG CULTURE INDEX(SCI) RESULTS

The SCI survey is an annual diagnostic tool to identify company strengths and areas of improvement in our corporate culture. More than 270,000 employees and 110 subsidiaries have been participated in the annual survey.

SCI survey consists of five categories - Work Smart, Think Hard, Build Trust, Leadership and Policy which are 5 core elements to reach the company vision, Vision 2020: Inspire the World, Create the Future.

We noticed that employee satisfaction has been on the rise each year since the introduction of this index in 2012 and the overall 2017 global SCI result marked 82 points, an 9 point increase from 2016. 82 points is the highest score since we launched SCI. A total 82% of global SCI participants are satisfied with the current corporate culture.

	Total	HQ	Productions	Sales	R&D
Numb of subs	117	1	28	65	23
Participants	275,736	83,664	154,194	22,280	15,598

Global SCI Survey Score

82
9 point increased
73
70
67
65
2013 2014 2015 2016 2017

Participation Rate

96.5%
1.5 % increased
95.0%
92.2% 92.0%
88.4%
2013 2014 2015 2016 2017
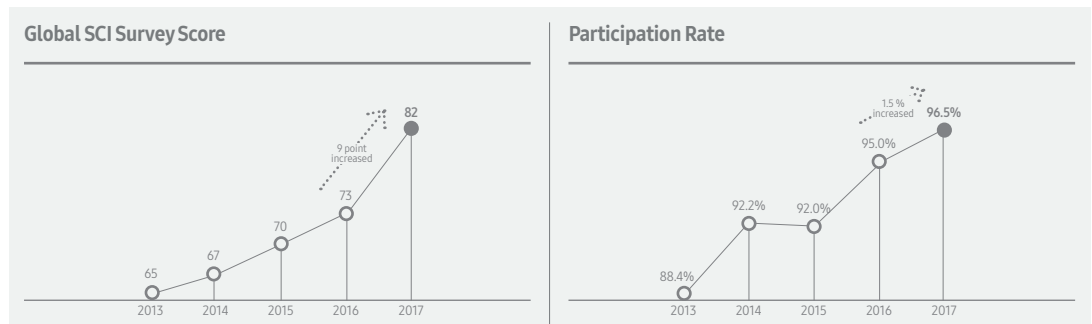
Footnotes:

1) Global SCI survey conducted by employees globally, excluding Korea
2) Participation rate calculated by no. of employees globally, excluding Korea

We are committed to integrating sound environmental, health, and safety management practices into all aspects of our business for our employees, suppliers, and customers across the globe. Through continued investment on safety programs and initiatives, and by maintaining a rigorous safety-first culture, we aim to reach a zero rate of workplace injuries.

Health & Safety

We aim to establish a global safety-driven culture by 2020 through integration of our commitment to environment, health and safety(EHS) management in our business strategy. In our executives' performance targets, we include safety management performance while evaluating the level of our safety culture and offering employee training. We identify potential risks and perform risk assessments based on the EHS management system(OHSAS 18001) at all our production sites in order to undertake improvement initiatives. We are also strengthening transparency in our chemical management process by disclosing the list of chemicals barred from use in our operation.

Our Commitment Statement:
Samsung's commitment to drive a strong global occupational health and safety culture

Societal Challenges:
Work related injuries and illnesses can have a particularly heavy toll on society. The economic and social impacts can be significant. The health of workers is also a major determinant of productivity

Transparent Management of Process Chemicals

We are dedicated to reducing the human health and environmental impacts of materials and chemicals used throughout our operation. We believe that employees who is a part of manufacturing a Samsung product, should be able to do so in a healthy and safe way.

To minimize health and safety risks associated with chemical usage, our goal is to restrict the use of substances of concern and responsibly manage chemicals. All of our operations are in compliance with the European Union's (EU) Restriction of Hazardous Substances Directive(RoHS) and the EU Registration, Evaluation, Authorisation, and Restriction of Chemicals(REACH) standards. We publicly disclosed our Restricted Substances List(RSL).

In 2017, we achieved a major milestone in health and safety management transparency by publishing a list of substances we regulate within operation. We classify eleven regulated substances that we recognize as potentially hazardous for all of our manufacturing sites into two categories. 'Prohibited' substances are strictly prohibited for use under any circumstances. 'Restricted' substances are chemicals that are allowed to use only under strict limitations.

Prior to engaging a supplier, we conduct a thorough due diligence audit to determine supplier practices with respect to these 'Restricted' materials. Through these audits, we offer solutions to these suppliers on ways they can improve their procedures and controls with respect to these substances. A few examples of our commitment to raising our suppliers' health and safety standards in 2017 include upgrading ventilation equipment, providing alternative chemical storage facilities, providing spill palettes for leak prevention, and improving exhaust systems, etc.

⊘

Prohibited Substances:
Strictly prohibited for use

☑

Restricted Substances:
Should meet following conditons

① Must receive permission before use

② Prohibited in cleansing stages

③ Must be used observant of workplace regulations (e.g. Rules on Ventilation system, protective outwear, etc.)

RESTRICTED SUBSTANCES LIST(RSL)

	Chemical	CAS No.	Range of restriction	Regulations
⊘	Benzene	71-43-2	All Purposes	• IARC [1] • Company Standards • Occupational Safety and Health Act [2]
⊘	n-Hexane	110-54-3	All Purposes	• EU Reproductive Toxic Chemicals • Occupational Safety and Health Act • Company Standards
☑	Dimethylformamide	68-12-2	Cleansing/Degreasing	• IARC(2A) • EU Reproductive Toxic Chemicals(1B) • Occupational Safety and Health Act
☑	Nitromethane	75-52-5	Cleansing/Degreasing	• IARC(2B) • Occupational Safety and Health Act
☑	Chloroform	67-66-3	Cleansing/Degreasing	• IARC(2B) • EU Reproductive Toxic Chemicals • Occupational Safety and Health Act
☑	TCE	79-01-6	Cleansing/Degreasing	• IARC • Occupational Safety and Health Act
☑	Toluene	108-88-3	Cleansing/Degreasing	• EU Reproductive Toxic Chemicals • Occupational Safety and Health Act
☑	PCE	127-18-4	Cleansing/Degreasing	• IARC(2A) • Occupational Safety and Health Act
☑	Methanol	67-56-1	Cleansing/Degreasing/Cooling	• Occupational Safety and Health Act
☑	Cyclohexanone	108-94-1	Cleansing/Degreasing	• Occupational Safety and Health Act
☑	Dichloromethane	75-09-2	Cleansing/Degreasing	• IARC(2A) • Occupational Safety and Health Act

Footnotes:

1) IARC: International Agency for Research on Cancer
2) Occupational Safety and Health Act in Korea

Samsung Ombudsman Committee

In April 2018, the 'Samsung Ombudsman Committee' released a comprehensive report on the labor environment and occupational diseases in Samsung's semiconductor manufacturing facilities in Korea. The Samsung Ombudsman Committee is an independent, third-party organization established in January 2016, to conduct a thorough investigation with occupational disease issues at Samsung's semiconductors facilities. We have been in good faith cooperating with the investigations run by the committee, held from November 2016 till December 2017, in our facilities at Giheung, Hwaseung, Onyang, and Asan.

Samsung Electronics employees, Family Committee, Supporters for the Health And Rights of the People(SHARPS) participated in the Mediation Committee on the issue of workplace safety and occupational diseases at Samsung's semiconductor facilities. The 'Ombudsman Committee' was established following the final settlements of the Mediation Committee. Chul Soo Lee, Professor of Seoul National University Law School, was appointed to chair the Committee, and members were selected from diverse areas including industrial health, preventive healthcare, occupational healthcare, and law, to retain the expertise and independence of the organization.

The Ombudsman Committee conducted an investigation in five areas –① evaluation on hazardous factor management, ② research on the relationship between occupational environment and health, ③ inspection of the employee health management system, ④ research on future strategies for industrial accident prevention, ⑤ research on disclosures of hazardous chemical substances and data storage on employee health and safety.

The Samsung Ombudsman Committee announced that, due to inconsistent scientific findings from former studies on this topic and a lack of significant statistical evidence, they could not make a conclusion on the link between the work environment at Samsung's semiconductor facilities and the cancer incidence and mortality rates of workers. Thus, the committee was not able to report on a cause and effect relationship between jobs at Samsung's semiconductor manufacturing facilities and alleged onset of occupational diseases. However, the detected level of hazardous substances was lower than that of the standard exposure rate or the general air quality levels.

The Committee also presented several solutions to dissolve potential risk factors as well as to enhance existing safety measures at our facilities. We, at Samsung, will devise future action plans after a careful review of the proposed solutions from the Committee's long-term investigations. We will remain fully committed to providing a safe and healthy working environment for all of our valued employees.

Occupational Health and Safety in Our Operations

DEVELOPING OUR SAFETY CULTURE

We, at Samsung Electronics, continue to engage in a company-wide evaluation on our safety culture. Building on the work of the prior year, in 2017, we assessed safety culture at 9 permanent worksites within Korea as well as 28 overseas manufacturing subsidiaries. A total of 118,000 employees participated in the evaluation. Results of the evaluation showed that our employees' safety awareness and understanding has increased compared to the previous year. Based on such positive results, we are planning to expand our safety culture communication channels and to increase employee participation in the evaluation.

SAFETY MANAGEMENT: BUILDING A SAFE ENVIRONMENT

ACCIDENT PREVENTION AND RESPONSE PROCESS

01 IDENTIFY RISK FACTORS

- Old facilities
- Non-compliance with safety regulations
- Lack of proper onsite management

02 SET COUNTERMEASURES

- Estimate the life span of facilities
- Set measures to comply with safety regulations
- Reexamine on-site management system

03 MAKE IMPROVEMENTS
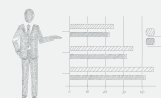
- Monitor facilities
- Offer safety training
- Perform on-site audits

04 MONITOR

- Evaluate performance
- Rules & processes

ACCIDENT RESPONSE PROCESS

01 ACCIDENTS OCCURRENCE

- Brief on situation
- Identify the type and risk level of the accident

02 EMERGENCY RESPONSE

- Organize an emergency management committee
- Take emergency evacuation/first aid action

03 ACCIDENT INVESTIGATION

- Analyze the cause of the accident through investigation
- Take action to prevent secondary accidents

04 RECOVERY ACTION

- Set and implement recovery plans
- Execute business continuity plans

05 REOCCURRENCE PREVENTION
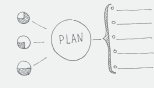
- Set plans to prevent reoccurrence
- Review the effectiveness of the accident response system

SAFETY MANAGEMENT PROGRAMS

Conduct Emergency Drills in Preparation for Safety Accidents

Regular drills under diverse emergency scenarios by accident type enable us to continually monitor and verify the effectiveness of our emergency response system. Drills cover conditions such as fire, earthquake, chemical leaks, and hands-on firefighting preparedness. In 2017, emergency drills were undertaken on 1,003 occasions, and each of our employees attended an average of 1.39 drills.

Strengthen Employee EHS Capacity

We provide differentiated and specialized training curriculum in relation to workplace EHS. In 2017, our average per capita training hours amounted to 11.14 hours.

EHS EDUCATION FOR EMPLOYEES

TARGET	DESCRIPTION	2017 ACHIEVEMENT
All employees	Introductory courses, legally mandated standard courses, safety leadership courses for executives	3,571,241 hours of training were offered in total, completed by 518,023 employees
EHS staffs	In-house examiner courses, professional licensing courses(such as master craftsmen and engineer.)	79,837 hours of training were offered in total, completed by 6,315 employees
Employees at overseas production sites	Global EHS Conference, key leader courses, sewage/wastewater treatment specialist courses, etc.	1,497,854 hours of training were offered in total, completed by 172,152 employees

EMPLOYEE HEALTH MANAGEMENT

EMPLOYEE HEALTH MANAGEMENT SYSTEM
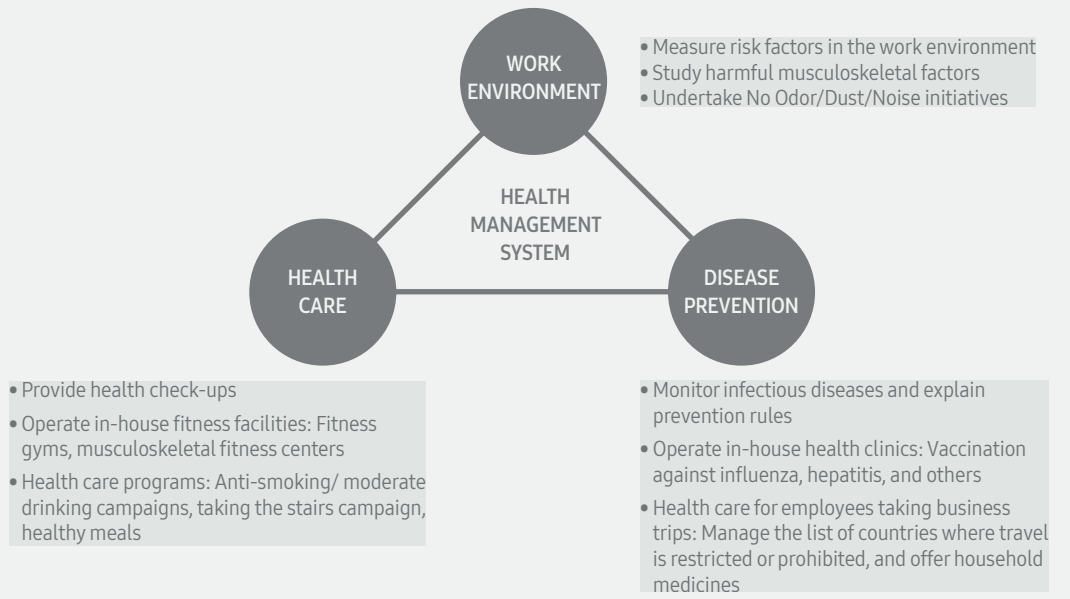
HEALTH MANAGEMENT SYSTEM

WORK ENVIRONMENT
- Measure risk factors in the work environment
- Study harmful musculoskeletal factors
- Undertake No Odor/Dust/Noise initiatives

HEALTH CARE
- Provide health check-ups
- Operate in-house fitness facilities: Fitness gyms, musculoskeletal fitness centers
- Health care programs: Anti-smoking/ moderate drinking campaigns, taking the stairs campaign, healthy meals

DISEASE PREVENTION
- Monitor infectious diseases and explain prevention rules
- Operate in-house health clinics: Vaccination against influenza, hepatitis, and others
- Health care for employees taking business trips: Manage the list of countries where travel is restricted or prohibited, and offer household medicines

EMPLOYEE HEALTH MANAGEMENT PROGRAMS

Designing Ergonomically-enabled Manufacturing Sites

For Samsung's home appliances manufacturing plant in South Carolina, we applied our internal ergonomic design standards right from the blueprinting stage. We are continuously looking for ways to lessen the risk of musculoskeletal stress for workers who conduct repetitive tasks, including developing special equipment and continuing factory automation.

Creating a Pleasant Work Environments

We have replaced high-toxic substances with lower toxicity substances and automated cleansing systems that use chemical substances. Moreover, we improved our ventilation systems and provided protective gear to our employees to create a more pleasant work environment.

Providing Health Promotion Programs

We provide several health improvement programs for our employees including one-on-one medical consultation, a Samsung Health App based campaigns promoting healthy lifestyles.

WORKPLACE CHEMICALS MANAGEMENT

To ensure the safety of the chemical substances we use, we developed chemical handling safety measures following EHS expert diagnosis and implementing such measures. We also provide regular training for employees who handle chemicals as well as routinely inspect chemical storage and handling facilities.

In order to reduce our chemical consumption, we adopt a three-phase management approach: developing substitute materials, reducing the concentration of chemicals used and discontinuing their use. We have also modified our manufacturing processes, allowed for the reuse of chemicals and improved our use methods. As a result of meticulous chemicals management, there were zero reported chemical spills across all of our worksites for the past four years.

PROCESS OF MANAGING CHEMICALS

We rigorously work to prevent accidents and injuries caused by hazardous substances. We manage chemicals via a system which covers data from all stages of our chemical management process - starting from the substance purchase stage up to the final disposal stage. In addition, we developed an integrated monitoring system that governs environmental facilities, chemical-handling facilities and disaster control facilities in order to systematically manage chemicals.

At every worksite, our employees are required to perform a preliminary evaluation of the chemical prior to purchase. Chemicals must meet our stringent assessment standards in order to be registered and eligible for use at our worksites. Through our preliminary chemical evaluation system, we ensure that the use of regulated substances (benzene, n-hexane) is prohibited. In 2017, we carried out a total of 5,386 evaluations. After use, chemical waste goes through our chemical waste treatment procedures, designed rigorously to prevent accidents.
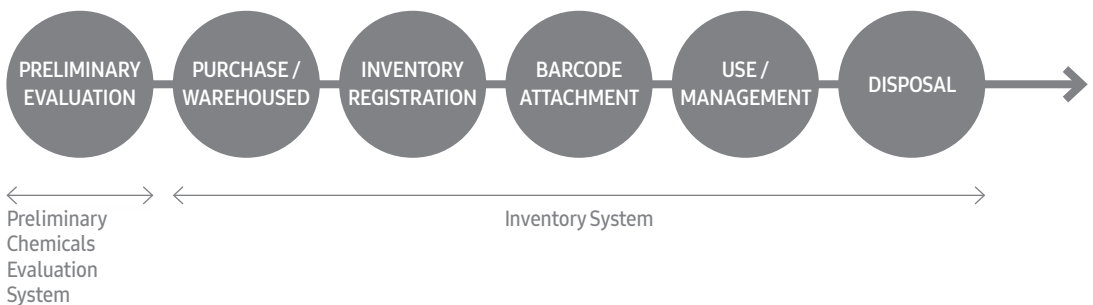
PRELIMINARY EVALUATION → PURCHASE / WAREHOUSED → INVENTORY REGISTRATION → BARCODE ATTACHMENT → USE / MANAGEMENT → DISPOSAL →

Preliminary Chemicals Evaluation System

Inventory System

INTEGRATED CHEMICALS MONITORING SYSTEM

EXPLOSION PROOF DUST COLLECTOR

FIRE EXTINGUISHING FACILITY

RTO[1]

INTEGRATED DISASTER CONTROL MONITORING CENTER

SURFACE TREATMENT PROCESS

AUTOMATIC EFFLUENT ANALYSIS SYSTEM

CCSS[2]
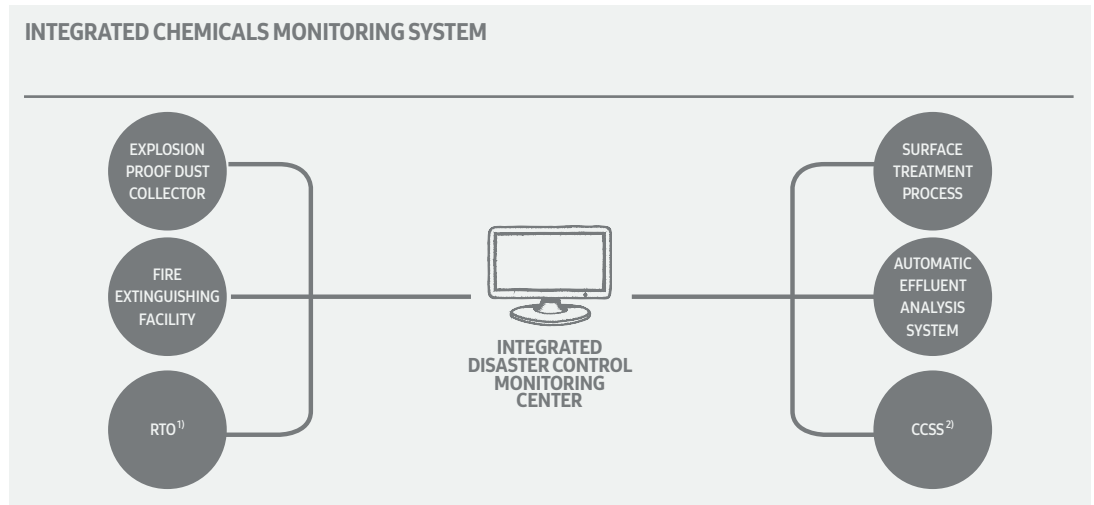
Footnotes:

1) Regenerated Thermal Oxidation
2) Central Chemical Supply System

OCCUPATIONAL HEALTH AND SAFETY IN SUPPLY CHAIN

In 2014, we created an independent organization, 'Partner Safety Group,' in charge of supporting the EHS management of our suppliers. Through this group, we transfer our expertise and educational programs to assist key suppliers improve EHS standards.

SUPPLIER EHS MANAGEMENT

Audits and Consulting on Corrective Actions

Through our audits, we ensure that our suppliers secure emergency exits, install heat and smoke detectors, conduct evacuation drills, and develop procedures to systematically prevent and respond to emergencies. Those whose work process involve the use of chemicals should be provided with an appropriate protective gear to wear. Our supplier support system monitors how our suppliers use health check-up services so that all employees of 'priority suppliers' receive legally mandated health check-ups.

We also review whether the following is done: physically demanding work is properly controlled, dangerous equipment is safely managed and insulation devices are regularly inspected. We demand that safety devices be installed for any risk factors that could threaten the safety of workers.

It is mandatory for our suppliers to operate protection programs for workers who handle hazardous substances – labeling storage containers, installing an additional containers against chemical leaks, providing a Material Safety Data Sheet(MSDS) at the workplace – and regularly sending our 'workplace environment & safety experts' to provide consulting. If we find a need for improvements on the management of wastewater and waste, the supplier is required to be trained on our relevant policies, and we work with these suppliers in making necessary process improvements.

Training

We provide EHS training sessions to different levels of supplier employees – CEOs, executives in charge of EHS, and working-level staffs – more than twice a year. The training consists of topics such as understanding environment and safety, key regulatory revisions, and in-depth details by area.

Sharing and Dissemination

We host regular meetings joined by our suppliers' heads of EHS to share their pending issues and disseminate best practices among them. Our annual 'Suppliers Day' at the environment & safety Innovation Conference is celebrated to share the innovative EHS practices of suppliers and award top-performing suppliers.

For outstanding suppliers, we recognize them as our EHS Best Partners and increase the number of these EHS Best Partner candidates each year to eliminate the environment & safety risks of all our suppliers across the globe.

SUSTAINABILITY
FOUNDATIONS
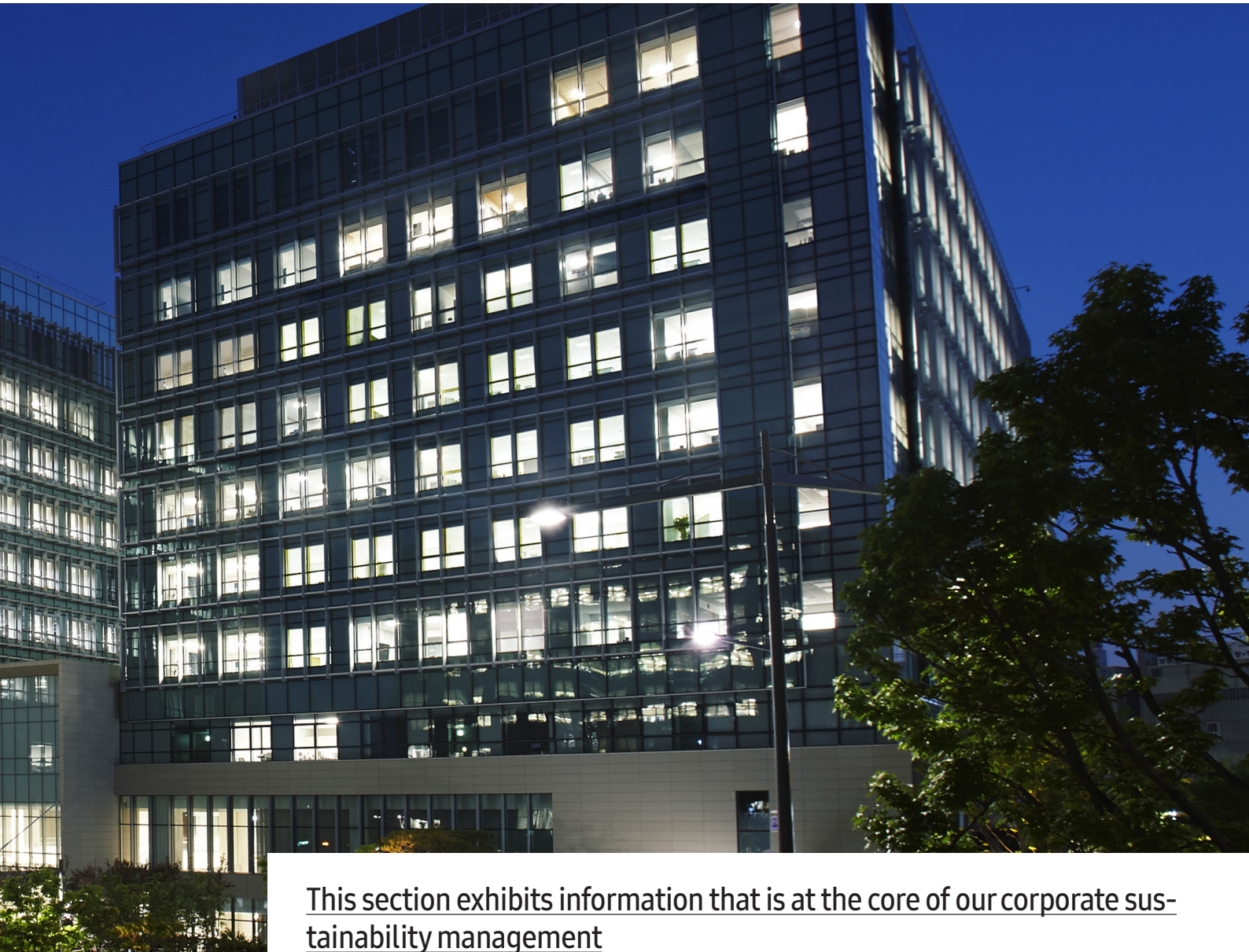
This section exhibits information that is at the core of our corporate sustainability management

Materiality

MATERIALITY ANALYSIS

Each year we conduct a materiality analysis to illustrate the topics we believe are of the greatest interest to our stakeholders and our business. We use the outcomes of this assessment to identify material issues and disclose relevant data in our sustainability reports. The assessment also informs our strategies, goals, and actions.

We created a pool of material issues based on media reports, business conditions, global standards and initiatives, and expert opinions. Of this pool of issues, 23 were selected as our 2018 material issues through internal discussions and consultation with experts. These issues were chosen and prioritized according to their impact on stakeholders and the business. A group of experts as well as employees from relevant departments led this effort and considered the company's policies, sales, cost, reputation, impact and regulations. The materiality outcomes were reviewed and finalized by the Corporate Sustainability Management Office and a global internal steering committee and have been approved by top management.

MATERIALITY ANALYSIS PROCESS

STEP 1
SELECT MATERIAL ISSUES

STEP 2
SET PRIORITIES

STEP 3
CONDUCT REVIEWS / VERIFICATIONS

Created a pool of material issues

822 issues in total

- 576 media articles related to Samsung Electronics
- UN Sustainable Development Goals(SDGs) and 50 Global Insight issues analyzed by KPMG
- 196 material issues in the industry (83 Industry-peer issues, 38 Industry Initiatives Major Issues, 47 by GRI, 14 by RobecoSAM, 14 by Sustainbility Accounting Standards Board(SASB)

Integrate issues and select material issues raised by multiple organizations

Analyze impact on our business

- Impact of material issues on our sales, costs, reputation, and regulations

Analyze impact on stakeholders

- Assessment on the impact of material issues on stakeholders(including customers, shareholders, investors, employees, suppliers, local communities, NGOs, government and media.)

Analyze impact on the value chain

- Assessment on the impact of material issues on economy, society and environment in each of the raw materials procurement, production, product, transport,service, use, and disposal phases

Conduct reviews by the top management and Sustainability Office

MATERIALITY ANALYSIS OUTCOMES

Influence on stakeholder assessments
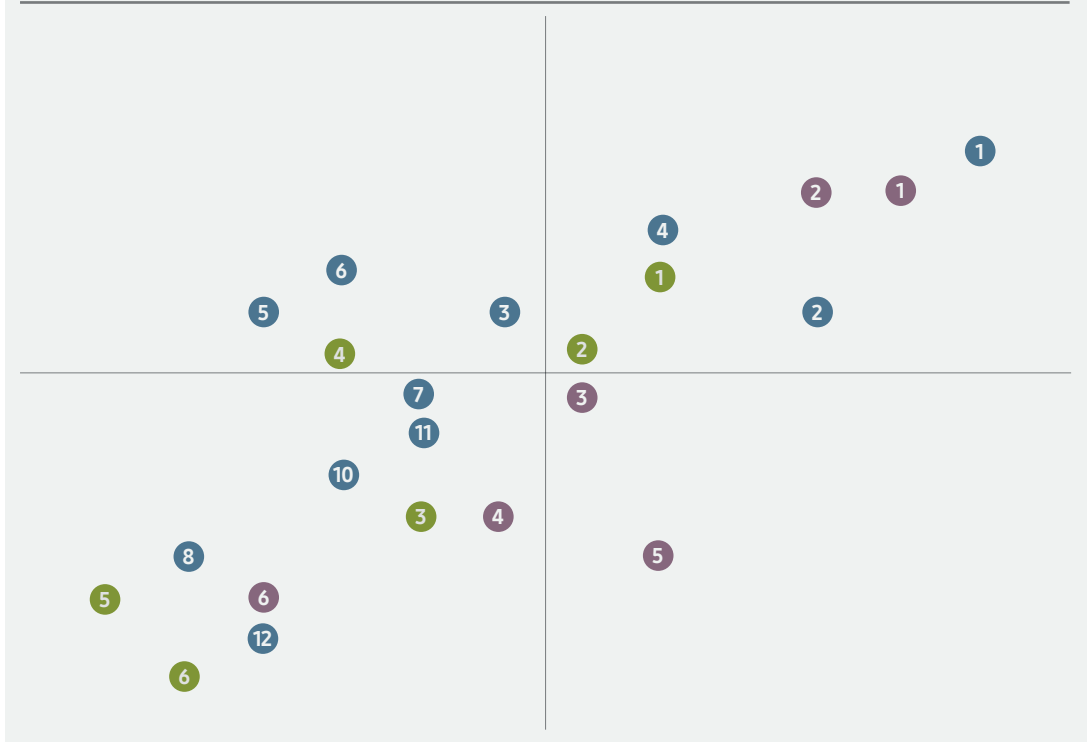
Significance of economic, environmental, & social impacts

ECONOMY ●	SOCIETY ●	ENVIRONMENT ●
1. Product Safety and Quality Management	1. Labor Practices in Supply Chain	1. Circular Economy
2. Transparency, Accountability, and reporting and Leadership in Corporate Governance	2. Occupational Health and Safety in Supply Chain	2. Product Stewardship
3. Business Model and Innovation	3. Human Rights	3. Climate Stewardship
4. Digital inclusion	4. Social Application of IT	4. Waste and Hazardous Materials in Supply Chain
5. Responsible Marketing and Customer Relationship Management	5. Public Policy Engagement and Global Stakeholder Engagement	5. Water and Wastewater Management
6. Intellectual Property Protection	6. Occupational Health and Safety	6. Energy Management
	7. Supply chain Sustainability Support	
	8. Human Capital	
	9. Privacy, Data Security, and Freedom of Expression	
	10. Ethical Business Practices	
	11. Responsible Sourcing and Manufacturing	

OUR TARGETS BY MATERIAL ISSUE

MATERIAL ISSUE	TARGET	DEADLINE	ON TRACK	COMPLETED
Product Safety and Quality Management	• Innovate the quality management system including process innovation, support for component suppliers, risk verification reinforcement, quality system optimization	Every year	●	
	• Nurture in-house quality experts by assisting employees in obtaining internationally-certified quality expert qualifications	Every year	●	
Business Model and Innovation	• Build the basis for Internet of Things-based connectivity across all products	2020	●	
	• Allow more than 1% of all domestic R&D staff to experience the C-Lab	2017		●
Digital Inclusion	• Broaden product features and service development to improve access to information for vulnerable groups	Every year	●	
Responsible Marketing and Customer Relationship Management	• Expand localized customer services	Every year	●	
Intellectual Property Protection	• Consistently manage intellectual property risks(operate an IT system to manage the use of software, provide compliance training)	Every year	●	
Labor practices in Supply Chain	• Prevent child labor at suppliers	Every year	●	
	• Perform on-site inspections on all critical suppliers	Every year		●
Occupational Health and Safety in Supply Chain	• Ban the use of hazardous substances(benzene, n-hexane) in the manufacturing process of suppliers	Every year	●	
Human Rights	• Disclose policies and activities that prevent forced labor along the supply chain	2017		●
	• Launch Employee Resource Groups for female staff in respective units	2018	●	
Social Application of IT(Local communities and environmental impact)	• Strengthen cooperation with local stakeholders – governments, NGOs – to expand local community development programs	Every year	●	
Public Policy Engagement and Global Stakeholder Engagement	• Strengthen cooperation with NGOs and other external organizations in addressing key human rights issues	Every year	●	
Occupational Health and Safety	• Reach grade A in safety culture level across all worksites	2020	●	
	• Maintain all of the current healthy and safety management system certification at manufacturing sites	Every year		●
Supply Chain sustainability support	• Provide KRW 50 billion to assist 2nd-tier suppliers and SMEs that do not have business with us in innovating their productivity	2018	●	
	• Increase the number of Smart Factories to approximately 1,000 among domestic SMEs	2017		●
Human Capital(Diversity and Employee Development)	• Implement global HR innovation programs(establish a horizontal organization culture, job function-based HR system and field-oriented HR operation)	2020	●	
Privacy, Data Security, and Freedom of Expression	• Reinforce privacy organizations and policies	2017		●
Ethical Business Practices	• Endeavor continuously to reduce compliance violations	Every year	●	
Circular Economy	• Collect 3.8 million tons of cumulative electronic waste by 2020	2020	●	
Product Stewardship	• Reach 90% or above in the ratio of Good Eco Products designated under our in-house eco product rating system(based on the No. of product development projects)	2020	●	
	• Reach 2.5 million tons in accumulated estimated GHG emissions reduction in the product use phase by improving product energy efficiency(from 2009 onwards)	2020	●	
Climate Stewardship	• Reduce intensity-based GHG emissions by 70%(against the 2008 base year)	2020	●	
Waste and Hazardous materials in Supply Chain	• Reach 95% in converting waste generated from the workplace into resources	2020	●	
	• Strengthen the management of hazardous substances from the manufacturing process and manage such materials contained in products(polyvinyl chloride, brominated flame retardants, phthalate)	Every year	●	
Water and wastewater management	• Reach 50ton/KRW 100 million in intensity-based consumption of water resources	2020	●	
Energy Management	• Meet the annual energy consumption target(2017 target: 23,603 GWh)	Every year		●

Sustainability Management Value Creation(True Value)

TRUE VALUE

As well as the economic and financial value that we generate for our shareholders and customers, we strive to create social and environmental value through sustainable management. We have taken a 'quality over quantity' approach in setting, and now implementing, our sustainability management goals. In 2016, we published our first True Value bridge using KPMG's 'True Value' methodology which provides a proven approach in the quantification of social and environmental externalities. In our 2017 Sustainability Report we reported that we had developed detailed implementation guides to further improve the data reliability and updated the True Value bridge.

For this report, we have updated the bridge for 2017. Our financial value was approximately KRW 42.19 trillion, and our True Value, which includes socio-economic and environmental values, amounted to nearly KRW 49.16 trillion. This means that our True Value rose by approximately 16.5% compared to the current Financial Value and also rose by approximately 89.2% compared to 2016 True Value.

The calculation of Samsung's True Value was conducted by the Corporate Sustainability Team in collaboration with KPMG experts. Continuing to assess our impact is an evergreen process. In 2018 we will be focusing on further integration of environmental and social considerations into our decision making to create value.

VALUE MEASUREMENT METHODOLOGY

CATEGORY		TYPE	MEASUREMENT METHODOLOGY[1]
Socio-Economic Value	Investor value	Benefits	• Dividends and interest payments to investors and creditors
	Supplier support	Benefits	• Investments made in the Win-Win Cooperation Fund
	Local community development	Benefits	• Return on investment made in educational projects(118%)[2]
			• Return on investment made in infrastructure development projects(250%)[3]
			• Return on investment made in sanitary facility development projects(550%)[4]
Environmental Value	GHG emissions in the workplace	Costs	• Social costs that incur due to GHG emissions[5]
	Atmospheric environmental impact	Costs	• Social costs that incur due to the emission of air pollutants (NOx, SOx, PM)[6]
	Aquatic environmental impact	Costs	• Social costs that incur due to water consumption based on severe water shortages in the area where our worksites are located[7]
	Environmental impact of waste	Costs	• Social costs that incur due to waste landfilling, incineration, and recycling respectively[8]

Footnotes:

1) The above benefits and costs are adjusted in consideration of price fluctuations, and the currency rate was KRW 1,067/USD and KRW 1,250/Euro as of December 31st of 2017.
2) G.Psacharopoulos and H.A. Patrinos, Returns to investment in education: a further update(2004)
3) BCG, The cement sector: a strategic contributor to Europe's future(2013)
4) G. Hutton, Global costs and benefits of drinking-water supply and sanitation interventions to reach the MDG target and universal coverage(2012)
5) EPA, Technical update of the social cost of carbon for regulatory impact analysis(2013)
6) EEA, Revealing the cost of air pollution from industrial facilities in Europe(2011)
7) TruCost PLC, Natural capital at risk: the top 100 externalities of business(2013)
8) A. Rabl, J. V. Spadaro and A. Zoughaib, Environmental impacts and costs of solid waste: a comparison of landfill and incineration(2009)

VALUE MEASUREMENT METHODOLOGY

BUSINESS ACTIVITY INVESTMENT

- Investments made in corporate citizenship programs
- Environmental discharge data
- Support for suppliers

Smart School support

KRW **27.1** billion

MONETARY VALUE

- Research outcomes from global research institutes
- Carbon price of the concerned country, etc.

Return on investment made in school education in terms of social benefits

118%

VALUE OF SOCIO-ECONOMIC & ENVIRONMENTAL IMPACT

Social Value of Smart Schools:

KRW **32.0** billion

2017 SAMSUNG ELECTRONICS SUSTAINABILITY MANAGEMENT VALUE

Unit: KRW million

EARNINGS	SOCIO-ECONOMIC			ENVIRONMENTAL				TRUE EARNINGS

- Financial Value: 42,186,747
- Investor value: 7,347,012
- Supplier support: 822,800
- Local community development: 86,203
- GHG emissions: -632,310
- Atmospheric environmental impact: -6,381
- Aquatic environmental impact: -641,910
- Environmental impact of waste: -3,750
- True Value: 49,158,411

TRUE VALUE

Unit: KRW million

Year	Value
2015	23,608,389
2016	25,988,765
2017	49,158,411
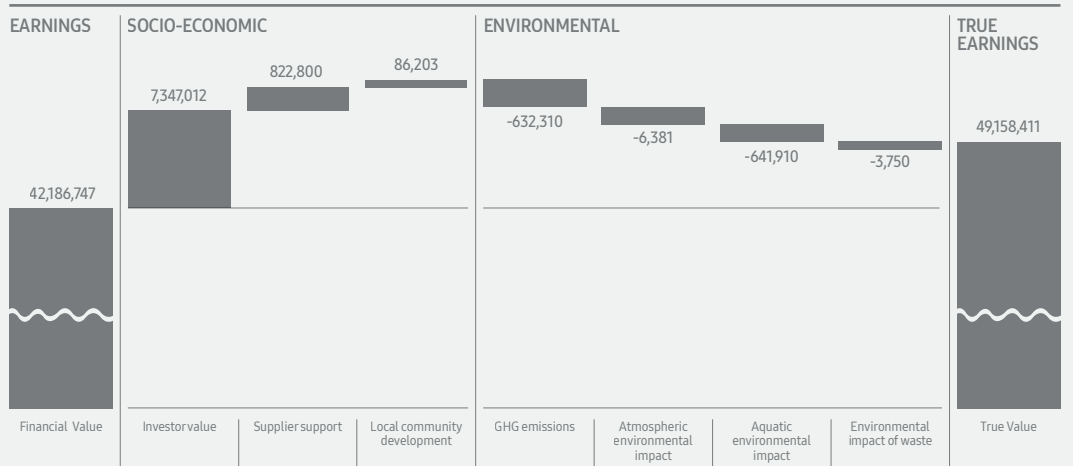
What We Do in Alignment with the UN SDGs

SDGs #1~17

① End poverty in all its forms every-
   where
② End hunger, improve food security,
   and promote sustainable agricul-
   ture
③ Ensure healthy lives and promote
   well-being for all at all ages
④ Ensure quality education and
   promote life-long learning oppor-
   tunities for all
⑤ Achieve gender equality and
   empower all women and girls
⑥ Ensure availability and sustainable
   management of water and sanita-
   tion for all
⑦ Ensure access to sustainable
   energy for all
⑧ Promote sustainable economic
   growth, full employment and
   decent work for all
⑨ Build resilient infrastructure, pro-
   mote sustainable industrialization
⑩ Reduce inequality within and
   among countries
⑪ Make cities and human settle-
   ments inclusive, safe, resilient, and
   sustainable
⑫ Ensure sustainable consumption
   and production patterns
⑬ Take urgent action to combat
   climate change and its impacts
⑭ Protect and sustainably use the
   oceans, seas, and marine resources
⑮ Protect the ecosystem and pre-
   serve biodiversity(forests, deserts,
   land, etc.)
⑯ Establish a fair justice system for all
⑰ Strengthen the means of
   implementation and revitalize the
   global partnership for sustainable
   development

GOAL	RELEVANCE[1]	POTENTIAL IMPACT[2]	OUR STATUS	FUTURE PLAN
SDGs #1 (NO POVERTY)		⊕ Improve access through technology, information and communication services ⊖ Exert a direct or indirect impact on environmental destruction that may affect local resident's livelihood	• Operate citizenship programs that guarantee access to information to all regardless of abilities or economic status • Operate the Tech Institute digital skills program to offer employment training to underprivileged/marginalized populations so that they become economically in-dependent	• Pursue technological innovation that meets social needs • Improve the quality of employment trainingprograms and expand employment support
SDGs #4 (QUALITY EDUCATION)		⊕ Increase access to education by using ICT	• Provide quality education and training programs in the EU • Provide career development programs aligned with the life cycle needs of employees	• Expand and improve education and digital skills program • Support individuals with strengthening their job expertise
SDGs #5 (GENDER EQUALITY)		⊕ Strengthen female leadership in the workplace and support female-led businesses	• Operate education programs for females - Designer School in Nepal, programs for women domestic violence in Italy • Operate work programs that ensure maternity protection (Mommy Room in Vietnam)	• Expand support for digital education for women • Strengthen gender equality as part of our corporate culture
SDGs #6 (CLEAN WATER AND SANITATION)		⊕ Ensure the sustainable use and management of water resources ⊖ Exert an indirect impact on the shortage of water resources in local communities	• Manage water resource risks in the workplace and monitor the quality of effluent	• Reach 50 tons/KRW100 million in intensity based use of water resources by 2020
SDGs #7 (AFFORDABLE AND CLEAN ENERGY)		⊕ Develop highly energy-efficient products by using IoT technology (e.g. smart home)	• Research technology that reduces energy use and adopt such technology for products • Implement energy use reduction projects at overseas subsidiaries	• Use 100% renewable energy to source operations in US, China, EU
SDGs #8 (DECENT WORK AND ECONOMIC GROWTH)		⊕ Ensure a safe work environment and assist in the economic development of local communities ⊖ Human rights infringement and child/forced labor in supply chain	• Offer innovation support programs for domestic/overseas suppliers and help them build Smart Factories • Policy commitment and due diligence work to protect human rights in our operations and supply chain	• Strengthen the inspection of labor and human rights, health & safety, environmental protection, business integrity, and management systems along the supply chain and expand support for improvements
SDGs #9 (INDUSTRY, INNOVATION AND INFRASTRUCTURE)		⊕ Support underprivileged areas in establishing communication connections and engaging in economic activities through the development of ICT infrastructure ⊖ Indirect impact on environmentally sound industrialization	• Provide financial aid for local communities to recover from Pohang earthquake	• Continuously support infrastructure development to help communities recover from natural disasters
SDGs #10 (REDUCED INEQUALITIES)		⊕ Contribute to addressing income inequality by reducing poverty in local communities through job creation, etc. ⊖ Exert an indirect impact on income inequalities and poverty within developing nations	• Offer customized services for vulnerable groups • Implement policies to protect the rights of vulnerable groups (children, apprentices, migrant workers)	• Continuously explore customized customer services for vulnerable populations • Continuously monitor our implementation of policies to protect the rights of vulnerable groups
SDGs #12 (RESPONSIBLE CONSUMPTION AND PRODUCTION)		⊕ Ensure the sustainable use and management of resources ⊖ Exert a direct or indirect impact on the depletion of natural resources	• Offer customized services for vulnerable groups • Implement policies to protect the rights of vulnerable groups (children, apprentices, migrant workers)	• Continuously explore customized customer services for vulnerable populations • Continuously monitor our implementation of policies to protect the rights of vulnerable groups
SDGs #13 (CLIMATE ACTION)		⊕ Reduce CO₂ emissions generated from the extraction of resources and product manufacturing ⊖ Exert a direct or indirect impact on climate change and air pollution	• Reduce GHG emissions in the workplace and increase the use of renewable energy • Participate in external GHG reduction projects (bioethanol stove distribution in Kenya)	• Reduce GHG emissions by 70% in the workplace by 2020 (against the 2008 base year) • Expand participation in collective projects to reduce GHG emissions beyond our operations
SDGs #15 (LIFE ON LAND)		⊕ Restore/recover ecosystems and ensure their sustainable management ⊖ Exert an indirect impact on the destruction of habitats and ecosystem disruptions	• Develop biodiversity preservation guidelines and identify and improve our impact on the aquatic ecosystem and the habitats of endangered species	• Undertake regular ecosystem preservation programs with local communities
SDGs #16 (PEACE AND JUSTICE STRONG INSTITUTIONS)		⊕ Monitor and combat human rights violations and corruptive practices ⊖ Exert a direct or indirect impact on corruptive practices(collusion between politics and business)	• Systematically manage our compliance and ethical risks based on Samsung Code of Conduct and Business Conduct Guidelines	• Perform regular surveys to monitor levels of employee awareness on integrity • Strengthen business management
SDGs #17 (PARTNERSHIPS FOR THE GOALS)		⊕ Support developing nations with technology transfer/ distribution and capacity-building	• Collaborate with global/local community organizations to educate our locally-hired staff at overseas worksites • Undertake localized corporate citizenship initiatives through our global partnerships with international institutions and NGOs	• Expand cooperation with global research institutes and NGOs to develop localized corporate citizenship programs

Footnotes:

1) Relevance to Samsung ◐◑ Low Medium ●High
2) Potential Impact : ⊕ Positive, ⊖ Negative

Stakeholder Engagement and Stakeholder Communication

KEY STAKEHOLDERS

STAKEHOLDER	KEY CONCERNS OF STAKEHOLDERS	COMMUNICATION CHANNEL	OUR STRATEGY
Customers	• Product/service quality • Safe product use • Correct product information • Transparent communication	• Customer satisfaction surveys conducted by external organizations • Call centers, service centers • Prosumer programs • Samsung Electronics Newsroom • Samsung Semicon Story • YoungSamsung Community	• Strengthen the quality and safety management system(Our Commitment to Quality) • Provide product information by launching country specific websites • Gather and address the voice of customers • Identify and consult on customer reputations through the Reputation Institute(Europe/ Central and Latin America)

Shareholders & Investors	• Economic outcomes
	• Risk management
	• Information sharing
	• Environmental, Social and Governance factors
		• Investor Relations meetings
		• General shareholder meetings
		• One-on-one meetings
		• Analyst Day
		• Samsung Electronics' Corporate Firms YouTube URL: https://www.youtube.com/samsungelectronics
			• Stable profit generation
			• Strengthen shareholder return policy
			• Set up the Governance Committee under the Board of Directors
			• Reinforce transparency in operating external sponsorships
			• Samsung Investors' forum(May 2017)
			  - Attended by key institutional investors, analysts, and IT industry experts in domestic and global sites
			  - 'Brief 'ARTIK', quantum dot', 'PLP' and other leading next-generation technologies

Employees	• Workplace health and safety • Diversity and equal opportunity • Training and career development • Employment and benefits • Labor relations	• Work Council • Counseling centers • Satisfaction surveys • Samsung LiVE • Newsletters • Reporting systems(compliance, ethics)	• Manage work environment • Build a creative organizational culture • Declare the three years & Inclusion Plan(North America) • Operate a customized career life cycle program • Host business briefings
Suppliers	• Fair trade • Shared growth • Employees' human rights protection • Supplier's assessment for their impacts on society	• Hotline, Cyber Shinmungo, etc. • Supplier meetings, Win-Win Cooperation Day, etc. • Shared Growth Academy • Management counseling group for suppliers	• Promote fair trade and shared growth • Assist suppliers with their innovation initiatives • Host the Tech Trans Fair • Operate supplier support fund • Ensure responsible management of the supplier work environment
Local Communities	• Local recruitment, local economy revitalization, and other indirect economic effects • Local environmental protection • Donation, volunteering, and other social-giving initiatives	• Local volunteer centers • Local community council • Samsung Nanum Village • Local Community Blog (Suwon, Gumi, and Gwangju sites) • Yongin Hwaseong community Blog (http://www.sotongsamsung.com)	• Support local SMEs through the Smart Factory program • Preserve the ecosystem of streams in the vicinity of our worksites • Implement educational and recruitment corporate citizenship programs • Operate employee volunteer groups
NGOs, CSR Councils, Specialized Institutions	• Social responsibility for local communities and the environment • Contribution to the UN SDGs • Transparent and prompt information disclosure	• Business networking events events • Open and transparent engagement with NGOs	• Gather feedback from global NGOs • Engage in the work of RBA(Responsible Business Alliance) and GeSI(Global e- Sustainability Initiative) • Develop human rights policies in cooperation with BSR
Governments	• Indirect economic effects • Fair trade • Health and safety • Compliance	• Attend policy debates • Attend council meetings • Participate in policy consultative bodies	• Operate SME support programs with government agencies • Comply with country-specific regulations on fair trade, workplace health & safety, and the environment • Develop and operate a venture investment window in collaboration with governments
Media	• Transparent and prompt information disclosure	• Press releases • Corporate and regional communications teams • Samsung Newsroom	• Active media engagement(media inquiries and coverage) • Expand global media touchpoints (events, briefings, etc.) • Timely sharing of comprehensive news

Corporate Governance

BOARD OF DIRECTORS(BOD) COMPOSITION

The Board shall have at least three but no more than four-teen Directors, in accordance with Article 24 of the Articles of Incorporation(AOI). While having more than three Direc-tors is in accordance with Article 383 of the Commercial Act in South Korea, we believe that the maximum number of directors should not exceed fourteen to ensure efficient decision-making and management of meetings. As of 2017, the Samsung Electronics Board comprises eleven Directors, of which six members are Independent Direc-tors. This meets the requirement of Article 542-8 of the Commercial Act, which states that a company shall have at least three Independent Directors and that Independent Directors shall constitute a majority of the Board. The list of Directors as of the reporting date is as follows.

Name	Title	Management Committee	Audit Committee	Independent Director Recommendation Committee	Related Party Transactions Committee	Compensation Committee	Governance Committee
Sang-Hoon Lee	Chairman of the Board						
Jae-Yong Lee	Vice Chairman						
Ki-Nam Kim	President & CEO(DS)	●					
Hyun-Suk Kim	President & CEO(CE)	○					
Dong-Jin Koh	President & CEO(IM)	○					
In-Ho Lee	Independent Director		●		●	○	●
Kwang-Soo Song	Independent Director		○		○	●	○
Sun-Uk Kim	Independent Director		○		○		○
Jae-Wan Bahk	Independent Director			○			○
Byung-Gook Park	Independent Director			○			○
Jeong Kim	Independent Director			○		○	○

Footnotes:

● Chair ○ Member

BOARD OF DIRECTORS QUALIFICATIONS

Transparency	• All directors are appointed through resolutions made by the general shareholder meetings. • Executive directors are nominated by the BOD, and independent directors by the Independent Director Recommendation Committee
Independence	• Directors are prohibited from engaging in business activities in the same industry without the BOD's approval. • Those who are full-time employees, affiliated to the Company's largest shareholder or to the Company itself, or recently worked at the Company with in the past two years are prohibited from serving as independent directors. • The BOD Chairman is appointed among directors through a BOD resolution, in accordance with the Articles of Incorporation and BOD regulations. • Directors are not allowed to excercise their voting rights regarding agenda items in which they have special interest.
Expertise and Diversity	• Independent director candidates are nominated based on their expertise or experience in business administration, economics, accounting, law, and relevant technologies. • Independent directors are provided with regular internal training via visits to domestic/overseas business sites and through briefings on the Company's operational status • A multitude of factors – religion, race, gender, hometown, expertise – are taken into account in the selection process, and discrimination based on such factors is prohibited in nominating director candidates.

BOARD OF DIRECTORS OPERATION

The Board of Directors meets seven to eight times every year and holds additional meetings when deemed necessary. The Chairman convenes meetings of the Board, while Any Director may convene a meeting with consent from the Chairman in the case where the meeting is deemed necessary for the purpose of carrying out his or her duties, along with an agenda and reasons for the meeting. The presence of a majority of all Directors shall constitute a quorum and resolutions shall be adopted by a majority of the votes of Directors attending the meeting. In compliance with Article 391 of the Commercial Act of Korea, the Board meeting may take place via electronic means (e.g. conference calls).

EVALUATION AND COMPENSATION

The evaluation of Independent Directors is conducted every year and measures the performance of each Director, including attendance rate, contributions, and independence. The results are used to better support the Independent Directors in performing their duties and to review whether the composition of the Board and its committees are appropriate. This is ultimately aimed at improving the efficiency of the Board. Moreover, the remuneration of Independent Directors is limited to base salary and business-related expenses.

BOD COMMITTEES

In 2017, our BOD met eight times to present and to handle a total of 30 agenda items, with an attendance rate of 97.5% for independent directors. To ensure swift and efficient decision-making, BOD committees were set up in accordance with pertinent laws and regulations. When major agenda items require in-depth expertise and experience, the BOD delegates such items to the relevant committees to conduct a thorough review of the matter and decide on appropriate actions. The BOD currently operates a total of six committees, including the Management Committee, Audit Committee, Independent Director Recommendation Committee, Related Party Transactions Committee, Compensation Committee, and Governance Committee.

BOD COMMITTEE OPERATIONS

COMMITTEE	MANDATE/OPERATIONAL STATUS
Management Committee	• Deliberates and decides matters either delegated by the BOD, or specified in the Articles of Incorporation or Regulations of the Board of Directors, aiming to enhance professionalism and efficiency of decision making • Convened 10 times in 2017
Audit Committee	• Supervises and supports management to maximize corporate value using a system of checks and balances • Consists of three Independent Directors. • Convened 6 times in 2017
Independent Director Recommendation Committee	• Ensures that Independent directors are recruited and recommended in a fair and independent matter • Consists of three Independent Directors * There were no Independent Director Recommendation Committee meetings held in 2017 as there were no Independent Director candidates requiring approval.
Related Party Transactions Committee	• Enhances corporate governance and to promote fair transaction • Reviews pending transactions between the company and its related parties. • Consists of three Independent Directors • Convened 7 times in 2017
Compensation Committee	• Evaluates the appropriateness of and reviews and approves the limit on Director's compensation to be submitted for resolution at a general meeting of shareholders • Consists of three Independent Directors • Convened once in 2017
Governance Committee (Formerly CSR Committee)	• Carries out all responsibilities previously handled by the CSR Committee, addresses matters that affect shareholder value, and endeavors to enhance communication with our shareholders • Established by expanding the CSR Committee(April 2017) • Consists of six independent directors • Convened 5 times in 2017

Risk Management

In response to growing uncertainties in our business environment, we take a pre-emptive approach to risk management. As a global technology industry leader, we scope out risks and business uncertainties caused by external and internal factors. We respond to these risks as a way to strengthen our sustainability and competitiveness in the market.

MORNITORING GLOBAL ISSUES

To identify and proactively address current economic, social, and environmental risks concerning key global issues, we reach out to a network of consulting firms, governments, academia, NGOs and subject matter experts to seek advice on a wide array of risk factors.

OUR RESPONSE TO RISKS

To help mitigate risks to our business, we have established a set of systematic risk response policies and response procedures in respective sectors. Identified risk factors are reported to top management to ensure that we can respond to them effectively. Three key business divisions and the Corporate Management Office review various risks including non-financial risks such as corporate sustainability and financial risks such as market, liquidity and credit. These risks are reviewed through the Management Committee hosted by CEOs and the Risk Council hosted by CFO(Chief Financial Officer). Notably, the CFO also serves as the company-wide Chief Risk Officer(CRO) and operates the Risk Council in collaboration with the heads of various functions including Legal, Human Resources, Communications, Public Affairs, Global Environment, Health and Safety Center, Partner Collaboration Center, and Global Product Quality Innovation.
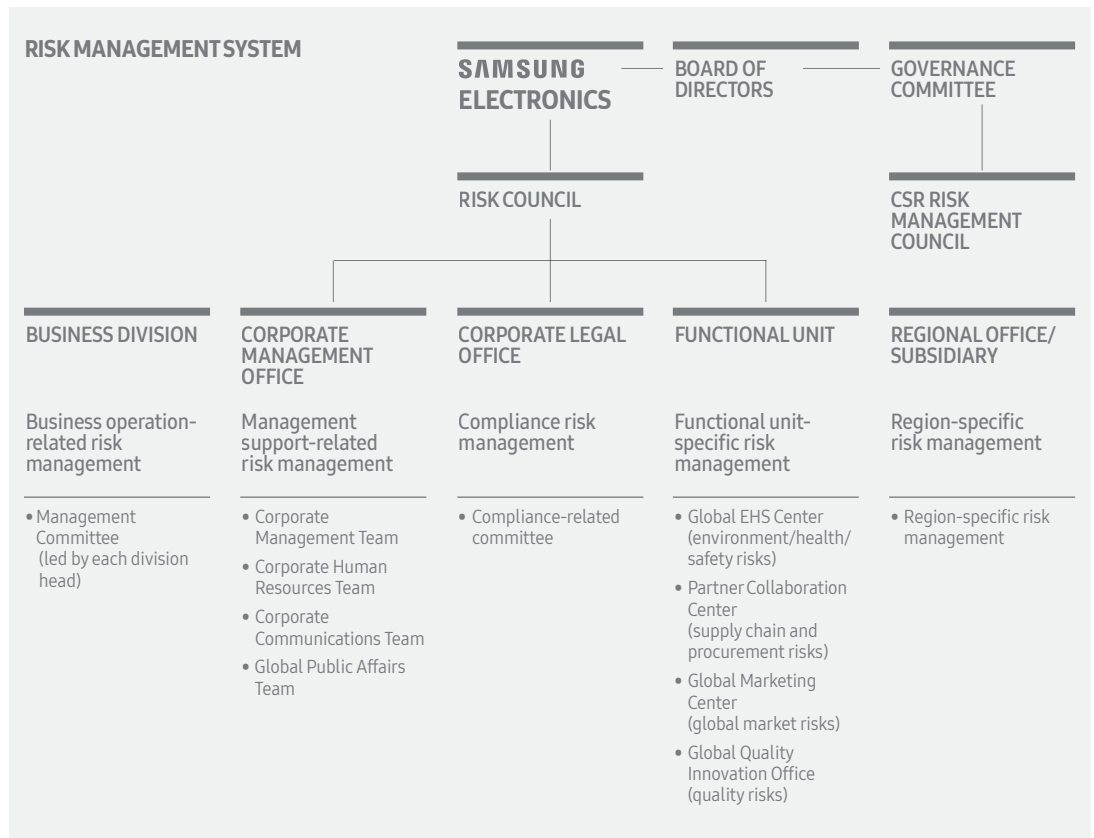
RISK MANAGEMENT SYSTEM

SAMSUNG ELECTRONICS — **BOARD OF DIRECTORS** — **GOVERNANCE COMMITTEE**

RISK COUNCIL

CSR RISK MANAGEMENT COUNCIL

BUSINESS DIVISION	CORPORATE MANAGEMENT OFFICE	CORPORATE LEGAL OFFICE	FUNCTIONAL UNIT	REGIONAL OFFICE/ SUBSIDIARY
Business operation-related risk management	Management support-related risk management	Compliance risk management	Functional unit-specific risk management	Region-specific risk management
• Management Committee (led by each division head)	• Corporate Management Team • Corporate Human Resources Team • Corporate Communications Team • Global Public Affairs Team	• Compliance-related committee	• Global EHS Center (environment/health/safety risks) • Partner Collaboration Center (supply chain and procurement risks) • Global Marketing Center (global market risks) • Global Quality Innovation Office (quality risks)	• Region-specific risk management

REINFORCED BOD SUPERVISION OF RISK MANAGEMENT

Business operations are constantly exposed to a variety of risks arising from business, financial, environmental safety, and labor conditions. While these risks are managed and addressed by the relevant departments, critical issues require the oversight of the Board. The Company's CSR Committee believes that issues related to CSR are critically important to the business and created the CSR Risk Management Committee in June 2017. The Committee is held on a quarterly basis and participated by external directors and related departments to oversee the internal management system for CSR risk.

SYSTEM-ENABLED COMPANY-WIDE RISK MANAGEMENT

At Samsung, we monitor our global supply chain from product development, procurement, manufacturing to logistics, sales and services in real time. This allows us to better detect market conditions, gauge any unusual events and minimize our supply chain risks.

Since 2004, our Disclosure Control and Procedures(DC&P) system allows for company-wide financial risk management and systematic CEO/CFO qualification procedures. Internal control procedures were established to efficiently manage financial risks. We are operating a self-diagnostic system for the purpose of risk prevention that includes diverse IT systems such as Global Enterprise Resource Planning(G-ERP) and Global Supply Chain Management (G-SCM) for financial and supply chain risk management, Global Environment, Health & Safety System(G-EHS) for the integrated management of environmental, health and safety risks, and Global Supplier Relationship Management (G-SRM) for the integrated management of supplier risks.

Responsible Business Practices

COMPLIANCE

Complying with legal and ethical standards is our top priority in business conduct, and we are fully committed to eliminating any unlawful or corruption practices and building an ethical organizational culture. In order to conduct business in a lawful and ethical manner, we analyze laws and regulatory schemes in countries where our employees are actively engaged in business practices.

Compliance Management

Our Corporate Legal Office, reporting to the CEO, operates the Compliance Team and Privacy Steering Committee. Our Compliance-related committees and the Privacy Steering Committee assists our top management in their decision-making processes. Under each committee, Samsung Business Divisions and Regional Offices are responsible for compliance and privacy at the local level. The table below sets out the responsible unit for compliance and privacy across the organization.

CATEGORY	MANAGEMENT SYSTEM	MANDATE	RESPONSIBLE UNIT3
Compliance	Compliance Program Management System (CPMS[1])	Reporting of compliance violations, help desk, self-initiated reviews, posting of manuals and guides	Corporate Compliance Team, Global Privacy Office
Anti Corruption	Ethics Management System	Posting of the Management Principles and Code of Conduct, reporting of corrupt practices	Audit Team
Personal Information Security	Privacy Legal Management System(PLMS[2])	Personal data protection management of products and services	Global Privacy Office
Intellectual Property Rights	IT4U	Ban on the illegal use of software	IT Strategy Group
Labor Relations	GHRP Portal	Compliance with labor standards, posting of HR regulations	HR Team
Environmental compliance	Global Environment, Health and Safety System(G-EHS[3])	Environment & Safety of workplaces and products	Global EHS Center
Trade	Conflict Minerals Management System(TCS[4])	Strategic resources, management of conflict minerals use	Corporate Compliance Team
Others	Global Policy & Procedure Manuals(GPPM[5]) management	Standardization of global business processes	Administration Team
	Contract management system	Standardization of global business processes	Global Legal Affairs Team, Corporate Legal Team

Footnotes:

1) Compliance Program Management System
2) Privacy Legal Management System
3) Global Environment, Health & Safety System
4) Trade Compliance System
5) Global Policy & Procedure Manuals

Compliance Management System

Our compliance management system aims to establish compliance-driven corporate culture, minimizing the business risks from various issues, such as cartel, IPR (Intellectual Property Rights), etc. This program also promotes stronger corporate responsibility, in particular, in the key areas of human rights, health & safety, and environment. The following figure illustrates the management areas of focus for the system.

KEY MANAGEMENT AREAS

• Anti-trust	• Intellectual property rights	• Anti-corruption	• Consumer protection
• Trade	• Labor relations	• Environment & Safety	• Subcontracting

COMPLIANCE MANAGEMENT PROCESS

Prevention	• Offer employee training, provide area-specific guides, make system-based self-reviews, operate a help desk, sense and manage new and revised regulations
Monitoring	• Conduct regular/ad-hoc audits in all operations by dedicated organizations or staff
Follow-up Management	• Identify the root causes of issues through process and result analysis, make improvements, prevent the reoccurrence of the same issue(e.g. introduce actual cases as part of training)

The Compliance Program Management System(CPMS), an IT system developed to manage compliance-related risks, provides our area-specific policies, and the details of regional issue monitoring. Our help desk is in operation to assist employees in making one-on-one inquiries to experts whenever they have work-related questions or when they find our guidelines insufficient to determine illegality. Our whistle-blowing system designed under the CPMS for our employees, firmly guarantees the confidentiality of whistle-blowers.

ANNUAL COMPLIANCE TRAINING

METHOD	TOPIC	DESCRIPTION
Offline	Basics & change	Training on compliance basics and key issues, offered as part of the introductory training for new hires with/without previous experience as well as annual company-wides
	Theme-based by work & job function	Advanced training on anti-corruption, trade secrets, and copyright, offered in consideration of work characteristics
	Global Mobility	Basic compliance training for expatriates at the headquarters
	Advanced for executives	Key issues such as anti-corruption offered as part of the Global Strategy Council meetings
Online	Advanced for employees	E-learning on intellectual property rights and data privacy

In dealing key issues in the areas of human rights such as child labor, migrant worker, conflict minerals, trade compliance, and privacy protection, we are fully operating the compliance system across the enterprise and supply chain. In addition, we conduct annual check-up of the compliance system of all of our subsidiaries to further enhance the system.

ETHICS MANAGEMENT

Ethics Management

We provide the Global Code of Conduct to our suppliers, customers, and other external stakeholders as well as to our employees through our ethics management website (www.sec-audit.com), and provide a channel to report on any violation. Furthermore, the Samsung Global Code of Conduct is available in a total of 15 languages (including Korean) and uploaded on our intranet. Relevant details are disseminated and shared among all our employees around the globe through collective, online, and audio/visual training offered annually.

In 2017, we received a total of 608 ethical related reports through our global reporting channels - consumer complaints accounted for 42%, and corruption-related reports accounted for 16% of the total number of reports. All corruption-related issues are subject to investigation and if the report is found to be substantiated, disciplinary actions are taken according to the severity of the concerned issues. The results of investigations are reported to the Audit Committee twice a year. Separate 'Business Guidelines' are provided to our business partners to establish transparent transaction practices.
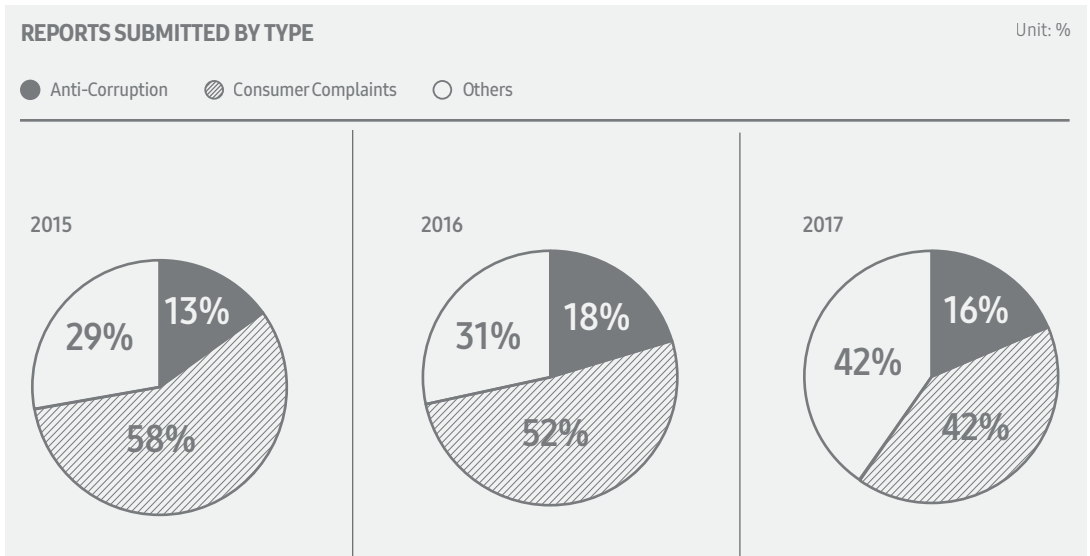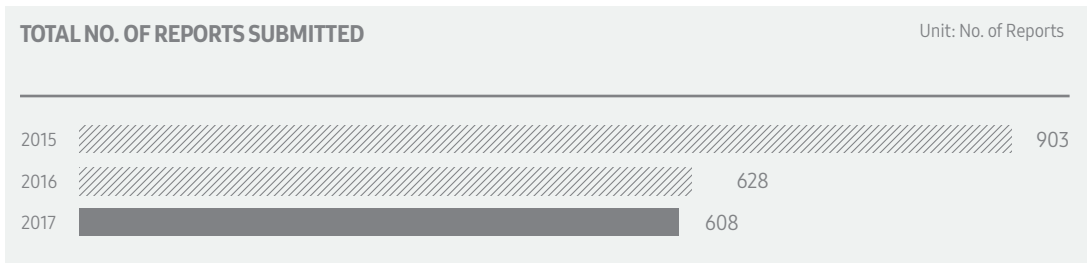
TOTAL NO. OF REPORTS SUBMITTED   Unit: No. of Reports

Year		
2015		903
2016		628
2017		608

REPORTS SUBMITTED BY TYPE   Unit: %

● Anti-Corruption   ▨ Consumer Complaints   ○ Others

2015
13% / 58% / 29%

2016
18% / 52% / 31%

2017
16% / 42% / 42%

PRIVACY AND SECURITY

Globally, 2017 met a number of data protection and cyber-security challenges which included mitigating the threats of cybersecurity and preventing data breaches. Effective data and privacy protection has never been more important for our company and for the whole industry. As the world's gatekeeper of digital information, the IT industry is under increasing pressure from governments and stakeholders to manage data responsibly. For example, EU data protection legislation is undergoing major change. Data protection laws are built on fundamental rights enshrined in the Charter of Fundamental Rights of the EU, which are the core building blocks of the EU's legal regime. Privacy issues arising from exponential growth in consumer and mobile technologies, an increasingly connected world and mass cross border data flows have pushed the EU to entirely rethink its data protection legislation to ensure that these fundamental rights are fully protected in today's digital economy. We are committed to responsibly managing privacy and digital security so that our employees and consumers can adequately understand how their online information is being managed.

Cyber Security Products and Services at Samsung Electronics
As a leader in the chip making and consumer electronics industry, we design our products and services to address the challenges posed, and to comply with international security regulations and laws. We have made three significant investments and upgrades to our products to help better protect our consumers and stakeholders.

(1) KNOX: Our KNOX security platform is a defence-grade security technology, including a hardware root of trust and firmware to help ensure devices feature end-to-end protection. We have been applying KNOX on mobile phones and tablets since 2013. In 2017, we found a solution to incorporate KNOX into Smart TVs and appliances. KNOX has been rated as the most 'Strong' in the Gartner report on mobile device security and complies with rigorous security requirements around the world including common criteria, FIPS 140-2, U.S. Department of Defense (DOD), U.K. National Cyber Security Center (NCSC), Agence nationale de la sécurité des systèmes d'information (ANSSI) of France, and the International Safe Community Certifying Centre (ISCCC).

(2) ARTIK IoT Platform: Moving beyond protection of our own IoT products, we developed a security solution available for all IoT device developers. ARTIK is a hardware-based, open, and secure platform that delivers interoperability between IoT devices and apps. ARTIK is considered to be a leading example of how openness and security can be incorporated at the same time. Moreover, ARTIK enables secure device registration based on a hardware root of trust that is operated in a secure environment and connects devices to the cloud using TLS(Transport Layer Security) and certificates issued by a trusted certificate authority.

(3) SmartThings Cloud: SmartThings Cloud is a single cloud enabled for both Samsung and third-party IoT products. We have made our cloud compatible and secure through the Open Connectivity Foundation standards and frameworks. Furthermore, we have developed certain cybersecurity requirements that a third party device must meet before connecting to our SmartThings cloud.

In 2018, we will remain committed to developing and innovating our products to protect our consumers' privacy and data.

Privacy and Personal Data Protection
We have officially published the Global Personal Data Protection Policy and have developed relevant policies to comply with the privacy and data protection laws and regulations applicable to each region. As a result of such endeavors, our employees are provided with the 'Data Protection Handbook' and the 'Guide for Outsourcing the Processing of Personal Data' to be used as management regulations. We operate our processes and systems in a way that incorporates relevant policies into our daily business conduct and continue to perform reviews and offer company-wide training on the proper handling of personal data.

• Operation of Dedicated Organization: We have established the Global Privacy Office within the Corporate Legal Office under the direct leadership of the CEO. We have appointed lawyers with expertise in data privacy in respective business divisions.

ROLE OF PRIVACY OFFICES

UNIT	ROLE
Privacy Steering Committee	• Decide on key policies and protection measures in relation to data privacy • Share pending issues by product/business division and discuss countermeasures
Global Privacy Office	• Establish privacy strategies and policies, develop relevant processes • Offer legal advice and support on privacy issues • Prevent and audit the security issues of products and services • Offer employee training and PR
Privacy Offices in Business Division	• Review and train on the privacy programs of business divisions • When an issue arises, report promptly and take follow-up measures
Privacy Officer in Regional Head Office	• Review and train on the privacy programs of the concerned Regional Offices and subsidiaries • When an issue arises, report promptly and take follow-up measures

• Perform Strict Review on Privacy Policy Operation/ Management Systems: We conduct regular reviews on our customer and employee systems and services during the entire process of personal data collection-processing-disposal.

Personal Data Management Process

In addition to our efforts to address the security challenges of our products, we take every possible measure to protect personal data through a virtuous cycle structure.

The process is divided into 4 stages:

ESTABLISH POLICY AND GUIDE

The Global Privacy Office and other relevant departments have established privacy policy, personal data processing outsourcing guideline, and data breach response process

OPERATE MANAGEMENT PROCESS

We provide legal review to fulfill our responsibility and duty as a data controller and a data processor and keep personal data secure to prevent privacy risk

TREND MONITORING AND TRAINING

We monitor trends in domestic and international data protection at all times and prepare response plans to comply with newly enacted or modified laws/regulations. Also, to increase employee awareness of data protection, we provide general training for all employees and specialized training relevant for specific job characteristics

CONDUCT AUDIT AND IMPROVE SYSTEM FLAWS

We annually conduct data protection compliance audits on our products and services. We subsequently correct system flaws in accordance with the audit results.

• Privacy Legal Management System(PLMS) Operation: It is mandatory to assess potential privacy risk by using the data privacy risk checklist throughout the lifecycle of products - from design and development to operation and discontinuation. The legal department has dedicated personnel assigned to conduct relevant reviews. Moreover, the PLMS is aligned with the Product Lifecycle Management(PLM), which is the global R&D project management system.

• Global Issue Response: We constantly monitor laws and regulations on personal data protection around the world to ensure that our products and services are in compliance with laws and regulations of each country. We detect risks and work with our business divisions and overseas subsidiaries to take action to eliminate risks in advance. For example, we apply the principle of 'Privacy by Design' starting with the design phase of a new product or service in order to comply with the directives and regulations on personal data privacy applicable to each country in EU. Preparations are being made for the General Data Protection Regulation(GDPR) force on May 25, 2018 focused on the rights of individuals and accountability of companies. Samsung HQ and our European subsidiaries are working closely together to overhaul organizations, policies, processes, and IT systems related to personal data.

SAMSUNG'S PREPARATIONS FOR EU GDPR

Process & System to Ensure Data Subjects' Rights	• To grant data subjects the right to personal data — right of access, right to erasure, right to restriction of processing, and right to data portability — we have a series of processes and systems in place. These systems make it possible to receive requests from data subjects, deliver their requests to the relevant product/service department, process them, and inform the data subjects of the final results.
Valid Consent to Process Personal Data	• To increase transparency in how we handle personal data of EU citizens, we have clearly separated consents and notices related to data collection and processing from the terms and conditions of use, which have been applied to our entire line of products and services in Europe.
Strict Protection of Personal Data	• Technical and security measures, including encryption and access control, have been heightened for the secure management of collected data, which had already been rigorously controlled by Samsung. In addition, the existing contracts for international transfers have been modified in compliance with the GDPR so that data can be transferred in a safe and lawful manner to countries outside the EU.
Stringent Oversight of Third Parties Processing Personal Data	• We have streamlined the management system for third parties involved in the development and operation of our products and services and improved contracts to ensure that they meet the GDPR requirements as data processors. In particular, to prevent any risk in data processing, we have strict supervision in place for the entire process that begins with the selection of third parties and ends with the termination of contracts.
Data Protection Officer & Privacy Office	• Through the Global Privacy Office, we appointed personnel responsible for privacy in each subsidiary in Europe. In order to make further improvements and enhancements, we have designated a DPO to take charge of the privacy protection system in the EU and have established an office constituted by legal counsels and staff.

• Strengthened Privacy Policy Training: Data privacy training is mandatory for all employees. All employees including executive officers are required to complete an online data privacy course every year. In addition, data privacy training is part of the introductory compliance training given to newly appointed employees. For individuals responsible for handling or processing data, the company conducts job specific in-person privacy training every year. We also assist privacy professionals to maintain or obtain privacy certification, including continuing professional education. In addition to the mandatory data privacy training, the company maintains 'Reference' and 'Privacy News' sections in the PLMS website to keep employees informed with the latest privacy issues and development.

NUMBER OF EMPLOYEES WHO HAVE COMPLETED PERSONAL DATA MANAGEMENT TRAINING(DOMESTIC)

Year	
2015	76,184
2016	72,557
2017	80,030

SUPPLY CHAIN MANAGEMENT STRATEGY

We operate our supply chain with approximately 2,400 suppliers across the globe based on a philosophy of fairness, openness, and partner cooperation. To establish a sustainable and responsible business ecosystem, we actively manage risk and opportunity in our supply chain and work towards mutual growth. We assist all our suppliers to comply with the 'Samsung Supplier Code of Conduct' and operate in accordance with relevant local regulations and international standards. By assessing our suppliers, we manage risk in terms of sustainability including issues related to labor and human rights, environment, health and safety, finance and ethics. Furthermore, we continuously support our suppliers to build mutual competitive advantage and growth based on our business philosophy that our competitive advantage comes from the competitive advantage of our suppliers. To ensure that our suppliers become globally-competitive, we have kept pushing the boundaries of our supplier supporting programs such as funding, education, and innovation to include both domestic and overseas suppliers.

Under our supply chain vision 'We Buy Value, We Pay Trust', we aim to build a sustainable business ecosystem by integrating Economic, Social, and Environmental aspects into our management strategy.

• **Economic:** We secure comprehensive competitive advantage in cost, delivery, quality, technology, and human resources wherever possible with our suppliers to maximize synergy, speed, and efficiency and to create a corporate ecosystem that is sustainable.

• **Social:** We mandate our suppliers to abide by international standards and regulations with regard to human rights, safe and healthy work environment, ethics, and conflict minerals issues. Our goal is to build an open and transparent management accountability system observed by all stakeholders along the supply chain.

• **Environmental:** We work with Eco Partner-certified suppliers to assess and manage the environmental impacts during component manufacturing and sourcing of raw materials and associated production processes.

FIVE CRITERIA OF SUPPLY CHAIN MANAGEMENT

Economic   Social   Environmental

Cost Competitiveness	• Conduct reasonable cost analysis in line with item-specific characteristics based on the G-SRM[1]
	• Continue to identify competitive suppliers through our global procurement bases and the Open Sourcing System
On time Delivery	• Use the G-SRM to secure visibility along the supply chain and operate an interactive information sharing system
	• Reinforce on time delivery capability by optimizing the global in-bound logistics of materials
Supplier Competitiveness	• Operate suppliers in consideration of sustainability factors, in addition to business competitiveness(new registration, contracting, comprehensive evaluation, etc.)
	• Build mid-/long-term partnerships with key suppliers through win-win cooperation programs
Response to Risk	• Conduct system-based supply chain risks monitoring and operate a comprehensive management system
	• Focus on the management of sustainability risks: responsible management of suppliers' work environment and transparency of conflict minerals
Human Resources Capacity	• Nurture global procurement experts and leaders by strengthening professional procurement capabilities
	• Use the training facility dedicated to educating supplier employees to provide free-of-charge training programs

Footnotes:

1) Integrated procurement system, Global Supplier Relationship Management(GSRM)

Our entire procurement operations are governed by the G-SRM system, which is based on our Procurement and Supplier Codes of Conduct. We have a dedicated organization responsible for managing our supply chain from every angle. Key features include the following:

• **Global Procurement Code of Conduct:** All of our purchasing personnel must adhere to our 'Procurement Code of Conduct' which consists of our 'Charter of Purchasing Practices,' 'Standards and Principles of Purchasing,' 'Ethical Standards for Purchasing,' and 'Socially Responsible Purchasing'. We also provide education to all of our purchasing personnel across the world; nearly 85% of global purchasing personnel were trained annually on Procurement Code of Conduct through online and offline programs.

• **Supplier Code of Conduct:** With top executive managements' commitment, we have established the 'Samsung Supplier Code of Conduct' in order to ensure that our suppliers comply with our 'Global Code of Conduct', operate in accordance with local regulation and international standard, and make necessary improvements that can promote the responsible management of work environment. We update our 'Supplier Code of Conduct' continuously to reflect recent changes such as revisions to the RBA Code of Conduct and updates to Global Standards. In 2017, we updated our Supplier Code of Conduct in response to the revision of RBA Code of Conduct 6.0, effective as of January 2018, on topics such as policy for second-tier suppliers, working hours, Emergency Preparedness, EHS training, GHG emissions, and responsible sourcing of minerals.

• **G-SRM, an Integrated Procurement System:** We utilize our Global Supplier Relationship Management(GSRM) system to analyze detailed cost, cost efficiency, and region-specific supplier procurement status of all procured components, which cover nearly 700 categories. The various applications of our G-SRM system include interactive sharing of SCM information with suppliers, supplier evaluations & registration management, risk management, and the integrated management of supplier compliance management, work environments, the Code of Conduct, and the self-initiated evaluation checklist.

• **Dedicated organization:** Since 2012, we have had a dedicated organization responsible for managing suppliers' work environments. To further entrench supplier better

practices, innovation and awareness from 2013 onwards, we have operated a training center solely responsible for supplier training as well as a consulting center dedicated to offering on-site support for supplier innovation initiatives.

• **Open Sourcing:** International Procurement Center(IPC), our procurement base located in strategically-important areas across the globe, enables us to monitor technological trends in relevant regions and identify new suppliers. Through our IPC organization, Open Sourcing System allows companies, who wish to do business with us, to present their business ideas through the procurement portal site(www.secbuy.com) of the G-SRM system. In 2017, a total of 590 suggestions were reviewed, out of which 70 suggestions were chosen for product application.

Critical Suppliers

Among our first-tier suppliers, we designate those with large transaction volume and business importance as critical suppliers in order to focus our efforts on monitoring and managing supply chain risk and opportunity. We give critical suppliers extensive support including the priority for contract renewal, allocation of more transaction volume, capability building program support, and on-site consulting to improve working environment, and so on. In 2017, our critical suppliers accounted for nearly 34% of the total number of suppliers, and our procurement from such suppliers stood at approximately 93% of the total spend of direct materials.

We also designate our second-tier suppliers who supply to our critical first-tier suppliers and have large transaction volume for Samsung as our critical second-tier suppliers. This is done in order to manage the potential risk on working environment such as the use of hazardous chemicals in the manufacturing process.

Supply Chain Risk Management System

We classify risk factors that may occur along the supply chain into internal procurement process factors and external supplier factors, in addition to natural disaster risks related to business continuity. We ensure that supplier-related sustainability risks are constantly monitored and managed through annual comprehensive self-assessment and on-site audits for both incumbent and newly registered suppliers.

SUPPLY CHAIN RISK MANAGEMENT SYSTEM

	PROCUREMENT PROCESS RISK(INTERNAL)	SUPPLIER RISK(EXTERNAL)	NATURAL DISASTER RISK(CONTINUITY)
Purpose	Address corruption, mismanagement, and any violation of domestic/overseas regulation as well as procurement principles.	To take timely measures, detect supplier sustainability risk in economic, social and environmental aspects including financial status, compliance with human rights & labor laws, compliance of environment & safety regulations, management of conflict minerals, non-use of hazardous substances, etc.	Operate an emergency response process against threats of natural disasters posed to our business continuity, such as earthquakes, volcanoes, typhoons, and floods.
Method	Constantly monitor abnormal business processes on a fundamental basis through our legacy systems, preemptively detect risk indicators in accordance with scenarios, and perform regular on-site audits.	Regularly perform 'annual comprehensive supplier evaluation process' and 'responsible management of supplier work environment process'. Monitor financial risk through external credit rating agencies.	Rapidly detect natural disasters via systems operated by global disaster information providers, analyze disaster impacts through supplier location information available on G-SRM system and notify staff in charge via e-mails or text messages on the status of disasters, along with the list of suppliers regarding products within the influence of disasters.

Registration of New Suppliers

We evaluate the candidated suppliers based on five criteria: procurement and quality, environment and safety, labor and human rights, Eco-Partner, and financial status. Only those who score 80 points or higher in all five criteria qualify to register as a supplier for Samsung. In the environment and safety, labor and human rights, and Eco-Partner domains we use checklist based on RBA's criteria to perform intensive reviews. To identify the actual condition of candidate suppliers, our in-house evaluators dedicated to each domain make on-site visits and evaluate suppliers based on the checklist while their financial status(credit rating) is reviewed with the help of professional external agencies.

• **Environment and Safety:** Our suppliers must satisfy 22 criteria including occupational safety, fire prevention facilities, occupational health, hazardous substance handling, and environmental facilities. Specifically, full compliance is required in the eight mandatory items that include fire prevention facilities and the handling of hazardous and waste substances, sewage and wastewater.

• **Labor and Human Rights:** Mandatory on-site audits are performed on 20 clauses including voluntary work, compliance with work hour regulations, and a ban on discrimination. Particularly, ban on child labor, guarantee of minimum wages, and ban on inhumane treatment are contained as mandatory requirements.

• **Eco-Partner:** The Eco-Partner certification reviews our suppliers in terms of their product environment policy, education & training, and hazardous materials management in components. We only work with Eco-Partner-certified suppliers. Our standard supplier contract signed with first-tier suppliers stipulates our Environmental Standards, international Human Rights standards and labor practices, compliance with our Supplier Code of Conduct and other ESG-related details in order to manage the quality of products from suppliers and their social and environmental impact.

Comprehensive Supplier Evaluation

We perform annual comprehensive supplier evaluations to assess the competitive edge of suppliers and to control sustainability risks by using eight evaluation criteria; Technology, Quality, Responsiveness, Delivery, Cost, Environmental and Safety, Finance and Law. The three criteria(Finance, Environment, and Law) are utilized for supplier-related sustainability risk analysis in terms of Economic, Environmental, and Social aspects. For the evaluation, we use various methods to evaluate the suppliers, including transaction data, on-site inspection results, data uploaded by suppliers. Because evaluation process is operated throughout the year as an ongoing evaluation system, all suppliers can check and monitor their performance and sustainability risk from time to time in the G-SRM system. In 2017, comprehensive supplier evaluation is carried out 89% out of all suppliers, excluding those registered less than one year.

• **High performers:** The results of comprehensive supplier evaluation are used in all supplier management process. As such, raising the proportion of high performers, who rated as 'excellent' or 'good' in evaluation result, is one of the KPIs in supply chain management in terms of securing sustainable competitive edge of suppliers.

As a result of evaluation in 2017, 60% of suppliers were rated as high performers. In accordance with the changed Supplier Code of Conduct, we have strengthened our evaluation standard in 2017, including policy of second-tier suppliers, protection of migrant workers' rights, work process safety management, and more. This change led to a decrease in the number of high performers compared to the 70% in 2016. We aim to raise the percentage of high performers to above 70% as it was in 2016.

High performers are granted incentives, including the preferential allocation of volume for the following year, an opportunity to join capability building initiatives, and more. In addition, as part of incentive for our suppliers, we hold annual event 'Partner Collaboration Day' and award a prize for Innovation Best Practices to encourage them. However, low-performers are required to take improvement measures and are subject to decreased allocation of volume and limits to additional transactions.

COMPREHENSIVE EVALUATION PROCESS

Samsung   Supplier

1 Year-round Evaluation

Self-initiated evaluation
Estimated score and rating

Announce evaluation criteria

2 Self-improvement

Identify/ implement improvement areas

Risk monitoring
Result compilation/ Feedback

3 Evaluation

Verify results

Open final evaluation results (end of year)

4 Follow-up Management

Develop and implement improvement plans

Post management for each rating*, support suppliers for improvement

Footnotes:

* Post management for each rating:
1) Excellent: Give precedence in allocating volume for the following year
2) Underperforming: Request improvement measures
3) Low rating(for 2 consecutive years): Discontinue business relationships

COMPREHENSIVE EVALUATION ITEMS

CATEGORY		ITEM
Business Competitiveness	Technology	• Eight items, including the ownership of technology patents and R&D investment
	Quality	• Five items, including failure rates and the ISO 9000 certification
	Responsiveness	• Six items, including engagement in our policies and the use of conflict minerals
	Delivery	• Six items, including on time delivery and RTP[1] response rates
	Cost	• Five items, including increases in transaction value and competitive edge in terms of cost
Sustainability Risk	EHS	• Five items, including workplace safety and international certification
	Finance	• Three items, including credit rating and debt ratio
	Law(Social)	• Five items, including labor/human rights in the workplace and anti-corruption

Footnotes:

1) Return to Purchasing order

Sustainability high-risk suppliers

We classify sustainability high-risk suppliers in the Economic, Social, and EHS areas as a result of comprehensive supplier evaluation as well as on-site audit, and intensively manage supplier-related sustainability risks.

• **Economic(Finance):** Based on the Dun & Bradstreet's (D&B) business information, Samsung Electronics monitors quarterly the financial data of high-risk suppliers rated 'poor' or 'less than poor' in order to prevent our business risks in advance.

• **Social(Law):** Suppliers whose compliance rate according to RBA based on-site audit result less than 90% or received penalty due to violation or corruption are classified as Social high-risk.

• **EHS(Environment, Health and Safety):** Suppliers that use hazardous chemicals of high toxicity in the manufacturing process including first tier supplier as well as second/third-tier suppliers are classified as high EHS risk.

In 2017, 2.7% out of all suppliers are categorized as sustainability high-risk in the Economic, Social, and EHS aspects. To manage suppliers' high-risk intensively, we regularly visit the high-risk suppliers, provide consulting and support to reduce sustainability risk by improving their work process, and monitored their improvement. As a result of constant effort to reduce sustainability high-risk, the percentage of our high-risk supplier was reduced compared to the previous year.

In addition, the result of risk assessment non-first tier suppliers in the EHS aspects showed that 4.5% of suppliers have vulnerabilities, which means they use hazardous chemical substances in the manufacturing process. To reduce the EHS high-risk of non-first tier suppliers, we conducted on-site inspection, and provided various supports including on-site consulting from outside experts to replace hazardous chemical, safety education and training, and work process improvement projects through our small-size firm support program. As a result, the percentage of our high-risk non-first tier suppliers was greatly reduced compared to the previous year.

Management of Second-tier Suppliers

Our supplier management approach extends to second-tier suppliers based in Korea in order to strengthen our competitive advantage along the entire supply chain. To manage risks of second-tier suppliers, we clearly define first-tier suppliers' responsibilities to manage working conditions of sub-suppliers. We encourage suppliers to engage in responsible corporate activities described in the Supplier Code of Conduct and to fulfil their duties of support and care.

• **Contracts Between First-tier and Second-tier Suppliers:** We demand a level of compliance that corresponds to our standard contract form when our first-tier suppliers sign contracts with second-tier suppliers.

• **Payments:** To help the financial condition of second-tier suppliers, we ensure that our first-tier suppliers increase their ratio of cash payments to second-tier suppliers and that such payments are made within 60 days.

• **Environment and Safety:** We hold first-tier suppliers accountable for building and supporting a safe work environment at second-tier and/or lower-tier suppliers and reflect the outcomes in evaluating their performance. For items highly likely to suffer environment and safety issues (e.g. chemical substances), we developed and distributed guidance for safe handling and use while defining and sharing criteria for first-tier suppliers to examine the environment and safety performance of second-tier/lower-tier suppliers.

• **Promotion of Fair Trade Policy:** Furthermore, we support wide-ranging programs to promote fair trade between first-tier and second-tier suppliers. With the help of 'Hyeopseonghoe', a council made up of our first-tier suppliers and the 'Council of Trustees'(consisting of second-tier suppliers), we have established a culture of mutual growth.

2017 RESULTS BY SUSTAINABILITY EVALUATION ITEM   Unit: %

CATEGORY	ECONOMIC(FINANCE)	LAW(SOCIAL)	EHS
Ratio of High-Risk Suppliers	0.4	1.2	1.3

TAX RISK MANAGEMENT

We are committed to conducting all business related activities in compliance with tax policies such as the 'Law Observance & Transparent Tax Report and Payment' and the 'Contribution to the National Finance and Society through Tax Policy Improvement'. In addition, we thoroughly assess various elements related to taxation and put the highest priority on duly complying with tax-related obligations. To reflect the importance of our tax strategy, our top management and BoD oversee our tax risk.

Tax Risk Management

We place top priority on compliance when managing various tax risks. We maintain a decision-making system based on thorough tax risk assessments and reviews so that we can effectively comply with regulations and practices in all our business transactions. We file all our income tax returns, meet all payment deadlines, and document qualifying evidence related to business transactions. We also maintain a transparent relationship with tax authorities and respond to any request on the part of such authorities in an expedient and accurate manner. Concerning local transactions, we comply with related laws and maintain fair trade prices in transactions with third parties and persons having special relations. Likewise, in managing transfer price for international transactions, we adhere to regulated prices by law and prevent risks.

TAX MANAGEMENT POLICY	
01	We comply with the laws and regulations of the countries we do business with and fulfill our responsibility for transparent tax reporting and payments. We do not transfer value to low tax jurisdictions or use tax havens for the avoidance of tax liability. To this end, we maintain an open and transparent relationship with the tax authorities of each country and provide relevant factual evidence and supporting documents upon request.
02	As we conduct a variety of business activities in several countries, we recognize the differences in tax laws for each country, prevent tax risks, and analyze relevant regulations and practices in doing all transactions.
03	Employees in charge of tax management at each subsidiary are required to comply with laws and regulations in accordance with our tax policies and perform their tasks under the principle of maintaining a transparent relationship with the tax authorities.

Tax Risk Assessment

We are committed to preventing any tax risk arising from the transaction of goods and services related to the business, mergers and acquisitions, changes in the corporate structure, international transactions, new business initiatives, and changes in the transaction structure. Therefore, when a business decision is required, our tax division carefully evaluates the tax risk in cooperation with external experts, and the relevant departments, along with other factors, evaluate the outcome of the tax risk review. When assessing tax risks in relation to business activities, we will focus on the following key items.

Contribution to Local Community Development

Our business and operations contribute to local communities around the world. We are a major tax payer and investor in many countries and we make a significant contribution to job creation each year. Moreover, we play a critical role in vitalizing the local economy through the purchase of products and services from all over the world. In particular, we contribute to the local economy by fulfilling our responsibility in transparent tax payments. In addition to paying corporate taxes, we also indirectly contribute to the local economy by paying surtaxes and withholding tax.

KEY CRITERIA TO ASSESS TAX RISKS RELATED TO BUSINESS ACTIVITIES		
A thorough analysis of the specific facts relation	Review of relevant domestic and international laws and taxation practices	Revenue and cost scenario
Potential risks and possible risks	How to respond to risks	

CUSTOMER RELATIONSHIP MANAGEMENT

In an era of global competition, companies must secure customer satisfaction. At Samsung, our goal is to maximize customer value by innovating for high quality products and services.

Service Operational Goal

In terms of service operations, our goal is to recognize customer requirements accurately, respond swiftly and empathize with our customers. Through constant innovation and improvements in our service operational system, we were able to attain greater precision in our repair services. Furthermore, our after-sales service product service processes are in line with all of our business practices and manage our service status real time.

Customer Service Channel

We provide customer service through global common channels and locally-optimized channels to help our customers receive our after-sales service. To ensure that our wide-ranging, globally accessible services exceed the set quality criteria, we perform on-site inspections in compliance with our service standards.

• **Galaxy Consultant:** We are expanding our smartphone-specific consultant services at the retail stores. These consultants, called Galaxy Consultants, provide services on simple procedures such as OS upgrades, account setting, data transfers, application installations/usage consultations, conducting demonstrations, and teaching customers how to navigate our Galaxy smartphones.

• **Samsung Members Application:** Samsung Members application enables our customers to deal with issues that occur in product use on their own through FAQ, inquiry, and self problem-solving features. In 2017, we decided to expand the service to apply to all of our product line-up, and currently we are in the process of developing the service. We plan to add features such as repair appointment services at after service centers and enable the service for large consumer electronics.

SAMSUNG'S SERVICE CHANNEL

Service requests and product inquiries	• Call center: Access customers' products through calls, e-mails or network to offer remote counseling, Make Live Chat available on the website
	• Website: Customer support menu includes diagnosis guidance and use guidance
	• Store visit: Galaxy Consultant
	• Samsung Members application
Product repair	• Customers visit service centers
	• Staff visits to customers for repairs, product pick-ups and more

NUMBER OF GALAXY CONSULTANTS

Unit: No. of People

Year	
2015	647
2016	1,099
2017	1,322

Service Quality Management

• **Operation of Service Standards:** We developed guidelines that set the service standards and call centers requirements and shared these with all global subsidiaries through our company-wide work standard system with an aim to provide harmonized services. Each of our regional subsidiaries uses our global guides customized to reflect local market specificities. Each subsidiary offers necessary training and shares local guidance manuals and procedures through our 'knowledge portal' system.

• **Service Quality Inspection:** We conduct regular evaluations of our service centers with regard to their adoption of service standards, technological capabilities, equipment repair, infrastructure, resource management, and financial stability. Depending on their size, service centers set improvement targets as well as incentives, such as commission increase or awards for top performers.

• **Service Technical Training:** Our service center managers and repair engineers are provided with training programs on how to repair new products and handle customer concerns. We provide either remote video or training programs depending on the country and product characteristics, and our accessible system allows employees to learn from

training programs videos and technical materials anytime. Every December, our CS Strategy Workshop is hosted under the supervision of the Head Office and joined by service expatriates from respective subsidiaries to review past year's achievements and set our service strategy for the following year. In North America, China, Europe and other regions, our Regional Offices also host their own workshop to develop differentiated region-specific service strategy.

SERVICE STANDARDS/DETAILS

SERVICE STANDARDS	DETAILS
Service Standards Operational Manual	• Operational manual for respective service processes - Customer contact center, technical counseling, acceptance of service requests, technical training, repair, outcome report, customer satisfaction call, expense settlement, claim management, etc.
In-Store Service Guide	• Add service functions within the store - In-store service definitions, service functions, layouts, etc.
Technical Guide	• Technical guide for product repair

Customer Communication

• **Integrated Global VOC Management System:** We gather VOC(Voice of Customers) data on product purchases, repairs, and use guidance through our call center and our website as a way to handle complaints and use our integrated global VOC management system to analyze customer needs and share them across the company to improve our products and services.

• **Customer Service Satisfaction Survey:** We conduct periodical customer satisfaction surveys on customers who have experienced our service. Survey outcomes are shared with relevant departments to improve service areas where customer satisfaction was relatively low or found to be less competitive. Such endeavors attribute to the constant increase in satisfaction with our services since 1994 when these surveys were first initiated.

2017 ACHIEVEMENTS IN CUSTOMER SATISFACTION

GERMANY

Die Welt Service Champions 2017 - 1st place in Consumer electronics

- **Host:** Die Welt(Newspaper), Service Value(Customer service research agency), Goethe-Universität(University)
- **Evaluation method:** Based on on-line survey of 2,895 companies across 77 industries to 1.5 million people

AUSTRIA

Service Champions Austria 2017(Service Champion No.1 of the Electronics Manufacturer)

- Based on research of 250 companies across 28 industries in Austria
- ※ Awarded '2017 Top Service Award'(Top 10 Premium groups, Sole winner out of manufacturing industry)

CZECH REPUBLIC

2017 Contact Center Award

- **Host:** ADMEZ je členem
- **Participants in Awards Ceremony:** 20 Companies, 250 people
- Out of 4 categories,(Inbound, Outbound, New Media, Special Project), won first place for Inbound, second place for New Media; 2 awards total

DUBAI

Customer Service Gratitude Award

- **Host:** DED(Department of Economic Development)
- **Methodology:** Dubai Customer Protection Agency evaluates companies' response system through 'black point tracking system'

POLAND

Polish Association of Disabled Persons - Building without Barriers Award

- **Host:** Poland Ministry of Health
- **Subsidiary:** Gratitude award for increased accessibility services for disabled people within retail stores - Sign language services 'Migam Project, training for disabled persons, dedicated service desks for wheel-chair users
- First to be recognized for the award in the industry

First Place in 'Star Quality Service Award by Customer' (Gwiazda Jakosci Obsługi)(4 consecutive years)

- **Host:** Polish rating agency 'JAKOSC OBSLUGI
- Measures customer satisfaction across 33 industries
- 1st place for 4 consecutive years(2014-2017) in Electronics industry (Home Appliance, TV) sector

UKRAINE

Choice of the Year 2017 - Services

- **Host:** Choice of the Year Ukraine Ltd.
- Top recognitions in Electronics, Communications, Services
- History: Won 6 times(2010~2012, 2015~2017)

2017 AWARDS IN KOREA – PRODUCT/SERVICES SATISFACTION

KCSI
- **Research:** Korean Customer Satisfaction Index
- **Host:** Korea Management Association Consultancy
- **Products awarded 1st place:** TV, Refrigerator, Washer, Air Conditioner, Kimchi-refrigerator, Smartphone, PC, Laser Jet

KS-QEI
- **Research:** Korean Standard Quality Excellence Index
- **Host:** Korean Standards Association
- **Products awarded 1st place:** TV, Refrigerator, Washer, Air Conditioner, Kimchi-refrigerator, Smartphone, PC, Tablet, Laser Printers

KS-SQI
- **Research:** Korean Standard Service Quality Index
- **Host:** Korean Standards Association
- **Products awarded 1st place:** Consumer Electronics, PC, Smartphones services

GCSI
- **Research:** Global Customer Satisfaction Competency Index
- **Host:** Academic Society of Global Business Administration
- **Products awarded 1st place:** TV, Refrigerator, Washer, Vacuum Cleaners, Kimchi-refrigerator, Air Purifier, Air Conditioner, Laser Jet, Smartphone, PC

KSQI
- **Research:** Korean Service Quality Index
- **Host:** Korea Management Association Consultancy
- **Services awarded 1st place:** Call-centers(Telephone services)

KS-CQI
- **Research:** Korean Standard Contact Service Quality Index
- **Host:** Korean Standards Association
- **Services awarded 1st place:** Call-centers(Telephone services)

NCSI
- **Research:** National Customer Satisfaction Index
- **Host:** Korea Productivity Center, Chosun Ilbo
- **Products awarded 1st place:** TV, Refrigerator, Air Conditioner, Smartphone, PC

CUSTOMER MAGAZINES OVERSEAS, 2017

USA
- **Magazine:** Consumer Report
- 20 products awarded 1st place by end of 2017
- 4 TV, 1 AV(BDP), 1 Smartphone, 14 home appliance products

GERMANY
- **Magazine:** Test
- 6 products awarded 1st place by end of 2017
- 3 TV, 1 Soundbar, 1 Tablet

UK
- **Magazine:** Which
- 7 products awarded 1st place by end of 2017
- 2 TV, 1 HTS, 1 Soundbar, 1 Smartphone, 1 Tablet, 1 home appliance product

FRANCE
- **Magazine:** Que Choisir
- 5 products awarded 1st place by end of 2017
- 2 TV, 1 Smartphone, 1 Tablet, 1 home appliance product

Performance Summary

ECONOMIC PERFORMANCE INDICATOR

ECONOMY DATA TABLE

	2015	2016	2017	Unit
KEY FINANCIAL PERFORMANCE[1]				
Sales	200.7	201.9	239.6	KRW trillion
Operating profit	26.4	29.2	53.6	KRW trillion
Net income	19.1	22.7	42.2	KRW trillion
Sales by Business Division[2] /Region				
Sales by Business Division(Absolute value)				
Consumer Electronics	46.9	47	45.1	KRW trillion
IT & Mobile Communications	103.6	100.3	106.7	KRW trillion
Device Solutions_Semiconductor	47.6	51.2	74.2	KRW trillion
Device Solutions_Display	27.5	26.9	34.5	KRW trillion
Harman			7.1	KRW trillion
Sales by Business Division(%)				
Consumer Electronics	21	21	17	%
IT & Mobile Communications	46	44	40	%
Device Solutions_Semiconductor	21	23	28	%
Device Solutions_Display	12	12	13	%
Harman			2	%
Sales by Region(Absolute value)				
Americas	68.9	68.7	81.0	KRW trillion
Europe/CIS	38.6	38.3	44.4	KRW trillion
China	31.0	35.6	38.3	KRW trillion
Korea	20.8	20.2	31.6	KRW trillion
Asia/Africa	41.3	39.1	44.3	KRW trillion
Sales by Region(%)				
Americas	34	34	34	%
Europe/CIS	19	19	19	%
China	15	18	16	%
Korea	10	10	13	%
Asia/Africa	22	19	18	%
ECONOMIC VALUE DISTRIBUTION				
[Supplier] Procurement costs	128.8	127	135.2	KRW trillion
[Local Community] Social contributions	523	444	385	KRW billion
[Shareholder/Investor] Dividends	3,069	3,992	5,826	KRW billion
[Shareholder/Investor] Pay-out ratio	16.4	17.8	14.1	%
[Creditor] Interest expenses	777	588	655	KRW billion
[Employee] Remuneration	23.5	24	27.2	KRW trillion
[Government] Taxes and dues by region	7.8	8.9	15.1	KRW trillion
Asia	35	19	10	%
Korea	51	67	81	%
Americas/Europe	13	13	8	%
Others	1	1	1	%

Footnotes:
1) Based on the consolidated financial statement
2) Based on net sales

RATIO OF ECONOMIC VALUE DISTRIBUTED IN 2017   Unit: %

SUPPLIER [1]	LOCAL COMMUNITY [2]	SHAREHOLDER & INVESTOR [3]	CREDITOR [4]	EMPLOYEE [5]	GOVERNMENT [6]
61.2	0.3	2.6	0.3	12.3	6.8

Footnotes:

1) Cost of all products and services purchased by Samsung for its business operations
2) Sum of all social contributions made through donations and other expense accounts
3) Dividends paid
4) Interest expenses paid
5) Sum of salaries, severance payments, and welfare benefits included in the cost of sales, R&D costs and SG&A costs
6) Sum of consolidated income taxes, other taxes, and dues calculated on an accrued basis

SOCIAL PERFORMANCE INDICATOR

EXTERNAL CONTRIBUTIONS

CONTRIBUTION	AMOUNT	DETAILS	OTHERS
Management plans for the Social Contribution Fund for 2017	KRW 12.59 billion	• The Social Contribution Fund consists of voluntary contributions of employees and matching funds raised by SEC. SEC plans to contribute KRW 12.59 billion in matching funds in 2017. • The contributions will be spent on sponsoring domestic and overseas volunteer programs as well as supporting local social contribution activities.	The BoD approved this action at the meeting held on March 24, 2017.
Sponsoring World Skills Competition	EUR 1.35 million (approximately KRW 1.63 billion)	• The Company will be sponsoring the WorldSkills Competition Abu Dhabi 2017 as a Global Premium Partner and WorldSkills International, the organizing committee of WorldSkills Competition, from 2017 to 2018.	
Ho-Am Foundation	KRW 4 billion	• The donation was made to support the foundation's activities such as 'Ho- Am prize'.	The BoD approved this action at the meeting held on April 27, 2017.
Samsung Press Foundation	KRW 1.7 billion	• The donation was made to support the foundation's activities to promote the development of the press infrastructure, such as Samsung Journalism Award.	
Samsung Welfare Foundation	KRW 24 billion	• The donation was made to support the learning of low-income middle school students.	
Samsung Life Public Welfare Foundation	KRW 37.7 billion	• The donation was made to support the operation of Samsung Medical Center	
Sungkyunkwan University	KRW 15 billion	• The donation was made to support the Samsung Scholarship program.	
Korea Disaster Relief Association	KRW 3 billion	• The donation was made to support and help Pohang residents recover from the earthquake.	The BoD approved this action at the meeting held on November 24, 2017.
Community Chest Of Korea	KRW 20.1 billion	• The donation was made to fulfil corporate social responsibility by participating in the annual campaign designed to help the marginalized.	

SOCIETY DATA TABLE

	2015	2016	2017	Unit
EMPOWERING SOCIETY				
Total corporate citizenship management expenditures[1]	523,395	444,789	385,571	KRW million
Total hours of domestic and global sites employee volunteer work hours	1,044,847	1,083,849	1,259,893	No. of hours
Volunteer hours per person[2]	3.21	3.51	3.93	No. of hours
CORPORATE CITIZENSHIP PROGRAM				
Accumulated no. of Samsung Smart School beneficiaries	667,326	1,401,776	2,228,150	No. of persons
Accumulated no. of Samsung Tech Institute beneficiaries	39,659	74,192	85,388	No. of persons
LABOR AND HUMAN RIGHTS				
Total employees [3]	325,677	308,745	320,671	No. of persons
Global(Excluding Korea)	228,775	215,541	224,213	No. of persons
Korea	96,902	93,204	96,458	No. of persons
Employees by Contract Type				
Employees on permanent contracts	318,965	304,715	316,534	No. of persons
Employees on fixed-term contracts[4]	6,712	4,030	4,137	No. of persons
Employees by Age Group				
Under 30	191,986	172,272	171,877	No. of persons
30's	92,701	93,348	100,856	No. of persons
40 and older	40,990	43,125	47,938	No. of persons
Employees by Job Functions				
Product development	65,602	62,546	65,494	No. of persons
Manufacturing	204,943	194,669	203,076	No. of persons
Sales/Marketing	27,788	25,836	25,266	No. of persons
Others	27,344	25,694	26,835	No. of persons
Employees by Job Positions				
Staff [5]	265,944	248,415	256,944	No. of persons
Managers	58,105	59,014	62,406	No. of persons
Executives	1,628	1,316	1,321	No. of persons
Employees by Region				
Korea	96,902	93,204	96,458	No. of persons
Southeast Asia/Southwest Asia/Japan	140,437	134,386	145,577	No. of persons
China	44,948	37,070	34,843	No. of persons
North America/Central & Latin America	23,947	25,988	25,814	No. of persons
Europe/CIS	15,487	14,445	14,711	No. of persons
Middle East	2,998	2,810	2,592	No. of persons
Africa	958	842	676	No. of persons
Turnover Rate				
Global Turnover Rate Excluding Korea [6]	15.9	16.9	17.1	%
Turnover Rate in Korea [6]	5	5.5	2.3	%
Welfare and benefit expenditure in domestic and global sites	3,853	3,459	3,813	KRW billion
Human Capital(Diversity and Employee Development)				
Employees who took childcare leave [7] [8]	3,816	3,818	3,643	No. of persons
Employees who return to work after childcare leave [7] [8]	93.3	93.8	94	%
Daycare center capacity [7]	2,551	2,905	2,905	No. of persons
No. of daycare centers [7]	12	14	14	No. of centers
No. of mentally/physically-challenged employees [7]	1,649	1,550	1,530	No. of persons
Ratio of mentally/physically-challenged employees [7]	1.7	1.7	1.6	%

Footnotes:

1) In kind: 17,916 KRW million, Cash 367,655 KRW million
2) Based on the total number of global employees
3) As of the end of the year, excluding supplier employees stationed in Samsung, those who are taking leave, interns, and those who are taking full-time degree courses
4) South Korea: Non-regular + part-time, Overseas: Contractor + apprentice

5) Including those working flexible work hours and other positions
6) As for employees on permanent contracts, ratio of employees who resigned against the average No. of employees during the concerned fiscal year
7) Scope of data collection: Domestic employees
8) As for employees on permanent contracts

SOCIETY DATA TABLE

	2015	2016	2017	Unit
Ratio of female employees [1]	46	44	45	%
Ratio of female employees by Job Functions				
Product development	17	17	18	%
Manufacturing	58	56	57	%
Sales/Marketing	29	29	30	%
Others	39	37	39	%
Ratio of female employees by Region				
Korea	26.2	25.3	25	%
Southeast Asia/Southwest Asia/Japan	63.5	63.2	63	%
China	43.2	41.4	40	%
North America/Central & Latin America	35	34.9	35	%
Europe/CIS	34.3	35	35	%
Middle East	13.4	14.1	15	%
Africa	32.8	32.5	34	%
Ratio of female employees by Job Positions				
Staff	53.1	51.8	53	%
Managers	12.4	12.7	13	%
Executives	4.5	6.3	7.0	%
Career development				
Employees who received training [2]	419	477	463	10,000 persons
Global(Excluding Korea)	312	368	327	10,000 persons
Korea	107	109	136	10,000 persons
Average training hours per person [3]	78	71	73.5	No. of hours
Global(Excluding Korea)	77	67	68.3	No. of hours
Korea	80	80	85.6	No. of hours
Training Expenditures				
Total training expenditures [4]	1,294	1,117	1,097	KRW100 million
Training expenditures per person [5]	1,335	1,198	1,137	KRW1,000
Training expenditure against sales [6]	0.06	0.06	0.05	%
Training expenditures against remuneration costs [7]	1.1	1.1	1.0	%
Employees who applied for re-employment through the Career Development Center [8]	5,500	6,400	6,924	No. of persons
Employees re-employed through the Career Development Center [8]	4,823	5,508	5,886	No. of persons
Employees re-employed through the Career Development Center	87.7	86.1	85.0	%
INVESTING IN THE COMPETITIVENESS OF OUR SUPPLIERS				
Investment in the Partner Collaboration Fund	8,649	8,232	8,228	KRW100 million
1st-tier suppliers	6,121	6,015	6,173	KRW100 million
2nd-tier suppliers	2,528	2,217	2,054	KRW100 million
Supplier Incentive in monetary value	322	366	647	KRW100 million
Attendees at supplier training	615	759	805	No. of suppliers
1st-tier suppliers	517	664	632	No. of suppliers
2nd-tier suppliers	98	95	173	No. of suppliers

Footnotes:

1) Based on the total number of global employees
2) Based on online/offline training, including redundancy
3) Based on online/offline training
4) Scope of data collection: Employess in South Korea
5) Total training expenditure ÷ total No. of employees in South Korea
6) Total training expenditure ÷ consolidated sales
7) Total training expenses ÷ labor expenses
8) On an accumulated basis between 2001 and 2017
9) Supported a total of 149 suppliers in 2017

SOCIETY DATA TABLE

	2015	2016	2017	Unit
TRAINEES AT SUPPLIER TRAINING [1]	12,694	13,089	16,209	No. of persons
1st-tier suppliers	11,002	12,673	12,687	No. of persons
2nd-tier suppliers	1,692	416	3,522	No. of persons
1ST-TIER SUPPLIERS SUPPORTED FOR THEIR INNOVATION INITIATIVES	53	64	137	No. of suppliers
Global(Excluding Korea)		19	22	No. of suppliers
Korea	53	45	115	No. of suppliers
BENEFICIARIES OF THE INDUSTRY INNOVATION CAMPAIGN [2]	433	562	462	No. of companies
2nd-tier and 3rd-tier suppliers	310	436	341	No. of suppliers
SMEs without business transactions with Samsung	123	126	121	No. of companies
BENEFICIARIES OF THE SMART FACTORY PROGRAM	120	479	487	No. of companies
Samsung suppliers	24	39	66	No. of suppliers
SMEs without business transactions with Samsung	96	440	421	No. of companies
RESPONSIBLE MANAGEMENT OF OUR SUPPLIER WORK ENVIRONMENT				
Third Party Initial Audit(Accumulated) [3]	170	190	214	No. of occasions
Third Party Closure Audit(Accumulated) [3]	76	92	109	No. of occasions
RESPONSIBLE SOURCING OF MINERALS				
Onsite inspections for suppliers' conflict minerals management	483	163	252	No. of suppliers
COMPREHENSIVE SUPPLIER EVALUATION				
Suppliers evaluated [4]	86	83	89	%
Suppliers rated excellent	70	70	60	%
Ratio of ISO 14001-certified suppliers [5]	87	86	86	%
Ratio of OSHAS 18001-certified suppliers	46	39	32	%
HEALTH & SAFETY				
Frequency rate [6] [7]	0.24	0.227	0.086	
Injury rate [6] [8]	0.045	0.044	0.017	
RESPONSIBLE BUSINESS PRACTICE				
Compliance Management				
Employees who received compliance training [9] [10]	190,919	210,229	260,032	No. of persons
Reports of the violation of business integrity [11]	903	628	608	No. of reports
Reports of corruption	13	18	16	%
Reports of consumer complaints	58	52	42	%
Other	29	31	42	%
Employees who received anti-corruption training [12]	320,399	313,590	317,965	No. of trainees
RESPONSIBLE MARKETING AND CUSTOMER RELATIONSHIP MANAGEMENT				
Ratio of CS Career Path(in-house certification program)-certified employees [13]	97	95	95.8	%
Customer Satisfaction	83.7	84	83.9	Point

Footnotes:

1) Including redundancies
2) 2014: 2nd year(Aug. 2014~Jul. 2015), 2015: 3rd year(Aug. 2015~Jul. 2016), 2016: 4th year(Aug. 2016~Jul. 2017), 2017: 5th year(Aug. 2017~Jul. 2018)
3) Accumulated since 2013
4) All suppliers excluding those registered less than one years ago(annual registration) are subject to evaluations conducted in eight categories
5) Demand that suppliers comply with ISO 14001 or other corresponding standards in the standard contract form
6) Based on all domestic employees and employees at the overseas manufacturing subsidiaries
7) (No. of injuries ÷ No. of annual work hours) x 1,000,000
8) (No. of injured workers ÷ No. of workers) x 100
9) Scope of data collection: Employees in South Korea
10) Including redundancy
11) Based on the data collected from the Samsung Electronics business integrity website(sec-audit.com)
12) Based on the total number of global employees
13) Among all CS staff

SUPPLIER COMPLIANCE BY KEY THIRD-PARTY VERIFICATION ITEM[1]

	2015	2016	2017	Unit
LABOR & HUMAN RIGHTS				
Freely chosen employment	99	97	98	%
Prohibition of child labor	100	100	100	%
Protection of underage workers	100	100	100	%
Work hour management	89	83	87	%
Guarantee of one-day off per week	95	94	97	%
Wages and benefits	98	99	95	%
Humane treatment	100	98	100	%
Non-discrimination	100	100	100	%
HEALTH & SAFETY				
Occupational safety	89	98	96	%
Emergency preparedness	94	91	94	%
Occupational injury and illness	96	99	98	%
Physically-demanding work	90	100	100	%
Machine safeguarding	100	100	100	%
Food, sanitation & housing	98	98	100	%
ENVIRONMENT				
Pollution prevention	100	100	100	%
Hazardous substance management	99	100	94	%
Wastewater/solid waste management	88	100	98	%
Air pollution	98	100	100	%
Restriction of product materials	100	100	100	%
ETHICS				
Business integrity	100	100	100	%
No improper advantage	100	100	100	%
Disclosure of information	100	100	100	%
Intellectual property	100	100	100	%
Protection of identity	100	100	100	%
Protection of personal information	100	100	100	%
Non-retaliation	100	100	100	%
MANAGEMENT SYSTEM				
Company commitment	100	100	100	%
Management responsibility	100	100	98	%
Risk assessment	100	100	88	%
Training	100	100	100	%
Communication	100	100	100	%
Employee feedback	100	100	100	%
Corrective action	100	100	96	%
Management of Business Improvement Goal	100	100	100	%

Footnotes:
1) Figures that reflect the improvements made

ENVIRONMENTAL PERFORMANCE INDICATOR

ENVIRONMENT DATA TABLE

	2015	2016	2017	Unit
PRODUCT STEWARDSHIP				
Development of eco-friendly products [1]	74	86	94	%
ENERGY EFFICIENCY				
Accumulated GHG emissions reduction in the product [2] use phase [3]	156	188	217	Million tCO_2e
Estimated GHG emissions reduction in the product [2] use phase of the concerned year [4]	32,805	32,232	28,486	Thousand tCO_2e
Estimated reduction [4] in energy consumption for products [2]	47	49	36	%
RESOURCE EFFICIENCY				
Accumulated recovery of end-of-life products [3]	226	271 [10]	312	10,000 ton
Recovery of end-of-life products in the concerned year	355,683	444,473 [10]	417,253	Ton
Asia/Oceania	86,102	127,912 [10]	140,814	Ton
Europe	215,227	262,942 [10]	220,015	Ton
Americas	54,354	53,618	56,424	Ton
RECYCLING				
Recycling of packaging materials [5]	7,040	7,911	9,619	Ton
Recycling of products [5]	73,678	82,867	92,195	Ton
Large appliance [6]	61,971	69,905	79,999	Ton
IT equipment [6]	6,776	7,217	5,831	Ton
Medium appliance [6]	2,289	2,597	2,421	Ton
Small appliance [6]	2,642	3,148	3,944	Ton
Conversion into resources [5]	63,595	71,528	79,579	Ton
Scrap metal [7]	29,871	33,597	37,379	Ton
Nonferrous metal [7]	11,075	12,456	13,858	Ton
Synthetic resin [7]	18,036	20,286	22,569	Ton
Glass [7]	1,317	1,482	1,648	Ton
Other [7]	3,296	3,707	4,125	Ton
Consumption of recycled plastics	34,322	30,849	35,268	Ton
Adoption of recycled plastics	6.3	5	6.1	%
OPERATIONAL IMPACT				
Environment and safety investment [8]	6,590	9,334	9,513	KRW 100 million
Violation of environmental regulations	0	0	0	No. of violations
CLIMATE STEWARDSHIP				
Use of renewable energy	92.06	181.77	228.54	GWh
GHG emissions generated in the workplace [9]	10,192	11,600	13,585	$1,000tCO_2e$
Scope 1	2,445	2,554	3,668	$1,000tCO_2e$
Scope 2	7,747	9,046	9,917	$1,000tCO_2e$
CO_2	8,524	9,909	10,889	$1,000tCO_2e$
CH_4	2	2	2	$1,000tCO_2e$
N_2O	305	264	343	$1,000tCO_2e$
HFCs	218	218	327	$1,000tCO_2e$
PFCs	1,018	1,115	1,847	$1,000tCO_2e$
SF_6	124	92	177	$1,000tCO_2e$

Footnotes:

1) Product development projects rated Good Eco-Product or above
2) Scope of data collection: Seven major product categories(mobile phones, notebooks, TVs, monitors, refrigerators, washers, and air conditioners)
3) Accumulated since 2009
4) Average annual energy consumption against the average annual energy consumption in 2008
5) Scope of data collection: South Korea
6) Reclassified according to 'Act for Resource Recycling of Electrical/Electronic Products and Automobiles' in South Korea
7) Changed the data from 2015 and 2016 according to revision for 'Recycling of products' data
8) Scope of Data collection: Worksites in South Korea
9) Calculated in accordance with nation-specific GHG management guidelines, IPCC guidelines, and ISO 14064 standards
10) Correction of numerical errors

ENVIRONMENT DATA TABLE

	2015	2016	2017	Unit
GHG emissions intensity[1]	2.64	3.04	3.28	tCO_2e/KRW100 million
Scope 3 emissions	18,528	14,868	15,809	$1,000tCO_2e$
Emissions from suppliers [2]	7,942	7,219	8,065	$1,000tCO_2e$
Emissions from logistics	10,478	7,562	7,625	$1,000tCO_2e$
Emissions from business trips[3]	108	87	119	$1,000tCO_2e$
Energy consumption in the workplace [4]	19,478	21,073	23,419	GWh
Power	15,368	16,587	18,450	GWh
Others	4,110	4,486	4,970	GWh
Energy consumption intensity[1]	4.8	5.0	5.7	MWh/KRW100 million
WATER AND WASTEWATER MANAGEMENT				
Water consumption	92,414	104,253	120,619	1,000 ton
Industrial water	58,444	62,986	67,708	1,000 ton
Municipal water(tap water)	32,830	40,147	51,916	1,000 ton
Underground water	1,140	1,120	994	1,000 ton
Intensity of water consumption [5]	53	60	59	t/KRW100 million
Wastewater discharge	72,583	81,716	95,919	1,000 ton
Reuse of water	46,200	48,602	56,154	1,000 ton
Rate of water reused	50	46.6	46.6	%
Supply of ultra-pure water for reuse	34,397	37,770	44,582	1,000 ton
Recovery of ultra-pure water for reuse	14,632	15,529	16,358	1,000 ton
Rate of recovery of ultra-pure water	42.5	41.1	36.7	%
Suppliers' water consumption [2]	134,733	108,290	104,756	1,000 ton
WASTE AND HAZARDOUS WASTE				
Waste generation	937,341	1,078,309	1,146,812	Ton
General waste	680,614	728,905	760,463	Ton
Hazardous waste [6]	256,727	349,404	386,349	Ton
Waste processed	937,341	1,078,309	1,146,812	Ton
Conversion into resources	875,828	1,022,686	1,088,979	Ton
Incineration(outside the Company)	31,123	26,622	32,301	Ton
Landfill(outside the Company)	30,390	29,001	25,532	Ton
Conversion of waste into resources	93	95	95	%
POLLUTANT MANAGEMENT				
Emission of air pollutants	1,222	2,062	1,311	Ton
NOx	642	635	685	Ton
SOx	117	196	69	Ton
Dust	438	1,197	509	Ton
NH_3	18	27	38	Ton
HF	7	7	10	Ton
VOC emissions	118,258	130,576	323,999	kg
Discharge of water pollutants	1,936	3,055	3,190	Ton
COD	970	1,639	1,771	Ton
BOD	277	520	521	Ton
SS	436	598	497	Ton
F	240	253	386	Ton
Heavy metal	12.7	45	15	Ton
Consumption of ozone-depleting substances(CFC-eq) [3]	13	5	3	Ton
Workplace Chemicals Management				
Consumption of chemicals	588	577	696	1,000 ton
Leakage of major harmful substances	0	0	0	No. of occasions

Footnotes:

1) (Total emissions/total consumption/total generation) ÷ consolidated global sales ÷ price index, excluding the sales of the Display Business Division, price index: Producer price index that was announced by the Bank of Korea for the concerned year (basis: 2005 = 1)

2) Concerns all 1st-tier suppliers, their consumption of power, fuel, or water during the previous year was examined in 2016 and 2017 respectively, and then calculations were made in consideration of their respective share of business conducted with Samsung

3) Scope of Data collection: Worksites South Korea

4) Based on global worksites, the 2015 numbers were modified due to the change in reporting unit from TJ to GWh

5) Total consumption ÷ consolidated global sales, excluding the sales of the Display Business Division

6) Based on the calculation criteria adopted by the country of respective worksites

APPENDIX
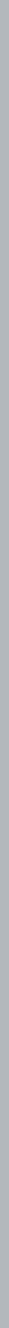
Independent assurance report

Deloitte.

TO THE MANAGEMENT OF SAMSUNG ELECTRONICS CO., LTD.

SCOPE

The management of Samsung Electronics Co., Ltd. ('the Company') engaged us to provide limited assurance on the Samsung Electronics Sustainability Report 2018 ('the Report') of the Company. This limited assurance work was performed for the following subject matters ('the Subject Matters') contained in the Report:

- Quantitative data included in the INTRODUCTION section of the report and corresponding qualitative description based on the data;

- Quantitative data included in the SUSTAINABILITY HIGHLIGHTS section of the report and corresponding qualitative description based on the data;

- Quantitative data included in the SUSTAINABILITY PILLARS section of the report and corresponding qualitative description based on the data, except data and description regarding to GHG emission;

- Quantitative data included in the SUSTAINABILITY FOUNDATIONS section of the report and corresponding qualitative description based on the data, except data and description regarding to GHG emission; and,

- Quantitative economic, social, and environmental performance data included in ESG Performance Summary among SUSTAINABILITY FOUNDATIONS section of the report, except data regarding to GHG emission.

Also, our procedures are designed to review whether the Report was prepared in accordance with 'Reporting Principles for defining report content' of the Global Reporting Initiative ('GRI') Standards;

- Stakeholder inclusiveness: Whether the Company has intended to identify stakeholders and responded to their rational expectations and concerns;

- Sustainability context: Whether the Company has intended to report performance during the reporting period in the context of broader sustainability; and

- Materiality and completeness: Whether the Company has intended to disclose sufficient information about economic, environmental, and social themes that significantly impact stakeholder decision making and that have a significant impact on business activities.

MANAGEMENT'S RESPONSIBILITIES

Management of the Company is responsible for the collection, preparation and presentation of the Subject Matters and the Report in accordance with the GRI Standards. Furthermore, the management is responsible for such internal controls as it determines is necessary to enable the preparation of the Subject Matters and the Report that is free from material misstatement, whether due to fraud or error.

OUR INDEPENDENCE AND QUALITY CONTROL

With the exception of this work, we have provided no other services relating to collection, preparation and presentation of the Subject Matters and the Report. We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

The firm complies International Standard on Quality Control 1, 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.

AUDITOR'S RESPONSIBILITIES

Our responsibility is to express a conclusion on the Subject Matters based on our procedures. We conducted our procedures in accordance with International Standard on Assurance Engagements 3000 (Revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board. This standard requires that we plan and perform our procedures to obtain limited assurance about whether the Subject Matters are free of material misstatements.

A review is focused on obtaining limited assurance. The procedures performed in a limited assurance engagement vary in nature, and are less in extent than for a reasonable assurance engagement. As a result, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. We do not accept or assume any responsibility for any other purpose or to any other person or organization. Any reliance any such third party may place on the Report is entirely at its own risk.

PROCEDURES PERFORMED

Our main procedures included the following;

(1) Interviews with management and employees responsible for the collation and accuracy of the Subject Matters;

(2) Review of the Report for the appropriate presentation of the Subject Matters, including the discussion of limitations and assumptions relating to the data presented;

(3) Identification of the online systems used to collect the Subject Matters, and the data samples collected through that system; and,

(4) Identification of evidence data at the workplace level for the Subject Matters.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

CONCLUSION

Based on the procedures we have conducted and evidence we have obtained, nothing has come to our attention that causes us to believe that the Subject Matters as set out in the Scope paragraph are not prepared, in all material respects, or that the content of the report was not adequately prepared in accordance with the 'Reporting Principles for defining report content' of the GRI Standards.

June 12th, 2018

Deloitte Anjin LLC.
CEO Lee, Jung Hee

Verification statement on 2017 Samsung Electronics Co., Ltd., Greenhouse Gas Emission

Introduction

Korean Foundation for Quality(hereinafter 'KFQ') has been engaged by Samsung Electronics Co., Ltd.(hereinafter the 'Company') to independently verify its 2017 Greenhouse Gas Emission Report of domestic corporations and 28 overseas subsidiaries. It is the responsibility of the Company to compile the Greenhouse Gas Emission Report according to the 'Greenhouse Gas and Energy Target Management Scheme(Notification No. 2016-255 of Ministry of Environment)', 'Guidelines for GHG emission reporting and certification of GHG emission trading scheme(Notification No. 2017-12 of Ministry of Strategy and Finance)', and ISO 14064-1:2006' and KFQ has responsibility to conduct verification based on 'ISO 14064-3:2006' to provide verification opinion on compliance of the Report against verification criteria.

Verification Scope

In this verification, domestic corporations and 28 overseas subsidiaries under operational control of Samsung Electronics Co., Ltd., and reported emission is including Scope 1 and Scope 2 emission.

Verification Opinion

Through the verification process according to the 'ISO 14064-3:2006', KFQ could obtain reasonable basis to express following conclusion on the Greenhouse Gas Emission Report.

1) 2017 Samsung Electronics Co., Ltd., Greenhouse Gas Emission Report was prepared against 'Samsung Electronics Co., Ltd., Greenhouse Gas Inventory Guideline' developed based on the 'Greenhouse Gas and Energy Target Management Scheme' and 'ISO 14064-1:2006':

2) As a result of materiality assessment on 2017 domestic Greenhouse Gas Emission, material discrepancy is less than the criteria of 2.0% for the organization which emits more than $5,000,000 tco_2eq/yr$ in accordance with the requirements of the 'Guidelines of verification for Greenhouse gas emission trading scheme':

3) For the 28 overseas subsidiaries, document review was conducted for entire 28 subsidiaries and sampling on-site assessment was conducted for 5 subsidiaries, 2 in India, 2 in Vietnam and 1 in China, as well as Company self-assessment. The result of material discrepancy is less than 2.0%.

4) As reported Greenhouse Gas Emission purchased electricity, process emission by fluorinated gas use and LNG consumption take more than 99% of total emission. Activity data of these emission sources were checked through the objective evidence provided by supplier therefore KFQ could confirm that these activity data is valid itself:

5) However, verification opinion regarding to the relevant error caused by emission reduction efficiency of emission reduction technologies in process emission which affect Greenhouse Gas Emission was not considered. It is because of the efficiency has to be assessed and confirmed by the Government or related specialized agency but it was developed by Company according to the Company own methodology. For the overseas subsidiaries, each national net caloric value and electricity emission factor were preferentially used but net caloric value and electricity emission factor were adopted from IPCC Guidelines or Korean Energy Law Enforcement Regulation and IEA statistics respectively in case of nonexistence of it. Therefore, it is necessary to re-calculate Greenhouse Gas Emission in any change of these parameters or factors.

6) Except unconsidered emission source in the 'Samsung Electronics Co., Ltd., Greenhouse Gas Inventory Guideline', material error, omission or insignificant issues was not found in 2017 Samsung Electronics Co., Ltd., Greenhouse Gas Emission Report.

2017 SAMSUNG ELECTRONICS CO., LTD., GREENHOUSE GAS EMISSION Unit: kiloton CO_2 eq

REPORT YEAR									2017. 1.1 ~ 2017. 12. 31
Verification Scope		Domestic					Overseas		Total
			China	South-east Asia	India	Europe	America	Africa	
GHG Emission	Sub Total	8,589	2,371	1,588	101	110	811	15	13,585
	Direct Emission (Scope 1)	2,800	573	134	8	24	126	3	3,668
	Indirect Emission (Scope 2)	5,789	1,798	1,454	93	86	685	12	9,917

May 28th, 2018

Daehyun Nam

Daehyun Nam

President & CEO Korean Foundation for Quality

GRI Index

GRI STANDARDS

ASPECT	GRI NO.	INDEX DESCRIPTION	STATUS	PAGE	COMMNETS
GENERAL DISCLOSURES					
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	102-2	Activities, brands, products, and services	○		Refer to the company website
	102-3	Location of headquarters	●	6-7	
	102-4	Location of operations	●	6-7	
	102-5	Ownership and legal form	○		Refer to the business report
	102-6	Markets served	●	6-7	
	102-7	Scale of the organization	●	118-125	
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	102-24	Nominating and selecting the highest governance body	●	99-100	
	102-25	Conflicts of interest	○		
	102-26	Role of highest governance body in setting purpose, values, and strategy	●	99-100	
	102-27	Collective knowledge of highest governance body	●	99-100	
	102-28	Evaluating the highest governance body's performance	○		
	102-29	Identifying and managing economic, environmental, and social impacts	○		
	102-30	Effectiveness of risk management processes	●	101-102	
	102-31	Review of economic, environmental, and social topics	●	99-100	
	102-32	Highest governance body's role in sustainability reporting	●	99-100	
	102-33	Communicating critical concerns	●	99-100	
	102-34	Nature and total number of critical concerns	●	99-100	
	102-35	Remuneration policies	○		
	102-36	Process for determining remuneration	○		
	102-37	Stakeholders' involvement in remuneration	○		
	102-38	Annual total compensation ratio	○		
	102-39	Percentage increase in annual total compensation ratio	○		
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	102-41	Collective bargaining agreements	●	72	
	102-42	Identifying and selecting stakeholders	●	98	
	102-43	Approach to stakeholder engagement	●	98	
	102-44	Key topics and concerns raised	●	98	

ASPECT	GRI NO.	INDEX DESCRIPTION	STATUS	PAGE	COMMNETS
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	102-46	Defining report content and topic Boundaries	●	92-94	
	102-47	List of material topics	●	94	
	102-48	Restatements of information	●	118-125	
	102-49	Changes in reporting	●		No significant changes during reporting period
	102-50	Reporting period	●	2	
	102-51	Date of most recent report	●	2	
	102-52	Reporting cycle	●	2	
	102-53	Contact point for questions regarding the report	●	2	
	102-54	Claims of reporting in accordance with the GRI Standards	●	2	
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	103-3	Evaluation of the management approach	○		
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	302-1	Energy consumption within the organization	●	61, 125	
	302-2	Energy consumption outside of the organization	○		
	302-3	Energy intensity	●	125	
	302-4	Reduction of energy consumption	●	61	
	302-5	Reductions in energy requirements of products and services	●	124	

ASPECT	GRI NO.	INDEX DESCRIPTION	STATUS	PAGE	COMMNETS
Water	303	Management Approach	●	61-63	
	303-1	Water withdrawal by source	●	125	
	303-2	Water sources significantly affected by withdrawal of water	●	62-63	
	303-3	Water recycled and reused	●	63,125	
Biodiversity	304	Management Approach	●	65	
	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	●	65	
	304-2	Significant impacts of activities, products, and services on biodiversity	●	65	
	304-3	Habitats protected or restored	●	65	
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	●	65	
Emissions	305	Management Approach	●	59	
	305-1	Direct(Scope 1) GHG emissions	●	124	
	305-2	Energy indirect(Scope 2) GHG emissions	●	124	
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	305-4	GHG emissions intensity	●	125	
	305-5	Reduction of GHG emissions	●	59	
	305-6	Emissions of ozone-depleting substances(ODS)	●	125	
	305-7	Nitrogen oxides(NOX), sulfur oxides(SOX), and other significant air emissions	●	125	
Effluents and Waste	306	Management Approach	●	61-64	
	306-1	Water discharge by quality and destination	●	62-63, 125	
	306-2	Waste by type and disposal method	●	64	
	306-3	Significant spills	●	125	No significant spills during reporting period
	306-4	Transport of hazardous waste	●	64, 125	We comply with conventions on the border control of hazardous waste
	306-5	Water bodies affected by water discharges and/or runoff	●	65	
Environmental Compliance	307	Management Approach	●	103	
	307-1	Non-compliance with environmental laws and regulations	●	59	
Supplier Environmental Assessment	308	Management Approach	●	109-113	
	308-1	New suppliers that were screened using environmental criteria	●	122	
	308-2	Negative environmental impacts in the supply chain and actions taken	●	113	
SOCIAL					
Employment	401	Management Approach	●	67	
	401-1	New employee hires and employee turnover	●	120	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	○		
	401-3	Parental leave	●	120	
Labor/ Management Relations	402	Management Approach	●	72-73	
	402-1	Minimum notice periods regarding operational changes	○		
Occupational Health and Safety	403	Management Approach	●	86-89	
	403-1	Workers representation in formal joint management–worker health and safety committees	●	72-73	
	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	●	122	
	403-3	Workers with high incidence or high risk of diseases related to their occupation	○		
	403-4	Health and safety topics covered in formal agreements with trade unions	○		
Training and Education	404	Management Approach	●	67-68	
	404-1	Average hours of training per year per employee	●	121	
	404-2	Programs for upgrading employee skills and transition assistance programs	●	81	
	404-3	Percentage of employees receiving regular performance and career development reviews	●	121	

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Diversity and Equal Opportunity	405	Management Approach	●	79-80	
	405-1	Diversity of governance bodies and employees	●	121	
	405-2	Ratio of basic salary and remuneration of women to men	●		We do not discriminate on any basis in all processes including promotion, compensation and disciplinary measures
Non-Discrimination	406	Management Approach	●	67, 79-80	
	406-1	Incidents of discrimination and corrective actions taken	●	72	
Freedom of Association and Collective Bargaining	407	Management Approach	○		
	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	○		
Child Labor	408	Management Approach	●	74	
	408-1	Operations and suppliers at significant risk for incidents of child labor	●	74, 76, 113	
Forced or Compulsory Labor	409	Management Approach	●	74	
	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	●	74, 113	
Security Practices	410	Management Approach	○		
	410-1	Security personnel trained in human rights policies or procedures	○		
Rights of Indigenous Peoples	411	Management Approach	○		
	411-1	Incidents of violations involving rights of indigenous peoples	○		
Human Rights Assessment	412	Management Approach	●	70	
	412-1	Operations that have been subject to human rights reviews or impact assessments	●	70-74	
	412-2	Employee training on human rights policies or procedures	●	73	
	412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	○		
Local Communities	413	Management Approach	●	33	
	413-1	Operations with local community engagement, impact assessments, and development programs	●	34-41	
	413-2	Operations with significant actual and potential negative impacts on local communities	○		
Supplier Social Assessment	414	Management Approach	●	109	
	414-1	New suppliers that were screened using social criteria	●	111	
	414-2	Negative social impacts in the supply chain and actions taken	●	111, 113, 123	
Public Policy	415	Management Approach	●	109	
	415-1	Political contributions	●		Code of Conduct prohibits contribution to political parties
Customer Health and Safety	416	Management Approach	○		
	416-1	Assessment of the health and safety impacts of product and service categories	○		
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	○		Refer to the business report
Marketing and Labeling	417	Management Approach	○		
	417-1	Requirements for product and service information and labeling	○		
	417-2	Incidents of non-compliance concerning product and service information and labeling	○		
	417-3	Incidents of non-compliance concerning marketing communications	○		Refer to the business report
Customer Privacy	418	Management Approach	●	106	
	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	●		No violations during reporting period
Socioeconomic Compliance	419	Management Approach	●	103	
	419-1	Non-compliance with laws and regulations in the social and economic area	○		Refer to the business report

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