

# LIFE'S GOOD

WITH

# LG

"Life's Good with LG" is the official CSR slogan of LG Electronics and conveys our earnest desire for comprehensive communication with stakeholders about our CSR efforts in a variety of areas.

2019-2020 LG Electronics Sustainability Report

**GROWTH & CHANGE  
FOR A BETTER LIFE**

## 2019-2020 LG ELECTRONICS SUSTAINABILITY REPORT

### REPORT OVERVIEW

LG Electronics has expressed our commitment to sustainable growth and change by establishing three mid- to long-term goals and nine major tasks for sustainability management, and is working to achieve these goals. This report has been compiled for LG Electronics to share our efforts and major activities in achieving our mid- to long-term sustainability management goals together with our stakeholders. It presents in detail the management approach (MA), activities, performances, goals and progress in our major tasks by linking key issues derived from a materiality assessment to our mid- to long-term sustainability management goals. In the interest of transparency, LG Electronics plans to publish a report every year to inform our stakeholders of our activities and progress toward achieving our sustainability management goals.

### REPORTING PRINCIPLES AND STANDARDS

LG Electronics' 2019-2020 Sustainability Report applies the 'Core Option' of the Global Reporting Initiative (GRI) Standards, a global sustainability standards guideline. It also reflects the reporting standards proposed by the Sustainability Accounting Standards Board (SASB) and the TCFD (Task Force on Climate-Related Disclosure). In addition, this report satisfies the four principles (Inclusivity, Materiality, Responsiveness, and Impact) of the AccountAbility Principles Standard (AA1000AP), which are principles that oblige an organization to explain its sustainability management efforts to stakeholders.

### REPORTING PERIOD

This report covers activities undertaken from January 2019 to December 2019, including some key activities conducted in the first half of 2020. LG Electronics is fully aware of the concerns of stakeholders and always strives to respond to such concerns. As for quantitative performance, LG Electronics has included three-year data from 2017 to 2019 to facilitate identification of trends.

### SCOPE OF REPORT

This report covers the activities of the headquarters, Korean and international production sites and sales corporations operated by LG Electronics. Consolidated financial information has been prepared in accordance with the Korean International Financial Reporting Standards (K-IFRS), and some financial information prepared on a stand-alone basis is presented with a footnote. In the case of social and environmental information, the reporting scope has been annotated in the event of any restriction on the collection of the data.

### THIRD PARTY ASSURANCE

This report has been verified by an independent assurance corporation (DNV GL) to ensure the accuracy, objectivity and credibility of the report preparation process and verification of all the information created, and was completed in accordance with international verification standards. The results of the third-party assurance are detailed on pp. 122-123. The financial information provided in this report has been audited by an independent auditor, and assurance on greenhouse gas emissions and energy usage was carried out in accordance with the verification principles such as 'Administrative Guidelines on Reporting and Verification of Greenhouse Gas Emissions by the Emissions Trading System.'

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More information  
on the sustainability  
management activities  
of LG Electronics can be  
found here.

LG Electronics  
Corporate Website  
[http://www.lge.com/  
sustainability](http://www.lge.com/sustainability)





# 1

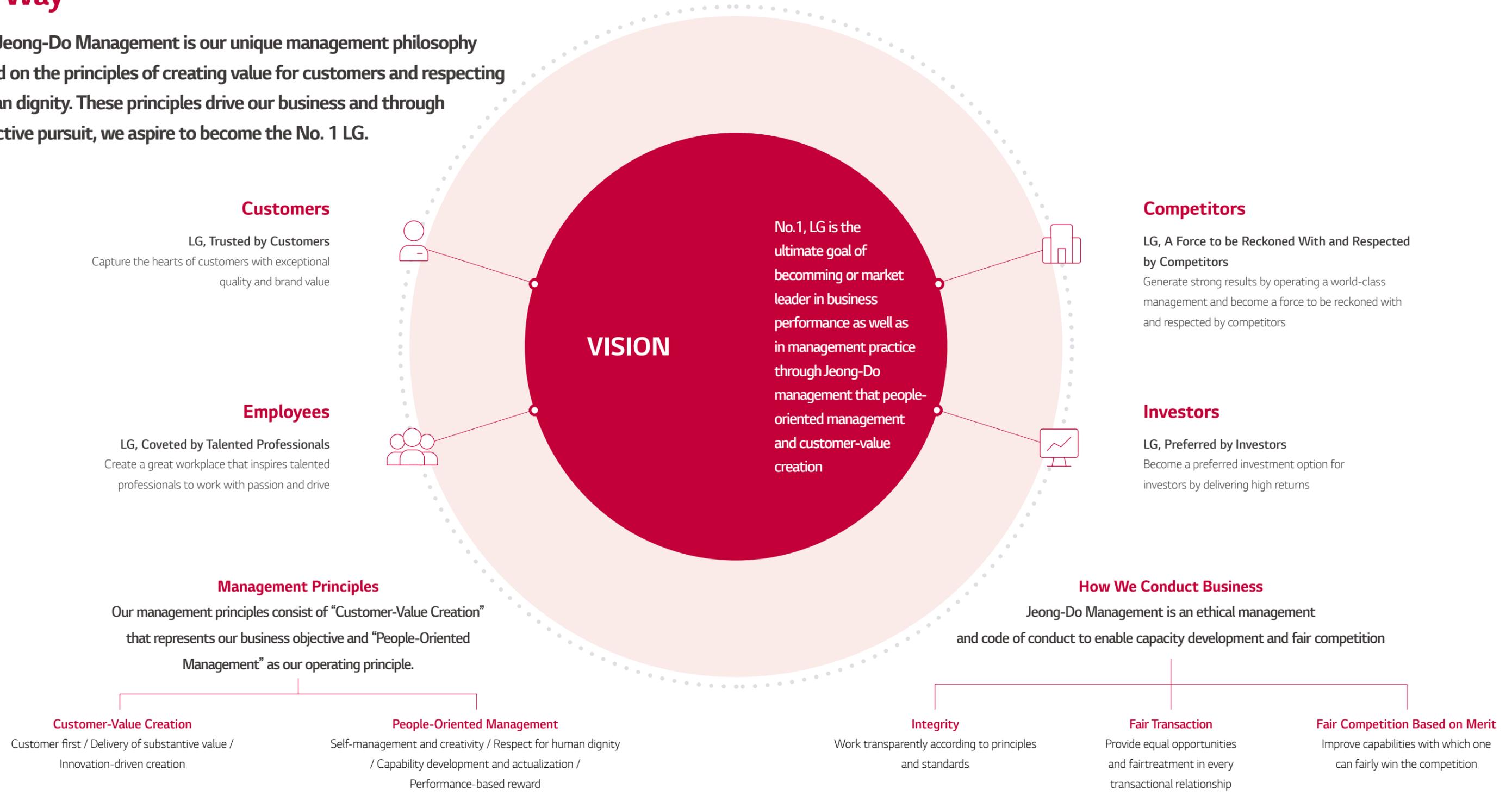
## CORPORATE OVERVIEW

- 004 Management Philosophy
- 006 Message from the CEO
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- 012 What We Do

# MANAGEMENT PHILOSOPHY

## LG Way

LG's Jeong-Do Management is our unique management philosophy based on the principles of creating value for customers and respecting human dignity. These principles drive our business and through collective pursuit, we aspire to become the No. 1 LG.



# MESSAGE FROM THE CEO



**Creating customer value through growth and change driven by digital transformation is the essence of business that LG Electronics pursues.**

**Dear Valued Stakeholders,**

As global leader defining technological innovation in electronic products, mobile communication devices, and household appliances, LG Electronics (LGE) is continuing its growth and generating customer value in our worldwide production sites. I extend my sincere gratitude to our stakeholders for their unwavering support and encouragement for LGE.

In the first half of 2020, uncertainties in the market due to global trade disputes and volatility in the foreign exchange market, as well as the global outbreak of COVID-19, resulted in economic stagnation of the global economy and industries. In these trying and difficult times, and determination are what we need perseverance to tackle today's challenges. As a community member and a corporate citizen, LGE affirms our commitment to the following initiatives, with a goal to build a future of mutual growth with our stakeholders.

**First, we will achieve innovation through growth and change centered on digital transformation.**

Until now, we achieved growth and development by refining our growth models around LGE's flagship businesses. In today's business environment, however, the complexities of the market and the competitive landscape significantly influence the company's growth and development trajectory. In response, LGE is innovating our business model through "strategic positioning and focus" in areas of potential mid- to long-term growth. We seek to create a virtuous cycle of growth and development based on such business strategy.

In particular, digital transformation is one of the key areas for LGE to maintain a sustainable operation in today's hyper-connected, Industry 4.0 era. By targeting business domains of high-growth potential such as artificial intelligence (AI) and big data, we are proactively responding to the changes that lie ahead of us. In this respect, LGE plans to incorporate contents and services to a wide range of products, while promoting connected devices to develop new markets and secure growth opportunities. Forging strategic collaborations with business partners in diverse sectors will strengthen our open innovation and contribute to realizing returns.

Furthermore, LGE will build a fast and responsible decision-making system that can respond to the rapidly changing business environment and initiate innovation by mobilizing company-wide capacity.

**Second, we will deploy all of our business capacity in creating customer value.**

At LGE, understanding the changing needs of our customers and delivering value is the core of our competitiveness as well as a long-term goal that must be maintained under any circumstance. We will keep in mind that creating customer value must be placed first as we maintain a product oriented business model. Everyone at LGE will pay close attention to the voice of our customers, recognizing it as a great resource for opportunities. With this, we will draw growth and changes in our endeavors in creating new customer value.

**Finally, we will build a company that works with our stakeholders for a better future.**

LGE will do our utmost not only to generate economic value but also to carry out our corporate responsibilities. Specifically, we have established mid- to long-term goals from a sustainability management perspective, in which we are undertaking a range of initiatives and managing our performances. In pursuit of the three main sustainability commitments – intelligent life, zero carbon and circular economy, and better society – we will devise measures to provide better value and prepare for a sustainable future for our stakeholders.

Since its establishment, LGE has been committed to creating economic, social, and environmental value for over half a century. Going forward, we remain fully committed to providing better value to our stakeholders, including customers, the environment, business partners, local communities, and employees. I ask for your continued support and interest in our journey toward sustainable development founded on growth, change, and innovation.

Thank you.

**June 2020**  
**CEO & President of**  
**LG Electronics**  
**Brian Kwon**

A handwritten signature in black ink that reads "Brian Kwon". The signature is fluid and cursive, written in a professional style.

# MESSAGE FROM THE MANAGEMENT

LGE will remain steadfast in maintaining its **sustainability** through **transparent disclosure** of ESG information and **active communication** with stakeholders.

The rise of responsible investment in recent years and mandatory reporting on ESG (environmental, social, governance) information in major developed countries underscores the importance of corporate social responsibility and sustainability management. As voluntary international agreements on social responsibility are increasingly reflected by countries in their respective national regulations and required by global enterprises as purchasing requirements, global compliance management is now considered a competitive edge in the market.

In recognition of the significant impact of

ESG factors on a company's financial performance, LGE transparently discloses the risks, opportunities, goals, and performances in economic, social, and environmental areas through various channels. In particular, we systematically pursue sustainability management based on our mid- to long-term sustainability management goals, and strive to meet the expectations of our stakeholders as a global enterprise.

In the face of a global economic downturn caused by the worldwide outbreak of COVID-19, LGE will withstand the uncertainties of the market environment and do our utmost to maintain business stability while creating economic, social, and environmental value. Our efforts to maintain constant growth and contribute to a sustainable future will continue.

CFO

Executive Vice President Doo-Yong Bae



LGE will serve as a Lifestyle Innovator offering a **new lifestyle** in all living spaces through **customer-oriented, platform-based artificial intelligence**.

Going beyond home appliances, LGE is changing and evolving into a Lifestyle Innovator, proposing a new way of life in all living spaces – 'at home', 'on the road', and 'in the office.' Household devices are interconnected, while devices in and outside of a home communicate between one another, and entire cities are connected in real-time, altogether contributing to building a new lifestyle.

In this regard, LGE announced to expand the existing AI ThinQ brand from a line of products to a platform. All of LGE's products will be connected to a platform equipped with cloud features, big data modules, and AI engines, thereby enabling them to utilize the platform's various features, as opposed to offering one simple smart function. This way, our products will contribute to actualizing new customer value.

Furthermore, LGE's three major AI goals – Evolve, Connect, and Open – will continuously evolve and improve, in order to provide optimally customized functions to each

customer and offer various AI experiences based on portfolios that encompass all household devices. At the same time, LGE pursues an open-ecosystem strategy, whereby we provide all things needed and required by customers. We are also expanding our global R&D network by establishing the LGE North America R&D Center, an integration of our research organization in North America, and recruiting professionals in the AI field.

Going forward, LGE will continue its efforts to define and provide AI that is most needed by our customers, while being a leader in setting a standard in the industry and taking AI to the next level. At the same time, we will be relentless in contributing to the prosperity and development of the humanity through Good AI that is both ethical and safe.

CTO

President Il-Pyung Park



To **'realize true customer value'**, LGE will continue our efforts toward achieving **sustainable growth of the company and society** by making **practical changes** to the way we work.

In line with the rapidly changing business environment, LGE encourages bold ventures, while ensuring that our initiatives are aligned with the management principles and mode of behavior defined by the LG Way, with a view toward building lasting change and innovation.

As part of our new venture of digital transformation, we have introduced a big-data-based AI recruitment system and carried out a range of activities to promote communication with professionals in the field. We have also adopted a robotic process automation (RPA) process as a measure to eliminate simple, repetitive work and encourage our employees to focus on core work that requires their creativity and is more valuable. At the same time, we customize our systems to align with our business characteristics so that each organization can remain flexible and autonomous. We also strive to enhance the quality of life not just for our employees but also for society as a whole by supporting our employees to unlock their full potential, realizing growth with the company and developing a vision for their future.

As a corporate citizen with an obligation to fulfill social responsibility, LGE ensures that human rights are reflected in its operating standards so that human rights management

will serve a cornerstone of corporate management. Every year, we examine the level of human rights awareness and practice among our employees, and provide consistent feedback on areas that need improvement. Furthermore, in line with Jeong-Do Management, LG's unique mode of behavior, we promote win-win growth with our business partners, health of our employees, safety in the work environment, and environmental management throughout the business as a whole. Finally, as part of our effort to achieve gender equality, we have instituted structural programs to minimize career breaks and disadvantages for female employees, while continuously recruiting female talent and providing programs that support women to take on leadership roles.

As a global corporate citizen striving to fulfill our social responsibilities, LGE will listen closely to the individual voices of our employees and stakeholders, ensuring that those voices are appropriately reflected in our business management.

CHO

Senior Vice President Won-Beom Kim



# WHO WE ARE

## Corporate Overview

As a global leader in the IT market, LG Electronics is leading technological innovations in the fields of home appliances, mobile communication devices, and electronic devices. With around 140 production sites worldwide, our sales reached KRW 62.3 trillion in 2019. LG Electronics is composed of five business divisions: Home Appliance & Air Solutions (H&A), Home Entertainment (HE), Mobile Communications (MC), Vehicle Component Solutions (VS), and Business Solutions (BS). It also leads the market in various fields, including refrigerators, washing machines, TVs, mobile phones, vehicle component, and solar energy.

		As of December 31, 2019	
<b>Name</b>	LG Electronics Inc.	<b>Date Established</b>	October 1, 1958
<b>Location of Headquarters</b>	LG Twin Towers, 128 Yeoui-daero, Yeongdeungpo-gu, Seoul, Korea	<b>Number of Employees</b>	73,971 employees (40,110* in Korea and 33,861 overseas)
<b>Industry</b>	Manufacturing	<b>Total Assets (Consolidated)</b>	USD 38.5 billion
<b>Major Products</b>	Refrigerator, Washing Machine, Residential/Commercial Air Conditioner, Cooking Appliance, Vacuum Cleaner, TV, Monitor, PC, Stereo System, Video System, Mobile Handsets, Automotive Components, Solar Energy System, etc.	<b>Total Liabilities (Consolidated)</b>	USD 24.4 billion
<b>President</b>	Bong-Seok Kwon	<b>Total Equity (Consolidated)</b>	USD 14.1 billion
		<b>Net Sales (Consolidated)</b>	USD 53.5 billion
		<b>Operating Income (Consolidated)</b>	USD 2.1 billion

\* Data from LGE's annual report  
 \*\* Exchange rate: 1 USD = 1,165 KRW

## Shareholder Status

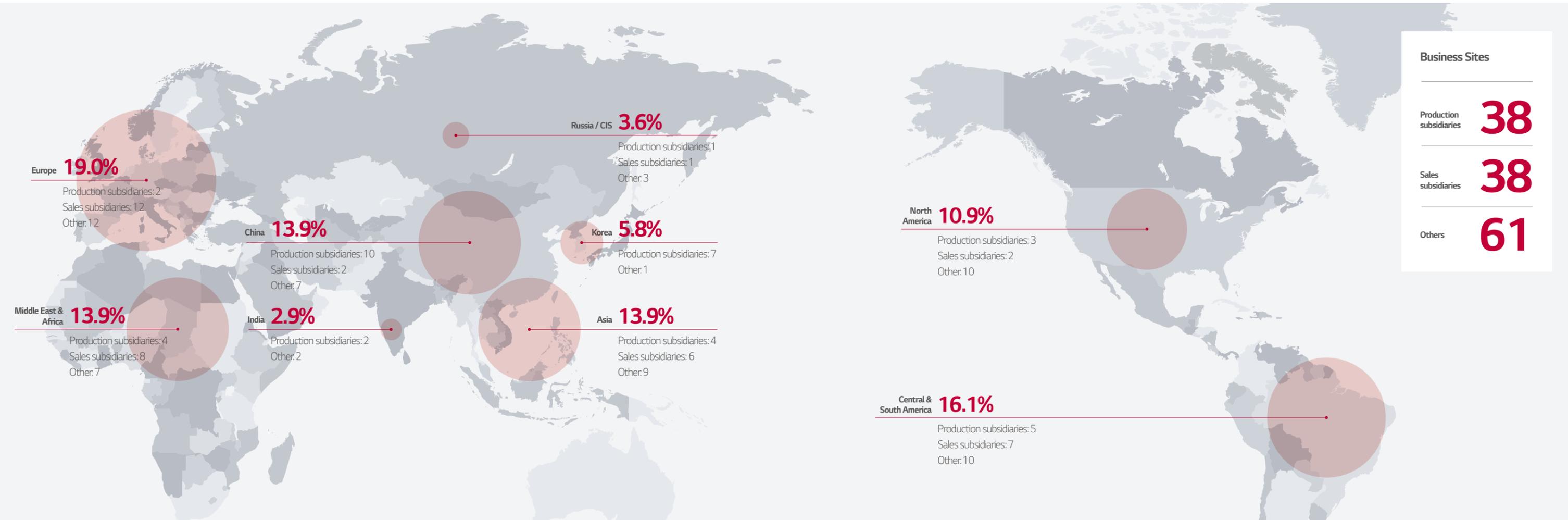
Status of Shareholders Holding More Than 5%		As of December 31, 2019
Shareholder	Number of Shares	Number of Voting Shares
<b>LG Corp.<sup>1)</sup></b>	55,094,582 Shares	33.67%
<b>National Pension Service</b>	15,518,099 Shares	9.48%
<b>BlackRock Fund Advisors</b>	8,243,170 Shares	5.04%

1) Required to hold more than 30% stocks of LGE as a subsidiary according to Fair Trade Act; Kwang-Mo Koo, CEO of LG group and the largest shareholder, holds 15% of stocks.

Largest Shareholders and Affiliated Persons		As of December 31, 2019	
Shareholder	Relationship	Number of Shares	Ownership
<b>LG Corp.</b>	Holding company	55,094,582 Shares	33.67%
<b>Seong-Jin Jo</b>	Former CEO, LG Electronics Inc.	16,235 Shares	0.01%
<b>Do-Hyun Jung</b>	Former CFO, LG Electronics Inc.	1,447 Shares	0.00%

## Global Status

Classification	As of December 31, 2019	
	Sales (Unit: USD billion)	Number of Employees (Unit: person)
<b>Korea</b>	19.5	40,110
<b>North America</b>	12.4	3,370
<b>Europe</b>	7.5	4,286
<b>Asia</b>	5.7	11,191
<b>Central &amp; South America</b>	3.1	5,727
<b>China</b>	2.0	6,588
<b>Middle East &amp; Africa</b>	2.0	1,224
<b>Russia / CIS</b>	1.4	1,475
<b>Total</b>	53.5	73,971



**Business Sites**

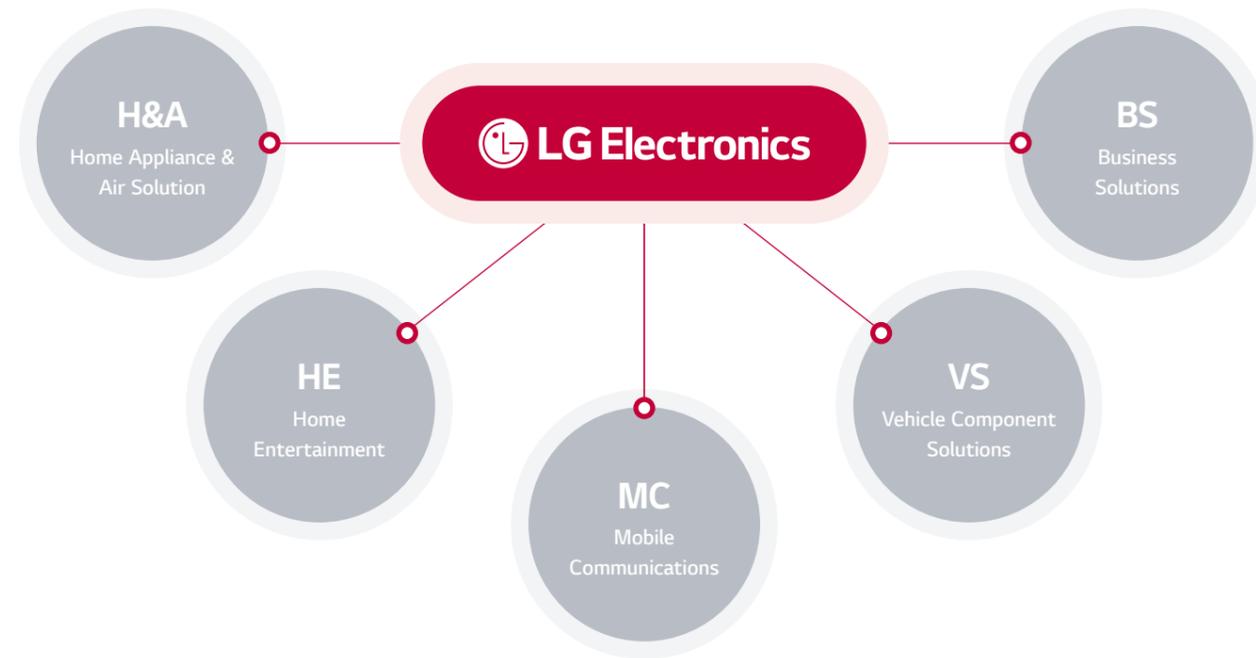
Production subsidiaries: **38**

Sales subsidiaries: **38**

Others: **61**

# WHAT WE DO

LG Electronics' key business units are Home Appliance & Air Solutions (H&A), which produces and sells major household appliances and commercial air conditioners, Home Entertainment (HE), which produces and sells digital media products, Mobile Communications (MC), which produces and sells mobile terminals, Vehicle Component Solutions (VS), which designs and manufactures automotive components, and Business Solutions (BS), which manufactures and sells displays and solar power materials to provide customized products and solutions.



# H&A Home Appliance & Air Solution



2019 Sales (Consolidated)  
**21,515.5** <sup>KRW</sup> billion  
 18.5 <sup>USD</sup> billion  
 2019 Portion of Sales (Consolidated)  
**34.5** %

The Home Appliance & Air Solution (H&A) business, a leader in the global home appliance market providing a 'total home solution', offers market-leading products combining innovative technology and premium design based on extensive research on the cultural traits and lifestyle habits of customers worldwide.

Social changes such as the transition into a digital society as a result of the development of information communications technology (ICT) and the rise of the MZ (millennial-Z) generation are changing the needs of customers throughout all industries. Amid such changes, LGE explores new business opportunities by bolstering our premium brand competitiveness and achieving digital transformation, as part of our effort to build a virtuous cycle of continued growth. By being one step ahead of others and introducing home appliances that help to create an ideal space for customers, we are expanding LGE's business portfolio to include the business in living space. In response to our expectation that non-face-to-face services will further expand in the future, we plan to strengthen our ThinQ app products and services. We are thankful to our customers' confidence in and support for LGE's premium home appliances, as well as new products that promote our customers' quality of life. In return, we promise to create sustainable customer value through innovative products and services.

Head of H&A Company  
 President Dan Song



# HE Home Entertainment

Our Home Entertainment (HE) Company promotes customer-oriented thinking and strategies in all business areas, including TV, AV and home beauty, in order to create sustainable customer-centered value. Through a range of measures to better understand our customers, including the operation of a customer advisory board and utilization of big data, we strive to identify customer needs more accurately and meticulously. In particular, in response to the recent TV viewing trends represented by over-the-top (OTT) services and other streaming media services, we will provide an optimal AI-based user experience (UX) and free content (LG channel) to offer a wide range of easily accessible content to viewers, and showcase TV products with innovative designs that create harmony with customers' living space and lifestyle. In addition we are making continued efforts to achieve tangible results in the wireless speakers and earbuds market by offering differentiated functions and unrivaled product quality. Furthermore, we seek to go beyond our achievements in the home beauty market by developing new beauty appliances that meet the levels of medical equipment and satisfy our customers' desires for beauty and health. Through our business activities, the HE business will stay true to our business values while offering sustainable value to our stakeholders that will help them enrich their lives.

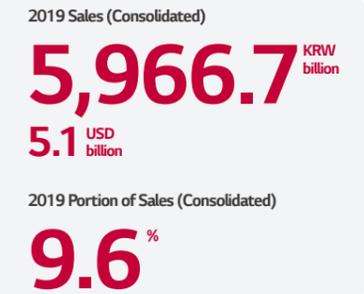
**Head of HE Company**  
Executive Vice President Hyoung-Sei Park



The Home Entertainment (HE) Company has solidified its position as a total solution provider in the industry that satisfies varying customer needs through multimedia video and audio equipment including TV and AV products, as well as beauty care business.



# MC Mobile Communications



The Mobile Communication (MC) Company strives to deliver the best experience to our customers through innovation based on customer value. In particular, we would like to add new value to our customers' lives by offering differentiated products equipped with superior hardware capabilities, innovative technology, and creative designs.

In a rapidly changing mobile market, the MC Company will focus on implementing the following three major strategies to achieve sustainable growth and development. First, we will focus on practical innovation based on customer value. By taking customer demands and complaints into consideration when developing our product strategies, we seek to enhance customer satisfaction in the short-term and expand our customer base in the long-term. We will also run the customer evaluation group to help us make business decisions from a strictly customer-oriented point of view. Second, we will utilize new market trends to secure product leadership. We will gain customer recognition by developing new-concept products ahead of others, secure definite competitiveness in hardware (HW) features, while strengthening competitiveness in design and user experience (UX) through collaboration with our business partners. Furthermore, we will also improve product images and customer awareness through continued brand communications. Finally, we will secure additional growth engines by exploring new business opportunities. By working closely with global platform providers, we will expand monetization programs in areas other than HW, and establish virtuous profit models in software (SW) by utilizing various screen devices. We also plan to develop a new product optimized for video/multimedia utilization as a new growth engine.

**Head of MC Company**  
Executive Vice President Morris Lee



# VS Vehicle Component Solutions



2019 Sales (Consolidated)

**5,465.4** KRW billion

**4.7** USD billion

2019 Portion of Sales (Consolidated)

**8.8** %

The Vehicle Component Solutions (VS) Company strives to attain the corporate vision of 'Innovation Partner for Vehicle Electrification' through the production and sales of in-vehicle infotainment (AV navigation, display system, telematics) products, EV components (motors, inverters, converters, etc.), self-driving car components, and vehicle lamps.

Defined by future trends represented by CASE. (Connectivity, Autonomous, Shared Mobility, Electrification), the automobile industry as a whole is undergoing a transitional period where both risks and opportunities exist. In the face of such changes, it becomes ever more important for us to respond flexibly to changes in customer and market demands, while maximizing resource efficiency. These measures are aligned with the "strategic positioning and focus" approach and expected to generate sustainable growth and development. In this regard, the VS Company seeks to lay the groundwork for sustainable growth by re-evaluating our business strategies and portfolios. We aim to enhance the competitiveness of our infotainment components and grow our electric vehicle components business, and present these as a key avenue of growth for our VS Company. Other plans include building intelligent systems by linking them to sensors and navigations that use vehicle lamps as a product line. Ultimately, our goal is to realize true customer value by applying user experience accumulated through our consumer electronics and IT-related businesses to the vehicle components business, while jointly developing and providing differentiated human machine interface (HMI) with automakers.

**Head of VS Company**  
Executive Vice President Jin-Yong Kim



# BS Business Solutions

The Business Solutions (BS) Company is a business partner providing a total solution to customers through LGE's products and services, whose fundamental value lies in 'innovating the work of our corporate clients and facilitating success in their businesses'. To this end, we preemptively identify the fast-changing market trends and technologies, striving to apply them to products and software, while interactively communicating with our customers through digital marketing. At the same time, we continuously expand our lineup of strategic products in order to respond to the various demands of the market ahead of others, while establishing a comprehensive environment conducive to efficient production, storage, and management of our energy products and services, such as high-efficiency solar modules, energy storage systems (ESS), and energy management solutions (EMS). In the future, we plan to identify diverse areas of value based on the trust accumulated with our clients in the B2B business, which is characterized by continuous transactions.

**Head of BS Company**  
President Soon-Hwang Kwon



The BS (Business Solutions) Company is a business partner offering innovative products and solutions to corporate clients worldwide based on its cutting-edge information display (ID) products and solar panels. Its ID business is focused on developing and commercializing products that will lead the fast-growing signage market, while its solar panel business is establishing a foothold in the market with its high-efficiency, N-type solar panel technology.

2019 Sales (Consolidated)

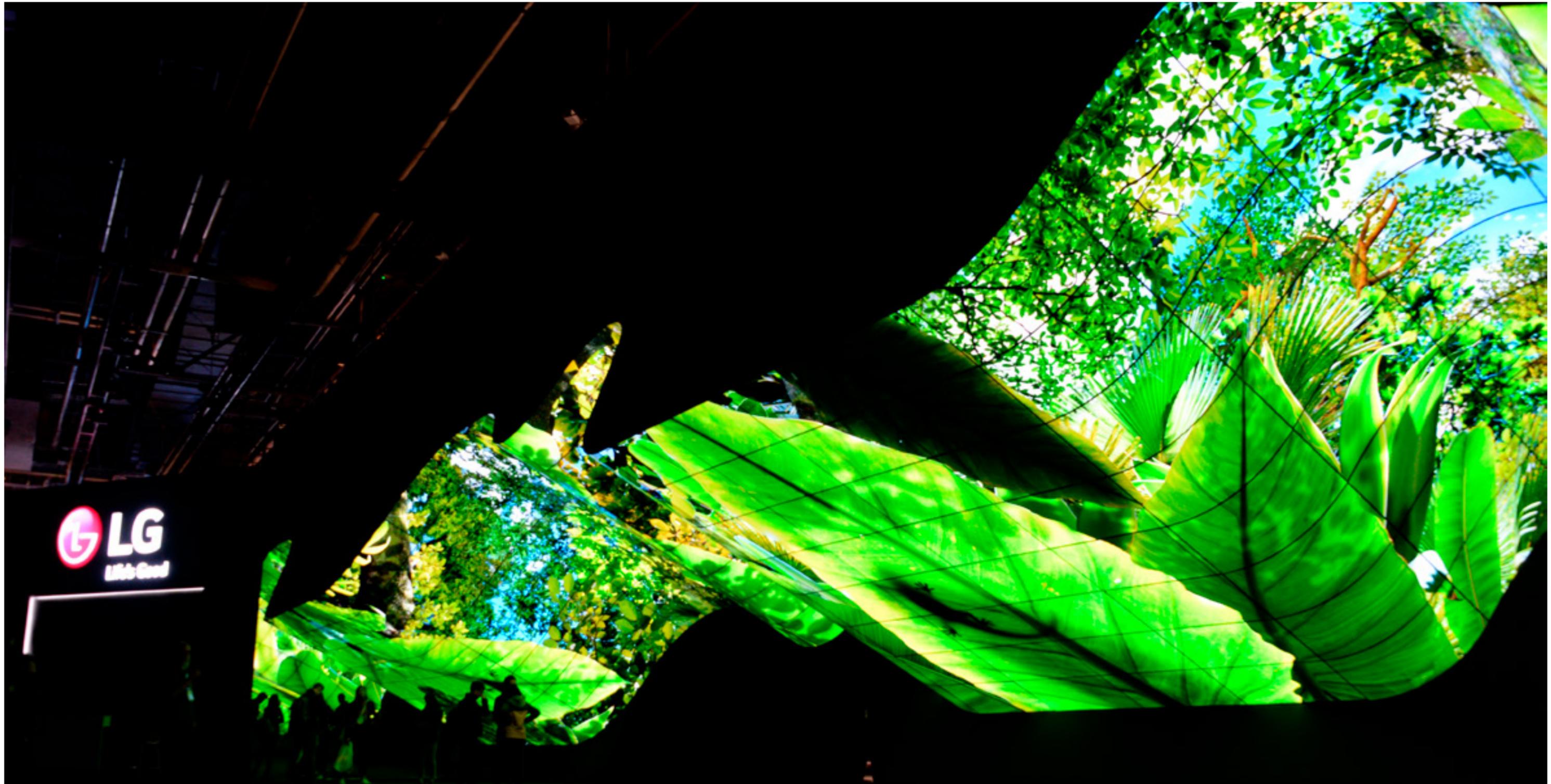
**2,672.5** KRW billion

**2.3** USD billion

2019 Portion of Sales (Consolidated)

**4.3** %





# 2

## SUSTAINABILITY COMMITMENTS

- 020 Mid- to Long-term Goals for Sustainability Management
- 022 Intelligent Life
- 030 Healthy Life
- 034 Green Business
- 038 Zero Carbon
- 042 Product Responsibility
- 048 Circular Economy
- 052 Sustainable Supply Chain
- 058 Decent Workplaces
- 066 Social Contribution

# MID- TO LONG-TERM COMMITMENTS FOR SUSTAINABILITY MANAGEMENT

LG Electronics is pursuing sustainable management in order to surpass the state of being a global leader in home appliances and mobile communications sectors and become a Top Global Company that continues to grow even under challenging conditions. In line with our strategic directions and UN SDGs (Sustainable Development Goals), we have defined three mid- to long-term commitments and implemented nine goals to meet the expectations set by our global stakeholders on social responsibility. Going forward, we will continue to promote 'Promoting Intelligent Lifestyles', 'Achieving Zero Carbon and Circular Economy' and 'Creating a Better Society', and pave the way towards a sustainable future.

## Three Areas of Commitments

### 1 Promoting Intelligent Lifestyles

Become a company that contributes to the transition to an intelligent lifestyle by expanding eco-friendly green businesses and launching innovative products that pursue healthy lifestyles as well as provide a higher level of convenience and accessibility where all things and people are intellectually connected

### 2 Achieving Zero Carbon and Circular Economy

Become a company that contributes to the economy of virtuous cycles by pursuing carbon neutrality in the overall operation through emissions reduction, development of high-efficiency energy products, improvement of environmental impacts and management of waste from production and at the end of product lifecycles

### 3 Creating a Better Society

Become a company that paves the way in creating better lives by broadening social contribution for local communities using products and services, increasing participation of employee volunteering activities and creating a safe working environment, while supporting the establishment of a sustainable management ecosystem throughout the overall supply chain process and pursuing work efficiency and work life balance

Goals	Major Strategic Tasks	In Progress	Completed	2019 Key Performances
<b>Establish an Intelligent Living Environment</b>  Pursue enhanced lives of customers by expanding user-friendly products based on AI and innovative technologies	<ul style="list-style-type: none"> <li>Establish intelligent connectivity to enhance empathetic value of products and services and improve quality of life</li> </ul>	●		<ul style="list-style-type: none"> <li>Created the LGE AI Experience Road Map</li> <li>Nurtured 12 LG AI Specialists</li> <li>Won the Ergonomic Design Award (Cord Zero wireless vacuum cleaner, etc.)</li> </ul>
<b>Pursue Healthy Lives for Customers</b>   Launch innovative products that consider social and environmental and help consumers lead healthy lifestyles	<ul style="list-style-type: none"> <li>Integrate innovative technologies e.g. hardware, software, AI, 5G to ensure personalized solutions for healthy lifestyles</li> </ul>	●		<ul style="list-style-type: none"> <li>Increased the sales of healthcare products by 161% compared to 2016</li> <li>Developed technologies for healthcare products (TrueSteam, UVnano)</li> </ul>
<b>Expand Green Business</b>    Continuously develop eco-friendly business models including renewable energy and electric vehicles to contribute to sustainable growth	<ul style="list-style-type: none"> <li>Ensure sustainable growth in the areas of renewable energy and EVs that reflects future-oriented, eco-friendly and human values</li> </ul>	●		<ul style="list-style-type: none"> <li>Entered mass production of Solar Car Roof</li> <li>Acquired the UL certification for bifacial solar modules for the first time in Korea</li> </ul>
<b>Pursue Zero Carbon</b>   Reduce GHG emissions and develop energy efficient products during production processes to support carbon neutrality	<ul style="list-style-type: none"> <li>Reduce carbon emissions in the production phase by 50% compared to 2017 (by 2030)</li> <li>Achieve carbon neutrality by expanding the areas of CDM (Clean Development Mechanism)</li> </ul>	●		<ul style="list-style-type: none"> <li>GHG emission: 1.5 million tons CO<sub>2</sub>e</li> <li>Received an Excellent grade at the 2020 CDP Award</li> <li>Secured 16.6 million tons of offset credits by reducing GHG emission as of February</li> <li>Acquired ISO 50001 certification for 7 domestic production sites and 5 research facilities</li> </ul>
<b>Reduce the Environmental Impacts of Products</b>    Contribute to minimizing environmental impact throughout the value chain including raw material procurement, production, use, and disposal	<ul style="list-style-type: none"> <li>Increase the ratio of Green 3 Star certified products up to 80% by 2030 as part of internal eco-friendly product assessment (based on the number of development projects)</li> </ul>	●		<ul style="list-style-type: none"> <li>Green 3 Star product ratio: 41.1%</li> <li>Acquired third party eco-friendly certification for 1,909 items (cumulative)</li> <li>Acquired US Energy Star certification for 542 items (cumulative)</li> <li>Organized training on measuring hazardous substance for 45 suppliers</li> </ul>
<b>Promote Circular Economy</b>   Contribute to establishing a circular economy by managing wastes during production and disposal processes	<ul style="list-style-type: none"> <li>Achieve a 95% waste recycling rate at production sites by 2030</li> <li>Collect and treat a total of 4.5 million tons of electronic waste by 2030 (from 2006)</li> </ul>	●	●	<ul style="list-style-type: none"> <li>Waste recycled: 109,435 tons</li> <li>Waste recycling rate: 86%</li> <li>Won the Gold Award for Sustainable Material Management in the Electronics category by the US Environmental Protection Agency</li> <li>Amount of waste products collected: 2,306,374 tons</li> </ul>
<b>Establish Sustainable Supply Chains</b>    Create an eco-system for sustainable management with CSR risk management throughout the supply chains including procurement of raw materials	<ul style="list-style-type: none"> <li>Use 100% RMAP (Responsible Minerals Assurance Process) conforming smelters by 2021</li> <li>Reduce the number of 1st tier suppliers with a high CSR risk</li> </ul>	●	●	<ul style="list-style-type: none"> <li>As of February 2020, 100% of tantalum was supplied by RMAP certified smelters (98% tungsten, 88% tin, 90% gold)</li> <li>Rated 'Good' by the RSN Conflict Mineral Assessment</li> <li>Ratio of suppliers with high CSR risk: 2.4% (Reduced by 3.6% YOY)</li> <li>Supplier CSR risk improvement rate: 100%</li> </ul>
<b>Establish a Decent and Safe Work Place</b>    Improve employee satisfaction by creating a safe environment and promoting a healthy work-life balance	<ul style="list-style-type: none"> <li>Set the highest standards in safety practice (independent level) in the manufacturing industry by 2030</li> <li>Achieve low CSR risk level in all production sites by 2020</li> <li>Improve work efficiency and work-life balance to achieve the highest level of employee satisfaction</li> </ul>	●	●	<ul style="list-style-type: none"> <li>Safety Culture Index: 3.3 points (out of 5.0)</li> <li>Rated as 'Safe' in CSR risk assessment for 38 worksites worldwide, Achieved 100% 'Safe' rating</li> <li>Employee satisfaction rate: 74.7 points on average (increased by 0.4 points YOY)</li> <li>Supported Caring program, flexible working hours, and Smart Vacations to promote a healthy work-life balance</li> <li>Direct Employees of LGE Korea Service Center Suppliers: 3,984 service technicians</li> </ul>
<b>Expand Contribution to the Local Community</b>      Contribute to enhancing the value of local communities by using products and services as a global corporate citizen	<ul style="list-style-type: none"> <li>Resolve social issues with our technologies and products (Reach a total of 300,000 beneficiaries by 2030)</li> <li>Support stakeholders' growth and independence through partnerships (Reach a total of 100,000 beneficiaries by 2030)</li> <li>Organize volunteer activities in all countries where we operate by 2030</li> </ul>	●	●	<ul style="list-style-type: none"> <li>No. of participants for 'Technology that Cares': 71,032</li> <li>No. of participants for 'Trustworthy Partnership': 2,792,666</li> <li>No. of participants for 'Sharing and Comfort' campaign: 129,264</li> <li>No. of employee volunteers: 692 (Korea)</li> <li>No. of participants/amount of donation: 70,735 / KRW 27,055,700 (Korea)</li> </ul>

# Our Future with Intelligent Life

Artificial intelligence (AI) is bringing transformative changes in our lives as it integrates with our systems, services, and devices. In the past, we focused on the possibility of AI technology but today we are faced with a generation concretizes customer value through AI. LGE is committed to creating new values for consumers through its own brand, ThinQ, a solution based on AI and IoT technology. With LG ThinQ, we pioneer the transformation of a hyper-connected society where every part of our lives is connected to AI.

## Target

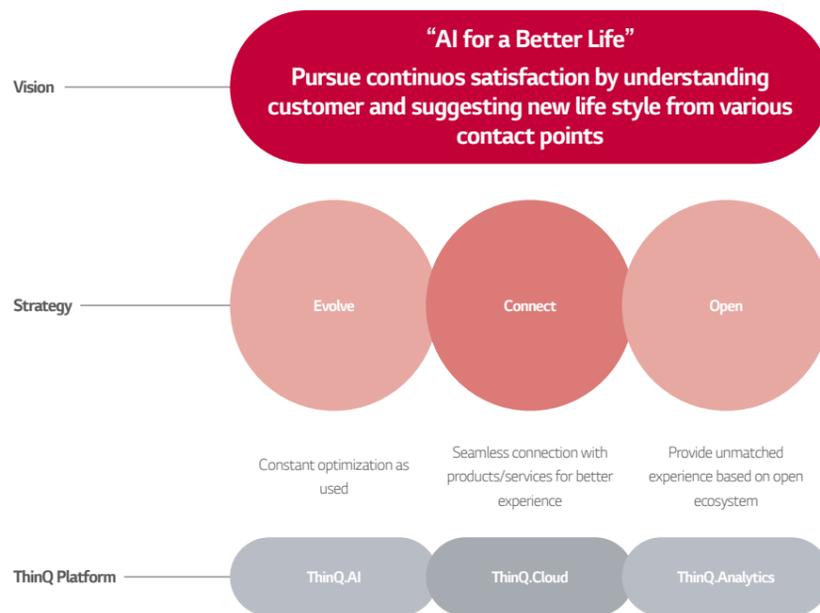
### AI and Future Technology Innovation for Better Lives



CES ThinQ Platform

### LGE's AI Vision and Strategy for Sustainable Lifestyle

LGE is committed to creating new values for consumers through its own brand, ThinQ, a solution based on AI and IoT technology. We set "AI for Better Life" as our vision and three key strategies with the focus on "Evolve", "Connect" and "Open" to generate long-term sustainable value for consumers.



### LGE AIX (AI Experience) Roadmap

With the growing influence of AI on our society today, there is still a lack of a framework and language to discuss its progress in various sectors including roads, houses, offices, and public spaces. Under these circumstances, LGE established a roadmap of four levels based on

research of cutting-edge AI science, engineering and prediction for the future, along with Element AI in Canada, which is participated in by Professor Joshua Benjio, a world-renowned AI scholar. Each level represents a step-by-step functional change in the impact of AI products and services on users and society. Focusing on the human-

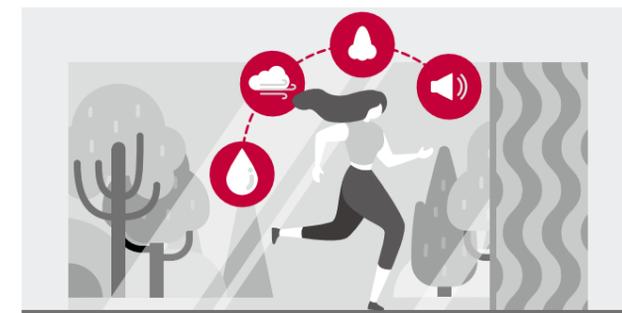
centric design, the term AIX (AI Experience) was created. The AIX Roadmap represents lifestyle changes as artificial intelligence advances. To clarify what the differences at each level actually mean, we divided them into four stages and considered the ethical implications as well.

AIX Levels	Lv1. Efficiency	Lv2. Personalization	Lv3. Reasoning	Lv4. Exploration
Operate products according to given commands	Identify the patterns based on behavioral analysis	Analyze the cause of action and results based on data at various contact points	Present solutions based on verified hypothesis	
Customer Value	<b>'Automation'</b> Automate complex stages using commands "Operate as designed"	<b>'Self-customization'</b> Optimize the automation of environmental/behavioral analysis "Learn the usage patterns"	<b>'Situational Customization'</b> Respond to situations through analysis of causal relationship "Understand and respond to new things"	<b>'Problem Solving'</b> Present new solutions based on observation and simulation "Find the best solutions"

### AIX Vision (Future Home Technologies)

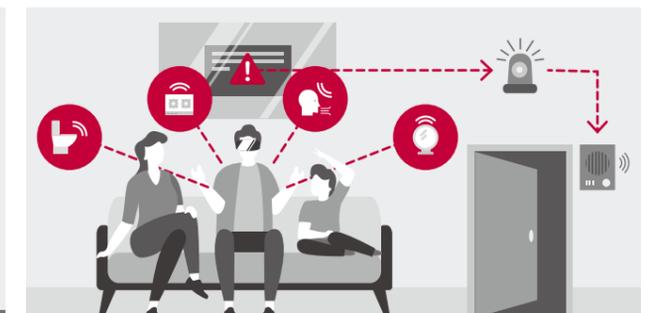
#### Better U (simulation of actual environment and activities)

Provide immersive experience of jogging by simulating the environment (screen/wind/smell/humidity)



#### Passive Health (total healthcare solution)

Predict the risk of chronic diseases and link health management with clinics based on multiple sensors



#### Intelligent Kitchen (customized cooking table)

Recognize the situation with people and cooking, and adjust the functions of tables and drawers in different stages of cooking.



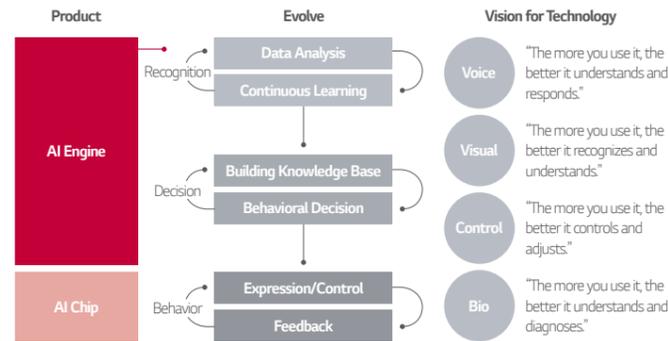
#### Emotional Space (emotional communication with home devices)

Form a relationship with home appliances based on emotional appeal and have natural conversations.

\* For more information on the LGE ThinQ Platform and the progress of AI, please visit our dedicated webpage ([http://thinq.developer.lge.com/en/aix\\_levels/](http://thinq.developer.lge.com/en/aix_levels/)).

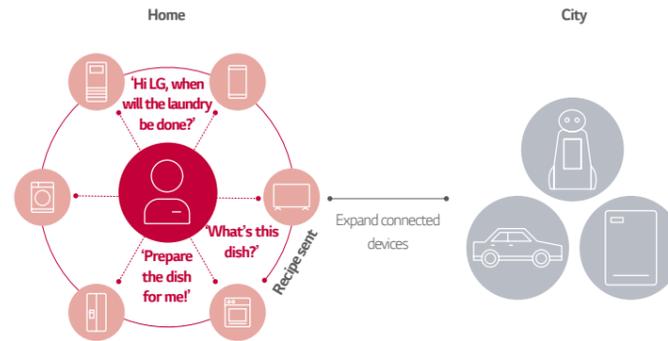
ThinQ AI Strategy Phases & Action Plans

**Strategy 1. Evolve** “Bridging the gap in customers’ expectations on performance/experience of products/services”  
Evolve refers to AI improving the performance/experience of product/services to meet the needs of users and the environment.



In order for products/services to improve their performance and user experience over time to reflect the needs of customers and surroundings, AI should continue to learn and adapt. LGE developed an evolving system that can make decisions and act based on collected data, analysis and learning. In collaboration with global leading institutes and the University of Toronto, we are developing small data learning technology to expedite the customization and adaptation process (AIX Lv2) and causal inference learning technology for the customization of context-specific solutions (AIX Lv3).

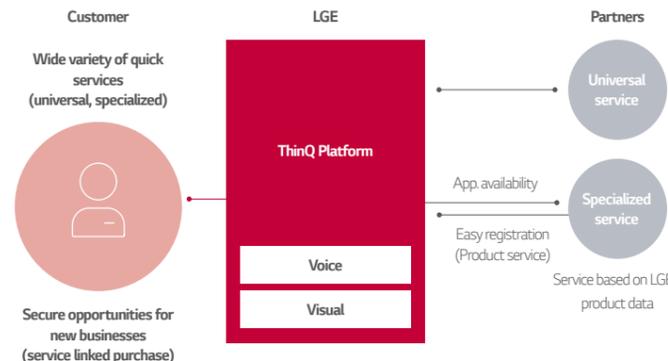
**Strategy 2. Connect** “Expanding the system and spatial connection for customer experience.”  
Connect refers to all products and services inter-connected to provide a seamless user experience anytime, anywhere. All products and services used by customers are connected through AI to improve customer experience.



In order to provide a seamless customer experience, it is important to have space-oriented, consistent interface and provide experiences that emerge by connecting products. (For instance, when a user asks about a dish while watching TV, the recipe should be sent to the oven so it is automatically set it to work.) We plan to connect the ThinQ platform to the ThinQ app that is connected to mobile and home appliances to create a consistent interface, connect the experience between products and integrate IoT technology to expand the seamless connection to the city.

\* Environment for a continuous user experience  
e.g. cooking methods automatically sent to the oven when users ask about food shown on TV

**Strategy 3. Open** “Providing the best experience by rapidly expanding universal/specialized services.”  
Open refers to universal/specialized services that can be readily connected to products through open platforms to provide a wide range of services to customers through Open Platform, Open Partnership, and Open Connectivity.



In order to provide a wide variety of services quickly, partners' services should be connected to the platform. LGE plans to open the ThinQ platform to expand universal services such as search and shopping and create a home environment service that encompasses all home appliances, rather than the existing product-specific service. We are also developing apps and development tool kits to help our service partners to register their service on the ThinQ platform for product-specific data-based services.

Advancing Technology for the Implementation of ThinQ AI Strategy



1. Voice Intelligence

“The more you use it, the better it understands and responds.”

The voice intelligence technology in our products and services are specialized to enhance the understanding of user’s commands and learn their personal speech patterns. The technology is deployed in our home appliances, mobile devices, robots, TVs and automobiles, and we are working to advance its performance based on voice learning technology.

Areas of Application - Voice Agent has been applied to home appliances/mobile/robot, TV (143 countries) and automobile (more than 120 OEM models).



3. Bio-Intelligence

“The more you use it, the better it understands and analyzes.”

We provide daily health care services on mobile and wearable devices through bio-intelligence that measures activity, exercise, and heart rate. In particular, we are developing healthcare technologies with high market-ability by focusing on emergency situations and daily health care services for chronically ill patients.

Areas of Application - Healthcare technology that offers medical consultation and emergency assistance



2. Visual Intelligence

“The more you use it, the better it recognizes and understands.”

The visual intelligence technology is developed not only to detect and recognize the state of objects but also to understand and analyze a situation from an image as it advances the ability to recognize a new object. In addition to the areas of video/audio quality of a TV, we are focusing our resources on the development of DSM (Driver Status Monitor) and AI-enabled navigation.

Areas of Application - Increase in models with facial recognition technology designed to prevent drowsy driving and negligence as part of the cabin monitoring system  
- Inventory management, recipe delivery, and smart refrigerator with shopping service



4. Control Intelligence

“The more you use it, the better it controls and adjusts.”

As a manufacturer, LGE is focusing on solving challenging problems such as vibration and noise by achieving an advanced level of optimized control logic through enhanced learning process in order to incorporate AI into essential product functions and innovation.

Areas of Application - Preparing to deploy intelligent technology that prevents vibration/noise amplification during the spin cycle of washing machines based on advanced laundry distribution control

**Major Activities**  
**Building AI Ecosystem**



2019 LG AI Specialist Accreditation Ceremony

**LG AI Specialist Nurturing & Accreditation**

LGE's AI training programs are designed to improve our employees' expertise in AI on three different levels including basic, intermediary and advanced. The advanced level, in particular, provides AI specialists with training and accreditation programs to developers with Doctorates and Master's degree in collaboration with Carnegie Mellon University, US and University of Toronto, Canada. The participants undergo verification programs given by professors of each university. In 2019, a total of 12 AI specialists were selected. Through programs for selected experts at each university, we are helping to enhance real-life AI R&D processes and their ability to solve problems that may arise in this respect. The selected participants have successfully completed the 16-week, project-based course in various areas such as voice intelligence, visual intelligence, control intelligence, and source algorithms under the guidance of the professors. Upon completion of the course, the participants work on the core solution development programs designed to solve problems in AI and serve as mentors helping other personnel to improve their expertise. Going forward, we will continue to support these programs to nurture AI specialists to lead the industry with the focus on AI, big data and cloud.

**LG AI Specialist Training Structure and Program Description**

Level	Program	Contents
Specialist	AI Specialist	<ul style="list-style-type: none"> <li>• Trained at University of Toronto, CMU (4 months)</li> <li>• Individual project and evaluation accreditation</li> </ul>
Advanced	Advanced Visual/Voice/Control	<ul style="list-style-type: none"> <li>• Advanced Theory + Project</li> <li>- Theory: intensive training with professors (2 weeks)</li> <li>- Project: specialist mentoring (linked with LG Leadership Academy)</li> </ul>
Intermediary	Deep Learning, RNN*, CNN**, etc.	<ul style="list-style-type: none"> <li>• Group training for problem-solving skills with a focus on hands-on practice</li> </ul>
Basic	R, Python, etc. (HQ/CTO)      Job Transfer Course	<ul style="list-style-type: none"> <li>• Basic concept and tool training (POSTECH MOOC, etc.)</li> </ul>

\* RNN : Recurrent Neural Network  
\*\* CNN : Convolutional Neural Network

**Global AI R&D Competency**

To leverage the strengths of overseas countries and secure talented employees, LGE has established AI units in its R&D labs in North America, Toronto, Russia and India, forming missions and roadmaps in line with its AI strategy, as led by the AI Lab. And, with primary research and development activities continuing in each R&D lab, LG Electronics expects to secure increasingly advanced AI technology and expand its lineup of products that utilize this technology. More specifically, source technology is being developed at R&D Centers in North America and Canada. The R&D Centers in Russia and India are developing vision intelligence and knowledge graphs for voice intelligence, respectively

**AI Chip Development and Internalization**

In 2019, LGE built a foundation to gain competitive advantages and lead the global AI market through independent development and internalization of AI chips, a key component in the AI sector. In particular, through the integration of the AI processor known as 'LG Neural Engine' that mimics the neural network of a human brain, we successfully advanced the performance of deep learning algorithm processing. AI chip-based products support 'On-Device AI' that can learn and analyze on its own, and can perform functions even when the network is not connected. We also provide a solution to protect personal information and prevent hacking using a powerful security engine. In addition, AI chip is capable of correcting the distortion of wide-angle lenses and supporting image processing to obtain bright and clear images even in the dark as well as faster and more accurate 3D spatial recognition engine for SLAM (Simultaneous Localization and Mapping). We plan to launch robot vacuum cleaners, washing machines, refrigerators, and air conditioners, all based on AI chips, and continue to collaborate with other companies, universities, and research institutes to expand our AI products and solutions.

**AI Proactive Service**

Unlike existing after-sale services where products are repaired after failure, LGE AI Proactive Service is designed to monitor the product usage data and notify the user of the product condition and maintenance steps via email and text message through the LG ThinQ app. Sensors mounted inside the product send the device data to the cloud server in real time, and the server analyzes the data to detect potential failure in advance. The Proactive Service also provides users with information on how to properly maintain the product from product purchase to installation, use, and management, as well as solutions to problems. Since July 2019, we have used the service to analyze the overheating of outdoor unit of air conditioners in Korea. We will continue to expand the supported products and management items in the future. In the global markets, we offered the Proactive Service in the UK, France, Spain, Germany, and Italy since November 2019. In March 2020, we launched the service for five product categories including refrigerators, washing machines, and ovens in the US.



LG ThinQ Proactive Service Mobile Screen

**Creating Social & Environmental Values with LG ThinQ**

In order to use AI as a tool such as LG ThinQ, it is integral to solve three major challenges: technical difficulties, efficiency, and prediction of problems. In the process of overcoming these challenges, we will be able to solve social and environmental issues as well. For instance, if AI can forecast natural disasters such as epidemics, heavy rains, and climate change, we can minimize its impact on our society. Also, if AI is able to predict abnormalities in the production process and present solutions, manufacturers can improve their productivity while reducing damage and social loss. Consequently, artificial intelligence will continuously support our development and serve as a helper and partner for mankind, fulfilling the needs of people, society and the environment. Of course, this foundation for the future requires the development of sustainable and ethical Good AI. As a global leader of AI technology, we are committed to promoting intelligent lifestyle's and paving the way towards a sustainable future.

Major Activities

Technical Expertise for Improving Product Accessibility

LGE takes into account the accessibility of its products for socially disadvantaged people including those with disabilities, senior citizens, children, and pregnant women. Since 2013, we have organized a advisory meetings with disability groups, accessibility agencies and law firms to discuss ways to improve accessibility for people with disabilities. In 2019, our commitment to this cause was recognized by the Ergonomics Society of Korea, which awarded LG CordZero Cordless Vacuum Cleaner Power Drive Mop Kit, LG SIGNATURE OLED TV (R9), and gram17 Laptop (17Z990) for best designs.

CASE. Improving the Accessibility of LGE Web

To improve our websites' user experience for people with disabilities, we are working with web accessibility experts including LEVEL ACCESS, INTERACTIVE ACCESSIBILITY, TANAGURU, and Korea Web Accessibility Assessment Center to apply WCAG (Web Contents Accessibility Guideline) version 2.1 level AA to LG.com and local websites. We rolled out our solution in the US market first and we are in the process of implementing this process in France, Canada, and Korea. We will continue to review and improve our web accessibility.

Major Achievements in Accessibility since 2017

2017	<ul style="list-style-type: none"> <li>• Won the CES Award (Accessibility Technology category: OLED/LED TV (65B7/65UJ7500))</li> <li>• Donated LG TROMM washing machines with AI voice command to the Korean Blind Union (Oct. 2017)</li> <li>• Participated in the KEA (Korea Electronics Association) sponsored Korea Electronics Show (Oct. 2017)</li> <li>• Sponsored and participated in the IAT Conference (Nov. 2017)</li> </ul>
2018	<ul style="list-style-type: none"> <li>• Improved mobile app accessibility (Mar. 2018 - Jul. 2019)</li> <li>• Korea/US Accessibility Consultation Group Workshop (Washington D.C., Oct. 2018)</li> <li>• Sponsored and participated in the IAT Conference (Nov. 2017)</li> <li>• The 18th Ergonomic Design Award (CordZero Cordless Vacuum Cleaner T9, LG PraL, 4K UHD Projector HU80K, 34GK950 Gaming Monitor)</li> <li>• Global IT Challenge for Youth with Disabilities (Nov. 2018)</li> </ul>
2019	<ul style="list-style-type: none"> <li>• The 19th Ergonomic Design Award (CordZero Cordless Vacuum Cleaner Power Drive Mop Kit, LG Signature OLED TV R9, LG gram 17Z990) (May 2019)</li> <li>• Improved the accessibility of LGE websites (Feb. 2019 - Jun. 2020)</li> <li>• Stakeholder Meeting for Improving Accessibility for People with Disabilities (Nov. 2019)</li> </ul>

Product with Improved Accessibility

LG V60 ThinQ 5G



LG G Pad 5 10.1 FHD



LG OLED/Nano Cell/UHD/FHD AI&Smart TV



LG SIGNATURE Refrigerator (URNTS3106N)



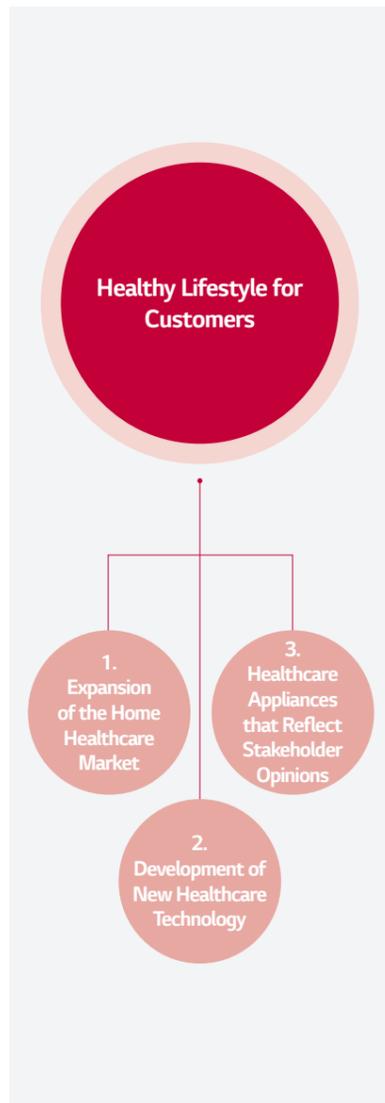
LG TROMM ThinQ Washing Machine / LG TROMM Dryer STEAM ThinQ



Category	LG V60 ThinQ 5G	LG G Pad 5 10.1 FHD	LG OLED/Nano Cell/UHD/FHD AI&Smart TV	LG SIGNATURE Refrigerator (URNTS3106N)	LG TROMM ThinQ Washing Machine / LG TROMM Dryer STEAM ThinQ
<b>Blindness and low vision</b>	<ul style="list-style-type: none"> <li>• Voice notification (mobile phone status, operation, messages)</li> <li>• Font/screen size control</li> <li>• Touch zoom-in</li> </ul>	<ul style="list-style-type: none"> <li>• High contrast/black &amp; white, color inversion/control</li> <li>• End call with power button</li> </ul>	<ul style="list-style-type: none"> <li>• Mobile phone status/operation voice notification</li> <li>• Minimize display brightness level</li> <li>• Display color control/inversion, personalization</li> <li>• Font size control</li> <li>• End call with power button</li> </ul>	<ul style="list-style-type: none"> <li>• Pitch, volume and speed control to make it easy to understand voice guide</li> <li>• Text-to-speech using screen reader</li> <li>• High contrast display</li> </ul>	<ul style="list-style-type: none"> <li>• Alarm function for door opening</li> <li>• Mobile notification for door opening through LG ThinQ App</li> <li>• Check display status, weather and time using voice command</li> </ul>
<b>Hearing loss and deafness</b>	<ul style="list-style-type: none"> <li>• Subtitle support Live</li> <li>• Live caption (real-time subtitle)</li> <li>• Flash notification</li> </ul>	<ul style="list-style-type: none"> <li>• Mute</li> <li>• Audio type (Stereo/Mono)</li> <li>• Volume control (left/right)</li> </ul>	<ul style="list-style-type: none"> <li>• Subtitle</li> <li>• LED</li> <li>• Mute</li> <li>• Audio type (Stereo/Mono)</li> <li>• Volume control (left/right)</li> </ul>	<ul style="list-style-type: none"> <li>• Subtitle</li> <li>• Minimize background noise with Clear Voice</li> <li>• Audio Guidance for initialization</li> <li>• TV Power Sound (On/Off signal)</li> </ul>	<ul style="list-style-type: none"> <li>• Push notification for display status on LG ThinQ App e.g. door opening, turbo freeze, and temperature control</li> <li>• Monitor energy/status and enable push notification through LG ThinQ App</li> </ul>
<b>Physical</b>	<ul style="list-style-type: none"> <li>• Large buttons for key functions</li> <li>• Auto screen off</li> <li>• Hold button to accept incoming call</li> <li>• Auto mouse click and repeat touch calibration</li> </ul>	<ul style="list-style-type: none"> <li>• HW keyboard functions (repeat key, fixed key, slow key)</li> <li>• Knock-on &amp; Knock-code</li> </ul>	<ul style="list-style-type: none"> <li>• Touch sensitivity control</li> <li>• Touch Assistant: enable key features</li> <li>• Auto screen off</li> <li>• Knock-on &amp; Knock-code</li> </ul>	<ul style="list-style-type: none"> <li>• Intuitive control using wheel and pointing</li> <li>• Intuitive icon design</li> <li>• Optimized UI for easy editing</li> <li>• Enhanced control based on voice recognition</li> </ul>	<ul style="list-style-type: none"> <li>• Two quick-Knocks</li> <li>• Door Open Hologram (Auto Open Door)</li> <li>• Auto Open Drawer System</li> <li>• Check door open, water dispenser, and display status using voice command</li> <li>• Easy access to laundry with the higher main wash (with TWINWash)</li> </ul>
<b>Others</b>	<ul style="list-style-type: none"> <li>• Touch area control</li> </ul>	<ul style="list-style-type: none"> <li>• Accessibility shortcut</li> </ul>	<ul style="list-style-type: none"> <li>• Limit access (guest mode)</li> <li>• Touch area control</li> </ul>	<ul style="list-style-type: none"> <li>• Menu transparency control</li> <li>• Remote controller cursor size and pointing speed control</li> <li>• Quick Access: quickly access to any service and content with a click of the remote controller</li> </ul>	<ul style="list-style-type: none"> <li>• Voice command button</li> <li>• Wi-Fi Function</li> <li>• Energy saving and fresh mode based on user patterns</li> <li>• Temperature control and turbo freeze</li> <li>• Smart Care offers AI DD (Deep Learning)-based option suggestion and optimized pattern</li> <li>• Smart Pairing recommends the best drying options based on the washing data</li> </ul>

# Our Future with Healthy Life

Climate change triggered by global warming is causing major social and environmental issues including air quality, yellow and particulate matter, and as a result, a premium is placed on eco-friendly and healthcare-related products. With the outbreak of COVID-19 pandemic in 2020, demand is increasing for personalized home appliances that offer a safer and more hygienic lifestyle as interest and concern for health rises. In response to these demands, LGE has launched innovative health care appliances that take into account social and environmental changes and contribute to consumers' healthy lifestyle. Leveraging our unmatched technical expertise, we have developed water purifiers, air purifiers, and air conditioners as well as washing machines, dryers, stylers and dishwashers based on the TrueSteam and UVnano technologies. We also offer a new product lineup consisting of refrigerators, water purifiers, and air conditioners that eliminate bacteria. Going forward, we will continue to develop and launch eco-friendly healthcare appliances that combine innovative technologies with R&D expertise to support a healthy lifestyle for our consumers.



## Target

### Healthy Lifestyle

LGE is developing a range of healthcare products to address the growing social and environmental concerns, and support consumers' healthy lifestyle all year long. Beyond maintaining a clean space, we offer products with unmatched quality and performance that help consumers enjoy a healthy and pleasant environment. We also provide continuous support and care services to help consumers maintain a healthy lifestyle. By combining convenience with the value of health, we are creating a new concept of 'Home Healthcare Appliance'.

## Major Activities

### Expansion of the Home Healthcare Market

In response to growing awareness of social and environmental issues surrounding particulate matter, water pollution, and food hygiene, the demand for home healthcare appliances is rising significantly. To meet these demands and address the social and environmental concerns, we are developing a range of innovative health care appliances.

In addition to Korea, we are also continuously expanding our presence in the North and South American, Asian and European markets for healthcare appliances. With this market expansion, our sales in the home healthcare sector is generating steady growth, accounting for KRW 2.5655 trillion from the H&A in 2019, a 161% increase from KRW 981.1 billion in 2016.



Sales Trend in the Home Healthcare Appliance Sector

2016	KRW 981.1 billion (5.9%)
2017	KRW 1.5375 trillion (8.4%)
2018	KRW 2.1941 trillion (11.5%)
2019	KRW 2.5655 trillion (12.1%)

\* sales ratio of H&A



## Major Activities

### Development of New Healthcare Technology

LGE is developing a range of technologies for home healthcare appliances and solutions to promote healthy lifestyles. Our dedicated teams are conducting pioneering R&D projects concerning water, air, and food. We are also developing next-generation technologies and solutions for our products in collaboration with academic and research institutes. In addition, we will continue to invest in developing advanced products and solutions that will improve the quality of people's lives.

## Major Activities

### Healthcare Appliances that Reflect Stakeholder Opinions

LGE healthcare appliances that reflect stakeholder opinions and expectations when developing products to improve health and convenience for consumers. The Water Science Lab holds a biannual symposium to share technology and explore plans for industry-academic cooperation, while the Air Science Lab appoints Korea and foreign advisors to carry out quarterly workshops and annual research tasks. In addition, the Food Science Lab operates a food science and technology advisory group, and collaborates with the food industry to identify industry trends and new business models.



LGE TrueSteam Healthcare Appliance

## CASE. LGE Home Healthcare Technology

### LGE TrueSteam Technology for Healthy Lifestyle of Customer All Year Long

LGE is launching new products with 'TrueSteam' technology that has differentiated disinfecting and cleaning power using steam generated by boiling water. Unlike the existing method of using steam generated at 60-70°C, the TrueSteam uses steam at 100°C or higher to maximize its anti-bacterial performance. The technology is deployed in a range of home appliances including washing machines, stylers, dishwashers and dryers. Improving the quality of life through home appliances has become a trend and LGE is at the forefront of driving innovation. With such innovative technologies as TrueSteam, we will continue to introduce new products that will transform our lives.

### UVnano Technology for Safe and Hygienic Environment

UVnano is a compound word pairing UV LED and nanometer, which is a wavelength unit of ultraviolet. It implies our commitment to provide hygienic products that eliminate bacteria. UV LED is used to eliminate harmful bacteria such as E. coli, Staphylococcus aureus, and mold by radiating UV rays instead of chemicals. Its efficacy has been proven by several certification agencies including the Korea Conformity Laboratories, Korea Testing & Research Institute, and TÜV Rheinland Korea. LGE will expand its UV LED sterilization feature, which has been available in only a few products, to a wider household product portfolio in the future.

LGE Healthcare Appliance R&D Capacity

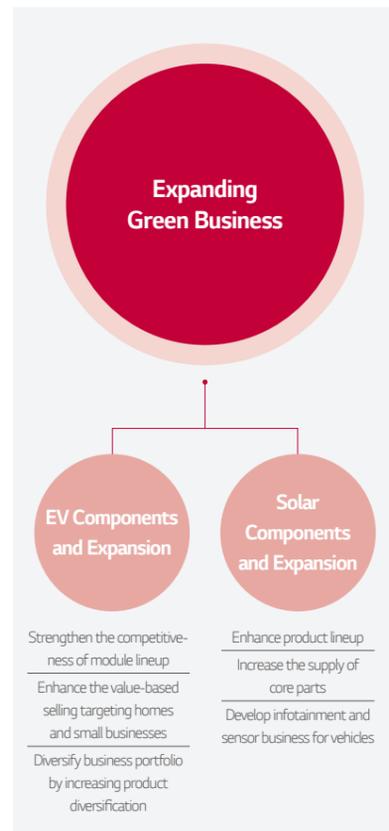
	Roles & Description	Healthcare Products & Technologies (2019-)	Directions for Technology Development
 <p>LG Air Science Lab</p>	<p>Established in October 2018, the LGE Air Science Lab is Korea's first corporate air science research institute. The lab conducts research on core air cleaning technologies with the focus on dust collection, deodorization, and disinfection in living spaces. The results of the research are applied to all LGE air solution products such as air cleaners, air conditioners, and dehumidifiers. LGE continues to develop innovative technologies in response to growing demands for clean indoor air.</p> <p><b>Housing Environment Test</b> Determining what happens when products are used in actual housing environment and testing the impact of an outdoor environment on the indoor air quality</p> <p><b>Microbiological Test</b> Assessing the disinfection performance of air cleaning products using microorganisms, and conducting comprehensive tests on air/water/filter sterilization</p> <p><b>Dust and Odor Test</b> Testing filters for their particulate matter removal speed and air purification performance (on 5 major harmful gases)</p>	<p><b>360° Air Purifier Pet</b> In July 2019, LGE launched the 'PuriCare 360° Air Purifier Pet' with comprehensive harmful gas photocatalyst filter, pet mode, mountable micro filter etc. Total harmful gas photocatalyst filter removes the gas that causes pet odor by about 55% more than the existing filters in terms of cumulative purification. Pet mode has been improved with up to 70% more power than the previous Auto mode, resulting in 35% more effective removal of hair and dust. In addition, the use of mountable micro filter makes it easier to remove pet hair and dust.</p> <p><b>PuriCare Mini</b> Launched in March 2019, PuriCare Mini, a portable air purifier, uses PM1.0 ultrafine particle measuring technology, and acquired the CA certification for compact purifiers and the CA certification for fine dust removal from the Korea Air Cleaning Association. It has also obtained the low noise certification from TUV Rheinland for its effectiveness in supplying clean air in residential spaces.</p>	<p>Air Science Lab establishes R&amp;D plans to provide enhanced customer value for in enjoying healthy and fresh breathing and enable them to discover their desired themes in all spaces. To this end, we plan to expand our indoor and outdoor air care solutions by focusing on lines of movement and increase our market share by strengthening the commercial value of our main platform. We will also work to provide clean air for customers with solutions that specialize in airflow and air quality management.</p>
 <p>Water &amp; Science Lab</p>	<p>Established in February 2018, Water Science Lab is a certified water quality testing agency that is committed to providing healthy and clean water to consumers by developing filters to remove harmful substances from water and conduct research on technology to keep products clean. In October 2018, the lab received the highest score in the 'Food Analysis Skill Assessment' hosted by the DEFRA (Department of Environment Food &amp; Rural Affairs) in the UK and was recognized for its expertise in analysis. LGE water science lab committed to developing core technologies based on reliable analysis data and results.</p> <p><b>Filter Test</b> Researching for filters to remove harmful substances in water and ways to leave substances that are beneficial to the human body</p> <p><b>Water Quality Test</b> Providing official data for different countries and analyzing a combination of water quality factors for each country to support optimized product development</p> <p><b>Sanitation Test</b> Developing core technology to maintain the purity of water by keeping water purifiers and other products clean</p>	<p><b>Free Replacement of Direct Water Line</b> Since 2017, LGE provided free direct water line replacement service in Korea. The free service, which is exclusively for our Care Solution customers, brings a new direct water line each year.</p> <p><b>Omni-Directional Water Purifier</b> Launched in August 2019, LGE's Omni-Directional Water Purifier has an omni-directional tap that can be lowered up to 100mm depending on the height of the cup for safety when using hot water.</p>	<p>Water Science Lab will develop products that apply various technologies for hygiene and health, the most prized benefits for consumers. It is dedicated to providing top-of-the-line services tailored to the needs of customers throughout the entire process from product planning to rental service. Going forward, water science lab will continue to conduct various analysis and research projects so that we can offer unique values for our customers through the products and technology of LGE.</p>
 <p>Food Science Lab</p>	<p>Established in February 2018, the Food Science Lab researches core technologies to create unique values for consumers using LGE kitchen appliances. At the lab, dedicated teams of professors and technical advisors as well as research agencies in Korea and abroad conduct R&amp;D activities for next-generation food technology. The technologies developed by the lab are deployed in various kitchen appliances including refrigerators, kimchi refrigerators, ovens, and electric ranges to support consumers' healthy lifestyle based on the understanding and analysis of food.</p> <p><b>Storage Technology</b> Developing technology to keep food fresh and conducting research on the temperatures and speed for food storage</p> <p><b>Fermentation Technology</b> Developing technologies to maintain optimal temperature for lactic fermentation to make food taste better</p> <p><b>Cooking Technology</b> Research on optimal temperatures and cooking times for cooking techniques and recipes that deliver delicious, healthy food</p>	<p><b>Kimchi Refrigerator Probiotic Kimchi+</b> LGE has released a kimchi refrigerator that produces 57 times more Leuconostoc, a type of lactic acid bacteria, than would be seen with normal storage functions. In addition, a supercooling system* has been developed to keep meat and fish fresh, even at sub-zero temperatures.</p> <p><small>* Technology to keep meat and fish fresh, without freezing, at sub-zero temperatures.</small></p> <p><b>HMR+(Home Meal Replacement) Cloud Oven Project Partnership</b> LGE signed a partnership agreement with Pulmuone for a cloud service for HMR in September 2019. We developed cooking algorithms specialized for a total of 31 menus, and the service is designed to automatically cook HMR by linking the ThinQ app and the cloud server without having to control the system. LGE plans to expand cooperation with food partners to provide healthier and more convenient food to customers.</p>	<p>Food Science Lab will continue its research business to lead the kitchen appliances markets and contribute to healthy lives of our customers through continuous research on healthy and delicious food. We plan to continue our research on home cloud appliances and subscription services (for both cooking appliances and refrigerators). To this end, we will expand our AI business and our partnerships with food companies by maintaining our Open Partnership policy for HMR auto-cooking based on the priority in line with our development resources.</p>

# Our Future with Green Business

According to the IRENA (International Renewable Energy Agency), approximately 72% of new power was generated from renewable energy in 2019. As such, the world is transitioning to renewable energy, whereby solar and wind power constituted about 90% of the total renewable energy capacity in 2019. Meanwhile, new regulatory requirements on vehicles with internal combustion engines are aggressively enacted in Europe and India among others, and global automakers announced their new policies on reducing and discontinuing their production of internal combustion engine vehicles as a measure to focus their resources on the development and expanded production of electric vehicles. Thus, sustainable energy serves as a future-oriented, eco-friendly, and universal solution for the global community and strategic responses to macro-environmental changes in the energy sector are integral part of corporate growth and development. At LGE, when it comes to renewable energy such as high-efficiency solar modules and ESS (Energy Storage System), we are committed to securing economic values for our products. In the electric and electronic sectors, we are focusing on the development of eco-friendly business models by creating unique values for consumers in the autonomous driving and next-generation EV markets by leveraging our advanced technology and quality-oriented management. Based on such eco-friendly business models, we will continue to protect our environment for future generations while increasing the economic value of the company.

## Target

### Development of Eco-Friendly Business Models



LGE's solar panels in Turkey

LGE is building an integrated environment where different products and services, including high-efficiency solar modules, ESS, and EMS (Energy Management Solution), are used more efficiently in terms of production, storage and management. In response to a growing demand for energy independence and power stabilization, we are working on the supply, maintenance, and management of microgrid solutions, as well as home integration and building solutions to achieve zero-energy buildings. We also launched solar car roofs that can charge and generate electricity using solar power in order to improve the fuel efficiency of eco-friendly vehicles and meet global environmental regulations. In addition, we are establishing standards to create a more efficient operation of the entire process from development and production to disposal of eco-friendly products. We are also committed to gaining competitive advantages in the EV components market to create eco-friendly values. To this end, we have independently developed the hairpin motor technology in which we leverage our design and production know-how we have gained over the years to enhance our competitive edge. Based on this eco-friendly operation, we will continue to protect our ecosystem for future generations while increasing the economic value of the company.



## Major Activities

### Strengthening Capacity for EV Components and Solutions Development

With the goal of enhancing our business structure to support the integration of eco-friendly vehicle driving (motor) and charging system (inverter, on board charger), we are working on the development and mass-production of hairpin type driving components and high-efficiency charging systems. In response to the dramatic growth of the eco-friendly vehicle market, we are working to strengthen our product lineup and secure more orders to achieve greater economies of scale, focusing on the internalization of key components and improving competitiveness. Building on the success of supplying core components for GM Chevrolet Bolt EV in 2016, we are working on the mass-production of a number of key components for North American and European automakers at our production facilities in Incheon, Korea and Nanjing, China in 2020. In addition to the key components for eco-friendly vehicles, we are developing our major product line including infotainment and driver assistance camera sensors such as head units, telematics, automotive displays, and ADAS cameras, and working with automakers to secure and enhance the expertise in SW solutions. Going forward, we will proactively invest in sectors with a potential for sustainable growth in response to a growing market share in EV, connected car and autonomous driving.

#### EV Components Lineup

- Air Conditioning/Cooling**
  - Electric Compressor:** Compresses the refrigerant in the air conditioning system
  - PTC Heater:** Increases the temperature of coolant to heat passenger space
  - Sheath Heater:** Increases the temperature of coolant when the battery temperature falls
- Battery Pack**
  - Battery Pack:** Stores and supplies electric energy required for driving electric vehicles
  - Power Distributor:** Controls the electrical energy flow of high voltage batteries
- Driving**
  - Drive Motor:** Converts electric energy to rotational energy to deliver driving force for EV
  - Inverter:** Converts DC power to AC power and controls the rotation speed and power of a motor
  - On board Charger:** A built-in charger for charging EV batteries from an external source
  - B-ISG:** Controls engine idling and reuses braking energy

### LGE's Future Automotive Technologies

#### HUD(Head Up Display)

HUD is a system that projects the instrument panel and key information onto the windshield, so drivers do not need to take their attention off the road to check the panel or control the navigation system while driving. The AR (Augmented Reality) HUD helps the driver to intuitively check the traffic conditions on a busy road by overlaying arrows, icons, and specific images directly into the driver's line of sight. In November 2019, we launched the mass-production of AR HUD, which will be officially released in Europe to be used by vehicles around the world.

#### Unmatched AVN (Audio, Video, Navigation)

LGE is developing a special AVN for the autonomous shared car industry. The LGE AVN is installed in various global premium car models including GM Chevrolet Volt EV and provides key information through intuitive infotainment display for all passengers creating unique values for customers.

#### Vehicle Charging Technology

LGE has developed the international standard wireless smartphone charger for vehicles based on our expertise and know-how in smartphone technology. Moreover, we have also developed and installed the 'On Board Charger' (OBC), an integral part of the charging system for electric vehicles. Meanwhile, we are working with GS Caltex on the "energy-mobility convergence station" that goes beyond simple electric vehicle charging stations.

#### Car Cockpit

The display that integrates instrument panel, AVN (Audio, Video, Navigation), and CID (Center Information Display) is called car cockpit. LGE is now the first company to supply a digital cockpit system based on plastic OLED (P-OLED) to '2021 Cadillac Escalade', offering new interior design and driving experience that have never been available in conventional vehicles.

Major Activities

Solar Components and Solutions



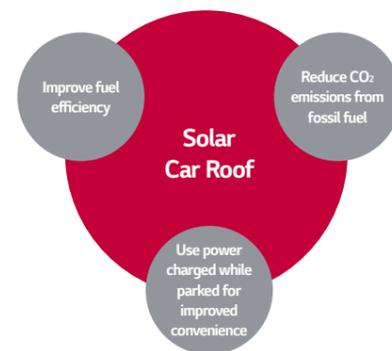
LG Sciencepark Korea

Production of High-Efficiency Solar Components

LGE manufactures solar cells and modules and implements strict quality assurance on all modules to ensure their quality. In 2020, we will focus on making our products more competitive by improving the output of the modules and the manufacturing process. By diversifying our product portfolio, we will actively operate a lineup of products that suit different markets such as homes, small and medium business, and the power generation industry. In addition, we will expand our work in product diversification to identify more business opportunities and expand our business portfolio. Looking ahead, LGE will establish a business structure that can generate sustainable growth by gaining a competitive edge for the solar module business.

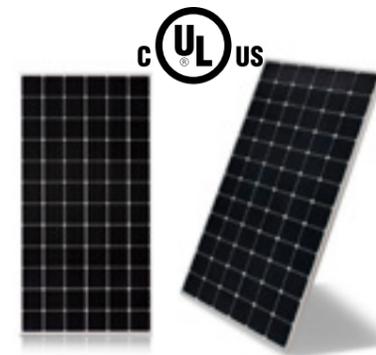
Development and Mass-Production of Solar Car Roof

In 2019, LGE began the mass-production and supply of solar car roofs. The solar car roof is a solar module that can charge the battery of electric and hybrid vehicles through high power generation performance with an output of more than 200W and an excellent exterior style to go with the roof of the vehicle. Compared to the existing solar car roof which covers certain systems such as indoor air conditioning, the LGE solar car roof has a superior output that extends the driving distance of ecofriendly car. In 2020, we are developing solar car roofs for new EVs as well.



CASE. Bifacial Solar Module Certified for UL (Underwriters Laboratories) as the First in Korea

Subsequent to the first mass-production and release of solar modules in 2010, we succeeded in the mass-production of bifacial solar modules in 2016, followed by the UL1703 certification for all modules in July 2019 for the first time in Korea. UL1703 is a safety standard applied to a flat-panel solar module, awarded by the US Underwriters Laboratories after an extensive safety and conformity test. LGE's ultra-efficient, bifacial solar modules have been internationally proven for their safety and excellence, and we will continue to lead the global bifacial solar modules market.



LGE's UL1703-certified Bifacial Solar Modules

Development of ESS (Energy Storage System) Linked with Solar Power Generation

We are developing ESS technology and solutions to improve the efficiency of storage and use of solar power. In order to enhance the economic cost of home solar power systems, we are focusing on integrated solutions that can improve the performance of ESS, control the operation, and monitor the ESS status. We will lead the ESS market by linking it to solar power for improved safety and convenience as well as performance.

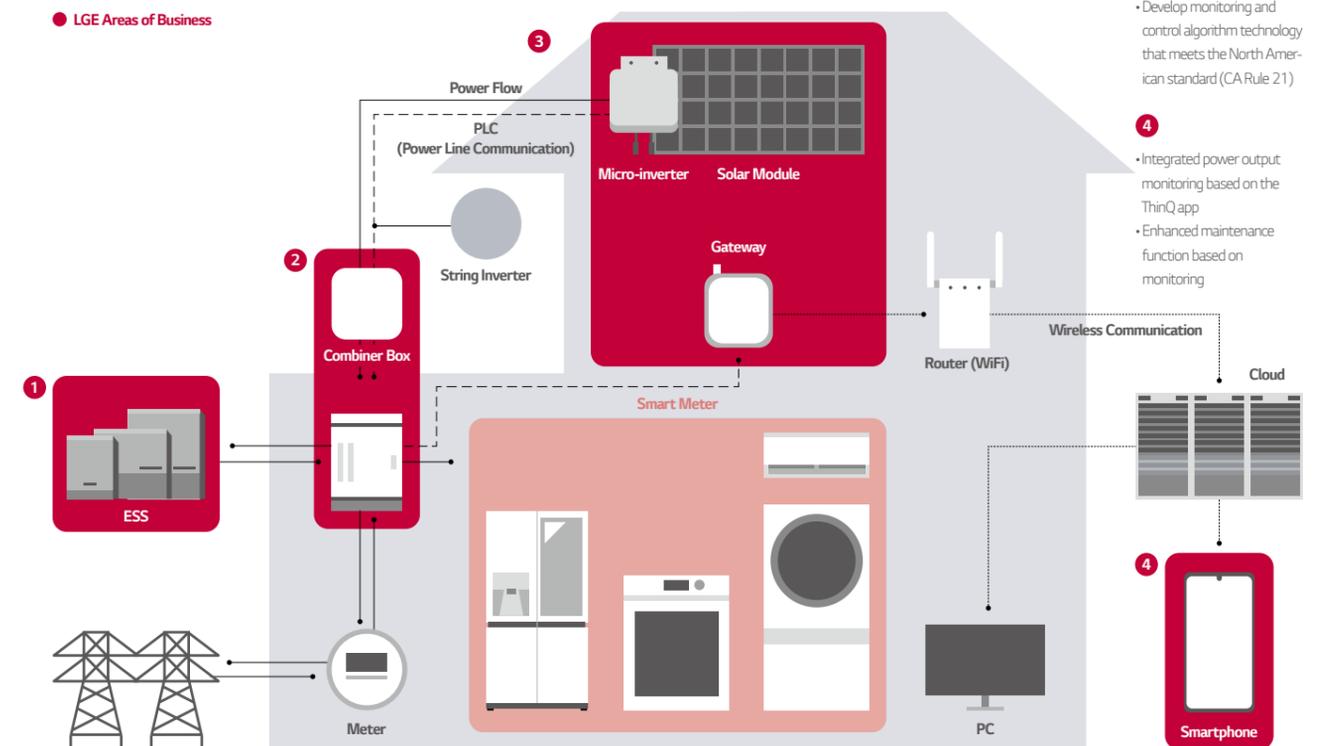
CASE. LGE's ESS Supplied to the Hawaiian Government

In 2020, LGE joined the microgrid consortium promoted by the Hawaiian Government as an ESS supplier. Microgrid is an eco-friendly power system that converges renewable energy sources such as solar and wind power, and it requires an ESS to store energy. We will supply our ESS to the Hawaiian Government using it as a test bed to increase our market share in the United States.

Integrated Home Solution Technology

LGE is developing an integrated home solution that combines energy technology, high-efficiency appliances, and HVAC technology. The solution is designed to realize the concept of Zero Energy, Zero Effort, and Zero Stress for consumers by combining the benefits of zero energy house and smart home.

LGE Areas of Business



- 1 • Build integrated monitoring data servers  
• Advance technology for ThinQ  
• Develop an algorithm to link micro-inverter with ESS power  
• Expand development of package technology in the form of smart switchboard in response to on/off grid

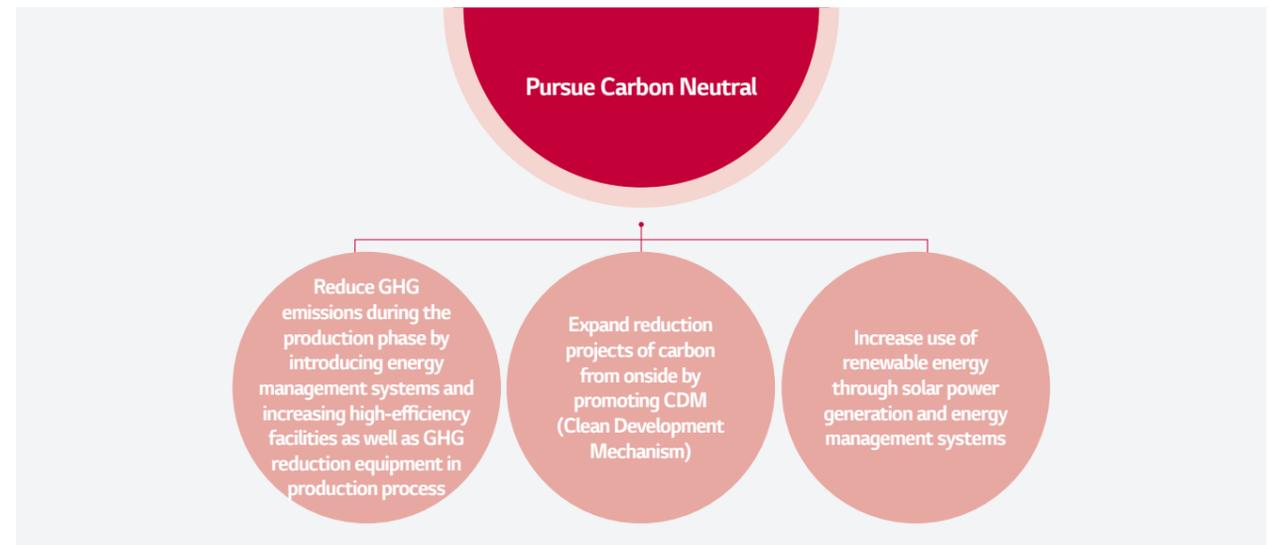
- 2 • AC home appliance: Responding to the existing AC coupled system linked to solar power  
• DC home appliance: Developing solar power DC distribution technology linked to LGE's home appliances

- 3 • Develop power generation algorithms in case of power failure  
• Develop an algorithm for parallel operation of micro-inverters  
• Develop ESS-linked power generation algorithms  
• Develop monitoring and control algorithm technology that meets the North American standard (CA Rule 21)

- 4 • Integrated power output monitoring based on the ThinQ app  
• Enhanced maintenance function based on monitoring

# Our Future with Zero Carbon

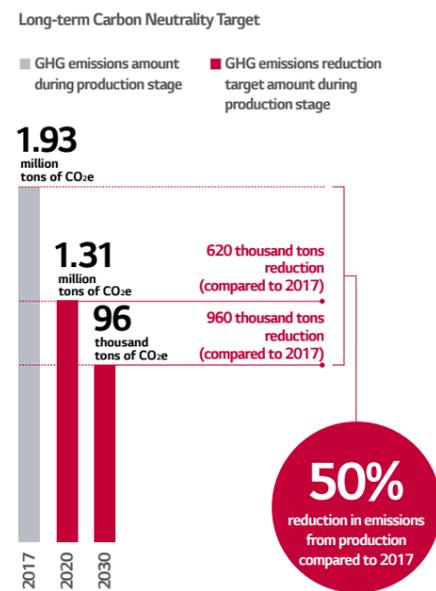
Since the Paris Agreement took effect in November 2016 and the global community reached an agreement on the new climate regime, initiatives around the world are undertaken to mitigate impacts and adapt to climate change. As a result, global companies have announced their plans to reduce GHG emissions and increase the use of renewable energy while joining their efforts to solve social problems caused by climate change. LG Electronics is also aware of the seriousness of these climate change issues and is hence continuing its efforts to minimize greenhouse gas emissions from business operations by utilizing its technologies, capabilities, products and solutions. Going forward, we will continue to contribute to building a sustainable society and pave the way towards a sustainable future as a corporate citizen and a member of international society.



## Target

- 50% Reduction in Carbon Emissions in the Production Stage Compared to 2017 (by 2030)
- Achievement of Carbon Neutrality through External Carbon Reduction by Expanding the CDM Project

LGE is increasing the energy efficient facilities and carbon emissions reduction equipment in our production process with the aim of reducing GHG emissions by 50% from 2017 by 2030. We are also securing carbon offset credits by actively participating in CDM (Clean Development Mechanism), which approves performance in reducing GHG emissions, by investing technology and capital in developing countries. In addition, we are contributing to the reduction of GHG emissions by installing and operating solar power facilities in our worksites by increasing the use of renewable energy. In order to achieve carbon neutrality by 2030, we will implement mid-to-long-term carbon management strategies in response to climate change.



## CASE. LGE USA Achieves Carbon Emissions Reduction Target Early

In September 2019, LGE USA achieved its goal of reducing carbon emissions by 50% from the baseline year of 2017, three years earlier than the target year of 2020. 80% of the total energy use of LGE's business sites in America come from renewable energy, and the company is contributing to reducing carbon emissions through various efforts - such as establishing an energy management system and improving energy efficiency.



LG Electronics USA New Jersey

## Carbon Management System

### 1. Top Decision Making Council

LGE sets long-term GHG reduction targets through its Corporate Safety and Environment Committee, monitoring risks and opportunities related to climate change across the company and making decisions on carbon reduction practices. The Corporate Safety Environment Council shares the results of the analysis of climate change risks and opportunities and discusses strategies in response to climate change with key management teams. In addition, LGE's Energy Facility Forum joined by energy and GHG reduction managers analyzes energy and GHG risks and investment opportunities at each worksite and share and disseminate best practices to reduce carbon emissions.

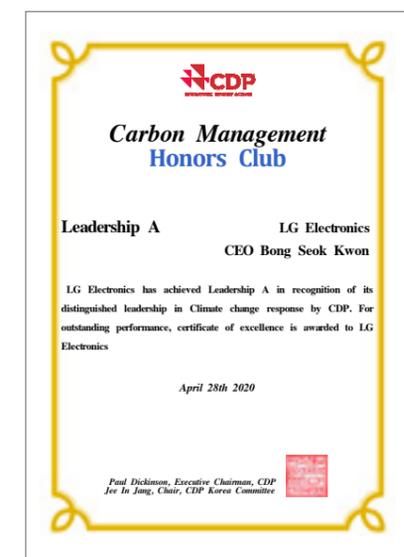
### 2. Management of Risk and their Conversion to Opportunities

We recognize risk factors and opportunities in climate change and carbon management activities from a financial and non-financial standpoint and establish a systematic response plan.

- 1) Identify possible risks related to energy use and carbon emissions by conducting analysis on energy management at global production sites
- 2) Participate in the GHG emissions trading system implemented in January 2015 to reduce GHG emissions, conduct a preliminary review of the risks associated with changes in government policies, and contribute to achieving national GHG emissions reduction goals.
- 3) GHG emissions reduction support for developing countries and small and medium-sized suppliers (expanding the Clean Development System (CDM) project and promoting domestic GHG external reduction projects)

### 3. Internal and External Communication

LGE participates in the Carbon Disclosure Project (CDP) every year and discloses its carbon management activities to both external stakeholders and internal employees. In 2019, LGE received a number of accolades including Leadership A in the CDP Climate Change Assessment, and selected for the Carbon Management Honors Club and the Carbon Management Sector Honors at the CDP Korea Awards.



Highest Rating in 2020 CDP

**Major Activities**

**Promoting Strategic Carbon Management Activities**

LGE is striving to maintaining the current level of GHG emissions at the production stage and achieve the mid- to long-term reduction target through strategic carbon management. By using high-efficiency solar panels, we generate and use renewable energy, and promote efficient energy management by introducing an energy management system. Furthermore, we are reducing carbon emissions through diverse carbon management activities, such as the raising of carbon funds and the introduction of carbon accounting.

**Generation and Consumption of Renewable Energy**

LGE generates and consumes renewable energy through high-efficiency solar panels. The solar power plant with a total capacity of 6.7 MW was built at worksites in Korea in which 8,832 MWh of solar energy was produced in 2019, thus contributing to GHG reduction. Meanwhile, LGE USA purchased 17,358 MWh of renewable energy certificates that resulted into a reduction of CO<sub>2</sub>e by 7,600 tons.

**Introduction and Certification of ISO 50001**

As a measure to efficiently use energy and reduce related costs, we are upgrading our energy management system by adopting the ISO 50001 international standard. LG Electronics has acquired this certification for all of its production sites in Korea. We are also introducing the system at our overseas worksites while maintaining the certification status through annual reassessment process.

**CASE. Certification and Operation Performances of Energy Management System**

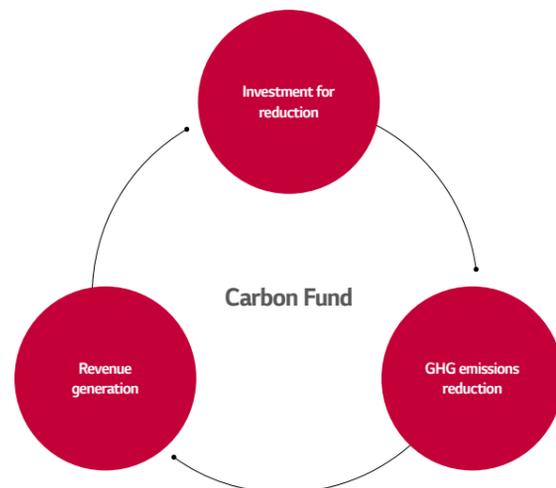
As of December 2019, we have acquired the ISO 50001 certification for seven production sites (Pyeongtaek, Cheongju, Gumi A1, Gumi A3, Changwon 1, Changwon 2, Incheon campus) and five research centers (Seochu R&D Campus, Yangjae R&D Campus, Magok Science Park, Gasan R&D Campus, Gangnam R&D Center) in Korea. In 2019 the Magok Science Park implemented activities for saving energy such as installation and certification of high-efficiency facilities and efficient operation of building's energy management systems. As a result, we won the 'Korea Energy Award' presented by the Ministry of Trade, Industry and Energy and the Korea Energy Agency in the Group and Individual categories as well as the Energy Champion certification by the Korea Energy Agency. We will continue to work towards our GHG reduction targets by implementing a systematic energy management system and engaging in energy-saving initiatives.



Korea Energy Award Ministerial Prize (Magok Science Park)

**Raising Carbon Fund**

Since 2017, LGE raised and operated an in-house carbon fund to efficiently introduce GHG reduction technologies and solutions. The fund is used to reduce GHG emissions and improve the efficiency of energy consumption at our worksites.



**Calculating Carbon Pricing**

As part of energy saving and GHG emissions reduction initiatives, we are exploring new business opportunities and identifying risks, and applying internal carbon costs that quantitatively measures the value of carbon for internal transaction. The 'internal carbon cost' enables us to accurately measure the financial value of our environmental impact and make effective decisions on our GHG emissions reduction investments.

**Introducing Carbon Accounting**

In accordance with Article 33 of the General Business Accounting Standards (Greenhouse Gas Emissions Credits and Liabilities), our emissions credits, as allocated by the Rep. of Korea government, as well as our emissions intensity, are analyzed on a quarterly basis. If the amounts exceed the defined limits, we reflect the costs in our consolidated financial statement.

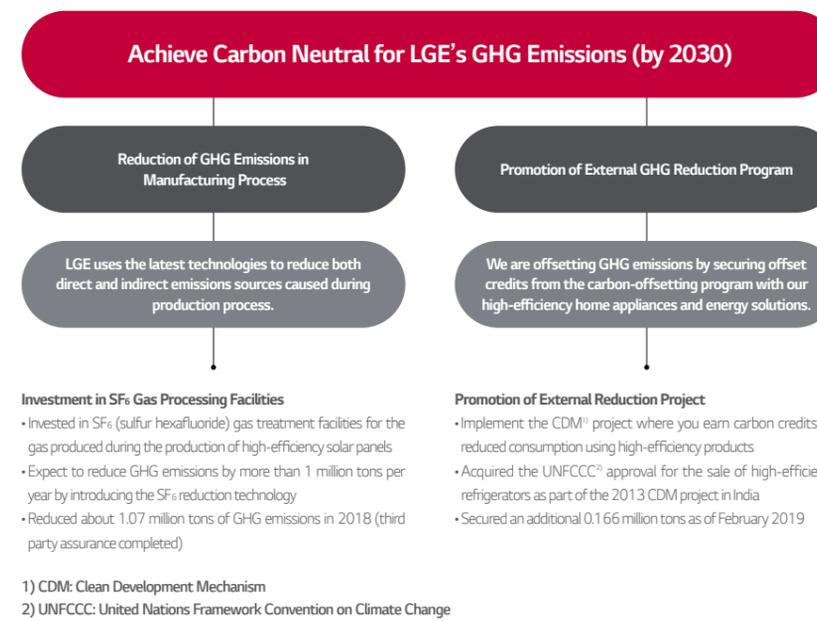
**Measuring, Reporting and Validating GHG Emissions**

As a company subject to Article 42-6 of the Low Carbon Green Growth Framework Act, we submit to the government, a timely report on our GHG emissions and the energy consumption at all of our Korean operations following third-party assurance, and transparently disclose this information to our stakeholders in accordance with Article 44 of the same act. Also, we have created a GHG inventory for our production sites worldwide and disclose the GHG emissions every year.

**Major Activities**

**Implementation of Carbon Neutral 2030 Strategy**

In order to achieve carbon neutrality by 2030, LG Electronics is investing in reduction technologies to minimize carbon emissions, as well as proactively engaging in external carbon reduction activities such as securing carbon credit units.



1) CDM: Clean Development Mechanism  
2) UNFCCC: United Nations Framework Convention on Climate Change

**CASE. Employee Energy Saving Campaign**

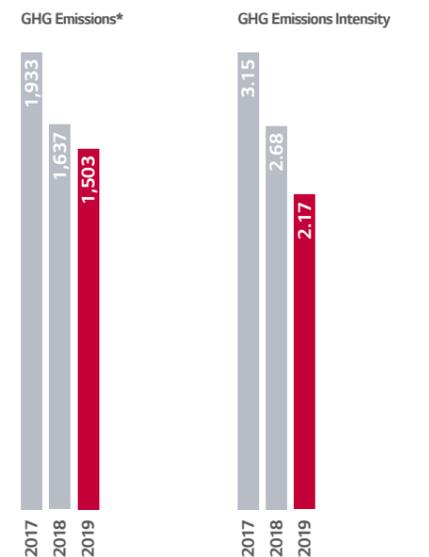
LGE organized an energy-saving campaign idea contest to raise awareness of employees and encourage their engagement in support of energy saving.



Energy Saving Campaign

**GHG Emissions and Intensity**

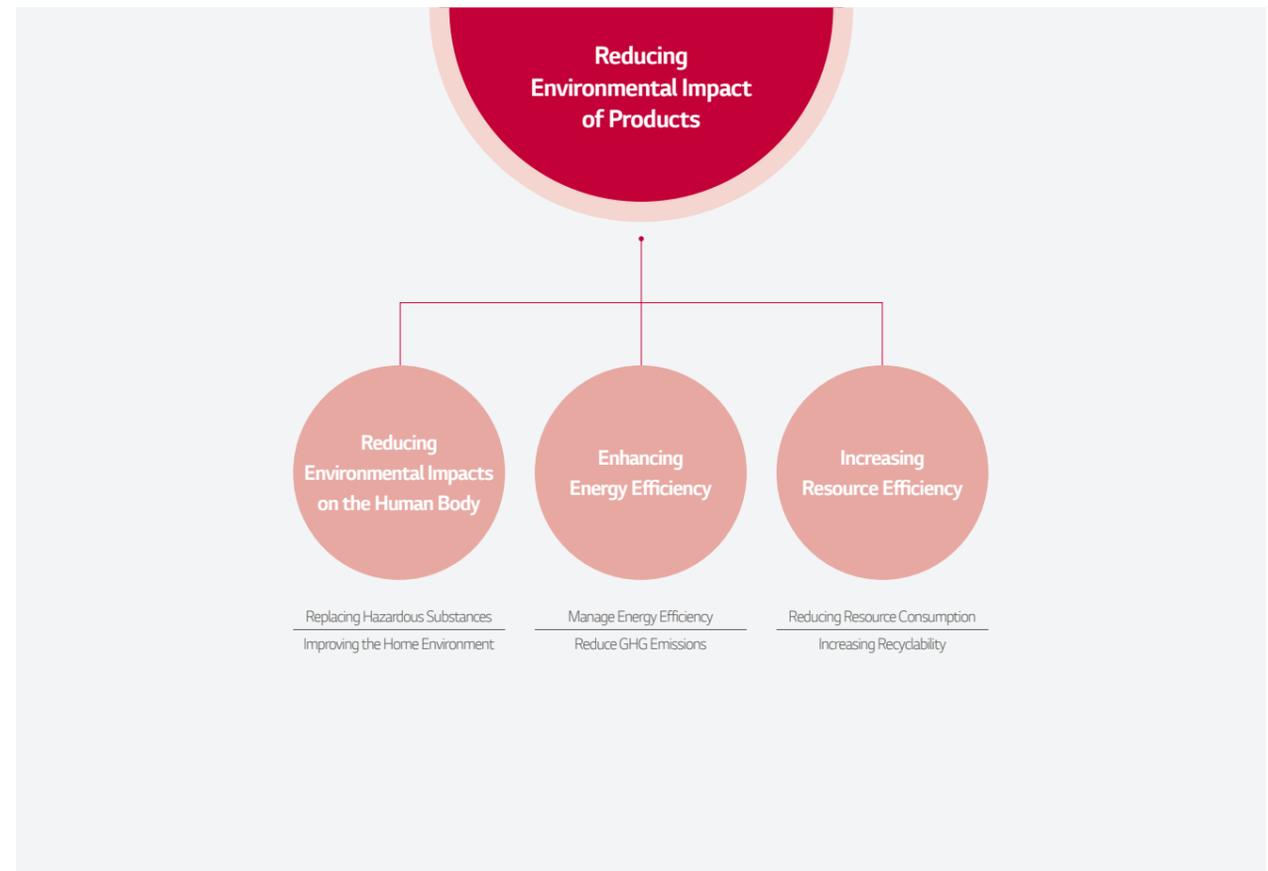
(Unit: 1,000 CO<sub>2</sub>e tons, 1,000 CO<sub>2</sub>e tons/KRW 100 billion)



\* Internal GHG (Scope 1 and 2) Emissions

# Our Future with Product Responsibility

From raw materials to manufacturing, distribution, use and disposal (recycling), LG Electronics is pursuing, from a mid- to long-term perspective, a green product strategy that considers three major elements of eco-friendliness - Resources, Energy, and Humans. In doing so, it aims to reduce the environmental impact of the entire product life cycle. Under this strategy, we continue to expand our green product development and green communication, and strengthen green partnerships. In order to take a systematic approach to conducting green product development for major products such as TV, mobile phone, refrigerator, washing machine, air conditioner, and monitor, we apply the Eco-Index to set goals and measure our performance. Based on the index, we manage these goals and performance to promote green product development.



**Target**  
Achievement the Green 3 Star Product up to 80% under Eco-friendly product assessment tool.

In 2011, LGE introduced Eco-Index, an environmental assessment standard. Unique to

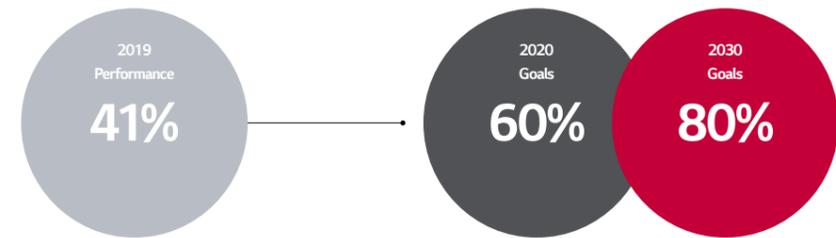
LGE, the Eco-Index is an index for evaluating eco-friendliness of our products that classifies each product model into Green 1 Star, 2 Star, or 3 Star. Based on this system, we are increasing the ratio of Green 3 Star products in our portfolio. In addition, we continuously manage and revise the Eco-Index standards to reflect trends and changes in the product

development. Going forward, we will continue to pursue customer-oriented green products by evaluating eco-friendliness and performance management using the Eco-Index standards.

## Eco-Index Evaluation Criteria

Area / Rating	Green 1 Star	Green 2 Star	Green 3 Star
Human	Satisfying Regulatory requirements on hazardous substances	Voluntarily replace hazardous substances	
Energy	Satisfying Energy specifications	Reach Market average efficiency	Secure Superior efficiency in competitive edge
Resource	Satisfying Recycling requirements	Designed to improve resource efficiency	
Innovation	Preceding activities for eco-friendly products (internal/external certification, advanced technology development, etc.)		

## Green 3 Star Product Development Performance and Goals (Number of development projects)



## Third-party Environmental Certification Status

All LG Eco-labeled products, certified by the government or third party accredited certification bodies with the respect to their eco-friendliness and energy efficiency, are disclosed to the public.

Environment Mark	Products	No. of Models
UL SPC (US)	Mobile Phone	21
UL EPD (US)	TV	1
UL Green Guard (US)	TV	1
EPEAT	Monitor	US Bronze 36
	TV	US Bronze 4
	Mobile Phone	US Silver 6
Asthma & Allergy Friendly Certification Program (US)	Washing Machine	13
	Air Purifier	4
Energy Star (US)	Refrigerator and 9 products	542
TUV Green Mark (Germany)	Dryer	22
EU Eco Label (EU)	TV	9
TCO (Sweden)	Monitor	140

Environment Mark	Products	No. of Models
Allergy UK Seal of Approval (UK)	Washing Machine	4
	Tromm Styler	1
	Vacuum Cleaner	1
	Air Purifier	1
	Air Conditioner	1
Eco-Label (Korea)	Laptop	27
	Monitor	17
	Air Conditioner	26
	PDPTV	0
Green Certification (Korea)	LEDTV	39
	Air Conditioner	14
	TV	12
	Laptop	25
	Monitor	7

## Environmental Certifications achieved in 2019

As a world first, LG Electronics has obtained the TUV Green Mark and CarbonTrust carbon footprint certification for its 2019 tumble-dryer model (RC\*O\*\*\*V\*\*) series. The TUV Green mark is a certification granted to products that meet specified sustainable criteria in the environment, such as harmful substances, recycling, and corporate social responsibility. CarbonTrust is a carbon footprint certification that certifies the carbon emissions throughout the value chain and LGE achieved the CarbonTrust certification for its stylers, washing machines and air purifiers earlier.



TUV Green Mark and CarbonTrust carbon footprint certification

**Major Activities**

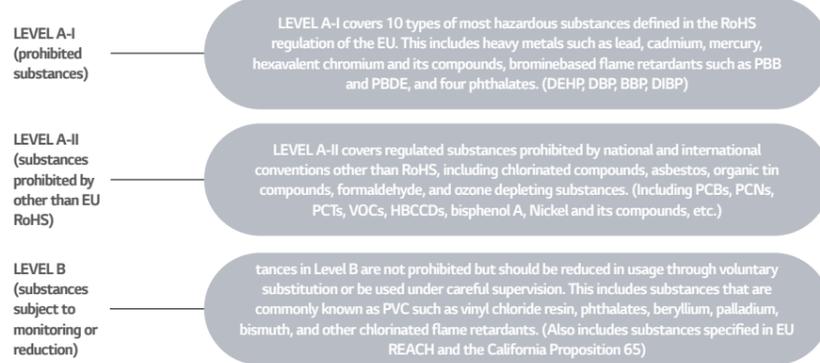
**Human: Improving Environmental Hazard**

**Voluntary Replacement of Hazardous Substances**

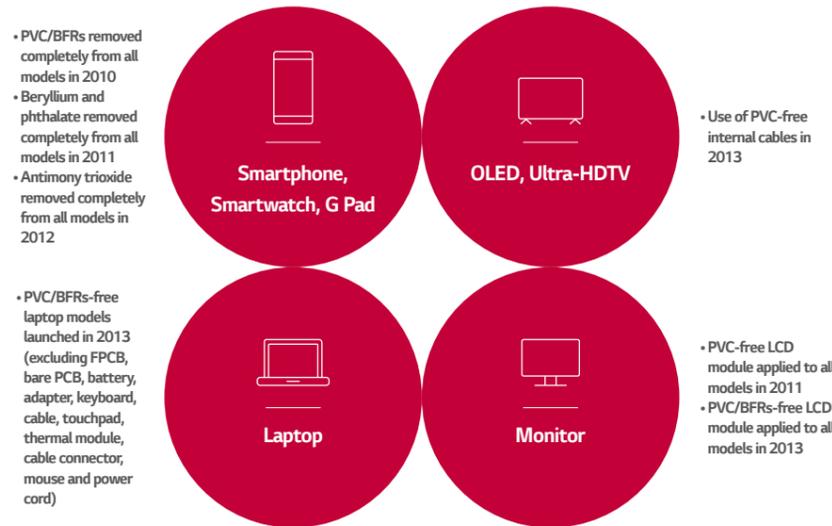
Based on a strong commitment to health and environmental protection, LG Electronics completely forbids the use of harmful substances (e.g. lead, mercury, cadmium, hexavalent chromium, PBB, PBDE, and etc.) that are prohibited by international environmental regulations, such as RoHS and REACH, during product development. We continuously develop alternative technologies and components to use in our products, substituting the toxic substances that can cause adverse health effects and environmental contaminations. In addition, we are working on the safety and reliability test for the replacement of such substances as polyvinyl chloride (PVC) and brominated flame retardants (BFRs) in advance, which are not currently subject to the regulations. As a result, PVC and BFRs have been completely removed from all our mobile phone lines since 2010. We also voluntarily replaced phthalate and beryllium in 2011 and antimony trioxide in 2012. Furthermore, the PVC used for internal cables of UHD and plastic OLED (P-OLED) TVs have also been replaced. Since 2013, for all refrigerator models, we have developed and applied PVC-free noise reduction parts (Skirt Lower) to maintain product quality while developing technologies and parts to replace hazardous substances to increase the application to other products. Meanwhile, in 2015, HBCD (Hexabromocyclododecane), a type of bromine-based flame retardant, was completely removed from the products and their packaging material in response to EU's regulation of POPs (Persistent Organic Pollutants). Moreover, we are managing our supply chain with regards to information on lethal substances and are preventing the use of toxic substances by thoroughly checking our work processes.

**Hazardous Substance Control Standards**

Hazardous substances are classified into LEVEL A-1, LEVEL A-II, LEVEL B under national regulations and international conventions.



**Replacement of Hazardous Substances**



**LCA (Life Cycle Assessment)**

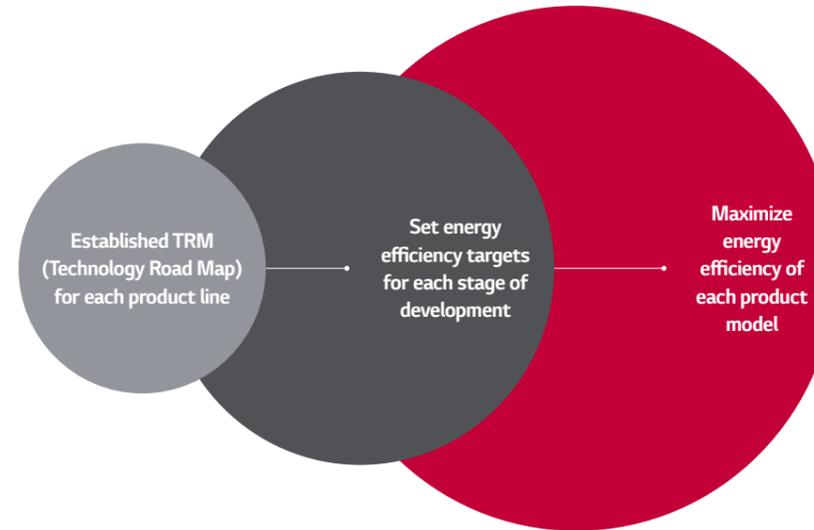
Since 2002, LGE has applied the 'LCA (Life Cycle Assessment)' process to accurately analyze and manage environmental impacts throughout the product life cycle. The LCA is a technique used to assess the environmental impact of each product cycle, including manufacturing, distribution, use, and disposal, to identify the areas of improvement and verify its performance. To establish a product evaluation process system that uses LCA, in 2011 we set up a Life Cycle Inventory (LCI) database for our major product groups. WE use this system annually to conduct LCA evaluations on 7 product categories, including TVs, monitors, washing machines, refrigerators, system/home air conditioners, and mobile phones. Based on our experience with the LCA and database of 4 years, we have developed our own Simplified LCA tool to assess potential environmental impacts in advance when developing mobile phones, TVs, and home appliances, and use the results to apply them to the product development process.

**Major Activities**

**Energy: Enhancing Energy Efficiency**

**Energy Efficiency**

LGE is committed to improving the energy efficiency of each product model by establishing TRM (Technology Road Map) and setting detailed goals in each stage. Although our products satisfy the global energy requirements such as ErP (Energy-related Products), we have set our own goals and strategies to further reduce energy consumption and standby power.

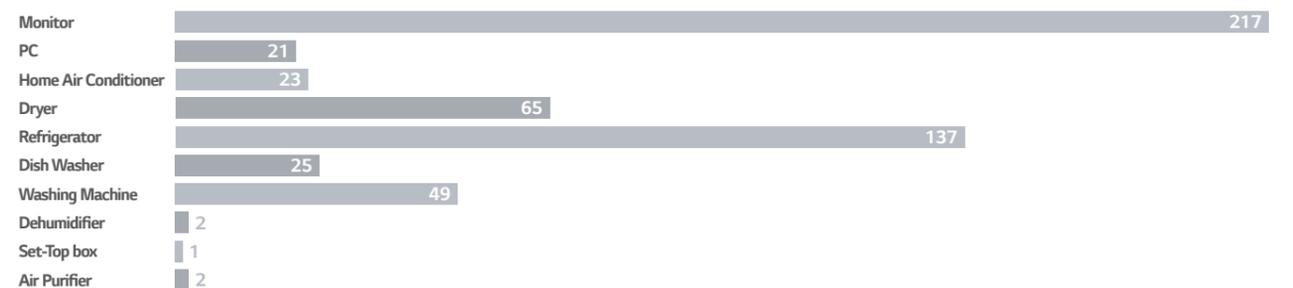


**Energy Star**

Energy Star is a program run by the EPA (Environmental Protection Agency) and DOE (Department of Energy) that certifies products with high energy efficiency. As of 2019, 542 of our models have been certified.

Energy Star Certified Products Sold in the US (as of the end of 2019)

(Unit:EA)



**Reducing Greenhouse-gas Emissions in the Product Use Stage**

LGE discloses to consumers the environmental impact of major products in their life-cycles with the focus on GHG and carbon emissions throughout the value chain. In addition, we are dedicated to reducing GHG emissions at each stage of the product life cycle through eco-friendly practices by reducing the weight of products and resources, and improving their energy efficiency. In particular, we are developing and supplying highly energy-efficient products to contribute to the reduction of GHG emissions. From 2007 to 2020, we aim to reduce 60 million tons of GHG below BAU. If this target is achieved, we expect to reduce about 400 million tons of cumulative GHG at the stage of use from 2008 to 2020. To this end, we have reduced GHG emissions by approximately 60.48 million tons (compared to the level of power consumption in 2007) in 2019.

Results of the life cycle assessment, by major products (carbon emission percentage)

(Unit: %)

Category	Pre-Manufacturing	Manufacturing	Transportation	Use	Disposal
TV	20.85	0.01	0.44	78.16	0.53
Monitor	6.62	0.04	0.11	92.72	0.50
Washing Machine	17.24	0.28	0.31	79.64	2.54
Refrigerator	17.98	0.21	1.88	78.51	1.42
System Air Conditioner	0.66	0.03	0.01	99.29	0.01
Home Air Conditioner	1.77	0.04	0.07	97.89	0.24
Mobile Phone	23.64	0.00	6.62	70.79	0.41

Major Activities

Resource: Increasing Resource Efficiency

Material & Structural Improvement

From the product development stage, LGE engages in various activities to enhance the material and structural integrity of our products, while reducing the volume and weight. We also collaborate with recyclers to improve the recyclability and disassembly of our products. For air conditioners (13,000W model), the 2018 model (Model No. TUW1301M9SR) has been reduced in weight by 5% (4kg) compared to the previous model (Model No. TUW1300M9SR) by changing its materials. We also reduced the number of fasteners by 5% (from 82 to 78) to make it easier to disassemble and improve its recyclability.

	Base Model - A	Test Model - B	Improvement Result - B/A
Model No.	TUW1300M9SR	TUW1301M9SR	
Weight (Kg)	88	84	0.955 (improved)
Volume (m <sup>3</sup> )	0.433	0.433	1
No. of Plastic Types (EA)	5	5	1
No. of Parts	173	169	0.97 (improved)
No. of Fasteners	82	78	0.95 (improved)

Use of Recycled Materials

LGE is increasing the use of recycled materials by testing the product stability and quality to promote the recycling of resources and improve its efficiency. As a result, recycled materials are being used for our washing machines, refrigerators, air solutions, smartphones, TVs, and monitors. The use of recycled plastic amounted to 7,134 tons in 2017, and 11,030 tons in 2018, and 9,282 tons in 2019. We are developing alternative parts and technologies to increase the use of renewable plastic while expanding the areas of its application and managing performance.

Consumption of Renewable Plastics

(Unit: ton)

Years	Consumption of Renewable Plastics
2017	7,134
2018	11,030
2019	9,282

Examples of Green Packaging Improvement

In 2012, LGE established the 'Eco-friendly Packaging Design Guidelines' that include lightening of packaging, reduction of volume, increase of reuse and recycle to certain product lines including mobile phones and TVs. Subsequently, the guidelines were implemented to all of our products in 2013. We increased the database on recycled (pulp) content in paper packaging materials to contribute to improving their recycling rate. Since 2014, we set target goals for each business division including the reduction ratio of packaging materials as well as its volume and space. Progress of each division in reaching its target goal is assessed twice a year. In 2019, we conducted assessment of environmental practice by applying improvements to the design of newly developed models. As a result of these efforts, we reduced packaging materials and volume by 2.3% and 1.4%, respectively. In 2020, we will continue to identify and share best practices and strengthen the activities of the Packaging Technology Research Group. In addition, we will continue to operate the eco-friendly packaging development system for each business division to achieve its time-bound, target goals.

Training and Technical Support for Suppliers

In order to strengthen green partnerships with our suppliers, LGE provides systematic training programs on environmental regulatory requirements, eco-friendly practice skills, and GHG emissions control for works with their environmental managers and Green Partnership Managers every year. Since 2013, we have fostered experts in the relevant fields through the Hazardous Substance Measurement Specialist Course, contributing to hazardous substance management practices, the advancement of management and measurement techniques, and the improvement of data reliability. This training course is conducted for the personnel in charge of measuring the hazardous substance inspection systems of our suppliers. In 2019, 86 employees from 73 suppliers participated in this training.

Supporting Eco-Friendly Training for Suppliers in 2019

Training Program	Participants	No. of Participants	Training Course
Capacity-building for working-level Green experts	Supplier's environmental management personnel	106	<ul style="list-style-type: none"> <li>• Introduction to Environmental Regulation</li> <li>• Hazardous Substance Control and Analysis Skills</li> <li>• HSMS</li> <li>• GHG Management</li> </ul>
Measuring Hazardous Substances	Environmental inspectors at LGE suppliers	86	<ul style="list-style-type: none"> <li>• LGE Hazardous Substance Control Standards</li> <li>• XRF Measurement Theory</li> <li>• XRF Measurement Practice</li> </ul>

Green Program Plus

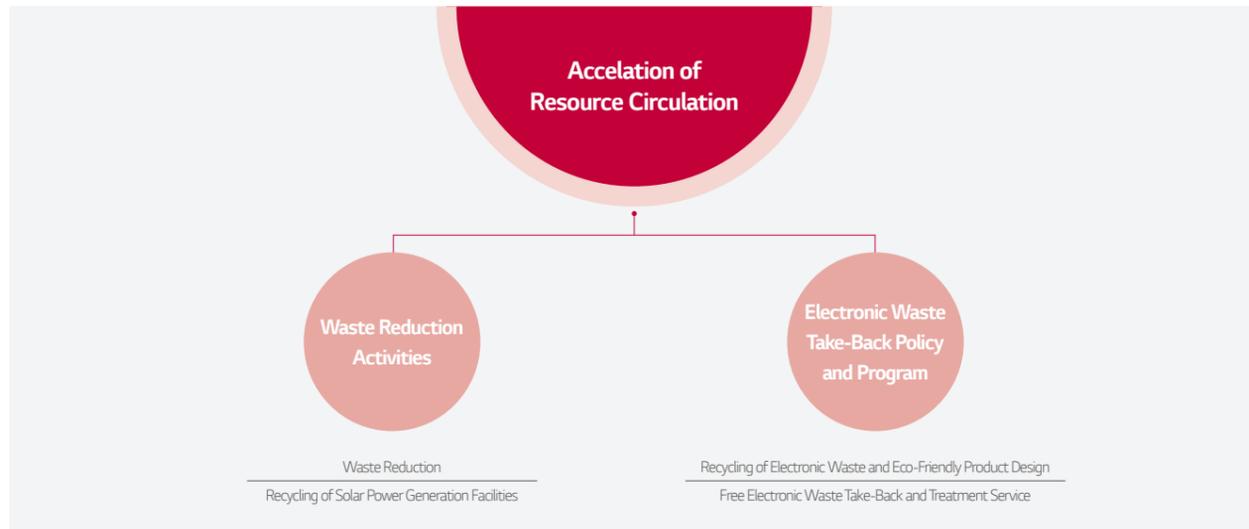
LGE conducted the GP Plus (Green Program Plus), an eco-friendly supply chain management program, to improve their sustainability and competitiveness and lay the foundation for mutual growth by sharing its expertise and know-how with its suppliers. Since 2005, we have operated the Green Program in response to regulatory requirements on hazardous substances in products, based on which we expanded the areas of our management to include eco-friendly practice and GHG emissions control of our suppliers. By doing so, we have strengthened the eco-friendly management of our supply chain and secured green partnership to enhance its sustainability and competitiveness by taking a proactive approach to global environmental regulations.

Status of Green Technology Certification by the Ministry of Trade, Industry and Energy

Name of Technology	Date of Certification	Valid Until
Energy/Water-Saving Turbo Shot Rinsing Technology II (for front-loaders)	Aug. 26, 2014	Aug. 25, 2020
Hand Wash 6-Motion Technology	Aug. 26, 2014	Aug. 25, 2020
Inverter Linear Compressor for Refrigerators	Aug. 26, 2014	Aug. 25, 2020
Standby Power Saving Technology for Laptops	Feb. 18, 2016	Feb. 17, 2022
Monitor Smart Energy Saving Using Backlight Brightness Control	Mar. 10, 2016	Mar. 9, 2022
Engine and cycle optimization technology for high-efficiency gas heat pump	Jan. 18, 2018	Jan. 17, 2021
Low-Energy Consumption Design based on Dynamic Backlight Control (DBC) Algorithm	Jan. 18, 2018	Jan. 17, 2021
TV Standby Power Saving Technology based on X-capacitor Discharge Function inside Control IC	May. 17, 2018	May. 16, 2021

# Our Future with Circular Economy

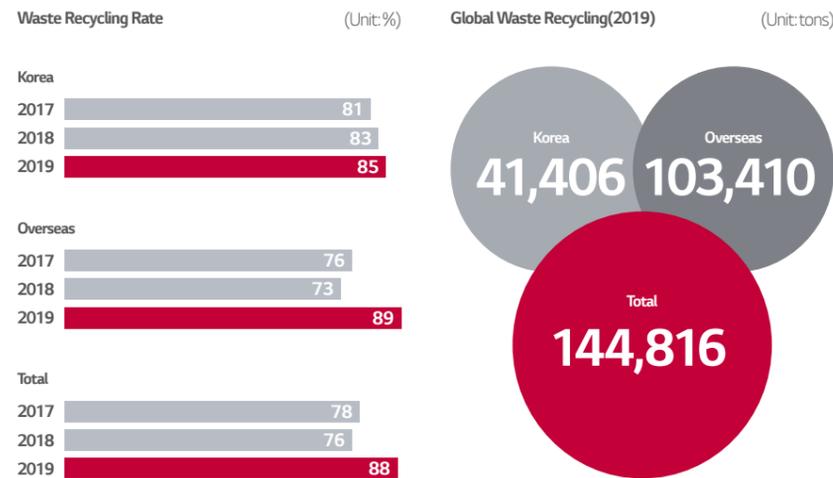
As the international community's awareness of environmental issues increases, the demand to build a society that promotes resource circulation, or sustainable practice of production and consumption, is increasing. LGE is instituting a range of efforts to transform its operations into a circular economy by increasing the recycling of wastes at our worksites. In particular, we are contributing to the resource circulation ecosystem in terms of the entire product life cycle, including establishing relevant policies for the management of waste electronic products in Korea and overseas businesses, and by considering the possibilities of reusing and recycling within our production processes. Going forward, we will continue to minimize environmental impact in our management activities and fulfill social and environmental responsibilities as a corporate citizen.



## Target

### Achieve 95% in waste recycling at production sites (by 2030)

With the aim of achieving 95% in waste recycling at our worldwide production sites worldwide by 2030, we are carrying out various initiatives to reduce wastes and increase recycling rate. In order to dispose wastes in an eco-friendly way and reuse them as resources for our production, we manage the waste disposal performance of each worksite and monitor the recycling process. We also increased the use of renewable materials to expand the range of recyclable products and minimize the environmental impact of our products.



## Major Activities

### Waste Reduction Activities at Worksites

#### Waste Reduction

LGE established an effective collection and transportation system for wastes generated at its domestic worksites and improved its efficiency through continuous research. With the aim of achieving zero fines on recycling and zero issues, we promote recycling programs to increase the amount of electronic waste collected and minimize the risks. In 2019, about 61.5% of our waste generation occurred overseas, and thus, our overseas production sites are increasing the recycling rate and moving away from waste landfilling. We are also improving our production process and recycling system to reduce the amount of wastes generated and increase the use of recycled materials.



Recycling Center

#### Recycling of Solar Power Generation Facilities

In order to reduce the environmental impact of our solar power generation facilities, LGE is actively participating in the 'Extended Producer Responsibility (EPR) on Waste Solar Panels', that is scheduled to take effect in 2023. Anticipating a dramatic increase in wastes from solar power facilities, we are establishing a collection, transportation, and recycling system. LGE has researched and developed scrapping methods and recycling technologies for solar power modules, and recycling waste from solar power generation facilities is being recycled such as glass, aluminum, and silicon, as raw materials at part of our business site. By doing so, we prevent environmental pollution caused by solar power facilities and building a foundation to enter the overseas solar waste recycling market. Moreover, we are responding to relevant regulations by comprehensively managing and monitoring the recycling status of items subject to new recycling obligations including dehumidifiers, beam projectors and massage chairs, as well as solar power generation facilities following the expansion of the Resource Circulation Act.



Solar Power Generation Facility at LG Electronics' Gumi business site

### CASE. Sustainable Materials Management Awards by the U.S Environmental Protection Agency

LG Electronics USA received the Gold Tier Awards in Sustainable Materials Management (SMM) from the U.S Environmental Protection Agency (EPA) at CES 2020. The award recognizes our contribution to resource recirculation by recycling of electronic waste without involving landfill and reusing them as raw materials. LGE is committed to minimizing the environmental impact of our products by taking into account from the production stage and actively collecting and reusing products after their use.



LGE Won Gold Tier for the Sustainable Materials Management Awards

**Target**

**Collection of 4.5 million tons of cumulative electronic waste since 2006 (by 2030)**

In regions across the world, LG Electronics has implemented policies to comply with local regulations concerning returns of home appliances waste, and is striving to contribute to a better environment for the future by establishing the necessary infrastructure for collection. We are increasing the recycling rate of collected waste and implement eco-friendly product design for more efficiency and recyclability with the aim of achieving the collection of 4.5 million tons of waste by 2030. We will continue to support circular economy by taking into account the economy and environmental factors throughout the value chain from mining and procurement of resources to production, distribution, consumption, and disposal.

**Major Activities**

**Electronic Waste Take-Back Policy and Program**

**Compliance with Electronic Waste Take-Back and Recycling Regulations**

LGE established a policy in response to regulatory demands for collection/disposal of electronic waste in each country where it operates while providing collection and disposal services. Furthermore, we are committed to reducing our environmental footprint by expanding our services to unregulated sectors. We also posted our global electronic waste take-back and disposal policy on our website\*, sharing information about electronic waste take-back facilities and system as well as its management in each local area.

\* LGE GLOBAL TAKE-BACK & RECYCLING POLICY WEBSITE: <http://www.lg.com/global/recycling>

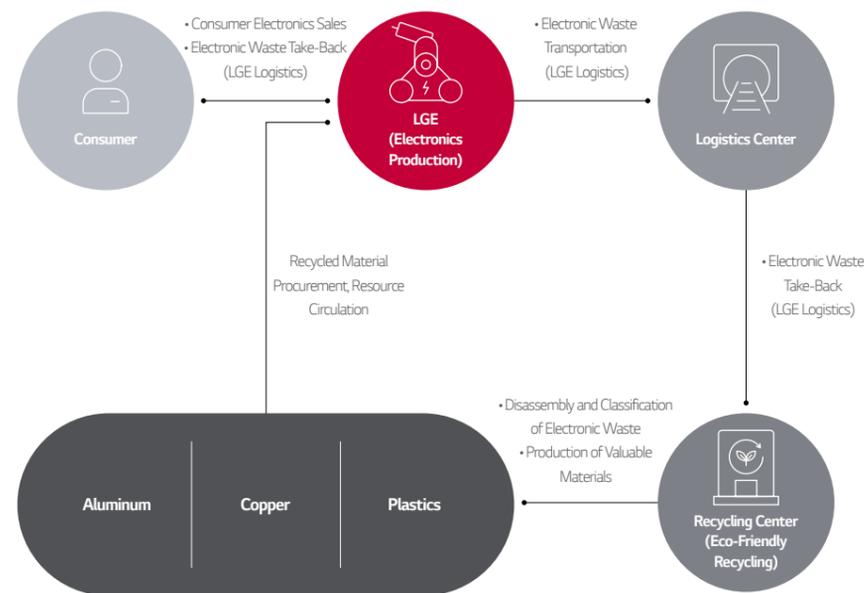
**Supporting the 'Individual Producer Responsibility (IPR)' System**

LGE supports the IPR (Individual Producer Responsibility) for responsible electronic waste take-back and is committed to increasing the recyclability of our products and reducing the environmental impact of landfill and incineration. In particular, we are improving the recyclability of our products by conducting assessment from the product development stage.

**Free Take-Back and Treatment Service for Home Appliance Waste (Korea)**

LGE provides free electronic waste take-back service in compliance with the EPR (Extended Producer Responsibility). Upon request by a customer, the agents collect the large-sized electronic waste from the designated venue, while small items are retrieved from a dedicated collection box set up at LGE Service Centers. The collected waste are recycled as materials through disassembly and classification process as part of our circular economy program.

**Domestic Electronic Waste Take-Back and Recycling System**



**Electronic Waste Take-Back and Treatment Service (Overseas)**

LGE offers electronic waste take-back and disposal service in 85 areas in 51 countries to meet the requirements of Waste Electrical and Electronic Equipment (WEEE) and the regulatory requirements of respective countries (as of the end of 2019). For new areas, we are introducing the services after discussions with local governments and industrial organizations, and analysis of regulations.

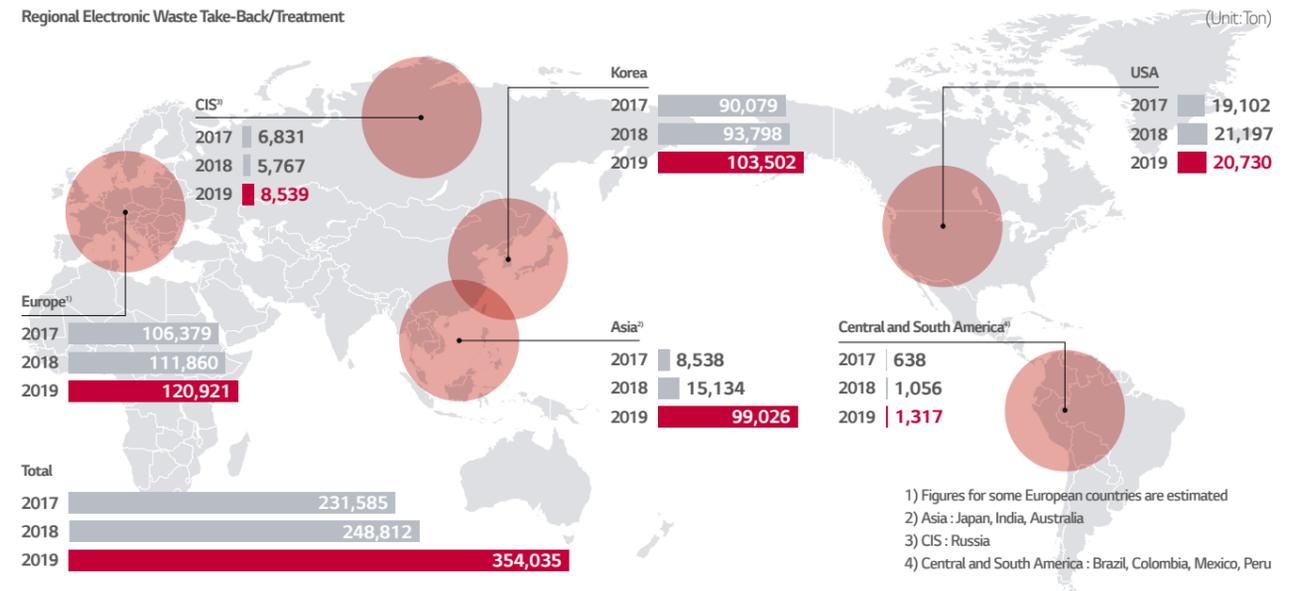
**CASE. European Recycling Platform (e-Waste Summit)**

Electronic waste has emerged as a major social and environmental challenge. Portugal in particular is facing significant difficulties due to the lack of awareness of recycling and the increase in electronic waste. LG Electronics Portugal organized the 'Electronic Waste Conference: Sustainable Technology in the Digital Era - Reality and Challenge' with the ERP (European Recycling Platform) to address this problem in May 2019. At the conference, various stakeholders, from academic experts and environmental activists to policy-makers, discussed ways to recycle electronic waste. Going forward, we will take the lead in creating a clean environment by engaging in various activities to improve our social environment around the world.

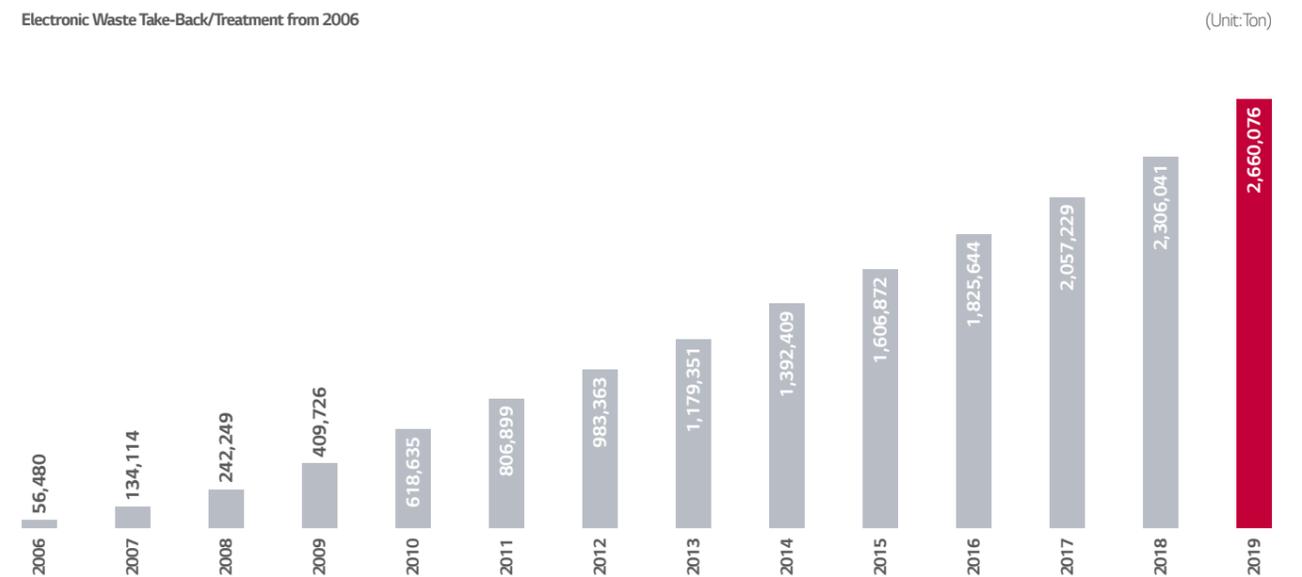


European Recycling Platform Conference

**Regional Electronic Waste Take-Back/Treatment**



**Electronic Waste Take-Back/Treatment from 2006**



\* As the reporting period differs by country, we might not obtain data from some countries. We report estimated amount or that of previous year instead. As a result some data might be slightly different on next year's report.



# Our Future with a Sustainable Supply Chain

As we move away from the focus on short-term performance to create financial value, there is a growing demand for non-financial responsibility of corporations and mutual growth with societies. Win-win partnerships with suppliers in particular have become an integral part of sustainable growth and development of the company. In addition to assessing and managing risks in the supply chain, LGE uses training and support programs to prevent risks in advance. In particular, we are inspecting and evaluating suppliers and smelters and refiners mitigate risk of social issues that may arise during the production and procurement of key raw materials and minerals, and are collaborating with various global organizations to improve the sustainability of our supply chain. Recognizing that our partners' growth and development will lead to our sustainability, we will continue to promote mutual growth with our partners.



## Target Work with only RMAP-conformant smelters 100% (by 2021)

At LGE, we prohibit the use minerals mined in conflict areas or those that violate labor/human rights or cause environmental damage during the mining process. We monitor the origin of the four major conflict minerals (tantalum, tungsten, tin, and gold) used in our products and components, and require

RMAP (Responsible Mineral Assurance Process) certification for and refiners in our supply chain. As a member of the Responsible Mineral Initiative (RMI), which is a global industry standard for conflict minerals, and the PPA (Public-Private Alliance for Responsible Minerals Trade), and the in which the US government and NGOs participate, we provide information to support the conflict mineral tracking system. In addition, we provide education for our suppliers to improve awareness of responsible mineral use, and alongside LG

Chemical and LG Display, we jointly recommend our suppliers to use RMAP-certified smelters. Aside from the four major conflict minerals, we are also participating in global activities to trace the origin of minerals, such as cobalt and mica, that may be associated with issues including forced labor and child labor. LG Electronics has completed all RMAP validated smelters/refiners concerning all tantalum smelters, and plans to attain 100% certification for tungsten and tin by 2020, and by 2021 for gold.

## RMAP\* Conformant Smelter Management (as of Feb. 2020)

Tantalum (Unit: Smelter)

Target: 100% by 2019 (Completed)			
	2017	2018	2019
Conformant	38	36	36
Active	0	3	0
Non-conformant	0	0	0
Percentage of Conformant Smelters	100%	92%	100%

Tungsten (Unit: Smelter)

Target: 100% by 2019 (Completed)			
	2017	2018	2019
Conformant	35	38	39
Active	0	3	1
Non-conformant	1	2	0
Percentage of Conformant Smelters	97%	88%	98%

Tin (Unit: Smelter)

Target: 100% by 2020 (Completed)			
	2017	2018	2019
Conformant	70	71	73
Active	1	1	0
Non-conformant	1	10	10
Percentage of Conformant Smelters	97%	87%	88%

Gold (Unit: Smelter)

Target: 100% by 2021 (Completed)			
	2017	2018	2019
Conformant	70	99	102
Active	5	3	0
Non-conformant	30	32	11
Percentage of Conformant Smelters	67%	74%	90%

\* RMAP (Responsible Mineral Assurance Process): a due diligence and assurance program by the RMI for smelters not using conflict minerals

\* Once an additional(certification in progress) tungsten smelter is certified, the 100% certified smelter target will be achieved.

## Major Activities Conflict Mineral System

### Conflict Mineral Management Policy

LGE conducts due diligence on materials supplied by 1st-tier suppliers to ensure our responsible mineral sourcing criteria are met. All our 1st-tier suppliers are required to document their conflict mineral screening and grounds and submit information to the LGE Conflict Mineral Management System. We also check whether 2nd-tier or lower tier suppliers use or supply conflict minerals. We require all smelters in our supply chain to be RMAP-conformant or certified by other industry accepted mechanism, and maintain close communication with our suppliers and partners to promote the certification process.

### Conflict Minerals Management Standards

LGE has established a conflict minerals management standard to implement the requirements and processes of the conflict minerals management in accordance with the reporting standards of the US SEC (Securities and Exchange Commission) and the OECD Guidance. Conflict mineral management standards apply to all products solely developed, produced, sold and supplied by LG Electronics, to all products and raw materials developed and produced by our suppliers, and to all products and raw materials developed by LG Electronics but produced by our suppliers.

## Conflict Minerals Managing System

LG Electronics operates a global unit responsible for complying with policies and standards concerning responsible minerals, fulfilling social responsibilities, purchasing and procuring minerals, and taking the following measures to ensure that programs for responsible mineral procurement are effectively implemented.

- Global communication via the website and email(conflict-mineral@lge.com)
- Analysis of external status including customer requests, regulatory compliance, use of RMI tools, international forums, NGO and media requirements
- Conflict Minerals Management System (HSMS/CMMS) operation of the on a regular basis to manage changes concerning our suppliers and to maintain/improve information on certain smelters
- Internal report and request for support to improve the effectiveness of the conflict minerals management program, and response to customer requests and risks
- participation in the RMI working group (conflict mineral due diligence, smelter participation requests, and disclosure of information on minerals) to support inspection activities and the identification of mineral origins, as an RMI members

\* RMI provides the status of conflict minerals of global smelters to its members and organizes a forum to share best practice to resolve issues.

\* Conflict mineral website - <https://www.lg.com/global/conflict-minerals-business-partner>

**Major Activities**

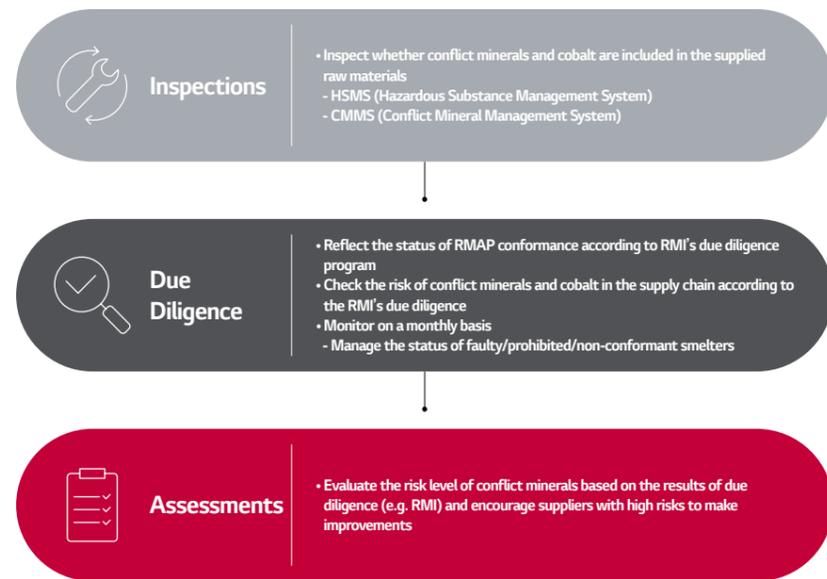
**Inspection and Due Diligence of Conflict Minerals and Risk Assessment**

**Inspection and Due Diligence of Conflict Minerals**

LGE uses the HSMS (Hazardous Substances Management System) and the CMMS (Conflict Minerals Management System) to collect information about conflict minerals in its materials. All our suppliers, smelters, and refiners are required to submit information on the production and procurement of conflict minerals including tantalum, tin, tungsten, and gold contained in both primary and secondary raw materials. Since 2019, we have also collected the origin of cobalt in addition to the four major conflict minerals. When suppliers or others submit information about conflict minerals contained in raw materials, we cross-check the information with our conflict minerals management system. Then, we use the HSMS to check whether conflict minerals or cobalt are included in the raw materials. We collect information about suppliers that use conflict minerals through the results of RMI's RMAP due diligence and its certifications, RCOI (Reasonable Country of Origin sourcing Information), and other available data, based on which we check the origin of the conflict minerals and identify major risk factors.

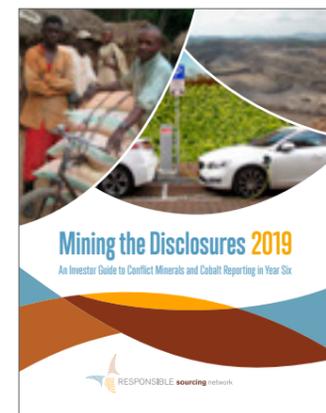
**Risk Assessment Conflict Minerals**

LGE assesses the level of risks in the procurement of conflict minerals and cobalt based on the data about their raw material, origin, and smelter or refiner RMAP validation status, and presents the process and ways to respond according to the level. Since May 2020, we have conducted monthly monitoring on information concerning conflict minerals and cobalt submitted by our suppliers. Through such monitoring, we are inspecting components and suppliers using prohibited smelters, faulty smelters, and non-conformant smelters. We are requesting and checking for accurate information on the origin of conflict minerals and cobalt products from 1,729 suppliers whose origin and distribution channels are registered, and are taking necessary measures such as suspending transactions for suppliers, smelters, and refineries that are deemed to be at high risk or have no potential for improvement.



**Rated "Good" for RSN (Responsible Sourcing Network) Conflict Mineral Management**

LGE was rated 'Good' from 215 global companies in the annual report published in 2019 by the RSN (Responsible Sourcing Network), a global NGO, based in Berkeley, California, USA. In 2019 in particular, eight global companies in Korea, China, and Japan, including LG Electronics, were included in the evaluation, in addition to the companies listed on the U.S. stock exchange. LGE is the only Korean company rated 'Good'. RSN's evaluation of conflict mineral management discloses our management system and status through its website. As a result of the evaluation, we are recognized for our strong commitment towards responsible mineral management through active due diligence and activities. Going forward, we will continue to support corporate and social sustainability through active management of all minerals we use.



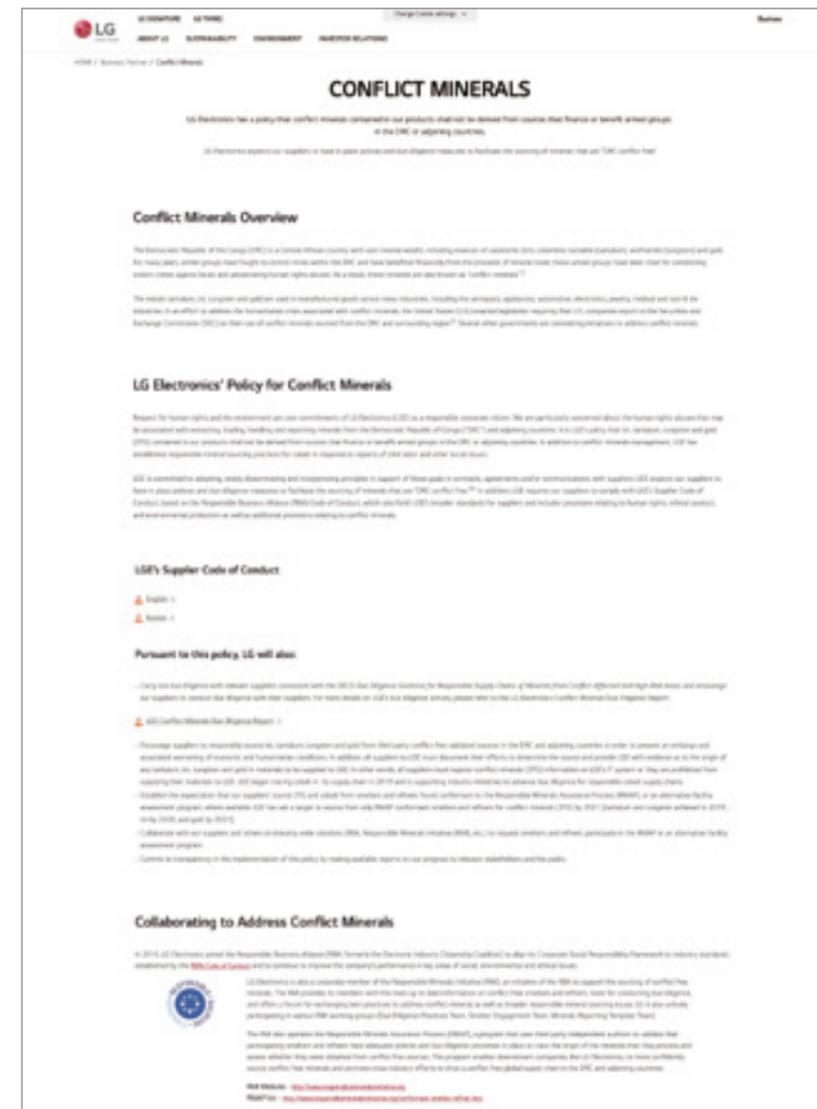
RSN Mining the Disclosure 2019

**Major Activities**

**Establishment of Cooperation System for a Conflict Minerals**

**Support for RMI's Conflict Mineral Due Diligence Program**

LGE Electronics participates in the RMAP certification program run by RMI. The certification program examines, through independent third-party organizations, whether smelters and refineries in the supply chain have policies for the use of responsible minerals, and whether procedures are in place to track the origin of minerals. Through RMI membership, we support due diligence on the use of conflict minerals, cobalt, and mica, and collaborate with other industries for responsible mineral sourcing in global supply chains. We are also actively engaged in the revision of the CMRT (Conflict Minerals Reporting Template) and Cobalt Reporting Template developed by the RMI, which are commonly used by global organizations and industries. In 2019, the Responsible Business Alliance (RBA) helped raise the necessary funds to effectively carry out due diligence on smelters and refineries.



LG Electronics conflict mineral website (<https://www.lg.com/global/conflict-minerals-business-partner>)

**Operation of the LG Affiliates Council**

LG Electronics, LG Chem, LG Display, and LG Innotek formed a council to raise the level of management by establishing policies and benchmarking management techniques that can create synergy in managing conflict minerals. In March 2019, a letter of recommendation was sent to the suppliers of each affiliate to encourage them to use RMAP conformant smelters for conflict minerals and cobalt. We not only engaged with our suppliers but major related companies such as posco and hyundai motors for consultation and support on conflict mineral management as part of our joint response to the issues in the global supply chain.

**Disclosure of LGE's Activities and Performance**

Every year, we share the progress we have made in the conflict minerals management program and its activities and performance. Internally and externally We also update the status of conflict minerals management on the global website (<https://www.lg.com/global/conflict-minerals-business-partner>). Since 2019, we have published a report with enhanced explanations to respond to stakeholders' requests for information on conflict minerals, and have made this report available on our website.

**Target**

**Inspect all 1st-tier suppliers' CSR risks and reduce the ratio of those with high risks**

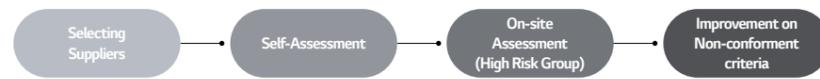
LG Electronics pre-emptively identifies risk factors to enhance the sustainability of its entire supply chain through continuous improvement and management. In order to support the systematic management of CSR risk, we have established a CSR inspection process for suppliers, and set the goal to check the risks of our 1st-tier suppliers while reducing the ratio of suppliers with a high level of risk. To this end, we use a checklist naming labor/human rights, safety/health, environment and ethics to conduct self-assessment of our suppliers and support improvement activities through consultation and on-site due diligence on suppliers with high levels of risk. As part of the risk analysis and due diligence, we focus on the types of nonconformities for improvement. We also strengthen our on-site risk management capabilities by providing CSR management training for our suppliers and overseas subsidiaries, while providing support for overseas subsidiaries to perform their own CSR risk analysis and management through training and on-site inspection practice.

**Major Activities**

**CSR Risk Analysis and Due Diligence in the Supply Chain**

In order to improve the CSR risk management in the supply chain, LGE conducts self-assessment of CSR risks and on-site due diligence on suppliers with high levels of risk. Using the in-depth self-assessment questionnaire, we review their labor, human rights, safety, health, and environmental practice while identified risks are classified into the categories of Low, Moderate, and High Risk. In 2019, CSR risk assessment was conducted for 1,665 suppliers, and on-site due diligence and consultation was provided to suppliers with high levels of risk and major suppliers to prevent the risks. (Korea: 14, Indonesia: 6, Thailand: 4, India: 3, Russia: 3) In the long run, we are going to increase the CSR risk self-assessment for 1st-tier suppliers from once a year to twice a year. Further, LG Electronics reviews suppliers' codes of conduct when signing purchasing contracts, in order to strengthen their obligations in complying with CSR. We also promote CSR compliance by reflecting the results of CSR risk self-assessments and on-site due diligence in purchasing contract evaluation process. Additionally, we will reduce the ratio of high-risk suppliers to 2% or less by making continuous improvements and operating our CSR risk inspection process.

CSR Risk Assessment Process in Supply Chain



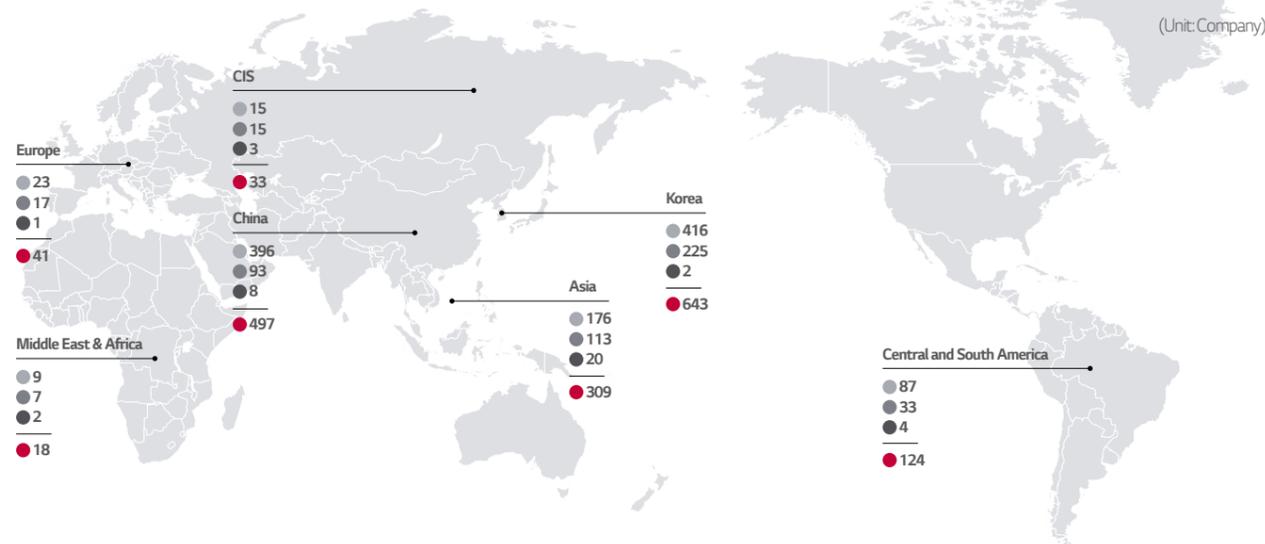
Results of Self-Assessment by Suppliers (Unit: Company)

	2017	2018	2019
No. of Suppliers that conducted Self-Assessment	1,764	1,684	1,665
No. of High Risk Suppliers	161	103	40
Percentage of High Risk Suppliers	9%	6%	2.4%

Results of On-site Assessment of Suppliers in 2019 (Unit: Company)

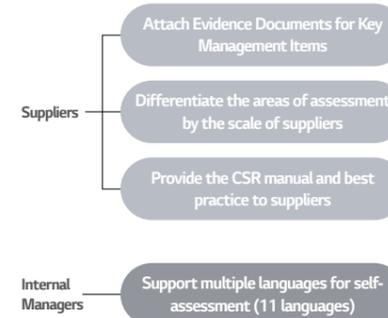
	Korea	Overseas	Total
On-site Assessment	14	16	30

CSR Risk Level Assessment Results of Suppliers by Region in 2019



**Improvement Self-Assessment System**

LGE has improved the CSR self-assessment system to enhance user convenience and the fidelity of improvement activities.



Types of Non-conformities in On-site Assessment (Unit: %)

	Description of Non-conformities	Percentage
Labor/ Human Rights	Prohibition of forced labor and contract details (No forced labor practice)	10
	Prohibition of child labor and age verification procedure (No serious violation of child labor)	6
	Grievance handling process	5
Safety/ Health	Firefighting facilities/emergency evacuation guidance/emergency evacuation drills	25
	Availability/distribution/wearing of PPE (Personal Protective Equipment)	24
	Control procedure, record and MSDS management of chemical substances	12

\* The above supplier's non-conformance types have been improved through task implementation (improvement rate: 100%).

**Major Activities**

**Support for CSR Management Capabilities of Suppliers/ Subsidiaries**

We conduct production company-led CSR risk management training to help our suppliers carry out self-assessments and implement improvement processes. While enhancing our CSR management capabilities by training overseas purchasing managers on CSR risk assessment and management processes, we are also providing them with supplier CSR management training to establish a system to manage the CSR risks of overseas suppliers. The managers from 8 subsidiaries in China and other Asian regions participated in the training conducted on the requirements for CSR management and self-assessment and on-site assessment processes while organizing on-site practice and best practice training at the local suppliers in China. An labor, human rights, safety health, and environment after completing the CSR management training, we collected feedback including requests for regular/ advanced training courses, which will be reflected in our future training. In 2020, we plan to expand our CSR management training for suppliers to subsidiaries in Vietnam, Thailand, Poland, and Mexico as part of the group training for suppliers in connection with on-site assessment.

Advanced CSR Training in China



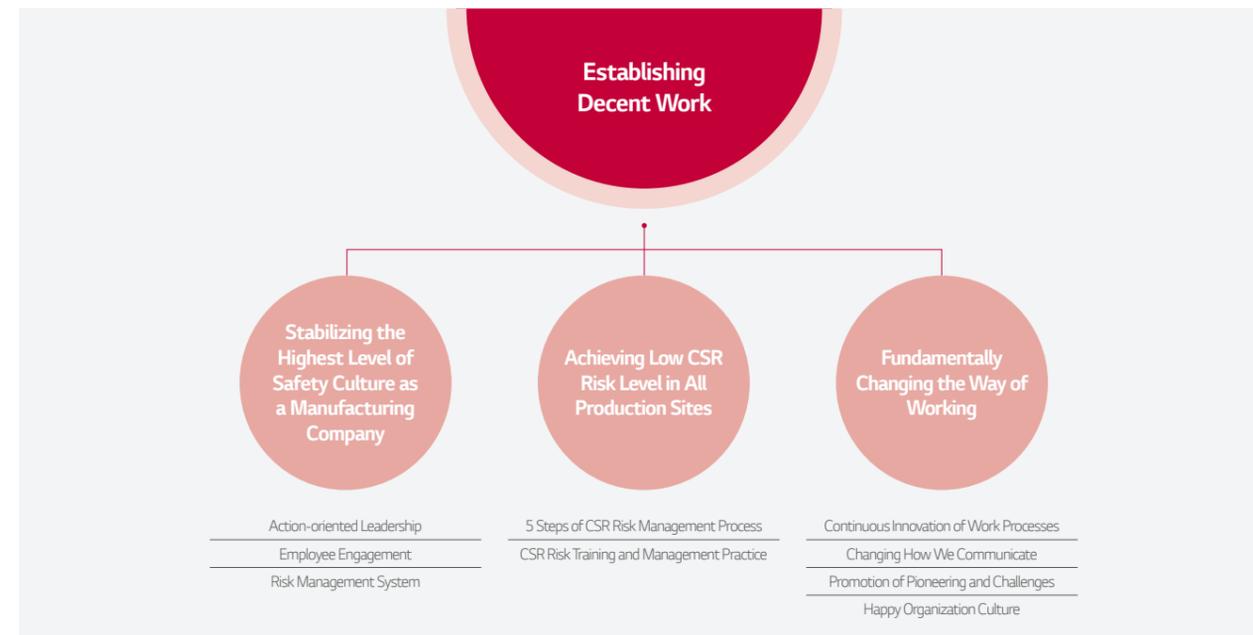
2019 Status of CSR Risk in the Supply Chain by Region

	Classification	2018	2019
Korea	No. of Training Sessions	2 Sessions	2 Sessions
	No. of Companies	584 Companies	457 Companies
	No. of Participants	634 Persons	529 Persons
Overseas	No. of Training Sessions	-	3 Sessions



# Our Future with Decent Workplaces

LGE is committed to creating a safe working environment with a healthy work-life balance to increase employee satisfaction and create a better value for customers. Based on the LG Way, we are creating a workplace where our employees are happy and communication is promoted, and maintaining our market leadership while minimizing industrial disasters and raising safety awareness. We also support employees' healthcare and mental health through various programs. In addition, we conduct self-assessment to reduce CSR risks in the areas of labor, human rights and ethics across the entire supply chain. We will continue to promote a healthy work-life balance and create a sustainable working environment by proactively managing CSR risks.



## Target Achieving the Highest Level of Safety Culture as a Manufacturing Company (by 2030)

In order to promote a safety culture where we consider not only our own personal safety, but also the safety of coworkers, we have introduced various activities and systems with the goal of establishing the highest level of safety culture in the manufacturing sector (independent level) by 2030. The safety culture indicators are assessed through executive and employee interviews and company-wide surveys, and areas of improvement are identified and used to enhance our safety practice. In 2019, our safety culture index rose 0.3 points from the previous year to 3.3 points (out of 5.0 points), and we plan to increase the score to 3.5 points by 2021. Going forward, we will continue to strive to achieve the highest level of safety culture in the manufacturing sector by taking various initiatives with the focus on 'Action-oriented Leadership', 'Expanding Employee Engagement' and 'Improving the Risk Management System'.

## Major Activities Action-oriented Leadership

**Action-oriented Leadership**  
LGE recognizes the safety environment as a cornerstone for corporate management and sustainable growth, with managers actively leading the promotion of a culture of safety awareness. Starting in 2019, the CFO Safety Environment Committee and CEO Management council have been held to actively reflect management decisions and objectives. Meanwhile, at the monthly business meetings of each business division, we carry out the Safety

Talk session as an ice-breaker for the main issues of the safety environment. On 'Safe Environment Day', which is the first Tuesday of every month, managers of each Korean and overseas worksite conduct inspections using the Six Safety Principles Checklist, identifying risks in business operations, making improvements and raising safety awareness.

## Major Activities Expanding Employee Engagement

### Safety Awareness Campaign

LGE is running various employee engagement campaigns to raise safety awareness. As part of the campaign, we held a photo contest to promote safety culture in the working environment and daily lives of employees. We encouraged employees to participate in the safety slogan contest and used the winning slogan 'Your safety score is the family happiness' for the safety campaign. In particular, various contents including animations, cartoons, and brochures that promote the Six Safety Principles are used for promotion and the production of campaign materials.

### LGE Six Safety Principles



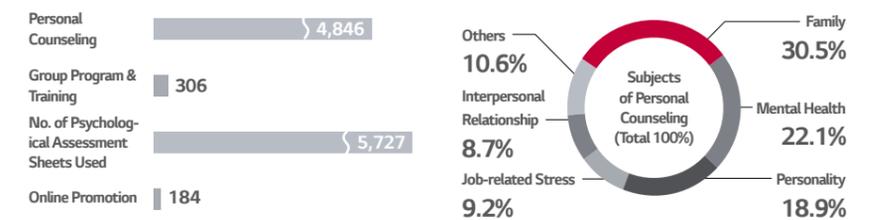
## Participatory Safety Training (Korea)

LGE has built Safety Experience Centers at its worksites in Seoul and Gumi, and the Production Technology Center and Science Park, where its employees can participate in safety training and learn how to recognize and prevent risks. The facilities provide safety experience training programs designed to minimize risks at the workplace, including VR experience, facility safety, CPR, and fire evacuation and to enhance the response of our employees. After each training session, participants are asked about the level of satisfaction and achievement for more effective application into practice and prevention of disasters.

## Psychological Counseling Center (Korea)

LGE established a psychological counseling center to help employees solve and deal with personal concerns and psychological issues they have in their daily lives. The counseling sessions are designed to help the employees focus on their job and improve their work values. In addition to handling personal grievances, the program provides consultation for interpersonal relations and communication, stress management, and leadership to support organizational activities and improve productivity. We also provide a variety of family programs, such as therapies for couples and children to promote a healthy work-life balance.

### 2019 Psychological Counseling Operation



## CASE. Employee Safety/Healthcare Crisis: Response to Infections Disease

For employee health and safety, LGE operates crisis response standards for infectious diseases. The standards are divided into four stages: Attention, Caution, Warning and Serious. We take measures to efficiently respond to possible incidents through the operation of a situation room at each business site. In particular, in 2020, we took staged measures to prevent the spread of COVID-19.

### LGE's Key Responses to COVID-19

- Post and share control room banners and daily progress
- Establish and distribute company-wide response guidelines
- Monitor the status of tested/confirmed cases and their conditions in Korean and overseas business sites
- Install and operate thermal imaging cameras at all worksites
- Distribute hand cleansers in all public areas and lobbies
- Distribute and mandate masks on commuter buses
- Restrict the use of group facilities (e.g. fitness centers, cafes, sports facilities)
- Ensure alternate work duties/shifts and install table screens
- Attach antibacterial films on the elevator buttons

**Major Activities**

**Improving the Risk Management System**

**Risk Rating in the Production Process**

LGE evaluates the risk of fire and accidents in its production process and categorizes the levels of risk into Level I-V in order to minimize them. By analyzing accidents and risk factors at each production stage, we establish a safety management system and define the directions and tasks for improvement. With the focus on managing the reliability of safety systems in high-risk facilities, and improving the anti-explosion systems in worksites handling flammable gases or liquids, we are working towards achieving Safety Level II or higher for all our worksites.

**Risk Levels in the Production Process**

Level	Risk Index	Improvement and Management
V Critical	4.1-5.0	Discontinue work for immediate improvement
IV Serious	3.1-4.0	Apply limitation and take necessary measures for improvement
III Dangerous	2.1-3.0	Make improvement to reduce risk
II Manageable	1.1-2.0	Conduct maintenance and make improvement where needed
I Safe	0-1.0	Maintain the status quo

**Safety Management in the Supply Chain**

In response to a growing regulatory demand for safety environment and social responsibility, LGE manages the safety of its suppliers. We are establishing the foundation for a safe supply chain through various support systems, such as checking regularly the safety environment of our suppliers, safety practice pledges, and qualification systems for the safety education of workers. If a supplier tries to hide any major accidents, we immediately terminate our contract. We also introduced an evaluation system in the areas of safety before signing the contract, making sure to minimize risks and promote safety in our supply chain.

**Establishment of Safety Specification Standards**

We established safety standards for common facilities with a high level of risk to prevent accidents in the production process. Safety measures are implemented for each high-risk facility including press, transfer machine, lift, and safety guards, along with safety standards for equipment operation and introduction. We also plan to distribute and educate safety specification standards as well as non-conformance cases across the company, and expand the targets to include quality test and R&D equipment as part of our efforts to raise the safety level of the overall process.

**Target**

**Achieving CSR Low CSR Risk Level in All Production Sites (by 2020)**

Recognizing the negative impact of CSR issues on the operation process, we manage the risks of labor, human rights, environment, ethics, and suppliers at all production sites on an ongoing basis. After joining the EICC (Electronic Industry Citizenship Coalition, currently known as Responsible Business Alliance) in 2010, we established a 5-step CSR risk management process using RBA's self-assessment tool. Through the process of target selection, in-depth self-assessment, on-site assessment, consultation for improvement, third-party review, and progress monitoring, we preemptively identify and improve CSR risk factors at our production sites around the world. In particular, LGE manages CSR risk management processes in all production sites under the supervision of the CSR team, and designates personnel responsible for CSR at each business site. As of December 2019, we achieved 100% CSR Risk Stability Rating at 38 of our worksites around the world, and conducted pilot self-assessments on three new worksites in the US. In 2020, we aim to conduct self-inspections (including at our US production sites) and improve our management systems to enable effective non-face-to-face inspections.



On-site CSR Risk Inspection

**Major Activities**

**CSR Risk Management**

**5-Step CSR Risk Management Process**



STEP 1 Target Selection	
Production Sites	All production sites (38)
Suppliers	1st-tier suppliers with over KRW 100 million of purchases in the previous year (1,683 suppliers from 31 countries)
Call Centers	7 in Korea, 10 in other countries
Logistics Centers	9 in Korea, 2 in other countries
Contractors	Suppliers with over KRW 100 million of purchases in the previous year and potential business dealing for next 2 years (31 suppliers)

**STEP 2 Self-Assessment**

Since 2011, we have conducted CSR risk assessments using the RBA SAQ (Self-Assessment Questionnaire) for all of our Korean and global production sites. The potential risks identified through the assessment are registered to encourage the worksite to make improvements. Each worksite can be provided with guides including improvement planning based on the results of self-assessment through the in-house IT system (PU-SRM).

**i-SAQ (In-depth Self Assessment Questionnaire)**

To improve the reliability of self-assessment, we developed i-SAQ (In-depth Self-Assessment Questionnaire) based on the RBA's on-site assessment manual. The i-SAQ consists of a total of 81 items (32 items for labor; 22 items for safety and health, 16 items for environment, and 11 items for ethics/suppliers) and it is updated annually according to the revision of the RBA Code of Conduct and on-site situations.

**2019 Self-Assessment Results**

	All	Labor/Human Rights	Safety & Health	Environment	Ethics/Suppliers	No. of Worksites
Korea	○	○	○	○	○	7
China	○	○	○	○	○	12
America	○	○	○	○	○	5
Europe & CIS	○	○	○	○	○	4
Middle East & Africa	○	○	○	○	○	6
Asia	○	○	○	○	○	4

○: Low Risk ○: Moderate Risk ●: High Risk

100% Safety rating for all worksites



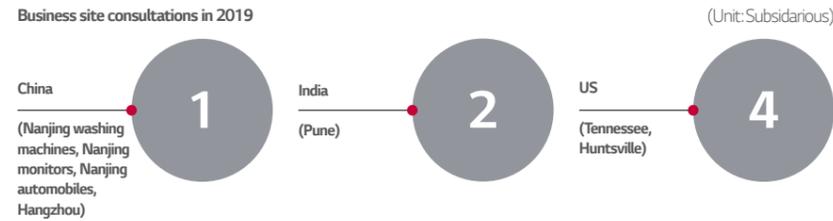
(Unit: Worksite)

	Stable	Poor	Unstable
Labor/Human Rights	36	2	0
Safety and Health	37	1	0
Environment	38	0	0
Ethics/Suppliers	35	3	0
Total	38	0	0

\* Excluding 3 new US worksites out of 41 worksites

**STEP 3 On-site Assessment & Consultation for Improvement**

LGE identifies worksites with a high level risk based on the results of self-assessment and conduct on-site assessment and consultation for improvement by analyzing the impact and the seriousness of the risks on business.



**STEP 4 Third-Party Review**

After self-assessment and on-site due diligence, we conduct independent third-party reviews to ensure the objectivity of the assessment and improve the CSR risk management capabilities of each worksite. In 2019, a total of 10 third-party reviews including RBA third-party assessments, were performed at seven overseas sites at the request of customers.

2019 Results of Third Party Review

Category	Review Details	Non-conformities	Improved	In Progress
EESH	Safety of mechanical facilities	2	1	1
	Health and safety communication	2	-	2
	Emergency preparedness	17	7	10
	Occupational safety	1	1	-
	Industrial disaster and disease	2	2	-
	Food, hygiene and residence	2	2	-
	Hazardous substance	4	2	2
Labor	Physical labor	1	-	1
	Freedom of association	1	1	-
	Working hours	13	9	4
<b>Total</b>		<b>63</b>	<b>43</b>	<b>20</b>

**Cases of Risk Improvement**

**1. Improving Social Insurance Payments**

In LG Electronics' production operations in China, there was a case where a supplier arbitrarily failed to pay mandatory social insurance. We reviewed all social insurance payments and sent official letters to those that failed to make payments. We also specify the condition in the contracts when we renew them.

**2. Improving Contractor Management**

At production sites in Poland, there have been cases where management standards with respect to working hours, wages, and workplace safety for contract workers on production lines has fallen short of international standards. In response to this, we established a process that complies with LGE EESH and HR policies and management standards for contractors' employees.

**STEP 5 Progress Monitoring**

We take prompt measures to improve any non-conformance issues identified through self-assessment, on-site due diligence, and third-party review while monitoring the progress on a regular basis. When it comes to consistent or common issues, or non-conformities that are difficult to deal with at a workplace, we take a corporate-wide approach through cooperation with relevant teams and establish of policies and guidelines.

**Expanding CSR Risk Training and Awareness**

LGE communicates the risk management policies of head office through CSR managers and shares CSR risk practices while organizing international conference promotion training and workshop to raise awareness on CSR management. We are also dedicated to improving the decision-making on risk management through

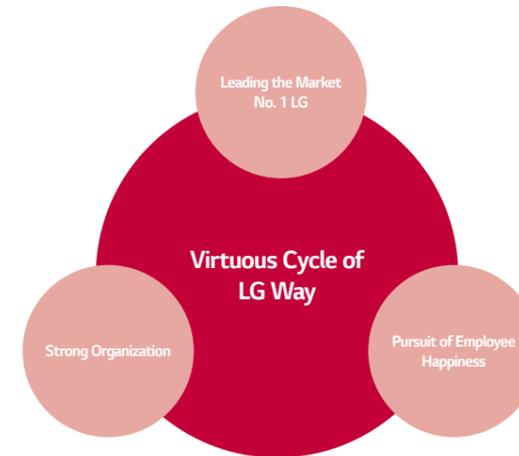
manager training for new corporate head and expatriates. In 2019, we organized specialized training for CSR managers in the U.S to enhance their expertise for effective CSR risk management at worksites.

**Target**

**Improve Efficiency and Work-Life Balance through Fundamental Change to the Way of Working**

Recognizing that employees' happiness and satisfaction lead to our sustainable growth, we set the basic direction and goal of the organizational culture as creating a virtuous cycle of organizational and employee happiness. Since 2019, we have been committed to creating a culture where we deliver strong value for customers and win their hearts based on the LG Way. Going forward, we will continue to realize this by aligning our corporate growth vision with the personal ones of our employees.

LGE Organizational Culture



Directions for Improving Organizational Culture

- Continuous Innovation of the way of working
- Making Changes for ongoing and mutual Communication
- Encourage trying new things and challenge-seeking
- Foster employee happiness and organizational strength



"Online Visible Radio", a new communication method for the online generation

**Major Activities**

**Continuous Innovation of the Way of Working**

**Work Processes, Meetings and Reporting**  
LGE has introduced a smart work process across the organization to enhance efficiency and promote specialized work improvement activities suited to the conditions of each division. With RPA (Robotic Process Automation), we are automating simple and repetitive tasks. We are also running a campaign to simplify meetings and report processes and introducing such tools as M Messenger, G Screen, and Webex to support online meetings and information sharing. In addition, we are strengthening our competitiveness by implementing a voice mail reporting system and Worktalk, an ongoing employee performance management tool.

Work Improvement Activities by Company

- H&A Company**  
'Smart working committee' for customer value and focus on fundamental tasks
- HE Company**  
Disseminate 'Don't & Do' employee guidelines for cultivating No.1 DNA
- MC Company**  
Holding a cross-top meeting to improve the way of working
- VS Company**  
Operating work processes specialized for the auto parts sector and improving its efficiency
- BS Company**  
Establishing B2B-based thinking and improving the way of working to strengthen the B2B competitiveness

**Major Activities**

**New Way of Communication**

**CEO & Managing Director On-site Seminar**

To encourage open, bottom-up communication, LGE management collects feedback and input from all levels, such as through special lectures, conversations and on-site visits between executives/leaders and employees. During CEO On-site Conversations, the CEO of LGE visits worksites to freely communicate with employees, encourage generating new ideas to create customer value and show appreciation for employees' contributions. Meanwhile, the Presidents of each Company support mutual understanding and share creative ideas through open communication with younger generations, such as through the H&A Talk Pub and BS Understanding & Communication. We will continue to strengthen communication between management and employees and together bring changes to build customer loyalty.

**Corporate-wide Communication Forum 'Growth and Change'**

We have created the 'Growth and Change' Forum so our employees can express and share their ideas on organizational change, work process improvement, and new product ideas. Each relevant department promptly reviews ideas, responds, and takes appropriate action to help our employees directly drive change and build a competitive organizational culture.

**Employee Satisfaction Survey**

LGE conducts the LG Way Survey once a year to gain insight into employees' levels of satisfaction and their needs. In 2019, the LG Way Survey was updated with a focus on the core LG Way value of 'Customer Value Creation'. Each team leader and member were shared the survey results and carry out annual improvement activities to create an organizational culture to 'win customers' hearts'.

2019 Results of Employee Satisfaction Survey

(Unit: Score)

**Korea Staff**



**Korea Operators**



**Overseas Staff**



**Major Activities**

**Encouraging Diverse Challenges of Employees**

**LG Idea Pot**

LG Idea Pot is a crowd sourcing platform where employees use collective intelligence to develop new products, solve various technical challenges and create value for customers. Through the platform, employees can freely present their ideas, such as solving technical issues like increasing the voice recognition performance of robot cleaners, or participating in product naming contests. The collected ideas are used to develop innovative products.

**The Challenger**

Through the Challenger program, LGE established a system that encourages creative ideas to lead to product development. The collected ideas are shared with other employees and assessed in a transparent manner, contributing to our customer value-based product development.

**Software Hackathon**

The Software Hackathon is an idea contest for software developers to share their expertise and experience to solve software issues by utilizing collective intelligence. The software developed through the contest is shared and used on a dedicated online forum for developers.

2019 Software Hackathon



**Idea Center**

LGE's CTO Division, which leads advanced R&D, reviews creative ideas for technology, products and services, submitted by research personnel, and supports the idea in commercializing their proposal. In 2019, 'LG HomeBrew', a home beer brewing machine developed based on the idea won the best product award at CES 2019.

**Major Activities**

**Job Satisfaction and Strong Organization**

**Caring Programs for Each Life Stage**

LGE provides employee caring programs based on their position and age to enhance their satisfaction and happiness. We offer gifts to employees with children entering elementary schools and taking a college entrance exam, and various welfare programs by company including family events, couple healing camps, and family trips.

Children's Day Family Event



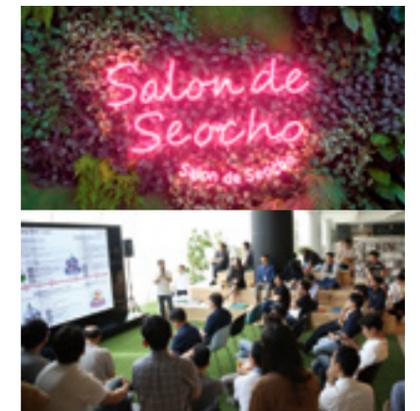
**Healthy Work-Life Balance**

Since the introduction of a 40-hour work week in our Korean business sites, LGE has implemented a flexible work schedule system with the aim of improving productivity and work-life balance. With the Smart Vacation program which encourages employees to take 2 consecutive weeks off after finishing a project, we help them take plenty of rest and focus on their job. We also designate a 'Day without Leader' to give all leaders, including executives, an opportunity to recharge, and to create a self-directed work environment where employees take a more initiative.

**Positive Attitude and Open Communication**

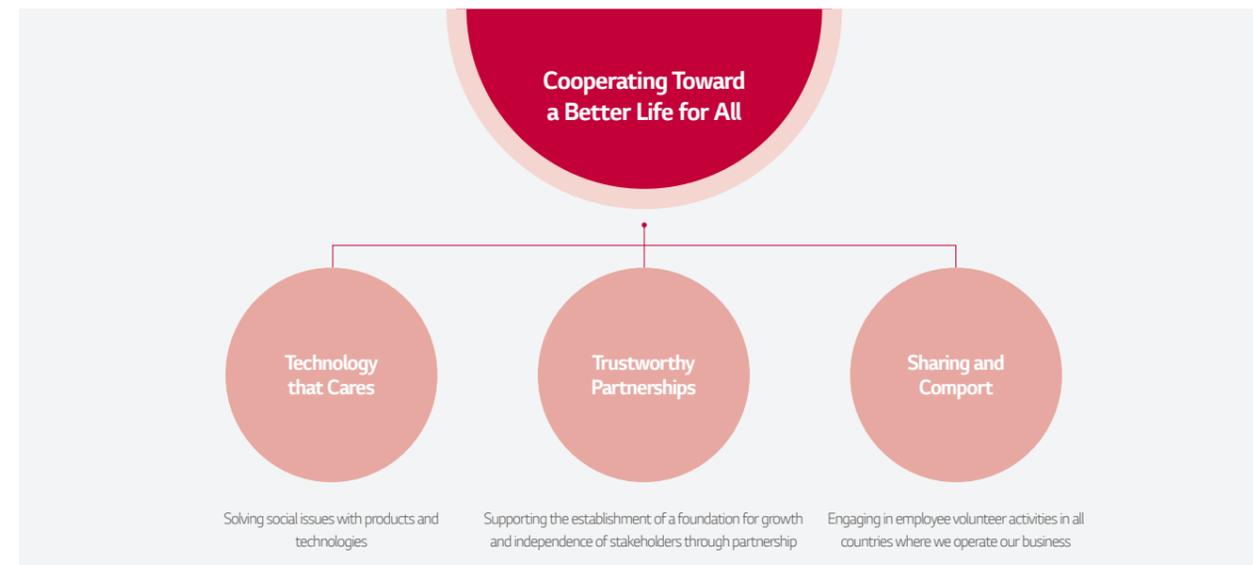
LGE is running a positive mindset campaign focusing on the keywords of Trust, Pride, and Fun to encourage compliments, mutual respect and positive culture among employees. We are contributing to creating a positive culture among employees through various programs such as 'LG Elegance Guide', 'Good Job, Everyone' and 'Thank You Tree'. We are creating an open work space that strengthens communication and teamwork among our employees. At the 'Salon de Seocho' and 'Darak' on the LGE Campus, all employees can communicate and share creative ideas freely. Thanks to this space, our employees continue to communicate in a positive manner and create a happy workplace for themselves.

Salon de Seocho



# Our Future with Social Contribution

LG Electronics is working alongside local communities and continuing its business activities across 100 Korean and global businesses sites, delivering products and services in diverse fields such as home appliances, electronics, and mobile devices. Under the vision of ‘cooperating toward a better Life for All’, we are carrying out sincere social contribution activities with the realization that it is not only economic achievements that are important, but also that promoting mutual growth with local communities plays a significant role for our company. In particular, we strive to solve social problems through our products and technologies. Through continuous operation of communication channels, we listen to stakeholders’ expectations and reflect them in our social contribution activities. Furthermore, we support diverse systems and social contribution programs so that all members of LG Electronics can lend a hand to their neighbors and practice a culture of voluntary sharing. As a global corporate citizen, we will continue to fulfill our social responsibilities to become a company that promotes sustainable growth with the local community, and is loved by our customers.



**Target**  
**Technology Technology that Cares: Solving social issues with products and technologies (reach 300,000 beneficiaries in total) (by 2030)**

LGE is committed to solving social issues and promoting sustainable growth with its innovative technology and products. Through organic cooperation of product planning, service, and marketing, we identify the challenges that our community faces and provide innovative products and services to solve them. LGE has established a process for selecting social contribution activities to deliver community-focused technologies to 300,000 people by 2030. We select and manage strategic CSR countries every year, and strive to foster human resources to discover and promote our innovative technologies that cares.

**Social Contribution Selection Process**  
 When selecting a new social contribution program, we listen to input from the local community to identify social issues and review the program for alignment with our business operation for implementation.

**Selection and Management of Strategic CSR Country**  
 We select strategic CSR countries based on UN Human Development Index, GDP growth rate, and business indicators for implementation of social contribution programs.

**Fostering Human Resources Through Technology that Cares**  
 To promote LGE's outstanding technology in solving issues concerning regional employment and youth independence, LGE proactively collaborates with internal and external experts to provide education on technology relating to the Fourth Industrial Revolution, such as artificial intelligence and IoT.



Beneficiaries of Technology that Cares by Region (Unit: Person)

Region	Key Programs	2017	2018	2019	Remarks
Korea	Washing machines for fire resistant suits, Sharing Love Products	20	48	6	(No. of fire stations and agencies)
Middle East & Africa	Free laundry service, science hall, vocational school	24,596	76,540	13,243	Ethiopia, UAE, Nigeria, Iran, Pakistan, etc.
Asia	Desalination Project, Inverter Class, IT Library, etc.	2,650	4,420	50,440	Bangladesh, Vietnam, Nepal, Indonesia
Europe	Greece LG & ITHACA Laundry	3,157	4,012	300	Greece
Central South America	Brazil Study Room Renovation Project	-	180	180	Brazil
Total*	-	30,403	85,152	71,032	Including 6,869 people for other activities in 2019

\* The number of beneficiaries in Korea are excluded due to differences in the unit.  
 \* The number of beneficiaries of free laundry in 2018 has been recalculated.

**Major Activities**

**Solving social issues with products and technologies**

**Korea: Donation of Washing Machines for Fire Resistant Suits**

LGE donated 20 washing machines for fire resistant suits of firefighters to six fire stations under the Gangwon-do Fire Department, which put out a large forest fire in the Gangwon area in April 2019. Previously, the firefighters had to hand wash their clothing or use regular washing machines to remove soot. Recognizing the difficulties, since 2017, we have developed a special washing machine for firefighters based on our expertise in home appliance. The washing machine contributed to the improvement of the firefighters' working environment by featuring the wash mode for 'fire resistant suit', and was certified by the KFI(Korea Fire Institute) through product inspection and certification test.



Donation of Washing Machines for Fire Resistant Suits to the Gangwon-do Fire Department in 2019

**Vietnam: Desalination Solution Support**

Residents in the Mekong delta region in Vietnam were having difficulties with drinking water and agricultural water due to the salt water from the rivers. To help them with the problem, LGE's Vertical Product Development Team developed a mobile desalination system that combines our energy technology with SME's desalination technology at the request of the Ministry of Environment and UN Habitat in Vietnam. Thanks to the system, 200 people who were affected by salt water in the river were provided with drinking water and agricultural water which solved their water problem. Then, by establishing a stable operation, we managed to get additional support from a French company contributing to the welfare of the local community.

**Global : LG IT Library**

Children and adolescents from low-income facilities around the world are exposed to socially vulnerable environments such as unstable employment, drug addiction and crime. To help solve these issues, we built an IT library to improve access to digital infrastructure. The library provides a smart education environment for children and adolescents by leveraging our excellent IT products and infrastructure. For the last three years from 2018, we have built 30 IT libraries around the world as part of our contribution to improve educational environment and IT capabilities of children and adolescents.

LG IT Library Opening Status

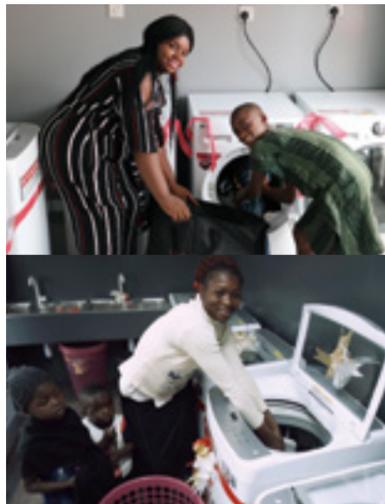


**USA: Contributing to the Promotion of Youth Happiness**

LGE's U.S. subsidiary runs the 'Life's Good: Experience Happiness' social contribution activity, which contributes to the emotional wellbeing and happiness of American teenagers. Unlike traditional social contribution activities that have had similar objectives, this program helps young people learn methods to develop self-control and find sustainable happiness by themselves. In 2019, a total of 2.7 million teenagers participated, and we are moving forward with the eventual goal of achieving 5.5 million youth participants."

**Nigeria: Free Laundry Operation of Rooms**

Since 2017, LGE has operated free laundry service facilities for residents in Nigeria who are having difficulties washing their clothes due to lack of water and electricity. The facilities were built on a parking lot of the LG Brand Shop and other areas and have air conditioners, the latest washing machines, dryers, irons, fabric softeners and laundry detergents as well as an uninterrupted power supply for residents' convenient use. In December 2019, the third laundromat was opened, and as of the end of 2019, more than 25,000 people have washed over 190,000 clothing items. The project was funded by the donation of our executive officers (Executive Social Contribution Fund), which was matched by the company. In 2020, we are looking into ways to expand the project in surrounding countries as well.



Free Public Laundromat No. 3 in Nigeria

as part of our youth support program. The institute develops talents specializing in repairing home appliances and ICT. The Dubai Service Corporation in particular supports curriculum development and offers teacher training classes for new products and technologies, and provides students and teachers with opportunities to train overseas. In addition, we are active in supporting the independence of outstanding talents by granting them internship and full-time job opportunities at our Dubai service office.



Graduation Ceremony of the LG-KOICA Hope TVET College

**2019 Target and Performance**

Region	2019 Target	2019 Performance
No. of Students	75	102
No. of Graduates	60	72
TVET Completion	90%	91%
Employment & Startup	90%	100%
No. of Academy-Industry Partners	18	36
Participation in Job EXPO	-	2 times

- Instructor training program held three times
- Business permit obtainment and pilot operation

**2020 Targets**

- Select more than 20% of the students from vulnerable groups
- Achieve 90% in the acquisition of national certifications
- Achieve 90% or more graduates getting higher education or jobs
- Build a foundation for sustainable school operation

**Bangladesh: Inverter Class**

According to the statistics from the ILO (International Labor Organization ILOSTAT database), youth unemployment rate in 2019 reached 11.9%, causing a serious social issue in Bangladesh. In particular, youths with disadvantaged backgrounds who experience difficulties in maintaining economic independence are in need of help to improve their quality of life. To help solve this issue, in 2018, we signed an agreement with KOICA, a Korean government-funded agency dedicated to domestic government assistance, and the BMET (Bureau of Manpower Employment and Training) to organize the 'LG Inverter Class' as a corporate job training program tailored to their needs. The program offers air conditioner repair skills training to 40 participants every year, using a curriculum and textbooks developed by LG Electronics Singapore. They are also provided with the opportunity to join the internship program of the LG Service Center in Bangladesh to help them internalize their technological competencies and build a foundation for self-reliance.

**Ethiopia: LG- KOICA Hope TVET (Technical and Vocational Education and Training) College**

LGE established the LG-KOICA Hope TVET (Technical and Vocational Education and Training) College in Ethiopia in cooperation with the local government of Ethiopia, the KOICA (Korea International Cooperation Agency) and NGOs

**Target**

**Trustworthy Partnerships: Supporting the establishment of foundation for growth and independence of stakeholders through partnerships (Reach 100,000 beneficiaries accumulated) (by 2030)**

By forming partnerships for social contribution with central and local governments, NGOs, and international organizations, LGE supports the growth and independence of its stakeholders while reflecting their input in its CSR programs. In countries where our affiliates operate, we formed a council to select regions with a high level of importance from the group's perspective and jointly promote programs that can demonstrate the different capabilities of each affiliate. In 2020, we established a standard for selecting partners for our social contribution programs and share it with Korean and overseas worksites to form more transparent and professional partnerships. In addition, we review and update our rules for donation and discretion of social contribution activities on a regular basis. We will continue our efforts to ensure that the results of cooperation with our stakeholders will benefit more than 100,000 people by 2030.

**Major Activities**

**Developing expertise and creating synergy through partnerships**

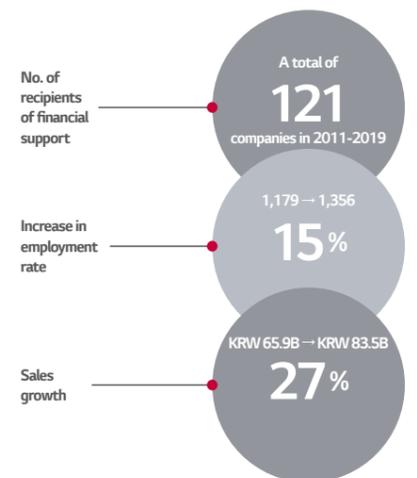
**LG Social Campus: Socio-economic Support**

LG Social Campus is a socio-economic platform that provides support in financial, workplace growth and talents developments, for developing talents and creating a successful model for social enterprises in the environmental sector. Through this platform, social enterprises can receive supporting fund interest-free loans, as well as independent office workspaces at free of charge. In addition, LG Electronics' labor union provides consulting services for improving corporate productivity through on-site technical support by our experts. We also support the growth of social enterprises in diverse ways, through training, seminars, networking, overseas training, marketing and public relations.



2019 LG Social Fellows Festival

**2019 LG Social Campus Performance**



**Vietnam: Supporting Disadvantaged Children, Adolescents and Young Adults in Hai Phong**

In Hai Phong, Vietnam, the group affiliates including LGE, LG Display, LG Innotek, and LG Chem jointly entered the market and operate business in each industry. They also contribute to strengthening the economic independence of children and adolescents from vulnerable groups to promote mutual growth and the development of local communities. LGE also offers its financial support for various CSR programs including building IT libraries in vocational and technical colleges, awarding scholarships, job skills training, and building libraries for local children and adolescents.

**Beneficiaries of 'Trustworthy Partnerships' by Region**

(Unit: Person)

Region	Key Programs	2017	2018	2019	Remarks
Korea	CSR College Student Supporters' 'Love Geine', LG Social Campus	53 / 22	990 / 30	937 / 27	(Unit: No. of Participants / No. of Companies)
Middle East & Africa	Dead Sea Marathon, LG Hope Village	8,600	11,349	1,300	Jordan (excluding 2019), Ethiopia
Asia	Mobile Medical Support, Global IT Challenge	55,127	51,239	30,553	Myanmar, Cambodia, Bangladesh, Vietnam, India, etc.
	Relief support for Marawi, Relief support for areas affected by the volcanic eruption		30,000	23,000	Philippines (Unit: No. of Relief Supplies)
North America	Life's Good: Experience Happiness	531,200	1,350,000	2,720,000	US
Total <sup>1)</sup>	-	594,980	1,443,578	2,769,656	Including 1,686 people who joined other activities in 2019

1) Due to different units, the total number of Korean companies and the number of relief supplies for the Philippines were excluded.

**Global IT Challenge for Youths with Disabilities**

Since 2011, LGE has organized the 'Global IT Challenge (GITC)' to promote the development of IT expertise for youths in developing countries, support the establishment of a foundation for career advancement, and improve public stigma for disabilities in participating countries as 'the only IT festival for youths with disabilities' in the world. GITC is participated by youths with disabilities (e.g. physically challenged, hearing, vision, and development) from 20 countries for the IT Paralympiad consisting of 2 individual and 2 group categories that breaks the boundaries of disability, religion, culture and countries. In 2019 in particular, it was selected as the official event of the 'Korea-ASEAN Special Summit' and was held in Busan, and the event contributes to creating a base for international cooperation and building of partnerships with government authorities and experts of each country.

**Korea: CSR College Student Supporters 'Love Genie'**

In 2014, as part of social contribution program with stakeholder engagement, LGE organized 'Love Genie', college student supporters who plan and conduct CSR activities. With the supporters, we offer education and mentoring on various aspects of CSR including labor, human rights, environment, and social contribution. We also provide opportunities for them to visit our overseas CSR sites. As of 2019, there have been a total of 204 participants with 6 sessions and it has established itself as a great opportunity for communication for those interested in CSR activities.



Launching ceremony for 6th Love Genie program in 2019

**Target**

**Sharing and Comfort : Employee Volunteer Activities in All Countries We Operate (by 2030)**

As part of our commitment to social responsibility and creating better future, our employees join their efforts to giving back to our local community. We continue to adhere to the 'Social Contribution Charter' declared in 2005 and the 'Social Contribution Principles' established by LG Corporation in 2012, while developing various programs and campaigns to support employee volunteer activities and share with the local community of all countries we operate our business by 2030. With such CSR programs as weekday leave for volunteering, employee volunteer group, and Life's Good Day, we promote the culture of sharing with our employees. We have also established crisis response system and distribute a response manual to our service engineers share our expertise and employees skills for emergency situations. In addition, through the global expansion of programs that were established in Korea, such as the 'Global Blood Donation Campaign' and 'LGE Employee Volunteer Day', we provide our overseas employees with opportunities to participate in these sharing activities. Meanwhile, our executive officers raise a fund to support our CSR programs and lead the transparent employee sharing practice by organizing the Executive Social Contribution Fund Committee in the first and second halves of the year.



"Bike To Work Day" to Celebrate World Environment Day (Europe)

**Beneficiaries of Sharing and Comfort by Region** (Unit: Person)

Region	Key Programs	2017	2018	2019	Remarks
Korea	Employee Volunteer Group, Blood Donation Campaign, 1-Person 1-Activity, Weekday Leave for Volunteering	3,084	4,252	4,093	
Middle East & Africa	Veteran Support, etc.	68	248	492	Ethiopia
Asia	LG Ambassador, Vacation Together	6,000	7,000	12,800	Bangladesh, China
<b>Total</b>	-	9,152	11,500	129,264	Including 111,879 people who joined other activities in 2019

**Major Activities**

**Employee Engagement CSR Program for the Development and Prosperity of Local Community**

**Global Blood Donation Campaign**

Since 2004, LGE has been running a blood donation campaign to support medical expenses by matching the grant with the number of employee donors in partnership with the Korean Red Cross. Through this campaign, KRW 10,000 is donated per person whenever employees and customers of LGE's global businesses participate in blood donation. Moreover, KRW 1,000 is donated for each person who participates in support through social networks, such as the LGE blog, Twitter, and Facebook pages. All of the money raised will go towards treatment and rehabilitation for disabled and underprivileged children. In 2019, a total of 7,331 customers (Posted photos of donor confirmation: 182, Liked: 7,076) joined the campaign and we gave away the products from social companies as a reward for their participation. In India, to celebrate the 22nd anniversary of the foundation of LGE India, stakeholders including corporations, customers, service centers, and influencers from 71 camps in 47 cities donated their blood as a token of our appreciation for the support and loyalty from our customers. Moreover, 22 businesses in 19 countries, including Russia, China, and Ethiopia, participated in the global blood donation campaign.

"No. of Participants in the Global Blood Donation Campaign (cumulative) ('06-'19)"

**25,219**

(Korea: 10,302, Overseas: 14,917)

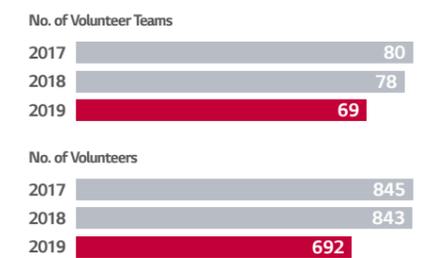


LG Global Blood Donation Campaign (Russia)

**Korea: 'Life's Good' Employee Volunteer Group**

In 2010, LGE organized an employee volunteer group that donates their talent to give back to local communities. Every year, the group joins talent donation activities such as product maintenance, free repair, science education for children, and development of interactive chat-bots for independent activists. We also provide financial support for these activities to encourage our employees's participation. In 2019, a total of 692 employees volunteered to support our CSR program and the idea of sharing.

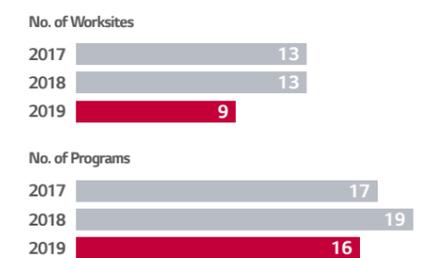
**Employee Volunteers by Year** (Unit: Team / Person)



**Korea: Worksite-Specific Programs**

LGE engages in worksite-specific programs to identify the needs and social challenges of local community and social welfare facilities, and contribute to solving these issues. In 2019, we organized 16 programs at 9 worksites, through which we raise awareness of our stakeholders.

**Worksite-Specific Programs by Year** (Unit: EA)



**Major Programs**

Consulting for improving local companies' quality/productivity, adaptation training program for the disabled, sharing meals for the underprivileged

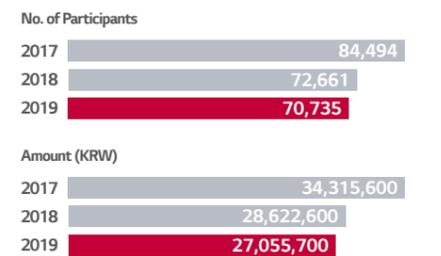
**Global: LG Global Volunteer Day**

In 2010, LGE designated the World Environment Day (June 5) as 'Global Volunteer Day', and organize activities to protect environment led by the labor union with the participation of employees from around the world. To celebrate the 10th anniversary in 2019, volunteer activities were organized at our global worksites for five months while in Korea, 1,959 employees and family members from 117 organizations joined the volunteer activities and donation for environmental causes through '1-Person 1-Activity' program. Our overseas subsidiaries are engaged in special volunteer activities on the theme of environmental cleanup. In Europe, the Bike to Work campaign was held to prevent environmental destruction and global warming, while at New York Times Square and Piccadilly in London, videos of our partnership with UNEP have been shown for over nine years to raise awareness of environmental protection.

**Korea: Donation Menu**

To encourage a culture of employee donations, we organized the 'Donation Menu' campaigns. Since 2011, we have supported our employees to join the cause by operating the campaign once every other month. If employees choose an item on the donation menu, the value of the selected side dishes will be contributed as donations. In 2019, 70,735 employees participated, raising KRW 260 million as of the end of 2019. Moving forward, LGE plans to continue to create a culture of donation that can be easily practiced through small actions and interests from our daily lives.

**Donation Menu Participants & Donated Amount** (Unit: Person / KRW)





# 3

## SUSTAINABILITY FACT BOOK

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# Corporate Governance

LG Electronics' BOD (Board of Directors) functions to identify the demands and expectations of global stakeholders regarding transparent governance, while securing the core values of expertise, independence, and transparency of its operation through the Board Committees and the director appointment process. By strictly complying with BOD regulations, the Board ensures that checks and balances are in place, in addition to protecting stakeholder rights and facilitating LGE's sustainable growth through responsible driven by the board management.

## Composition of the BOD

- The BOD is composed of seven members to achieve efficiency in decision-making and the operation of meetings.
- The BOD has two inside directors, one non-executive director, and four independent directors, so that external directors account for the majority of BOD members.
- The BOD comprehensively evaluates independence, professionalism, and diversity in appointing its directors, and does not discriminate in terms of gender, race, religion, political views, culture, etc.
- Each director is appointed through the Annual General Meeting and prohibited from holding multiple positions.

## Operation of the BOD

- The BOD serves its function of managerial supervision by accurately evaluating and proposing a wide spectrum of opinions on major management issues or the execution of work by management.
- The BOD explores new growth engines and measures for corporate growth from a broad perspective, while the management focuses on its professional roles such as product and strategy development, thereby dividing major management roles.
- Independent directors are given the opportunity to participate in the business by serving as objective outside experts in monitoring and checking management.

Category	Name	Position / Major Career Experience	First Appointed in	Note
Non-executive Director	Young-Soo Kwon	COO of the Holding Company	March 2019	Chairman of the BOD Management Committee Independent Director Candidate Recommendation Committee
	Bong-Seok Kwon	CEO	March 2020	Chairman of the Management Committee
Inside Directors	Doo-Yong Bae	CFO	March 2020	Management Committee
	Joon-Keun Choi	Former Representative Director of Hewlett-Packard Korea Former President of Korea Linux Association Former Chairperson of the Global IT Enterprise Committee affiliated with Ministry of Science and ICT	March 2015	Audit Committee Independent Director Candidate Recommendation Committee
Independent Directors	Dae-Hyung Kim	Former GE Plastics Asia/Pacific CFO Former SABIC IP Asia/Pacific Commercial Finance Director	March 2016	Chairman of the Audit Committee Independent Director Candidate Recommendation Committee
	Yong-Ho Baek	Professor, Graduate School of Policy Science, Ewha Womans University Former Chairperson of Fair Trade Commission (KFTC) Former Commissioner of National Tax Service of Korea (NTS)	March 2017	Audit Committee
	Sang-Gu Lee	Professor, College of Computer Science, Seoul National University Former President of Society for e-Business Studies	March 2019	-

## Appointment of BOD Chairman

- BOD Regulations: The Chairman of the Board may be appointed from among the inside directors including the CEO, other non-executive directors, and independent directors.
- The BOD seeks to implement responsible management led by the Board and improve the transparency of its operations by appointing a Chairman that is separate from the CEO.
- The Chairman of the Board leads the deliberation and resolution of matters approved by the AGM, approval of financial statements, revision of the Articles of Association, financing, and major business matters.

## Activities of the BOD (Unit: Times, Cases; As of 2019)



## Attendance Rate (Unit: %, As of 2019)



## Expertise of the BOD

- Independent directors are appointed based on their professional knowledge and experience in relevant sectors to ensure expertise and efficiency in business management.
- Currently, the four independent directors have expertise in management/accounting, policy/administration, electronics/electricity, and advanced equipment.
- We give independent directors an overview of the company and provide training on the operation, role, and legal responsibilities of the Board to facilitate a quick understanding of the status of management.
- Independent directors visit and inspect business sites in Korea and overseas for a better understanding of the business.
- In order to enhance the expertise of the Audit Committee, we provide training on recent trends and developments in financial audits. We have also established the Internal Financial Audit Team as an organization dedicated to supporting the Audit Committee.
- We have established the Board Secretariat to support the activities of the Board and its subcommittees, and to provide the necessary support for the Board in performing their duties.

## Committees under the BOD

Category	Responsibilities and Activities
Audit Committee (Three Independent Directors)	<ul style="list-style-type: none"> <li>• Conducts audits on business matters and accounting</li> <li>• Reviews and presents opinions on matters that may affect the independence of external auditors</li> <li>• Secures independence by organizing the Committee with only independent directors</li> <li>• Secures expertise by including accounting/finance expert(s) as Committee member(s)</li> <li>• Holds the authority to request appointment, change, or dismissal of external auditors</li> </ul>
Management Committee (Two Inside Directors and One Non-executive Director)	<ul style="list-style-type: none"> <li>• Serves the purpose of responding to changes in the business environment in a flexible manner and improving the efficiency in operating the Board</li> <li>• Discusses the direction of corporate management through engagement with and feedback of shareholders and stakeholders</li> <li>• Carries out deliberation and resolution of managerial matters delegated by the Board</li> </ul>
Independent Director Candidate Recommendation Committee (One Non-executive Director and Two Independent Directors)	<ul style="list-style-type: none"> <li>• Recommends candidates when appointing new independent directors</li> <li>• Conducts substantial reviews of recommended candidates in accordance with the Commercial Act, relevant laws and regulations, and the regulations of the Independent Director Candidate Recommendation Committee</li> <li>• Secures impartiality and independence by organizing the majority of the Committee with independent directors</li> </ul>

## Status of Compensation for the BOD

(Unit: KRW million; as of 2019)

Category	Remuneration	Bonus	Total Amount	Average per Person
CEO Seong-Jin Jo	1,717	1,670	3,387	-
CFO David Jung	1,021	828	1,849	-
Independent Director	-	-	343	84

\* The above table reflects the BOD status as of 2019 and positions held by former directors. Inside directors were newly appointed in March 2020.

\* The average employee salary in 2019 was KRW 86 million

## Independence of the BOD

- We delegate decision-making rights to the BOD and business execution rights to the management in order to ensure checks and balances in the operation of the company.
- Transactions that may cause conflicts of interest between any of the directors and the company are approved only upon full consideration of the Board prior to such transactions taking place.
- The majority of the Board members are independent directors to ensure that the Board provides oversight on corporate governance and the executive management.
- The earliest appointed independent director assumes the role of senior independent director, representing the other independent directors and coordinating their opinions.

## Grounds for Ineligibility for Independent Directors

- Directors, executive directors and employees who are engaged in the regular business of the relevant company or directors, auditors, executive directors and employees who have been engaged in the regular business of the relevant company within the previous two years
- The principal shareholder, his/her spouse, lineal ascendants, and lineal descendants in cases where the largest shareholder is a natural person
- Directors, auditors, executive directors and employees of the corporation, in cases where the largest shareholder is a corporation
- Spouses, lineal ascendants, and lineal descendants of directors, auditors and executive directors
- Directors, auditors, executive directors and employees of a parent company or a subsidiary company of the relevant company
- Directors, auditors, executive directors and employees of a corporation which has a significant interest in the relevant company, such as business relations with the company
- Directors, auditors, executive directors and employees of another company for which directors, executive directors and employees of the relevant company serve as directors and executive directors

## Evaluation of the Management Performance

- Performance by the management is evaluated using Financial and qualitative indicators.
- Performance is evaluated for up to three years for the payment of bonuses.
- The criteria and methods for calculating compensation for the management are publicly disclosed.

Category	Indicators
Financial	sales, operating profit, etc.
Others	brand characteristics, future preparation, risk management, etc.

## Compensation System for the Management

- Compensation for management is paid in accordance with the criteria for the Board, taking into account the position and duties, and within the amount approved by the AGM.
- Bonuses corresponding to 0~150% of the total remuneration are paid based on the evaluation of quantitative and qualitative indicators and in accordance with the executive remuneration regulations.

# Jeong-Do (Right-Way) Management

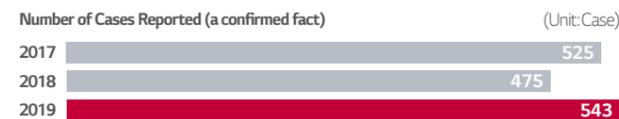
Jeong-Do (Right-Way) Management is LG's unique guideline for employee conduct, based on its commitment to fair competition and ethical management practices, providing the foundation for our thoughts and actions. Pursuant to the Code of Conduct and the Code of Ethics, our employees and suppliers strive to fulfill our social responsibilities as leading players in the global market by improving our systems, engaging in various educational and awareness-raising activities, and operating a counseling center dedicated to Jeong-Do Management.

## Code of Ethics

- In 1994, LGE established the Code of Ethics, setting direction for Jeong-Do Management practices to be observed by all employees.
- The Code of Ethics comprises the full text of the 'Code of Ethics' – the public declaration of our ethical values rooted in "customer-value creation" and "people-oriented management" – and the 'Practical Guidelines' which provides detailed guidelines on employee conduct.
- On the official LGE website, we have disclosed the Code of Ethics and the Practical Guidelines (<https://www.lg.com/global/about-our-brand#jeongdo-management>).
- As of 2019, the Code of Ethics has undergone six rounds of amendments, through which related regulations and sub-guidelines have been strengthened.
- The LGE Code of Ethics is distributed to 120 global subsidiaries so that all employees are fully versed in their ethical and professional responsibilities.

## Whistleblower System

- We have established a whistleblower system as a means of reporting violations of Jeong-Do Management by our employees, further strengthening transparency and a sense of responsibility in the course of performing job duties.
  - Jeong-Do Management portal
  - Mobile reporting system
  - Online whistleblower system (<http://ethics.lg.co.kr/main/en.do>)
  - Win-win channel for suppliers (reporting of grievances experienced by external stakeholders)
- All reports received through the whistleblower system are thoroughly protected by the internal reporting system, and any matters related to corruption and illegalities are subject to disciplinary action depending on the seriousness of the violation, as determined through investigation.



\* The number of reported cases increased due to raised staff awareness with strengthened regulations (Workplace Harassment Prevention and Victimized Worker Protection Act) and training among others.



## LGE Code of Ethics

	<b>Chapter 1. Responsibilities and Duties to Customers</b>	1_Respecting Customers 2_Creating Value 3_Providing Value
	<b>Chapter 2. Fair Competition</b>	1_Pursing Free Competition 2_Complying with Laws and Regulations
	<b>Chapter 3. Fair Transactions</b>	1_Equal Opportunity 2_Fair Transaction Process 3_Pursuing Mutual Growth
	<b>Chapter 4. Basic Ethics for Employees</b>	1_Basic Ethics 2_Accomplishing Missions 3_Self Development 4_Fair handling of Job 5_Avoiding Conflict of Interests with the Company
	<b>Chapter 5. Corporate Responsibilities for Employees</b>	1_Respecting Humanity 2_Fair Treatment 3_Promoting Creativity
	<b>Chapter 6. Responsibilities to the Nation and Society</b>	1_Rational Business Operation 2_Protecting Stockholders' Returns 3_Contributing to Social Development 4_Conservation of the Environment

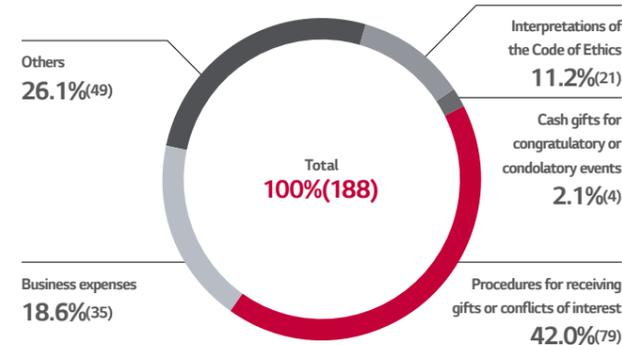
## Jeong-Do Management Risk Prevention System and Process

- We have established a new Jeong-Do Management risk diagnostics system with the aim of preventing risks and instilling the Jeong-Do Management spirit in our employees.
- We have applied a two-track process whereby both the business department and the audit department can jointly manage issues relating to receivables, expenses and purchasing, and so on.
- By introducing the latest technologies such as machine learning and AI, we have established monitoring systems for each type of risk.

## Jeong-Do Management Counseling Center

- Counseling Channel:** The Jeong-Do Management Counseling Center offers various channels for one-on-one counseling to employees for inquiries on Jeong-Do Management.
  - Online system using intranet
  - Counseling via telephone
  - Counseling via e-mail
- Confidentiality Guarantee:** The content of counseling may be disclosed at the discretion of the person receiving counseling, but if the person does not want it to be disclosed, all such information as well as their identity is kept confidential.
- Education and Sharing:** Frequently asked questions (FAQ) are compiled and shared with all employees through online channels or during training programs in Korea and overseas.

Types of Inquiries Made at the Jeong-Do Management Counseling Center in 2019 (Unit: Case)



## Jeong-Do Management Training and Awareness-Raising Activities

- We emphasize that 'Jeong-Do Management' is not a choice but a non-negotiable requirement that governs LGE's existence. We provide regular training and hold awareness-raising activities so that employees are fully versed with the principles set forth in Jeong-Do Management.
- Training:** We provide collective training for our employees in Korea and overseas and share cases of noncompliance on company bulletin boards or the Jeong-Do Management Portal to prevent recurrence.
- Public Relations:** Periodically distributing examples of Jeong-do Management and related articles through the "Jeong-do Management" Newsletter, establishing awareness of Jeong-do Management through activities and current news concerning all employees.
- Survey:** We conduct regular surveys of Jeong-Do Management participation by our suppliers and employees, as a measure to assess the level of awareness of relevant issues in order to prevent irregularities and develop improvement measures.

Jeong-Do Management Online/Offline Training (Unit: Person)

Category	2019
Employees (Korea/Overseas)	14,142

- Following the enforcement of the Workplace Harassment Prevention Act (July 2019), we have conducted training on the prevention of harassment and sexual harassment in the workplace for all heads of organizations in an effort to establish a sound, harassment-free organizational culture.

Workplace Harassment/Sexual Harassment Prevention Training (Unit: Person)

Year	Number of Trainees
2019	4,787
1 <sup>st</sup> Quarter, 2020	332

\* Subjects of training other than those legally required

## Reward System for Reporting Irregularities

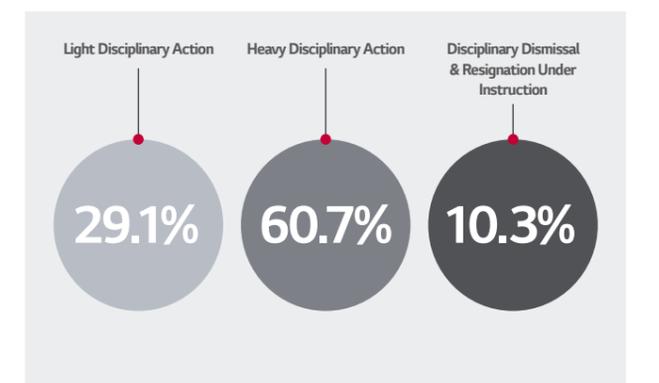
- LG Electronics operates an Ethics Hotline for employees and the general public in order to further strengthen employee compliance with Jeong-Do Management and eradicate irregularities that undermine customer value.
- Informants submit documents that support the misconduct they are reporting to LGE. Irregularities that require immediate attention may be reported only on factual grounds without documents of proof.

## Voluntary Reporting System

- Pursuant to its ethics regulations, LGE prohibits receiving of gifts and other valuables, which are self-reported by employees and handled accordingly.

<b>Reporting and Returning of Items</b>	<ul style="list-style-type: none"> <li>Gifts or other valuables unavoidably accepted by employees are self-reported and returned.</li> </ul>
<b>Items that Cannot Be Returned</b>	<ul style="list-style-type: none"> <li>Items are donated to social welfare institutions, followed up by sending LGE's Code of Ethics, a letter of request for cooperation, document which is proof of the donation to stakeholder and head of the company in question</li> <li>Items that cannot be donated are put up for in-house auction, all proceeds of which are used for social contribution causes.</li> </ul>

## Measures Taken Upon Internal Audit in 2019



# Compliance Risk Management

LG Electronics implements compliance management by establishing a compliance risk management system and relevant organizations, in addition to setting compliance goals and managing performance. We offer various programs such as compliance survey and training to our employees to help them internalize compliance management, while operating reporting channels to build a sound and transparent corporate culture.

## Compliance Risk Management System

- We operate a compliance program that identifies, evaluates, improves, monitors, and reports compliance risks.
- In 2019, we reorganized and reinforced manpower for the Compliance Bureau under the CEO, thereby contributing to spreading a culture of responsible management.
- Compliance Team: Carries out compliance training for employees, handles compliance risks, and undertakes monitoring
- Compliance Planning Team: Supports compliance management by establishing compliance management systems and responding to legal regulations

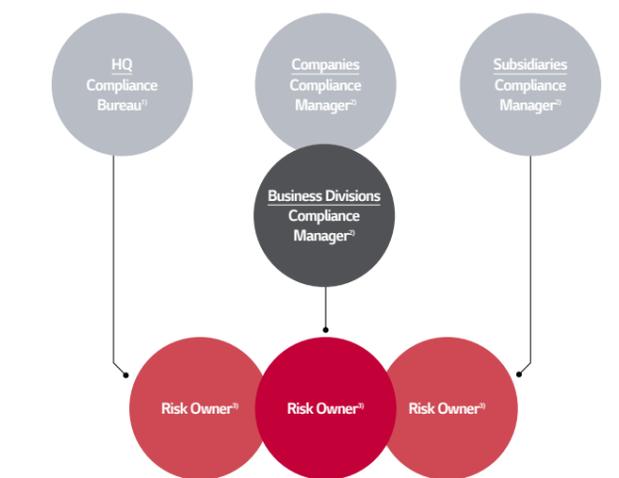
## Goals and Plans for Compliance Risk Management

- Mid- to Long-Term Goals**
- Improve the capacity to identify compliance risks in advance and make proactive response
  - Establish and expand worksite-oriented autonomous management systems
- Implementation Plans**
- Establish a monitoring system for regulatory developments and strengthen response to legal issues
  - Improve awareness of compliance on business sites and provide consulting on risk management

## Compliance Program Cycle



## Compliance Risk Management Organization



- 1) Manages compliance matters at the company level
- 2) Operates and supports compliance programs for relevant organizations
- 3) In charge of managing corporate risks subject to intensive management
- 4) In charge of managing risks of relevant organizations

## Personnel in Compliance Organizations



## Compliance Management Standards



## Compliance Survey

- Compliance surveys are conducted to measure the level of employees' compliance awareness and are used to identify and improve factors that deter a culture of lawful compliance from being established.

Compliance Survey Results (Unit: Person)

Category		2017	2018	2019
Korea	Eligible Persons	29,594	29,247	29,389
	Respondents	25,618	25,225	23,683
Overseas	Eligible Persons	17,947	15,356	15,193
	Respondents	15,232	13,444	13,058
Total	Eligible Persons	47,541	44,603	44,582
	Respondents	40,580	38,669	36,741

## Development of Advanced Online Compliance Training Programs

- We develop and conduct training programs tailored to each job group (general, sales and marketing, technical), offering compliance training that is relevant to each employee's work and increasing the utilization of training programs.
- We developed and conducted advanced online compliance training programs.
- We collaborate with external compliance training agencies and provide training content developed by attorneys and compliance experts from around the world.
- We provide compliance training to employees at global business sites in five languages: Korean, English, Chinese, Spanish, and Portuguese.
- We request employees who have completed the online compliance training program to submit the Pledge of Online Compliance (heads of organization/general employees).

Online compliance training by year (recipients/subjects) (Unit: Person)

Category	2017	2018	2019
Korea	27,346/29,649	27,342/29,715	27,578/29,845
Overseas	17,954/19,850	15,807/18,253	16,389/18,417
Total	45,300/49,499	43,149/47,968	43,967/48,262

Online compliance training by occupation (recipients/subjects) (Unit: Person)

Category	General	Sales Marketing	Technology	Heads of Organization
Korea	27,578/29,845	3,690/4,025	2,812/3,455	18,981/19,810
Overseas	16,389/18,417	11,074/12,361	2,837/3,356	1,491/1,556
Total	43,967/48,262	14,764/16,386	5,649/6,811	20,472/21,366

Offline Compliance Training (Unit: Person)

Category	2017	2018	2019
Training for New Team Leaders	378(15)	140(7)	148(9)
Leadership Training for Expatriates	232(6)	210(6)	165(6)
New Business Leader Training	-	-	32(1)
Onboarding Training for Expatriate Managers	-	-	8(1)

\* Figures insides brackets indicate number of training sessions conducted

## Compliance Reporting Channels

- Reports on the following matters can be made directly via LG hotline (<http://ethics.lg.co.kr/main/endo>).
- Receipt of rewards from stakeholders, unfair equity participation in suppliers, lack of transparency in the supplier selection process, illegal/unfair use of company assets, manipulation and false report of documents/figures, etc.

## Compliance Key Performance Indicator (KPI) Management

- KPI management enables evaluation of compliance management activities by each organization.
- KPI in 2019: Level evaluation of compliance risk prevention activities, convention of Compliance Committee, completion of online/offline training programs, and risk assessments

## Compliance Committee

- We hold Compliance Committee meetings at both the corporate and the business site level to promote a culture of compliance and substantially improve compliance risks.



Members of top management  
Departments responsible for managing corporate risks subject to intense management

**4 times**



Heads of organizations and managers  
Compliance managers  
Risk owners and other working-level employees

**3 times on average**

- Promotion of Compliance Committee activities at the business site level through a system that makes it mandatory for companies and overseas subsidiaries to propose their own compliance agenda

# Fair Trade

As a corporate citizen, LG Electronics protects the global market order, provides accurate information to customers, and stays committed to fair trade and win-win growth. To this end, we ensure thorough examination and management of fair trade risks, and endeavor to compete fairly with our competitors through a variety of programs that are based on the 'LG Way', the guiding principle for our thoughts and actions.

## Promoting an Awareness of Fair Trade

- LGE believe that we can create better customer value by establishing strong trust with customers, suppliers and competitors around the world through fair competition and transactions.
- Fair trade is not only our duty to society as a corporate citizen but also a basis for our competitiveness as we pursue Jeong-Do Management.
- LGE prevent monetary losses as well as non-monetary losses such as reputation degradation through the promotion of fair trade.

## Fair Trade Compliance Program

- We have established the 'Fair Trade Compliance Program' in order to pursue win-win growth with our suppliers and build trust with our stakeholders.
- We undertake periodic activities to raise our employees' awareness of cartels, unfair trade practices, unfair labeling and advertising, and unfair subcontracting practices.
- We designate compliance managers for compliance monitoring and risk management, and undertake follow-up monitoring for business transactions.
- As a measure to instill our employees with management's strong commitment to fair trade, we prepare and distribute action guidelines.
- We plan to strengthen the responsibilities and duties of each business site to prevent violations and fully comply with fair competition and trade laws.

## Inspection and Management of Fair Trade Risks



## Eradication of Unfair Trade and Unfair Labeling & Advertising

- We distribute guidelines to relevant departments and examine corporate systems in an effort to prevent unfair trade practices,
- We operate a channel for reporting unfair trade practices and requesting review of relevant matters, so that reports are promptly reviewed and followed up by on-site inspections.
- We conduct on-site inspections of sales divisions to prevent unfair trade practices.
- We analyze cases of violations of the 'Act on Fair Labeling and Advertising' and conduct employee training based on the findings to prevent noncompliance.
- By extending the scope of pre-screening from labels and advertisements for marketing purposes to product development, R&D, and quality control, we strive to provide accurate information to all customers.
- In order to eradicate unfair labeling and advertising, we plan to introduce a screening process throughout product development, R&D, and quality control.
- We plan to provide guidelines on notices relating to labeling and advertising.

## Cartel Prevention

- We established the 'Anti-Cartel Principles' as LGE's guidelines to prevent cartels.
- We organize employee training and awareness-raising activities so that the Anti-Cartel Principles are incorporated to all areas of work.
- We communicate the management's message against the formation of cartels through the CEO Letter.
- Heads of organizations prone to cartel formation take cartel prevention surveys, in addition to constantly upgrading and improving relevant work standards and processes.
- Contact with competitors is prohibited in principle to prevent cartels. Only in inevitable cases, employees can make contact with competitors after undergoing prior reporting and approval procedures in order to prevent any suspected activities.
- We conduct monitoring and on-site inspections to ensure internal control procedures for cartel prevention are properly implemented
- We undertake periodic activities to reinforce cartel prevention through improvement activities such as new business activities, changes in the business environment, and regulatory developments, so as to ensure full compliance with the Anti-Cartel Principles.

## Antitrust Compliance Newsletter

- We reinforce employee education through promotional newsletters that include quizzes
- We also distribute English newsletters to foster a culture of fair trade not only in Korea but also across all overseas business sites

## Pursuit of Fair Subcontracting Practices

- We pursue fair subcontracting practices to achieve win-win growth with our suppliers through mutual cooperation.
- We revised the Standard Subcontracting Agreement in 2019 and monitor its compliance to improve and ensure fairness in the subcontracting process.
- In order to ensure fairness and transparency in subcontracting transactions, we check the status of subcontracting practices and implement measures to improve relevant systems.
- We revised the Standard Agreement for Joint Development in order to protect the technologies and intellectual property rights of our suppliers.
- We continue our efforts to ensure that fair subcontracting practices take root at LGE by providing our employees with compliance training.

### Antitrust Compliance Newsletter (October 2019)

**[Fact Check] Misunderstandings about Anticompetitive Activities**

- 1. Anticompetitive activities (e.g., Cartels) benefit the company.**  
**No, rather...** Enormous amounts of money and time are lost due to huge fines, litigation costs and loss of business opportunities.
- 2. Cartels will never be exposed.**  
**No, rather...** Cartels are easily exposed through leniency programs and continuous developments in investigation strategies.
- 3. Employees will not be personally disciplined by the Company for anticompetitive activities because they participated in such activities for the Company.**  
**No, rather...** Any employee may be subject to the Company's disciplinary actions since participating in anticompetitive activities is a serious violation of the "Antitrust Laws." Thus, any contacts with competitors are prohibited as a matter of policy, and in cases of unavoidable contacts, employees must abide by the RAPCC procedure.

In case of unavoidable contacts, employees must report and obtain approval through the RAPCC procedure. For further inquiries, please contact your legal staff.  
Thank you.

\*RAPCC: Reporting&Approval Program for Contacts with Competitors

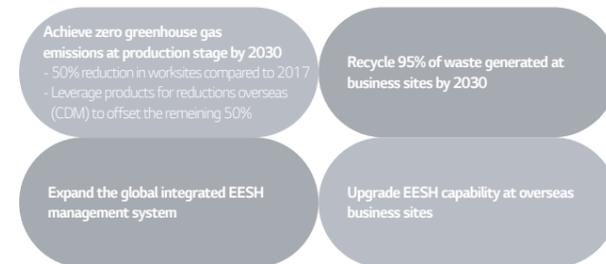
# Safety and Environment

LG Electronics has established an integrated management system for energy, environment, safety, and health (EESH), while striving to achieve eco-friendly management and fulfill its safety and health principles. By establishing EESH policies and mid- to long-term goals, we seek to ensure that a safety culture of global standards is firmly established in both our Korean and overseas business sites. At the same time, we make continuous efforts to minimize our environmental impact by ensuring thorough management of water resources as well as waste such as chemical substances.

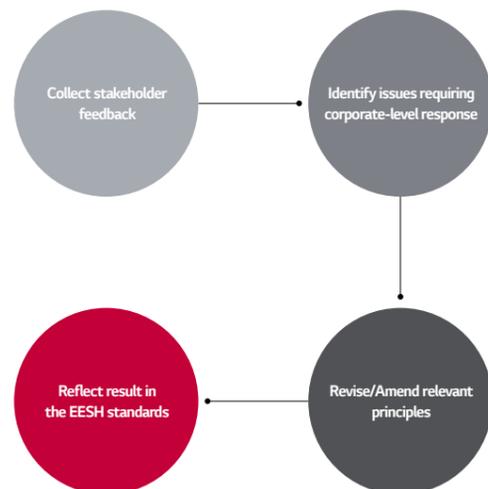
## Integrated EESH Management System

- Since establishing corporate-level EESH policies and regulations in 2009, we have constantly upgraded our EESH standard system to meet global standards
- We operate an integrated EESH standard system at the company level centering on EESH management regulations.
- In April 2010, LG Group declared its green management strategy named 'Green 2030 (three major management goals)', in which we established and implemented LGE's mid- to long-term EESH goals.

### Mid- to Long-term EESH Goals



### EESH Standard System Management Process



## EESH Policy

- We established and distributed the 'EESH Policy', LGE's integrated safety and environment principles, based on our green management strategies and safety and environment principles to employee
- We carry out various activities based on the EESH Policy, including optimization of energy efficiency, operation of eco-friendly processes, development of eco-friendly products, instituting safety and health in our business sites, and promotion of employee health.
- To help our employees integrate the EESH Policy and safety culture in their work, we conduct mandatory safety and environment training for each job grade, while strengthening professional training for safety and environment personnel to enhance their professional competence and execution ability.
- We make various efforts to acquire additional certifications for our integrated EESH management system at overseas production sites
  - Environmental management system (ISO 14001), Safety and health management system (OHSAS 18001, ISO 45001), and Energy management system (ISO 50001)

### EESH Policy



## Safety and Environment IT System

- We integrated safety and environment management channels into the EESH Portal to enhance efficiency.
- We added safety training for employees of our suppliers to help them manage and monitor safety and environment.
- We responded to an average of seven safety and environment issues per week through our online channel (EESH Portal).
- We plan to utilize the EESH Portal as an information-sharing channel among our headquarters, companies, and subsidiaries to enable joint response to safety and environment issues, and to bolster a safety culture.
- Through the EESH Portal, we plan to strengthen and computerize management and monitoring of safety and environment issues for our employees.

## Safety and Environment Evaluation System

- We established GEARS (Global EESH Audit Rating System), LGE's unique safety, environment, and energy evaluation system, in an effort to proactively identify safety and environment-related risk factors at business sites to prevent accidents and ensure safety and soundness of business sites.
- By utilizing GEARS 3.0, introduced in 2016, we have strengthened safety and environment evaluation standards centering on on-site risk identification, in addition to continuing efforts to improve the evaluation system.
- Heads of each business site and subsidiary receive reports on issues requiring improvement identified by EESH audit and continuously monitor the improvement process.
- We apply a safety assessment system that takes into account a range of deviation in the level of safety and environment management in each business site located in Korea and overseas. In 2019, all overseas subsidiaries strengthened their internal safety and environment management capabilities by carrying out voluntary evaluations based on GEARS.
- In Korea, the Safety and Environment Team in each business site selects and assesses 2 work sites requiring stringent safety and environmental management standards than legally required.

### Development of the EESH Evaluation System

Year	System	Evaluation Method
2015	GEARS 2.0	Document-based evaluation
2016		Work-site-oriented evaluation
2017		Korea: Revision of evaluation standards Overseas: Diagnostics centered on fire safety
2018	GEARS 3.0	Overseas: Application of GEARS
2019		Korea: Evaluation tool upgrade (LEIAS 2.0) Overseas: Self-evaluation in all subsidiaries

## Safety and Environment Committee/Council

- Since establishment in 2019, the Safety and Environment Committee and Council explore company-wide issues and agendas and discuss related solutions (safety and environment risk management strategies for the first/latter half of the year)
  - The Safety and Environment Council, chaired by the CFO, was convened twice (May 31, October 30).
  - The Safety and Environment Committee, chaired by the CEO, was convened twice (June 13, November 12).
- The Safety and Environment Committee and Council enable a response to safety and environment issues at company level by reporting corporate-level issues to management, securing the execution ability for decision-making and solutions.

## Compliance Risk Management

- In an effort to minimize safety and environment risks, we introduced the global safety and environment compliance risk management system in 2014. In 2019, we established an integrated safety and environment risk management system that reflects Korean and global business characteristics, enabling an integrated management of compliance risks.
- We examine legal compliance risk status with external experts in safety and environment diagnostics in 10 areas including safety, environment, health, disaster prevention, facilities, permits, and approvals.
- Compliance risk analysis is followed up with the distribution of guidelines for preventing recurrence of the same risks. Activities are organized to strengthen risk management capabilities such as workshops and training programs for related personnel.
- We provide training to relevant personnel, professional knowledge on safety and environment, and develop diagnostics skills, as a measure to strengthen job competencies for employees overseeing risk diagnostics.
- We benchmark best practices regarding compliance risk management in LG Group affiliates and apply them to our evaluation system.

## Safety and Environment Compliance Risk Diagnostics

- We plan to carry out safety and environment compliance diagnostics once a year for production sites in Korea, every other year for laboratories in Korea, and every 3 years for production sites overseas.
- In 2019, we held environmental management diagnostics in 3 laboratories in Korea (LG Science Park, Gasan R&D Campus, and Seocho/Yangjae R&D Campus).
- Evaluation items for environmental management diagnostics consist of environmental items (air, water) and chemical substance items (inventory, criteria for handling chemical substances).

### Business Sites or Laboratories Subject to Risk Diagnostics

Year	Region	Number of Business Sites
2016	Central & South America/Asia	9
2017	Middle East/Europe	10
2018	China	2
2019	Korea	3

### Risks Diagnosed

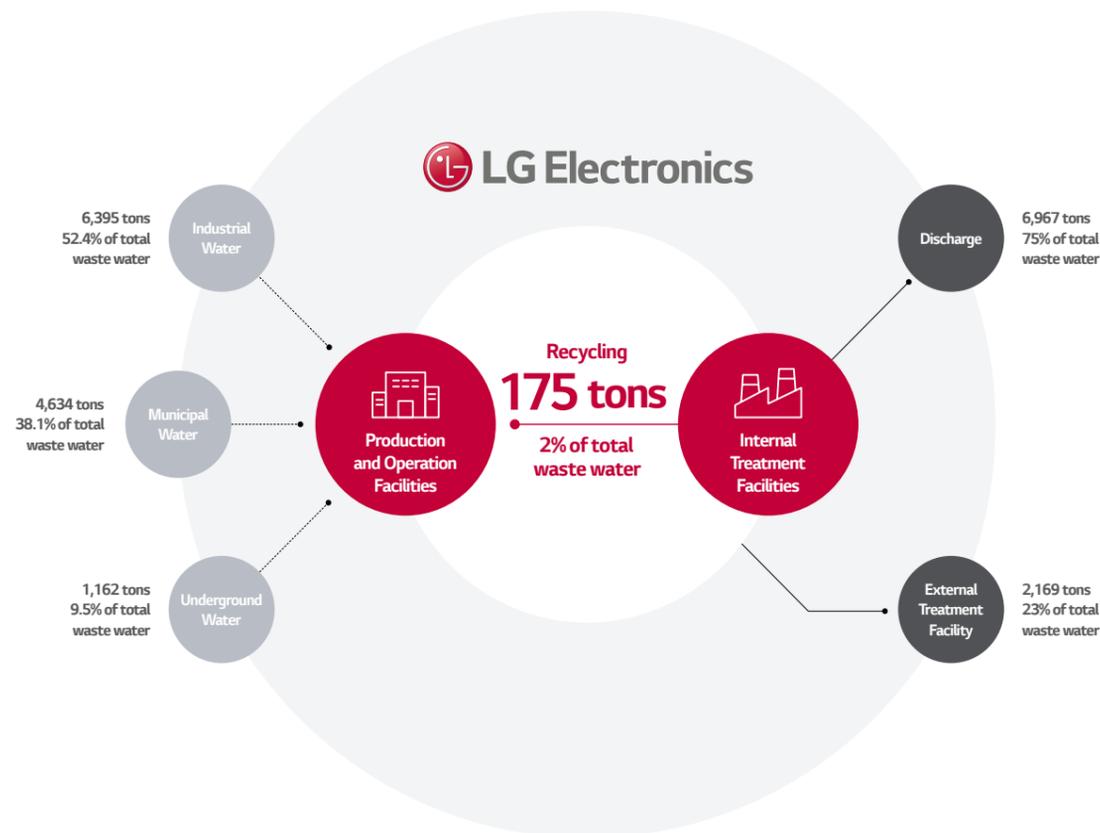
(Unit: Case)

	LG Science Park	Gasan R&D Campus	Seocho/Yangjae R&D Campus
Legal Violation Risks	6	4	4
Potential Risks	2	3	5
<b>Total</b>	<b>8</b>	<b>7</b>	<b>9</b>

## Water Resource Management

- LGE has set the goal to reduce water consumption, or per unit of revenue in KRW, by 20% in 2020 from 2007.
- In our production sites and laboratories in Korea and overseas, we undertake various initiatives to manage water reuse and wastewater discharge, as well as to reduce water consumption.
- We established water inventory, undertake regular evaluation of various water risks such as lack of water resources, degradation of water quality, and increase of water consumption, and monitor the amount of water consumption in each production site.
- We introduced a zero discharge system to enhance the efficiency of water usage by recycling used water for watering plants or as industrial water.
- We contribute to improving wastewater recycling and saving water resources by establishing wastewater treatment facilities and recycling systems.
- Our measures to secure emergency water reserves enable us to operate our business sites for at least two days in the case of an unexpected interruption in water supply.

## Flow of Water Resources in 2019 (Korea)



## Wastewater Discharge in Korea

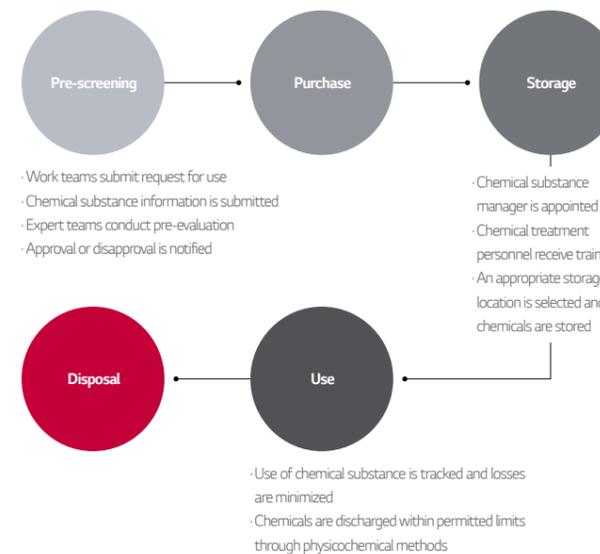
Business Sites	Secondary Treatment Facilities	Facility Discharged Into
Yangjae R&D	Tancheon Water Reuse Center	Tancheon
Magok Science Park	Southwest Water Reuse Center	Han River
Cheonju	Cheongju Sewage Treatment Center	Seoknam Stream
Gumi	Gumi Sewage Treatment Center	Gwangam Stream
Changwon	Deokjong Sewage Treatment Center	Jinhae Bay

\* Based on business sites in Korea with an internal waste water treatment facility

## Chemical Substance Management

- Our chemical substance management practices is based on the LG Chemical Management System (LGCMS) since 2013.
- All chemical substances for production and R&D purposes stored or used at all business sites in Korea, and those procured from suppliers undergo preliminary screening.
- For safe storage of chemical substances, we regularly examine chemical storage facilities in each business site and install chemical leakage prevention facilities.
- We carry out hazardous substance risk assessments to establish chemical management criteria and emergency response procedures.
  - Level 1: Ban on the use of the chemical substance in question
  - Level 2: Reduction of the chemical substance in question
  - Level 3: Monitor the chemical substance in question
- We developed methods to analyze new chemical substances of social concern and conducted two precision analyses in 2019 (144 types of chemical substances).
- We developed an IT system for tracking the entire process of chemical substance management.

## Chemical Substance Management Process



## Chemical Substance Management Training

- Workers at business sites handling hazardous substances receive on-site and online training regarding safety management of chemical substances, accident response and evacuation procedures, and guidelines for safe handling of hazardous substances.
- R&D personnel receive safety and health training on chemical substance and laboratory management.

## Response to Chemical Substance Regulations

- Regulatory Analysis**
  - Review laws on chemicals and devise countermeasures
  - Conduct external work related to chemicals
- Supply Chain**
  - Comply with chemical handling standards and operate facilities
  - Create and archive MSDS/ingredient specifications
- R&D**
  - Assess the hazards of materials used for R&D
- Production Quality**
  - Examine chemical ingredients used in the production phase
- Business Operation**
  - Operate a chemical information management system
  - Conduct a preliminary review of newly handled chemicals

## Compliance with Environmental Laws

- In order to eliminate risks of non-compliance with environmental laws, we conduct environmental status assessments at production sites, take measures to correct issues identified in the assessments, and monitor the progress.
- We comply with environmental laws by installing and operating pollution prevention facilities, and continuously improving our environmental management procedures.
- We plan to establish legal compliance monitoring systems by region, area of concern, and business site, in addition to organizing regular meetings to share developments regarding environmental regulations.

## Higher Standards for Environmental Pollutant Emissions

- The concentration of air and water pollutants discharged from our business sites is maintained at 50% of the legal discharge standards. We make various efforts to continuously reduce pollutant discharge and maximize the efficiency of pollutant disposal.
- Each business site operates its own pollutant discharge reduction system taking into account the characteristics of major chemicals and raw materials handled at each site.
- In 2019, there was no leakage of pollutants exceeding legal standards, and no damage was incurred.

# Suppliers

Stepping into the Digital Transformation era, LGE works to build a new future with its partners by registering sustainable growth together, based on distinctive activities for symbiotic cooperation and voluntary compliance with the fair trade standards. The company nurtures and supports partners by selecting 5 implementation tasks with a view to realizing win-win growth on unwavering trust.

## Win-Win Growth Strategy



## 5 Major Tasks for Win-Win Growth



## Support for Achieving the Highest Level of Global Competitiveness

- Since 2018, we shared our know-how in automating production lines and building infrastructure for digitalization to our suppliers to help them innovate their manufacturing competitiveness.
- As a result, we contributed to increasing our suppliers' overall productivity (output per person/hour) and sales, as well as creating new jobs.
- Beginning in 2020, we extended our support to second-tier suppliers to help them achieve higher manufacturing competitiveness.

## CASE Supporting Our Suppliers in Establishing Smart Factories

Passing on Robot Welding Automation Technology to Suppliers

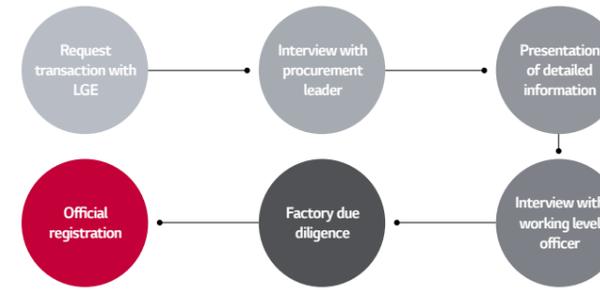


• LGE dispatched production technology experts to our suppliers to support them in adopting production line automation technologies and building smart factories.

## Support for Strengthening Next-Generation Technology

- **Support for Developing Parts Using New Technologies and Technical Means:** LGE provided royalty-free use of its intellectual property to small- and medium-sized enterprises (SMEs) to support SMEs in strengthening their R&D capacity. LGE also engaged in joint technology development including new injection technology and automatic parts lifting robot technology.
- **Protection of Suppliers' Core Technology:** Suppliers' core technologies are escrowed by a trusted government agency, ensuring the protection of trade secrets and core technologies, while LGE covers the full cost of the technology escrow service.
- **Process for New Transaction:** We added a new function on our supplier website called "Process for New Transaction", whereby new suppliers with no prior collaboration history with LGE can suggest new technologies and materials to LGE.

"Process for New Transaction" Process



## Financial Support

- Zero-Interest Direct Financing**
  - We provide zero-interest direct loans to our suppliers facing financing difficulties in an effort to improve their productivity and product quality, expand facilities, establish overseas operations, and develop advanced technologies.
  - In 2020, we increased our annual financial support to suppliers experiencing difficulties due to COVID-19 from KRW 40 billion to KRW 55 billion, and made advance payments of relief funds in February which were originally due in June.
- Win-Win Growth Fund**
  - We operate a Win-Win Growth Fund to offer low-interest financing to our suppliers in order to ensure their financial stability in joint dealings with financial institutions.
  - As of 2020, we operate a Win-Win Growth Fund of KRW 200 billion for our first- and second-tier suppliers that have signed the Fair Trade Agreement with LGE.
- Win-Win Payment System**
  - Since 2015, we have been operating the win-win payment system that ensures payments received by first-tier suppliers are safely executed to second- and third-tier suppliers.
  - We are making the adoption of the win-win payment system mandatory in major suppliers.

## Talent Development

- **Win-Win Growth Academy:** We have opened the Win-Win Growth Academy, free training courses exclusively for employees of our suppliers, within our training facility.
- We provide special technical training in cooperation with local universities (Kyungnam University and Korea Polytechnics).
- In 2019, we opened a robot automation training course for the first time, providing customized on-the-job training covering robot control and operation, and application to production lines.
- We make continuous efforts to develop and offer various training programs, including the introduction of a fire safety course.

Robot Automation Training Course



## Innovation of Processes

- **Supplier Grievance Hotline:** We operate the 'Supplier Grievance Hotline', a channel for reporting corrupt conduct or irregularities of LGE employees. Reports are followed up by fact checking and appropriate measures.
- **Support for Supplier Employee Welfare:** To promote the welfare of our suppliers' employees, we offer a reward program called the 'Win-Win Performance Sharing Fund', provide support for the use of leisure facilities, offer encouragement gifts and tickets to sporting events and operate an online shopping mall exclusively for our suppliers' employees.
  - Efforts to promote employee welfare, including providing masks and hand sanitizers to suppliers experiencing difficulties due to COVID-19
- **Communication with Suppliers:** We organized a cooperative association of LGE's suppliers, in which we convene general meetings and workshops on a regular basis to discuss measures to bolster cooperation for win-win growth.

## CASE LGE Cooperative Association Workshop 2019

- At cooperative association workshops, participants share and are rewarded for best practices of innovation, such as production line automation.
- Major performances regarding win-win growth are shared among representatives of LGE suppliers.

LGE Cooperative Association Workshop (2019.03)



LGE Cooperative Association Workshop (2019.11)



# Customers

LG Electronics strives to advance our infrastructure and identify differentiated customer service for maximizing customer satisfaction through promptness, accuracy, and kindness. Based on our mid- to long-term goals, we implement customer-centered management and carry out various activities for quality enhancement, which include establishing a customer retention system and improving service accessibility.

## Customer-Centered Management Goals

Our goal is to maximize customer satisfaction by providing customer service with a strong foundation and improving service quality from the perspective of customers, while contributing to enhancing management performance and brand image by increasing product value for our customers.

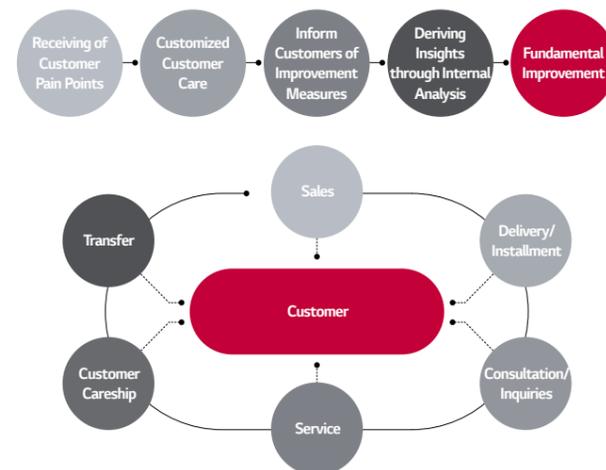
### Mid- and Long-Term Goals

	<b>Improving Customer Experience Value</b>	<ul style="list-style-type: none"> <li>Shift focus from operation- and efficiency-driven service to customer-experience-oriented service</li> <li>Establish an integrated customer experience data management system to share information involving frontline service and increase accessibility</li> </ul>
	<b>Strengthening Frontline Response</b>	<ul style="list-style-type: none"> <li>Enhance happiness of frontline service personnel by simplifying the frontline customer response process, improving working environments, and operating employee care programs</li> <li>Establish organizations dedicated to customer pain point management in major overseas subsidiaries</li> <li>Categorize VOC (Voice of the Customer) from the customers' viewpoint and standardize it globally</li> </ul>
	<b>Improving Customer Pain Points</b>	<ul style="list-style-type: none"> <li>Establish processes that reflect customer pain points from the product development stage</li> <li>Review and monitor customers' use of our products and services through the Service Technique Study Group</li> </ul>

## Establishment of Customer Pain Point Management System

- By defining all VOC as customer pain points, we have established organizations and systems to comprehensively manage the entire process of customers' experiences of our products and services.
- In online spheres, we identify customer pain points and relevant trends in real-time and undertake activities to strengthen communication with our customers.

### Customer Pain Point Management System



## Increasing Accessibility to Customer Service

- Textbot:** We adopted AI (Artificial Intelligence) technology to textbot, allowing precise customer consultation without restrictions on time or space.
- Voicebot:** We introduced voice recognition technology in our voicebot service, offering no-wait customer consultation service and responding to customer complaints and inquiries by compiling major questions and answers.
- Visible ARS (Automatic Response System):** We introduced a service for customers calling our Call Center on a smartphone, whereby the list of Call Center tasks automatically appear on smartphone screens and customers can select the task they require. This service is available 24/7 and has greatly increased customer convenience.
- ThinQ One Stop Solution:** We provide the 'ThinQ One Stop' service, supports all customer needs on a single platform (smartphone application) regarding home appliances using AI technology.
  - Provides situation-specific content for customers who need to take self-repair measures for product malfunctions
  - Offers to make repair requests through self-diagnosis
  - Provides customer careship program through regular visits to customers' homes

## Frontline Social Contribution Activities

### Relief activities in the aftermath of Typhoon 'Mitag'



Cleaning and repairing flooded home appliances after setting up temporary service offices in affected areas (October 2019: Gyeongbuk Yeongdeok-gun, Gangwon Samcheok-si, Gyeongbuk Uljin-gun)

### Visiting Service



Smart phone classes for senior citizens by LG Smart Phone Academy (November 27, 2019: LG Electronics Mokpo Service Center)

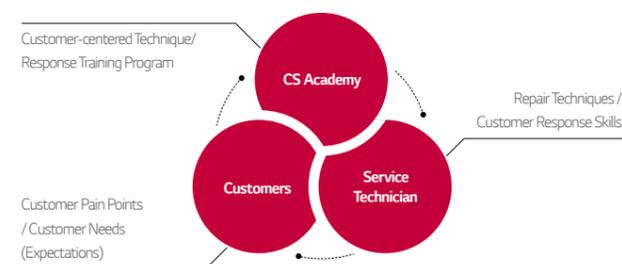
## Training for Improving Customer Service

- We provide service quality improvement training to our frontline customer service personnel, encouraging self-driven changes in offering customer-centered service.
- By designing a step-by-step program composed of basic, intermediate, and advanced courses, trainees can receive systematic training depending on customer service capabilities.
- By introducing mobile learning, trainees can receive efficient training on improving the quality of customer service.
- In Korea, we introduced practical training for AR Glass and promoted debate-oriented self-driven learning, which we plan to expand into overseas subsidiaries.

## Service Technology Research Council

- The Service Technology Research Council studies and applies the highest level of customer response techniques and know-how to frontline customer service, seeking to increase the quality of service as experienced by customers.
- The Study Group develops optimal product repair techniques and solutions, maximizing customer satisfaction by applying them to frontline customer service.

### Service Technology Research Council management process



<b>Quality Improvement</b>	<ul style="list-style-type: none"> <li>Devise measures to improve customer pain points</li> <li>Identify improvement points for each phase of product life cycle and provide optimal service</li> </ul>
<b>Technical Support</b>	<ul style="list-style-type: none"> <li>Develop a standard repair process in consideration of feedback from service technicians and relevant personnel</li> <li>Provide guidelines to service engineers and service-related personnel</li> </ul>
<b>Competence-Building</b>	<ul style="list-style-type: none"> <li>Develop and distribute guidelines on empathy-based customer service</li> <li>Develop guidelines and videos on product repair</li> <li>Develop repair tools and identify best practice cases to improve product repair techniques</li> </ul>

## LG Global Service Olympics: Central Asia, China, and India

- We hold LG Global Service Olympics to share product repair techniques and know-how of service engineers at our global business sites.



LG Global Service Olympics

## Customer Satisfaction Survey

- In Korea, we conduct customer satisfaction surveys by sending/receiving text messages to/from customers who have experienced LGE's services, implement improvement measures based on the results, and categorize customers into ordinary customers, corporate customers, institutions, and staff of the LG Group or further categorize and manage customers depending on whether they have used our products.
- In overseas countries, we survey customer satisfaction levels by calling customers who have experienced LGE's services and carry out improvement measures according to survey results.
  - In 2019, 185,569 cases were surveyed, which is 10% of the completed repair cases of general customers.

### Major Improvements After Customer Satisfaction Surveys in Korea

<b>1. Identified customer pain points in major daily issues and performed on-site improvements</b>	Analyzed high-frequency cases and established response measures
<b>2. Prepared response scripts on site guides for products that do not show the same symptoms while testing</b>	Identified major cases in refrigerators, TVs, washing machines, etc., and prepared/distributed response guidelines
<b>3. Executed pre-care activities to address the pain points of visiting customers</b>	Prepared a checklist to prevent customer inconveniences for waiting customers, operated simple customer counters in each branch, and changed the self-counter operation system
<b>4. Improved the MCS* system to provide customer index information in advance</b>	

\* Mobile Communication Service

### Korean and Global Customer Satisfaction

Korea		Overseas	
2017	93.3	2017	68.6
2018	92.9	2018	68.3
2019	93.0	2019	68.4

 Korea Service Grand Prix  
 No. 1 in KS-SQI (Korean Standard-Service Quality Index)

## CASE Customer Satisfaction Management by LGE Brazil

- On Brazil's largest customer complaint website 'Reclame aqui', LGE Brazil received the highest customer evaluation grade and acquired the RA1000 certification mark.
- LGE Brazil received the highest points in all areas including customer evaluation score in the past six months, response rate, solution provision rate, and willingness to re-purchase, and acquired the certification mark issued upon passing the audit of Reclame aqui's analysis team, demonstrating top customer satisfaction management in each business category.

## Awards Received in 2019

Country	Month	Awarded By	Description
Korea	April	Korea Brand Management Association	No. 1 in Home Appliance After-Sales Service Sector for Korea Customer Surprise Brand Index
	June	Institute for Industrial Policy Studies	No. 1 in Home Appliance After-Sales Service Sector at National Service Awards
	July	Korean Standards Association	No. 1 in Home Appliance After-Sales Service Sector for Korean Standard Service Quality Index
China	March	China Household Electrical Appliance Service Association	Outstanding Company for Satisfactory Consumer Household Electrical Appliance Service
New Zealand	March	Electro-Technical Association	Service Excellence Awards (Home Appliances)
Indonesia	April	Consumer Association	Best Call Center Award
Russia	April	Customer Satisfaction Association	Winner in Customer Communication
	July	Federal Service for the Oversight of Consumer Protection and Welfare	Grand Prize in Customer Satisfaction
Peru	September	National Consumer Protection Authority	No. 1 in Customer Service and Product & Service Warranty
USA	September	ACSI (American Customer Satisfaction Index)	No. 1 in Home Appliance After-Sales Service

# Information Protection

Diversification of IoT products and services, in addition to constant changes in the business environment, demand companies to take on more responsibilities in terms of information protection. In this regard, LG Electronics strives to ensure the rights of our customers by establishing an integrated privacy information management system for the collection, storage, use, and destruction of information. At the same time, we secure software security in products by proactively identifying and responding to risk factors relating to cybersecurity regulations and compliance both in Korea and overseas countries.

## Privacy Information Protection System

- In response to the implementation of the EU GDPR (General Data Protection Regulation) and the strengthening of consumer privacy protection regulations in the United States, Brazil, and India, we proactively identify and improve privacy information risk factors.
- We strictly adhere to the five basic principles of privacy protection (minimum collection, protection of the customers' right to be informed, measures to ensure security, use within the purposes of collection, and safe disposal) to thoroughly manage our customers' privacy information.
- We operate an organization dedicated to information security and provide mock training and education.
- We disclose the safe and legal process of privacy information handling in a transparent manner.

\* In 2019, no penalties or fines were imposed for breaches or violations of customer privacy.

## Privacy Information Protection Measures

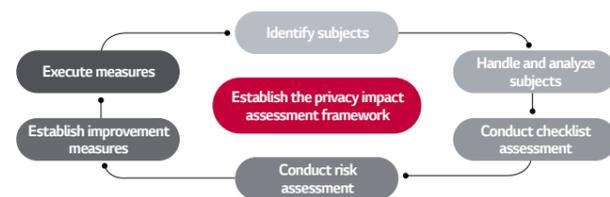
<b>Technical Measures</b>	<ul style="list-style-type: none"> <li>• SSL*</li> <li>• Access control measures</li> <li>• One-way encryption storage</li> <li>• Limited personnel with access authority</li> </ul>	<ul style="list-style-type: none"> <li>• Minimization of the printing of privacy information</li> <li>• Prior approval by privacy manager</li> <li>• Security of information processing PCs</li> <li>• Documentation of the purpose for privacy information collection</li> <li>• Separation of privacy information servers</li> </ul>
<b>Managerial Measures</b>	<ul style="list-style-type: none"> <li>• Entry control into Information Security Office</li> <li>• Access authority control</li> </ul>	<ul style="list-style-type: none"> <li>• Measures enabling search/change of privacy information and cancellation of membership</li> <li>• Inquiries by phone or e-mail</li> </ul>
<b>Measures to Protect Customer Rights</b>		<ul style="list-style-type: none"> <li>• Observance of information usage period</li> <li>• Response to request for revocation of consent</li> </ul>

\* SSL: A standard security technology that enables secure transfer of privacy information through encryption algorithm

## Privacy Impact Assessment

- Through privacy impact assessments, we proactively evaluate and improve the risk factors and adequacy of our privacy protection measures, which enables us to launch products and services with reinforced privacy protection features.
- We continuously upgrade the privacy impact assessment framework so that we can respond to the changes in laws and regulations, as well as technical trends.

Establish the privacy impact assessment framework

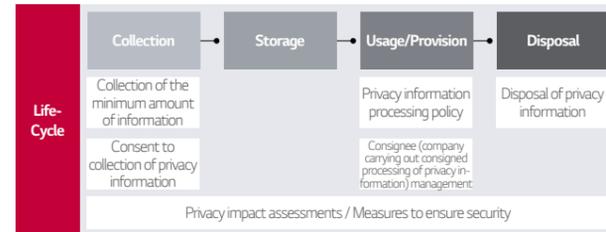


## Integrated Privacy Information Management System

- For efficient use and prevention of leakage, we have established a framework for integrated management of customers' privacy information.
- We have acquired domestic and international certifications for our privacy information protection system, certifying the security of data protection.

### Framework for Privacy Protection Assessment

<b>Management System</b>	Policy	Company regulations on information security	Diagnostics/Audit/Certification	GSI <sup>1)</sup>	TSS <sup>2)</sup>
		Privacy protection rules		Diagnostics	ISMS <sup>3)</sup>
		Standards and guidelines		ISO <sup>4)</sup>	ISMS-P <sup>5)</sup>
Organization	CPO Dedicated Privacy Protection Team	Training/PR	Companywide employee training		
			Collective training for suppliers		
Response to privacy infringement incidents			Protection of the rights of information subjects		



<b>Protection Measures</b>	SSL	PC encryption	DB access control	Paper shredders
		DB encryption	Server access control	Complete deletion solutions
			Print-i	Privacy-i
Was-i				
Comprehensive monitoring				

- 1) GSI (Global Security Index): Company-wide Security Index System
- 2) TSS (Team Security Score): Team Security Index System
- 3) ISMS (Information Security Management System): Certification System for Information Protection Management Systems
- 4) ISO (International Organization for Standardization): Certification System of the International Organization for Standardization
- 5) ISMS-P (Personal Information Security Management System): Certification System for Personal Information Protection Management Systems

### Certifications for Integrated Information Security Management System

<b>International Certifications</b>	ISO 27001	18 in Korea
	ISO 27018	1 in Korea
	ISO 29100	1 in Korea
<b>Domestic Certifications</b>	ISMS	1 in Korea
	ISMS-P	1 in Korea

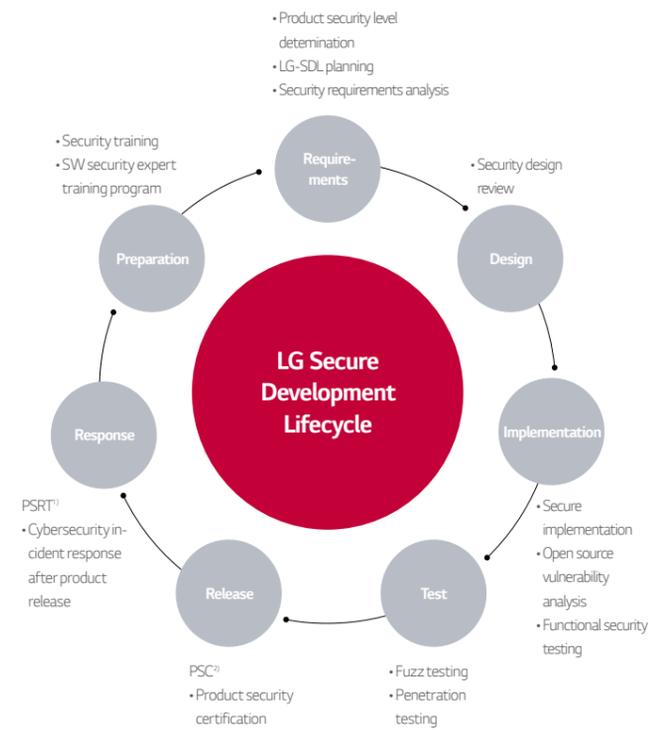
## Basic Principles of Product Security

- We ensure consistent product security by establishing a unitary process to analyze and respond to potential cybersecurity risks in products.
- We established LGE's standard security requirement guidelines to comply the standards required by new global security regulations.
- We established systems dedicated to responding to regional cyber security regulations.
- We organized PSRT (product security response) team and process to maintain the high security quality of product and respond immediately to security issues arising after launching products.

## LG-SDL Security Activities in SW Development

- LG-SDL (Security Development Lifecycle) Standardization of core security activities to be performed at each phase of the SW development process.
- Ensurance of product security by detecting and removing potential security vulnerabilities in products from the early stages of SW development.
- Conduct security activities based on product security levels determined by considering product characteristics and security impact.
- Issuance of a product security certificate (PSC) on products that satisfy all passing criteria of LG-SDL.

### LG-SDL Cycle



## Nurturing Software Security Expert Development

- Our SW Security Specialist Training Course is designed to foster software specialists who can drive product SW security activities and the develop the security technical based on a deep understanding of software security.
- SW security specialists who have successfully completed our training and certification programs develop security technologies for each product and actively contribute to global cybersecurity compliance.
- SW security specialists actively engage in various activities as security evangelists, providing SW security mentoring, presenting in-house lectures, and holding workshops.

### LG Software Security Specialist Program Goals

Number of Trainees to Complete the Program (Cumulative)	Number of Specialists (Cumulative)	Goals by 2022 (Number of Specialists)
43	14	150

### The 2<sup>nd</sup> LGE Software Specialist Program Completion Ceremony



## Activities to Strengthen the Product Security

- Through security vulnerability diagnosis by internal and external security experts we are able to proactively establish measures to prevent security incidents and increase the level of product security.
- Under the bug bounty program, we receive external reports of security vulnerabilities in our product software from outside sources and provide rewards to the reporters.
- We operate the LG Electronics Information Security Analysis Center (LGE ISAC), a professional penetration testing team, to examine the vulnerabilities of LGE's IoT products and the internal/external server systems.
- We organize company-wide security workshops to share Best Practices in cyber security technology and discuss strategies to effectively enhance product security.

### The 6<sup>th</sup> LGE Security Workshop, March 2019



# Employees

In pursuit of the "LG Way", which embodies our corporate philosophy and mode of behavior, LG Electronics strives to create value for customers and implement a management system based on respect for the people. We continuously improve our HR management system in order to ensure fair evaluation and compensation, while supporting our employees to develop their job capability and achieve personal growth through various programs. Other efforts include promoting a healthy labor-management relationship through communication between employees and the company, as well as creating a corporate culture built on mutual trust and respect.

## Key Initiatives for 2020

LGE encourages innovation in the way we work and in our systems in order to achieve sustainable growth even in new business environments. We operate an HR management and training system so that every employee can maximize their professional skills.



**Evaluation and Compensation**

We are constantly improving our HR system to accelerate the creation of business performance. We ensure objectivity and impartiality in employee evaluation by adopting an absolute evaluation and peer group evaluation system. At the same time, we use the 'Work Talk' system, a performance management tool based on in the form of social media, which encourages employees to voluntarily manage their own job performance. In addition, we are strengthening our performance-based compensation system through ongoing incentives paid to employees who have achieved outstanding results.

- Secured objectivity of evaluation through the introduction of an absolute evaluation system
- Promoted the use of 'Work Talk', an ongoing evaluation system
- Ensured impartiality of performance/competency evaluation through peer group evaluations
- Strengthened the performance-based compensation system



**Types of Job Position**

In order to promote a horizontal, creative, and open corporate culture, we have changed our job position system from a five-grade system centered on employees' job positions and years of service to a three-grade system centered on roles, capabilities, and performance. By simplifying the job grade system, we accelerated the speed, efficiency, and execution of work. At the same time, we select and promote employees who have achieved outstanding performance to foster a self-driven and challenge-oriented work environment.

- Built a horizontal/creative culture by simplifying the job position system
- Created a self-initiative and self-driven work environment through promotion by selection



**Talent Development**

In order to foster business leaders and key talents who will lead the future of LGE, we are strengthening activities to secure strategic business fundamentals and early capability building. We focus on discovering and rotating talented employees to support our new growth projects, while strengthening training tailored to individual and organizational needs necessary to fulfill varying roles.

- Strengthened the development of key talents
- Strengthened personalized training



**Work-Life Balance**

We are in the process of stabilizing the 'flexible work system' of 40-hour work week and higher work efficiency in order to create a corporate culture that values a sound balance between work and life. We also seek to enhance efficiency by making fundamental changes in the way we work. In addition, we have developed and operate a 'voice mail and consultation system' for prompt handling of work, while enhancing employees' focus at work and encouraging a creative and autonomous culture by introducing a 'no-meeting Mondays' and 'casual attire' policy. Furthermore, we help our employees achieve work-life balance by operating 'LG Daycare Centers' and implement parental leave, shortened working hours, and non-paid leave during pregnancy in order to lessen the burden of pregnancy, childbirth, and childcare for our employees.

- Promoted voice mail and approval system
- Implemented the 'Refresh' system to encourage employees to take vacations
- Improved meeting/reporting culture
- Managed working hours through a flexible work system
- Implemented casual attire policy
- Actively supported parental leave and shortened working hours

## Respect for Diversity

- All LGE employees and partners have the right to pursue happiness in relation to dignity, value and work as human beings.
- We instituted various systematic measures to enable all employees to carry out their work and develop their potential to the fullest without experiencing any discrimination or disadvantages due to gender, race, education, religion, etc.

## LGE Global Labor Policy



## Direct Employment of the Employees of LGE Korea Service Center Suppliers

- In May 2019, we directly employed 3,984 service technicians of our subcontractors as permanent employees of LGE.
- We promote customer satisfaction by increasing quality jobs and providing professional and differentiated services.

### Direct Employment of LGE Service Technicians



## Labor-Management Relations

- We have established our own concept of "labor-management relations", creating common value based on mutual trust and respect.
- There are various channels for labor and management to engage in joint discussions on major labor issues.
- Once a year, collective bargaining agreements are made at the regular labor management committee.
- Major changes in business operation are discussed in depth between labor and management as soon as they take place.

### Labor-Management Relations at Business Sites (Korea) (As of January 2020)

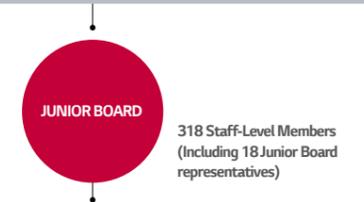
Members of Labor Union	Dispute-Free Period Agreed by Labor and Management for Wage Negotiations and Collective Bargaining
9,787 persons (25% of all employees)	31 years

## Junior Board

- As an organization that represents staff-level administrative workers, the Junior Board serves to expand communication between management and employees.
- Through joint meetings with management, the Junior Board delivers the VOE (Voice of Employees) and discusses relevant agenda items.
- At its meetings, the Junior Board members share best practice cases of organizational culture and promote a sound organizational culture across the company.
- The Board undertakes various social contribution activities, such as promoting donations for charitable causes and volunteering using LGE products.

### Activities of the Junior Board

Members	Convey VOE to the Junior Board - Junior Board Bulletin Board - Intensive Group Interview - One-on-one Grievance Meetings
	Open Communication with the Management



Regular Junior Board Meetings	Deliver VOE of each organization Discuss requests from business divisions and business sites Share activities of the Junior Board
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Junior Board Council at the Company Level	Share management performance of each company Hold meetings with heads of companies Hear opinions regarding systematic changes at the company level Share activities of the Junior Board at the company level
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LGE Junior Board Council	Share management performance of LGE Hold meetings with CEO briefings Hear opinions regarding systematic changes at the corporate level Share corporate-level activities of the Junior Board
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### Junior Board Appointment Ceremony



## Directions for HR Development

To achieve continued business performance and create future growth engines, we will provide optimal learning solutions and nurture future leaders who are creative and embrace challenges.

To this end, we will nurture future business leaders and key talents, establish digital assessment systems, achieve transformation in L&D (learning & development), strengthen our global business and DX capability, and reinforce autonomous on-site learning.

## Development of Future Business Leaders and Key Talents

- In order to develop LG's future business leaders to rise to the challenge within the next 10 to 15 years, we discover young and talented employees with great entrepreneurial potential and support their growth based on 'individual GROW maps' (each individual's roadmap to growth) in the aspects of experience, exposure, and education.
- To ensure systematic and continued growth of key talents, we provide a track-specific training system. We also operate a development center to assess the qualities required to become a leader in a digital business environment.

## Digital Assessment Center

- In order to discover and develop future leaders to serve in core positions, we operate Assessment Center where individual competencies and personal characteristics are scientifically evaluated. Through our virtual assessment system, we offer non-face-to-face assessments and propose formal/informal solutions based on data analyses.

## L&D Transformation

- In response to changes in the global business environment, we seek to achieve transition to self-driven learning that can be readily adapted to actual work.



## Strengthening Global Business Capability

- Through Contents Provider, we established an educational platform that provides various quality educational content and curation based on trainee data for timely response to changes in the global business environment and new knowledge/technical trends.
- We strengthened our learning systems so that employees in overseas subsidiaries have access to the same educational content available to HQ employees anytime and anywhere.

## Securing the Capability for Digital Transformation (DX)

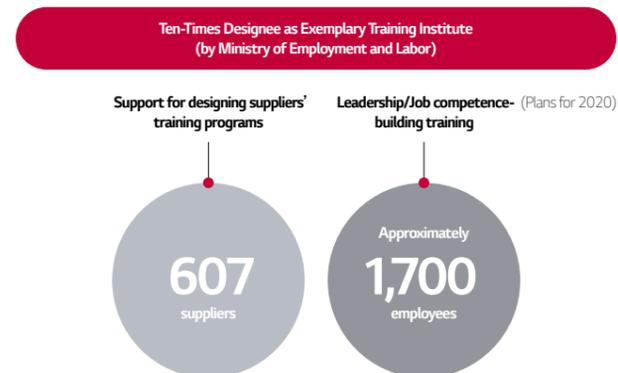
- To develop future leaders who will spearhead LGE's digital transformation (DX), we offer DX capability-building programs to leaders and top talents. At the same time, our systematic HR development programs, including basic knowledge acquisition, case studies, and actual project execution, enable trainees to build skills regarding core digital technologies such as AI and big data.
- We conduct problem-solving training based on data by each job duty in order to internalize the digital competence of all employees and improve the way we work.

## Strengthening On-site Learning

- We offer a variety of learning programs to help our employees acquire the skills required in their own work by learning ahead or repeating what they have learned without restriction of time or space.
- We are promoting our platform-based learning system to provide digital learning materials by each module developed to cater to different levels of job competence. Leadership experts and our in-house technical experts play a leading role by offering capability-building lectures and coaching through two-way communication.

## Suppliers' Consortium for National Human Resource Development (Korea)

- As part of the Consortium for National Human Resource Development, we have supported our suppliers in training their employees since 2006 to facilitate social contribution and achieve mutual growth.
- We offer various leadership and competence-building training to our suppliers' employees. Recently, we have been visiting more of our suppliers to better understand their work process and seek ways to achieve win-win growth.



## Employee Training System

All Employees							Business Leaders/ Core Talent			
Korea				Overseas						
My Vision Planning	Position	Business Function College	Life Planning	Required per Position/ Duty	Business Function					
MVP-V	'Shift' Leader/ Division Leader	Design	My LG, My Life	Director Course			Global CEO Conference			
MVP-IV		Product Planning		Manager Development	LG My Company	Business Division Leader	EnDP	First-time VPs	R&D Personnel Enhancement	
MVP-III	Team Leader Enhancement	R&D	New Manager							Marketing/ Sales
MVP-II	Experienced Employee Training Course	SW		Dream Happiness (30s)	Global New LGE On-boarding	Business Leader Candidates	MBA	Pre-Expatriate FSE Candidate		
MVP-I		Procurement	Self-Reflection (From fourth-year employees)						GLP	EIP
New Employee	Product/ Parts Leaders	Materials		Self-Development (From second-year employees)						
		Quality								
		SCM								
		Manufacturing								
		Marketing								
		B2B								
		CS								
		Finance								
		HR								

MVP: My Vision Planning / GLP: Global Leadership Pool / EIP: Early Identified Pool / EnDP: Entrepreneur Development Program



Robot Advanced Course



FT (Facilitator) Training Course at the Talented Personnel Development Center

# With the Community

Under our social contribution vision of 'Cooperating Toward a Better Life for All', we contribute to the sustainability of not only our local communities, but also the international community as a whole through a wide range of social contribution activities. In particular, we have set 3 strategic initiatives for social contribution – 'Technology that Cares', 'Trustworthy Partnerships', and 'Sharing and Comfort' – and carry out various activities in an effort to fulfill our part in achieving the Sustainable Development Goals (SDGs) as a responsible global corporate citizen. As a company that looks beyond the past and the present and dreams of a better future, we will continue our social contribution efforts in association with the international community, so that our initiatives can create more value and have a positive influence on global sustainability.

## Social Contribution Framework



## LGE's Social Contribution Activities and the UN SDGs

SDGs	Relevance to LGE's Business	LGE's Activities
<b>3</b> GOOD HEALTH AND WELL-BEING 3.8 Achievement of universal healthcare, including access to quality health services, medicine and vaccines	<ul style="list-style-type: none"> <li>Use of products such as refrigerators, washing machines, water purifiers, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Operating free laundromats in Nigeria to improve hygiene of the socially-vulnerable</li> <li>Developing and donating washing machines exclusively for washing firefighters' fire resistant suits</li> </ul>
<b>4</b> QUALITY EDUCATION 4.3 Provision of quality technical, vocational and tertiary education 4.4 Expansion of professional/vocational training needed for business activities	<ul style="list-style-type: none"> <li>Recruitment of talent to provide high-quality home appliance/ICT repair service</li> <li>Promotion of industry-academia cooperation to strengthen human capacity and technical capabilities</li> </ul>	<ul style="list-style-type: none"> <li>Providing space and financial support to social economy enterprises in the environmental protection sector through LG Social Campus in Korea</li> <li>Operating a vocational training school in Ethiopia and building infrastructures i.e IT library, for IT education in Vietnam</li> </ul>
<b>8</b> DECENT WORK AND ECONOMIC GROWTH 8.3 Encouragement of the formalization and growth of SMEs by creating jobs, and providing policy support and financial services 8.6 Reduction of the proportion of youth not in employment, education or training	<ul style="list-style-type: none"> <li>Support for capacity development and reinforcement</li> <li>Provision of education and training using LGE's core competencies</li> <li>Expansion of access to financial services</li> </ul>	<ul style="list-style-type: none"> <li>Providing space and financial support to social economy enterprises in the environmental protection sector through LG Social Campus in Korea</li> <li>Operating a vocational training school in Ethiopia, building infrastructures for IT education in Vietnam, and holding inverter classes in Bangladesh</li> <li>Providing CSR training to undergraduate students, and supporting the planning and execution of relevant activities</li> </ul>
<b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE 9.a Increase in financial, technological and technical support to African and least developed countries 9.c Improvement of ICT and Internet accessibility in African and least developed countries	<ul style="list-style-type: none"> <li>Improvement of LGE's brand awareness in new markets</li> <li>Building of social infrastructure in developing countries</li> </ul>	<ul style="list-style-type: none"> <li>Undertaking the prosthetics project in Kenya</li> <li>Establishing IT education infrastructures and saltwater desalination facilities in Vietnam</li> </ul>
<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES 11.4 Contribution to protect and safeguard the world's cultural and natural heritage	<ul style="list-style-type: none"> <li>Protection of World Cultural Heritage and awareness-raising using PR infrastructures</li> <li>Forge partnerships with government organizations related to cultural heritage</li> </ul>	<ul style="list-style-type: none"> <li>Conducting regional volunteer activities under the theme of environmental protection, participated by employees at all business sites</li> <li>Screening the World Cultural Heritage promotion video at NewYork Timesquare and Piccadilly Circus in London</li> </ul>

## LGE's Endorsement of the SDGs

- As a leading global company, we are actively committed to achieving the UN SDGs.
- We have set 3 major strategy initiatives and 5 goals highly relevant to our business characteristics as our priority goals.
- We reflect the opinions of our stakeholders in making continuous efforts to discover and implement social contribution activities relating to our 5 priority goals and the SDGs.

### UN Sustainable Development Goals (SDGs)

- The United Nations Sustainable Development Goals (SDGs) are global agendas that need to be addressed to build a sustainable global society by protecting the planet and human rights, ending poverty, and achieving social and economic development.
- To contribute to achieving the SDGs, we encourage all social constituents such as government institutions, private enterprises, and civil society to participate in the cause and form partnerships.
- It consists of 17 goals and 169 targets to be implemented by 2030.

## Specific Social Contribution Targets

- Technology that Cares**  
To provide LG Electronic products and technologies to those who need them, and develop new products and technologies to contribute to solving community problems, such as social and environmental issues.
- Trustworthy Partnerships**  
To respect each and every opinion of LG Electronics' stakeholders, and in our management activities reflect the expectations collected through diverse communications channels.
- Sharing and Comfort**  
To reach out to the marginalized in society and consider how we can move forwards together, establishing local communities where we can live in harmony through volunteering and donations.

## Procedures for Social Contributions



## Selection of New Social Contribution Activities and Execution of Donations

All of our social contribution activities and donations undergo thorough prior review, and take place in accordance with the direction of our social contribution causes. The LGE Social Contribution Guidelines establish discretionary rules for social contribution activities and donations of KRW 50 million or more, such as requiring the CEO's approval, depending on the content and amount of each given activity. In the case of donations, in particular, individuals, political or religious organizations, sports teams, private gatherings such as alumni associations are excluded and are approved only when all the following requirements are met:

- 1) The purpose of the donation is in line with the company's social contribution goals.
- 2) There is no interest between the company/employee and the person requesting/receiving the donation.
- 3) The donation is made in accordance with the relevant anti-corruption laws and regulations such as Criminal law and the Improper Solicitation and Graft Act.

## Creation and Operation of the Executive Social Contribution Fund

The Executive Social Contribution Fund, founded in 2004 by the voluntary participation of LGE's executives, is operated by executives contributing 0.5% of their basic salary and the company matching the same amount. The purpose of the Fund is to carry out LGE's various social contribution activities and the Steering Committee is held biannually to ensure efficiency and transparency in management of the fund.

## LG Ambassador

In Bangladesh, LG Electronics has chosen the LG Ambassador program to support local residents in resolving regional issues that are difficult for the company to understand. Once a local resident or customer submits a plan for resolving a local issue, we review the plan with our partner agencies to identify qualified candidates to support. Residents who successfully submit plans are appointed as LG Ambassadors and receive funds for support. In 2020, LG Electronics will expand this program globally and continue to contribute to improving community issues around the world.

### Evaluation Criteria

- ① Local NGOs undertake the first review taking into account the local situation, the importance of the issue and feasibility.
- ② LGE local subsidiary (branch office) conduct the second review in the aspects of relevance to SDGs and local policies.
- ③ The CSR Team at the LGE headquarters evaluate relevance to LGE's three major social contribution strategies.
- ④ The final winner (LG Ambassador) is selected based on a comprehensive evaluation of the LGE local subsidiary and the CSR Team at headquarters.



LG Ambassador in Bangladesh

## Emergency Relief Process

We support the restoration of regions damaged by flood, fire, and other disasters. According to our business manual for disaster situations, we provide special repair services in Korea affected by disasters and help minimize inconvenience experienced by customers in using LGE products. The 'Flood Relief Service Manual' systematically defines the scope and subjects of service support by classifying floods into four levels. In the event of a flood, we provide free repair services by effectively providing the necessary manpower and equipment in accordance with the manual. Moreover, we collect electronic waste and operate free laundromats to help speedy recovery of disaster-affected regions. Every May and June, we check the status of our personnel, equipment, materials and guidelines, and conduct mock drills to prepare for the summer flood season.



Flood recovery support (Philippines)

## Key Points of LGE's Flood Relief Service Manual



### Classification of Floods(Korea)

Category	Grade D	Grade C	Grade B	Grade A
	Partial flooding caused by local heavy rain	Metropolitan flooding by heavy/torrential rain	Nationwide flooding	Declaration of national disaster
<b>Damage</b>	1,000 households or less (140 cases/day)	3,000 households or less (420 cases/day)	Under 5,000 households (700 cases/day)	5,000 households or more (700 cases/day or more)
<b>Personnel</b>	1 response unit (30 persons)	3 response units (90 persons)	5 response units (150 persons)	Up to 8 response units (240 persons)
<b>Equipment</b>	Equipment operation by each regional team	Equipment operation by major storage posts	Deficit of equipment other than regional equipment must be transferred between storage posts or additionally purchased	

## Global Social Contribution Activities

In an effort to contribute to the sustainable development of the international community, we undertake environmental preservation and poverty eradication initiatives, educational activities, and volunteer activities participated in by our employees and customers across the world where our subsidiaries are located.

### Life's Good Employees Overseas Volunteer Group

Life's Good Employees Overseas Volunteer Group undertakes a range of initiatives to help improve the environment and achieve social progress in developing countries by actively utilizing LGE's technologies and resources accessible across the world. Many employees voluntarily participated in our social contribution activities in Nepal in 2019, with a 10 to 1 competition rate for participation. At the time, Nepal was still suffering from the aftermath of a devastating earthquake in 2015, including housing shortages, financial difficulties, as well as worn-out school facilities and poor educational environment for many children. In an effort to help address these issues, Life's Good Employees Overseas Volunteer Group visited Shree Seti Devi School in 2019 and carried out various construction and teaching activities, such as building shower rooms, painting murals, repairing the playground, remodeling the classrooms, and providing education on hygiene. The Volunteer Group also organized the opening ceremony of LG IT Library, a smart educational facility utilizing LGE products. Thanks to these efforts and support, Nepalese students can now study in a pleasant and smart educational environment. Under the CSR slogan 'Life's Good with LG', Life's Good Employees Overseas Volunteer Group will continue to share warm hearts in all parts of the world.



Life's Good Employee Overseas Volunteer Group in Nepal

### Forest Restoration Using ICT Technology (Spain)

LGE carries out the 'Smart Green Campaign' across Europe to prevent environmental damage and global warming. As part of this campaign, our subsidiary in Spain holds the 'One Tree for Every Person Campaign', which aims to plant 47 million trees throughout Spain by 2030. In 2019, it also supported forest restoration activities using ICT technologies in Alto Tajo Natural Park located in Guadalajara Province of Spain. To help restore this natural reserve, which was recently burned down in a forest fire, we planted 2 million tree seeds in association with 'CO2 Revolution', a Spanish start-up specializing in intelligent tree planting. First, drones equipped with LGE's G8 smart phones were flown over the park to precisely photograph and film areas for seed-planting using 3 rear cameras. Subsequently, gram notebooks were used to analyze the data from the phones and determine the types and location of seeds to be dispersed. Finally, G8 smart phones were used to control the drones that dispersed the seeds. We will remain active in continuing our social contribution activities by utilizing our technologies and capabilities to help solve global environmental issues, such as the forest restoration campaign in Spain, as well as local community issues.



Forest restoration activities using drones in Spain

### Types of Social Contribution Cost

(Unit: KRW 100 million)

	Community Investment	Charitable Donation	Commercial Marketing
2017	114	17	286
2018	204	42	20
2019	55	133	63

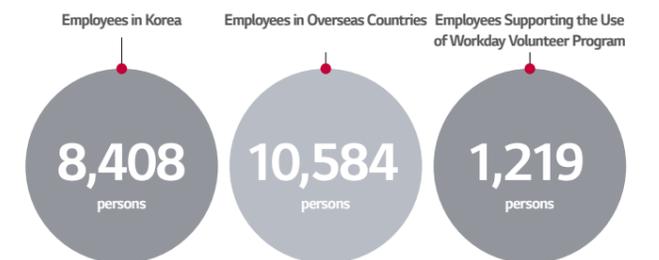
\* Costs relating to the 2017 Community Development Fund, charitable donation in 2018 and commercial marketing differ from those in the previous year's report due to the correction of errors that arose from the application of the exchange rate in the system.

### Social Contribution Funds

(Unit: KRW million)

	Executive Social Contribution Fund	Employee Social Contribution Fund
2017	311	244
2018	334	243
2019	364	365

### Participation in Voluntary Activities (Cumulative)



\* Including number of accumulated activities

# 4

## APPENDIX

101	Sustainability Management Performance Data	119	SASB Index
112	EESH-Quality Certification Status	120	TCFD Index
113	Membership-Awards & Recognition	121	Corporate Governance Index
114	Materiality Assessment	122	Independent Assurance Statement
116	GRI Standards Index	124	History of Sustainability Reports Publication

## SUSTAINABILITY MANAGEMENT PERFORMANCE DATA

### Financial Performance and Distribution

	Classification	Unit	2017	2018	2019
Financial Performance (Consolidated)	Net sales		61,396.3	61,341.7	62,306.2
	Cost of sales		46,737.6	46,260.6	46,970.6
	Gross profit		14,658.7	15,081.0	15,335.6
	Selling and marketing expenses		12,190.2	12,377.8	12,899.4
	Operating income		2,468.5	2,703.3	2,436.1
	Financial income	KRW billion	483.7	487.4	426.2
	Financial expenses		831.1	796.6	714.0
	Other non-operating income		1,346.6	1,251.6	1,376.0
	Other non-operating expenses		1,577.1	1,560.0	1,943.6
	Profit (loss) before income tax		2,558.1	2,008.6	528.6
	Income tax expense		688.6	535.8	348.7
	Profit (loss) for the year		1,869.5	1,472.8	179.9

	Classification	Unit	2017	2018	2019
Economic Value Generated Distributed and Retained* (Parent)	Sales		<b>31,966.5</b>	<b>29,982.0</b>	<b>28,654.5</b>
	Non-operating income and financial profits		71.3	(420.2)	(325.1)
	Economic value generated		32,037.8	29,561.8	28,329.4
	Operating expenses		31,265.3	29,494.3	28,488.5
	Wages & Fringe benefit expenses	KRW billion	3,890.1	3,892.2	4,416.3
	Capital costs		280.6	377.6	384.6
	Taxes & Dues		36.4	37.1	37.2
	Donations		17.0	7.6	14.6
	Economic value distributed		<b>35,489.3</b>	<b>33,808.8</b>	<b>33,441.2</b>
	Economic value retained		(3,451.6)	(4,246.9)	(5,011.8)

\* Some figures calculated using internal LGE data

## Economic Data

### Summary of Consolidated Statements of Income

Classification	Unit	16th Year(2017)	17th Year(2018)	18th Year(2019)
1. Net sales		61,396.3	61,341.7	62,306.2
2. Cost of sales		46,737.6	46,260.6	46,970.6
3. Gross profit		14,658.7	15,081.0	15,335.6
4. Selling and marketing expenses		12,190.2	12,377.8	12,899.4
5. Operating income		2,468.5	2,703.3	2,436.1
6. Financial income	KRW billion	483.7	487.4	426.2
7. Financial expenses		831.1	796.6	714.0
8. Gain (loss) from equity method		667.5	(77.2)	(1,052.1)
9. Other non-operating income (expenses)		(230.5)	(308.4)	(567.7)
10. Profit (loss) before income tax		2,558.1	2,008.6	528.6
11. Income tax expense		688.6	535.8	348.7
12. Profit (loss) for the year		1,869.5	1,472.8	179.9

### Summary of Consolidated Statements of Financial position

Classification	Unit	16th Year(2017)	17th Year(2018)	18th Year(2019)
I. Current Assets		19,195.0	19,362.9	19,753.5
Trade receivables		8,178.2	6,371.6	6,360.3
Inventories		5,908.4	6,021.4	5,863.4
Other current assets		5,108.3	6,969.9	7,529.8
II. Non-current Assets	KRW billion	22,026.0	24,965.6	25,106.4
Investments in jointly controlled entities and associates		5,620.3	5,537.6	4,554.5
Tangible assets		11,800.8	13,334.0	14,505.4
Intangible assets		1,854.6	3,001.2	2,692.0
Other non-current assets		2,654.5	2,998.5	3,364.2
<b>Total assets</b>		<b>41,221.0</b>	<b>44,328.4</b>	<b>44,859.9</b>
I. Current liabilities		17,536.5	17,135.0	17,657.9
II. Non-current liabilities		9,010.8	10,886.5	10,776.8
<b>Total liabilities</b>		<b>26,547.3</b>	<b>28,021.5</b>	<b>28,434.7</b>
I. Paid-in capital		3,992.3	3,992.3	3,992.3
Capital stock		904.2	904.2	904.2
Share premium	KRW billion	3,088.2	3,088.2	3,088.2
II. Retained earnings		10,964.2	12,075.4	11,857.3
III. Accumulated other comprehensive loss		(1,522.5)	(1,604.7)	(1,309.8)
IV. Other components of equity		(209.8)	(209.8)	(209.8)
V. Non-controlling interest		1,449.4	2,053.6	2,095.1
<b>Total equity</b>		<b>14,673.7</b>	<b>16,306.9</b>	<b>16,425.1</b>
<b>Total liabilities and equity</b>	KRW billion	<b>41,221.0</b>	<b>44,328.4</b>	<b>44,859.9</b>

### Financial Assistance Received from Government (Korea)

Classification	Unit	2017	2018	2019
Tax relief and tax credits		153	32	153
Investment grants, R&D grants, and other relevant types of grant	KRW billion	13,724	8,734	7,450

### Defined Benefit Plan Obligations and Other Retirement Plans (Korea)

Classification	Unit	2017	2018	2019
Expected amount	KRW billion	23,413	23,862	25,923
Expected ratio	%	92	97	96
The extent to which the scheme's liabilities are estimated to be covered by the assets that have been set aside to meet them	KRW billion	21,632	23,089	24,789
Percentage of salary contributed by employee or employer	%	100	100	100

### Ratios of Standard Entry Level Wage by Gender Compared to Local Minimum Wage (Korea)

Classification	Unit	2017	2018	2019
New Employee	Office Position	210	181	169
	Technical Position	147	117	103

\* No pay gap between employees on the basis of gender

### Amount of Direct Purchase from Local Suppliers

Classification	Unit	2019
Korea		11.7
Asia		6.2
China	KRW trillion	4.7
Americas		4.6
Europe, CIS		1.9
MEA		0.1

### Percentage of Direct Purchases by Category

Classification	Unit	2019
Display Components		28.7
Mechanical Parts		30.5
Electronic Parts	%	20.8
Semi-Conductors		10.9
Raw Materials		6.1
Others		2.9

### Amount of Local Purchases by Key Subsidiaries by Product

Classification	Unit	Total Purchase of 2019	Total Local Purchase of 2019
Korea		13.1	9.5
Nanjing, China	Washing machine	0.6	0.6
Qingdao, China	Mobile Phone	0.5	0.3
Nanjing, China	Monitor	1.0	0.6
Taizhou, China	Refrigerator	0.8	0.7
Rayong, Thailand	Air Conditioner	0.5	0.4
Reynosa, Mexico	TV	2.2	0.02
Mlawa, Poland	TV	2.3	0.8
Others	-	10.5	3.8

## Environmental Data

### Energy Consumption within the Organization

Classification	Unit	2017	2018	2019	
Non-renewable sources	LNG (Korea)	1,243	744	827	
	LNG (Overseas)	538	390	508	
	Coal (Korea)	-	-	-	
	Coal (Overseas)	TJ	-	-	-
	Others (Korea)	117	71	72	
	Others (Overseas)	441	260	639	
	Subtotal		2,339	1,465	2,046
Renewable sources	Solar Power	0.6	0.7	5.4	
	Wind Power	-	-	-	
	Biomass	TJ	-	-	-
	Others	16.7	45.4	62	
	Subtotal		17.5	52	68
Energy purchased	Electricity (Korea)	3,902	2,959	2,946	
	Electricity (Overseas)	TJ	2,315	2,386	2,838
	Steam (Korea)	450	453	395	
	Steam (Overseas)	35	40	61	

\* Applicable business sites

- Korea : Business sites in Korea under operational control of LG Electronics

- Overseas : Overseas production subsidiaries of LG Electronics (32 subsidiaries)

\* Applicable energy usage: Combustion facilities in business sites, and external electricity and heat usage.

\* Energy consumption was calculated based on the net calorific value. Steam includes the consumption of steam recovered from waste heat generated at our locations in Korea.

\* Verification status: Third party assurance was completed on all Korean and overseas production sites (verification of fugitive emissions from refrigeration is excluded).

### GHG Emissions (Scope 1, 2)

Classification	Unit	2017	2018	2019
Direct GHG emissions (Scope1)	Korea	967	650	466
	Overseas	138	135	154
Indirect GHG emissions (Scope2)	Korea	396	391	385
	Overseas	432	461	499
Total (Scope1 + Scope2)	1,000 tons of CO <sub>2</sub> e	1,933	1,637	1,503
GHG emissions intensity (unit: KRW)	1,000 tons of CO <sub>2</sub> e / KRW 100 billion	3.15	2.68	2.17

\* Applicable business sites

- Korea: Business sites in Korea under operational control of LG Electronics

- Overseas: Overseas production subsidiaries of LG Electronics (32 subsidiaries)

\* Basis of Assessment

- Korea: GHG Trade Scheme for quantification and reporting of GHG emissions, Guideline for GHG Trade Scheme management

- Overseas: ISO 14064-3:2006 (GHG - Part 3: Specification with guidance for the validation and verification of GHG assertions)

\* Assessment

- Korea: LGE's GHG Inventory Report, LGE's Process of managing and collecting GHG Data, calculating and reporting emissions

- Overseas: LGE's GHG Emission Report, LGE's Process of managing and collecting GHG Data, calculating and reporting emissions

### GHG Emissions (Scope 3)

Classification	Unit	2017	2018	2019
Other indirect GHG emissions (Scope3)	Rental building	8,829	10,610	11,313
	Business trip	tons of CO <sub>2</sub> e	56,559	60,853

\* Assessment: Emissions from rental buildings and business trips by employees are assessed by a third party.

### Air Emissions

Classification	Unit	2017	2018	2019	
NOx (Nitrogen Oxide)	Korea	11.1	20.9	29.7	
	Overseas	Tons	36.1	34.5	58.5
	Total		47.2	55.4	88.1
SOx (Sulfur Oxides)	Korea	1.7	5.8	0.2	
	Overseas	Tons	43.3	32.5	12.8
	Total		45	38.3	13
VOCs (Volatile Organic Compounds)	Korea	27.9	18.0	8.9	
	Overseas	Tons	3	3.7	106.5
	Total		30.9	21.7	115.3
Dust	Korea	11.4	7.5	7.6	
	Overseas	Tons	55.7	57.9	61.9
	Total		67.1	65.4	69.5

### Waste by Type and Disposal Method

Classification	Unit	2017	2018	2019	
Total weight of hazardous waste(Korea)	Recycling	404	1,060	1,102	
	Incineration	Tons	932	927	633
	Landfill	-	66	853	
Total weight according to treatment methods (non-hazardous**)	Korea	42,528	40,419	41,406	
	Overseas	Tons	93,446	91,489	103,410
	Total		135,974	131,908	144,816
Total weight according to treatment methods (non-hazardous**)	Korea	7,751	8,160	7,197	
	Overseas	Tons	4,159	2,437	1,436
	Total		11,910	10,957	8,633
Total weight according to treatment methods (non-hazardous**)	Korea	1,945	400	202	
	Overseas	Tons	24,951	31,312	11,833
	Total		26,896	31,712	12,035
Total weight according to treatment methods (non-hazardous**)	Korea	52,224	48,979	48,805	
	Overseas	Tons	122,556	125,238	116,679
	Total		174,780	174,217	165,484

\* All the wastes generated from the business sites of LG Electronics are treated by a local certified waste treatment service provider.

\*\* Total weight according to treatment methods is additionally specified as non-hazardous in 2019-2020 Sustainability report.

### Significant Spills

Classification	Unit	2017	2018	2019
Number of Spills	Cases	0	0	0
Volume of Spills	Tons	0	0	0

### Non-compliance with Environmental Laws and Regulations

Classification	Unit	2017	2018	2019
Total monetary value of significant fines	KRW	0	0	0
Total number of non-monetary sanctions	Cases	0	0	0

\* Summary of violations of regulations subject to fines over USD 10,000 (in accordance with DJSI criteria)

## Environmental Data

### Water Withdrawal by Source

Classification	Unit	2017	2018	2019
Surface water		N/A	N/A	N/A
Ground water		1,219	1,433	1,162
Water reused in the workplace**	1,000 Tons	245	223	207
Municipal water supplies or other public or private water		9,540	10,850	11,031
- Municipal water		4,263	4,487	4,635
- Industrial water		5,277	6,363	6,396
<b>Total</b>	1,000 Tons	<b>11,004</b>	<b>12,506</b>	<b>12,400</b>

\* Scope2 (indirect water consumption) excluded

\*\* The definition of Waste water from other organization is changed to Water reused in the workplace in 2019-2020 Sustainability report.

### Waste Water Treatment

Classification	Unit	2017	2018	2019
Water reused		245	223	175
Internal Treatment Facility	1,000 Tons	5,945	6,256	6,967
External Treatment Facility & Others		4,549	5,804	2,169

### Water Discharge by Quality and Destination

Classification	Unit	2017	2018	2019	
Water drainage (Limited to treatment facilities at the company)	Korea	5,226,310	5,437,589	4,978,806	
	Overseas	718,470	818,768	1,452,320	
	<b>Total</b>	<b>5,944,780</b>	<b>6,256,357</b>	<b>6,431,126</b>	
Wastewater quality	COD	Korea	40.0	48.9	44.8
		Overseas	121.7	141.0	179.7
		<b>Total</b>	<b>161.7</b>	<b>189.9</b>	<b>224.5</b>
	SS	Korea	21.1	24.6	26.4
		Overseas	73.3	59.0	32.3
		<b>Total</b>	<b>94.5</b>	<b>83.6</b>	<b>58.7</b>
	T-N	Korea	115.8	141.7	116.2
		Overseas	2.9	2.9	9.1
		<b>Total</b>	<b>118.7</b>	<b>144.6</b>	<b>125.2</b>
	T-P	Korea	1.2	1.3	2.1
		Overseas	0.7	0.8	3.1
		<b>Total</b>	<b>1.8</b>	<b>2.1</b>	<b>5.2</b>

## Social Data

### The Number of Employees by Region

Classification	Unit	2017	2018	2019
Korea		37,655	37,700	40,110
China		8,483	7,671	6,588
Asia		6,070	6,059	6,702
CIS		1,679	1,638	1,475
North America	Employees	2,341	3,052	3,370
Europe		4,390	4,483	4,286
India		4,506	4,317	4,230
Japan		243	266	259
Central and South America		6,742	6,135	5,727
Middle East & Africa		1,664	1,291	1,224
<b>Total</b>	Employees	<b>73,773</b>	<b>72,612</b>	<b>73,971</b>

### Total Number of Employees by Employment Contract

Classification	Unit	2017	2018	2019	
The number of employees by employment contract and gender	Permanent	Male	57,280	56,657	58,682
		Female	15,270	15,047	14,420
	Temporary	Male	657	515	569
		Female	566	393	302

### New Employee Hires and Employee Turnover

Classification	Unit	2017	2018	2019
Number of newly hired employees by age group	Below 30	5,770	5,506	5,722
	30-50	3,391	3,927	6,444
	Over 50	242	358	786
Ratio of newly hired employees by age group	Below 30	61.4	56.2	44.2
	30-50	36.1	40.1	49.8
	Over 50	2.6	3.7	6.1
Total number of newly hired employees by gender	Male	6,828	7,017	10,124
	Female	2,575	2,774	2,828
Ratio of newly hired employees by gender	Male	72.6	71.7	78.2
	Female	27.4	28.3	21.8
Number of employees who turnover by age group	Below 30	4,835	4,827	4,401
	30-50	5,455	5,691	6,234
	Over 50	618	538	981
Turnover ratio of employees who turnover by age group	Below 30	36.8	43.7	37.9
	30-50	41.5	51.5	53.7
	Over 50	4.7	4.9	8.4
Number of employees who turnover by gender	Male	7,650	7,806	7,984
	Female	3,263	3,250	3,632
Ratio of employees who turnover by gender	Male	70.1	70.6	68.7
	Female	29.9	29.4	31.3

## Social Data

### Diversity of Governance and Employees

Classification	Unit	2017	2018	2019
Gender ratio of the BOD	Male	100	100	100
	Female	0	0	0
Number of employees by gender	Male	57,937	57,172	59,249
	Female	15,836	15,440	14,722
Number of employees by age	Below 30	14,062	12,161	11,142
	30-50	54,157	54,310	55,858
	Over 50	5,554	6,141	6,971

### Proportion of Senior Management Hired from the Local Community

Classification	Unit	2017	2018	2019
Number of local employees	Employees	7,669	6,858	6,908
Senior management*		161	126	134
Ratio	%	2.1	1.8	1.9

\* Senior management : Personnel who have been assigned duties

### Parental Leave (Korea)

Classification	Unit	2017	2018	2019
Total number of employees who took parental leave	Male	148	194	224
	Female	510	491	383
Total number of employees who came back to work after parental leave	Male	103	142	180
	Female	480	414	410
Ratio of employees who came back to work after parental leave	Male	89.6	73.2	92.8
	Female	92.7	84.3	83.5
Total number of employees that returned to work after parental ended that were still employed 12 months after their return to	Male	25	59	121
	Female	296	307	310
Ratio of employees that returned to work after parental ended that were still employed 12 months after their return to	Male	46.3	30.4	62.4
	Female	58.4	62.5	63.1

### Percentage of Employees Receiving Regular Performance and Career Development Reviews

Classification	Unit	2017	2018	2019
Male		100	100	100
Female		100	100	100
Office position	%	100	100	100
Technical position		100	100	100

### Average Hours of Training per Year per Employee (In Korea)

Classification	Unit	2017	2018	2019
Male		62.4	64.8	58.5
Female		58.4	59.8	58.1
Office position	Hours	74.0	78.4	68.6
Technical position		15.0	12.2	28.5

### Incidents of Violations Involving Rights of Indigenous Peoples

Classification	Unit	2017	2018	2019
Incidents of violations involving rights of indigenous peoples	Cases	0	0	0

### Total Number and Percentage of Operations Assessed for Risks Related to Corruption

Classification	Unit	2017	2018	2019
No. of business sites	Sites	107	107	104
Ratio of business sites	%	100	99	100

\* Out of 108 business sites in Korea and overseas, one overseas business site that did not manufacture commercially in 2018 was excluded.

### Communication and Training about Anti-corruption Policies and Procedures

Classification	Unit	2017	2018	2019
Korea	Number and ratio of the members of the Board of Directors who received a notice or training	7(100)	7(100)	7(100)
	Number and ratio of members who received a notice or training	27,346(92)	27,342(92)	27,520(92.4)
Overseas	Number and ratio of suppliers who received a notice or training	1,764(100)	1,684(100)	1,665(100)
	Number and ratio of members who received a notice or training	17,954(90)	15,807(87)	17,004(90.6)

### Confirmed Incidents of Corruption and Actions Taken (In Korea)

Classification	Unit	2017	2018	2019
No. of Corruption Cases		0	0	0
Confirmed incidents in which employees were dismissed or disciplined for corruption	Cases	0	0	0
Confirmed incidents when contracts with business partners were terminated or not renewed due to violations related to corruption		0	0	0

### Business Sites that have been Subject to Human Rights Impact Assessments

Classification	Unit	2017	2018	2019
The number business sites where the company operates		37	37	38
The number of business sites subject to assessment of human rights impact	Business sites	37	37	38
The ratio of business sites subject to assessment of human rights impact	%	100	100	100

### Training on Human Rights Policies or Procedures (Korea)

Classification	Unit	2017	2018	2019
The number of hours of training on the Human Rights Policy and procedures related to the business.	Hours	2,571	3,175	2,059.5
The number of employees who received training on the Human Rights Policy and procedures related to the business.	By position	954	1,519	909
	By job type	346	480	151
	Online	405	492	176

### Ratio of Security Personnel Trained in Human Rights Policies or Procedures (Korea)

Classification	Unit	2017	2018	2019
Security personnel trained in human rights policies or procedures	Employees(%)	69(100)	475(100)	475(100)

### Incidents of Discrimination and Corrective Actions Taken (Korea)

Classification	Unit	2017	2018	2019
The number of cases of discriminatory incidents	Cases	0	0	0

## Social Data

### Substantiated Complaints Concerning Breaches of Customer Privacy and Losses of Customer Data

Classification	Unit	2017	2018	2019
Complaints received from outside parties and substantiated by the organization	Complaints	0	0	0
Complaints from regulatory bodies		0	0	0
Total number of identified leaks, thefts, or losses of customer data	EA	0	0	0

### Assessment of the Health and Safety Impacts of Product and Service Categories

Classification	Unit	2017	2018	2019
Percentage of major product and service categories for which health and safety impacts are assessed	%	100	100	100

### Incidents of Non-compliance Concerning the Health and Safety Impacts of Products and Services

Classification	Unit	2017	2018	2019
Incidents of non-compliance with regulations resulting in a fine or penalty		0	1	0
Incidents of non-compliance with regulations resulting in a warning	Incidents	0	0	0
Incidents of non-compliance with voluntary codes		0	0	0

\* Summary of violations of regulations on the Health and Safety Impacts of Products and Services subject to fines and penalties over USD 10,000 (in accordance with DJSI criteria)

### Non-compliance with Laws and Regulations in the Social and Economic Area

Classification	Unit	2017	2018	2019
Total monetary value of significant fine	KRW	30,000,000	0	19,350,848
Total number of non-monetary sanctions	Sanctions	0	0	0

\* Summary of violations of regulations subject to fines over USD 10,000 (in accordance with DJSI criteria)

\* In accordance with conversion rates by year

### Impact Assessments on Local Community

Classification	Unit	2017	2018	2019
Ratio of business sites subject to social impact assessments (including gender impact assessments) based on participatory processes	%	None	None	None
The number of countries which held stakeholder consultation on CSR		2	2	2
The number of local community consultation committees and processes that include vulnerable groups	EA	2	2	2
The number of representation bodies to deal with impacts		None	None	None
Ratio of formal local community grievance processes	%	None	None	None

### New Suppliers that were Screened Using Social Criteria

Classification	Unit	2017	2018	2019
Percentage of new suppliers that were screened using social criteria	%	100	100	100

### Negative Social Impacts in the Supply Chain and Actions Taken

Classification	Unit	2017	2018	2019
Number of suppliers assessed for social impacts (Suppliers that have performed self-assessment by year)	Suppliers	1,764	1,684	1,665
Number of suppliers identified as having significant actual and potential negative social impacts		0	0	0
Percentage of suppliers identified as having significant actual and potential negative social impacts with which improvements were agreed upon as a result of assessment	%	100	100	100
Number of suppliers identified as having significant actual and potential negative social impacts with which relationships were terminated as a result of assessment	Suppliers	12	0	0

### Free Training for Suppliers (Korea)\*

Classification	Unit	2017	2018	2019
The number of suppliers	Suppliers	316	281	349
The number of participating employees	Employees	2,408	2,121	1,610

\* Refer to p87

### Amount of Funding for Suppliers (Korea)\*

Classification	Unit	2017	2018	2019	
Direct Funding	The number of funded suppliers	Suppliers	21	35	30
	The amount of fund	KRW billion	200	243	273
Win-Win Growth Fund	The number of funded suppliers	Suppliers	124	127	174
	The amount of fund	KRW billion	988	1,049	1,148
Win-Win Payment	The number of funded suppliers	Suppliers	1,424	1,574	1,564
	The amount of fund	KRW billion	77,805	78,079	75,376

\* Refer to p87

### Safety Data

Classification	2017	2018	2019
LTIFR <sup>1)</sup>	0.67	0.65	0.75
OIFR <sup>2)</sup>	0	0	0
Fatality (No. of case)	0	0	0
Lost-time Injuries (No. of case)	104	91	106
Total Hours Worked	155,421,107	140,129,484	141,987,149

1) LTIFR: Lost-Time Injuries Frequency Rate (Number of lost-time injuries x 1,000,000)/(Total hours worked in accounting period)

LTIFR (Lost-Time Injuries Frequency Rate) is an accident index that differs from occupational accident rate and Frequency Rate of Injury (FR) and includes not only industrial accidents, but also all labor losses of more than one day.

2) OIFR: Occupational Injuries Frequency Rate (Number of occupational illness cases x 1,000,000)/(Total hours worked in accounting period)

LG Electronics has employees who work in special conditions or who work with special materials undergo a special medical checkup on an annual basis. The results indicate that none of our employees contracted occupational diseases for the period between 2017-2019.

\* Applicable employees: All employees home and abroad including those in overseas production subsidiaries of LG Electronics.

\* For LTIFR and OIFR, calculation is based on average figures for Korean and overseas employees

# EESH-QUALITY CERTIFICATION STATUS

as of April 2020

Region	Subsidiary	Country	Environmental Management	Health and Safety	Energy	Business Continuity Management	Quality
South America	LGEMX(Mexicali)	Mexico	ISO 14001	-	ISO 50001	-	ISO 9001
	LGERS(Reynosa)	Mexico	ISO 14001	-	-	-	ISO 9001
	LGEMM(Monterrey)	Mexico	ISO 14001	-	-	-	ISO 9001, ISO 17025
	LGESP_T(Taubate)	Brazil	ISO 14001	-	-	-	ISO 9001
	LGEBR_M(Manaus)	Brazil	ISO 14001	OHSAS 18001	-	-	ISO 9001, IATF 16949
Europe	LGEMA(Mlawa)	Poland	ISO 14001	OHSAS 18001	ISO 50001	-	ISO 9001, IATF 16949
	LGEWR(Wroclaw)	Poland	ISO 14001	OHSAS 18001	ISO 50001	-	ISO 9001
	LGERA(Ruza)	Russia	ISO 14001	OHSAS 18001	-	-	-
CIS Africa	LGEEG(10th of Ramadan)	Egypt	ISO 14001	OHSAS 18001	-	-	ISO 9001
	LGEAT(Istanbul)	Turkey	ISO 14001	OHSAS 18001	-	-	ISO 9001, ISO 27001
	LGESR(Riyadh)	Saudi Arabia	ISO 14001	OHSAS 18001	-	-	ISO 9001
	LGESA(Johannesburg)	South Africa	-	-	-	-	-
	LGEIL_P(Pune)	India	ISO 14001	OHSAS 18001	-	-	ISO 9001, ISO/IEC 17025
Asia	LGEIL_N(Noida)	India	ISO 14001	OHSAS 18001	ISO 50001	-	ISO 9001
	LGETH(Rayong)	Thailand	ISO 14001	OHSAS 18001	ISO 50001	-	ISO 9001
	LGEVH(Hai Phong)	Vietnam	ISO 14001	OHSAS 18001	ISO 50001	ISO 22301(VS)	ISO 9001, IATF 16949
	LGEIN_T(Tangerang)	Indonesia	ISO 14001	OHSAS 18001	-	-	ISO 9001
	LGEIN_C(Bekasi)	Indonesia	ISO 14001	OHSAS 18001	-	-	ISO 9001
	LAGENT(Nanjing)	China	ISO 14001	OHSAS 18001	ISO 50001	-	ISO 9001
	LGENB(Qinhuangdao)	China	-	-	ISO 50001	-	ISO 9001, IATF 16949
China	LGENV(Nanjing)	China	ISO 14001	OHSAS 18001	-	-	ISO 9001, IATF 16949
	LGEHZ(Huizhou)	China	ISO 14001	OHSAS 18001	ISO 50001	-	ISO 9001
	LGEQD(Qingdao)	China	ISO 14001	OHSAS 18001	ISO 50001	-	ISO 9001, IATF 16949
	LGEHN(Hangzhou)	China	ISO 14001	OHSAS 18001	-	-	ISO 9001
	LGETR(Taizhou)	China	ISO 14001	OHSAS 18001	-	ISO 22301(Mobile)	ISO 9001
	LGETA(Tianjin)	China	ISO 14001	OHSAS 18001	ISO 50001	-	ISO 9001
	LGEQH(Qinhuangdao)	China	ISO 14001	OHSAS 18001	-	-	ISO 9001
	LGEQA(Qingdao)	China	ISO 14001	OHSAS 18001	-	-	ISO 9001
	LGEPIV(Nanjing)	China	ISO 14001	OHSAS 18001	ISO 50001	-	ISO 9001, ISO/TS 16949
	Pyeongtaek	Korea	ISO14001	OHSAS 18001	ISO 50001	-	ISO 9001
	Gumi(TV)	Korea	ISO14001	OHSAS 18001	ISO 50001	-	ISO 9001, IATF 16949
Korea	Gumi(Solar)	Korea	ISO14001	OHSAS 18001	ISO 50001	ISO 22301 (VS, Mobile)	ISO 9001, IATF 16949, ISO/TL 9000, ISO 13485
	Changwon1	Korea	ISO14001	OHSAS 18001	ISO 50001	-	ISO 9001, ISO 13485
	Changwon2	Korea	ISO14001	OHSAS 18001	ISO 50001	-	ISO 9001
	Pyeongtaek Chiller	Korea	ISO14001	OHSAS 18001	-	-	ISO 9001, IATF 16949
	Incheon	Korea	ISO14001	OHSAS 18001	ISO 50001	ISO 22301(VS)	ISO 9001, IATF 16949
	Chungju	Korea	ISO14001	ISO45001	ISO 50001	-	-

# MEMBERSHIP-AWARDS & RECOGNITION

## Memberships

Responsible Business Alliance	Maekyung Safety & Environment	Korea Display Industry Association	Korea Electronics Association (Private Sector Council for Electronics Trade Promotion)
UN Global Compact	Trade related IPR Protection Association	Korea Micro-Joining Association	Korea Association for ICT Promotion
UN Global Compact Korea Network	Korea Business Council for Sustainable Development	Korean Academy for Trade Credit Insurance	Korea Radio Promotion Association
Korean Association for supporting SDGs for the UN	Korea Audit Bureau of Certification	Korea International Trade Association	Korea Association of Information & Telecommunication
ZigBee Alliance	Korea Authorized Economic Operator Association	Korea Invention Promotion Association	Korea Products Safety Association
Council of Economic Organizations	Korea Investor Relations Service	Korea Association of Industrial Technology	Korea Intellectual Property Protection Association
International Vaccine Institute	Korea Employers Federation	Korea Association of Industrial Technology Security	Korea Intellectual Property Association
Organization of Consumer Affairs	Korea Economic Research Institute	Korea Association of Industrial Designers	Korea Intellectual Property Association Society of CAD/CAM Engineers
Professionals in Business Industrial Health Association	Fair Competition Federation	Korea Listed Companies Association	Korea Chemicals Management Association
Korea Society of Mechanical Engineers	Accreditation Board for Engineering Education of Korea	Korean Society for Noise and Vibration Engineering	
Korea Chamber of Commerce and Industry	Korea Advertisers Association	Korea Smart Grid Association	
The Korean Institute of Electrical Engineers	Korea Management Association	GS1 Korea	

## Awards & Recognition

Date Awarded	Awards & Recognitions	Awarded by
Apr. 2020	Awarded as "Excellence in Sustainability" by the Energy Star Award 2020	U.S. Department of Energy
Mar. 2020	2020 Best Washing Machine Award (for 3 models)	U.S. Consumer REPORT
Mar. 2020	Red Dot Design Award (18 models, 1 models won Best of the Best) International	Reddot of Germany
Feb. 2020	Main Prize at the IF Design Award	International Forum Design GmbH of Germany
Feb. 2020	Performance Award (for 6 Air-conditioning Equipment)	American Society of Heating, Refrigerating and Air-Con. Engineers
Nov. 2019	Best Innovation Award and Innovation Award at 2020 (16 products including LG OLED TVs)	Consumer Technology Association USA
Oct. 2019	2019 Good Design Award (for 19 models)	Japan Institute of Design Promotion
Aug. 2019	IDEA Design Award 2019 (2 gold award products, 1 silver award product, 10 bronze award products)	Industrial Design Society of America
Aug. 2019	EISA Award 2019 (4 products including LG OLED TVs)	European Imaging and Sound Association
Jul. 2019	Green Products of the year 2019 in Korea (7 products including LG DIOS dishwasher)	Korea Green Purchasing Network
Jul. 2019	2019 Annual Energy Winner Award (8 products including LG DIOS dishwasher)	Consumers Korea
Apr. 2019	Acquired Carbon Footprint Certification (6 products including LG DIOS dishwasher)	UK Carbon Trust
Feb. 2019	No.1 Best Brand of Korea Index 2019 (3 products including LG Puricare water purifier)	Chosun Media (Korea)
Jan. 2019	Grand prize at 2019 Korea First Brand (LG Cinebeam-lazer 4K Projector)	Korea Customers' Council

# MATERIALITY ASSESSMENT

## Materiality Assessment Process

In order to identify material sustainability issues, LGE adopted global sustainable initiatives and assessment systems including GRI, SDGs, SASB, RBA, and TCFD. Then, the identified issues were prioritized and analyzed in terms of their impact from a comprehensive perspective in line with our vision, strategy, industry trend, media exposure and internal and external surveys.

### STEP 01 Fundamental Analysis of Issue Pool

Based on the analysis of global standards and initiatives for global sustainability management, evaluation system analysis, best practices in the industry, and media research, we have identified the trend in the sustainability practice.



### STEP 02 Pooling Issues

A pool of 52 issues have been created in line with sustainability management based on industrial standards, assessment, trends, internal practice and perspectives of external stakeholders.

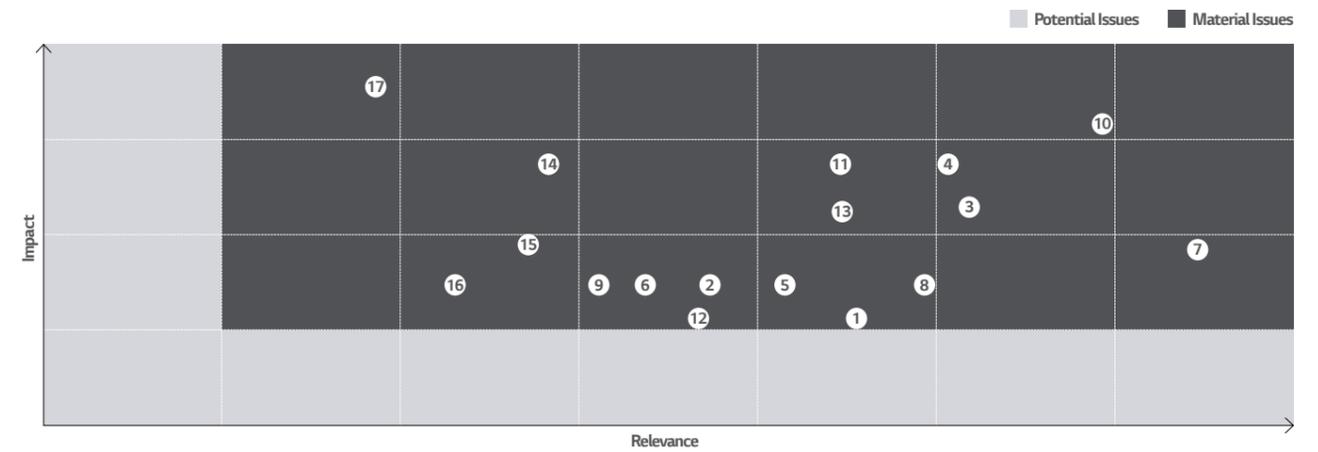
### STEP 03 Assessment of Materiality

LGE assessed the materiality of issues based on stakeholder survey and basic information to identify the materials issues we need to focus on out of a pool of 52 issues.

Survey Overview	
Period	Feb. 1 - 28, 2019
Method	Online survey
Respondents	Internal/external stakeholders
Content of Survey	<ul style="list-style-type: none"> <li>Materiality of issues</li> <li>Strategy, finance, operation and impact of material issues</li> </ul>

### STEP 04 Materiality Assessment and Report

Through prioritization of issues, 17 material issues have been identified and shared through the sustainability report.



### Classification and Reporting of Material Issues

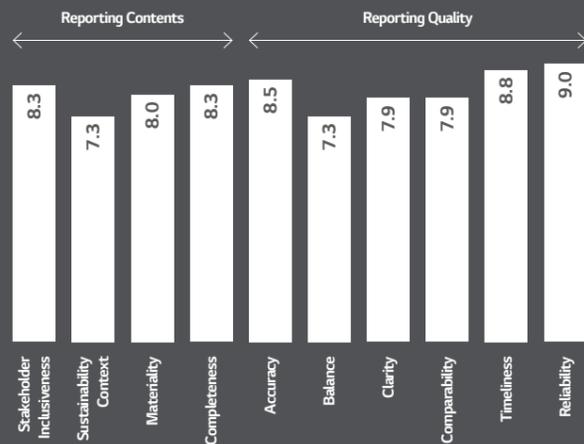
Material Issue	GRI Standard Topic	Reporting Content	Page
1 Global Market Development and Diversification	Other Issues	What We Do	12-17
2 Internalization of Ethical Practice/Code of Conduct	Other Issues	Jeong-Do (Right-Way) Management, Compliance Risk Management, Fair Trade	76-81
3 Customer Privacy Protection	[GRI 418] Customer Privacy	Information Protection	90-91
4 Technical Innovation and R&D with Social/Environmental Considerations	Other Issues	Healthy Life	30-33
5 Infrastructure for Connecting Products/Solutions (e.g. AI, IoT)	Other Issues	Intelligent Lifestyle	22-29
6 Access to Products/Solutions for Vulnerable Population	Other Issues		
7 Support and Investment for Talent Development	[GRI 404] Training and Education	Employees	92-95, 108
8 Work-life Balance and Organizational Culture	Other Issues	Decent Workplaces	58-65
9 Safety and Health Management System and Culture	[GRI 403] Occupational Health & Safety	Decent Workplaces, Safety and Environment	58-60, 82-83
10 Strategic Social Contribution	[GRI 413] Local Communities	Social Contribution	60-62, 66-71, 96-99
11 Risk Analysis and Assessment in Supply Chain			
12 Conflict Mineral Flow and Smelter Management	[GRI 414] Supplier Social Assessment	Sustainable Supply Chain	52-47, 111
13 GHG Emissions Reduction	[GRI 302] Energy [GRI 305] Emission	Zero Carbon Green Business	38-47, 104-105
14 Climate Change Risk Assessment			
15 Efficient Use of Raw materials and Resources	[GRI 301] Materials	Product Responsibility, Circular Economy	42-51, 105-106
16 Safe Disposal of Hazardous Substances and Wastes	[GRI 306] Effluents and Waste		
17 Eco-friendly Product/Solution Development	Other Issues	Product Responsibility	42-47

### Other Reporting Issues

Governance Independence/ Transparency/Expertise	Product/Solution Labeling and Disclosure	Fair Performance Evaluation and Rational Compensation	Environmental Policy and Regulations
Fair Governance Assessment and Compensation	Product/Solution Quality and Safety Management	Increase in Safety Investment	GHG Emissions and Energy Consumption
Governance and Management's Ownership	Service Network Quality Management System	Transparency in Donations and Contributions	Use of Renewable Energy
Protecting and Exercising Shareholders' Rights	Brand Identify and Reputation Management	Measuring Effectiveness and Impact of Social Contribution	Water Resource Management and Water Source Protection
Active Disclosure of Sustainability Management Information	Job Creation	Building Cooperation Systems in Local Community	Tracing Hazardous Substance and Development of Alternatives
Financial/Non-financial Risk Management	Equality and Diversity in Workplace	Sustainability Goal and Progress Management	Pollutant Emission Reduction (Air/Water Quality)
Transparent Tax Compliance	Cooperative Labor-Management Relationship	Supplier Code of Ethics and Obligations	Biodiversity Protection
Compliance with Laws and Regulations	Compliance with Labor Standards	Mutual Growth Program	Eco-friendly Business Model
Customer Input	Human Rights and Risk Management	Fair Practice in Supply Chain	

### Incorporating Stakeholder Input

LGE maintains close communications with its key stakeholders including customers, local communities, employees, government and media to support sustainable growth and development. A stakeholder meeting is held every year to incorporate their input and needs while conducting surveys to identify material sustainability issues. In 2019 in particular, we conducted interviews on our sustainability report with experts to collect and reflect their feedback in the 2019-2020 LG Electronics Sustainability Report. More information about our stakeholder engagement process and system can be found on our website (<https://www.lg.com/global/csr-sustainability-management-system>).



### Interviews with Experts

#### Reporting Contents (7.98 out of 10)

Assess the content of the LGE Sustainability Report in terms of stakeholder inclusiveness, sustainability context, materiality and completeness.

#### Reporting Quality (8.23 out of 10)

Assess the quality of the LGE Sustainability Report in terms of accuracy, balance, completeness, clarity, comparability, timeliness and reliability.

### Key Feedback

- Although actively incorporating stakeholder input, it is necessary to clearly identify stakeholders and specify how to engage. → Provide the details in the materiality page in the report.
- Issues are responded to in a balanced manner and need to enhance the alignment with business. → Report business alignment with sustainability based on the areas of focus.
- Report the latest information on time and ensure reliability through third-party assurance but negative issues need to be disclosed as well. → Maintain a balance when including negative issues in the report.

# GRI Standards Index

## Universal Standards(Core Option)

Standard Indicators		Reporting	
No.	Title	Page	Note
102-01	Name of the organization	10-11	
102-02	Activities, brands, products, and services	12-17	
102-03	Location of headquarters	10-11	
102-04	Location of operations	10-11	
102-05	Ownership and legal form	10-11	
102-06	Markets served	10-17	
102-07	Scale of the organization	10-11	
102-08	Information on employees and other workers	10-11, 107-108	Data concerning in-house suppliers to be reported at a later date
102-09	Supply chain	10-11, 52-57	
102-10	Significant changes to the organization and its supply chain	-	China(Yeon-tae,koon san), kazakhstan production site closed
102-11	Precautionary Principle or approach	61-62, 78-79	
102-12	External initiatives	113	
102-13	Membership of associations	113	
102-14	Statement from senior decision-maker	6-7	
102-16	Values, principles, standards, and norms of behavior	4-5, 76-77	
102-18	Governance structure	74-75, 79, 83	
102-19	Delegating authority	78-79	
102-40	List of stakeholder groups	114	
102-41	Collective bargaining agreements	93	
102-42	Identifying and selecting stakeholders	114	
102-43	Approach to stakeholder engagement	114	
102-44	Key topics and concerns raised	114-115	
102-45	Entities included in the consolidated financial statements		Annual report
102-46	Defining report content and topic Boundaries	Report Overview	
102-47	List of material topics	114	
102-48	Restatements of information	99	Types of Social contribution cost
102-49	Changes in reporting		No major changes
102-50	Reporting period	Report Overview	
102-51	Date of most recent report	-	LGE website*
102-52	Reporting cycle	Report Overview	
102-53	Contact point for questions regarding the report	125	
102-54	Claims of reporting in accordance with the GRI Standards	Report Overview	
102-55	GRI content index	116-118	
102-56	External assurance	122-123	

\* <https://www.lge.com/global/sustainability-reports-communications>

## Topic Specific Standards

Standard Indicators		Reporting	
No.	Title	Page	Note
<b>Economic Performance</b>	201-1	Direct economic value generated and distributed	101
	201-2	Financial implications and other risks and opportunities due to climate change	34-37, 38-41
	201-3	Defined benefit plan obligations and other retirement plans	103
	201-4	Financial assistance received from government	103
<b>Market Presence</b>	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	103
	202-2	Proportion of senior management hired from the local community	108
<b>Procurement Practices</b>	204-1	Proportion of spending on local suppliers	103
	205-1	Operations assessed for risks related to corruption	109
<b>Anti-corruption</b>	205-2	Communication and training about anti-corruption policies and procedures	109
	205-3	Confirmed incidents of corruption and actions taken	109
<b>Anti-competitive Behavior</b>	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	76-77, 80-81
	103	Management Approach	42-47
<b>Materials</b>	301-3	Reclaimed products and their packaging materials	46
	103	Management Approach	38-41, 42-47
<b>Energy</b>	302-1	Energy consumption within the organization	104
	302-5	Reductions in energy requirements of products and services	42-43, 45
<b>Water</b>	303-1	Water withdrawal by source	106
	303-3	Water recycled and reused	106
<b>Emissions</b>	103	Management Approach	38-41, 42-47
	305-1	Direct (Scope 1) GHG emissions	104
	305-2	Energy indirect (Scope 2) GHG emissions	104
	305-3	Other indirect (Scope 3) GHG emissions	104
	305-4	GHG emissions intensity	104
	305-5	Reduction of GHG emissions	38, 104
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	105
<b>Effluents and Waste</b>	103	Management Approach	48-51
	306-1	Water discharge by quality and destination	106
	306-2	Waste by type and disposal method	105
	306-3	Significant spills	105
<b>Environmental Compliance</b>	306-4	Transport of hazardous waste	50-51, 105
	307-1	Non-compliance with environmental laws and regulations	105
<b>Employment Labor/ Management Relations</b>	401-1	New employee hires and employee turnover	107
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	63-65
	401-3	Parental leave	108

# SASB Index

The SASB (Sustainability Accounting Standards Board) Standard is an industry-specific sustainability accounting standard established by the US Sustainability Accounting Standards Boards in 2011. For the first time in the industry, the standard categorized sustainability information with a high level of financial importance into 77 industries in 11 areas in accordance with the “SICS (Sustainable Industry Classification System)”, taking into account the specificity of each industry. LGE belongs to the SASB Technology & Communications Area in the Hardware Industry Group, and plans to maintain communications with stakeholders by sharing information through its sustainability report.

## Topic Specific Standards

	Standard Indicators		Reporting	
	No.	Title	Page	Note
Occupational Health and Safety	103	Management Approach	58-60, 82-83	
	403-1	Workers representation in formal joint management-worker health and safety committees	82-83	
	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	111	Company-wide
	403-3	Workers with high incidence or high risk of diseases related to their occupation	83	
	403-4	Health and safety topics covered in formal agreements with trade unions	82-83	All business sites in Korea
Training and Education	103	Management Approach	92-95	
	404-1	Average hours of training per year per employee	108	
	404-2	Programs for upgrading employee skills and transition assistance programs	94-95	Homepage*
	404-3	Percentage of employees receiving regular performance and career development reviews	108	
Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	108	
	405-2	Ratio of basic salary and remuneration of women to men	103	Annual report
Freedom of Association and Collective Bargaining	406-1	Incidents of discrimination and corrective actions taken	109	
Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor	56-57, 60-62	
Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	56-57, 60-62	
Security Practices	410-1	Security personnel trained in human rights policies or procedures	109	
Rights of Indigenous Peoples	411-1	Incidents of violations involving rights of indigenous peoples	109	
Human Rights Assessment	412-1	Operations that have been subject to human rights reviews or impact assessments	109	
	412-2	Employee training on human rights policies or procedures	109	
	412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	56-57, 111	
Local Communities	103	Management Approach	66-71, 96-97	
	413-1	Operations with local community engagement, impact assessments, and development programs	66-71, 98-99	
	413-2	Operations with significant actual and potential negative impacts on local communities	60-62	
Supplier Social Assessment	103	Management Approach	52-57	
	414-1	New suppliers that were screened using social criteria	111	
	414-2	Negative social impacts in the supply chain and actions taken	56-57	
Customer Health and Safety	416-1	Assessment of the health and safety impacts of product and service categories	110	
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	110	
Marketing and Labeling	417-2	Incidents of non-compliance concerning product and service information and labeling	110	None incident occurred in 2019 (see Annual report)
	417-3	Incidents of non-compliance concerning marketing communications	110	None incident occurred in 2019 (see Annual report)
Customer Privacy	103	Management Approach	90-91	
	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	110	
Socioeconomic Compliance	419-1	Non-compliance with laws and regulations in the social and economic area	110	

\* <https://www.lge.com/global/employee-talent-management>

## SUSTAINABILITY DISCLOSURE TOPICS & ACCOUNTING METRICS

Topic	Accounting Metric	Category	Unit	Code	Report	Page
Product Security	Approach to identify and address data security risks in products	Discussion & Analysis	n/a	TC-HW-230a.1	Privacy Protection and Product Security	90-91
Diversity & Inclusiveness	Percentage of gender and ratio/ethnicity in (1) executive officers, (2) engineers, and (3) others	Quantitative Indicator	%	TC-HW-330a.1	Sustainability Performance Data	107-108
	Percentage of the sales of products containing IEC 62474 flammable substances	Quantitative Indicator	%	TC-HW-410a.1	-	-
Product Lifecycle Management	Percentage of the sales of products that meet EPEAT requirements or equivalent	Quantitative Indicator	%	TC-HW-410a.2	Reduction of Environmental Impact	43
	Percentage of the sales of products that meet ENERGY STAR standards	Quantitative Indicator	%	TC-HW-410a.3	Reduction of Environmental Impact	43, 45
Supply Chain Management	Weight of take back and recyclability of expired products and electronic wastes	Quantitative Indicator	Ton, %	TC-HW-410a.4	Resource Circulation	46-47, 48-51
	Percentage of 1st-tier supplier facilities audited in (a) all facilities and (b) RBA VAP (Validated Audit Process) as high-risk facilities or equivalent	Quantitative Indicator	%	TC-HW-430a.1	Sustainable Supply Chain	56-57
Procurement of Raw Materials	Percentage of 1st-tier supplier's (1) RBA VAP (Validated Audit Process) or non-conformity with other companies and (2) (a) priority non-conformities and (b) other corrective actions for non-conformities	Quantitative Indicator	%	TC-HW-430a.2	Sustainable Supply Chain	56-57
	Description of risk management related to the use of important raw materials	Discussion & Analysis	n/a	TC-HW-440a.1	Sustainable Supply Chain	52-57

# TCFD Index

At the Paris Climate Agreement in 2015, each country set a goal to reduce GHG emissions and decided to make global efforts to prevent global warming. To meet the demands of the global community, the FSB (Financial Stability Board) established the TCFD (Task Force on Climate-related Financial Disclosures) in December 2015. Recognizing the importance of economic decision-making in response to climate change, TCFD developed an international framework for disclosing financial information related to climate change in four areas of corporate governance, strategy, risk management, and metrics & targets. The financial information disclosed in relation to climate change based on the recommendations of the TCFD is used by stakeholders and investors for making decisions. LGE supports the long-term and macroscopic efforts of the global community to respond to climate change while contributing to the achievement of a sustainable low-carbon economy by reducing carbon and GHG emissions and increasing the use of renewable energy.

TCFD (Task Force on Climate-related Financial Disclosures)



TCFD Index

Category	Disclosure	Report	Page
Governance	Describe the board's oversight of climate-related risks and opportunities.	Carbon Neutral	39
	Describe management's role in assessing and managing climate-related risks and opportunities.	Carbon Neutral	39
Strategy	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	Carbon Neutral	38
	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	Green Business, Carbon Neutral	34-37, 40
	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Carbon Neutral	38
Risk Management	Describe the organization's processes for identifying and assessing climate-related risks	Carbon Neutral	39
	Describe the organization's processes for managing climate-related risks.	Carbon Neutral	39
	Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management.	Carbon Neutral	38-39
Metrics & Targets	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	Carbon Neutral	20-21, 38
	Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 GHG emissions and related risks.	Sustainability Performance Data	104
	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	LGE Mid/Long-term Sustainability Management Target	20-21

# GOVERNANCE Index

Recognizing that the soundness and transparency of corporate governance as an integral part of sustainable growth, corporate value, and protection of stakeholders' interests, LGE is committed to board-oriented management and creating sound and transparent governance. In 2020 in particular, in accordance with Article 24-2 of the Disclosure Regulations on the Securities Market, a corporate governance report was established to help investors understand our governance. In the report, details of LGE corporate governance policies, as well as the rights, roles, and functions of shareholders and board of directors provided while reporting the status of internal and external auditors. LGE corporate governance report is disclosed to all stakeholders through the Financial Supervisory Service Electronic Disclosure System (<http://dart.fss.or.kr/>).

Key Corporate Governance Indicator Compliance

Classification	Key Indicators	Followed		Description	Remarks
		O	X		
Shareholders	Shareholders are informed 4 weeks before the general meeting of shareholders*.		●	3 weeks (21 days) before the meeting in 2020	
	Shareholders can vote electronically.*		●		
	The general meeting of shareholders is held outside the busy period.		●	Held on March 26, 2020	
	Shareholders are notified of the dividend policy and plan at least once a year.**	●		Quarterly performance data and dividend policy is posted on the website.	Item 1-4
	The CEO succession policy (appointment in case of emergency) is established and implemented.	●		A group of candidates is nominated and trained every year.	Item 3-2
BoD	Internal control policies are established and implemented.	●		Risk management (board rules), compliance management, internal accounting management and disclosure management policy are established and implemented.	Item 3-3
	The chairman of the board and CEO are separate.	●		As of March 2019	Item 4-1
	A concentrated voting system is adopted.		● <sup>1)</sup>		
	A policy is established to prevent the appointment of those who can damage corporate value or violate the rights of shareholders.	●		The internal appointment rules and review process are available.	Item 4-4
Audit Body	No external directors serve more than 6 years.	●			Item 5-1
	Internal audit body is trained at least once a year.**	●		External expert training is available.	Item 9-1
	Independent internal audit department (internal audit support organization) is organized.		● <sup>2)</sup>		
	There are accounting or financial experts in the internal audit body.	●		There is one accounting expert.	Item 9-1
	The internal audit body holds a meeting with external auditors without the presence of management at least once a quarter.**	●		The body discusses and reports to the auditor on a quarterly basis.	Item 10-2
	The internal audit body can access important business information.	●		Specified in the Audit Committee rules.	Item 9-1

\* The items are based on the general meeting of shareholders held right before the submission of the report.

\*\* The items determine the performance within the disclosure period.

- There is no plan to introduce a concentrated voting system, as there is a risk that management will deteriorate due to private interests, such as the possibility of seizing the board of directors through speculative capital.

- The LGE Internal Accounting Audit Team (internal audit support organization) has a system for securing independence for reporting directly to the Audit Committee. However, as it is under the CEO, the committee has no authority over HR and budget planning and it is specified as non-compliant because it fails to meet the independence requirements as specified in the guidelines.

# INDEPENDENT ASSURANCE STATEMENT

## Introduction

LG Electronics Inc. ("LG Electronics") commissioned DNV GL Business Assurance Korea Ltd. ("DNV GL"), part of DNV GL Group, to undertake independent assurance of '2019-2020 LG ELECTRONICS SUSTAINABILITY REPORT (the "Report"). The directors of LG Electronics have sole responsibility for the preparation of the Report. The responsibility of DNV GL in performing the assurance work is to the management of LG Electronics in accordance with the terms of reference. DNV GL's assurance engagements are based on the assumption that the data and information provided by the client to us as part of our review have been provided in good faith.

## Scope and Basis of assurance

Based on non-financial data and sustainability activities and performance data of 2019 generated from LG Electronics, we have evaluated the adherence to AA1000 Accountability Principles 2018<sup>1)</sup> and assessed the quality of sustainability performance information. We have reviewed that the Topic-specific disclosures of GRI Standards which are identified in the process for defining report content;

No.	Material topic	GRI Topic Specific Disclosure
1	Global Market Development and Diversification	N/A
2	Internalization of Ethical Practice/Code of Conduct	N/A
3	Customer Privacy Protection	418-1
4	Technical Innovation and R&D with Social/Environmental Considerations	N/A
5	Infrastructure for Connecting Products/Solutions (e.g. AI, IoT)	N/A
6	Access to Products/Solutions for Vulnerable Population	N/A
7	Support and Investment for Talent Development	404-1,2,3
8	Work-life Balance and Organizational Culture	N/A
9	Safety and Health Management System and Culture	403-1,2,3,4
10	Strategic Social Contribution	413-1,2
11	Risk Analysis and Assessment in Supply Chain	414-1,2
12	Conflict Mineral Flow and Smelter Management	
13	GHG Emissions Reduction	302-1
14	Climate Change Risk Assessment	305-1,2,3,4,5,7
15	Efficient Use of Raw materials and Resources	301-3
16	Safe Disposal of Hazardous Substances and Wastes	306-1,2,3,4,5
17	Eco-friendly Product/Solution Development	N/A

We performed our work using AA1000AS 2008 with 2018 addendum<sup>2)</sup> and DNV GL's assurance methodology VeriSustain™<sup>3)</sup> (Ver. 5.0) which is based on our professional experience, international assurance best practices. DNV GL provides Type 1 and the moderate level of assurance. But some environmental performances have been verified by Type 2. The assurance was carried

out from June and till July 2020. The site visits were made to LG Electronics' Headquarters in Seoul, Korea. We undertook the following activities as part of the assurance process:

- challenged the sustainability-related statements and claims made in the Report and assessed the robustness of the underlying data management system, information flow and controls;
- interviewed representatives from the various departments;
- conducted document reviews, data sampling and interrogation of supporting databases and associated reporting system as they relate to selected content and performance data;
- reviewed the materiality assessment report.

## Limitations

The engagement excludes the sustainability management, performance and reporting practices of LG Electronics' other subsidiaries, associated companies, suppliers, contractors and any third-parties mentioned in the Report. DNV GL did not interview external stakeholders as part of this Assurance Engagement. Economic performance based on the financial data is cross-checked with internal documents, the audited consolidated financial statements and the announcement disclosed at the website of Korea Financial Supervisory Service (<http://dart.fss.or.kr>) as well as data on the website of LG Electronics (<https://www.lg.com/global>). These documents, financial statements and the announcements are not included in this Assurance Engagement. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. The baseline data for environmental and social performance are not verified, while the aggregated data at the corporate level are used for the verification. DNV GL expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

## Conclusion

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

### 1. The Principle of Inclusivity

LG Electronics has identified customers, partner companies, local communities, employees, government, and media as a group of internal and external stakeholders, and collected major opinions and needs through annual stakeholder discussion meetings. In particular, in 2019, LG Electronics conducted an interview on the Report published by LG Electronics to collect feedback, and reflected it in the Report. The assurance team confirmed that LG Elec-

tronics has identified the impact on its stakeholders and that the stakeholder engagement process is being implemented. Details of the stakeholder engagement system and process are provided on the LG Electronics website ([www.lge.co.kr/lgekor/company/sustainability/system.do](http://www.lge.co.kr/lgekor/company/sustainability/system.do)). In the future, LG Electronics could present the reasonable expectations and interests of respective stakeholders in detail.

### 2. The Principle of Materiality

LG Electronics has conducted the materiality assessment to prepare the Report. Through the analysis of various international standards and trends, vision and strategy, business issues in the electronics industry, media exposure, and internal and external surveys, a total of 52 sustainability management issues were identified. In addition, through the prioritization of issues, 17 material issues were selected as material topics. LG Electronics has reported material issues identified through materiality assessment in connection with LG Electronics' three mid- to long-term focus areas and nine initiatives. We have reviewed the materiality assessment process and noted relevant material topics prioritized from the process are addressed in the Report.

### 3. The Principle of Responsiveness

From the perspective of mid- to long-term sustainability management, LG Electronics has established three focus areas of 'Promoting Intelligent Lifestyles', 'Achieving Zero Carbon and Circular Economy' and 'Creating a Better Society', and is implementing nine initiatives associated with them. The Report reports the main goals, progress stages, and performances of 2019 for each goal. In addition, the Report reports on key performances and related cases for material issues selected through materiality assessment. Through the operation of a dedicated organization for sustainability management, LG Electronics discloses the company's decision-making matters, activities, and future plans for material issues related to sustainability expected by stakeholders. LG Electronics also conducts a comprehensive and balanced stakeholder communication through a systematic stakeholder engagement process.

### 4. The Principle of Impact

The impact on stakeholders related to material topics should be identified, monitored and evaluated. LG Electronics grasped the direct and indirect effects of material topics identified through materiality assessment and put them in the Report. The assurance team confirmed that LG Electronics identifies and monitors the impact on stakeholders due to material topics and reports the impact in a quantified form to the extent possible. In particular, LG Electronics conducts interviews with sustainability management experts on the Report to collect feedback and reflects it on the Report.

### 5. Reliability of specific sustainability performance information

DNV GL evaluated whether it follows the principles of the report AA1000

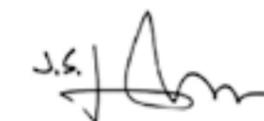
AP (2018) as described above (Type 1 verification). In addition, the reliability was verified for water consumption, waste generation, air pollutant emissions and accident rate as specific sustainability performance information. We have interviewed the incharge person, reviewed the process of gathering and processing data and test information on a sampling basis. In-charge person can explain the source and process of the data identified above, which is considered traceable. The intentional error or misstatement is not noted from the data and information disclosed in the Report. Data owners were able to demonstrate the origin and interpretation of the data in a reliable manner. The data was identifiable and traceable.

## Competence and Independence

DNV GL applies its own management standards and compliance policies for quality control, in accordance with ISO/IEC 17021:2015 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We have complied with the DNV GL Code of Conduct<sup>4)</sup> during the assurance engagement and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of sustainability assurance professionals. DNV GL was not involved in the preparation of statements or data included in the Report except for this Assurance Statement. DNV GL maintains complete impartiality toward stakeholders interviewed during the assurance process. DNV GL has provided LG Electronics' 2019 greenhouse gas emission verification, environmental, safety and health, energy and information protection management system certification. In our opinion, this does not affect the independence or impartiality of our work.

July 2020 Seoul, Korea

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




1) AA1000 AccountAbility Principles 2018: Internationally accepted, four principles-based framework and guidance that organisations can use to identify, prioritise and respond to sustainability performance and responsibility.  
2) AA1000 Assurance Standard 2008: Internationally accepted, freely available standard that provides the requirements for conducting sustainability assurance.  
3) The VeriSustain protocol is available upon request at DNV GL Website ([www.dnvgl.com](http://www.dnvgl.com))

4) DNV GL Code of Conduct is available from DNV GL website ([www.dnvgl.com](http://www.dnvgl.com))

# HISTORY OF SUSTAINABILITY REPORTS PUBLICATION

## 2006-2019



## 2020



### 2019-2020

#### LG Electronics Sustainability Report (July 2020)

- Report Progress based on Sustainability Commitments
- Apply GRI (Global Reporting Initiative) Standards

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