# NATURE, HUMAN AND SPACE

LG Hausys Sustainability Report 2020





We Create Human-friendly and Eco-conscious Living Spaces.



# ABOUT THIS REPORT (9<sup>th</sup>)

Reporting Principles	GRI Standards (Core Option), UN Global Compact (UNGC) Index	
Reporting Period	January 1, 2019 ~ December 31, 2019	
	(including results from the first half of 2020)	
Reporting Scope	Economic, environmental, social activities and achievements	
	of all domestic workplaces and subsidiaries, as well as certain	
	overseas corporations	
Reporting Criteria	Figures for the past three fiscal years	
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Additional Information



## CONTENTS

#### 04 CEO Message

#### 06 Business & Strategy

- 07 About LG Hausys
- 08 Product Portfolio
- 10 Management Strategy & Business Performance
- 13 Overseas Business
- 14 Sustainability Management

#### 16 Focus Issues

- 18 Development of Products that Satisfy the Customers
- 24 Creating a Safe Workplace Environment
- 28 Win-win Growth with Suppliers
- 32 Upgrading Product and Service Quality

#### 36 Management Report

- 38 Governance
- 40 Jeong-Do Management
- 42 Talent Management
- 46 Environmental Management
- 48 Social Contribution
- 51 Information Security

#### 52 Appendix

- 53 Sustainable Management and Data
- 56 Current State of ESH Quality Certification & Affiliates
- 57 Distribution of Major Economic Value
- 58 Significance of Comprehensive Analysis
- 60 Independent Assurance Statement
- 62 GRI Standards Index
- 64 UN Global Compact



# **CEO** Message



President & CEO, LG Hausys Co., Ltd. G , W . Kaw Kang Gye Woong

#### Dear stakeholders,

LG Hausys is a company that manufactures and supplies building & decorative materials, automotive materials and components, and Industrial Film. We are doing business in the broad strategic direction of advancing our business portfolios and strengthening our business structure in a bid to promote sustainable growth. While issuing the ninth Sustainability Report, which covers our sustainability management activities in 2019, we intend to collect the valuable opinions of our stakeholders and reflect them in our management activities.

In 2019, LG Hausys recorded sales of KRW 3,186.8 billion, a 2.4% decrease from the previous year, and operating earnings of KRW 68.8 billion, a 2.3% decrease from the previous year. We were able to post some notable achievements despite the market slowdown by increasing sales of our high value-added products, improving the profit rate of received orders, and conducting cost innovation activities, even though the market conditions were deteriorating. This year, it is expected to face a even more difficult business environment due to the slowdown in the construction, real estate and automobile industries as well as the influence of COVID-19.

LG Hausys will overcome this crisis by implementing 'customer satisfaction' management and by turning those risks into opportunities amid the challenging management environment. We will also strengthen our fundamental competitiveness by increasing sales of our high value-added products and identifying additional opportunities for improvement. We will concentrate all our capabilities and resources on providing substantial benefits to our customers, rather than simply focusing on technologies and products. In particular, we will change our behavior and thinking from a 'manufacturing-oriented' model to a 'customer-oriented' model so that the employees of all our business units can communicate accurately and execute their duties sincerely.

Furthermore, we will promote sustainability management activities in the following economic, environmental, and social aspects by communicating with the different groups of stakeholders including customers, shareholders, partners, and local communities. First, we will continue to develop 'Customer Satisfaction Products' that offer the best value to our customers.

We are now operating under new product development processes companywide in order to reflect customer opinions in product development at the earliest possible stage. We will consider the health and safety of customers who use those of our products made with eco-friendly materials, such as flooring materials, wallcovering, and automotive fabrics. At the same time, we will actively contribute to improving environmental issues such as to adverse climate conditions and anomalous weather events due to climate change and natural disasters, and to use high-efficiency energy products including energy-saving windows, doors, glass, and high-performance building insulation materials. LG Hausys aims to position itself as a company that earns the trust and admiration of its customers by supplying healthy eco-friendly products and materials and providing systems and solutions that maximize energy efficiency.

# Second, we will create a safer workplace environment for our employees.

The importance of environment and safety management is becoming more important as large and small accidents occurring in corporate activities affect not only the employees inside the workplace but also the local community. Therefore, we have strengthened our environment and safety diagnosis organization's ability to understand the operation systems and facility management conditions of all workplaces, and have conducted improvement activities. We will expand the scope of diagnosis to our suppliers and construction sites, and will perform this activity on a regular basis. We also developed a companywide environment and safety IT system in 2019 to analyze how accidents occur and how they are managed afterward. As the 'awareness and behavioral habits of employees' were recognized as the root cause of the environment and safety accident, we implemented training and PR activities to raise and improve awareness of environment and safety throughout the company. We also assigned specialists to high-risk manufacturing lines and construction sites and expanded the organization to identify and eliminate risks with a focus on manufacturing lines.

## Third, we will carry out win-win growth activities to nurture competitive suppliers.

Based on the recognition that our suppliers are partners with whom we grow together, we are promoting joint growth policies aimed at enhancing their capabilities and improving their way of doing business in order to boost their competitiveness. To that end we are running a joint growth support system, increasing productivity by carrying out manufacturing innovation activities, providing financial support such as win-win funds, and supporting capability improvement training on quality, environment and safety, and professional jobs for the suppliers' employees. We will continue to train and to monitor our employees and our suppliers in order to spread the corporate culture of compliance with the relevant laws and regulations and fair trade practices. We are also helping our suppliers to prevent CSR risks related to labor and work conditions, ethical management, and environmental health and safety, and to fulfill their social responsibilities by complying with the CSR code of conduct for suppliers.

# Fourth, we will improve the product quality and the service quality at customer contact points.

LG Hausys is making efforts to secure product safety throughout the entire product production and the distribution process, from product planning to follow-up management, in order to realize Customer Satisfaction and to improve the product reliability. We will identify and offer the values that our customers truly want by perfecting our quality management system continuously. In particular, we opened the LG Hausys Customer Service website (http://service.lghausys.com) this year with the aim of helping customers obtain answers to any question they may have when using our products in their daily lives, and to solve their pain points conveniently and quickly. We will continue to develop a system that listens to the voice of the customers, particularly in regards to their pain points, and solve them immediately using various online and offline channels.

LG Hausys will continue to provide the best value for customers. We will lay the foundation for sustainable growth with 'customer satisfaction' management, strengthen environment and safety management and continue to grow together with local communities and partners to become the best company that is trusted and respected by stakeholders.

We greatly appreciate your continuous interest and support. Thank you.

# **BUSINESS & STRATEGY**

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About LG Hausys Product Portfolio Management Strategy & Business Performance Overseas Business Sustainability Management

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# About LG Hausys

LG Hausys is a company specializing in the production of building & decorative materials, industrial film, and automotive materials/components. The company's main products include building decorative materials such as windows, flooring materials, and solid surface/engineered stone, industrial films such as home appliance/furniture surface materials, and automotive fabrics/components.

LG Hausys operates seven overseas sales corporations, four overseas manufacturing corporations, and five overseas representative offices, mainly in the US, China and India, aside from the domestic main office and manufacturing plants.

## **Global Network**



## History

• 1947	Established Lak Hui Chemical Industrial Corp. (Currently LG Chem)	
• 1952	Manufactured Korea's first synthetic resin-formed products	
• 1958	Produced vinyl flooring	
• 1976	Produced PVC windows	•
• 1984	Produced plastic automotive components	
• 1995	Produced solid surface HI-MACS	•
• 1997	Established a manufacturing corporation in Tianjin, China	•

- 2005 Completed a HI-MACS plant in the U.S.2006 Launched Z:IN as a premium interior design
- brand 2009 Launched LG Hausys along with demerger
- from LG Chem.
- 2010 Produced the world's first corn-based PLA wood flooring
- 2011 Initiated the operation of an engineered stone plant in the U.S.
- 2012 Began producing coated glass

- 2013 Completed an insulation materials plant for buildings
- 2015 Began operating the Wuxi manufacturing plant in China
- 2016 Initiated the operation of an automotive skin plant in the U.S. and expanded the engineered stone plant in the U.S.
- 2017 Acquired shares of c2i, the Slovakian automotive parts company
- 2018 Completed the construction of the second insulation material plant
- 2019 Launched the LG Z:IN brand

# **Product Portfolio**

### Building & Decorative Materials

LG Hausys creates safe and healthy spaces by producing diverse products ranging from solid surface and engineered stone loved by world-renowned architects, interior films and decorative films equipped with a sensuous design and functions, and windows and functional glass with excellent insulation and durability, to eco-friendly flooring/wall decoration materials made with comfortable and safe plant-based materials, and insulation materials with excellent insulation and fireresistant performance.

#### **Main Products**

Windows, Glass, Flooring, Wallcovering, Insulation materials for buildings, Wood polymer composite (WPC), Solid surface, Engineered stone and Interior film, Decorative film













### **Industrial Films**

We produce home appliance surface materials known for their outstanding design and materials for use in advertisements, and in the creation of aestheticallypleasing spaces.

#### Main Products

Home Appliance Surface Materials, Sign & Graphics



### Automotive Materials & Components

Our automotive skin is recognized for its exceptional functionality and eco-friendliness with lightweight components that help improve fuel efficiency and other automotive components fitted in both interior and exterior of vehicles to create safer and more comfortable auto interiors.

#### **Main Products**

Automotive Skins, Lightweight Components, Automotive Components

# Management Strategy & Business Performance

#### **Management Strategy**

LG Hausys conducts its business according to two main strategies aimed at expanding its business portfolio and strengthening its business structure. Regarding its building decorative materials business, LG Hausys will expand its domestic B2C business and continue to sell high value-added products. For its industrial film and automotive materials/components businesses, LG Hausys will focus on increasing competitiveness and improving profitability. LG Hausys will prepare for a changing market and achieve steady growth by strengthening its strengthening of solutions with the aim of raising customer value, R&D based on market and customer needs, introduction of manufacturing innovations at the world-class level.



#### **Business Overview and Market Outlook**

#### Introduction

The company's main products in the area of decorative building materials include windows and doors, flooring materials, wallcoverings, insulation materials, solid surface, engineered stone, and decorative films. LG Hausys is taking the lead in improving the residential environment of its customers by providing various products, such as windows and doors made of plastic and aluminum that can be applied to residential and commercial spaces, functional coated glass with excellent insulation performance, eco-friendly flooring materials and wallcoverings of diverse designs, solid surface and engineered stone that is used as a finishing material for kitchen tops and interior and exterior decoration, and building insulation materials that are highly resistant against fire and provide excellent energy saving effects. LG Hausys is also concentrating on developing eco-friendly technologies, such as decorative film made with recycled PET for the first time in Korea.

The industrial film helps materialize the furniture, windows, and other appliances as well as home appliance surface materials, and sign and graphic films. In accordance with the function, films are high-performance items with weatherproof and durable technology and are recognizable for their unrivaled designs.

The automotive components sector produces automotive skins and lightweight components. The automotive skin delivers innovative designs and eco-friendly surfaces which can be used for seat covers and door panels. The lightweight parts contribute to improved fuel efficiency by reducing vehicle weight while maintaining the steels conventional strength and it is predicted rise in demand. The general parts are adopted for the exterior and interior use.

#### Market Trend

The building decorative materials business is closely linked to the real estate market trend. The domestic construction industry market has been decreasing in sales and volume since 2015. As the number of older buildings increase, the demand for housing renovation is forecast to rise. However, the quantity of housing transactions has dwindled and the growth rate has been slower. With new rigorous construction and safety regulations, the call for high performance insulation and eco-friendly products is on the rise. The growth rate of the real estate market overseas such as the U.S., China, and Europe has dropped, but the need for premium eco-friendly interior materials are expected to rise.

The automotive materials/components and industrial film sectors are closely connected to the up and coming industries such as automobile and home appliance markets. The demand for new cars have been dropping in overseas markets including the U.S, Europe, and China. However, the need for lightweight parts, eco-friendly interior materials, and unique designs are expected to increase considering the electric motor vehicle consumption trend. Even though the interest in industrial films is rising, the competition on material selection has intensified among companies regarding their customer's discrete requirements. In the home appliance industry, one of the up and coming industries, the call for luxurious premium products is forecast to increase.



\* Performance and future estimates are calculated by referring to the data of the National Statistical Office, the Ministry of Land, Infrastructure and Transport, and the Korea Appraisal Board.

#### Achievements & Goals

LG Hausys recorded sales of KRW 3,186.8 billion (a decrease of 2.4% from the previous year) and operating earnings of KRW 68.8 billion (a decrease of 2.3% from the previous year) in 2019 due to the housing/construction and automobile industries. As such, we will realize growth and earnings by improving our structural profitability based on the development of differentiated products and innovations in such areas as manufacturing and cost/expenditure, and by expanding our overseas markets with the focus on high value-added products, because the market recovery is likely to be slow in the future. We are also continuously strengthening our B2C capabilities in the building decorative materials business, and by responding to changes in the business environment such as the expansion of the domestic remodeling and repair market.

Task	Key achievements in 2019	Plans for 2020	Mid/Long term goals
Strengthening the domestic B2C business	To expand products and services in order to propose a internal solution     To increase the share of the B2C sales channel	Secured the competitiveness of interior products/services     Expanded the sales infrastructure by opening shops in LG Electronics' Best Shop and large- scale distribution shops	To maintain leadership of the building decorative materials market by securing interior business competence
Increasing high value- added products	<ul> <li>To increase premium design, new functional and eco-friendly products at home and abroad</li> <li>To improve profitability by introducing new manufacturing innovations</li> </ul>	<ul> <li>Completing the third manufacturing line of E-stone at Georgia plant and the third manufacturing line of insulation materials in Cheongju, and starting mass production</li> </ul>	<ul> <li>To achieve steady growth with profitability</li> <li>To expand overseas business</li> </ul>
Strengthening R&D competitiveness	<ul> <li>To develop insulation materials with enhanced fire resistance to respond to tightened regulations</li> <li>To develop next-generation building decorative materials</li> <li>To develop future window solutions.</li> <li>To develop functional automotive skin products</li> </ul>	Developing high performance and high fireproof insulation materials     Developing future window solutions	<ul> <li>To develop next-generation building decorative materials suitable for future residential environments</li> <li>To introduce 'Open Innovation' to secure core original technologies and prepare for the future</li> <li>To secure global technical skills for the production of automotive fabrics</li> </ul>
Securing DX* capabilities	-	<ul> <li>Securing the capability to collect, analyze and utilize customer data</li> </ul>	<ul> <li>Strengthening business competitiveness such as manufacturing/logistics/quality control/ marketing based on big data</li> </ul>

\* DX : Digital Transformation

#### **Business Strategy**

Building & Decorative Materials

In view of the rising demand for home renovation and repair services, LG Hausys is focusing on increasing customer contacts and product line-ups in order to expand the B2C business in the domestic building materials industry. LG Hausys has concentrated on diversifying its sales channels, such as showrooms, online mall, complex events, and home shopping etc. in order to increase customer accessibility. LG Hausys will also increase the number of booths in the home appliance shop ("Best Shop") in collaboration with LG Electronics. Hausys is also developing a product/service that proposes customized space to customers by securing more existing products such as windows, flooring materials, and wallcoverings, and more products needed for house renovation and repair, such as the kitchen and bathroom, and by providing them as a interior package.

#### Energy Saving

The third manufacturing line of insulation materials, which has recently been expanded with an investment due to the tightening of energy efficiency and safety standards for building materials, will start mass production in the first half of 2020. Its launch will enable the company to actively respond to the increasing demand for highly fire resistant and effective insulation materials. LG Hausys is also taking the lead in improving the residential environment by concentrating on the development of functional glass products such as Low-E in order to improve the insulation performance of windows, and by investing in the development of future windows such as automatic ventilation systems and display windows etc.

#### **Overseas Building Materials**

The overseas building decorative materials business will strengthen its position in the global market, which is centered on North America and Europe, by expanding its range of engineered stone and solid surface with premium quality natural stone patterns that overseas customers will recognize for their outstanding design and quality.



#### Industrial Films



The industrial film area is securing its competitiveness by providing home appliances, furniture, and signs and graphic films based on differentiated new product generation capacity and processing technology. We are also improving our surface treatment technologies and design capabilities on a continuous basis.

Automotive Components



For the automotive materials and components business, the automobile skin division is focusing on the development of new material technology that improves the air quality inside the vehicle, and surface treatment products with a highly sensuous quality, in order to respond to changes in the industrial environment, such as high quality materials, increased demand for improved fuel efficiency, and the strengthening of environmental regulations. The auto components division is also developing lightweight composite materials for electric cars, the market for which is expected to grow significantly.

#### Change of the LG Z:IN Brand

#### Brand Combination

LG Hausys launched its new brand, LG Z:IN, by combining the premium interior brand Z:IN with the LG brand. LG Hausys will provide more products and services to general consumers as well as construction companies and industry workers, by adding the specialty of "Z:IN" as a premium interior brand to the brand power of LG.

LG Z:IN

### **Overseas Business**

LG Hausys is implementing customer-centered market strategies not only in Korea but also in key markets such as North America, China and Europe. LG Hausys has established manufacturing and sales bases in China, North America, and is now focused on expanding its global network through product localization. In particular, LG Hausys has secured a leading position in the global market for its engineered stone, solid surface, automotive skin and home appliance surface materials among other products. It has increased the market share of its engineered stone, solid surface products by securing various sales channels including building decorative material distributors, and is developing the commercial market more intensively. In the field of industrial films, the company is selling more eco-friendly films to European furniture companies. In the flooring field, demand in North America and Europe in particular is changing from carpets and floors to PVC sheet materials, so we expect continuous growth in that area. LG Hausys is also increasing its market share of automotive skins in the U.S. and China through major complete car Spec-in, and is exporting building materials such as solid surface and flooring materials to emerging markets such as India and Southeast Asia. Currently, it is planning to increase supplying items such as interior films.

\*As of the end of 2019 (Unit : KRW 100 million)

Sales

Sales

Sales

#### North America

North America is home to the world's largest decorative and automotive materials market.Our localization strategy focuses on solid surface, automotive skins, and other highly sought after products. We have solid surface and engineered stone plants in the state of Georgia. In 2017, a sales corporation was established in Canada to lay a solid foundation for the provision of services throughout the entire North American market.

LG Hausys is increasing its e-stone line No. 3 to respond to the e-stone market in 2020, which has high growth potential, and is expected to enjoy continued high growth based on the development of differentiated products and enhanced production capacity.

#### China

In China, the emphasis is on flooring materials, automotive materials and components, and industrial films. LG Hausys has secured a large market share in flooring materials such as tiles and sheets, and high-gloss films for home electric appliances, in which continuous growth is expected. The Tianjin and Wuxi plants are being operated as a part of the company's localization strategy with the aim of providing differentiated products and services from production to distribution. Meanwhile, environment and safety management is realized by continuously improving environment/safety facilities at both the Tianjin and Wuxi plants.



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#### Europe

LG Hausys has laid firm foundations for the expansion of our business in Europe, with the focus on solid surface and furniture films. We are striving to increase our market share and accelerate growth by developing more commercial solid surface markets, and aim to expand the scope of its business in the PVC flooring market.

#### India

LG Hausys is steadily growing in the Indian market by concentrating on the home appliance surface material and solid surface business. We are raising awareness of our brand using localized design and marketing activities.

#### Other Countries

The solid surface, industrial film, and flooring material markets are rapidly growing in emerging countries such as the Middle East and Southeast Asia. As such, LG Hausys is supplying products that meet the needs of various markets by strengthening its local marketing activities, including customer seminars.



# Sustainability Management

It is our vision to create 'human-friendly, eco-conscious happy living spaces' that we advance sustainability management at LG Hausys. To become a company respected by society, we have established our sustainability management system to focus on risk management, social contributions, and stakeholder communication as the guiding principles of our sustainability management.

### Sustainability Management Implementation System

Vision	We create human-friendly and eco-conscious living spaces		
Objective	Become a	sustainable company in harmony with st	akeholders
Implementation Task	Risk management	Social contribution	Stakeholder communication
Progress	<ul> <li>Risk diagnosis</li> <li>CSR diagnosis of major suppliers</li> <li>Strengthening follow-up actions according to the results of the diagnosis.</li> <li>Risk change control</li> <li>Supporting the latest international principles.</li> <li>Managing supplier improvement tasks and implementing trainings.</li> </ul>	<ul> <li>Increasing our patriotic and social contribution activities</li> <li>Activities supporting the remodeling of memorial centers</li> <li>Home improvement activities for nationally meritorious people</li> <li>Cultural heritage and environmental conservation activities</li> <li>Make Dokdo Green</li> <li>Dokdo youth keeper</li> <li>Promoting local community/social contribution programs.</li> <li>Employee participation-based volunteer activities.</li> <li>Emergency relief activities such as support for flooded areas.</li> </ul>	<ul> <li>Publishing the Sustainability Management Report</li> <li>Managing and sharing core CSR performances.</li> <li>Participating in external evaluation</li> <li>Sustainability management organizations at home and abroad, such as the Korea Corporate Governance Service. Disclosing the company's ESG (Environmental, Social and Governance) status.</li> </ul>

### External Awards Received for Sustainability Management

	2012	Honored with the Special Carbon Disclosure Award (CDP)
	2013	Received an A rating across all sectors in the ESG assessment performed by the Korea Corporate Governance Service
I	2014	Received an A rating in the ESG assessment performed by the Korea Corporate Governance Service (ranked first in environmental and social sectors)     Included on the list of <east 30="" asia=""> companies with outstanding CSR performance in Korea, China, and Japan, published by the Hankyoreh Economic Research Institute     Ranked first in the building materials industry on the Korean Sustainability Index (KSI) published by the Korean Standards Association</east>
	2015	Listed on the DJSI Korea Index for the first time     Ranked first on the 'Sustainable Super Company 25' list published by the Sustainability Management Financial Center     and the Korea Economic Daily     Ranked first in the building materials industry on the Korean Sustainability Index (KSI) published by the Korean Standards     Association
1	2016	Joined the DJSI Korea Index for two consecutive years     Received an A rating in all sectors of the ESG assessment performed by the Korea Corporate Governance Service     Ranked first in the building materials industry on the Korean Sustainability Index (KSI) published by the Korean Standards     Association
1	2017	Included in the DJSI Korea Index for third consecutive year     Honored with the Carbon Management Award in Industrial Materials (CDP)     Received an A rating in all sectors of the ESG assessment performed by the Korea Corporate Governance Service     Ranked first in the building materials industry in the Korean Sustainability Index (KSI) published by the Korean Standards     Association
	2018	<ul> <li>Included in the DJSI Korea Index for the fourth consecutive year.</li> <li>Received an A rating in all sectors of the ESG assessment performed by the Korea Corporate Governance Service</li> <li>Ranked first in the building materials industry in the Korean Sustainability Index (KSI) published by the Korean Standards Association</li> </ul>
	2019	Included in the DJSI Korea Index for the fifth consecutive year.     Received an A rating in all sectors of the ESG assessment performed by the Korea Corporate Governance Service     Ranked first in the building materials industry in the Korean Sustainability Index (KSI) published by the Korean Standards     Association     Received the presidential citation in "The Most Loved Companies in Korea" Award by the Ministry of Trade, Industry and Energy.

## Key Achievements of Sustainability Management in 2019

LG Hausys has published this year's report with the focus on the four main sustainability management issues that its internal and external stakeholders were found to be most interested in, namely, ensuring product quality and satisfaction; guarantee a safe workplace; share growth with suppliers; and the development of products that satisfy the customers.

Development of Products that Satisfy the Customers Page 18-23			
Task	Achievements in 2019	Plans for 2020	Mid/Long-term Goals
Identification and development of differentiated products by increasing holding technology	<ul> <li>Changed the residential environment paradigm, and developed future windows to improve customer convenience</li> <li>Complied with the government's regulations and continued to develop eco-friendly building decorative materials</li> <li>Developed large-area lightweight components for future cars</li> </ul>	<ul> <li>Effective response to regulatory changes such as energy and hazardous substances and continuous development of eco-friendly building decorative materials.</li> <li>Provision of lightweight solutions using design/ analysis capabilities and references</li> </ul>	<ul> <li>Develop functional products that eliminate customers' Pain Points</li> <li>Develop products with the focus on customer safety, from the product itself to construction and use</li> <li>Occupy the eco-friendly auto component market early on by developing battery pack related parts continuously.</li> </ul>
Strengthening of differentiated design and implementation technology	<ul> <li>Developed Solid Surface with clear patterns by applying design realization technology</li> <li>Mass produced full-carbon exterior parts for the first time among domestic OEM companies</li> </ul>	<ul> <li>Development of interior space design</li> <li>Expansion of product use as a building decorative material by advancing composite material technology</li> </ul>	<ul> <li>Develop products from the customer's perspectiv and improve differentiated design capabilities</li> <li>Develop car interior parts of various designs using high-resolution printing technology</li> </ul>

Task	Achievements in 2019	Plans for 2020	Mid/Long-term Goals
Management system improvement	Standardized company-wide environment and safety work by auditing the management system Improved crisis response capabilities by specially auditing crisis response training	<ul> <li>Rearrangement of the checklist and conducting special audit to ensure compliance with the relevant legislation and internal controls.</li> <li>Selection of specific items such as the chemical substance management system and performance of audit managed by the main office TFT, and reestablishment of company-wide regulations</li> </ul>	<ul> <li>Voluntarily identify and resolve law compliance issues by workplace; establish a system for responding preemptively to revision of laws, etc</li> <li>Conduct risk assessment by workplace and audit matters that require intensive</li> </ul>
Strengthening the awareness for workplace safety	<ul> <li>Conducted improvement activities based on the results of a safety culture level evaluation</li> <li>Implemented training to deepen understanding of the safety operation system and improve basic competences</li> </ul>	<ul> <li>Increase of value diffusion activities, such as encouraging all employees to participate in safety activities</li> <li>Introducing the "lead by example" leadership of management to production lines</li> </ul>	<ul> <li>Arrange assessment tools and foster assessors for self-assessment of the safety culture</li> <li>Perform improvement activities by business unit, workplace based on the results of the assess- ment of the safety culture</li> </ul>

Win-win Growth	Win-win Growth with Suppliers Page 28-			
Task	Achievements in 2019	Plans for 2020	Mid/Long-term Goals	
Enhancing the fundamental competitiveness of suppliers	• To increase the support productivity improvement by carrying our manufacturing innovation activities Increasing investment funds support for joint growth (300 million won $\rightarrow$ 500 million won)	<ul> <li>Provision of financial support, such as the win-win Fund and cash payments</li> <li>Increased technology, management, and training support to suppliers in order to raise productivity and quality</li> </ul>	Create an industry ecosystem that supports continued growth by enhancing mutual competitiveness     Maximize suppliers' productivity improvements by supporting manufacturing technology	
Open Communication	Established on-site communication with the management and 1st-tier suppliers     To reward suppliers for making excellent productivity improvements	<ul> <li>Established on-site communication with the management and 1st- and 2nd-tier suppliers</li> <li>Increased rewards for suppliers that achieve excellent productivity improvements</li> </ul>	Strengthen the foundation for joint growth and establish a healthy collaboration culture     Expand the scope of secondary suppliers to support win-win growth	
Creating a fair trade environment	To add evaluation points when concluding a standard subcontracting contract between 1st and 2nd suppliers Operating a pre- and post-deliberation committee for subcontract transactions	<ul> <li>Promotion of Fair Trade Commission agreements between 2nd and 3rd tier suppliers</li> <li>Establishment of reasonable and fair transaction practices by complying with the laws and guidelines</li> </ul>	Comply with fair trade practices     Increase activities aimed at preventing unfair transactions	

Upgrading Produ	Upgrading Product and Service Quality Page 32-35p			
Task	Achievements in 2019	Plans for 2020	Mid/Long-term Goals	
Quality assurance system level-up	<ul> <li>To tighten the quality management of suppliers</li> <li>To audit major processing suppliers</li> <li>To expand investment in intelligent manufacturing infrastructure</li> <li>To develop a real-time production/process management system</li> </ul>	<ul> <li>Increasing monitoring of quality improvement task</li> <li>Checking the F-cost task and implementation of improvement measures for non-conformities found during the quality audit</li> <li>Verifying product safety and long-term methods of testing product safety issues on a regular basis and promoting the transfer of the reliability test method</li> </ul>	Standardize common quality work capabilities upward     Standardize quality work and raise the level of management     Reflect the customer VOC in quality improvement     Introduce a quality IT system that takes the lead globally     Introduce system/data linkage in the develop- ment-quality area     Manage information and output needed to perform tasks based on systems	
Six Sigma	<ul> <li>To expand the use of big data in the performance of improvement tasks</li> <li>To carry out big data strategy tasks</li> <li>To improve analysis capability through internal/external training</li> </ul>	<ul> <li>Raising the quality management standard by analyzing big data</li> <li>Increasing big data tasks and the target for deep learning vision check</li> <li>Nurturing in-house analysis experts and providing user training</li> </ul>	<ul> <li>Adopt innovative ways of working based on big data analysis</li> <li>Discover BP cases in each process and share the process</li> <li>Secure the big data utilization capability of the engineer</li> </ul>	
Customer contact management	<ul> <li>Activities aimed at increasing customer satisfaction with the A/S contact</li> <li>Improving capabilities by training A/S suppliers</li> <li>Improving construction CTQ and managing construction specifications</li> </ul>	Strengthening the service quality operation system     Strengthening the A/S operation IT system to further boost customer satisfaction     Establishing and operating the quality system for interior	<ul> <li>Improve the capability of counseling the customer VOC by improving the customer counseling IT system</li> <li>Link customer and repair engineer information by introducing a single platform IT system</li> <li>Enhance counseling capability by introducing a Chatbot system</li> </ul>	

\* See pages 58-59 on Significance of Comprehensive Analysis

# **FOCUS ISSUES**

Development of Products that Satisfy the Customers Creating a Safe Workplace Environment Win-win Growth with Suppliers

> Development of Products that Satisfy the Customers

Upgrading Product and Service Quality

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Upgrading Product and Service Quality



# Development of Products that Satisfy the Customers





#### Sustainability Indicators

Technology certifications and awards received at home and abroad

25 (Cumulative as of the end of 2019)

R&D cost

**76,981** (as of the end of 2019, Unit : KRW 1 million)

#### Sustainability Approach Method

As regards its R&D activities, LG Hausys focuses on developing sustainable products with a low environmental impact by increasing research on surface treatment and analysis/reliability, by nurturing talented professionals, and by continually identifying new business areas for future growth. LG Hausys is also striving to develop products that will maximize customer satisfaction by offering differentiated designs and enhanced functionalities.

#### Achievements and Plans

Identification and development of differentiated products by increasing holding technology

#### Achievements in 2019

- Changed the residential environment
   paradigm, and developed future windows to
- improve customer convenience • Complied with the government's regulations and continued to develop eco-friendly
- building decorative materialsDeveloped large-area lightweight
- components for future cars

#### Plans for 2020

Plans for 2020

- Effective response to regulatory changes such as energy and hazardous substances and continuous development of eco-friendly building decorative materials
- building decorative materials.Provision of lightweight solutions using design/analysis capabilities and references

#### Strengthening of differentiated design and implementation technol

#### Achievements in 2019

- Developed Solid Surface with clear patterns
   by applying design realization technology
- by applying design realization technology • Mass produced full-carbon exterior parts for the first time among domestic OEM
- companies
- Development of interior space design
  Expansion of product use as a building decorative material by advancing composite
- decorative material by advancing comp material technology

## **Research & Development**

#### **R&D** Organization

Research Institute was divided into two departments; R&D center and design center. The research center plays a central role in conducting research on resources and discovering new business areas to prepare for future needs. The center implements ecofriendly product development and satisfies the customer demands in the window, decorative materials, surface substances, and automotive component fields. The design center leads customized design solution studies by predicting changing market trends.

LG Hausys is committed to finding new business fields with continuous investments in R&D, resources, and base technology security and affiliate cooperation. In particular, based on our core technology such as surface finish (coating), composite material design and processing, and analysis reliability research, we concentrate on empowering the R&D ability by adopting future-oriented building materials and lightweight automotive items as sustainable growth areas. LG Hausys will lead the industry by launching new products which can actively handle market changes such as intensified restrictions in domestic and overseas markets and innovative items responding to global technology trends and exceeding the customer expectations. For realization, we hire outstanding and gualified people from both Korea and overseas, and are vigorously involved in open innovation activities including conducting national assignments with government institutes or research centers and forming partnerships with key domestic and international technology suppliers.

#### Expanding R&D Investments

In order to recruit and train qualified R&D employees with masters degrees and PhDs from Korea and abroad, we are engaged in a wide range of events and programs, including the LG Techno Conference and industryacademia research projects. We are also cooperating with academia, government-funded agencies, and corporations to further our R&D capabilities.

#### Building Relationships with Academia and Research Institutes

LG Hausys has forged collaborative relationships with diverse external organizations, and is engaged in joint industry-academia research with prestigious universities in Korea, such as Seoul National University and Korea University. We are conducting joint research with government-funded research institutes such as the Korea Institute of Civil Engineering and Building Technology, Korea Conformity Laboratories, etc. Through such external collaborations, we are intensifying our R&D efforts to develop new technologies that could serve as powerful growth engines in the future.

#### Technology Cooperation Partnership with CNSPPT

In March 2017, LG Hausys signed a joint research and technology partnership agreement with the Center For Nano-Structured Polymer Processing Technology (hereafter referred to as CNSPPT). Currently, CNSPPT and LG Hausys are conducting research in insulation materials and lightweight composite materials. Based on the results of such research, LG Hausys expects to be able to test new technologies in the insulation materials and automotive lightweight components market to utilize them in its own research efforts.

#### Major Research Achievements in 2019

#### Release of residential sheet flooring "X-Comfort"

This product provides an excellent walking feeling by delivering high cushioning and rebound elasticity, and features an elegant appearance created using the large-sized Embossed in Register(EIR) method. Handling convenience and constructability have also been improved by reducing the product's weight compared to existing sheet flooring products.

#### Release of high insulation and high durability Low-E glass "Super-plus 2.0"

Low-E glass offers improved insulation and process ability compared to existing low-E glass products thanks to its optimized optical performance and coating fluid composition. Energy grade 1 can be secured when the product is improved used in double-glazing, while improved durability.

#### Release of transparent optical parts for cars

The CID (Center Information Display), successfully mass produced for the first time in Korea, is a product replacing the flat glass of the display unit which provides vehicle operation information and convenience. 3D shapes can be realized because film with optical properties and PC resin are manufactured using the compression injection method. By applying more beautiful design than glass, LG Hausys supplies CID products for seven car models.



#### Product Development Process and Research Focus

#### LG Hausys' Product Development Process

LG Hausys realizes customer value by developing products that reflect customer voice and tendencies along with trends in design and technology. LG Hausys releases a stream of new products designed to meet customers' desires and requirements in time based on its system of communication and cooperation between departments, and by reflecting the market response.

#### **Product Research Areas**

LG Hausys develops sustainable products by making the values of "eco-friendly", "energy saving" and "human-friendly" its top priority, with the aim of realizing healthy and comfortable living spaces made with eco-friendly materials, reducing energy consumption through high-efficiency products and lightweight materials, and resolving social issues and providing customer convenience, respectively.



## Market Trend Analysis

#### **Design Trend Research**

LG Hausys analyzes the drivers and flow of design changes based on diverse insights related with various domestic and overseas design environments and consumer needs, and reflects them in the designs of new products and development of new content. In addition, LG Hausys promotes the spread of design trends via various channels including seminars, magazines, press media, and exhibitions in order to share the customer's cultural value and achieve joint growth, rather than conducting simple design research that contributes to business growth and brand value improvement.

#### Product Development Activities based on Design Trends

LG Hausys makes concerted efforts to analyze the space that customers want and formulates its design strategy by conducting various trend analyses including big data research. This direction is linked with product development and the design of various products featuring the same design identity, thus creating a harmonious space.

	Social / Consumer Trend	Based on the analysis of changes in the social environment and consumer lifestyles, we trace the customer psychology and derive strategic implications from it.	
	Design Trend	Strategies are established by forecasting changes in mid-to-long term trends through preliminary research on overall design.	
Trend Research	Space Trend	Near future space is forecast by identifying the various drivers that change space, and space is researched from the perspective of integrating LG Hausys' products.	
	Big Data Research	Customer needs are collected by data trawling on a wide range of topics from space to products, which are reflected in design development.	
Design Theme	A space theme of merchantable quality is created and applied to all related products, based on the design strategy established through trend research and analysis.		
Product Design Development	Various product designs tailored to the design theme are developed harmoniously. The unique design identity of LG Hausys is applied to all products by linking each product.		
Proposal of Integrated Space	"The space proposed by LG Hausys" is presented to customers by coordinating individual products which are developed according to the Design Theme and adding all elements that composes the space.		
Package Product Design	LG Hausys develops package product designs that meet the lifestyle requirements of users based on its proposing space style, and offers customized spatial solutions.		

#### Major Design Achievements in 2019

#### Winner of the iF Design Award – Prestige Flooring Materials, Crack Concrete

Prestige-Crack Concrete is a tile flooring material for commercial spaces, which applies a coarse texture that we can feel on actual concrete and a special printing method that shows the different 3D appearance of the surface depending on different angles. It received the main award in the "textiles, wall, floor" category at the 2019 iF (International Forum) Design Awards.





# Sustainable Products for Customer Satisfaction

#### Eco – Friendly Healthy and Pleasant Living Spaces

#### Films for Recycled Furniture Film - Recycled Plastic Bottle Materials

Campaigns to reduce the consumption and use of 'single-use' plastic are being waged around the world due to pressing environmental problems such as the proliferation of plastic garbage and the 'separate garbage collection' crisis. LG Hausys has produced and released "films for recycled furniture" made with recycled PET (Polyethylene terephthalate) as the main raw material. Films for furniture are surface finishing materials that can express various designs by attaching them to the surface of plywood, which is a common furniture material. This material is applied to various types of furniture including kitchen sinks, closets and desks, as it allows various patterns ranging from wood to marble or metal, and gloss/matte texture to be expressed freely. LG Hausys produces films for furniture using recycled materials, and has solved the problem in the recycling of plastic bottles, such as peeling-off and quality variation, for the first time in Korea.

#### ZEA Flooring and Wallcovering - Eco-friendly Decorative Materials

Since 2008, the Consumers Green Product of the Year Award has been presented each year by the Green Purchasing Network with the aim of revitalizing the green product market. Green products are strictly evaluated and selected by 20 consumer environmental groups, 500 consumer panels, and consumer voting groups, as well as experts in the relevant fields. In 2019, LG Hausys' flooring material ZEA Sorizam was recognized as an eco-friendly product that minimizes hazardous substances and reduces noise between floors, while its ZEA wallcovering series (Diamant, ZEA Fresh, ZEA Fabric) earned recognition as an eco-friendly product whose coating layer is made of ingredients derived from plants. LG Hausys' ZEA Sorizam and building insulation materials were listed as green products for six consecutive years, whereas the ZEA wallcovering series and Super Save windows were listed for four years running.



#### Eco-friendly Automotive Skin - Can Reduce Harmful Substances in Vehicle Interiors

As the number of customers who prefer environmentally-friendly materials has increased, LG Hausys has continued to conduct R&D activities aimed at finding novel ways of reducing the discharge of toxic substances that end up in the human body. We have introduced environmentally-friendly skins by minimizing the level of phthalate plasticizers used in conventional vehicle skins, as well as employing differentiated solutions and techniques (such as the application of a water-based coating to the surface). As a result, we became the first Korean automotive skin manufacturer to obtain Oeko-Tex Class 1. LG Hausys will continue to focus on R&D and manufacturing technologies to provide a more comfortable driving experience for both drivers and passengers.

#### Energy Saving High Efficiency Product and Lightweight Materials

#### Super Save Window - High Insulation Windows with Top-grade Energy Consumption Efficiency

Even though larger windows are generally better, they result in considerable energy loss. Therefore, it is very important to increase the energy efficiency in terms of cost saving. It is also eco-friendly because carbon dioxide emissions caused by heating can be reduced. Low-e glass is a type of functional glass developed by coating a thin layer of a silver or metal oxide substance on the surface of building sheet glass to enhance insulation. The Super Save Window is exceptionally easy to use due to its "easy open & lock display handle functions," which are designed to enable users to open and use the windows safely and easily.



\* The type of glasses is the option and according to the type of glass, the grade of energy consumption efficiency and the cost of air conditioning and heating reduction effect can be different.

## Super-double low-E Glass – Excellent Insulation and Shielding Performance

Hot sunlight in summer causes excessive radiant heat to flow into a room, increasing the cooling load, deteriorating the durability of building exteriors' decorative materials, and causing bleaching and discoloration in interior finishing materials and furniture. Therefore, it is important to use a shielding function to block the inflow of external heat energy in summer. Conversely, it is very important to keep indoor warmth in winter because the cold external temperature takes away heat generated in a room by the central heating and increases the heating load. "Super-double low-E glass" delivers the best insulation and shielding performance in Korea thanks to its double layer of silver coating, thereby reducing cooling costs by preventing 74%<sup>1</sup>) of hot solar heat from entering a room in summer and improving the insulation performance in winter.



1) Solar heat inflow rate = 1 - solar heat acquisition rate (%)

Based on super double low-E double-layered glass 24mm (result of the solar heat acquisition rate test, windows and doors performance test laboratory, LG Hausys)

#### Innovative Parts Reducing Vehicle Weight - Maintain Rigidity and Help Improve Automobile Fuel Efficiency

Due to strengthened environmental regulations for automobiles, there is a movement among automobile makers to reduce the weight of vehicles. LG Hausys is continuing its R&D efforts to develop differentiated plastic composite materials and innovative parts for automobiles with the goal of becoming the number one player in the automobile weight reduction market. As a result, LG Hausys has succeeded in developing innovative automotive solutions in collaboration with customer companies. The company's lightweight plastic roof rack has seen its weight reduced by 26% compared to conventional aluminum materials, and customer satisfaction has been further enhanced by diversifying the design as well as reducing the weight. The weight of the knee protector has been reduced by about 38% by changing the existing steel product to a plastic product. LG Hausys has also released a front seat back that reduces weight by 20% compared to existing steel products and minimizes assembly parts, thus contributing to vehicle safety and fuel efficiency. In addition, the weight of the undercover has been reduced by 15% to prevent noise, compared to competitive materials. The use of lightweight materials will be expanded from the automotive to the non-automotive field, including eco-friendly battery packs, home appliances, and construction field.



※ The degree of weight lightening is based on the simulation results of the vehicle design analysis program and may change according to the specifications when manufacturing the actual product.

#### Human – Friendly Resolve Social Issues & Provide Customer Convenience

#### Insulation Material for the Building Sector - Highfunctioning Semi-noncombustible Insulation

LG Hausys manufactures a high-functioning semi-noncombustible PF insulation material with a very low level of flammability. Our PF insulation material delivers a powerful insulation effect despite its relative lack of thickness. Its top-level insulation characteristics (0.020 W/mK) can help reduce energy consumption in buildings. In addition, its heat-resistant, durable resin combined with environmentally-friendly foam gas minimizes impact on the ozone layer as well as the generation of toxic gas in the event of a fire. As a result of these efforts, LG Hausys' PF insulation materials contributed to the activation of green building establishments and the excellence was highly regarded in five sectors of certification for green buildings; energy performance, ban for nonessential products containing ozone-depleting substances, use of Environmental Product Declaration (EPD) product, use of low carbon materials, application rate of green building materials.

## Harmful Dust Reduction Filter Network - Removes over 90% of Fine Dust

LG Hausys introduced windows equipped with harmful dust reduction filter screens to address the growing need for products capable of dealing with fine dust. The harmful dust reduction filter network has a nano-fiber filter with a

thickness equal to 1/230 of the diameter of a human hair. This special thickness enables it to be capable of filtering out insects, fine, and large dust particles. It can remove over 90% of the dust in the air, and permits users to safely ventilate even in the event of danger warnings concerning the presence of high levels of fine dust in the atmosphere. In addition, the filter network has a double-filter structure comprised of a general insect screen and a roll insect screen for fine dust. On normal days, only the general insect screen is used, while the roll screen is used on particularly heavy fine dust days.



※ Note: Refers to the performance of the filter net, not the window set. The test result was published by the FITI Testing & Research Institute (ASHRAE Standard 52.1, weight method, tested with dust composed from 0.97 – 176 PM). The performance may vary slightly when used in real life, and there is a small possibility of dust inflow.

#### X-Comfort, a Flooring Material Making Your Feet Comfortable while Reducing Noise between Floors

A high-elastic double cushion layer is used for the first time in X-Comfort product, among sheet flooring materials. The high-elastic double cushion layer consists of a soft upper layer and a hard lower layer designed to cushion the impact of walking and make walking most comfortable by supporting the arch of the foot and preventing it from sinking. According to the results of the walk performance test of X-Comfort conducted by the Korea Institute of Footwear & Leather Technology, X-Comfort demonstrated cushioning property (compression change rate) and elasticity (rebound resilience) about 1.2 times better than ZEA Sorizam (4.5T), the existing LG Hausys sheet flooring material product.

## Test of Lightweight Shock Sound Reduction Measured at the Laboratory $\mbox{TEST}(\,{\scriptstyle \bigtriangleup}\,dB)$



Compression Change Rate (Cushion Property) Test

#### Ball Rebound Resilience Test



Please refer to the LG Hausys website for the details. (KOR.)

# Creating a Safe Workplace Environment





#### Sustainability Approach Method

Achievements and Plans

Social interest in safe workplaces is growing because corporate activities can have a negative effect on the environment and human safety or lead to major and minor environment and safety incidents that have a serious impact on local communities. At LG Hausys, we set and manage company-wide workplace safety targets and evaluate and improve the level of safety awareness. We established a 'preventive workplace safety management system' that enables us to identify and eliminate risk factors well before any accidents even occur. We perform a wide array of self-reviews to ramp up our system and management and make investments.

Safe investment amount

(as of the end of 2019, Unit : KRW 100 million)

Injury rate

# (as of the end of 2019, 2018: 0.46%)

Management sys	tem improvement	
Achievements in 2019	Plans for 2020	
<ul> <li>Standardized company-wide environment and safety work by auditing the management system</li> <li>Improved crisis response capabilities by specially auditing crisis response training</li> </ul>	<ul> <li>Rearrangement of the checklist and conducting special audit to ensure complian with the relevant legislation and internal controls.</li> <li>Selection of specific items such as the chemical substance management system ar performance of audit managed by the main office TFT, and reestablishment of company- wide regulations</li> </ul>	
Strongthoning the aware	ness for workplace safety	
5 5		
Achievements in 2019	Plans for 2020	
Conducted improvement activities based on the results of a safety culture level evaluation Implemented training to deepen understanding of the safety operation	<ul> <li>Increase of value diffusion activities, such as encouraging all employees to participate in safety activities</li> <li>Introducing the "lead by example" leadership</li> </ul>	

system and improve basic competences of management to production lines

# Safety Environment Operational System

#### Environment and Safety Management System

LG Hausys has been operating a environment and safety management system under ISO 14001, OHSAS 18001 and announced the dedication to environment and safety management both internally and externally. We have been conducting guidance based on a environment, safe and health policy for consistency.

#### Management Responsibility of Workplace Safety

We have developed a company-wide workplace safety organizational structure and have set workplace safety management goals, such as safety awareness campaigns or task performances, and reflect them in performing organizational assessments in order to reinforce the management responsibility of workplace safety. In addition, there is a quality, environment and safety council meeting hosted by the CEO monthly and the participants discuss and agree on the goal, analyze the current state, audits, and investment situations related to a safe workplace.

Strengthening the Company-wide Environment and Safety Organization

- 1. Establishing an audit TFT organization to increase the identification of environment and safety risks
- Separate creation of a health and safety team and an environment team/ part at each plant to ensure quick decision-making and the concentration of execution power, in order to cope with ever tighter external environmental regulations.
- 3. Execution and improvement of an operating system suitable for the characteristics of each production process at the workplace, establishment of an environment and safety part under the management of the manufacturing plant manager, and assignment of dedicated engineers to risk factor improvement activities from the perspective of works/processes.



#### Response to the Infectious Disease

To ensure the health and safety of both employees and members of the local community, LG Hausys has established crisis response guidelines for infectious diseases that can be propagated far and wide, and has prepared countermeasures according to each risk level. In particular, as COVID-19 spreads throughout the world in 2020, we have ensured the safety of our employees by assigning dedicated personnel to the related teams in order to manage potential coronavirus patients and implement measures designed to prevent the spread of the epidemic at our workplaces in Korea and overseas.



#### Outbreak of an infectious disease

- Disseminating the company's infectious disease prevention guidelines and providing the related training in countries where the disease is prevalent
- Monitoring the latest developments, such as the spread of the infectious disease, in countries where the disease is present



'Serious'

level

#### Reporting of domestic patients

- Disseminating and promoting the guidelines on infection prevention company-wide
- Monitoring overseas visitors who show symptoms
- Identifying persons who have visited or traveled to an affected country for business purposes during the period concerned
- Asking employees to refrain from traveling to the areas concerned, and prohibiting travel if necessary



Detection of potential coronavirus patients in the workplace

- Management of potential coronavirus patients
- Sanitary control
   Management of affected areas (affected floor and shared space)
- : Disinfection, quarantine, supply of masks, increased control of access by external personnel - Checking of the body temperature (thermal imaging camera) and
- distribution of hand sanitizers and thermometers - Avoidance of internal and external group events, physical contact,
- group dining, training, etc • Prohibition of business trips to affected areas

Detection of confirmed COVID-19 patient in the workplace

- Management of patients who are confirmed to have COVID-19
- Sanitary control
- Disinfection of the entire area and checking of workers' body temperature in the same space
   Continuous checking of workers' body temperature and
- Continuous checking of workers' body temperature and provision of hand sanitizers
   Prohibition of internal and external group events, physical
- contact, group dining, training, etc • Considering shutdown of all affected workplaces and
- Considering shutdown of all affected workplaces and control of access by outsiders

## Management System and Facility Improvement Activity

#### **Risk Factors Improvement Activity**

LG Hausys always monitors each system and risk factor to prevent accidents such as fire and injuries and commits to enhancement activities.

#### | Current State of Risk Factor Inspections |

Initiative	Description
Fire Prevention	<ul> <li>Define management items-power, use of LNG, and overheated equipment</li> <li>Construct measurement/warning systems</li> <li>Improve upon the firefighting devices in offices, warehouses and other vulnerable facilities</li> <li>Train individuals on emergency response procedures</li> </ul>
Eliminate oil mist/ static electricity	<ul> <li>Install static dischargers, oil mist measurement devices, and industrial humidifiers</li> <li>Modify the formulation of raw materials, measure and manage the discharge of static electricity and oil mist</li> </ul>
Reduce narrowness to zero through the blocking system	<ul> <li>Conduct activities to eradicate narrowness with high recurrence rate</li> <li>Install safety devices to prevent narrowness and minimize damage</li> </ul>
→ S Reinforce the disaster prevention system	<ul> <li>Expand evacuation facilities and warning/ monitoring systems</li> <li>Reinforce fire-fighting devices for vulnerable facilities</li> </ul>
Review ESH management status	<ul> <li>Review feedback from the examination of relevant principles and the management of staff diagnosed with certain medical conditions</li> <li>Verify the progress made in reducing waste</li> </ul>

\* ESH (Environment, Safety, Health)

#### Strengthening Construction Safety Capability

LG Hausys is doing its utmost to prevent safety accidents when installing windows by continuously supplementing and operating the construction safety management system. In 2019, we re-checked our compliance with the laws and company standards concerning health & safety preventive actions, incident management, and organizational structure in the construction sector. LG Hausys will continue conducting audits in order to maintain and supplement the management system on a regular basis.

#### | Major Activity Plans |

- Regular health and safety meetings and risk assessments
- Improvement of the training level of construction safety
- supervisors in order to enhance their competences
- Expansion of safety inspection activities and introduction of an I/P policy against safety standard violations

#### Strengthening the Special Environment and Safety Audit

LG Hausys established the "Environment and Safety Audit TFT" in the main office organization in a bid to strengthen the management system and ensure compliance with the relevant laws and regulations, and to solidify the check & balance system with the environment and safety team in the workplace. In particular, we have reorganized the "Law Compliance Checklist" in 2020 by selecting the items together with in-house specialists in each field, which should be observed among the laws in the entire area of environment, safety, and fire-fighting, in order to focus on strengthening compliance with the regulations. Based on this, we are trying to eliminate potential non-compliance in advance by having each workplace conduct the first self-inspection, to be followed by a second audit conducted by the audit TFT of the main office. We will conduct our audits with the focus on the chemical management system in order to manage ever more thoroughly the hazardous risks of chemical raw materials which are becoming increasingly complex and diverse. The issues and improvement schemes identified in the results of the audits are reflected in the company-wide regulations to prevent their recurrence.

#### | Detailed Information on Audits |

ltem	Object	Period	Details	
Regular Audit	All plants	Once a year	Perform all safety-related area inspection and review results	
Special Audit	The depart- ment in charge	Frequency	<ul> <li>Diagnosis of compliance with the laws, diagnosis of similar risk factors when internal and externa issues occur.</li> <li>Diagnosis at the order of the management.</li> <li>Diagnosis of supplier support and emergency response training</li> </ul>	
Accident Check	The depart- ment in charge	Frequency	<ol> <li>Serious accident</li> <li>The same accident occurs at the same location or accidents hap- pen more than two times per year</li> <li>Any issues which can lead to middle and large scale accidents occurance</li> </ol>	

# Establish a Culture of Safety and Strengthen Awareness

#### The Stage of Accident Prevention and the Current Activity State of LG Hausys

In accordance with each stage of accident prevention, LG Hausys created company rules, invested in facility improvement, stabilized the inspection system and has been conducting safety activities since 2013. In compliance with the regulations and proceedings, we have prepared the basic accident prevention policy and procedures by establishing company rules on safety, health and environment issues and standards on safe practices and emergency response manuals. In addition, LG Hausys invested in fire-fighting equipment, facility renovation, safety devices for high-risk equipment, etc. and have seen the positive effects

of accident control. We reinforce the safety management system with inspections on the system in all plants including overseas plants and research centers as well as safety improvement activities. LG Hausys realizes the importance of people's thoughts and behavioral change for fundamental prevention. Since then, we have been establishing a culture of a safe workplace and expanding it.

#### | Development Stages of the Accident Prevention |



\* Source: Health and Safety Executive (HSE), DNV GL

#### Safety Culture Strengthening Activity

LG Hausys conducted an assessment of the safety culture for executives and workers to remember the safety culture in 2018. Hosted by Korea Occupational Safety and Health Agency (KOSHA), we surveyed employees in Ulsan plant and Chungju plant and interviewed the person in charge, manager and workers of the plants. According to the results, LG Hausys will draw indications and create a training session for all workers to learn and internalize the culture.

#### | Activities to Spread the Safety Culture by Phase |

#### 2018, 2<sup>nd</sup> half 2020, 1<sup>st</sup> half 2019 2020, 2<sup>nd</sup> half Evaluating the safety culture level (Ulsan/Cheongju, collaboration with th Korea Occupational Health and Safety Diffusing safety values and improving communication. haring operating systems and improving training Systematization/ Internalization • Improving/Internalizing methods of · Surveys and interviews on the safety Clarification of the R&R of executives. culture managers, professional technicians evaluation • Promoting company-wide slogans/ - Offline surveys Supplementing survey evaluation Diversification of the environment and absolute safety rules - One-to-one interviews with external tools/interview security safety promotion channels • Planning the company-wide environment Implementing self-evaluated nurturing experts Development of a company-wide IT & safety day training Executives, managers, workers system for environment and safety : Collective training for evaluators by • Expression of willingness/site leadership workplace Implementation of environment and activities by the management safety leadership training for the • Promoting "Safety talk" Applying the results of the evaluation management of the company-wide culture level Streamlining of legal training for Evaluation by internal evaluators managers and supervisors Analysis of the results of evaluation and Activating site meetings on environment Additional collective training for devising improvement plans and safety professional technicians Support for the application of best • Praising suggestions openly and domestic improvement cases Establishment of the production improving rewards/incentives Establishment of self-improvement environment and safety part/nurturing Introducing the communication program goals for each workplace training to prevent unsafe practices Systematizing the safety culture evaluation Establishment of an evaluation operation procedure Application of the KPI's prevention indicators of environment and safety

#### | Detailed Promotion Plan |

	Slogan	Creation of slogans through a company- wide public contest		
	Absolute rules	Selection of absolute rules on safety compliance to be followed by all employees		
Value	Environment & safety day	Designation of the "Environment & safety day" (November 1st)		
	Executive leadership	Posting of an environment and safety newsletter throughout the company, provision of safety guidance at worksites		
	Safety talk	Sending environment and safety information letters and encouraging adherence to environment and safety		
Commu- nication	Direct communication meeting	Communication with workplace/ environment and safety leaders and professional technicians		
	Public praise/Reward	Rewards for those who promote safety activities, and sharing this information with the family		
	Diversification of communication channels	Use of the Kakao Talk channel for consultation		
Improv-	Operating system	Production of legal manuals and training		
ing existing activities	Training	Site-customized work standards/regulations/raw material training		

## Win-win Growth with Suppliers





#### Sustainability Indicators

Suppliers assessed for CSR risks

**340** (Unit : No. of companies)

Proportion of purchasing in the community

(proportion of purchasing from suppliers near the workplace compared to total purchase)

#### Sustainability Approach Method

LG Hausys recognizes our suppliers as partners with whom we will grow together with. We are working hard to build a sustainable industrial ecosystem in which all of the parties concerned can help raise each other's competitiveness. To turn our suppliers into strong competitors, we are specifically focusing on strengthening the capabilities of our suppliers and implementing standardized job procedures. In addition, we are bolstering our CSR management systems in both our domestic and overseas supply chains in order to prepare for CSR risks that may arise in the course of managing our suppliers.

#### Achievements and Plans

Achievements in 2019	Plans for 2020
• To increase the support productivity improvment by carrying out manufacturing innovation activities • Increasing investment funds support for joint growth (300 million won $\rightarrow$ 500 million won)	<ul> <li>Provision of financial support, such as win-win Fund and cash payments</li> <li>Increased technology, management, a training support to suppliers in order to productivity and quality</li> </ul>
Open Com	munication
Achievements in 2019	Plans for 2020
<ul> <li>Established on-site communication with the management and 1st-tier suppliers</li> <li>To reward suppliers for making excellent productivity improvements</li> </ul>	<ul> <li>Established on-site communication wi management and 1st- and 2nd-tier su</li> <li>Increased rewards for suppliers that a excellent productivity improvements</li> </ul>
Creating a fair t	rade environment
Achievements in 2019	Plans for 2020
<ul> <li>To add evaluation points when concluding a standard subcontracting contract between 1st and 2nd suppliers</li> <li>Operating a pre- and post-deliberation committee for subcontract transactions</li> </ul>	<ul> <li>Promotion of Fair Trade Commission agreements between 2nd and 3rd tier suppliers</li> <li>Establishment of reasonable and fair transaction practices by complying wit laws and quidelines</li> </ul>

## Supplier Sustainability Management

#### **Supplier Status**

LG Hausys trades with more than 1,655 suppliers in order to procure raw materials and parts that it needs. In 2019, 39% of our total purchases originated from local suppliers situated near our manufacturing plants. LG Hausys recognizes suppliers as partners with whom it will grow together with, and operate a win-win growth support system in which all parties enhance each other's competitiveness.

#### Win-win Growth Program

LG Hausys recognizes that win-win growth is a key element of sustainability management and is aggressively pursuing supplier support activities that could produce solid results. In particular, we are building a cooperative system revolving around five mutual support activities for our suppliers: financial support, improvement of payment terms, quality/technology development support, workforce/training support, and management support.

Project 2019 Outcomes		Description	
Financial support	<ul> <li>Managed the KRW15 billion LG Partnership Fund (a win-win growth fund) and supported 33 suppliers financially</li> <li>Provided network loans worth KRW 720 million to 3 suppliers</li> <li>Provided KRW 500 million to the win-win growth fund</li> </ul>	We provide Network Loans, Family Loans, and LG Partnership Funds to our suppliers to boost their cash flow at low interest rates. We also assist them with improving their financial condition by providing outstanding suppliers with additional support.	
Improvement of payment terms	<ul> <li>Fully maintained cash-equivalent payments</li> <li>KRW 244.2 billion in cash payments</li> </ul>	While our funding policy stipulates that cash payments be made only for contracts valued at less than KRW 3 million, we are increasing the ratio of cash payments made to our suppliers to support their business operations.	
Workforce and training support	<ul> <li>Training on the 3R5S, FTA country of origin for 413 employees in 334 companies.</li> </ul>	LG Hausys runs training courses on quality, environment & safety, Jeong-Do management, general management, and specialized jobs for its suppliers' employees.	
Support for quality and technology development	<ul> <li>Sent 160 technology/quality experts to 80 suppliers</li> <li>Made 3 joint patent applications and support for application for one "technology escrow policy"</li> </ul>	We invested approximately KRW 240 million in assisting our suppliers with facility investments and improvements, productivity enhancements/quality stabilization, and system infrastructure support. In addition, we actively create joint patent applications to help our suppliers safeguard their technology.	
Management support	<ul> <li>Reached KRW 551 billion in the price coupling and supply program</li> <li>Hosted six discussion meetings with suppliers in 2019 (132 executives from 131 suppliers attended and engaged in exchange activities)</li> <li>Rewarded top-performing suppliers (cash payments)</li> <li>Shared benefits through the renovation of old facilities</li> <li>Covered costs to renovate old facilities and were thus able to share the cost savings</li> </ul>	<ul> <li>Price coupling and support program <ul> <li>In response to fluctuating exchange rates and market</li> <li>conditions concerning raw materials, we operate a price</li> <li>coupling and support program for major chemicals and raw</li> <li>building materials to swiftly reflect such shifting conditions in</li> <li>supply costs.</li> </ul> </li> <li>Support for exchange initiatives <ul> <li>Our CEO and purchasing executives attend meetings with</li> <li>our suppliers and visit them on-site to stay current on their</li> <li>pending issues, and to reflect their feedback in our business</li> <li>conduct. Included in our broad-ranging management support</li> <li>initiatives are awards granted to top-performing suppliers, etc.</li> </ul> </li> </ul>	

# Enhancing the Competitiveness of our Suppliers

#### Supporting the Competitiveness of Our Suppliers

LG Hausys is strengthening cooperation at its manufacturing sites based on the understanding that our competitiveness can only be truly enhanced when our suppliers supply products of the highest quality. We are stabilizing the production of our suppliers and improving product quality by supporting their production facilities and technology. To this end, we have supported productivity improvements among our major suppliers by donating investment resources focused on joint growth since 2014, and led the suppliers' efforts to introduce manufacturing innovations by implementing a policy of sharing their achievements.

#### Supporting Suppliers' Efforts to Enhance Productivity

#### Enhancing Suppliers' Manufacturing Competitiveness by Supporting Window "Line Zero" Welding Technology

LG Hausys has enabled its suppliers to manufacture differentiated products with the potential to enhance their competitiveness by supporting welding machine technology, which is related to our patent technology "Line Zero".

#### Supporting Suppliers' Manufacturing Innovations

LG Hausys is making efforts to improve the manufacturing competitiveness of its suppliers by introducing innovations to their manufacturing sites and facility automation in recognition of the fact that co-prosperity with suppliers is a key factor in enhancing our own manufacturing competitiveness. In addition, the savings and improvements obtained through such manufacturing innovations are shared with the suppliers in various forms such as joint patents and technology transfer.

Suppliers	Overview	Support details	
Haeng Sung	<ul> <li>Productivity enhanced by automatic wrapping set- up; yield and non- conformity rate improved by changing the type of vacuum pump</li> </ul>	Cost of automatic wrapping setup and vacuum pump replacement supported, consulting provided	
Seokyoung Steel & Technology	<ul> <li>Productivity improved by installing a servo cutter</li> </ul>	<ul> <li>Productivity and quality enhanced by supporting the cost of servo cutter production and operating universal machines efficiently</li> </ul>	
Ж	Replacement loss reduced using a mold transfer device	<ul> <li>Supported the cost of installing a two- way carrier for mold replacement, and provided support</li> </ul>	
Hyupsung Chemical Fiber	<ul> <li>Productivity improved by using large-size extruders and introducing cutters</li> </ul>	• Supported the cost of introducing large-size extruders and transferred cutter technology know- how	
TAS FL	• Material cost yield improved by using silver layer coating	• Supported the cost of introducing the silver coating process	

## Fair Trade

#### Signing the Fair Trade Agreement

LG Hausys has consistently complied with the relevant laws and regulations such as the Subcontracting Act, and has supported its suppliers in accordance with the "Fair trade and win-win growth agreement" ever since its foundation. LG Hausys was incorporated as an evaluation company for Win-Win Index in 2012, and has been objectively evaluated by the Fair Trade Commission and the Korea Commission for Corporate Partnership for the contents of the win-win growth for the year. As a result, the company has been awarded an "excellent" rating for the last five years in the Win-Win Index evaluation. LG Hausys has signed a fair-trade agreement with 174 1st-tier suppliers with the aim of promoting mutual prosperity by carrying out various support policies. such as payment method improvement, financial support, technology protection, and training support. Thereafter, the 1st-tier suppliers signed an agreement with 20 2nd-tier suppliers in order to make joint efforts to spread a fair trade culture, such as by improving payment dates and notifying each other of unit price adjustment information in advance.

#### The Fair Trade Compliance Program

Since 2010 LG Hausys has pursued a fair trade culture, establishing a voluntary fair trade compliance program for that purpose.

Program	Description
د پُرُنُي پُنُ	• Inspect major business divisions and plants to monitor their trade practices
Regulatory training	<ul> <li>Raise employee awareness of fair trade and disseminate the culture of fair trade</li> <li>Distribute fair trade manuals and teaching materials</li> <li>Offer regular internal/external training</li> </ul>
Preliminary review	<ul> <li>Target the entire business operation from planning through sales and marketing to purchasing and financing</li> <li>Aim to prevent violations of competition regulations</li> <li>Mobilize internal fair trade experts to conduct reviews prior to initiating business</li> </ul>
Subcontracting transactions internal review	<ul> <li>Build systems to prevent and monitor unfair subcontracting practices in doing business with suppliers</li> <li>Form and operate the Internal Subcontract Transaction Review Committee attended by purchasing managers</li> </ul>

#### | Major Program |

#### Outcomes of the Fair Trade Compliance Program

Every year we provide fair trade and subcontracting training for our business divisions and manufacturing plants and conduct audits. In 2019, we sent our CEO's message on fair trade to all our employees to express top-management's deep commitment to fair trade practices. Through the Fair Trade Series, we have shared the latest cases of violations of fair trade regulations in order to instill in our employees' minds a greater sense of duty and obligation regarding compliance. In addition, we have held a series of educational sessions for our business divisions and purchasing department employees on the prevention of collusion, subcontracting regulations, and compliance with the Fair Trade Act. We have also continued to educate career employees and audit the sales division, while our working-level marketing staff were given external training on the use of advertisements as a channel for reinforcing our compliance-oriented mindset.

Category		The number of people who completed the training (person)	Implementation of the training (number of times)	
2017	Subcontracting	72	4	
2017	Cartel and unfair trade	252	15	
2018	Subcontracting	110	7	
	Cartel and unfair trade	265	12	
2019	Subcontracting	138	6	
	Cartel and unfair trade	164	13	

| Employee Fair Trade Compliance Training Frequency |

### Supplier Company's Risk Management

#### CSR Code of Conduct for Suppliers

In 2016, we established the CSR Code of Conduct for all of our suppliers and have since implemented these regulations. This code of conduct defines the responsibilities of suppliers on issues related to labor and work conditions, ethics management, health and safety, and environmental management. We encourage both tier 1 and tier 2 suppliers to abide by this set of regulations. As for overseas suppliers contracted to our manufacturing corporations in Tianjin, Wuxi and Atlanta, Georgia we have included clauses in the signed contracts that stipulate compliance with the CSR code of conduct.

#### Supplier CSR Assessments

LG Hausys assesses 340 suppliers from whom it has purchased (in the previous year) at least KRW 100 million worth of supplies, based on a checklist developed from the CSR code of conduct. The CSR assessment is absolutely essential for new candidate supplier companies in particular. The results of the assessments are included as a score in our periodic audits of our suppliers. Starting in 2020, we plan to divide our suppliers into different groups based on preliminary risk ratings (high / middle / low) and to conduct assessments so that we can implement appropriate improvement measures based on the results. At the same time, we are managing the CSR efforts of those of our suppliers who are affiliated with some of our major overseas manufacturing plants, namely our Atlanta, Wuxi, and Tianjin corporations. Our Atlanta corporation conducts assessments of suppliers with which it has at least USD10,000 worth of traded supplies, and will sign CSR code of conduct agreements with its suppliers in 2018. Meanwhile, the Tianjin, and Wuxi corporations already have any CSR code of conduct stipulations written into their supply agreements, and are presently undergoing CSR assessments.

#### | Checklist Items |

- Safety & Health : safety and health management system, industrial safety, industrial accidents
- Environmental Management : environmental management system,
- harmful chemical management, environmental pollutant management
- Employee Rights : written labor contract, discrimination prevention, wages
   & working conditions

Others : customer satisfaction management, ethics management system, fair trade local community contributions

#### **On-site Inspections and Corrective Measures**

LG Hausys conducted on-site CSR inspections of some suppliers who were selected from a pool of companies with significant amounts of purchases, and suppliers suspected of having environmental and workers' rights issues (based on the need to conduct risk assessments). After performing the on-site inspections in accordance with the CSR Code of Conduct for Suppliers, it was discovered that industrial safety, disaster management, and labor issues in the workplace had been managed far below these standards. The suppliers in question were given instructions on how to write employment contracts for foreign workers, information about minimum wages, and how to join employment benefits programs. In addition, the suppliers were educated and given educational materials on workplace safety regarding issues like how to comply with safe forklift operating procedures, and the wearing of protective gear in the case of emergencies etc. As a part of the CSR violation prevention campaign, CSR education was provided to supplier companies during purchase negotiation meetings, with the CEO of each company in attendance. In the future, we plan to strengthen the monitoring and follow-up measures. For instance, LG Hausys will ask the suppliers concerned to submit a plan for improving their CSR after the assessment.

| New and existing suppliers that have passed the environmental standards review and the social impact assessment<sup>1)</sup> |

	Unit	2017	2018	2019
All new suppliers	Count	101	207	117
Evaluated new suppliers	Ratio (%)	100	100	100
Evaluated existing suppliers	Count	400	340	340
Suppliers with confirmed high risk <sup>2)</sup>	Ratio (%)	0	0	0

1) Supplier evaluation target

- New supplier. Evaluating all new suppliers as of the corresponding year.

 Existing supplier. Evaluating suppliers over 100 million won purchase as of the previous year, or suppliers handling items with high strategic importance.

2) Risk classification by supplier

- High: Less than 75 points in the LG Hausys CSR checklist item score.

- Middle: 75 - 85 points in the LG Hausys CSR checklist item score.

- Low: More than 85 points in the LG Hausys CSR checklist item score.

# **Upgrading Product and Service Quality**





LG Hausys is extending its quality assurance activities to the entire product process including manufacturing, sales, and use in order to provide high-quality products and services to customers and to meet the social demand for products that do not adversely affect the human body or the environment. We have also attempted to improve customers' convenience in terms of purchasing by expanding the window for direct communication with them.

#### Achievements and Plans

Achievements in 2019	Plans for 2020	
<ul> <li>To tighten the quality management of suppliers</li> <li>To audit major processing suppliers</li> <li>To expand investment in intelligent manufacturing infrastructure</li> <li>To develop a real-time production/process management system</li> </ul>	<ul> <li>Increasing monitoring of quality improve task</li> <li>Checking the F-cost<sup>1)</sup> task and implemen of improvement measures for non-confor found during the quality audit</li> <li>Verifying product safety and long-term methods of testing product reliability</li> <li>Sharing product safety issues on a regu basis and promoting the transfer of the reliability test method</li> </ul>	
Six S	ligma	
Achievements in 2019	Plans for 2020	
<ul> <li>To expand the use of big data in the performance of improvement tasks</li> <li>To carry out big data strategy tasks</li> <li>To improve analysis capability through internal/external training</li> </ul>	<ul> <li>Raising the quality management standard analyzing big data</li> <li>Increasing big data tasks and the target fo deep learning vision check</li> <li>Nurturing in-house analysis experts and providing user training</li> </ul>	
Customer conta	act management	
Achievements in 2019	Plans for 2020	
Activities aimed at increasing customer satisfaction with the A/S contact     Improving capabilities by training A/S suppliers     Improving construction CTQ <sup>2)</sup> and managing construction specifications	<ul> <li>Strengthening the service quality operation system</li> <li>Strengthening the A/S operation IT system to further boost customer satisfaction</li> <li>Establishing and operating the quality system for interior</li> </ul>	

2) CTQ (Critical to Quality): A key quality factor that affects quality significantly.



## Product Quality Control

| Quality Assurance System |

Quality control flow Planning quality	Development (Design) quality	Production quality Warehousing Processing Shipment	Manufacturing & construction quality	Quality in use
<ul> <li>Quality strategy</li> <li>Establishment of mid/long term strategies</li> <li>Quality cost (Q-cost) man- agement</li> <li>Process improvement</li> <li>Quality audit</li> <li>Process compliance status</li> <li>International certification/la management</li> <li>Quality data analysis</li> <li>Quality data analysis</li> <li>Quality data analysis</li> <li>Quality performance monitoring</li> <li>Production information tracking management</li> </ul>	Q-Gate for new products     Check development quality     Check long-term reliability     Check for harmful substances     Review early flow manage- ment     Spec-in Q-Gate for windows /	Quality test (IQA /OQA) <sup>1)</sup> Production Quality Management     Facility, work conditions     monitoring     Verify 4M <sup>2)</sup> Revisions     Supplier quality assessment/ guidance     Sign quality evaluation     agreement     Provide testing equipment, production equipment     assistance     Quality Improvement Meeting     Group for each plant	<ul> <li>Provide technical support to manufacturing company</li> <li>Manufacturing/construction company assessments</li> <li>Construction training</li> <li>Standardize construction (ISO)</li> <li>Quality improvement meeting group</li> <li>Meeting of the working group on construction quality</li> </ul>	Analysis of customer complaints     Customer counseling quality     Manage response time, friendliness     Service quality     Handling speed, manage customer satisfaction

1) IQA : Quality assurance of raw/subsidiary materials in storage / OQA : Quality assurance of products shipped

2) 4M : Variable factors in the production process (Men, Materials, Machine, and Method)

## Operating the Quality Information Management System "QAS (Quality Assurance System)"

LG Hausys provides products of uniform quality to customers by controlling any changes that may occur during the production process, such as new product manufacturing, and eliminates the impact of any changes in raw materials, facilities and processes using an IT system designed to verify whether manufactured products satisfy the guality requirements. We are also investing in IT/facilities to collect and manage all guality information in an integrated manner, so that the base materials, production history and process conditions of each product can be traced whenever a customer raises a complaint, and so that the collected information can be reflected in quality improvements. LG Hausys is strengthening the base of its manufacturing quality management by applying the MES (Manufacturing Execution System),<sup>1)</sup> which can manage production plan establishment and the manufacturing history systematically, and the UMS (Utility Management System),<sup>2)</sup> which can monitor process conditions and equipment status in real time. LG Hausys is continuously securing technology by reflecting the automated test system, which uses various sensors to increase the competitiveness of appearance quality, in its annual tasks.

 MES (Manufacturing Execution System): A production management system that controls everything from the establishment of production planning to manufacturing execution.

 UMS (Utility Management System): A system that monitors process conditions and facility status in real time.

#### Operating the Development Quality Verification System

All new products are managed by Q-Gate (the company's new product quality verification procedure) from the initial planning phase to the mass production stage. As it is the core foundation for preventing accidents and improving productivity, the technology/production/quality/research center division are concentrating their capabilities on Q-Gate. Efforts are made to release products that can satisfy the customer by setting clear quality goals that reflect customer requirements in the product planning phase and by checking whether the quality level requirement is satisfied by holding the quality verification committee three times.

## Strengthening of Quality Management Capabilities at Overseas Corporations

In order to set up a quality assurance system at its overseas manufacturing corporations that will perform at the same level as its domestic

plants, LG Hausys has been standardizing the quality regulations and disseminating the work procedures used at its domestic plants. Quality experts from the Seoul HQ were dispatched to help implement a quality assurance system that incorporates local characteristics. Its operational status is being monitored on a regular basis. To ensure its successful implementation, the quality assurance department at the Seoul HQ participates directly in the setting of quality KPI and KPI targets for overseas corporations. Monthly KPI performances are also reported to top management at HQ. Furthermore, the Seoul HQ provides Six Sigma education to overseas corporations in order to train local experts who can solve quality problems and develop the skills required for making quality improvements. Case studies in quality excellence are also taught to relevant personnel of the overseas corporations.

#### Training Quality Experts

We are meeting customer requirements accurately by internalizing Six Sigma, and fostering in-house problem-solving experts tasked with establishing more effective measures for improving product quality. Since 2016 we have implemented a stronger policy for fostering competent personnel by linking the MBB/BB/GB\* qualification certification with the promotion system. By 2019, 8.1% of our engineers had completed an MBB, and the figure is set to increase to 9.4% in 2020. In addition, we run training courses on big data utilization for our hands-on workers, and have carried out quality projects by fostering big data analysts in order to secure the capabilities needed in the era of the Fourth Industrial Revolution.

- \* MBB (Master Black Belt) : A Six Sigma expert who is in charge of education and project supervision consulting
- BB (Black Belt) : A Six Sigma project leader
- GB (Green  $\mathsf{Belt})$  : A Six Sigma project manager who carries out the implementation of the project

#### LCA : Life Cycle Assessment

LG Hausys provides quantified environmental information for each phase of the product life cycle (manufacturing, distribution, use, and disposal) through the LCA (Life Cycle Assessment). Data on six environmental factors (resource consumption, global warming, ozone layer effect, acidification, eutrophication, photochemical oxide generation) were accumulated for a broad range of products including windows, SumTiles, flooring materials (sheets for export, tiles), insulation materials, wallcovering (ZEA Fresh), Econo, and KANGGREEN. LG Hausys will analyze and manage the environmental impacts of these products while increasing the corresponding product family.

## Customer Communication

#### Strengthening Online Customer Contact Points

LG Hausys operates various communication channels to increase online channel accessibility as online interior customers are increasing. LG Hausys opened the Z:IN YouTube channel in 2019 and created many visual contents that allows customers to indirectly experience various materials, along with the SNS channel. LG Hausys will newly open "LG Z:IN mall" in 2020, which combines "Z:IN" (interior information provision site) and "Z:IN Mall" (direct management mall of LG Hausys), to provide various contents in the "space of communication" focusing on customer participation. In addition, LG Hausys will improve customer management from construction and A/S by linking online consultation with reliable offline professional services. LG Hausys will continue to expand O2O\* services by increasing the convenience of mobile devices, so that customers can experience differentiated O2O services in a more familiar and convenient way.

\*020 : Online to Offline

#### Strengthening Offline Customer Contact Points

LG Hausys operates 16 offline exhibition halls besides the LG Z:IN Square, the company's flagship store at Nonhyeon-dong, so that customers can experience and purchase products by themselves. We plan to open a large-size exhibition hall for each major trading area in phases throughout the country. In 2020, LG Hausys plans to concentrate on securing sales channels that will enable customers to shop for home appliances and other products together with interior products on a one-stop shop basis, including by opening more LG Z:IN interior shops in home appliance shops (e.g., LG Electronics' Best Shop) and large distribution channels. LG Hausys is also endeavoring to improve customer convenience by increasing customer visit sales activities, such as apartment moving-in fairs, apartment complex events, and pop-up stores.

#### Prosumer Activity, Z:ENNE

Z:ENNE represents our interior community that consists of our brand ambassadors and prosumers and is engaged in our overall product promotion and marketing activities. Since 2006, Z:ENNE spread LG Hausys news in a storytelling format, produced high-quality contents about our brand and products from the customer's point of view, and functioned as a communication channel between customers. Recently, LG Hausys has expanded the role as a prosumer and increased activities aimed at improving customer satisfaction, such as the suggestion of new ideas for products needed by consumers and the performance of quality evaluation activities before product release.

## **Quality Assurance Activities** at the Point of Customer Contact.

#### The NPS Survey

LG Hausys introduced the NPS (Net Promoter Score) in 2016 to supplement the discrimination in the results of the customer satisfaction survey and to manage service guality more systematically. Accordingly, we are continuously improving product quality by strengthening the product expert system for each region, in order to improve customer satisfaction with a high recommendation index, and we are collecting the opinions of the customers with a low recommendation index in order to reflect them in our product development and in our manufacturing and service guality.



\* Customer recommendation index = (recommended cases - non-recommended cases)/ total response

#### Increasing Communication with Existing Customers

LG Hausys has established a customer response process that focuses on customer types, in order to improve customer satisfaction by resolving customers' Pain Points. In addition, the customer service bulletin board, a feature of the existing LG Hausys website, was redeveloped into an independent website and opened in February 2020. Accordingly, dedicated staff members with specialized knowledge of products/construction were assigned and the related response teams were expanded, while a "Simple inquiry" and "Self actions" policy are now being operated to provide manuals and videos designed to provide customers with troubleshooting tips and guidance. LG Hausys is striving to enhance the convenience of customers who already use our products via the customer service website, through real-time Kakao Talk consultations, application for the "personal visit" service, and subsidiary material purchases.

#### **Operating Construction Quality Check Department**

LG Hausys continues to check and improve its production procedures to reflect customer needs and complaints in phases throughout its corporate activities, and to verify and guarantee guality from the viewpoint of the customer. Accordingly, we operate an construction quality check team to provide excellent and consistent construction services along with our high guality products. We visit the main sites in Korea and check the quality of each construction team, and then standardize and disseminate the know-how of excellent construction teams. In the future we will control construction quality more thoroughly so that all construction teams can provide the best service by coping with diverse construction environments and overcoming unexpected variables in the field.
#### Verifying Product Use Safety

LG Hausys continues to carry out activities to reduce harmful environmental factors in the product life cycle in order to provide customers with healthy and safe products.



#### Mandatory hazard check when developing new products

LG Hausys requires the verification of product hazards in the new product quality verification phase, and checks the emission of hazardous substances - from the base material to the finished product. All newly developed products should pass the verification process without omission, and any production process suspected of generating toxic emissions is controlled by rejecting the development completion approval. LG Hausys will continue to manufacture products that customers can use with peace of mind by blocking harmful substances at the source during the new product development phase.

#### Operating the IT system for chemical substances management

#### - Preliminary review of chemical substances

We have ensured the systematic management of chemical substances throughout the product development process from the product development phase to the environment and safety review, purchase, review, use, storage, and disposal. Accordingly, we continue to make improvements to allow our employees to work safely away from risk factors and to minimize the risks associated with the harmful chemical substances used in the production process.



Base Material Warehousing

#### Operating dedicated teams under the research institute

#### - Verifying long-term reliability

LG Hausys has developed an accelerated test method and included it in its regular inspection items for verifying a product's safety and its long-term use quality, and reflects the customer's use environment in product characteristics. We measure and manage accurately how long a given product that is exposed to a particular service environment for many years can maintain its quality, and make continuous improvements aimed at strengthening its durability.

#### - Analyzing hazardous substances

LG Hausys operates precision analysis facilities and professional personnel to increase the reliability of efforts to detect serious toxic substances, such as TVOC and HCHO, and to secure the safety of non-recognized harmful substances that may be detected during the process. We continuously monitor the hazardous substances emitted during the entire production process from the development phase to product release, as well as any hazardous substances that may be generated by unintended chemical reactions or unidentified pathways.

\* A total of 18 hazardous substances were submitted for analysis in 2019.

#### Operating a toxic substance analysis room for each plant

LG Hausys has established a hazardous substance analysis infrastructure (test equipment/inspector) at its domestic manufacturing plants and is constantly testing for major toxic substances such as TVOC and formaldehyde. All products are controlled according to stringent standards within the legal standards, and all non-conforming products that exceed the standard are disposed of, and recurrence prevention activities are performed on the basis of a thorough causal analysis. LG Hausys has improved the capability of its inspectors and the reliability of its analysis results by holding regular exchange meetings with relevant departments.

#### Operating the radon (radioactive material) test system

A radon analyzer installed at each domestic plant, and tests are being performed on a regular basis. LG Hausys will emphasize customer safety first and foremost, and actively respond to new toxic substances continuously.

#### Acquired official product safety certification

LG Hausys holds various product safety certifications according to the characteristics of its products, ranging from the domestic "Eco Label" and the HB Mark to OEKO-TEX, a European textile product quality certification. LG Hausys will secure product safety that can be trusted in the domestic and foreign markets by renewing its certification periodically.

- 1) Eco Label: Government-certified certification issued by the Korea Environmental Industry and Technology Institute, Ministry of
- Environment, which certifies the eco-friendliness of the whole process from product manufacturing to consumption and disposal.
   HB Mark (Healthy Building Material): A certification related to the organic compound emissions (TVOC, HCHO) of building materials, issued by the Korea Air Cleaning Association.
- 3) OEKO-TÉX (European textile product quality certification; an association of 18 textile institutes in Europe and Japan): Eco-friendly certification that evaluates the harmlessness of a product.

Product Shipping-out

#### Securing the basis of tracking and managing causative agents

LG Hausys has established a system for tracking a product's manufacturing history (base materials, working conditions, etc.) by linking IT systems such as the MES (production management system) and the WMS (warehouse management system). LG Hausys will operate the tracking management system continuously to respond to unexpected toxic substance issues by identifying the cause accurately and estimating the extent of any damage.

# MANAGEMENT REPORT





### Governance

#### Shareholder Composition and Rights

We established a fair and stable ownership structure to become a sustainable company. Our shareholders are entitled to wide-ranging shareholder rights, and information on major business issues is disclosed through the electronic information disclosure system of the Financial Supervisory Service or on our corporate website.



LG Hausys Homepage - Shareholders

#### **BoD Composition and Operation**

Our Board of Directors (BoD) is responsible for making major decisions regarding our business conduct and for supervising the operations of our board members. The board also votes on matters stipulated by the relevant laws and the Articles of Association, matters delegated at the general shareholders' meetings, and other important business-related matters. As of April 2020, our Board of Directors consists of two executive directors, one non-executive directors, and four outside directors.

#### Appointment of the BoD and External Directors

The appointment of the BoD members follows the procedures stipulated by the Commercial Code and other relevant regulations, and must be approved at the general shareholders' meetings. Listed companies with more than KRW 2 trillion in assets must fill more than half of the BoD's seats with external directors. In accordance with this rule, four external directors were selected from among a pool of experts with no vested interests in LG Hausys, bringing with them extensive experience and expertise in the fields of economy, business management, chemical engineering, and automotive engineering. Once appointed, the external directors listen to the company's strategic directions with regard to the economy, society, and environment. They also attend to pending issues, and are then asked to voice their opinions on these matters.

			BOD Composition (As of April 2020)	
Directors	Name	First appointment date	Major career	Remarks
Executive	Kang Gye-Woong	2020.3.26	(Current) Representative director of LG Hausys (Current) CEO of LG Hausys and director of Korea sales division of LG Hausys (Former) Korea Sales & Marketing Company B2C Group Leader of LG Electronics (Former) Representative director of Hiplaza	BoD Chairman
Directors	Kang In-Sik	2019.3.14	(Current) Representative director of LG Hausys (Current) CFO of LG Hausys (Former) Director in charge of accounting, LG Chem (Former) Director in charge of finance, LG Chem	
Non-executive Director	Kang Chang-Beom	2019.3.14	(Current) Manager of the LG Chemical Team (Former) Director in charge of management strategy, Battery Business Division, LG Chemical (Former) LG Business Administration Team (Chemical)	
	Kim Jin-Gon	2015.3.13	(Current) Professor, Department of Chemical Engineering, Pohang University of Science and Technology (Current) Regular member of the Korean Academy of Science and Technology	
External Directors	Bae Zong-Tae	2015.3.13	(Current) Professor, College of Business, KAIST (Former) Chairman of the Korean Association of Small Business Studies (Former) Chairman of the Korean Society for Innovation Management & Economics	Member of the Audit Committee
	Kim Young-Ick	2016.3.24	(Current) Adjunct professor, Department of Economics, Sogang University (Former) Director of the Research Center, Hana Daetoo Securities (Former) Director of the Research Center, Daishin Securities	Chairman of the Audit Committee
	Lee Bong-Hwan	2018.3.9	(Current) Non-executive director, LG Hausys (Former) Professor, Industry-University Cooperation concentration, Graduate School of Engineering Practice, Seoul National University (Former) Director of R&D Headquarters, Hyundai Mobis	Member of the Audit Committee

#### **BoD Activities**

Our BoD met 7 times in 2019, and the average percentage of directors in attendance was 91.8%. The BoD deliberated on a total of 40 agenda items including the approval of business plans, out of which 32 were approved and 8 were reported.

Meet- ing	Date of meeting	Main agenda items	Attendance of directors
1	19.1.29	Approval of the 10th term financial statements and 10 other items	85.7%
2	19.2.21	Approval of the convocation of the 10th general shareholders meeting and 4 other items	85.7%
3	19.3.14	Approval of the payment of directors' remuneration for 2019 and 6 other items	100%
4	19.4.24	Report on the Q1 2019 business results and 2 other item	85.7%
5	19.7.25	Report on the Q2 2019 business results and 3 other item	100%
6	19.10.24	Report on the Q3 2019 business results and 2 other item	85.7%
7	19.11.28	Approval of the appointment of executive directors and 6 other items	100%

#### **Evaluation and Compensation for Directors**

LG Hausys determines the BoD remuneration criteria each year after considering the yearend evaluation of BoD performance, inflation rate, and the competitiveness of external director compensation. The remuneration limit for directors is approved at the general shareholders' meeting in accordance with the set criteria, and any adjustment to the BoD remuneration must be proposed to and approved by the BoD.



#### **BoD Committees**

#### Audit Committee

We operate the Audit committee under the BoD to ensure the independence and transparency of our auditing. The committee consists of three outside directors, all of whom are exempt from the disqualification criteria stipulated in the Commercial Code. The Audit Committee is responsible for inspecting LG Hausys' accounting and business practices, and reserves the right to request board members to report on business operations and to investigate the business conduct and assets of LG Hausys. The committee can convene ad-hoc general shareholder meetings to deal with special issues by submitting documents that describe the reason such meetings are required and the purpose of such meetings. The committee also has the right to request business reports from subsidiaries and investigate their operations and assets if deemed necessary.

#### Audit Committee Operation and Activity

Meet- ing	Date of meeting	Main agenda
1	19.1.29	Report on the operational status of the internal accounting management system in 2018 and 5 other items
2	19.2.21	Resolution of the audit report for the 10th financial statement and the business report and 3 other items
3	19.3.14	Appointment of external auditors
4	19.4.24	Report on the Q1 2019 business results
5	19.7.25	Report on the Q2 2019 business results and 2 other item
6	19.10.24	Report on the Q3 2019 business results

#### External Director Candidate Recommendation Committee

LG Hausys operates the External Director Candidate Recommendation Committee to protect the independence of the appointment procedure for external directors. The committee considers each of the candidates' expertise in their respective fields of economy, environment and society, and checks for independence and any conflict of interest, before recommending them for approval at the shareholders' meeting. The committee is composed of three members, more than half of whom must be external directors.

### Jeong-Do Management

#### The LG Way and Jeong-Do Management

As LG's unique corporate culture, the LG Way aims to put LG's Management Philosophy of "Creating Value for Customers" and "Respecting Human Dignity" into practice by abiding by Jeong-Do Management principles to ultimately achieve the "No. 1 Vision" of LG.

#### LG Code of Ethics

LG established its Code of Ethics and is practicing these ethical norms to help quide the practices and value judgments of its employees. The Code of Ethics Handbook and e-book is available in Korean, English, and Chinese and is distributed to our employees.

| Composition of Major Contents of Ethical Standards |

Chapt	Main content
Chapter 1.	Responsibilities and obligations towards customers
Chapter 2.	Fair competition
Chapter 3.	Fair trade
Chapter 4.	Basic ethics of the employees
Chapter 5.	Responsibilities for the employees
Chapter 6.	Responsibilities towards the country and society

#### LG Hausys Jeong-Do Management

### Operational system

- · Jeong-Do Management training
- and promotion Ethics Counseling Center
- Jeong-Do Management Pledge

### Audit system

- Regular audits

- Shinmungo System
- Whistle-Blowing System

### Year-round audits

Report audits

#### LG Hausys' Jeong-Do Management

At LG Hausys, we are fully aware of the 'importance of Jeong-Do Management not as an option, but as a prerequisite for our survival as a company.' Thus, we operate a dedicated Jeong-Do Management organization and ensure that this management philosophy is built into the fabric of our corporate operation so as to prevent any corruptive or illegal behaviors of our employees and to establish a culture of Jeong-Do Management. For us at LG Hausys, Jeong-Do Management means more than a mere ethics management, but forms the basis of our competence to outperform our competitors. To this end, we sharpen our competitive edge through constant innovation to 'Create Value for Customers' while providing equal opportunity and performance-based compensation to our employees to 'Respect Human Dignity,' which in turn enables us to offer great customer service that espouses high value and integrity.



#### | The LG Way and Jeong-Do Management |

At LG Hausys, we abide by the philosophy of Jeong-Do Management as well as our Code of Ethics in our business operations while taking the initiative in improving any irregularities formerly misconceived as customary practices so that Jeong-Do Management becomes an even more vital part of our organizational culture.

#### Jeong-Do Management Programs

We practice Jeong-Do Management a wide range of programs such as the Jeong-Do Management Pledge, the Whistle-Blowing and Shinmungo Systems, and Jeong-Do Management training.

#### Jeong-Do Management Pledge

All our employees sign the Jeong-Do Management Pledge online, and our suppliers do the same through signing contract documents upon the start of business relationships. This further serves to commit both employees and suppliers to abide by the LG Code of Ethics and practice Jeong-Do Management.

#### Whistle-Blowing System

We at LG Hausys prohibit all our employees from accepting any bribes or rewards from stakeholders under any circumstance. In the case that bribes or gifts are offered, they should be politely refused and returned in accordance with the Code of Ethics. If for any reason this is not possible, the concerned articles should be reported to the Ethics Bureau and be donated to welfare organizations or sold through inhouse auctions so that the proceeds can be used for charitable work.

#### Shinmungo Program

Any violation of the Jeong-Do Management principles is reported via the Shinmungo System. These include unfair practices committed by our employees through the misuse of authority, acceptance of bribes, and any other practices that go against the LG Code of Ethics. In the case that online reporting is unavailable, reports can be made by phone, fax, postal mail, or in person. We guarantee that any information on the informants is strictly protected, and should any individual who has filed a report become disadvantaged as a result, we ensure that restoration or equivalent compensation measures are taken.

LG Cyber Shinmungo (Eng.)

#### Dissemination of the Jeong-Do Management Culture

LG Hausys is making concerted efforts to spread the Jeong-do Management culture by implementing Jeong-do Management training and distributing promotional materials to all its employees and partners, including overseas corporations, every year. LG Hausys provides training for each job position, incuding those of newly appointed team leaders, expatriates, and new recruits/experienced employees, as well as dispersion training led by each business division/ department. Employees of the company's overseas corporations also receive continuous training based on videos and training materials produced in the local languages. LG Hausys communicates with its suppliers through mobile webtoons/ messages so that suppliers can approach Jeong-do Management in a friendly manner. In addition, LG Hausys has appointed a director and the personnel of the Office of Ethics in the business unit/part in order to establish a culture of "Jeong-do Management" throughout the company, and they are practicing Jeong-do Management every day by leading education and public relations activities. In particular, the Office of Ethics in the business part held a workshop in 2019 to spread the Jeong-do Management culture to the company's overseas corporations.

The Jeong-Do Management Division will continue making efforts to establish the Jeong-Do Management culture to prevent employee risk factors related to Jeong-Do Management and ensure compliance with the basics and principles to avoid recurrence of risk factors. The division will also continue to communicate with the suppliers to establish fair and transparent trade connections.

#### | Jeong-Do Management Education Data<sup>1)</sup> |

Category	Region	unit	2017	2018	2019
Number of employees who received education	Domestic	No. of persons	6,075	3,060	2,598
	Overseas <sup>2)</sup>	No. of persons	687	934	767
Number of suppliers that received education <sup>3)</sup>	Domestic	No. of compa- nies	1,615	2,0124)	1,998 <sup>4)</sup>

1) Based on the cumulative number of people in question (including duplicates) 2) U.S., China, Europe, Russia, etc.

 Supplier training program: General meeting of purchasing suppliers, supplier training by business unit

4) The mode of communicating with suppliers was changed from offline training to the mobile webtoon/message method between 2018 and 2019.



Office of Ethics workshop of the business part for overseas corporations

### Talent Management

#### **HR Management Principles**

#### **HR Management Principles**

Value is created from individual creativity, while performance is driven by employee capability. At LG Hausys, we provide fair opportunities in accordance with an individuals ability and qualifications, fairly evaluate the delivered outcomes, and compensate according to the individual and organizational contributions made. Furthermore, we have adopted a consistent, long-term approach to making all HR management decisions while guaranteeing equal employment opportunities, respecting human rights, and compensating our employees for their performance without any discrimination on the grounds of gender, age, religion, etc. as specified in our Code of Conduct and our employment policy.

#### Employee Data

The number of our employees in Korea and abroad amounted to 4,484 on a consolidated basis as of the end of 2019. The ratio of office workers and professional technicians was 69% and 31% respectively. In 2019, we hired 196 new employees, and we are now leading the push to create more jobs for young people.

#### Securing Outstanding Individuals

#### Securing Outstanding Individuals at Home and Abroad

LG Hausys holds job fairs and carries out recruitment activities in major universities in North America and Japan, as well as in Korea, in order to secure outstanding individuals. It also operates summer internships linked with employment for graduating students in a bid to secure competent persons early on. As regards R&D positions, LG Hausys supports outstanding individuals with the talent required for its research tasks by operating customized research courses for each department and industryacademic scholarship programs.

#### Improving the Employment Brand

The creation of a differentiated employment brand is needed to secure outstanding individuals and communicate with them. LG Hausys participates in the "LG Techno Conference", which introduces the current status of technical innovation to outstanding individuals who are studying for a master's or doctoral degree at home and abroad, and explains the plan for nurturing talented R&D personnel, and the hosting of "LG Day", a joint recruitment activity of LG Group.

#### Compensation System

#### Fair Assessment System and Continuous Feedback

We endeavor to ensure fairness in assessing the performance of our employees includes quarterly reviews, the Assessment Review Committee, and evaluator capacity-building training. We conduct quarterly progress reviews to help employees strengthen their execution capabilities to reach the set goals, while offering regular performance feedback and coaching to improve the fairness and acceptability of evaluation outcomes. As a part of the year end assessments, the Assessment Review Committee performs comprehensive assessment reviews that take into account any contributions to business operations and organizational specificity, in addition to individual performance and competence. We also provide mandatory e-learning to evaluators to improve their capacity in conducting fair and objective assessments. LG Hausys continuously reviews and reflects measures to ensure fairness in its evaluations, such as changing the object of the relative evaluation (team  $\rightarrow$  job position).

#### Performance-based Compensation System

Our compensation system consists of cumulative and noncumulative components based on performance-driven principles: the cumulative annual salary scheme compensates individuals differently based on the results of the previous year's evaluation, whereas the non-cumulative scheme is composed of role-based pay, performance pay, on-the-spot incentives that reward exceptional performance, and reward programs operated at the level of each unit organization. Furthermore, we hold the R&D Awards, Design Jump, the Innovation Best Practice Award, and other project-level programs designed to reward outstanding R&D and innovation initiatives. These programs are designed to consolidate the performance-driven HR principle of "High Performance, High Return."

#### Protection of Labor and Human Rights

#### **Global Labor Policy**

We fully respect the provisions set by the agreements made by the International Labor Organization (ILO), the 'UN Guiding Principles on Business and Human Rights' proposed by the UN Human Rights Commission, and other standards and regulations set by international organizations and groups in the fields of labor and human rights. In 2016, we established the <LG Hausys' Global Human Rights & Labor Policy> which declares our commitment to 'guaranteeing and respecting the right to human dignity, freedom, and happiness as a fundamental value.' Its full version is available on our corporate website.



🖉 LG Hausys' Global Human Rights & Labor Policy

#### Labor-Management Relations

LG Hausys is improving its employees' quality of life by securing worldleading corporate competitiveness through its continuous achievements. To this end, LG Hausys has established a strong labor-management partnership based on participation and cooperation. LG Hausys also aims to establish community-based labor-management relations that contribute to social development. To achieve this objective, we will operate a 3-dimensional labor relations model based on the 3 pillars of business management, worksite, and collective bargaining to engage with and seek cooperation from our employees. In addition, we are constantly communicating and faithfully consulting with our labor union in an effort to build a mature labormanagement culture based on mutual trust and respect. As of the end of 2019, 67.4% of the total employees joined the trade union.

		<i>,</i> ,		
Category	Unit	2017	2018	2019
The number of trade union admission	No. of persons	998	1,024	993
The rate of the	%	64.7	68.1	67.4

 Percentage of unionized workers = (Unionized workers / Under the company regulations, the number of people eligible to join the labor union) x 100

#### Labor-Management Community

admission

| Unionized Workers<sup>1)</sup> (domestic) |

We pursue engaging and cooperative labor relations: labor relations are built horizontally, not vertically, and employees and the top management respect each other's role on equal footing. Our executives host regular dialogues with employees, and quarterly management meetings. Organization revitalization events like the annual sports events held at company worksites also help open up dialogue between management and labor. Furthermore, we host quarterly labor-management conferences to discuss common issues that concern labor and management alike, such as the improvement and expansion of welfare facilities, and greater business performance.

#### Occupational Health and Safety Committee

We have signed employee agreements with our labor union, and host quarterly Occupational Health and Safety Committee meetings at which labor and management are represented in equal numbers. In addition to preventive initiatives focused on production departments and blind spot areas, an employee representative attends the committee meetings once every 6 months to inspect the work environment and address health and safety issues.

#### The Grievance Settlement Process

LG Hausys is making efforts to protect its employees' human rights, increase their job satisfaction, and create a healthy working environment by listening to and settling employees' grievances. we operate a personal grievance acceptance program on the company intranet.

#### **Employee Welfare Benefits**

LG Hausys runs a host of employee welfare benefit programs designed to create a satisfactory working environment for our employees.

Area of support	Type of support	Description
Flexibl	e Employee Benefits	A welfare program in which employees can choose from a wide range of benefit services depending on their lifestyle and preferences
	Housing fund support	Housing fund support, company housing quarters, and dormitories are provided
Residence/Economic       condolences       deaths in the family, and support is provided for the necessary congratulatory and expenses         Stability Support       School tuition support       School tuition is provided for children in middle and high school and university, includ fees and classroom fees. (There is no limit to the number of children eligible for support	condolences	Leave is granted on special family occasions such as marriage, 60th birthday celebrations, and deaths in the family, and support is provided for the necessary congratulatory and condolences expenses
	School tuition is provided for children in middle and high school and university, including registration fees and classroom fees. (There is no limit to the number of children eligible for support.)	
	Medical expense support	Medical care expenses are received by the employee, and the employee's spouse and children
	Health checkup support	Regular health check-ups are provided
Healthcare/Health Check-up Support	Health/psychological counseling support	A counseling service is provided through a welfare manager and an outside professional counseling organization
Check-up Support	Group term life insurance	Insurance benefits are provided in the event of 3 major diseases, death, and accidents
	Vacations	Summer vacation and annual leave
	Vacation facilities operation	The company operates four vacation facilities
Leisure Activity Support	Informal group support	Support is provided for various informal groups formed by employees for leisure activities
EST -	Reward for long-term employees	Commemorative souvenirs are given to longterm employees, a 6-day paid overseas vacation is offered to employees and their spouse upon their 20th year of employment and upon retirement
Others	Souvenirs for retired employees	LG Hausys provides souvenir gifts to employees who leave the company after more than 10 years of service, and a 5-night overseas trip to employees who retire at the regular retirement age

#### | Employee Welfare Benefit Programs |

#### **Outstanding Individuals Nurturing Program**

#### Increasing Leadership Change Programs

LG Hausys conducts a team leader leadership survey to diagnose the level of leadership competency and various follow-up programs to enhance leadership competency. We implement the Leadership Jump-Up course with a focus on self-reflection and discussion as company-wide team leader leadership training, and support self-changing leadership by sending leadership letters that cover the in-house practice cases of improving working styles. For the teams interested, we provide programs for practical changes such as the Happy together team workshop that makes a happy team by increasing team's work value and promoting communication.

#### Strengthening Core Job Competence

To nurture R&D and manufacturing experts systematically, LG Hausys develops and operates practical business courses for the R&D field, which include the actual development cases of LG Hausys from the basic theory of each field such as polymer materials/processing, inorganic materials, composites, and architectural design/energy. For the manufacturing field, LG Hausys develops and implements training courses in phases with a focus on LG Hausys' underlying technologies such as car rendering, extrusion, injection, coating, printing, and foaming.

# Work-life Balance and Increasing / Supporting of Competent Women

LG Hausys actively participates in government policies such as providing parental leave, creating a family-friendly corporate culture and promoting a healthy work-life balance. We also manage and nurture competent persons for each job so that competent female personnel can grow as core leaders of the organization, and hold the "Forum for Competent Female Employees", which is managed by the employee consultative group, for the mutual networking and mentoring of female talents every year.



|LG Hausys Training System |

1) D/C: Development Center. LG entrepreneur competence assessment program

#### Innovating the Organizational Culture

#### Improving the Way of Working

LG Hausys has introduced a flexible time system in July 2018 which allows employees to choose their working hours within the limit of 40 hours per week after agreeing with the leader, in order to respond quickly to changes in the external environment such as legislation to reduce working hours. LG Hausys is also conducting activities to change the way of working, which allows the participation of employees. For example, LG Hausys conducts a campaign of improving the way employees work with a focus on keywords, such as meetings, reports, and protocols, and holds improvement workshops for each team according to the diagnosis survey results.

#### Creating a Dynamic Organizational Culture

In 2019, LG Hausys aims to establish a dynamic organizational culture in which employees take the initiative and assume full responsibility (meritocracy) for their work, with performance as its focal point, a communicative culture that is full of positive energy (vitality), and a creative culture (creativity) that encourages novel innovations. LG Hausys will continue making positive changes so that employees can work resourcefully and achieve excellent results in line with the changing business environment.



### **Environmental Management**

#### Environmental Management System

#### Environment, Safety and Health Policy

LG Hausys has established its own environment, safety and health policy to grow and develop together with the society, by securing society's trust through zero-accident and eco-friendly management in recognition of the fact that environment, safety and health management is an important factor in ensuring the company's sustainable development based on the principle of "Respecting Human Dignity". In addition, we have introduced management regulations covering air quality, water quality, chemicals, and waste at each workplace, in order to achieve harmony between our entrepreneurial activities and the environment.



#### **Environmental Investment**

We are constantly increasing our investment in environmental improvements through process enhancements and eco-friendly product design, to product production, and to GHG emission/ energy consumption reduction and environmental conservation. In 2019, we invested approximately KRW 7.1 billion in environmental preservation, mainly by installing brand new highly effective air pollution control equipment.

#### Controlling Environmental Pollutants in the Workplace

#### Atmospheric Environment Management

To improve the atmospheric environment, we actively embrace new technology and switch to new high-efficiency pollution control equipment and systems in order to improve our efficiency in treating air pollutants. We primarily operate Regenerative Thermal Oxidizers (RTO) and electric precipitators as the optimal air pollution control equipment, and we built a monitoring system to prevent air pollution accidents and monitored the operational status of such equipment in real time.

LG Hausys made significant efforts to reduce air pollutant emissions by installing four RTOs at the Ulsan Plant and wet scrubbers in Cheongju Plant in 2019.

#### Water Environment Management

Across major areas of our worksites, air-water separator tanks are up and running to prevent the spread of pollutants, and emergency storage tanks were installed to prevent pollutant leaks to offset any damage imposed by unintended environmental accidents. All alarms and barriers were also installed to prevent any leakage of liquid pollutants as well as the spread of such pollutants. The Cheongju Plant has developed a system and monitors four water gates to prevent the rapid proliferation and spread of pollutants in the event of a pollutant spill. Experts are stationed at the internal wastewater disposal facility of the Ulsan Plant on a 24/7 basis in order to monitor the quality of wastewater generated while manufacturing products and to check that the wastewater is being properly treated. Furthermore, non-point pollution source treatment equipment is under operation to prevent nearby streams from being polluted by these sources.

\* Water intake at the Ulsan Plant : Surface water, tap water \* Water intake at the Cheongju Plant : Tap water, industrial water

#### Hazardous Chemicals Management

Our domestic plants handle hazardous chemicals such as MEK and ethyl acetate. This prompted us to focus on developing alternatives to reduce our consumption of such harmful chemicals. We also installed such safety devices as barriers and gas detectors around the storage facilities of harmful chemicals to prevent fires, explosions, or leaks caused by these chemicals within the workplace. Meanwhile, we appointed managers at each spot in charge of managing hazardous chemicals to thoroughly examine the relevant facilities.

#### Review of New Raw Materials Regulations

Responding to the government regulations has emerged as an important issue as the government's policy on and supervision of chemical substances have been strengthened. Accordingly, LG Hausys strengthens its review of the regulations at home and abroad before purchasing new raw materials in order to comply with the laws and regulations related to chemical substances.

#### Ozone-Depleting Substance Management

We do not produce any ozone-depleting substances as defined in the Montreal Protocol nor use such substances in our manufacturing process. Yet, CFC-based substances are contained in a portion of the refrigerants of the freezers used for product freezing and air conditioning.

#### Minimizing Our Impact on the Ecosystem

Our Ulsan Plant has voluntarily conducted quarterly water quality inspections and environmental impact assessments on the Heoya River system as part of its ecosystem conservation initiatives. A total of 13 locations, from the Heoya Dam to Ganggunaru where the river meets the sea, are analyzed and managed for six items (COD, SS, pH, etc.), If deemed necessary, measurement data is provided to the relevant authorities. Our Cheongju Plant signed an agreement with the Geum River Basin Environmental Office to improve the water quality of the nearby Miho Stream, and is engaged in such activities as ditch reconditioning, planting, and daily environmental education for local residents.

#### Response to Climate Change

#### Climate Change Response Strategy

LG Hausys actively responds to climate change risks by implementing energy-saving activities and process innovations for each workplace on a continuous basis, and by carrying out greenhouse gas reduction activities in response to the Emissions Trading Scheme, including the introduction of external heat sources. We also help consumers to save energy in their daily lives by releasing highefficiency products, and contribute to the energy-saving initiatives of local communities by awarding the Green Store certification to company-operated stores.

#### Climate Change Strategy

Energy saving workplaces • Greenhouse gas reduction and energy saving activities - Improvement of old facilities - Energy-saving activities in daily life • Reduction of fossil energy consumption + Energy saving product • Provision of high-efficiency products - Insulated products such as low-E glass and insulation material - Improvement of fuel efficiency products such as parts for reducing vehicle weight • New product R&D related to energy saving

# Energy Consumption/Greenhouse Gas Reduction Activities and Achievements

# Energy Consumption/Greenhouse Gas Reduction Activities and Achievements

In 2015, shortly after the GHG Emissions Trading Scheme took effect, LG Hausys adopted a technology combining a rotor concentrator with an existing RTO to process VOC(Volatile Organic Compounds) gas and thereby reduce GHG emissions. Essentially, this technology converts a large volume of low density VOC gas into a small volume of high density VOC gas. Of the fifteen RTOs installed in the Ulsan plant, only those capable of being combined with highly efficient concentrators were selected and are being refitted one at a time. The energy source for the internal inside the concentrator uses the circulating heat in the RTO, thus contributing

to GHG emission reductions. As a result, VOC throughput has been reduced compared to the use of RTO only, and the consumption of RTO fuel (city gas LNG) use has been reduced, resulting in a GHG reduction at the Ulsan plant.

#### Conducting Energy Saving TFT Activities

LG Hausys is implementing energy saving activities in which all its employees are required to participate, by organizing the energysaving TFT for its domestic workplaces. In particular, we are conducting energy saving activities by replacing aged or obsolete facilities such as boilers, compressors, water facilities and piping, as well as improving systems and supplementing cooling and air conditioning systems such as chillers, heaters, and air conditioning equipment. Our energy saving activities in 2019 included efforts to improve chamber heat radiation loss and the condensate water collection piping at the Ulsan plant, and the application of highefficiency inverter fans, the replacement of LED lights, and the collective blocking of snow melting system when the energy load is high in winter at the Cheongju plant.

#### Our Response to the Emissions Trading Scheme\*

- Some 30,000 tons remaining in 2019 will be carried over to the company's 2020 carbon credit.
- The extra or insufficient carbon credits obtained during the 2nd planning period (2018 ~ 2020) will be traded on the market, and the company's emission reduction activities will be carried out in its workplaces on a continuous basis to cope with emissions credit.
- $^{\ast}$  Emissions trading scheme: The act on the allocation and trading of greenhouse gas emission permit

#### Disclosure of Greenhouse Gas Information

Each year LG Hausys' greenhouse gas emissions are verified by a certified verification institute in accordance with the Emissions Trading Scheme, the results of which are disclosed to the general public in the company's sustainability and business reports. In addition, the climate change response system and status information are disclosed to domestic and foreign investors in the DJSI <sup>1</sup>) and CDP <sup>2</sup>) reports. We also acquire the Environmental Product Declaration and the Carbon Footprint of Products certification for certain products by preparing LCA (Life Cycle Assessment) reports after analyzing the greenhouse gas emissions generated throughout the entire product process - from production to purchase to disposal.

DJSI (Dow Jones Sustainability Indices): The sustainability management index is used to comprehensively evaluate the economic, environmental, and social aspects of the company and open excellent companies to the capital market.

CDP (Carbon Disclosure Project): A project that discloses the company's climate change response strategy to investors.

### Social Contribution

#### Strategy for Implementing Social Contributions

LG Hausys is conducting various social contribution activities designed to promote mutual prosperity with local communities by utilizing the capabilities of the company and its employees, including activities aimed at preserving the cultural heritage environment, improving memorial center, and improving the residential environment of "persons of national merit", as well as boosting local community sharing activities. We will continue conducting diverse





contribution activities with a sense of social responsibility in order to lead positive and happy changes in the local community.

#### Preserving Korea's Cultural Heritage and Environment

We continue to provide educational youth programs to preserve our natural, historical and cultural heritage and to pass down this legacy to future generations as a way of safeguarding our splendid cultural heritage.

#### Make Dokdo Green

This annual facility improvement initiative has been undertaken in Dokdo since 2009 to improve the quality of life for Dokdo residents while protecting the pristine environment of this natural preservation area.

#### **Dokdo Youth Keepers**

Since 2010, LG Hausys has held the annual "Youth Camp for Love Dokdo" in order to give selected college students opportunities to experience Dokdo by visiting Dokdo island. The company has also been carrying out Dokdo Youth Keeper activities to inform the world of the importance of Dokdo since 2019. LG Hausys provides the Dokdo Youth Keepers with training on planning, video production and editing, expert mentoring, and budget to enable them to produce diverse creative media contents related to Dokdo Island. Through the Dokdo Youth Keeper activities, Korean youths, the future of the country, receive a great opportunity to broaden their understanding of the importance of our history and territory and feel a deeper sense of pride.



Dokdo Youth Keepers (2019)

#### | Make Dokdo Green |

#### Dokdo Lighthouse Ulleungdo Dokdo 2011. Dokdo Residential Housing Donated air-conditioning 2018. Environmental improvement of the Ahn Yongbok equipment 2011 2013~2017. Memorial Hall (windows). Donated construction materials for 2019. Environmental improvement of the Dokdo Volunteer Donated electronic devices the expansion of Seodo residential Forces Memorial Hall (windows, flooring). housing (windows/wallcovering/ flooring, etc.) Patrol Road Dokdo Management Office 2009~2015. 2013~2017 Installed and repaired safety fences Donated electronic devices (using "reinforced wood"). Dokdo Police Guard 2009. Replaced the flooring (tiles) in the gym, internet cafe, and cafeteria 2010. Renovated the flooring (tiles) and walls (wallpaper) in the **Ulleung Police Guard** barracks and donated equipment 2013. Installed flooring (tiles) and wallpapered (wallcovering) the 2011. Renovated the kitchen facility (tiles and others) and donated official Residence and patrol division offices cooking equipment. 2014. Installed flooring (tiles) and wallpapered (wallcovering) the 2012. Renovated the operations room / guest rooms / hall flooring (tiles) and walls (films) official Residence and patrol division offices / Donated heating equipment Renovated the changing room and donated furniture

- 2015. Installed flooring (tiles) and windows, and wallpapered (wallcovering) the official residence and patrol division offices
- 2016. Renovated the flooring at the official residence and patrol division office
- 2017. Renovated the tiles at newcomer station

# Renovating the Memorial Centers and the Residence for People of National Merit

We renovate facilities related to Korea's Independence Movement as well as the residence for men of national merit so that the spirit of this historic movement and the sacrifice and national contribution of our ancestors will be forever remembered by future generations.

#### Renovating the Memorial Center

Based on the spirit of supporting the independence movement initiated by the founder (the late Koo In-Hwoi, chairperson), LG Hausys has remodeled many memorial halls (Seo Jaepil, Yun Bonggil, Lee Hwayeong, Ahn Junggun, Han Yongwun, Ahn Changho, Kim Changsuk and Shin Chaeho) using the company's outstanding products, such as windows and flooring materials. LG Hausys has also supported the restoration of ten historic sites at home and abroad, including the Chongqing Provisional Government Complex and the Korean Empire Embassy in the U.S.

#### Renovating the Residence for People of National Merit

Since 2015, LG Hausys has been renovating the homes of national heroes, Korean War veterans, and descendants of independence activists. We have renovated the homes of 23 people in Korea and three people in other countries (U.S. and India), and will continue with our renovation activities in the future.

- 2013. Replaced the flooring (tiles) in the situation room
- 2014. Replaced the flooring (tiles) in the briefing room and donated electronic appliances
- 2015. Constructed bathrooms / toilets
- 2016. Replaced the flooring in the gym



Renovating of Kim Changsuk memorial hall



Renovating of Shin Chaeho memorial hall

#### Sharing Initiatives for Local Communities

We launch broad-ranging sharing initiatives to demonstrate just how much we care for the less-privileged in our local communities. Such initiatives are undertaken by respective worksites and in cooperation with central and local governments. In doing so, we actively explore and capitalize on opportunities to lend a helping hand to local communities.

#### Make a Happy Space

Our Make a Happy Space initiative was launched to encourage our future leaders to dream and hope for a better future by improving public youth spaces with our specialized products, execution, and design capabilities. LG Hausys has improved 24th shared spaces of social welfare organizations for adolescents since the opening of the first "Creating a Happy Space," which is a child welfare town at the Holt Ilsan Center. In particular, employees and their children have produced DIY items of furniture, such as lockers, and donated them to the "Creating a Happy Space" beneficiary facility, after entering into an agreement with the Habitat for Humanity Korea. In addition, LG Hausys supports the facility environment independently from the KACCC (Korea Association of Children's Center Councils).



#### Key Social-Giving Initiatives by Plant

LG Hausys is engaged in diverse social contribution activities such as cleaning the neighborhoods around its manufacturing plants in Korea and abroad, assisting with the maintenance of facilities in such areas, lending a strong helping hand with the recovery efforts in flood damaged areas, and contributing to the development of local communities.

#### Creating Value for Local Communities through Private-Public Partnerships

We cooperate with central and local governments to fully mobilize our business capabilities and infrastructure in renovating old residential facilities in local communities and enabling people to enjoy a more ecofriendly and pleasant living space.

#### Engagement in the Green Remodeling Project

The Green Remodeling Project is supervised by the Ministry of Land, Infrastructure, and Transport to improve the energy performance of old buildings whose energy efficiency has degraded. This not only helps in balancing the energy supply/demand, it also serves to reduce energy costs. We provide our high-insulation windows and other high energyefficiency products to expand the cause of this meaningful project. LG Hausys is primarily committed to the green remodeling market by renovating old windows 6,800 times in 2017, 7,200 times in 2018 and 7,500 times in 2019.

# Diagnosing the indoor environment/Supporting improvement projects (making a place of clean breaths)

The air quality of regional children's centers selected as a target for "making a place for clean breaths" was measured, and some centers were found to have actually exceeded the standard stipulated in the "Indoor Air Quality Control Act", or mold can be found with the naked eye. LG Hausys provided eco-friendly interior materials that acquired the Eco Label certification, such as "ZEA Nature Love flooring materials" and "wallcovering FIANCEE", to eleven regional children's centers in Gyeonggi-do, in order to improve their deteriorated indoor environment. Some 300 youths who use the centers received the benefit of living in a more pleasant and comfortable environment thanks to the environmental improvements carried out on this occasion.

#### Renovating Residences for the Socially-Underprivileged with the Ministry of Environment

We offer free assistance in renovating homes for socially-under privileged groups like low-income families, broken families, children suffering from environmental diseases, and people whose living conditions are often sub-par. We inspect their homes for hazardous factors that cause environmental diseases and, when necessary, install our eco-friendly wallcovering covering and flooring free of charge. Since 2015, the first year of this bold initiative, LG Hausys has installed eco-friendly wallcovering and flooring in around 1,200 households, markedly improving their indoor environments. For those suffering from atopic diseases, and other environmental diseases, we have provided free medical treatment in cooperation with the Environmental Health Center. Furthermore, LG Hausys, together with the government, has been a pioneer in improving the indoor environments of underprivileged social groups.

	-	
Workplace	Initiative	Description
Ulsan plant	One company, One village	Supported the events held in villages near the plant and purchased agricultural produce from these villages
	One company, One stream	Inspected the water quality of Hoeya River near the plant and conducted clean-ups along the river
	One company, One mountain	Cleaned up Daeun Mountain with Ulsan city and Ulju-gun
	LG happy day	Donated kimchi to local children's centers in Onyang and the elderly living alone with funds raised by employees at year-end events
Cheongju plant	One company, One military	Formed a partnership with the 37th Infantry Division of the ROK Army, assisted with their military camp environment improvement efforts, donated appreciation gifts and funds
	One company, One village	Supporting the events of villages near the Cheongju plant
	Support for children from low-income families	Provided minimum living expenses to children from lowincome families in alignment with Child Fund Korea
	Happy coal briquette delivery campaign	Delivered briquettes to seniors living alone with Chungbuk Briquette Bank

### Information Security

# Strengthening the Information Security Management System

Recognizing that information related to sustainable company growth and customer service provision is an important asset, LG Hausys has formed a company-wide organization and established a management system encompassing policy, training and diagnosis in order to protect such important asset.

#### Operating the Information Security Consultative Group

Our overall company-wide information security activities are managed by the Chief Information Security Officer (CISO), who is appointed in accordance with the Information and Communication Network Act. In addition, we operate the information security consultative group, which is composed of the information security team at the headquarters, the persons in charge of security at major workplaces (Ulsan, Cheongju, and R&D centers), a team dedicated to information security, and the person in charge in the business unit. The consultative group holds an information security council more than once a year to review and make decisions on major company-wide security policies, companywide security issues, and other matters that may require improvement.

# Raising the Security Level by Checking the Workplace at Home and Abroad

The information security of our domestic workplaces and overseas corporations is diagnosed in the areas of management, technology, physical, and personal information. The security level is improved gradually by detecting potential vulnerabilities during the diagnosis. Our overseas corporations make continuous security improvements by responding to the European GDPR (General Data Protection Regulations), analyzing the enforcement ordinance of the Network Safety Act in China, and establishing response plans. The Ulsan and Cheongju plants have established and implemented security reinforcement measures, including regular checks of the production network, in order to respond to external attacks.

#### Raising Employees' Awareness of Security Issues

The company-wide security policy and guidelines are revised once a year and important changes are posted so that employees can familiarize themselves with the relevant information. In addition, employees are required to undergo information security training every year. Efforts are made to raise employees' awareness of security by continuously informing them of security incidents, such as cases of ransomware and phishing using malicious mail, and of security measures and countermeasures.

#### Information Security Prevention Activities

Security threats are monitored in real time to prevent accidents such as service shutdowns, leaks of important, confidential or personal information, and the alteration and/or destruction of information systems. Also, we make continuous efforts to enhance security and operate a range of security solutions so that we can identify vulnerabilities in advance and respond to external threats and accidents.

#### Security Vulnerability Inspection Activities

We consider security from the perspective of function and data management in the design phase when developing a new system or updating an existing one, using the security deliberation and review process, and operate processes designed to minimize vulnerabilities. Before opening a system, the vulnerability of the server that has implemented a given application and source code security are checked, and a hacking simulation is performed, in order to detect parts that are vulnerable to external attack in advance and take preventive actions.

#### Applying Security Design According to Environmental Changes

LG Hausys adopts new technologies, including the cloud, in order to provide better services in line with IT technology changes in the digital transformation environment. LG Hausys protects its customers' personal information and other important data and provides secure and stable services by designing the security architecture so as to maintain and raise the level of security in the changed environment, and by applying and monitoring its security solutions for network security and enhanced access control to support the architectural design.

#### **Customer Information Protection Activities**

LG Hausys performs information security activities continuously in accordance with the laws related to personal information at home and abroad, including the Personal Information Protection Act, the Information and Communication Network Act, the European GDPR, and the Network Safety Act in China. In particular, LG Hausys renews the ISM (Information Security Management System) certification every year, and does its best to protect customers' personal information by diagnosing information security on a regular basis.





# APPENDIX

Sustainable Management and Data Current State of ESH Quality Certification & Affiliates Distribution of Major Economic Value Significance of Comprehensive Analysis Independent Assurance Statement GRI Standards Index UN Global Compact



# Sustainable Management and Data

### **Financial Data**

#### Consolidated Profit and Loss Statement

			(Unit : KRW 1 million)
Item	2017	2018	2019
Sales	3,209,405	3,266,496	3,186,807
Cost of sales	2,413,364	2,535,790	2,440,053
Gross profit	796,041	730,706	746,754
Selling & administrative expenses	650,637	660,335	677,977
Operating income	145,404	70,371	68,777
Non-operating profit & loss	∆ 38,843	∆ 87,982	∆ 54,996
Continuing business profit before tax	106,561	∆ 17,611	13,781
Corporate tax	23,543	∆ 1,269	∆ 1,019
Profit & loss from discontinued operation	∆ 15,163	∆ 36,785	∆ 3,235
Net income	67,855	∆ 53,127	11,565

\* Included and reflected the business discontinued in 2017 (Vacuum insulation panel)

#### **Consolidated Financial Statement**

(Unit : KRW 1 million)

Item	2017	2018	2019
Current assets	1,170,284	1,080,876	1,022,430
Notes and accounts receivable	665,121	565,567	511,719
Inventories	288,735	298,354	291,161
Non-current assets	1,412,147	1,428,838	1,543,149
Tangible assets	1,230,726	1,277,509	1,339,828
Assets held for sale	0	2,030	2,134
Total assets	2,582,431	2,509,714	2,565,579
Current liabilities	804,673	736,764	974,505
Non-current liabilities	792,178	856,203	675,096
Total liabilities	1,596,851	1,592,967	1,649,601
Paid-in capital	50,000	50,000	50,000
Capital surplus	616,466	616,466	616,466
Other capital items	△ 8,189	∆ 8,189	∆ 16,500
Aggregate of other universal profit & loss	∆ 22,578	∆ 18,926	∆19,348
Retained earnings	349,881	277,396	283,582
Non-controlling interest	0	0	1,778
Total equity	985,580	916,747	915,978
Total equity and liabilities	2,582,431	2,509,714	2,565,579

\* Figures with  $\Delta$  sign indicates (-) number \* Revised by reflecting the conversion to a liquid asset due to the reclassification of the account for assets for sales in 2018.

IG Hausys business report 2019 on the electric public announcement system (KOR.)

### **Employees**

Category		Unit	2017	2018	2019
Total employees		No. of persons	4,494	4,477	4,484
Overseas employees <sup>1)</sup>		No. of persons	1,297	1,234	1,233
Domestic employees <sup>2)</sup>		No. of persons	3,197	3,243	3,251
Korea					
	Total	No. of persons	3,123	3,184	3,192
Regular	-Men	No. of persons	2,708	2,771	2,777
Total employees         Diverseas employees 1)         Domestic employees 2)         Korea         Regular         Contract based         By gender         By age         By job level         By job category         By region         People with disability         Ven of national merit         New recruits         Staff turnover 4)         &&D/Design center 5)         Percentage of female managers         Vlaternal leave         Equal remuneration <sup>7</sup> )         Falent Development         Hours of training per	-Women	No. of persons	415	413	415
	Total		74	59	59
Contract based	-Men		63	44	52
	-Women		11	15	7
	Men		2,771	2.815	2,829
By gender	Women		426	428	422
	20s		653	649	622
	30s		803	836	883
By age	40s		1,009	1.016	990
Total employees         No. of persons           Overseas employees <sup>1)</sup> No. of persons           Domestic employees <sup>2)</sup> No. of persons           Korea         Total         No. of persons           Regular         Total         No. of persons           -Men         No. of persons           -Women         No. of persons           -Women         No. of persons           -Men         No. of persons           -Women         No. of persons           -Women         No. of persons           -Women         No. of persons           Women         No. of persons           By gender         Men         No. of persons           20s         No. of persons	732		756		
		· · ·	23		28
By job level			3,174		3,223
			2,175	4,477 1,234 3,243 3,184 2,771 413 59 44 15 2,815 428 649	2,254
By job category			1,022		997
			756		865
			574		663
By region	57		1,081		1,020
			786		703
People with disability			45		45
			85		83
			229		196
			87		80
			350		338
5	)		8.9		9.4
Percentage of remate managers			32		38
			93		97
Maternal leave					
			90	100	100
	Executive level (base salary only)		86.8		94.1
Equal remuneration <sup>7)</sup>	Manager level (base salary only)	-	87.1		88.6
By region People with disability Men of national merit New recruits Staff turnover <sup>4)</sup> R&D/Design center <sup>5)</sup> Percentage of female managers Maternal leave Equal remuneration <sup>7)</sup> Talent Development Hours of training per employee (By gender) Hours of training per employee (By job category) The subject of regular			85.7	86.6	87.4
	Non-manager level	%	92.6	94.0	97.1
Talent Development					
			33.6		34.6
employee (By gender)	Women	Hour	36.5	33.9	27.3
Hours of training per	Office workers	Hour	39.3	45.7	42.8
	Technicians	Hour	22.5	16.1	13.1
		No. of persons	2,105	2,131	2,164
	The rate of employees	%	99.6	99.3	99.2
		No. of persons	15	18	17
An overseas corporation	Overseas postings	rio. or persons			
An overseas corporation Current status of overseas			456	505	569
An overseas corporation Current status of overseas employment (United States)	Local employees	No. of persons	456 34		569 22
An overseas corporation Current status of overseas employment (United States) Current status of overseas	Local employees Overseas postings	No. of persons No. of persons		32	
An overseas corporation Current status of overseas employment (United States) Current status of overseas	Local employees Overseas postings Local employees Number of locally hired employees	No. of persons No. of persons No. of persons	34	32 604	22
An overseas corporation Current status of overseas employment (United States) Current status of overseas employment (China) Ratio of senior-level employees	Local employees Overseas postings Local employees Number of locally hired employees Number of senior-level employees among	No. of personsNo. of personsNo. of personsNo. of persons	34 731	32 604 1,109	22 527

Refers to locally recruited employees. (Overseas postings from Korea are excluded.) / 2) Includes overseas postings and employees of subsidiary companies.
 TOSTEM Ochang Plant is included in others / 4) Voluntary resignation and advisor office transfers, PSAA & Production Technology Center transfers are excluded
 Central research institute, design center, research project and design project of the business unit. / 6) Employees above the Professional (formerly Manager) level
 Ratio of basic salary and remuneration of women to men (office workers) / 8) Candidate: Domestic employees excluding executives and VP, professional technical workers: There is no regular performance evaluation / 9) Professional (formerly Manager) or higher-level employees

#### Environment

Category		Unit	2017	2018	2019
	PVC	ton	144,119	130,074	119,088
D	Calcium carbonate	ton	100,395	95,542	97,854
Raw materials	Plasticizer	ton	29,600	31,961	29,912
consumption	MMA	ton	24,302	20,995	19,816
	Sum of major raw materials consumption	ton	298,416	278,572	266,670
Design the local state	Consumption of recycled materials	ton	25,774	23,142	22,312
Recycled materials	Consumption ratio of recycled materials	%	8.64	8.31	8.37
Energy & Greenhouse Gas	1)				
	LNG	TJ	1017.7	1,029.0	973.8
	Diesel	LΤ	16.1	27.2	23.9
Major energy	Gasoline	LT	2.4	2.3	2.0
consumption	Electricity	LT	1,805.6	1,806.4	1,704.1
	Steam	LT	47.8	45.7	2.0
	Reduction in energy use	LΤ	275	298	239
Annual saving achieved	Reduction in GHG emissions	tCO2eq	9,655	7,090	7,140
5	Energy savings made	KRW 1 million	2,390	1,755	1,883
	Direct energy	τJ	1,036.3	1,058.5	999.
Energy	Indirect energy	TJ	1,853.4	1,852.1	1,706.1
consumption	Total energy consumption	TJ	2,889.8	2,910.6	2,705.8
	Scope 1	tCO <sub>2</sub> eq	65,459	70,314	62,312
	Scope 2	tCO <sub>2</sub> eq	89,399	88,939	82,839
GHG emissions	Scope 2 Scope 2 Scope 2	tCO <sub>2</sub> eq	154,859	159,253	145,150
	Scope 3	tCO <sub>2</sub> eq	118,387	105,911	104,73
	Intensity-based emissions	tCO <sub>2</sub> eq/ton	0.41	0.44	0.3
Environmental Investment		CO2eq/ton	0.41	0.11	0.5
Environmental investment		KRW 1 million	4,865	5,617	7,138
Environmental Pollutants	anount		4,005	5,017	7,130
Water consumption		ton	648,818	601,004	532,31
Water consumption	Waste water discharge	m <sup>3</sup>	22,869	17,396	15,973
Discharge of water	BOD	ton	0.28	0.21	0.0!
Discharge of water pollutants	COD		0.20	0.41	0.03
pollucarics	SS	ton	0.33	0.17	0.2
		ton	56.94	48.60	45.4
	NOx	ton	50.94	40.00	43.4.
Emission of air	SOx	ton	-	-	20.00
pollutants	Dust	ton	29.64	35.62	30.98
	Volatile Organic Compound (VOC)	ton	233.47	165.50	171.82
	Hazardous Air Pollutants (HAP)	ton	14.34	15.06	23.90
Intensity-based consumpt (consumption/production		ton/ton	0.0345	0.0549	0.0713
Discharge of Waste					
Discharge of Waste	Recycled	ton	32,361	30,723	32,625
	Converted to fertilizer	ton	101	179	16
General waste	Incinerated	ton	3,294	4,275	3,190
General waste	Buried	ton	1,415	2,339	1,02
	Total		37,172	37,516	36,998
	Reused	ton	-	57,510	50,550
		ton	437	471	65
Designated as a sta	Recycled	ton		471	
Designated waste	Incinerated	ton	443		40
	Buried	ton	18	3	1.06
	Total	ton	898	938	1,06
Total wasted discharged Total waste recycled		ton	38,049 32,798	38,454 31,279	38,064 33,280

1) Includes non-manufacturing workplaces in Korea, and reflects the results of the conformity assessment of the Emissions Trading Scheme and the transfer of shared PSAA facilities to LG Chem in 2019.

### **Health Safety**

Category		Unit	2017	2018	2019
Accident Rate					
	Injury occurrence rate (Injury frequency rate) <sup>1)</sup>	-	1.56	3.07	2.64
C	Occurrence rate of work related illness <sup>2)</sup>	-	0.12	0.31	0.18
Employees	Absentee Rate (AR) <sup>3)</sup>	%	0.02	0.01	0.01
Lost-Time Injuries Frequency Rate (LTIFR) <sup>4)</sup> Work-related deaths		-	2.46	5.27	2.64
		No. of persons	-	-	-
	No. of accidents	No. of cases	6	2	2
Number of	Injury Occurrence Rate	-	5.96	1.74	1.51
indirect employees	Lost-Time Injuries Frequency Rate (LTIFR)	-	6.96	3.48	3.02
Work-related deaths		No. of persons	-	-	-
Rate of persons with symptoms		%	30.64	30.17	31.64
Number of employees represented by joint labor-management health and safety committee		No. of persons	18	20	20

\*\* Based on domestic workplaces in terms of environment, health, and safety data (excluding energy use and greenhouse gas emissions)

1) Injury frequency rate: (no. of accidents × 1,000,000) / total number of working hours in a year

2) Severity rate: (no of working days lost × 1,000) / total number of working hours in a year

3) Absentee rate : (no of absent days at work × 100) / total number of working hours in a year

4) LTIFR (Lost Time Injury Frequency Rate): The number of works lost more than 1 day among the total number of working hours of all workers

(number of works lost more than 1 day x 1,000,000)/total no. of working hours/year)

# Current State of ESH Quality Certification

(As of the end of Dec. 2019)

	Name of corporation /		Certifications				
Country	Country workplace	Location	Environmental management	Safety and health	Quality assurance		
Korea	Ulsan Plant	Ulsan	ISO14001	OHSAS18001, KOSHA18001	ISO 9001, IATF16949		
	Cheongju Plant	Cheongju	ISO14001	OHSAS18001, KOSHA18001	ISO 9001		
China	LG Hausys Tianjin Co., Ltd.	Tianjin	ISO14001	-	ISO 9001, IATF16949		
China	LG Hausys (Wuxi) Co., Ltd.	Wuxi	-	OHSAS18001	ISO 9001		
USA	LG Hausys America, Inc.	Atlanta	ISO14001	OHSAS18001	ISO 9001, IATF16949		
Europe	c2i s.r.o.	Slovakia	ISO14001	-	ISO 9001, IATF16949		

\* ISO 9001: The international standards for a quality management system published and organized by the International Organization for Standardization. IATF 16949 (International Automotive Task Force): The international standards for quality management in the automotive industry.

# Affiliates

### Status of association membership

The Green Company Council	Korea Industrial Safety Association	Korea Chamber of Commerce and Industry
Korea Employers Federation	The Polymer Society of Korea	Fair Competition Federation
Korea Association for Exterior insulation (KAFE)	The Korean Society of Rheology	Korea Production Safety Association
Korea Specialty Contractors Association	SPE KOREA	Korea Vinyl Environmental Council
Korea Industrial Technology Association (KOITA)	The Korean Institute of Chemical Engineers	Korea Environmental Preservation Association

## Distribution of Major Economic Value



	Category	2017 <sup>2)</sup>	2018	2019
	Dividend per share (KRW) 1)	1,800	250	250
Shareholders and investors	Earnings per share (EPS)(KRW) 1)	6,796	∆ 5,327	1,154
	Total dividend (KRW 100 million)	180	25	25
	Wages (KRW 100 million)	3,043	2,922	3,330
Employees	Welfare benefits (KRW 100 million)	658	687	679
	Severance payments (KRW 100 million)	243	226	223
Government	Corporation tax, other taxes, and public utility charges (KRW 100 million)	402	174	188
Suppliers	Purchase of goods and services (KRW 100 million)	22,262	23,192	21,284
Local community	Investment in local communities (KRW 100 million)	22	15	15

1) Based on common stock.

2) Vacuum insulation projects were suspended in 2018 and its profit and loss were not included.

3) Figures with △ sign indicates (-) number

## Significance of Comprehensive Analysis

#### The Decision on Report Contents for Stakeholders

LG Hausys defines the shareholder, investor, employee, customer, affiliates and local community as stakeholders in accordance with the role, influence and responsibility for an individual or a person in an organization affecting our business management. The 2020 sustainability report contains key issues which affected the decision making of key stakeholders for the year 2019.



#### The Process to Finalizing Key Issues

LG Hausys underwent the comprehensive assessment process to finalize the essential key issues based on stakeholder concerns for the 2020 report as we did for the 2019 report. We narrowed it down to 15 key issues which were discussed for sustainable management in 2019 by researching the international standards of sustainable management, reports from the leading company of sustainable management and media.

#### Step 1 : Create an Issue Pool

#### Create an Issue Pool (15 Issues in 3 Fields)



#### Matters to Report by Major Interest of each Stakeholder

#### Shareholders and investors

- Transparent disclosure of financial/non-financial information
- Fair compensation for investment activities
- --- page 38-39 / 53 → Governance, financial performance

#### Employees

- Job stability, improvement of labor-management relations and communication
- Providing a safe work environment that promotes employees' growth  $\rightarrow$  Creating a safe workplace environment, competent --- page 24-27 / 42-45 person management

#### Suppliers

- Establishment of ethical business connections
- Support systems that ensure a win-win relationship with the enterprise  $\rightarrow$  Joint growth --- page 28-31

#### Local communities

- Communication with the company by participating in community activities --- page 48-50

→ Social contribution

#### Customers

- Communication with company and markets
- Maximizing satisfaction through products and services  $\rightarrow$  Development of products that satisfy the customers
- Upgrading product and service quality --- page 18-23 / 32-35

#### \* Sustainability management research

[International standard review] Check the latest sustainability management issues, such as ISO 26000, GRI Standard, and DJSI.

[Global benchmarking] Benchmark the latest sustainability reports of advanced companies from domestic or overseas leading companies and similar businesses.

[Media research] Analyze major issues selected from the viewpoint of the media, among articles related to LG Hausys and reported in 2019.

Key stakeholder survey] Utilize the results of a survey of internal/external stakeholders to obtain feedback on last year's report and to screen the importance of newly identified issues (customers, suppliers, sustainability evaluation researchers, employees, etc.)

#### Step 2 : Materiality Assessment

In addition, We surveyed our stakeholders to listen to and understand their perspective on the current business issues and their impact. We surveyed the internal and external stakeholders such as the employee, customer, affiliates, workers in the same industry and the sustainability management professionals after asking and receiving the agreement of each department from the 12th to the 18th of February in 2020. 547 stakeholders participated in the survey and LG Hausys collected the feedback on the significance of the 15 issues and management level of LG Hausys.

#### The Results of the Survey

Rank	Materiality issues	5 Impact										
1	Development of products that satisfy the customers	ำ 4.5								Developm	ent of prod	ucts
2	Creating a Safe Workplace Environment										y the custo	
3	Upgrading product and service quality	4						Pr	omotina		0	
4	Promoting mutual prosperity and win-win growth with suppliers	3.5						mutual pi	5	9 6	Upgradi product service	and
5	R&D capacity building								wth with suppliers—			a Safe
6	Business performance and strategy	3									lace Enviro	onment 4
7	Developing eco-friendly products	2.5							R&E	capacity l	ouilding 5	
8	Responding to climate change	2.5										
9	Social contribution activities	2				•						
10	Controlling environmental pollutants in the workplace											
11	Respecting the human rights and labor rights of employees	1.5										-
12	Ethical management	1										
13	Financial risk management											
14	Developing employees' capabilitiesv	0.5		• •								
15	Controlling the use of resources	0										
		0	0 0.	5 1	1.	5 2	2	2.5	3 3.	.5 4		5 5 Relevance

#### Step 3: Confirming the Key Issues and Reporting Topics

Five key issues were selected and included in the report based on the results of the importance assessment, which considers the importance of issues identified through research, the business interests of internal and external stakeholders, and the business impact on each issue.

GRI 417-2 Marketing and labeling	GRI 403-1, 403-2 Industrial health and safety	GRI 308-1, 414-2 Social and environment evaluation of supply chain	GRI 416-1 Customer health and safety	
Development of products that satisfy the customers, R&D capacity building	Creating a safe workplace environment	Win-win growth with suppliers	Upgrading product and service quality	
18-23 page	24-27 page	28-31 page	32~35 page	

LG Hausys will continue to establish sustainable management by communicating with stakeholders and identifying key concerns systematically.

### Independent Assurance Statement

#### To: LG Hausys Stakeholders

Pursuant to the request for third-party assessment by LG Hausys ("Client") ("assessment service"), Korea Productivity Center ("Assessor") hereby submits the third-party assurance statement on its '2020 Sustainability Management Report ("Report").

#### **Responsibility and Independence**

The information and opinions, described in the Report, were directly written by the Client. The Assessor, the independent assessment institution, was not involved in the writing of the Report, and shall only be responsible for maintaining an objective attitude in its assessment service for assessing the prior written report. The Assessor has no interests in the Client that could hamper the independence of its assessment service.

#### Assessment Criteria and Method

We carried out the assessment in accordance with Type 1 and the moderate level of assurance based on AA1000 Assurance Standard (AA1000AS, 2008) with 2018 Addendum and applied the Type 2 for the specific indicators that require reliability verification of information collection processes such as Water usage, Waste management, Lost time injuries frequency rate (LTIFR), and Industrial accident rate. Furthermore, the Assessor reviewed whether the Client complied with the four principles of inclusivity, materiality, responsiveness, and impact presented by AA1000AP (2018). Based on the four-principle composition method <sup>1</sup> we carried out the assessment service. On the basis of documents and information presented by the Client and in the field interviews, we checked all indicators and information specified in the Report to confirm their balance, comparability, accuracy, timeliness, clarity, and reliability.

The assessment service was carried out using the following method.

- We confirmed whether the Report met the requirements of the core 'in accordance' criteria<sup>2</sup> under the GRI Standards.
- We confirmed whether the Report complied with the principle of determining the report content and quality presented by the GRI Standards.
- We confirmed whether the Report properly dealt with the key topics for the Client and its stakeholders.
- We confirmed the grounds of major data and information through field assessment. We also confirmed the reported indicator processes and system through interviewing relevant staff.
- We checked the suitability of the contents described in the Report and the errors of expression therein by comparing it to other sources.

#### Assessment Results

We confirmed that the Report met LG Hausys' sustainable management activities and performance faithfully and fairly. In addition, we confirmed that the Client met the requirements of the core 'in accordance' criteria (core option) of the GRI Standards.

We confirmed that the written Universal Disclosures met the requirements of the core option of the GRI Standards and that the written Topicspecific Standards disclosed the following material topics according to the materiality evaluation results.

Core Issues	Material Topic	GRI Disclosures	
Issue 1 Development of products that satisfy the customers	Marketing and labeling	417-2	
Issue 2 Creating a safe workplace environment	Industrial health and safety	403-1, 403-2	
Issue 3 Win-win growth with suppliers	Social and environment evaluation of supply chain	308-1, 414-2	
Issue 4 Upgrading product and service quality	Customer health and safety	416-1	

1. Composition Method (Format) : AA1000AP (2018) presents the four principles each (inclusivity, materiality, responsiveness, and impact) according to Principle Statement, Key Definitions, Discussion, and Required Adherence Criteria.

2. GRI 'In accordance' criteria: The GRI Standards divides the GRI report 'in accordance' criteria into 'core' and comprehensive' criteria. The core 'in accordance' criteria can be met by reporting part of general disclosures, the management approach (MA) of all identified aspects (Material Topics), and special disclosures of one or more topics.

Opinions with regards to the principles presented by AA1000AP (2018) are made below;

#### Inclusivity: Stakeholders' Engagement

The Client defines the five categories of its major stakeholders as shareholders/investors, suppliers, customers, communities, and employees and engages with them through the communication channel of each group. We confirmed that the Client reflects their opinions and their major interests in its management policies.

#### Materiality: Selection and Report of Major Issues

We confirmed that the Client organizes its sustainability management issues with 15 items, including the international standards for sustainability management GRI Standards, ISO 26000, DJSI, to issues derived from media analysis, benchmarking of the same industries, etc. The Client identified five main issues that are important to be managed by LG Hausys and we confirmed that these issues were reflected in each page of the Report in a balanced manner.

#### Responsiveness: The Organization's Response to Issues

We confirmed that the Client identifies major expectations that may impact the performance of stakeholders so that they conduct activities in response to the identified issues, and that the corresponding contents were properly described in the Report. In particular, the Client clearly discloses its activities by issue through its approach to important issues, performance, and mid-to-long term goals.

#### Impact: Consideration of the Organization' Impacts on Society

Considering the organization's impacts on the society, the Client sets boundaries on the impacts of major issues. We confirmed that the Client focuses on the environmental and safety impacts of the product and social issues and discloses its product and development activities to minimize negative effects in the Report.

With respect to LG Hausys' other indirect greenhouse gas emissions (Scope 3) for 2019, the Assessor confirmed the waste that was generated by the products and services purchased through its Spread Sheet (MS-Excel), other indirect greenhouse gas emissions estimation tools, by its downstream leased assets, and the process of its upstream and downstream transportation and logistics operation. We also confirmed the emissions generated by its employees' commuting. As part of the assessment process, we identified the following and found nothing that could seriously impair the estimation of emissions.

- LG Hausys' estimation tool for other indirect greenhouse gas emissions: Calculation formula, emission factor
- Interviews with relevant staffers regarding information on the other indirect greenhouse emissions/data gathering process of LG Hausys.

#### Limitations

- The scope and boundary of the assessment service follow the report's temporal, regional, and value chain reporting boundary. Accordingly, the scope of the assessment service fully met all domestic workplaces criteria and data of subsidiaries and overseas corporation are included. The data on the supply chain was not included in the scope of assessment unless otherwise noted.
- In regards to the environmental and social performance data, in the case of actual values, the reliability of data collection and calculation process, as well as the accuracy of the collected baseline data were confirmed. Additionally, in the case of the calculated values, the rationality of the assumption and calculation process was confirmed. For financial data, consistency was confirmed with the financial statements audited by external auditors, disclosure data, and the like.
- We carried out the field assessment targeting the HQ of LG Hausys based in Seoul. We also indicated that if additional assessment procedures are conducted in the future, results may differ.





June 2020 Noh Kyu-sung, KPC Chairman Cheong Seung-tae, Center Head Kim Bo-bi, Research Fellow Yoo Seung-heon, Research Fellow

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# **GRI Standards Index**

### **General Disclosures**

Classification	Index	Description	Page	Note
	102-1	Report the name of the organization		
	102-2	Report the primary brands, products, and services	7.0	
	102-3	Report the location of the organization's headquarters	7-9	
	102-4	Report the region where the organization operates		
	102-5	Report the nature of ownership and legal form	38	
	102-6	Report the markets served	7	
Organizational	102-7	Report the scale of the organization	7	
Profile	102-8	Report information on employees and workers	54	
	102-9	Describe the organization's supply chain	28-31	
	102-10	Report any significant changes in the supply chain	-	No significant chang in organization and supply chain
	102-11	Report prevention principles and approach	14	
	102-12	List external initiatives	62-64	
	101-13	List memberships of associations	56	
Strategy	102-14	Provide a statement from the most senior decision-maker of the organization	4-5	
	102-15	Provide a description of key impacts, risks and opportunities	10-12	
Ethics and Integrity	102-16	Describe the organization's values, principles, standards and norms of behavior	40-41	
Governance	102-18	Report the governance structure	38-39	
10	102-40	Provide a list of stakeholder groups engaged by the organization	58-59	
	102-41	Report percentage of total employees covered by collective bargaining agreements	43	
Stakeholder Engagement	102-42	Report the basis for identification and selection of stakeholders with whom to engage		
	102-43	Report the organization's approach to stakeholder engagement	58-59	
	102-44	Report key topics and concerns that have been raised through stake- holder engagement		
	102-45	List all entities (subsidiaries and joint ventures) included in the organiza- tion's consolidated financial statements	-	Business Report
	102-46	Define report content and topic Boundaries	58-59	
	102-47	Report list of material topics	50-55	
	102-48	Report any restatements of information	-	N/A
	102-49	Report changes in reporting		
Reporting	102-50	Report the reporting period for information provided		
Practice	102-51	Report the reporting date of most recent previous report	2-3	
	102-52	Report the reporting cycle		
	102-53	Provide the contact point for questions regarding the report or its contents		
	102-54	Provide reporting methods in accordance with the GRI Standards	62 62	
	102-55	GRI Index	62-63	
	102-56	External assurance	60-61	
	103-1	Explanation of the material topic and its boundary	58-59	
Management Approach	103-2	The management approach and its components	10 2/ 20 22	
- pp. cooli	103-3	Evaluation of the management approach	18, 24, 28, 32	

### Topic-specific Disclosures

Classification	Index	Description	Page	Note
GRI 200 Economy				
	201-1	Direct economic value generated and distributed	57	
Economic Performance	201-2	Financial implications and other risks and opportunities for the organization's activities due to climate change	47	
	201-3	Coverage of the organization's defined benefit plan obligations	43	
Market Presence	202-2	Proportion of senior management hired from the local community	54	
GRI 300 Environment				
Materials	301-1	Weight and volume of used raw materials		
Macchao	302-1	Energy consumption within the organization		
-	302-2	Energy consumption outside of the organization	44	
Energy	302-3	Energy intensity		
Lifergy	302-4	Reduction of energy consumption		
	302-4	Reduction of energy requirements of products and services	22-23	
			22-23	
Water	303-1 303-2	Water withdrawal by source		
vvalei	303-2	Water sources significantly affected by withdrawal of water Water recycled and reused		
-	305-1	Direct (Scope 1) GHG emissions		
-	305-2	Energy indirect (Scope 2) GHG emissions		
-	305-3	Other indirect (Scope 3) GHG emissions	55	
Emissions	305-4	GHG emissions intensity		
-	305-5	Reduction of GHG emissions		
	305-6	Emissions of ozone-depleting substances (ODS) Nitrogen oxides (NOX), sulfur oxides (SOX), and other		
	305-7	significant air emissions		
Effluents and Waste	306-2	Waste by type and disposal method		
Environmental Compliance	307-1	Non-compliance with environmental laws and regulations	-	Business Report
Supplier environmental- assessment	308-1	New suppliers that were screened using environmental criteria	31	
GRI 400 Society				
	401-1	New employee hires and employee turnover		
GRI 400 Society	401-3	Parental Leave	54	
	403-1	Percentage of workers represented by the labor-management joint health and safety committee		
Occupational Health and Safety	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	56	
-	403-4	Health and safety topics covered in formal agreements with trade unions	43	
	404-1	Average hours of training per year per employee	54	
Training and Education	404-2	Programs for upgrading employee skills and transition assistance programs	42-45	
	404-3	Ratio of employees receiving regular performance and career development reviews	54	
Diversity and Equal Opportunity	405-2	Ratio of basic salary and remuneration of women to men	54	
Supplier Social Assessment	413-1	Negative social impacts in the supply chain and actions taken	48-50	
Local Communities	414-2	Operations with local community engagement, impact assessments, and development programs	31	
Customer Health and Safety	416-1	Incidents of non-compliance concerning the health and safety impacts of products and services	32-35	
		Violations of the laws and regulations on compliance with product		

# UN Global Compact

Category	Principle	Report contents	Page	
	Principle 1 : Businesses should support and respect the protection of internationally proclaimed human rights.	LG Hausys has established the Global Human Rights and Labor Policy, which guarantees and respects the rights of human dignity, freedom, and happiness and	31, 42-23	
Human Rights	Principle 2 : Businesses should make sure that they are not complicit in human rights abuses.	has established and implemented CSR Code of Conduct for all supplier companies.		
	Principle 3 : Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.			
L'and and a start of the start	Principle 4 : Businesses should uphold the elimination of all forms of forced and compulsory labor.	In accordance with our code of conduct and hiring rules, we do not discriminate on the basis of gender, age, and religion when we hire new employees. We practice	42-44	
Labour Standards	Principle 5 : Businesses should uphold the effective abolition of child labor.	equality of employment and respect for human rights and apply the same standards when compensating our employees for their conjugation		
	Principle 6 : Businesses should uphold the elimination of discrimination in respect of employment and occupation.	employees for their services.		
0 %	Principle 7 : Businesses should support a precautionary approach to environmental challenges.	We are implementing environmental management that minimizes environmental impact throughout the entire	46-47	
Environment	Principle 8 : Businesses should undertake initiatives to promote greater environmental responsibility.	product life cycle. In particular, we are striving to reduce energy consumption and GHG emissions through process innovation and operational optimization. We		
	Principle 9 : Businesses should encourage the development and diffusion of environmentally friendly technologies.	are also expanding the development of eco-friendly products through energy-efficient products.		
52 Anti-Corruption	Principle 10 : Businesses should work against corruption in all its forms, including extortion and bribery.	Recognizing that Jeong-Do Management is a prerequisite for corporate survival, we conduct ethical management education and operate an ethics violation reporting system. In addition, in order to establish fair subcontracting practices, we have included rules for fair subcontracting in our procurement regulations.	40-41	

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