

2019  
Hyosung Advanced Materials  
**Sustainability Report**

# ABOUT THIS REPORT

Hyosung Advanced Materials Co., Ltd. (herein after "Hyosung Advanced Materials" or "HAMC") published a Sustainability Management Report in 2012 and 2016 as a business unit (Industrial Material Performance Group) of Hyosung Corp. under the name “Hyosung Sustainability Report”.

This report (2019 Hyosung Advanced Materials Sustainability Report) was published exclusively by HAMC. It is the first sustainability report published as an independent corporation since our spinoff in 2018. We plan to share, transparently disclose the company's sustainable management activities and achievements across the economic, social, and environmental sectors, and gather opinions from various stakeholders.

## Reporting Principles

This report was written in accordance with the core option of 'GRI Standards of the Global Reporting Initiative(GRI)'. In addition, global sustainability initiatives and indicators such as Ecovadis, ISO26000, and UN SDGs have been considered and further reflected so that we meet the interests and criteria of various stakeholders.

## Reporting Period and Scope

The reporting period for this report is from January 1, 2019 to December 31, 2019. When it comes to provision of trend data, time range of the overseas subsidiaries has been set to include the recent three years (2017~2019), but some data were provided for two years due to lack of data in 2017 after the spin-off in 2018. In case of qualitative activities and achievements, the report may include data up until June 2020. All financial data is based on the criteria of K-IFRS (Korean International Financial Reporting Standards). The scope of this report includes domestic and overseas business sites(Vietnam and China) of HAMC. For the matters that require attention in regard to the scope of this report, a separate explanation is provided at the bottom of each content to avoid confusion. In addition, some of the data reported in the previous report has been changed due to the re-adjustments after spin-off. A separate explanation for calculation rationale is provided at the bottom of such contents to avoid confusion.

## Verification

In order to ensure the credibility and fairness of this report, Networks-Y has verified this report in accordance with the AA1000AS(2008) principles (inclusiveness, importance, responsiveness) as well as with the verification procedures based on ISAE 3000 data and process reliability principles. The results of the third party verification can be found on page 53 of the report.

## Inquiries

If you have any questions or comments in regard to this report, please contact us at the following :

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This is our **Communication on Progress** in implementing the Ten Principles of the **United Nations Global Compact** and supporting broader UN goals.

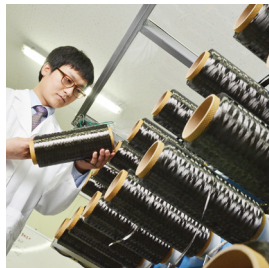
We welcome feedback on its contents.

## Glossary

Hyosung : Refers to the five companies that were formed as a result of the spinoff in June 2018 – one holding company(Hyosung Corp.) and 4 operating companies (HAMC, Hyosung Heavy Industries Co.,Ltd, Hyosung TNC Co.,Ltd, Hyosung Chemical Co.,Ltd)

PG : Performance Group  
PU : Performance Unit

# CONTENTS



## OVERVIEW

- 04 CEO Message
- 05 Company Overview
- 06 Sustainability Management System

## FOCUS ISSUES & BUSINESS CASES

- 08 Customer Satisfaction and Product Responsibility
- 10 Overseas Expansion into New Markets
- 11 Eco-products and Technology Development
- 13 Sustainable Supply Chain Management

## SUSTAINABILITY MANAGEMENT

- 17 Governance
- 19 Risk Management
- 21 Ethical Management
- 23 Human Resource Recruiting
- 24 Human Resource Training
- 26 Human Resource Management
- 28 Social Contribution
- 30 Green Management
- 34 Safety and Health
- 36 Research and Development
- 37 Information Security

## SUSTAINABILITY PERFORMANCE

- 40 Economic Performance
- 42 Social Performance
- 45 Environment & Safety Performance

## APPENDIX

- 50 Stakeholder Engagement
- 51 Materiality Assessment
- 52 Certifications Status and Association Membership Status By Business Site
- 53 Third Party Verification Statement
- 54 GRI Standards Index
- 56 UN SDGs



# CEO Message



We shall strive towards  
a new and sustainable future  
for Hyosung Advanced Materials

Dear respected stakeholders,

As the business environment becomes increasingly difficult due to rapid changes in industry, technology development, increased raw materials cost and competition, the instability of global economy is rising. Pandemic caused by COVID-19 in 2020 has made the companies suffer from double jeopardy. In particular, the automobile industry, which is classified as a major market for our main products, has worsened greatly in its business conditions. However, all the employees of Hyosung Advanced Materials(HAMC) continue to make full efforts to generate economic performance by securing quality competitiveness, diversifying uses, and developing next-generation products including eco-friendly products to enhance customer value.

Efforts to generate economic performance alone will not be sufficient for HAMC to lead the future. We understand and recognize our role and responsibility as a global citizen, and are committed to establish ourselves as a sustainable company by communicating more actively with stakeholders. Also, we are progressing our steps forward with various activities such as minimizing environmental impact including climate change, promoting safety & health, open recruitment, and HR management in order to leap forward to become a company that contributes to our society. Furthermore, we will continue to expand our long-term outcomes as we seek sustainability not just in economic performance, but also in environmental and social perspectives.

HAMC has been operating the Sustainability Steering Committee (SSC, formerly the "CSR Committe") composed of top management to monitor the direction of sustainable management activities as well as their processes and results. Through the SSC and the working-level CSR organization, we operate a sustainable management system that can systematically implement sustainable management activities. This year we have strengthened the sustainability governing structure even more by expanding the functions of the SSC. In 2020, we established four new specialized subcommittees under the wings of the SSC to strengthen the sustainability management system so that we can make the practical changes.

As the first independent sustainability report published by HAMC, this report contains our commitment to transparently communicate our sustainability initiatives, specific activities, and performance to stakeholders. We hope that this report and the reports to be published continuously will serve as a useful communication channel for various stakeholders to understand HAMC's effort and results for sustainability.

HAMC is grateful for all the interest and support from various stakeholders including shareholders, customers, business partners, communities, and our employees. Moving forward, HAMC will continue to strive to create values throughout its value chain and promote sustainability in the mobility industry so that we can coexist and grow with all stakeholders.

We will continue to do our best for the new future of HAMC, which will be created through continued and open communication with stakeholders.

Thank you.

CEO Jungmo Hwang

- OVERVIEW
  - CEO Message
  - Company Overview
  - Sustainability Management System
- FOCUS ISSUES & BUSINESS CASES
- SUSTAINABILITY MANAGEMENT
- SUSTAINABILITY PERFORMANCE
- APPENDIX



COMPANY  
OVERVIEW

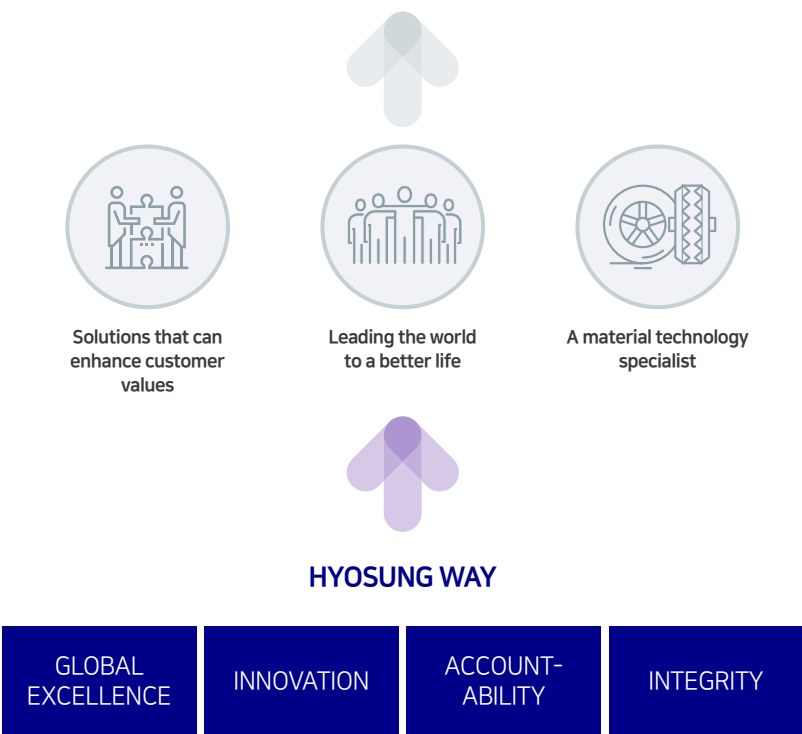
We offer solutions that enhance customer values

HAMC produces high-tenacity industrial yarn, textiles, and steel wire materials that are applied to various industries such as automobiles, civil engineering, architecture, agriculture, and military. HAMC continues to grow as a solution provider that enhance customer values through self-developed global no. 1 products such as tire cords, automotive seat belt yarn, airbag fabrics as well as new materials that will drive sustainable growth. In addition, HAMC will continue to find and implement tasks for fulfilling economic, social, and environmental responsibility as a member of corporate citizens, and strive for sustainable coexistence between businesses and the entire society.

VISION

Human **Safety** & **Comfort** Solution Provider

A specialist in material technology that can help people lead a better life by offering solutions that enhance customer values



ABOUT HYOSUNG ADVANCED MATERIALS CORPORATION

COMPANY NAME	Hyosung Advanced Materials
DATE OF ESTABLISHMENT	June 1, 2018
CEO	Jungmo Hwang
HEADQUARTER	119, Mapodaero (Gongdeokdong), Mapogu, Seoul, South Korea, 04144
BUSINESS AREA	Tire Reinforcements, Industrial Yarns (i.e. Automotive Seat Belts and Airbag), Automotive Carpets, Airbag Fabrics, Aramid, Carbon Fibers, etc.
GLOBAL NETWORKS	15 Manufacturing Plants in 10 countries in Asia, Europe, America, and Africa
TOTAL SALES	KRW 3,054 billion
OPERATING INCOME	KRW 158 billion
EMPLOYEES (2019)	1,038
CREDIT LEVEL	<div><div>A</div>Corporate Bond</div> <div><div>A2</div>Commercial Paper</div>

\* Financial information is based on consolidated financial statements as of December 31, 2019.

OVERVIEW

CEO Message

Company Overview

Sustainability Management System

FOCUS ISSUES & BUSINESS CASES

SUSTAINABILITY MANAGEMENT

SUSTAINABILITY PERFORMANCE

APPENDIX

# SUSTAINABILITY MANAGEMENT SYSTEM

## We promote consistent activities that are transparently disclosed to enhance sustainability

In accordance with the demand and expectation from various stakeholders, HAMC has been evolving into a sustainable company fulfilling its economic, social and environmental responsibilities. HAMC is operating Sustainability Steering Committee in which the top managements participate in decision-making. In particular, we established a new specialized sub-committee for sustainable management in each major field to strengthen the performance, strengthening the governance system so that improvement activities can be carried out under the leadership of the responsible executives/team leaders under the responsibility of the C-level executives.

### Sustainability Management Philosophy

HAMC strives to carry out its economic, social, and environmental responsibilities by establishing a CSE (Creating Social Eco-system) that can solve social issues and enhance the sustainability of mankind through close cooperation between businesses and civil society.



### Sustainability Management System

#### Sustainability Steering Committee

HAMC operates the Sustainability Steering Committee(SSC) composed of the company's top management to systematically and continuously encourage and ensure that sustainability is a consideration for employees' daily work. Sustainability activities and performance are regularly reported to the top management through this committee. As the final decision-making body for sustainability, the SSC discusses and decides major issues through voting. The SSC also discusses and decides the direction of the company's future sustainability management based on the current industry situation and trends, which are shared with the sub-committees so that activities to derive actual change takes place.

#### Specialized Sub-committees

The Sustainability Management Secretariat (previously the Sustainability Management TFT) and the four specialized sub-committees take lead in HAMC's sustainability activities on a corporate-wide level including overseas subsidiaries. The specialized sub-committees were established to ensure the planning and execution of sustainability management activities for each field. The sub-committees regularly review and monitor the activities, and major issues are reported to the SSC for review and guidance, and decision-making. The CEO appoints each committee's chairperson who is top management-level executive (i.e. C-level). And each committee is composed of members who are executives in charge of each sector. Together, they discuss and carefully review the agenda items for each committee sector upon their expertise. The Sustainability Management Secretariat(SMS) monitors the day-to-day activities of sustainability as well as serves as the secretary for each committee, and organizes the regular meetings held twice a year during which members check the progress of implementation goals as well as discuss solutions to the issues. For effective work undertaking and improvements, the specialized sub-committees have designated working-level employees who are usually team leaders to plan and execute the improvement tasks.



#### OVERVIEW

- CEO Message
- Company Overview
- Sustainability Management System

#### FOCUS ISSUES & BUSINESS CASES

#### SUSTAINABILITY MANAGEMENT

#### SUSTAINABILITY PERFORMANCE

#### APPENDIX

# Focus Issues & Business Cases

Customer Satisfaction and Product Responsibility	08
Overseas Expansion into New Markets	10
Eco-products and Technology Development	11
Sustainable Supply Chain Management	13



## MANAGEMENT APPROACH

# CUSTOMER SATISFACTION AND PRODUCT RESPONSIBILITY

## Background

Industrial materials are used in various sectors and require high quality to realize different properties depending on each application. Therefore, it is considered more important than any industry to discover customer needs, which is then followed by definition and realization of the optimal quality through constant communication with customers. Customers’ trust gained in this process is an essential element of the company’s sustainable growth.

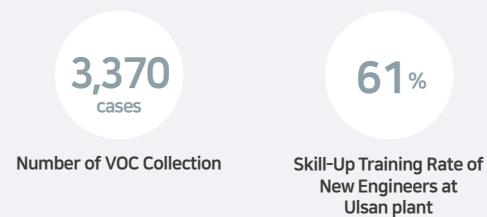
## Our approach

Hyosung Advanced Materials identifies customers’ needs through a customized VOC (Voice of Customer) management system to provide them optimized solutions. In addition, we are striving to provide the same level of quality at all manufacturing plants across the globe. As a result of pursuing customer satisfaction and product responsibility, we have enhanced competitiveness of our products and services. Also, improving our customer satisfaction is a foundation for our sustainable growth.

## Objective in 2020



## Achievement in 2019



UN SDGs Linkage

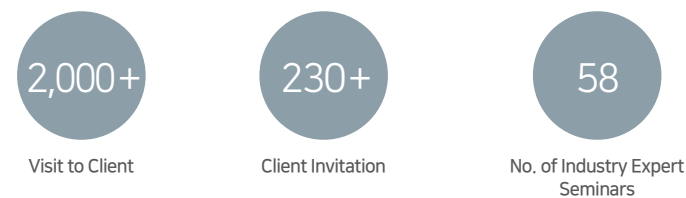


## Strengthening Quality Competitiveness Upon the Focus on Customers

### Customized VOC Management System

In order to provide optimal products and services, Hyosung Advanced Materials operates a VOC (Voice of Customer) management system which is tailored to each customer. In 2019, we collected over 3,000 VOC cases from which we identified customer feedback requiring improvements in a variety of business sectors including delivery, technology, quality and sustainability. We also collect customer needs and exchange technology though regular customer visits which take place once or twice per year. We use various channels such as academic conferences, product & technology exhibitions to gather VOC, and strive to provide the best solutions accordingly. Also expert seminars and trainings were hosted in response to customers' needs for technical knowledge. We seek to increase customer value through continuous VOC management.

#### ■ Performance of Customized VOC Management System in 2019



#### Business Cases – Customer Satisfaction and Product Responsibility

##### ✓ VOC Letter

Tire & Industrial Reinforcements PU is publishing VOC Letter, a company newsletter distributed to all departments including production, research, sales and planning to share VOC response cases and future tasks as well as market trends and issues. We respond to customers’ requests in timely manner by taking appropriate measures designed on VIU(Value in Use) analysis from various perspectives and sharing the information with all relevant departments.

##### ✓ Intensive Capability Building Program "Skill-up Training"

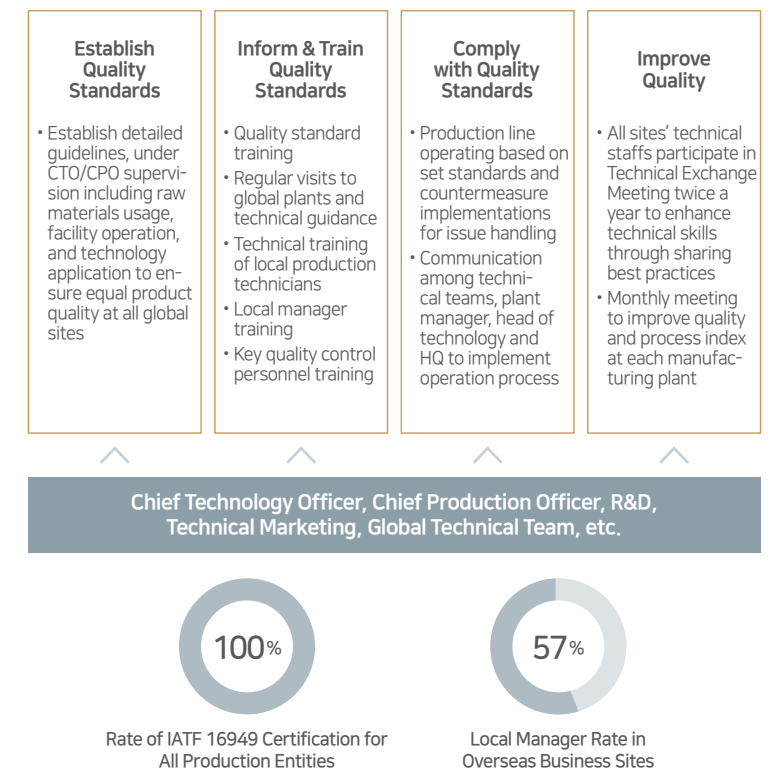
At Ulsan plant, the mother plant of HAMC, we are conducting Skill-up training for junior employees and other new employees. It aims to cultivate specialists through 4-month intensive training of professional skills and knowledge. The trainees learn a variety of business knowledges that are applicable to real tasks such as labor relations and sales as well as knowledges about production process directly related to quality.

##### ✓ Manufacturing Process Training for New Employees

Hyosung Advanced Materials requires all new employees to complete a 2-week-training of key manufacturing processes at Ulsan plant regardless of their position or major, so that all new employees acquire basic technological knowledge. (100% completion rate in 2019)

### Global Quality Management System

Hyosung Advanced Materials regards product quality as prerequisite to ‘customer value’ and operates its business based on global quality management system to ensure consistent quality required by customers in all manufacturing sites around the world. The new quality policy has been established and distributed to all manufacturing plants, emphasizing the importance of product quality consistency. Production quality standards for each process are established and managed, and production activities are carried out in accordance with the quality control process from the input of raw and subsidiary materials to the shipment of final products. Product quality management dedicated organization is operated under leadership of CTO(Chief Technology Officer) and CPO(Chief Production Officer). Cases and standards are shared with all production subsidiaries through monthly meetings and technology exchange meetings between factories, and continuous monitoring and feedback are carried out as well. Furthermore, not only we offer job rotation to improve common competency of employees and train next generation CTO and CPO through professional HR training program, but we also continuously promote global quality management system and our capacity for quality assurance by training local managers in overseas.



Customer-centric Management

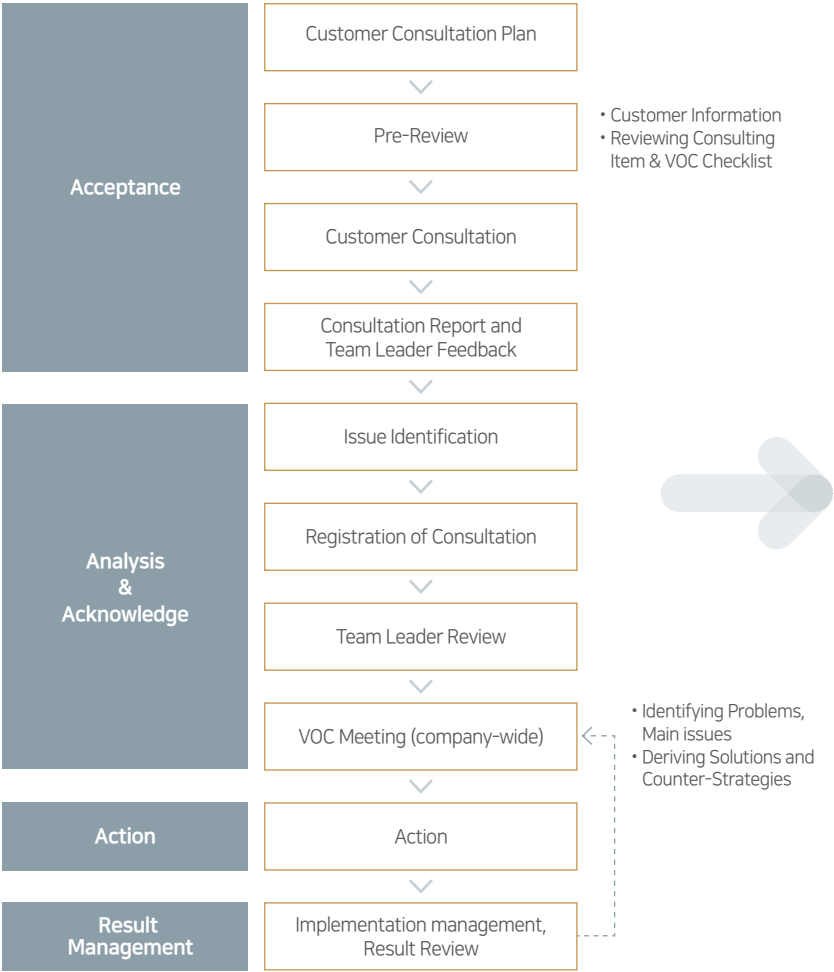
Carrying on C-Cube Activities

Hyosung Advanced Materials collects to Voice of Customer (VOC), Voice of Customer's Voice of Customer (VOCC), and Voice of Competitor (VOCO) to develop customer-oriented management that identifies the core needs of customers and establishes and implements business strategies based on this, and is promoting C-Cube activities as part of its objection. C-Cube activity follows a 5-step-process which include 'Acceptance', 'Analysis', 'Acknowledge', 'Action' and 'Result Management.' In particular, the 'Result Management' step is a process that analyzes the success and failure factor of the past activities to derive strategies that can increase the success rate in next time thus contributing to employees' continuous capability development in the related activities. In 2019, we set up a system to internalize and support C-Cube (VOC) activity process to reflect customers' voices at all departments such as sales, marketing, product and R&D. Throughout this process, customer-centric work environment has been created where all members of the organization listen to customers' voices and strive for customer satisfaction.

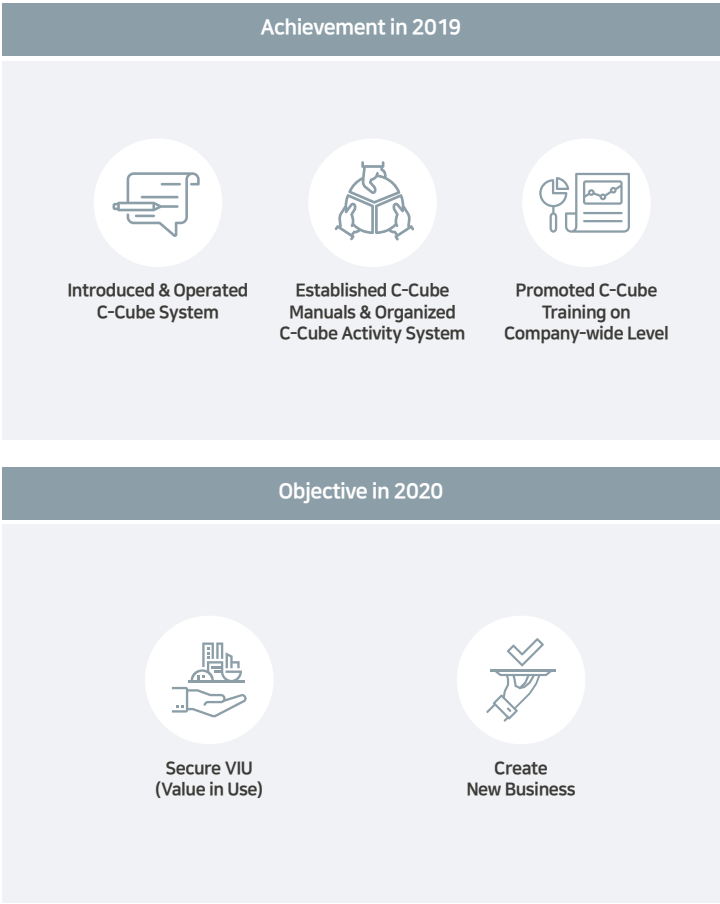
Internalizing C-Cube Capacity

Hyosung Advanced Materials carries out C-Cube activities based on documented manuals and conducts company-wide training so that C-Cube can be successfully incorporated in the organization. A dedicated team for promoting C-Cube activity was established, and pre-training was conducted on the person in charge appointed by each department. We conduct company-wide training and supervisor training for person in charge. Monthly information exchange meeting is also held to share the performance of C-Cube activities. In addition, C-Cube activity manuals have been created and utilized in each business department reflecting its own team culture and business environment. In case we receive a negative VOC, all related departments cooperate to find a solution and executes it in a timely manner. We are also promoting best practices through publishing 'VOC Letter'. In 2020, we will continue to promote C-Cube activities focusing on three main targets, which are securing VIU (Value in Use), zero C&C (Claim & Complaint), and discovering new projects.

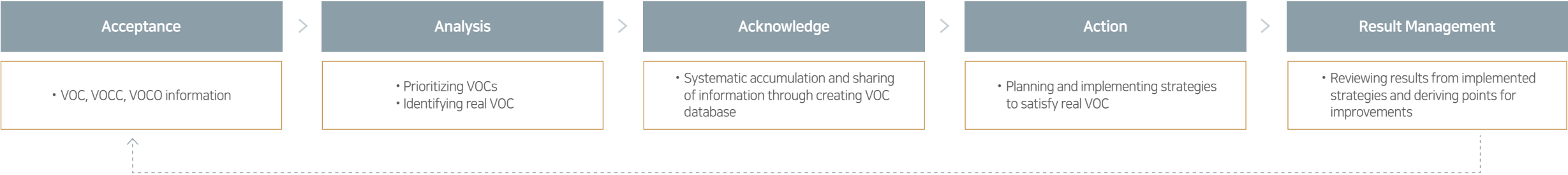
Process of C-Cube Activities



C-Cube Achievement and Objective



C-Cube Activities Flow Chart



MANAGEMENT APPROACH

OVERSEAS EXPANSION INTO NEW MARKETS

Background

Market competition intensifies as barrier to entry lowers, and the industry matures. In order to maintain a market-leading position in this environment, we need competency to solve customers’ problems beyond simply presenting good products with quality and performance. It is also required as an essential capacity of a company to discover new markets and customers by quickly capturing changing market trends such as lightweight, environmental, and composite material products.

Our approach

When it comes to business areas where we play market-leading role with our high technology and product profiles, we take the strategy to maintain the market by continuously developing products meeting customer needs based on our technology and product capacity differentiated from competitors. In a business area where the new materials and new applications are actively under development, we try our best to secure a growth engine for our sustainable future by focusing on new applications which can demonstrate our performance and pioneer new markets.

Objective in 2020



Achievement in 2019



UN SDGs Linkage



Global Production Network

Optimized Production Base

At Hyosung Advanced Materials, overseas production bases account for more than 90% of sales, and are located in major countries on each continent so that we can optimize product supply to Tier 1 customers based on regional characteristics of the automotive industry. In addition to the production subsidiaries in China and Europe, we have established a large-scale production base in the southern part of Vietnam by intensively fostering Vietnam as the company's main production base since 2007. In 2018, a new subsidiary was established in the central region of Vietnam. We have introduced IoT technologies in our production facilities in Vietnam and made the high-efficiency production available with the IoT-driven big data. Domestic production plants, on the other hand, serve as mother plant which manage production quality of other global production sites, based on the past production experience in our flagship product. In addition, Korean production sites are in charge of high value-added products such as carbon and aramid fiber. We extended our production capacity for BCF(Bulked Continuous Filament) yarn in Ulsan plant, so that we can expand our dominance in the polyester automotive carpet market against the competitors' low-cost polypropylene products. We also plan to expand capacity in Korea for new materials such as aramid and carbon fiber to effectively respond to increasing customer demand and to localize materials. After the ceremony for new investment agreement in carbon fiber which was attended by the President of Korea, Moon Jae-in, production capacity has doubled from 2,000 to 4,000 tons. We plan to continue expanding the capacity to 24,000 tons per year by 2028 through a total investment of KRW 1 trillion. Aramid yarn production sites are also under expansion at Ulsan Plant in line with the increasing demand for option cables for 5G telecommunication networks. We are promptly responding to customer needs and reflecting them in product development by operating research centers in Korea, Vietnam, and China.



[ Contract Signing Ceremony of New Investment in Carbon Fiber at Jeonju Plant ]

Differentiation Strategy

Market Expansion through Material-specific Approach

Hyosung Advanced Materials apply different market expansion strategies between key materials such as polyester and nylon, which are our foundation business, and new materials such as aramid and carbon fiber which have been developed since the 2010s. Our polyester and nylon material products are subject to customer-centric expansion strategy through which we continuously fulfill the changing customers’ needs in parallel with new customer development, and we aim to provide solutions to increase customers’ values. Our global no. 1 products - tirecords and yarns for seat belts, are continuously under R&D to reduce product weight while increasing strength in line with the market trend of lightweight. In regard to our interior business area, by applying polyester materials to automotive carpets which was conventionally produced only with existing polypropylene and nylon materials, we have preemptively introduced customized products that meet both marketability and economic competitiveness, which further led to expansion to new markets. We will continue to develop polyester products based on recycle materials and acquire more environmental certifications, in order to fulfill environmental responsibility as well as needs of end-users who are sensitive to such issues. For new materials such as aramid and carbon fiber which were developed as next-generation growth engine, we are actively facilitating market expansion through extending product applications. We are targeting the new market by increasing supply of such materials for novel applications such as hydrogen high-pressure containers, aircraft and oil & gas from contracts with new clients, as well as traditional applications in CNG high-pressure containers and bullet-proof products.



Participation in International Exhibitions for Technical Marketing

In order to promote our products, we are actively participating in major global exhibitions such as JEC World and CAMX, and communicating with customers to explain the underlying technologies and applications. In May 2019, Hyosung Advanced Materials participated in Techtextil, the world’s biggest industrial textile trade fair hosted in Germany. At the exhibition, a variety of our industrial yarn lineups were presented such as polyester and nylon as well as aramid and carbon fiber, which attracted a great attention from the participants. In November 2019, we attended Milipol, the world’s largest defense industry exhibition. As interest in bullet-proof materials has increased worldwide due to deteriorating global security and rising threat of terrorism, Hyosung Advanced Material’s aramid fiber ALKEX®, received great interest at the exhibition. In addition to the industrial textile exhibitions, we plan to participate in the Tire Technology Expo 2020 the world’s largest tire exhibition, to actively promote our products and engage with our existing and potential customers.



## MANAGEMENT APPROACH

# ECO-PRODUCTS AND TECHNOLOGY DEVELOPMENT

## Background

Climate change has significant impact not only on companies but also on various stakeholders. Due to the government's environmental impact reduction policy and enhancing awareness of consumers, companies are required to reduce environmental pollution and minimize the use of resources and hazardous substances throughout the entire product lifecycle, including production, consumption, and disposal. With the higher demands for eco-conscious products, stakeholders advocate companies that continue to enhance their environmental capacity with continued interest.

## Our approach

Hyosung Advanced Materials has been developing and selling eco-friendly products with an aim to facilitate recycling, respond effectively to climate change and mitigate environmental impact in line with Green Management Vision 2030 policy. In 2019, we have managed to commercialize and launch scrap-based steelcord and secured environment certification by developing a yarn which is made of recycled PET bottles.

### Objective in 2020



### Achievement in 2019



### UN SDGs Linkage



## Mitigating Environmental Impact in Production

Hyosung Advanced Materials identifies environmental impact of production processes at all stages from procurement of raw materials to final product and tries to minimize such impact. We will keep developing new measures that could contribute to impact mitigation, extend the scope of the existing improvement activities and boost development and application of new technologies.

### Eco-friendly Products Made of Plant-based 'Bio-PET'

With the advent of autonomous driving and car sharing services, enhanced driving convenience will increase the mileage and driving time of automobile in the future, and automobile and auto parts manufacturers continue to research and develop in order to minimize environmental impact. Especially, customers' needs in eco-friendly materials are rapidly increasing along with the current R&D trends of seeking for lightweight and fuel efficiency. To mitigate resource depletion and environmental problems which are caused by polyester(PET) made from existing petrochemical materials, Hyosung Advanced Materials is making use of Bio-PET from Bio-EG extracted from plant-based raw materials to produce car carpet products and is conducting research to extend the scope of application.



#### ✓ What is Bio-PET?

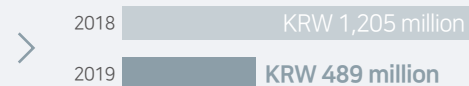
It is an eco-friendly polyester produced with Bio-EG extracted through catalytic reaction and fermentation process using sugar canes and corns, instead of oil-based EG(ethylene glycol) which is commonly used in PET(polyethylene terephthalate).

### Waste Sulfur Treatment for Low Environmental Impact

The production process of aramid, a high-strength and incombustible fiber, generates waste sulfuric acid. From June 2018, we applied a special eco-friendly technology for waste sulfuric acid treatment, which had previously been treated by an external sewage treatment company reducing 19,000 tons of waste sulfuric acid treatment. In this way, we managed to achieve both cost reduction of treatment process and prevention of water pollution.



#### Cost for waste sulphur treatment



### 'Lyocell Tire Cord' - Made of Wood Extract Material

Rayon tire cord used as a reinforcement for high-speed tires, has a risk of hazardous substances being released due to the use of sulfuric acid in the manufacturing process. On the other hand, our 'Lyocell Tire Cord', developed as a substitute for rayon tire cord, is made of cellulose extracted from wood and release very little harmful substances such as carbon disulfide and hydrogen sulfide during rayon manufacturing, effectively preventing air and water pollution caused by release and treatment of harmful substances.

### Eco-friendly Dip recipe to Improve Fatigue Resistance in Tires

At the final manufacturing process, tire cords are dipped in a chemical-compound fluid, chemical dip, and then dried by heat. This process is essential to achieve best performance of tires by increasing adhesion between tire cords and rubber, and to increase driving distance by enhanced resistance. Hyosung Advanced Materials developed eco-friendly dip recipe after ceaseless research to achieve environmental manufacturing process. The eco-friendly dip is now close to commercialization stage, and with this, we expect to reduce hazardous substances in the process without using rezosynol and formalin, and contribute to generating less waste tires by extending product lifetime with higher fatigue resistance.



[ Tire Cord Manufacturing Site ]

Expansion of Low-carbon Products

With the enhanced awareness of climate change response, Hyosung Advanced Materials aims to respond to possible climate change impact in the use phase of a product while directly reducing emissions in the production phase. To this end, we continuously develop and produce products that can reduce greenhouse gas emissions in all business areas.

TANSOME® – the Key to Automotive Fuel Efficiency Improvements

TANSOME® is the first high-performance carbon fiber developed in Korea through our independent technology, featuring only one-fourth the density but 10 times the strength of steel. Featuring its ultra-lightness and high-intensity, TANSOME® is used as a key material for improving fuel efficiency of automobiles through vehicle weight reduction, ultimately contributing to reducing carbon emissions. In addition, with its excellence in stability and functionality, TANSOME® is used in a variety of products, especially in high-pressure CNG containers as well as in environmental energy industries.




[ Hyosung Advanced Materials' Carbon Fiber, TANSOME® ]

High-strength Tire Cord

Tire cord is a major reinforcement material which determines the form and performance of tires, and is used in the rubber-rolling process in tire production. High-strength tire cords has an intensity 10-20% higher than regular tire cords, which lowers cord thickness contributing to less rubber usage during calendering. The lightweight of tires results from weight saving of cord and rubber, which improves fuel efficiency and reduces GHGs emission through decreased rolling resistance of tires.

Steel Cords Made of the Process By-products

The production process of steelcord generates steel scraps as by-products and releases greenhouse gases. Hyosung Advanced Materials produces eco-friendly products that can save raw materials and reduce emissions at the same time using steel scraps generated as by-products. Steelcord, made from scrap-steel has high strength due to its high impurities, but has limitation in application to thin products, so it has been commercialized by applying to some of the current product specifications. We will continue to develop screening and processing technologies to further extend product applications.



✓ Launch of steel cords made from scrap-steel in 2019


✓ Sales share of high-strength tire cord among all tire cords – 1.2%

Increasing Recycled Products

Hyosung Advanced Materials has a large number of polyester-based products in its product portfolio and strives to minimize environmental impact that can occur in the production and use of products. Process wastes, which can be easily discarded in the lifecycle of a product, and after-use products have been recycled as polyester chips and used as raw materials.

Recycled Polyester Yarn

Global fabric consuming manufacturers (i.e. apparel and shoes) are actively promoting the use of recycled polyester yarn, an eco-friendly product, as environmental pollution caused by excessive use of plastic products has emerged as a social problem. In line with the global efforts to reduce environmental pollution and respond to environmental demands in the apparel markets, Hyosung Advanced Materials developed high-strength recycled polyester yarn using raw materials extracted from waste plastics and obtained Global Recycle Standard (GRS) certification from an international authority.



✓ High-strength Recycled Polyester Yarn  
Certified by the Global Recycled Standard (GRS) 4.0

Recycled Floormat by Polyester Recycled Chips

Global automobile manufacturers are proactively developing and introducing automotive parts recycled from waste plastics. Hyosung Advanced Materials started to develop automotive carpet and mat recycled polyester (Bulk Continuous Filament) based on the needs from the client companies. We are working on developing the product which meets the customers’ requirements by utilizing not only polyester recycled chips and waste nylon from waste fish nets and waste yarn, but also process wastes from both our production lines and our supplier companies for recycled chips.



[ Automotive Carpets ]

Novel Technology Development

Green Technology Development

Hyosung Advanced Materials endeavors to minimize the environmental impact that can occur in the entire production process, from raw materials to product production, product use, and post-use processing. To reduce the environmental impact, we are in the process of developing a lubricant that replaces Nonylphenol, and applying it to the tire cord production process. In addition, we are developing high-strength carbon fibers that can be used in high-pressure containers, which are essential for hydrogen energy facilities, and lightweight vehicle bodies and vehicle structures that can reduce emissions. We are focusing on R&D projects in carbon fiber, an eco-friendly material that can be used in various high-tech industries such as aerospace and high-capacity energy storage.

MANAGEMENT APPROACH

SUSTAINABLE SUPPLY CHAIN MANAGEMENT

Background

Due to the changing trend in the management strategy of the automobile industry, it is becoming necessary to establish a sustainable supply chain by emphasizing social and economic responsibilities of suppliers such as human rights, safety, and environment. Suppliers should now grow together as partners who accompany us throughout the entire procedures including production process, not to mention quality compliance and delivery time.

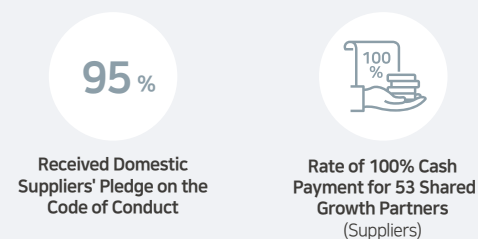
Our approach

Hyosung Advanced Materials has established a supplier management system with the purchase team and other relevant departments to build regular monitoring and evaluation system and promote various support programs. Furthermore, we are striving to further enhance shared growth management through compliance program and preliminary business consultation. We preemptively manage potential risks by setting up emergency response system to maintain sustainable supply chain.

Objective in 2020



Achievement in 2019



UN SDGs Linkage



Supplier Management System for Stability of Supply

Complementary Supplier Management Organization

With the lead of Purchase Team, various departments within Hyosung Advanced Materials are closely collaborating to manage suppliers effectively. For example, Quality Assurance Team is in charge of monitoring, technical support, and training for suppliers' product quality improvement, Production Team supports suppliers to meet their product with the standard The Technology Innovation Team supports technology development of suppliers and the Plant's Administration Team takes care of purchasing some of raw and consumable materials while the Environment Safety Team is responsible for overall management and support for suppliers when it comes to safety and environment.

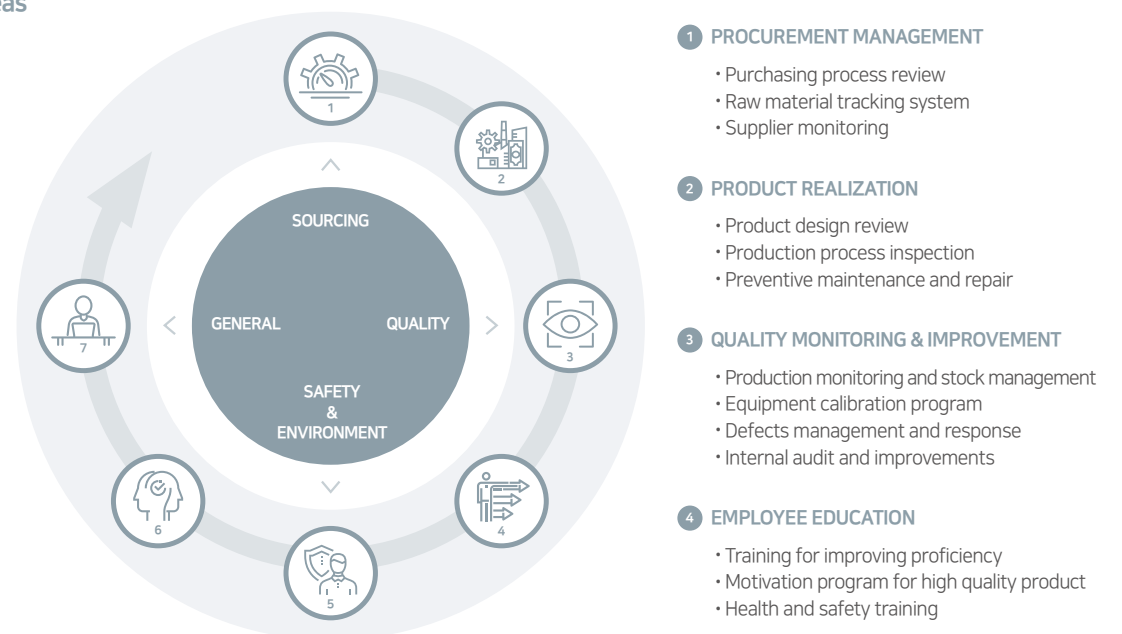


HAMC Supplier Risk Management Areas

- CUSTOMER-ORIENTED MANAGEMENT**
  - Reflecting customer needs and continued monitoring on customer satisfaction
  - Quality/performance evaluation by management
  - Dedicated organization for quality and responsibility
- COMPLIANCE WITH SOCIAL RESPONSIBILITY**
  - Human rights/labor responsibility
  - Ethical management
  - Fair business practices/anti-corruption
  - CSR activities
- SAFETY & ENVIRONMENT**
  - Management of waste/hazardous substances
  - Safe working environment
  - Contingency plan and training
  - A dedicated organization for environment

Risk Management for Stable Supply

At Hyosung Advanced Materials, Purchase Team works closely with other related departments to prevent potential supplier-related risks in advance at all stages of supplier selection, monitoring, and evaluation. As a company mainly producing automotive materials, which are intermediate goods, we are constantly inspecting suppliers with the priority in safety and quality from the very first production process to guarantee the safety of our end-customer. In the incidence of quality issues from suppliers' products, we respond quickly through our raw materials tracking system. Moreover, we also support safe production environment for our suppliers through regular inspections and guidance. In preparation for supply failures due to accidents or issues of suppliers, we are managing supply risks by establishing an emergency response system with emergency organizations and response guidelines for each supply failure case. In addition to basic response manuals for natural disasters, casualties and safety accidents, the contingency plan covers strikes and supply-related emergencies, and provides manuals for such event in each scenario and situation so that we can be more resilient to supply risks including delivery delay. In April 2019, Ulsan plant conducted five scenario-specific training sessions for supply continuity risk management, including suspension of raw materials supply, transportation accidents, delayed delivery to customers, shutdown of facilities, and company intranet system down due to cyber attacks. And 47 employees in charge of each emergency scenario conducted contingency training and evaluation for each risk type. After the evaluation, problems and improvement measures were identified for each scenario and reflected in the manuals.





## Supplier Management System

### Regular Supplier Monitoring

Hyosung Advanced Materials selects new suppliers based on their supply stability compliance with employees’ human rights and ethical management. In particular, as a supplier of industrial yarn and fabric which are mainly used in automobiles, we regularly monitor raw materials every year in accordance with a certification of IATF 16949, a system certification for automobile parts manufacture, and ISO 14001, environmental management system, etc. Through this consistent monitoring and review, we evaluate our suppliers’ products in various aspects including quality, price, delivery date, and management, and identify their problems and support improvement activities. Hyosung Advanced Materials conducts re-evaluation of all domestic processing partner companies once a year to evaluate strikes, back payment, environment and safety as well as quality and delivery, based on which benefits are provided. In 2019, we completed monitoring of 23 raw material suppliers and 4 processing suppliers. Currently, we are trying to advance the evaluation system by adding more standards including human rights, labor, ethical management, health & safety and environment in order to effectively manage social and environmental risks of suppliers and strengthen our own social responsibility. In addition, we prepared and shared guidelines related to social and environmental responsibility to our partner companies in order to strengthen their sustainability. In 2019, 95% of all partner companies voluntarily submitted a pledge to comply with these guidelines.

### Supplier Communication

Hyosung Advanced Materials runs a communication channel that allows suppliers to raise their opinions any time in the event of an unfair request or violation of our regulations. Suppliers can report anonymously through the whistleblowing center on our website. Confidentiality of information and informants is guaranteed, and any consequent disadvantage is prohibited. In addition, we regularly collect our partner companies’ voices through regular communication channels such as business partners meeting and quality-related requests during annual on-site evaluations.

### Compliance Program

Through the Code of Ethics, Hyosung Advanced Materials announces to the public that it respects the principles of fair trade and intellectual property rights of its partner companies. In addition, the self-compliance program, which was succeeded by the holding company in 2018, provides guidelines to employees and prevents violation of fair business practices through monitoring conducted by the self-compliance manager. In addition, in case of supply contract worth more than KRW 2 billion, the company uses checklist of the preliminary business consultation system to identify any violations or unfair practices in advance to prevent corruption.

## Share Growth Management with Suppliers

### Comprehensive Supplier Support Activities

As a partner that manages risks together with suppliers beyond raising their competitiveness in cost and quality, Hyosung Advanced Materials cooperates with and supports them in various fields to ensure their sustainable production. If selected as an outstanding partner through evaluation by the purchasing team, the partner company receives cash payment benefits and is recommended as a candidate for Outstanding Partner Companies Award which gives the winner a reward. We also support our business partners through training and providing technical consulting service, and participation in Energy Partnership Program. Regarding the safety-related matters, the Environment Safety Team conducts on-site inspections for health and safety management of partner companies twice a year and rewards outstanding companies. Our safety manager and rewarded outstanding partners provide mentoring and guidance about overall health & safety issues to newly registered partners. We also participate in the Win-win Cooperation Program every year to help partner companies assess risks and develop technologies, and for partner in the sector of repair and maintenance, we inspect their daily safety measures(Safety First Activity). Musculoskeletal disorders prevention program is also conducted every year for our supplier companies to strengthen their health and safety. For enhancing welfare of partner companies, we provide them with the same fringe benefits including the use of resort facilities and medical service. Recently, we provided masks to employees in partner companies to alleviate difficulties and hardship from COVID-19 crisis.

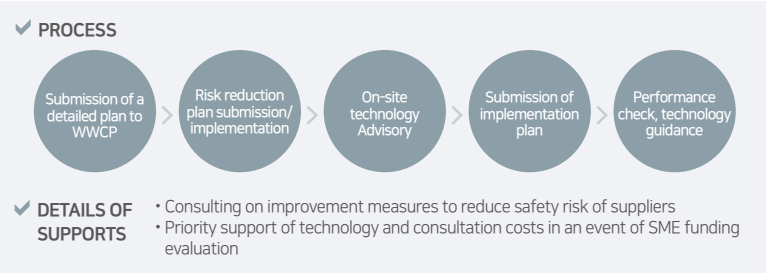
Evaluation Rate by Each Area in 6th Revision and Additional Standards Planned for the 7th Revision of Supplier Management Process (IATF 16949).

Area	Existing criteria	Rate	Additional standards planned for the 7th revision
Quality	Quality management system, customer claims, defects	35%	None
Competitiveness	Delivery, delay of delivery, price competitiveness	30%	None
General management	Management performance, Contract period in years	10%	<div><div>• Management plan, detailed action plans, activities to improve business performance</div><div>• Investment plan and cost reduction activities</div><div>• Average years of service, turnover rate, CSR activities</div><div>• In-house ethics regulations and whistleblowing center</div><div>• Cases of anti-corruption, violation of fair trade law</div></div>
Human rights	Wage arrears Number of labor strikes	10%	<div><div>• Cases of workplace harassments</div><div>• Compliance with legal standards of working hours and wages</div><div>• Employment of minors, working condition of minors, child labor and forced labor prohibition</div><div>• Policy for protection of pregnant women</div><div>• Employment contract and appropriate overtime pay</div><div>• Stipulation of employee non-discrimination, employees’ freedom of association</div></div>
Environment	Certifications and permissions Environment and safety accidents	15%	<div><div>• Dedicated environment team/department</div><div>• Regular monitoring of working environment and safety inspection</div><div>• Regular fire and other safety-related trainings</div></div>

### BUSINESS CASE – Win-Win Cooperation Program with Suppliers

The Ulsan plant of Hyosung Advanced Materials actively participates in the Win-Win Cooperation Program (WWCP) organized by the Korea Occupational Safety and Health Agency every year to support the safe production environment of partner companies. Ulsan plant participates in the WWCP with 47 suppliers, and manages safety and health with both internal and external experts. We conduct regular meetings and training programs every month, joint weekly and daily safety inspections and perform regular audits and interview on a semi-annual basis to mitigate risks from supplier companies. In addition to the risk reduction programs and support for technology development, we are carrying out various activities to promote health and safety of our partner companies and employees such as installation of fire protection and medical equipment and health programs against obesity, smoking, and musculoskeletal disorders.

[ Win-Win Cooperation Program – Ulsan Plant ]



## Compliance Program

### Promoting Fair Business Practices

In order to establish a fair business trade culture together with suppliers, we have established fair trade guidelines, which are recommended by the Korea Fair Trade Commission, as part of our corporate regulations. Four basic practices are included in our corporate regulations, including making contracts, selection and operation of partners, setup and operation of internal deliberation committee and written proof of subcontracting. We also announced the guidelines for prohibiting retaliatory acts such as unilateral restriction or suspension of transactions to suppliers in order to establish a healthy and transparent business relationship with suppliers which enables fair partnership.  
(HAMC's Fair Trade Guidelines Established in 2018.06.01.)

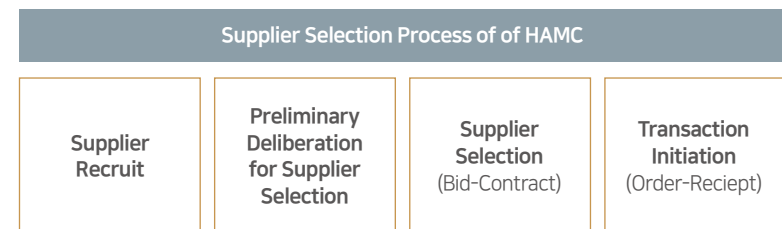


### Practices for Making Contracts

HAMC has built rational and transparent business relationships with suppliers by ensuring that the interests of suppliers are properly reflected in contracts. To this end, we prepare a checklist for preemptive inspections, which we use to prevent unfair behaviors before a contract is signed.

### Practices for Partner Selection

HAMC is striving to establish fair and transparent standards in selecting suppliers. New suppliers are selected in consideration of quality, delivery capacity but also ESG criteria such as the supplier's supply stability, employees' human rights, and ethical management level.  
New suppliers are encouraged to practice sustainability management by signing and complying with HAMC's supplier code of conduct.



### Internal Deliberation Committee

HAMC operates an internal deliberation committee to deliberate on the fairness and legality of subcontracting transactions with suppliers. In particular, when signing a contract of more than KRW 2 billion we follow specific procedures of deliberation in advance to verify whether the contract and pricing process is fair and legal.

### Practices for Written Proof of Subcontracting

HAMC clearly designates the types of documents required in order to facilitate a clear transaction and protect suppliers' rights when signing contracts with suppliers

### Fair Business Trade Education

We regularly provide case study training of the Subcontracting Act and breach of contract to the departments considered to have high risk related to unfair business trade with suppliers such as Purchasing Team, Administration Team, and Quality Assurance Team. We also carry out training about fair business trade to the sales departments, covering the Fair Trade Act and the Fair Agency Transactions Act, providing information on legitimate process and standards in the sales environment.

### Non-retaliation Guidelines

HAMC is compliant with non-retaliation guidelines which prohibits the company from rejecting or ceasing the trade or significantly limit the quantity or content of products or services of the suppliers in business trade due to certain reasons. The employees perceived with the relevant misconduct are summoned to disciplinary committee and are treated accordingly.

- ✓ Report to related agencies that the company has violated fair trade regulations
- ✓ Request for mediation with the company in the Dispute Mediation Committee
- ✓ Raise questions related to contents in the contract
- ✓ Raise questions and issues related to fair trade through whistleblowing center of the company's website

## Supplier Ethical Management

### Code of Ethics for Shared Growth Management

" Suppliers are a source of competitive edge for the company, and we aim for shared growth based on transparent and fair trading with suppliers."

1. When selecting suppliers, it is considered whether they comply with Hyosung's human rights, environmental and social values.
2. Business transactions with a supplier should be made in an equal position, and we do not engage in unfair trade practices, abusing our superior position
3. We create a foundation for shared growth with suppliers by enhancing their sustainability through multi-faceted support activities.

### Guidelines to the Code of Ethics for Shared Growth Management

1. When selecting suppliers, starting and continuing contracts with them, we consider whether they comply with human rights, environmental, and social values which the company pursues.
2. We ensure that business transactions with a supplier is carried out fairly in an equal position, and we thoroughly discuss trade conditions and process with suppliers and do not commit unfair trade practices, abusing our superior position.
3. We create a foundation for shared growth with suppliers by enhancing their sustainability through multi-faceted support activities.
4. We protect the physical and intellectual property rights of suppliers and all information of sub-contractors.

### Supporting Supplier Ethical Management

HAMC reflects suppliers' performance in human rights and ethical management in the annual suppliers evaluation; based on which, we encourage their improvement in such matters. In addition, we monitor overdue wages at partner companies and support them to improve working environment with more rest areas.



[ Training on Fair Trade ]



A background image of a factory interior. A worker in a dark shirt is standing next to a pallet loaded with large spools of wire. The pallet has the word 'SOUTHWORTH' printed on it. The background shows industrial machinery and more spools of wire.

# Sustainability Management

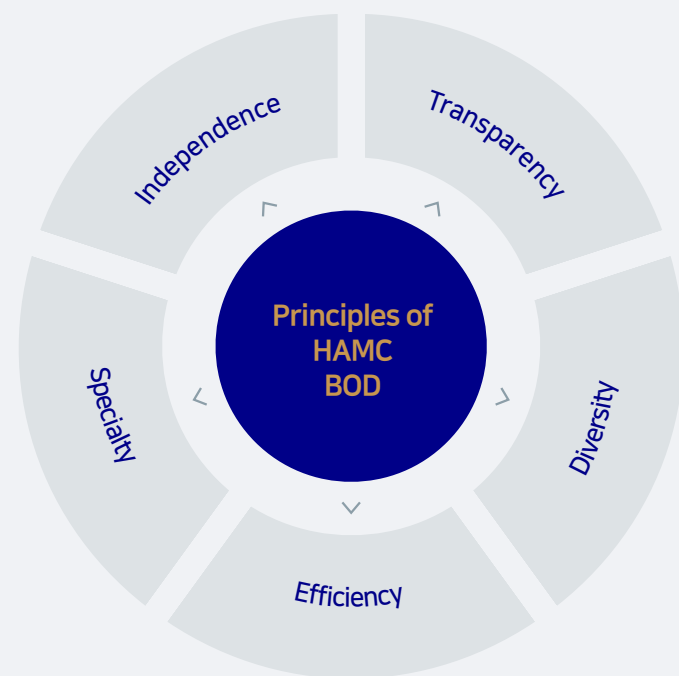
Governance	17
Risk Management	19
Ethical Management	21
Human Resource Recruiting	23
Human Resource Training	24
Human Resource Management	26
Shared Growth Management	28
Green Management	30
Safety and Health	34
Research and Development	36
Information Security	37



# GOVERNANCE

Hyosung Advanced Materials is creating customer value in accordance with the vision of "A specialist in material technology that can help people in the world lead to a better life by offering solutions that can enhance customer values", and operates the governance structure, which is the basis of corporate management, in accordance with principles and policies. Our governance guarantees an authority that is transparent and independent in decision-making, and based on the checks and balances, it enables the company to have effective business operation.

As the highest decision-making body, the Board of Directors reviews and decides on matters prescribed by law or corporate articles of association, delegated matters by the general meeting of shareholders, or high-priority matters related to basic company policy and business operation. It is also aimed to improve interests of the stakeholders including shareholders.



UN SDGs Linkage



## Principles of the Board of Directors (BOD)

### Independence and Transparency of Directors

To improve the independence and transparency, majority of BOD members are composed of outside directors. The outside directors whose independence is verified implement checks and balances on the executive management. The resolutions of the BOD are deliberated and resolved in accordance with the articles of association and the regulations of the BOD and the voting rights of any director who has a special interest or conflict of interests regarding the resolution is limited pursuant to the regulations of the BOD. Meanwhile, in order to avoid conflict of interests among directors and implement large-scale internal transactions among business companies in fair and transparent manner, the BOD reviews and puts limitations on the matters related to 'Transactions between Directors and Company' as specified in the Commercial Act (Article 398). Regarding the committees in the BOD, the Audit Committee entirely consists of outside directors, while the Outside Director Candidate Nominating Committee is mandated to compose two thirds of its members with outside directors, and to appoint an outside director as the representative director of the committee in order to enhance independence and transparency.

### Specialty and Diversity of Directors

In the fast-changing business environment where strategic decision-making of the Board is constantly required, the specialty and diversity are considered as a prerequisite for a director. Regarding the business at HAMC, high-level in-house expert is in charge of overall operation of business and participates in the BOD and serves as the CEO to realize the responsible management. In order to represent various stakeholders, the BOD is composed of outside directors with profound experience and specialty in a variety of fields such as finance, economy, technology, law, and industry so that the BOD is not biased against a specific background. Outside directors objectively supervise and advise management by participating in the BOD based on specialty in their fields. In particular, the Audit Committee includes at least one specialist in law, finance, and technology. In addition, continuous training is provided to improve the professionalism of the board directors. The newly appointed directors receive introductory company training including visions, strategies, financial status, and major internal policies. In order to improve understanding of the business industry, we identify demands for training/education from the BOD and conduct regular training accordingly.

### BOD Efficiency

For efficient operation of the BOD, we have established committees in the BOD to take specific roles and functions required. Although the Audit Committee and the Outside Director Candidate Nominating Committee are not mandated to be established according to the relevant law, we are operating those committees to enhance the independence and transparency of our governance structure. The Management Committee was set up to respond flexibly to the rapidly changing global business environment and to operate business efficiently. The Management Committee reviews and decides on matters delegated by the BOD such as corporate's management policy and investment.

### BOD Performance Appraisal and Remuneration

Each year, directors are evaluated based on their specialty in corporate business and technology as well as performance of the Board activities, and the following result is discussed in the BOD. Compensation for the Board is payed fairly and transparently based on the evaluation result with an approval of the general shareholders' meeting. The remuneration of the Board is provided within the remuneration limit approved at the general meeting of shareholders. The retirement allowance of the BOD shall be paid in accordance with the provisions on retirement allowance for executives which was approved by the general meeting of shareholders.

### Protection of Shareholder Value

HAMC announces a general meeting of shareholders 18 to 22 days before the meeting date, which is longer than the minimum standard of two weeks, to protect shareholders' interests and rights and interests, and to allow them to spend enough time deliberating on agenda items. In addition, we try to avoid peak dates during the proxy season to hold a general meeting in order to reach the necessary quorum and secure shareholders' votes. Shareholders may exercise their rights by proposing schedules in writing or electronically up to six weeks before the general meeting of shareholders. Meanwhile, the company has not paid out dividends due to no profit available for dividends under the Commercial Act. However, if dividends are possible in the future, we plan to make decisions in consideration of investments for the company's continuous growth, business performance, and cash flow conditions. All shareholder uphold equal voting rights based on the number of shares held. In addition to regular performance announcements every year, the NDR (Non-Deal Roadshow) is held regularly for investors in Korea and overseas institutional investors. We provide various in-depth IR (Investor Relations) materials to meet the increasing shareholders' demand for information and enhance their understanding and trust. Moreover, a policy regarding internal control has been established to prevent internal transactions or self-transactions for personal interest.

Principles of the Board of Directors (BOD)

Board Members

The Board of Directors(BOD) consists of directors who are appointed in the Shareholder's meeting, and is comprised 2 inside directors and 3 outside directors. The inside directors are nominated by the recommendation of the BOD, and the outside directors are nominated by the recommendation of the separate resolution process from the Outside Director Nominating Committee for a closer and more objective review. Relevant information is provided to shareholders through reference materials disclosed prior to the shareholders' meeting and announcement of convening the shareholders’ meeting. The resolution is approved by shareholders on the day of the shareholders' meeting.

(As of the end of December 2019)

Title	Name	Gender	Roles	Appointed Date	Expiry Date	Specialty
Inside Director	Jungmo Hwang	Male	Chairman of the Board of Directors, CEO, Chairman of the Management Committee, Member of the Outside Director Candidate Nominating Committee	2018. 6. 1	2022. 3. 18	Corporate management
	Seunghan Kim	Male	Member of the Management Committee	2018.6.1	2022. 3. 18	Corporate management
Outside Director	Dongkun Kim	Male	Member of the Audit Committee, Chairman of the Outside Director Candidate Nominating Committee	2018 .6. 1	2022. 3. 18	Legal (Lawyer)
	Ingoo Han	Male	Chairman of the Audit Committee	2018 .6. 1	2022. 3. 18	Accounting, finance (Accountant)
	Sangyup Lee	Male	Member of the Audit Committee, Member of the Outside Director Candidate Nominating Committee	2018 .6. 1	2022. 3. 18	Technology (Chemical & Biomolecular Engineering Scientist)

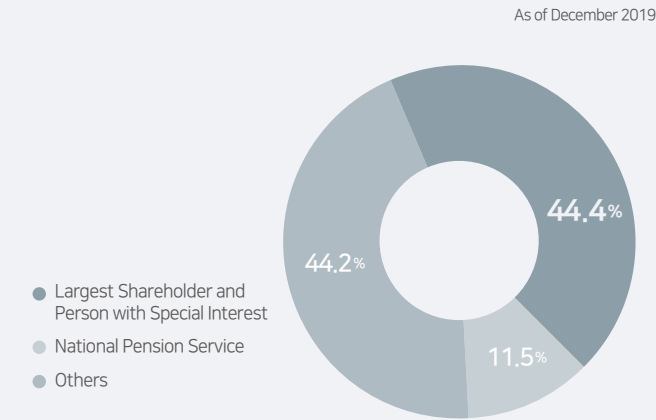
Board Operation

In accordance to the BOD Operation Policy article 6, regular meeting is held once in each quarter by principle, while temporary meetings are convened occasionally when necessary. In 2019, a total of 6 meetings were held, and 27 agendas were covered for reporting and decision-making including compliance support activities, transactions between directors and company, investments for environment(i.e. solar panel installation), CSR as well as major business issues.

Board Subcommittees Status

Subcommittee Name	Members	Number of Meetings Hosted in 2019
Management Committee	Inside Director Jungmo Hwang(Chairman), Inside Director Seunghan Kim	47
Outside Director Candidate Nominating Committee	Outside Director Dongkun Kim(Chairman), Outside Director Sangyup Lee, Inside Director Jungmo Hwang	-
Audit Committee	Outside Director Ingoo Han(Chairman), Outside Director Dongkun Kim, Outside Director Sangyup Lee	7

Shareholders Status



Status of the BOD Meetings in 2019



Compensation for Directors and Auditors in 2019

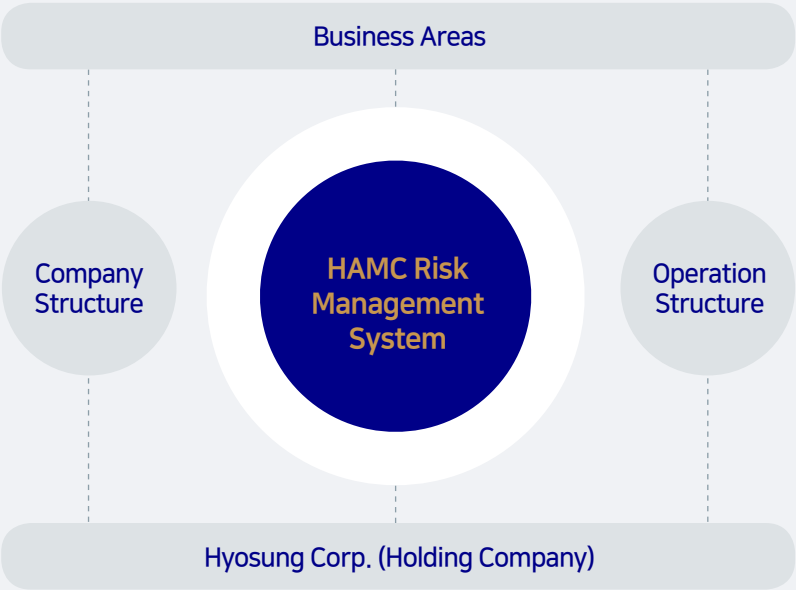
Unit: KRW 1 million

Category	Persons	Total Compensation	Avg. Compensation per Director
Inside Directors	2	674	337
Outside Directors	3	-	-
Directors from the Audit Committee	3	163	54

\* 'Outside Directors' are all included in 'Directors from the Audit Committee'

RISK MANAGEMENT

Risk can rise in both financial areas such as exchange rates, liquidity and interest rates, as well as non-financial areas such as supply chain, environment, law, and security. In order to timely respond to the internal and external risks that may hinder the achievement of our sustainability goals, HAMC has a company-wide risk management system covering all business areas. As we recognize risk management to be a critical part of management strategy, we have identified and defined possible risk concepts in each field in advance and have manualized response processes for each case. Recently, unpredictable risks such as COVID-19 have negatively impacted the corporate management. HAMC has established a dedicated risk management organization to properly respond to such sudden risks. HAMC will be the leading company through running risk management process and developing effective systems and process.



UN SDGs Linkage



Risk Management Strategies

Integrated Risk Management System

HAMC is exposed to a variety of risks involved with health & safety, supply chain, and environment, etc. In order to effectively manage risks, HAMC is operating an integrated company-wide risk management system globally. We have established a cooperation system between the holding company and HAMC as well as between headquarter office and domestic/overseas business sites so that risks are identified in advance and negative impact to the company can be minimized.

Risk Management Process

HAMC runs a risk management process which is based on five stages, 'identification-analysis-prevention-solution-monitoring'. We are effectively responding to the risk by prioritizing them upon likelihood and impact.

Risk Identification	Potential risks are identified and defined upon analysis of internal and external environment of HAMC.
Risk Analysis	Major risks are derived through risk factor analysis and potential impact predictions.
Risk Prevention	A preventive system has been established to effectively control and prevent risks through regular risk assessments of various business areas. (i.e. child labor, business continuity)
Risk Solution	Risk management staff analyzes the status of risk occurrence and minimizes or controls risk through rapid reporting and decision-making.
Risk Monitoring	Risk response plans are verified and countermeasures are established to prevent recurrence of risk.

Risk Management Sector

HAMC is running a risk management system which covers both financial and non-financial risks. We are reducing risk-driven uncertainties by defining the risks in each sector and setting up detailed response measures. In particular, agenda items regarding financial risks are addressed and reviewed in accordance with the policies approved by the Management Committee in the Board of Directors.

Category	Risk Definition	Response Methods
Exchange Rate	Risk of financial loss due to exchange rate change	We manage exchange risk systematically by matching deposit and expenditure currencies to minimize the occurrence of exchange positions, and detailed classification of exchange rate risk management policy including hedge cycle, period, and rate.
Liquidity	Risk of financial loss due to unexpected liquidity deterioration	We regularly forecast future cash flows to maintain an appropriate level of deposit, and have concluded agreements with a financial institutions regarding the emergency funding.
Interest Rate	Risk of financial loss due to interest rate fluctuations	Considering the trend of interest rate maturity and short/long-term interest rate structure, the appropriate amount of borrowings and deposits is derived, and the allowance of interest rate gap ratio is set and complied with.
Supply Chain	Production risk due to raw material supply failure	We are strengthening our partnership by identifying the requirements of supply chain in advance. We have defined supply chain emergency situations and differentiated responses for each scenario has been established.
Safety and Health	Human injury or financial loss due to disasters, safety accidents	Regular training is conducted for each disaster and safety accident scenario such as earthquake, fire, explosion, and gas leakage to foster the ability to respond flexibly in the event of an actual accident.
Environment	Risk of disadvantage due to non-compliance with environmental regulations	We operate designated departments to manage environmental risks and regularly monitor emissions through the greenhouse gas emission system.
Legal Compliance	Risk of penalties due to legal violations	By using standard contracts, we proactively prevent possible legal non-compliance of related laws(i.e. Fair Trade Act). Compliance Team and Audit Team regularly monitors to check non-compliance, while employees are trained annually to increase awareness of legal issues.
Security	Risk of weakening of company's core competency due to information leakage	In order to prevent leakage of important information, a designated security inspection department conducts regular monitoring. The document centralization system has been established to effectively manage the creation, modification, storage, and transfer of documents.



Key Risk Management Activities

COVID-19 Risk Management

HAMC carried out a wide range of response and prevention activities to effectively manage COVID-19 risks based on the tight cooperation among relevant departments across all sectors of business by the lead of the Corporate Strategy/Support/Finance Offices. We focused on initial prevention measures by refraining all possible social gatherings taking place at business sites such as company-wide team building activities, domestic/overseas business trips, on-site visit from external guests, club activities, and group training. Also, we set up clear guidelines for employees to follow. In an effort to practice social distancing within the company, we started home-office system backed up by IT services. Moreover, employees' body temperature was checked whenever they enter and leave the office building and those detected with high temperature were reported to the HR team for medical test.

COVID-19 Response Activities of Hyosung

HR	<ul style="list-style-type: none"><li>Established and operation of home-working/remote-working system</li><li>Guideline preparation and regular notifications to prevent infection at work</li><li>Response manual/process for employees with similar symptoms</li><li>Support mask purchasing costs for all employees in Korea for 2 months</li><li>Support COVID-19 testing expenses for employees</li></ul>
Operation	<ul style="list-style-type: none"><li>Office entry process using thermal imaging cameras, mandatory mask usage</li><li>Contactless thermometers and hand sanitizers placed at workplace</li><li>Patrol for social distancing during commuting/lunch time</li><li>Separate operation of lunch times by floor</li><li>Guidelines for domestic/international business trip</li><li>Support mask purchasing costs for suppliers' in Korea for 2 months</li></ul>
Overseas Subsidiaries	<ul style="list-style-type: none"><li>Guidelines of working and prevention activities for expatriates and overseas subsidiaries</li><li>Support relocation costs for expatriates' families to Korea</li><li>Provide masks and protection garments to our business sites in China</li></ul>
IT/ Security	<ul style="list-style-type: none"><li>Phishing precautions related to COVID-19 to prevent accidents</li><li>Guide off-site access to intranet and real-time troubleshooting services</li><li>Technical support(i.e. messengers with video call function)</li></ul>



[ COVID-19 Prevention Activity-Thermal Imaging Camera ]

Supply Disruption Risks

Emergency Response System of Business Sites

In order to manage risks throughout the entire process, including raw material, supply stability of suppliers and processing contractors, and delivery, HAMC established the process-specific mechanism to conduct regular inspection and scenario training in compliance with international standards (IATF 16949, ISO 14001). In particular, emergency response organizations have been established and specific measures to emergency have been organized to cope with risk of supply crisis caused by natural disasters such as typhoons, heavy rains, as well as fires.



[ Emergency Response Training at Business Site ]

Environmental Risk Management

With the lead of the Environment Safety(ES) Team at each business site, we are monitoring our business sites day-to-day and constantly training the employees about impact and prevention measures of environmental accidents. In particular, we are striving to minimize possible risks by delivering response training for specific scenarios, such as leakage of water and wastewater due to malfunction of production facilities, leakage of wastewater due to failure of wastewater treatment facilities, and leakage from toxic substances storage tanks.

Safety Risk Management

HAMC manages workplace safety through the ES Team at each plant. The ES Team monitors compliance of on-site safety guidelines(i.e. helmet, masks) and holds regular training sessions. Employees also receive training from KOSHA(Korea Occupancy Safety & Health Agency) regarding falling accidents, helmet safety, etc. And incentives are provided to workers according to the number of accident-free days. In addition, an IT-based chemical substance management system is in place to control the registration and usage of hazardous substances.

Sustainability Risk Management

HAMC has set up the Sustainability TFT under the direct management of the CEO in order to promote sustainability on a corporate-wide level globally. The TFT is responsible for establishing action plans to enhance sustainability including supply chain management, environmental risks, and HR etc. They also monitor whether those action plans are properly executed. Especially the Risk Management Committee headed by the Chief Strategy Officer is in charge of risk management on a corporate scale.

Sustainability Action Plans in 2019

Category	Action Plans
Enhancing Operation System	Establish Sustainability task force team at a company-level ⇒ Regular meeting at Hyosung Group level
Expanding External Disclosure	Increase the frequency of publishing sustainability report from biennially to yearly, and add overseas subsidiaries to the scope of reporting (Hyosung Vietnam, Dongai)
Environmental Risk	Enhancing climate change risk management
Environmental Risk	Establish Green Management Vision 2030, to reflect the external environmental changes
Security Risk	Enhance security risk response capacity by introducing a company-wide integrated document control system (HiCloud)
Ethical Management	Extend the scope of training subjects Reinforce employee awareness through expanding the participants of ethical management training
Human Resource Management	Establish a training system at each operating company
Suppliers Management	Strengthen the monitoring on suppliers' CSR fulfillment in addition to their pledge for ethics compliance. Establish Code of Conduct for suppliers and request for their participation
Suppliers Management	Strengthen supplier support projects
Others	Update the code of ethics & its guidelines, purchasing policy, and safety/health policy

# ETHICAL MANAGEMENT

As the social demand increases in ethical management, many domestic and international companies are starting to declare their commitment to ethical management and are making efforts to practice it. In addition, many regulatory agencies monitor the companies, focusing on legal compliance and transparency, and the social demands in corporate ethics are also increasing. HAMC emphasizes the importance of ethical management under the company's first business principle, 'Honesty and Trust.' In addition to basic legal compliance, HAMC carries out various ethical management activities in order to promote fair and transparent business operation and to ensure the company's sound growth and stakeholders' trust. Ethical management forms the foundation of basic principles of behavior for all employees at HAMC, and we believe that competitiveness can result in actual economic outcomes when the ethical management becomes the basis.



UN SDGs Linkage



## Ethical Management System

### Ethical Management Principles

In an effort to facilitate clean corporate ethics, HAMC continuously strives to internalize ethical management in the company. 'Honesty and Trust' is the core philosophy of our ethical management, and in order to realize it in practice, the 'Code of Ethics' and 'Guidelines to the Code of Ethics' were established. The Code of Ethics consists of seven themes, including compliance with laws and regulations, customer-respecting management, shareholder-oriented management, employee-respecting management, employee compliance management, shared growth management with suppliers and social responsibility management. Each of these ethical code themes is reflected in the management activities through the implementation of Guidelines to the Code of Ethics. They are regularly reviewed to cope with rapidly changing industry trends, and communication channels are operated to reflect the diverse needs of stakeholders.

Code of Ethics	Guidelines to the Code of Ethics
Compliance with laws and regulations	<ul style="list-style-type: none"><li>• Compliance with national policies and regulations</li><li>• Compliance with corporate policies and basic corporate ethics</li></ul>
Customer-respecting management	<ul style="list-style-type: none"><li>• Transactions with customers</li><li>• Partnership with suppliers</li></ul>
Shareholder-oriented management	<ul style="list-style-type: none"><li>• Protect profits of shareholders and investors</li><li>• Protect shareholders' right-to-know</li></ul>
Employee-respecting management	<ul style="list-style-type: none"><li>• Respect for executives and employees</li><li>• Facilitation of a sound company culture</li></ul>
Employee compliance management	<ul style="list-style-type: none"><li>• Transparent and fair task performance</li></ul>
Shared growth management with suppliers	<ul style="list-style-type: none"><li>• Aim for mutual growth with business partners</li></ul>
Social responsibility management	<ul style="list-style-type: none"><li>• Contribution to social development</li><li>• Sound and healthy social life</li></ul>

### Organizational Structure of Ethical Management

HAMC has formed a strong organizational structure for ethical management, centered on the CEO. The CEO is striving to ensure that the ethical management philosophy can be naturally reflected in management activities. Major ethical management activities are operated under the supervision of the Compliance Support Team. We make sure that members of the Compliance Support Team have strong understanding of the company for smooth execution of ethical management activities. In addition, we have designated personnel in charge of ethical manger activities within each department to assist the activities of the Compliance Support Team and to manage performance effectively. Also, we have independent internal auditors who have been appointed so that thorough supervision is carried out throughout the entire management from field work to headquarter office.

### Ethical Management Enhancement Process

Prevention	<ul style="list-style-type: none"><li>• Employee training</li><li>• Share Code of Ethics with employees</li><li>• Self-inspection using checklist</li><li>• Monitoring and managing legal changes</li></ul>
Monitoring	<ul style="list-style-type: none"><li>• Regular non-regular audit by the department in charge (Audit Team)</li><li>• Technology and quality audit</li><li>• Monitoring on reported cases</li></ul>
Follow-up Management	<ul style="list-style-type: none"><li>• Improvement activities</li><li>• Developing case-based training</li><li>• Immediate improvement and re-inspection of audit subjects</li><li>• Report to CEO on audit results</li></ul>

### Ethical Management Communication Channel

HAMC is operating 'HR Counseling Center' and 'Grievances Procedure' so that employees can receive counseling on unethical behavior and grievances, and counseling on ethical standards. Usually, counseling takes place by face-to-face, but anonymous counseling is also available online to protect the identity of the reporter. In order to secure thorough confidentiality, we also operate a mailbox in Mapo Post Office. In 2018, we set up an online whistleblowing channel in our website to receive reports of unethical behaviors in the supply chain such as bribery, solicitations and unfair business trades.

Awareness Building for Ethical Management

Declaration of Ethical Management

In 2019, CEO of HAMC has declared the implementation of Sustainable Development Goals (SDGs) through the UN Global Compact Declaration to fulfill ethical management and social responsibilities. In 2020, we also participated in the "17th BEST CEO Pledge Ceremony" hosted by the BEST Forum: Business Ethics and Sustainability management for Top performance to declare compliance with ethical management at both domestic and overseas business sites.

Ethical Management Training

In order to promote employees’ voluntary practice and awareness of ethical management, we are conducting mandatory annual training not only to all employees in general but also to newly recruits or promoted employees. High-risk departments are selected considering their direct involvement with the suppliers and relevance of fair business practices, and these departments are subject to regular training on subcontract act and contract violation cases. For sales departments, we provide information about compliance process and standards applicable to sales field such as trade secrets protection, cases of embezzlement, bribery and forgery, and the regulations related to fair trade. We plan to make educational contents for all office employees in our domestic sites to facilitate their awareness in ethical management.

Ethical Management Campaigns

For effective promotion of employees’ awareness in ethical management, we produced promotional videos and magazines which are later distributed within the company groupware. In addition, we continuously deliver the importance of ethical management through messages from management executives.



[ Employee Pledge for Ethical Management at subsidiary in Vietnam ]

Risk Management in Business Ethics

Internal Monitoring

HAMC conducts an audit on all aspects of management, from on-site management to job diagnosis for production management. We have established and operated internal audit regulations since 1984, and it has been inherited also to each operating companies after spin-off in 2018. The technology and product audits are also in operation to build customer trust in our products and achieve their satisfaction. In addition, we guarantee the independence of audit activities, and we guarantee anonymity and minimize disadvantages so that auditors and informants are not treated unfairly.

Internal Audit System

We conduct regular audits according to internal audit regulations and special audits if certain issues arise. The material cases detected from the audit results are dealt with different measures such as caution, punishment and reimbursement depending on seriousness of the cases.

Follow-up Monitoring after Audit

The audit results are reported to the CEO, and those who are notified of the results are required to make immediate improvements to the indicated matters. At the same time, the audit team regularly reviews the issues to prevent recurrence.

Number of completed training on Ethical Management in 2019 (Unit: Persons)

	Ethics and Anti-corruption	Fair Trade	Total
HAMC	116	117	233

Number of illegalities and corruptions and reported cases (Unit: Persons)

Category	2018		2019	
	Domestic	Overseas	Domestic	Overseas
HAMC	Number of reported cases		-	1
	Number of disciplinary person		-	6

Compliance Program

Hyosung established a compliance program in September 2006 to voluntarily reinforce its compliance with regulations and spread sound business practice in the company. Each operating company inherited it and introduced it to their management system upon the spin-off on June 1, 2018. The Compliance Support Team is responsible for managing the compliance program and minimizing related risks by promoting guidelines to compliance program, training employees, and monitoring. At HAMC the Compliance Officer appointed by the board of directors is also in charge of the fair trade compliance manger. And the compliance manager updates the Compliance Manuals every year for employees to comply with up-to-date legal frameworks even in the event of revisions or changes.

Pre & Post-contract Deliberation System

In the process of making a contract with suppliers, we are operating a system to fundamentally block illegal matters and unfair practices through deliberation both before and after signing a contract. The internal deliberation committee, which consists of purchasing executives and purchasing team leaders, confirms compliance with fair trade through the legality review check sheet, and make efforts not only to comply with commercial laws but also to promote win-win cooperation with suppliers.

Ethical Management Awareness Building for Suppliers

When we make a contract with new suppliers, we ask them to voluntarily submit the statement of declaration for ethical management. Furthermore, we have established the code of conduct for suppliers to facilitate awareness of ethical management within the supply chain. In order to raise awareness of ethical management not only for employee but also for our suppliers, we plan to provide ethical training materials and venues for employees of supplier companies.

The Code of Conduct for Suppliers

- ✓ **Ethics and Fair Trade**  
- We promise to establish a transparent fair trade culture and actively participate in ethical management.
- ✓ **Human Rights and Labor**  
- Respect employees' human rights and do not treat them inhumanely.
- ✓ **Safety and Health**  
- Prevent accidents and occupational diseases of workers by preemptively identifying risks in the workplace.
- ✓ **Environment**  
- Meet environmental standards of all products and services and try to minimize environmental impact.



# HUMAN RESOURCE RECRUITING

Employees’ capacity is a deciding factor of a company/s competitiveness, especially in a global society where a company’s business activities take place all over the world. Hyosung would like to secure competitiveness by building a foundation for a sustainable work environment where each employee’s individuality is respected, a sound organizational culture is promoted, and safe working environment is available so that employees can work in pleasant atmosphere and yield optimal performance. We hire employees who practice our core values, 'global excellence, innovation, accountability, integrity', and provide them with various growth opportunities. We also provide them with an organizational culture of communication and cooperation and with a work environment that respect a balance between work and life. By taking these measures, we are trying to prevent a loss of talented people and to increase job satisfaction and commitment.



UN SDGs Linkage

## Recruiting Excellent Employees

### Hyosung's Talents

Hyosung’s desired talents are ‘global leaders’ who have our core values of global excellence, innovation, accountability and integrity to realize our mission of "Enhance and enrich the quality of life for humanity with its leading technology and management capability." Employees clearly understand the meaning and value of their work, challenge themselves to achieve the best outcomes and fulfill their responsibilities with dedication and self-motivation, thereby contributing to a brilliant future for themselves, for the company, for the customers, and for all stakeholders in the society.

### Open Recruitment

To attract ‘global leaders’ who can fulfill Hyosung’s mission, we are running various channels in both regular and occasional recruitment. In addition, we are transparently sharing the information related to the employment contract and recruiting process through our recruitment website. All applicants are given equal opportunities in the recruitment process and are not subject to discrimination based upon their academic background, gender, or religion. As part of our efforts to enhance transparency and diversity, we have excluded sections, such as applicants’ photos and family status, and eased application restrictions based on age, academic record, and language proficiency scores. In consideration of the socially disadvantaged, we are also implementing preferential policies for national merit and the disabled.

### Onboarding Program

We are operating onboarding programs for new employees so that they can easily adapt to the company and demonstrate their capacity at early times in their fields. All new employees receive introductory training in Hyosung and each operating company, and mentoring program are delivered consecutively. For new employees who already have career experience, introductory training in our core values, organizational structure and regulations is provided on a regular basis, and scouted executives are provided with 1:1 training program to introduce business status, organization structure, management philosophy and other company policies after they get onboard.

### Mentoring Program

Hyosung is operating a mentoring program to support the new employees’ onboarding and career development. New employees of Hyosung receive introductory training of Hyosung and the four operating companies. Mentors are assigned from each team to take responsibility of assisting the new employees to build competences required in their job position. When new employees are assigned to their teams, they are matched 1:1 with a mentor and participate in a mentoring program for 6 months. The program helps new employees acquire basic competencies necessary for their growth by enhancing their understanding of the company's philosophy and business, their positions, our products, customers, and markets. Hyosung continues to improve its system for new employees to secure future growth engines.



[ Onboarding Program for New Employees ]

# HUMAN RESOURCE TRAINING

Hyosung is making various efforts to secure competitiveness for sustainable growth after its transition to the holding company system on June 1, 2018. After the spin-off, the Human Resource Development Center reorganized its training programs and set the direction of operation tailored to business area and characteristics of each operating company. To this end, staffs of the Human Resource Development Center have been deployed to each operating company to share knowledge and experience so that the companies can establish and operate their own training system and enhance job competency required from the relevant industry. In 2019, Hyosung conducted various education programs focusing on four areas: management philosophy communication, developing leaders, strengthening job expertise, and building global competency. We will continue to strengthen the foundation of sustainable growth of our employees by integrating management philosophy into the field and discovering and disseminating best practices through the close collaboration with the HR development center and persons in charge of training in each operating company.



## Enhancing Employees Competency

### Management Philosophy Communication

We are carrying out a variety of programs to spread our core value, 'Hyosung Way', and to highlight accountability management, so that all employees are clearly aware of the management philosophy and further apply it to their tasks. We focus on introducing core values to the new employees so that their direction of growth could align with the company's. We guide all employees to practice 'actions for accountability management' and to internalize management philosophy. Since 2019, we have incorporated 'actions for accountability management' into our employee evaluation system, as we are trying to improve employees' attitudes toward work, the pursuit of the company's sustainable growth, and their personal development.

Trainee	Description of Training
All employees	Educating 'actions for accountability management' so that employees understand and practice them at work
Newly recruited (new/experienced)	Sharing corporate philosophy, core values, and actions for accountability management to the newly recruited in order to help them quickly adapt to the company
Newly promoted	Encouraging the newly promoted employees to make change in accordance with their new job level by educating them on the expectations for their new role

### Developing Leaders

Hyosung's leadership training efforts are aimed at developing managers who have the capability of promoting our business sustainably and lead the organization effectively. When executives and team leaders are appointed, we support them and provide educational opportunities to help them gain a broader perspective as a businessman. Recently, we are also paying attention to the role of a leader who could effectively communicate with millennials and encourage their immersion. We will continue to make efforts so that all employees can practice their leadership and grow into leadership positions

Trainee	Description
Newly appointed executives	Making newly appointed executives aware of their roles and responsibilities and supporting their growth as goal-achieving leaders based on business philosophy and entrepreneurship
Sales executives	Assisting onboarding of sales executives by educating company core values, business status and policies
New team leaders	Supporting new team leaders' success through performance and team management based on roles and responsibilities
Insight Forum	Providing up-to-date business trends and diverse insights to executives and team leaders

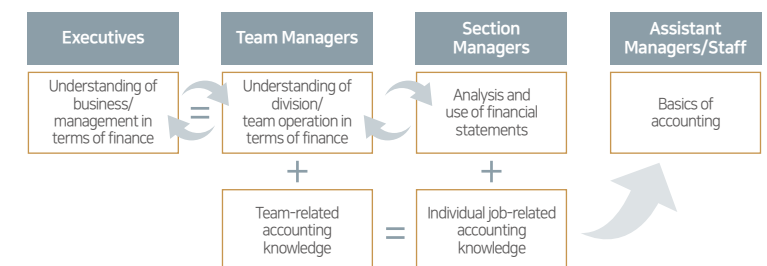
### Strengthening Job Specialty

Hyosung provides a variety of training and education for all executives and employees in the company so that they can learn the knowledge and skills required for their respective fields of work. In addition to the Human Resource Development Center, each PU/business site or team operates job training tailored to its own characteristics, enabling the training to go hand in hand with the task at actual work.

Area of Training Category	Description of Training
Finance/accounting	Improving business efficiency through comprehensive understanding of finance/accounting
By each operating company	Sales: Overall sales activities : customers / market / competition / credit / stock / logistics
	Production: Overall production activities: process / facilities / quality / innovation activities / environment safety
	Management: Overall management support and operational activities : costs / accounting / regulations / HR
	Research: Overall R&D activities : R&D / research methodology / project feasibility
Core competency training	General job competencies required in each business unit : product knowledge / work attitude / organization strategies

After the transition to the structure of holding company in 2018, Hyosung has been required to secure effective business operation and financial stability to the holdings and its four operating companies. Following this change, each executive or employee is challenged to implement various tasks with the strict cost-effectiveness in their mind. To this end, we have organized a company-wide training in finance and accounting in 2019. Our executives have undertaken extensive training on effective management of business KPIs in order to support profit management and investment decision-making for sustainable growth of the company. Training of team leaders was focused on accounting knowledge and management measures which may be useful in their individual field of work such as sales, production, research, operation, planning and finance. Team members were trained to learn practical knowledge about finance and accounting applicable to their tasks. Executives who have participated in this training have acknowledged that profit management and responsible decision-making for investment are essential for maximizing future values for shareholders and company alike.

#### [ Company-wide Finance/Accounting Training ]





Enhancing Employee Competency

Enhancing Global Competency

As Hyosung is actively expanding its business territory around the world, it has become our utmost priority, as we work to strengthen the capabilities of human resources to respond effectively to the needs of global market. To this end, we have identified and actively supported various educational needs derived from overseas subsidiaries and branches, such as the fostering of leaders who can lead the continued growth of overseas subsidiaries and enhancement of job competency for overseas expatriates and local employees. In 2019, we dispatched in-house professors to Vietnam and Jiaxing. Professors were tasked with training candidates for executive positions, new employees and, salespeople: they provided them with coaching and training tailored to the local conditions. In the future, we expect that our overseas subsidiaries and branches will establish their own training systems and work to disseminate the company's management philosophy while also developing their employees' competencies.

Overseas Subsidiaries	Description of Training and Development
Vietnam	Establish a system for developing candidates for executive positions - Selection, competency assessment, management training, personalized on the job training and regular mentoring
Jiaxing, China	Build sales capacity for new sales employees - Sales, customer counseling skills and data collection, and sales coaching for local managers



[ Training in Overseas Subsidiary ]

Field-specific Training by Professors

Hyosung has two full-time professors with backgrounds in leadership and sales, respectively. They work to provide education tailored to the company's unique business characteristics and organizational culture, which are differentiated from a general business curriculum. Whenever there is a demand for training in the field of work, a differentiated hands-on training is provided with specific solutions related to the issues at hand. The Human Resources Development Center will continue to strengthen activities that contribute to improving the performance in the field by providing various means of support, such as training system and curriculum development, to meet educational needs at each operating company and PU/business site.



[ Field-specific Training ]

Reinforcement of Customer-Centric Management by Training

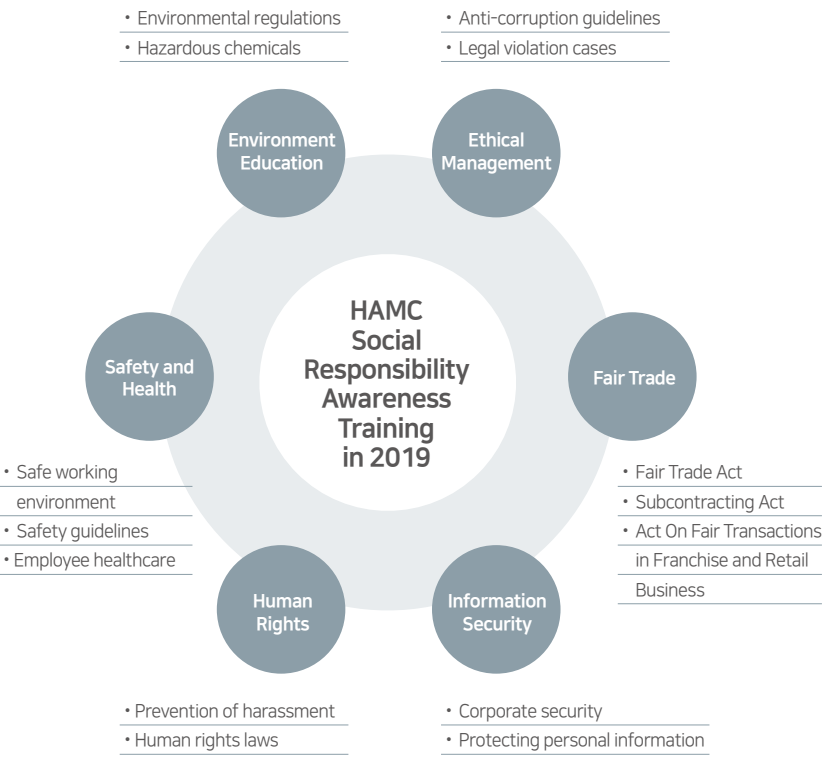
The Human Resources Development Center provides training through diverse channels, so that all employees can align themselves with the business objectives. In 2019, we conducted training for employees in different positions, in cooperation with related departments to effectively steer C-Cube (VOC, VOCC, VOCO) activities, the customer-centric management practices that are emphasized as part of the company's management policies. In 2020, we made video clips of C-Cube activities and spread them to all business sites so that they can effectively learn from the practices.

Job Competency Training for CDP

HAMC provides a variety of training courses to help employees strengthen their job competency as they progress in their job. Over 730 on-line courses are provided to cover basic career skills, professional training by field, and foreign languages. All employees are given opportunities to expand their job competency for career development.

Social Responsibility Awareness Training

We continue to raise awareness of social responsibility through trainings. In 2020, trainings on anti-corruption and compliance with fair business practices, environmental education, and workplace harassment prevention will be delivered to all employees in Korea. And we will continuously expand the scope of trainees to cover all overseas subsidiaries.





# HUMAN RESOURCE MANAGEMENT

HAMC is operating diverse support systems to enhance employees' engagement and job satisfaction. We are also running a maternity protection policy, a flexible working policy, and an in-house daycare center to alleviate the childcare burden. We are paying attention to employees' requests and needs through employee survey so that we can cultivate a sound organizational culture and pleasant working environment as well as carry out team building activities accordingly. Moreover, we encourage employees' motivation by rewarding excellent employees in each quarter. HAMC has established a company-wide communication channel to address employees' grievances and protect their rights. To reinforce the organization's vision and goals, the CEO and top management directly participate and promote conversation and communication with employees.



UN SDGs Linkage



## Work and Life Balance

### Family-friendly Management

HAMC endeavors to build a family-friendly culture in the company that encourages employees and their families to participate and communicate their needs directly to the company upon which we seek to make improvements. To that end, we have implemented various programs for employees and their families as well as maternity protection policy. In recognition of these activities, HAMC received Family-friendly Management Certification in 2018.

### Maternity Protection Policy

HAMC boasts a variety of maternity protection policies for pregnant employees. In addition to the 90 to 120 days of maternity leave that can be used before and after childbirth, the company also offers reduced working hours by 2 hours per day for expecting mothers within 12 weeks after pregnancy and after 36 weeks of pregnancy. In addition, the company guarantees maternity leave and supports medical expenses in case of miscarriage or complication. After giving birth, childcare leave can be used within one year, or a reduced working hour system of 15 to 30 hours per week can be arranged. In addition, employees can use nursing room in the company and breastfeeding time is guaranteed for 30 minutes or more, twice a day in the office. In addition, a special ID card is provided to pregnant employees so that colleagues can be more aware and considerate. We also provide leave for spouses and family care leave in case of sickness of their children or family members, and enforce a policy to prevent overwork of pregnant women at night or during holidays.

### Daycare Centers

In order to relieve the childcare burden of working parents and to further support a work-life balance, we are running in-house daycare centers in the Mapo and Ulsan business sites. We ensure the best childcare environment in the centers by regularly conducting inspections for toxic substances ensuring reliable childcare and high-quality education by teachers from professional childcare service agencies.



[ Company Daycare Center ]

### Flexible Working Arrangements

HAMC complies with legal working hours (52 hours per week) and supports flexible working arrangements to increase employees' productivity. There are optional working hours system and flexible working hours system, and overtime pay is given for extra working hours. In this way, employees can manage their time flexibly and efficiently depending on their workloads.

### Refresh Day and Designated Holiday System

Through the 'Refresh Day Policy', HAMC encourages employees who may find it difficult to use up their paid holidays due to the factory operation schedule to use a maximum of five annual paid holidays in a row. In addition, we operate the designated holiday system, in which employees are given days-off , usually in connection to one-day-national holiday or traditional holiday. This allows employees to fully recharge and return to work with fresh energy.

## Organization Development

### Employee Opinion Survey

We implement opinion surveys to diagnose organizational culture and current issues in each PU, business site, and team, so that we can identify a sense of belonging and trust from our employees in depth. A professional firm in the field of organizational culture is invited to implement these surveys. We have conducted surveys and 1:1 in-depth interviews to all employees and executives to understand the status of our company and set the direction of organizational innovation we will pursue in the future.



[ HAMC's Family Day ]

## Team Culture Activities

### Proud Hyosung-er Award

The Proud Hyosung-er Award is awarded every quarter or year to the executives or employees who have achieved outstanding performance contributing to company's growth and development. Winners are selected in the sectors of marketing, technology, research and management support, and monetary incentives and promotion-related advantages are given as a reward.



[ Proud Hyosung-er Award ]

### Conversation with Top Management

The CEO of Hyosung holds a monthly meeting to directly explain and share the company's major achievements, issues and policies to executives and team leaders. During the meeting, a Q&A session is prepared where top management members and employees can communicate candidly, thereby strengthening company-wide communication and management transparency.

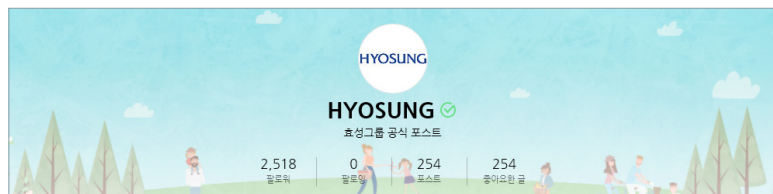


[ Conversation with Top Management ]

## Company Communication

### Internal Bulletin Boards, Blogs and Other External Communication Channels

Hyosung is operating communication boards such as ‘Tong Tong Bulletin Board’(used in real name, 156 posts in 2019) and ‘Wa-gle Wa-gle’(used in nickname, 430 posts in 2019) in its company intranet so that all employees widely share business information and news and exchange their opinions. Tong Tong Bulletin Board serves as a communication platform across entire business units, with communicators from each unit putting posts along with photos to promote business activities. It also facilitates interactive communication by actively responding to the suggestions posted by employees (42 posts in 2019). In addition, by operating Hyosung blog, 'MY FRIEND HYOSUNG', we deliver various news within and outside the company, including major corporate news, social responsibility activities and stories of employees. Furthermore, we also created YouTube and NAVER TV channels for internal and external communication. In recognition of our active company-wide communication, we received the 'Best Organizational Communication Blog Award' in 2018 Korea Communication Awards hosted by Korea Business Communications Association.



### Communicator

In order to facilitate cross-departmental communication among PUs, we are appointing ‘Communicators’ within each business site. At least one employee should be selected as a communicator in each site. Once appointed as a communicator, he or she is responsible for communicating and informing issues of their business site to others after getting proper training related to organizational communication.

### Employee Relations

Our internal regulations allow and support labor union activities. Each business unit transparently discloses management status of the company to its employees through regular briefing sessions or round-table meetings for each management-level. Meanwhile, we operate the Labor-Management Committee at the headquarter as well as at each plant and hold a quarterly meeting to discuss welfare, grievances, health and safety of employees. Among the members of the Labor-Management Committee we appoint a person in charge for grievance handling committee to immediately review the complaints received and manage them throughout the company, and continuously monitor whether the issues have been improved or not.

### HR Counseling Center

The HR counseling center is a communication channel to collect and directly deliver employees' work-related grievances to the executives including various issues such as sexual harassment, embezzlement, and personnel corruption. HR executives directly interview with employees and give them feedback under strict confidentiality. As a result, we manage to lower the turnover rate of our employees by providing them with job change options or consulting solutions.

### External Communication Channels



Hyosung Official Facebook Page  
<https://www.facebook.com/myfriendhyosung>



Hyosung Official NAVER Post Page  
<https://post.naver.com/hyosungpr>

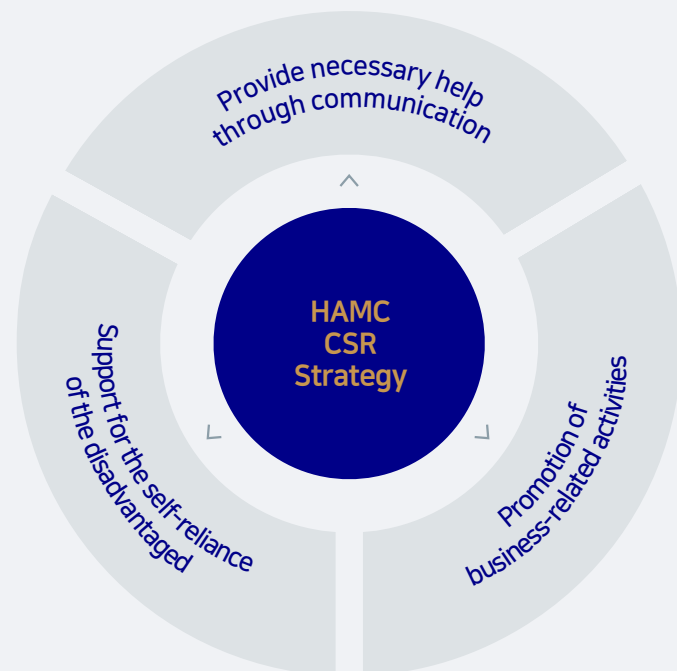


YouTube Channel – Channel 호호  
<https://www.youtube.com/채널호호>



## SOCIAL CONTRIBUTION

The effect of CSR (corporate social responsibility) activities are maximized when core competency of a company matches with the actual needs from a local community. Corporate social contribution is becoming more competency-oriented and market-oriented. HAMC operates a communication channel and consultative body to gather a wide range of opinions from local citizens and expert group in order to accurately understand the needs of the community. We are also forming partnerships with NGOs and civic organizations to propel our social contribution more effectively. By expanding the scope of social contribution, we aim to benefit all underprivileged people in the community, strengthen strategic social contribution by closely combining it with our core competencies and business area, and further enhance the sustainability of HAMC.



UN SDGs Linkage



## Social Contribution System

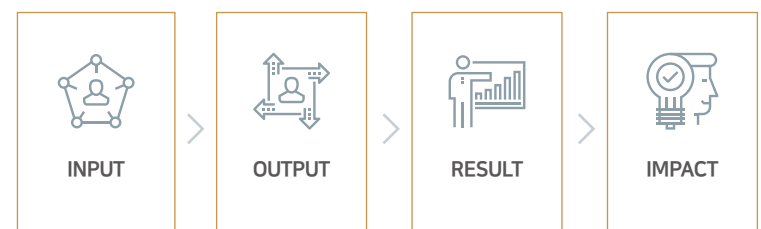
HAMC continues to provide practical help to neighbors in need through various activities in order to co-exist with members of the local communities at business sites in domestic and overseas.

### HAMC CSR Vision & Strategy

Vision and Goals
Hyosung Advanced Materials shall establish a CSE(Creating Social Eco-system) through providing <b>necessary help</b> to social members based on <b>communication and cooperation</b> with the community and government, creating an environment where <b>vulnerable groups can become self-reliant</b> , as well as <b>business-related CSR activities that are mutually beneficial</b> to members of the society.

CSR Strategy		
Provide <b>continued necessary help</b> rather than one-time events which are derived from <b>communication with local stakeholders</b> .	Provide <b>practical help</b> for the <b>independence of vulnerable social groups</b> such as people with disabilities, the elderly, and people in poverty.	Promote <b>business-related activities</b> that can <b>co-exist</b> with beneficiaries.
CSR Focus Areas of Hyosung		
Vulnerable group support domestic and global	Culture & Art Sponsorship	Patriot and Veteran Support

### Social Contribution Performance Measurement Process



## Continued & Necessary Support

### Smile Expedition in Vietnam

To support the vulnerable groups overseas, Hyosung dispatched the ‘Smile Expedition’, the medical volunteer group’ to the Dongnai province near Ho Chi Minh City, Vietnam. The Smile Expedition, a social contribution program with 9 years of history through which Hyosung provided free medical treatment and health training activities for 2,400 local residents in cooperation with 30 members including staffs of the International Relief Agency for Hunger, Gangnam Severance Hospital and Hyosung. The medical service covered a variety of sections including heart surgery, gynecology, ophthalmology, dentistry as well as health training. In addition, about 150 people including expectant mother in Hyosung business sites and college students in nearby areas were provided with basic gynecological training covering safe contraception methods and knowledge about pregnancy, and elementary school students received anti-cavity treatment and eye examination. A total of 15,000 local residents who were placed in a medical blind spot received high-quality free medical treatment since 2011.

### Overseas Child Sponsorship

Through monthly donation by the employees, we are supporting children residing in underprivileged areas in Vietnam and developing their region. In addition, subsidiary in Vietnam provides a clean and safe education environment for the children and built a library to help children from minority ethnic groups learn Vietnamese. The fund raised through voluntary donation from our employees is used for the health and education of Vietnamese children, and the company's grant amount is used for development projects for the areas where children live, for classroom expansion, drinking water quality, and awareness activities for parents and teachers.



[ Smile Expedition Activities ]



## Practical Support Activities by Site

### Seoul

#### ■ Volunteer Activities at Residential Facilities for the Severely Disabled

Employees at the headquarters have been participating in a monthly voluntary work at a local residential facility for the disabilities(Youngnak Ania) since 2012. We assist the staff at the facility during meal time once a month. Every year, we hold a sports day for the residents of Youngnak Ania, conducting a one-on-one matching sports program with the children who have difficulty in outdoor activities. We also support the cost of replacing inner seats for their wheelchairs.

#### ■ Environmental Cleanup Activities at Community Welfare Centers

Every month, we conduct environmental cleanup activities at the Central Senior Welfare Center in Seochogu, a community center that helps senior citizens learn and interact in a pleasant environment.

### Ulsan

#### ■ Scholarship for the University of Ulsan

HAMC provides scholarships for students with outstanding academic records at a local university so that students in need can focus on their studies.

#### ■ ‘One-Company, One-Village’ Farming Volunteer

We visited Ulsan Joong-gosan village to help their work during the farming season, which is the busiest time of the year for many farmers. Ulsan plant is supporting their rice planting and harvesting as well as throwing a party for the elderly residents at the Joong-gossan village, a sister village of Ulsan plant since 2005.



[ Sports Day at Youngnak Ania ]

### Jeonju

#### ■ Volunteer Activities at ‘Hosung Orphanage’

Jeonju plant employees organize regular visits to the Hosung Orphanage in the region to proceed ‘Sharing Volunteer Activities’. In 2019, we supported replacement costs for old electric appliances and building study rooms, contributing to the children’s living condition improvements.

#### ■ Scholarship for Jeonbuk Girls’ High School

Since 2017, Jeonju plant has been supporting a scholarship to students in difficult economic condition or excellent academic performance at the Jeonbuk Girls’ High School, contributing to fostering local talents in the region.

#### ■ ‘One-Company, One-Trail’ Cleanup Activities

There is a trail near the Jeonju plant which is visited frequently by local residents as well as employees for taking a walk or social gathering. The employees of Jeonju Plant regularly clean up the trail and pick up trash around the trail so that the citizens can pleasantly use the trail.

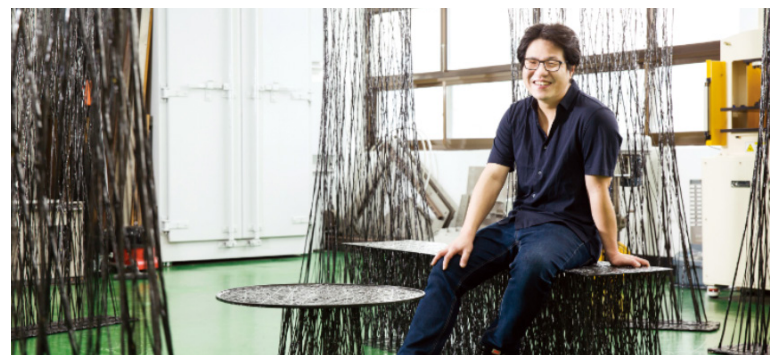
### Daejeon

#### ■ Activities at a Local Day Care Center

We organize regular visits to the local day care center to help improve the children’s living conditions and support their education.

#### ■ Cleanup Activities at the National Cemetery

Every year we visit to the Daejeon National Cemetery to proceed volunteer activities, pay respect to those who have sacrificed for our country and cleanup the graveyard area.



[ Business-related CSR – Supporting Carbon Fiber Artist ]

## Business-related Activities

### Support for Carbon Fiber Start-ups

Through the Jeonbuk Center for Creative Economy Innovation(CCEI) and Hyosung Carbon Specialized Start-up Care Center established and operated at our Jeonju plant, we support the commercialization of start-ups. We provide the start-ups with counselling, technical consultations, commercialization support, and marketing support.

In 2019, we supported a number of local small to medium-sized companies - consultation of Carbonfiber Energy System(CES)’s Conformite European Marking(CE) certification of its carbon fiber heating system, WIS’s development of carbon material prototypes, and S-advanced Materials’ development of carbon material hydrogen storage vessel flame suppressant prototypes.

### Sponsorship of Artists Using Industrial Materials

HAMC provides our products such as aramid, carbon fiber, and carpet to artists who use technical textile for their art work. We also offer technical consultations regarding the use of technical textiles.

Since 2018, we have supported artist Roh, Il-Hoon who uses advanced materials such as carbon fiber and aramid in his art work. He is well-known for his ‘Rami Series’ that uses natural motif and pattern into design and 3D structure. In October 2019, we provided our carbon fiber, TANSOME® as material to artist Roh for the 2020 Cheongju International Craft Biennale .

### Cultural Heritage Conservation at Changdeokkung Palace

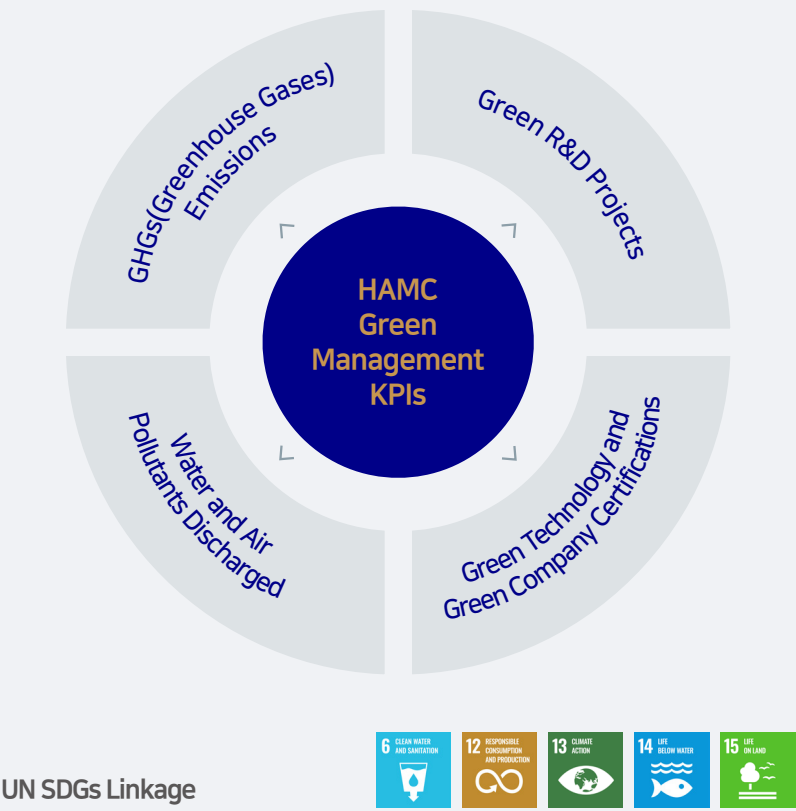
Since 2006, employees of Hyosung have regularly participated in the cultural heritage protection activities of Changdeokkung Palace. In 2019, we organized an event in Changdeokkung Palace with 40 employees and their family members during which we all cleaned a pavilion “Juhabru” at the palace together while strengthening the employee bond as well as contributing to cultural heritage conservation.



[ Cultural Heritage Conservation Activities in Changdeokkung Palace ]

GREEN MANAGEMENT

As stakeholders' interest in the environment increases, industries are facing changes in accordance with international environmental agreements and initiatives. Following the green energy policy that has been emphasized since the Paris Agreement took effect, global leading companies are expanding use of renewable energy, and financial institutions are evaluating environmental issues of companies when making important investment decisions. Therefore a company's environmental management capabilities are emphasized more than ever nowadays. HAMC proactively seeks to respond to environmental risks by identifying environmental issues from various stakeholders from the planning stage of a project. In addition, Green Management Committee has been reorganized to facilitate green management systematically, and specific plans and tasks have been prepared in accordance with green management strategies, and related performance is monitored every year. Furthermore, we have been focusing on investment in facility improvement for saving energy and reducing emissions as well as waste management and pollution prevention.



Green Management System

Green Management VISION 2030 of Hyosung Group

To realize our green management vision, "Becoming an Eco-friendly Company Leading the Better Life of Humanity," Hyosung has established four strategies: 20.5% of emissions reduction (compared to BAU), business expansion through developing green technologies, environmental corporate culture through green infrastructure within the company, and enhancement of stakeholder trust by disclosing information transparently. In addition, we are deriving detailed action plans to support these strategies and implementing them to realize the goals.

Green Management Committee

HAMC operates Green Management Committee under Sustainability Steering Committee of which CEO has leadership, as a subcommittee specialized for environment, health and safety. Green Management Committee with C-level leadership conducts decision-making about green management and reports important agenda to Sustainability Steering Committee who is responsible for final decision-making. Furthermore, we implement green management systemically with green management specialized manpower and Environment Safety Team at each production sites.

Roles and Responsibilities of the Departments in Charge

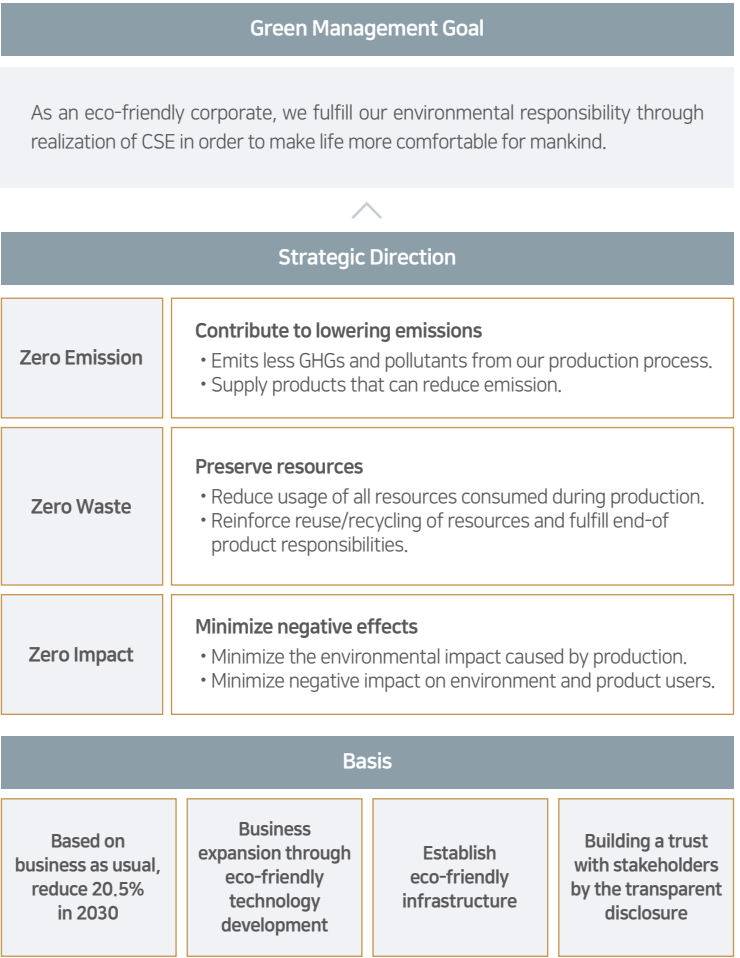
The organization and specialized manpower in charge of green management of HAMC monitor the enactment and revisions of laws related to environmental regulations, such as the Act on the Allocation and Trading of Greenhouse Gas Emission Permits, The Occupational Safety and Health Act and the Act on Registration and Evaluation of Chemicals, and reflect the result of green management activities to the green management strategies. We provide guidance and training on the legal framework related to green management to our business sites in order to prevent any legal violation due to lack of awareness. We also guide them about environmental insurance renewal in each business site and registration of environmental information in compliance with environmental information disclosure system based on the Environmental Technology and Industry Support Act. The Environment Safety Team of each plant reports the compliance with legal framework related to environment and safety and controls pollutants stricter than the legal standards through strict management of pollution prevention facilities. The activities of green management experts are carried out frequently throughout the year, and are regularly reported and managed.

Environmental Performance Evaluation System

HAMC has a system to evaluate and manage environmental performance, such as greenhouse gas emissions, discharge of water and air pollutants compared to permissible standards, and cases of legal violation.

Green Management of HAMC

Based on Hyosung 's Green Management VISION 2030, HAMC is committed to fulfill our environmental responsibility through actualization of CSE(Creating Social Eco-system) in order to improve sustainability for all humanity. To achieve this goal, we are carrying out various activities aligned to three strategic directions - 'Zero Emission', 'Zero Waste', 'Zero Impact'.





20.5% of Emissions Reductions by 2030 Compared to BAU

Upgrading Greenhouse Gas Management System

Hyosung has established a greenhouse gas (GHGs) management program to systematically manage emissions target and performance by each business site, and has upgraded the existing system in 2019, based on the changed guidelines after spin-off. We manage monthly emissions data in preparation for the ETS (Emission Trading System) system, as well as source-specific emissions data (Scope 1, 2) to effectively respond to third-party verification for the ETS system, CDP (Carbon Disclosure Project), and continued customers’ requests.

Building Awareness for GHGs Reduction

Hyosung shares best practices related to energy saving in each business site to encourage all employees to be committed to reducing greenhouse gas emissions. In addition, each business site establishes detailed action plans and goals for emission reduction so that employees can practice them in day-to-day work. By promoting climate change-related education across the company, we were able to raise employees' awareness of climate change.

GHGs Emissions Quality Control & Quality Assurance

The Green Management Team, which is in charge of calculation and reporting of emissions of HAMC, operates quality assurance of greenhouse gas emissions such as monitoring energy consumption and greenhouse gas emission activities and internal verification of data errors for calculating emissions. The departments in charge of tasks related to greenhouse gas at each plant (Power Control Team, Plant Management Team) are responsible for quality control through collecting, managing, preserving data on GHGs reduction activities as well as meter management and regular inspections (calibration test).



[ Photovoltaic Panels ]

GHGs Emissions Reduction

HAMC manages energy usage data at its business sites to derive optimal measures to reduce emissions and increase energy efficiency, and actively conducts activities to mitigate emissions such as enhancing efficiency of production lines, replacing old facilities to high-efficiency ones, use of renewable energy, and shift to low-carbon fuels.

High-efficiency Production Lines

Daejeon plant is saving power by flexible operation of thermo hygrostats in the plant and shortened preparing time of a production to reduce running time of dryers. Ulsan plant is minimizing heat loss from radiation in steam by achieving the efficiency in production process and is saving power usage from replacing aging facilities with high-efficiency ones. Jeonju plant has reduced 50% of LNG use by optimizing carbon fiber production process. By using idle compressed air of nitrogen generators as low pressure air in the production process, low pressure compressor usage time has been reduced, thus, reducing power required for operation.

Replacement with High-efficiency Facilities and Inverters

Many industrial facilities including pumps, fans, and compressors are usually highly electricity-intensive with low level of energy-efficiency. HAMC has introduced operation method using high-efficiency or manual inverters for such heavy energy-consuming facilities to achieve higher energy efficiency and less power consumption in order to create a better working environment with lower level of noise and vibration. Moreover, boilers and motors with low energy consumption efficiency were replaced with high-efficiency ones, which not only save energy but also reduce greenhouse gas emissions.



[ Waste Heat Steam Pipes ]

Replacement with High-efficiency LED Lamps

Hyosung is continuing to reduce power by replacing the existing conventional lamps with LED lamps. Since 2015, about 13,000 lamps at Changwon Plant and 7,000 at Gumi Plant were replaced with LED ones. Business sites in Ulsan, Daegu, and Yongyeon have also contributed to reducing emissions by using high-efficiency LED lamps.

Solar Photovoltaic Power Generation and Solar Water Heating System

In order to facilitate the use of renewable energy, HAMC has gradually expanded photovoltaic power from domestic business sites to Jiaxing and Qingdao (to be completed in 2020). By installing photovoltaic power generation facilities and self-consumption of generated power in the workplace, we are reducing the amount of electricity purchased and indirect greenhouse gas emissions (Scope 2).

Use of Steam from Waste Heat

HAMC is reducing the use of fossil fuels by utilizing the waste heat and process heat at plants from other companies. In addition, economic revenue is also generated by reselling such external waste heat to other companies through steam pipelines.

Replacement with Low-carbon Fuel

HAMC has been reducing emissions by replacing carbon-intensive B-C oil with LPG and LNG. It has gradually expanded the replacement rate and finally stopped using B-C oil since 2019. Additionally, we are replacing fossil fuels used in boiler with biogas (methane) generated from the anaerobic digestion process of wastewater treatment facilities in our business sites.



Facilitating Eco-friendly Corporate Culture by Establishing Green Infrastructure

#1. Air Quality Improvement

Risk Management regarding the Special Act on Air Quality Improvement

Hyosung provides detailed guidance to each business site to manage legal risk from air quality improvement regulations. In 2019, educational materials were distributed to each business site regarding the enactment of the subordinate statutes of the Air Control Zone Act, and training sessions were held to introduce related details. In addition, we encourage employees to attend the briefing session on the Air Control Zone Act, held by the Ministry of Environment, so that business sites have the capability to voluntarily comply with the Air Quality Control Area Act.

Air Pollution and Odor Management

HAMC conducts regular training for field workers to enhance their understanding of air pollutant management and to develop practical skills. We effectively manage air pollution and odors by setting up our own standards for emission of air pollutants that are stricter than the legal standards stipulated by the Korean Ministry of Environment.

Reducing the Emission of Air Pollutants

HAMC converted B-C oil, a high-sulfur fuel used in factory machinery, power generation, and boilers, into low-sulfur fuels such as LNG and by-product gas (Off-gas, biogas). In addition, we reduce not only air pollutants emitted but also energy consumption by introducing high-efficiency and low-emission burners and replacing outdated boilers. As the health and safety of the people have been threatened by fine dust, we have voluntarily signed an agreement with the Ministry of Environment on the reduction of fine dust for the improvement of air quility in the local society in preparation for the season of high concentration of fine dust and emergency reduction measures. In addition, we make various efforts to reduce air pollutants by establishing and operating our own standards of emission concentrations that are stricter than legal standards through optimizing the operation of air quality facilities and by conducting real-time monitoring on air pollutant emissions.




✓ Decreased 1.2 thousand tons of GHGs emissions at domestic business sites in 2019 through environmental investment and operational improvement

#2. Water Management

Reducing the Discharge of Water Pollutants

HAMC minimizes the discharge of water pollutants by establishing its own internal standards that are much stricter than the legal standards. Regular water quality inspection is conducted to all business sites, and improvement activities such as replacement of aging water pollution prevention facilities are carried out on the sites where something significant is found as a result of the inspection. In addition to the water quality inspection, HAMC conducts its own analysis of wastewater concentration and prepares emergency countermeasures to remove water pollutants in connection with the production department when highly polluted wastewater is released.



✓ Increase reuse rate of water in domestic business sites  
2018: 34.6% ⇒ 2019: 53.9%

Water Reuse

HAMC has established and operated water reuse facilities and processes to expand the use of recycled water. Business sites manage their performance of recycled water use. In the future, we plan to expand rainwater facilities and water recycling facilities in order to establish a sustainable water reuse system.



[ Sewage Treatment Facility for Water Reuse ]

#3. Waste Management

Waste-related Legal Risk Management

The Green Management Team minimizes legal risks related to waste matter that may occur at the business sites by disseminating the waste-related regulatory information such as the waste disposal charge system and extended producer responsibility to employees at all business sites of Hyosung group.

Waste Management

HAMC carries out systematic waste management by clearly defining the disposal method according to the waste type at each business site. In addition, we strive to ensure the proper waste management through training on separate waste disposal and regular inspection activities. In order to reduce the amount of waste generated in the production process and minimize environmental impact, we are improving the waste disposal process by taking into account the properties and components of waste, and deriving improvement measures to increase the waste recycling rate.

Waste Reduction Activities

HAMC not only manages and treats waste carefully, but also continues activities to reduce the amount of waste generated. As a result of research and development on the use of process waste and recycled raw materials and the related process technologies, we are realizing waste reduction through products such as steel cord made of scrap wire rod and carpet yarn and sewing thread certified with GRS (Global Recycle Standard).



[ Steel Cord ]

Facilitating Eco-friendly Corporate Culture by Establishing Green Infrastructure

#4. Hazardous Chemical Substance Management

Hazardous Chemical Substances Management System

HAMC manages all chemical substances used in the workplace through an ERP-based computer system. All purchased materials are investigated to confirm whether they contain chemical substances through the system, and purchases are blocked if they contain chemicals without approval by the chemical manager at each business site. Purchase of materials is only approved when the materials completely comply with the regulations. This is verified through cross checking the materials data provided by the supplier with our SERC DB (a SAP EHS Regulatory Content Database).

Chemical Substances Management System

In preparation for potential emergencies such as leakage and explosion of chemical substances, we have established an accident response system by setting up networks with related departments and organizations and conducting regular emergency response training for employees. In addition, we have established Comprehensive Measures for Chemical Substance Management based on which dedicated teams are organized along with their responsibilities and roles defined. All business sites treating chemical substances have established a thorough chemical spill response system in which potential travel path of the spill is tracked in advance, a step-by-step prevention plan is established, and blocking facilities are installed in the final travel route. We also conduct weekly on-site inspections with a checklist of risk factors related to hazardous chemicals. Our suppliers handling chemicals are required to report their contracts to environmental agencies in accordance with legal procedures.

Chemical Substances Risk Management

The Green Management Team guides the revision of the chemical-related regulations to its business sites so that each business site can be managed according to the latest regulations, and ensures compliance with the regulations by guiding performance reports and updating the DB of chemical substances. The Environment Safety Team at each plant carries out regulatory evaluation of chemicals purchased and produced, discharged amount assessment according to relevant laws, statistical investigation of chemicals, and performance reports on hazardous chemicals, and thoroughly manages chemical substances handling facilities in the workplace in accordance with legal standards. In compliance with the revised regulations on registration and evaluation of chemical substances, HAMC has completed a preliminary report on existing imported chemicals or manufactured that is more than 1 ton and is currently under registration process

through joining joint registration committee after being granted a grace period for registering chemicals according to the amount of manufacture and import.

Impact Assessment and Minimization of External Impact

The business sites treating specific hazardous chemicals over certain amount manage their use of chemicals in accordance with off-site risk assessment. We assess the impact on other businesses, residents and ecosystems near our business sites in the event of a spill, and the reassessment takes place whenever there is a change in the amount of chemicals treated and the treatment facilities. In addition, we have established a risk management plan and notify residents and the relevant organizations of the hazards of substances as well as evacuation drills in case of an accident, in an effort to minimize the damage to local communities.

Emergency Scenario Response Training

HAMC trains all employees every year by establishing emergency scenarios in preparation for accidents in order to efficiently respond to emergencies caused by leakage of hazardous chemicals, etc. Scenario response training is an emergency situation training that assumes an actual disaster situation, and is implemented with the aim of minimizing the severity of emergency situations and minimizing environmental/human impact by strengthening actual response capabilities. Through training, we protect priceless lives in the event of an accident, raise awareness of safety accidents for our employees, and strive to secure safety and reduce damage to property and personnel by preventing, preparing, responding, and recovering for emergency situations.



[ Emergency Scenario Response Training ]

Environment Management System Certification

HAMC establishes mid/long-term environmental goals and detailed annual implementation plans, and conducts internal and external audits every year to check their performance against their goals and derive improvements. We introduced ISO 14001 to systematically identify, evaluate, manage environmental impacts and to efficiently manage environmental risks. Through ISO 14001 certification, the company discovers and manages environmental issues in a timely manner and conducts internal audits every half year by qualified internal auditors. When it comes to the issues with high risk of accidents, we build test and scenarios in advance followed by actual emergency training to minimize any damage in the event of an accident.

Environment Cleanup Campaigns at Each Business Site

HAMC actively participates in protecting the natural environment near each business site through the ‘One Company-One River,’ and ‘One Company-One Walking Trail’ campaigns. We fulfill our responsibilities as a member of the local community through environment cleanup activities through voluntary participation by our executives and employees.

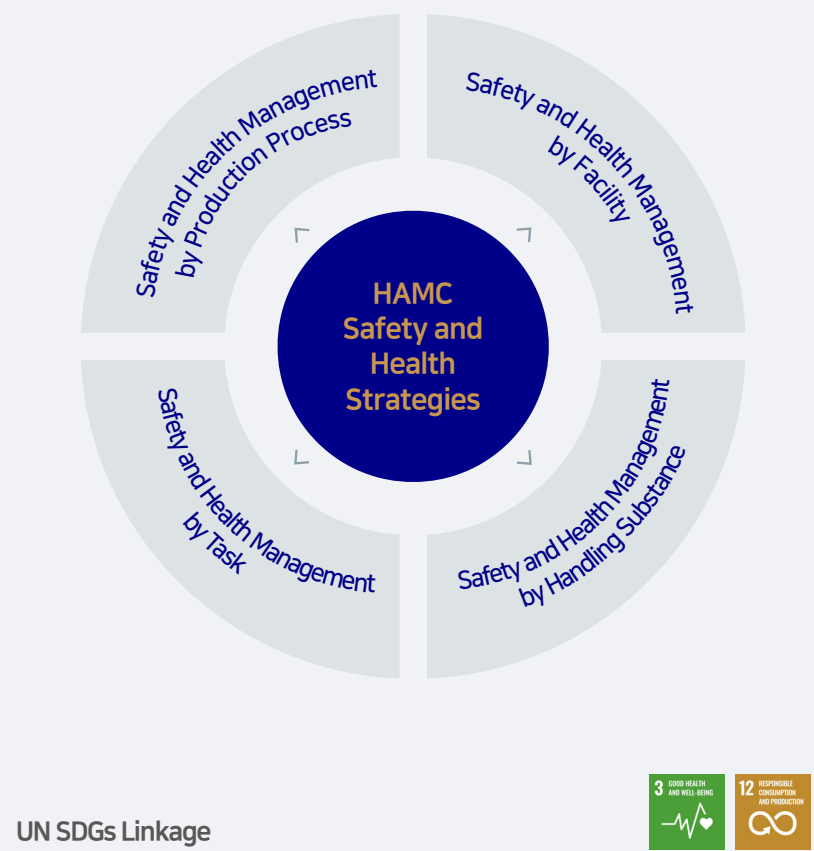


[ ‘One Company-One Walking Trail’ - Environment Cleanup Campaigns ]



# SAFETY AND HEALTH

Hyosung Advanced Materials cannot overlook the risk of safety accidents given the fact that its business sites are mostly based on manufacturing plants and industrial sites. In addition, recently, stakeholders are increasingly interested in prevention of disasters and accidents and improvement of working environment. Therefore, leading domestic or international companies are striving to ensure higher level of safety and health than the legal standards. HAMC considers safety and health to be a key value for the company to pursue and tries to create a system that can prevent accidents preemptively based on basics and principles rather than in the aftermath. To this end, HAMC has set a goal of a accident-free workplace and implements detailed safety and health activities based on two strategies: safety & health of workplace and employees.



## Safety and Health System

### Safety and Health Management System

HAMC operates a safety and health management system that focuses on safety & health of workplace and employees. We make sure that all business sites at high risk of safety accidents establish a safety and health management system based on manuals, and operate various programs to promote employees' safety & health. In particular, we have acquired international safety and health certifications such as KOSHA 18001 and ISO 45001. We are resolving risk factors in the workplace and preventing safety accidents in the process of conducting environment and safety assessments (PQ, Pre-qualification) which are required by customers.

#### ■ Safety and Health Management System

Mission	>	Achieving Accident-free Business Sites			
Strategies	>	Workplace Safety and Health		Employees Safety and Health	
Tasks	>	By Production Process	By Facility	By Task at Work	By Handling Substance
Organizations in Charge	>	Industrial Safety & Health Committee, Safety Inspection Committee			

### Industrial Safety & Health Committee

HAMC continuously keeps track of safety and health issues that require decision-making through regular meetings of the Industrial Safety and Health Committee between labor and management. In particular, by operating the working-level safety and health committee between hourly workers and management to resolve related complaints at the working site in a timely manner, we are building trust between two sides and creating a safe workplace. In addition, we conduct regular labor-management joint inspection involving not only our employees but also supplier companies. In addition, we continue to invest in safety facilities and provide training and education to promote safety awareness.

### Safety Inspection Committee

In order to prevent safety accidents and improve the capability of safety management, Hyosung has established the company-wide Safety Inspection Committee which consist of the heads of the Safety Environment Teams at each business site to conduct regular safety inspections. The needs of improvements are derived through regular safety inspections in all domestic and overseas business sites, and major safety and health issues are identified based on significance and urgency through meetings of safety and health representatives of supplier companies on site. In addition, we improve safety management by sharing the best practices and conducting case studies across our business sites.

## Workplace Safety and Health

### Executive-led Company-wide Safety and Health Inspection

HAMC conducts company-wide workplace safety and health inspections under the supervision of PU Presidents and Plant Managers in order to preemptively cope with workplace accidents that may occur in the production lines. Plant managers, department managers and supervisors carry out safety inspections for key assets within plants, and the status of response in the event of an accident. Also, staffs of the Safety Environment Team and members of the Industrial Safety and Health Committee also participate in the inspection to enhance effectiveness. We also check the health status of our employees during vulnerable seasons, such as, heat waves. We strive to prevent accidents and disasters through regular mock training.

### Facilitating Safety Culture in the Workplace

HAMC conducts an annual safety culture survey of the management supervisors to identify necessary improvement and reflects the result in the safety management plan. In order to promote employees' safety awareness, we are conducting a joint awareness campaign and a customized workplace campaign using statistics on accidents. In addition, accident cases which also cover from ours to other companies cases are shared to all plants, and accordingly, preventive measures are established for tasks posing a risk of similar accidents. We are striving to improve SHE (Safety, Health, Environment) awareness by announcing the request of the safety and health manager at monthly meetings, sharing safety and health issues at executive meetings, and checking safety and health compliance matters in a regular basis. Furthermore, in order to operate workplace in safety, we are conducting emergency response drills such as emergency evacuation, first aid, rescue and fire drills in preparation for fire situations in cooperation with related organizations.



Workplace Safety and Health

Safety Training Before Work

HAMC provides regular safety training for on-site technical employees before work. The supervisor delivers safety work procedures and health and safety compliance to the workers based on work standards, potential risk assessment results, as well as accident cases. We effectively utilize this brief on-site training to promote safety awareness of employees.

Safety-First Activity

HAMC ensures the safety of not only for our employees, but also our suppliers and employees of construction companies in the business sites. The work environment is reviewed through frequent patrols and inspections by a safety officer in the factory, and the work with insufficient safety measures is stopped and corrected immediately. Cases of action are accumulated and reported on a monthly basis, shared with employees and suppliers. In addition, we enhance Safety-First activity with providing compensation to companies for excellent Safety First Activities.



[ Regular Safety and Health Inspection of Business Sites Hosted by Top Management ]

Safety and Health Management Activities

In cooperation with the Safety Environment Team, each operational department finds risk factors through autonomous safety inspection and carries out improvement activities after selecting a safety and health inspection theme suitable for its condition and characteristics. In addition, when a safety accident occurs, the head of the corresponding department immediately reports the details of the accident in accordance with the manual and establishes fundamental safety measures under the supervision of the responsible plant manager. Furthermore, we prevent similar accidents by sharing details and safety measures about the accident with other plants and business unit.

Preliminary Safety and Environmental Review System

HAMC operates a preliminary safety and environmental review system to prevent accidents and violations of laws and regulations. The subject of review is existing processes, facilities, utilities, chemical substances, as well as on-site work safety review of business participants and dispatched workers and the work standards change.



[ Self-control Safety and Health Management Activities of Business Sites]

Win-Win Cooperation Activities with Suppliers

HAMC provides the same level of safety training to supplier companies in order to improve their autonomous safety management capabilities and awareness. We also carry out activities such as high-risk workplace focus management and support for potential risk assessment. We share changes in regulations, major issues of safety and health, and cases of internal and external safety accidents during monthly meetings with safety and health representatives from supplier companies, and provide technical support for vulnerable areas through supplier safety and health evaluation every half year. If a violation of the regulations occurs during the safety inspection, a warning notice is issued, and the work is immediately stopped to prevent safety accidents. We are making efforts to prevent safety accidents of our suppliers through such diverse support activities.

Fire Fighting Facilities Improvement

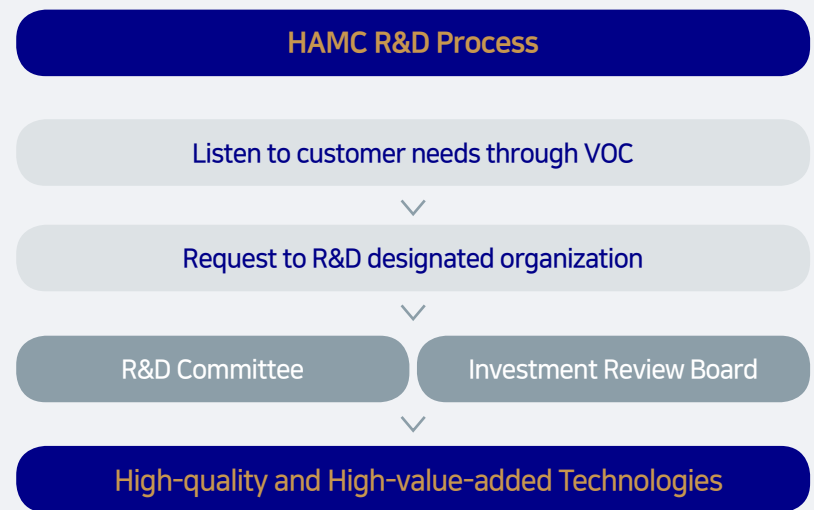
HAMC regularly inspects and improves firefighting facilities to prevent fires and explosions, and to minimize the spread of fire and casualties. Since 2013, we have continuously invested in the improvements of firefighting facilities, and have completed facility improvements such as replacement of fire receivers and system improvement, replacement and stabilization of old fire-fighting tracks, improvement of detectors, and establishment of an integrated fire monitoring system.



[ Preliminary Safety and Environmental Review ]

# RESEARCH AND DEVELOPMENT

As the development of the industry is advanced, the importance of developing high-quality and high-value-added technologies is growing since there is a limit to enhancing competitiveness by upscaling the size. In addition, due to the widening scope of innovation and the increasing complexity of technology, companies' R&D strategies are evolving from closure to openness, making the technological boundaries being dissolved. It is time to successfully converge technologies to keep up with the latest R&D trends. HAMC's R&D organization mainly focuses on three areas: industrial textile, steel wire, and composite materials. In order to provide optimized solutions, HAMC conducts its R&D process by requesting to the development designated R&D team after finding out the needs of the customer, authorizing final-review of the R&D committee and Investment Review Board.



UN SDGs Linkage



## R&D Organizational System

### R&D Committee

R&D Committee is a company-wide committee with the attendance of CEO, heads of PG/PU, executives, and team leaders to discuss the R&D status of major items of each operating company and reflect customers' requirements in R&D strategies in timely manner. The R&D Committee is held twice per year, and during the committee, an overall direction for R&D activities are established and the opinions of related departments are comprehensively reviewed, including sales, marketing, development and research to set up R&D strategies.

### R&D organization

HAMC operates R&D organizations within Industrial Textile Business, Steel Wire Business, and Carbon Composite Business in conjunction with the R&D Center, and is continuously improving its R&D capabilities through experience, passion, and constant challenges. We also strive to develop safe and convenient products and provide optimized solutions for users and customers. R&D requests related to the steel wire business are mainly developed by the Steel Wire Research Center at HAMC, and the industrial textile and carbon composite materials are developed by the respective research teams in R&D Business Center at Hyosung Group. For these areas, holding company is responsible for the R&D under the service agreement with operating companies. The HAMC Steel Wire Center continues to expand its research capabilities as a research institute not only in Korea, but also in global business sites such as Vietnam and China so that it can immediately meet the needs of customers anywhere in the world.

### Production Technology Center of Hyosung Group

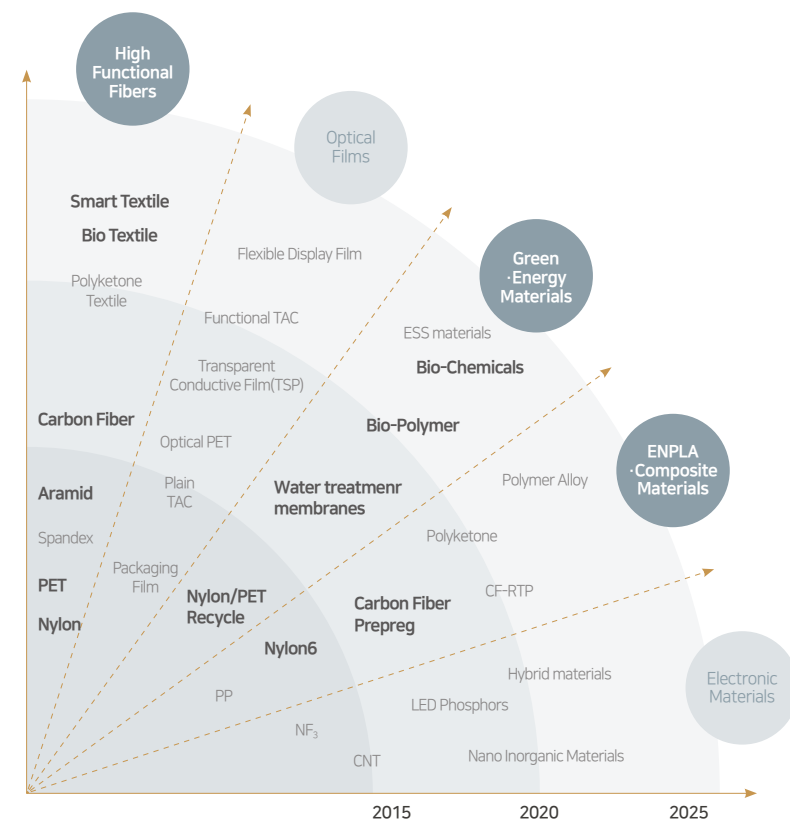
The Production Technology Center was established in 2019 with the aim of strengthening technical competence as well as fostering experts in core technologies by linking Hyosung R&DB Labs and main production plants to collaborate. In order to minimize errors and improve efficiency in applying R&D results to the production line, the Production Technology Center is in charge of reviewing facilities for production technology, as well as preparing measures for applying new technologies according to process simulation and design/condition changes. Professionals from different fields and organizations, including Hyosung R&DB Labs and production units in each sector, are mutually improving their capabilities by conducting training in their respective fields. In the future, we will invite outside experts to hold seminars and lectures to supplement technical capabilities, and we will continue to secure high-level professionals in preparation for further expansion of production lines.

### In-house Technology Exchange Meeting

Technology exchanges are conducted among related departments/teams during the in-house technology exchange meeting, through which R&D efficiency is enhanced. Various Base Technology TFTs are formed to secure core base technology and internalize related-research capabilities. We are efficiently solving research problems and shortcoming through activities that help enhance "convergence of technology", such as "Breakthrough through Brainstorming" and "Technology Cross Meetings".

### Vision 2025 Roadmap of Hyosung R&DB Labs

Hyosung R&DB Labs has set up Vision 2025 as the Technological Leader, forging the future with its global level technology and secured future growth engines based on the five new product axes.



# INFORMATION SECURITY

As business and information technologies change, information security issues are continuously changing as well. In order to effectively respond to changes in information security issues, companies must ensure robust information security systems. In particular, it is important to understand the flow of information in business activities and to pinpoint where information security risks can occur, especially considering intangible and shareable nature of information itself. To be prepared for information security risks caused by cyber terrorism or internal data leakage, Hyosung established information security regulations and operating standards as well as organized an organizational system to inspect such risks. In addition, we are conducting various activities to prevent leakage of important information by reviewing the security log and installing multifunction printers with security solutions attached.



## Information Security System

### Regulations and Operating Standards for Information Security

Hyosung established information security regulations and operating standards in 2016 and operating company has succeeded to those starting from the split on June 1, 2018, for purpose of protecting important information and data assets held by the company and creating an environment to use data safely. The scope of the information security regulations is extended to cover visitors, trainees, temporary employees, and contract-related personnel. (HAMC's information security regulations establishment date : 2018.06.01)

#### Information Security Management Area

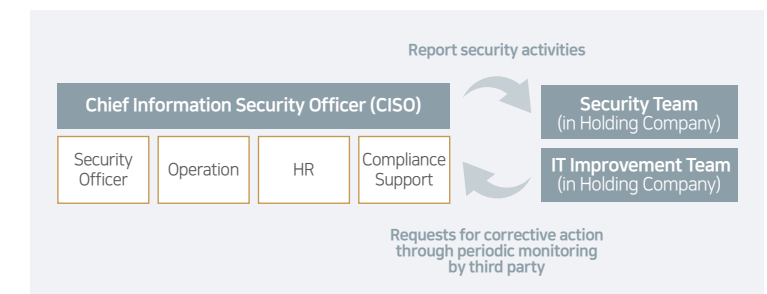
The areas of work in the information security sector are classified into security management, monitoring, and security discipline. Operational standards have been established and implemented for each area. In case of security discipline, findings of security breaches revealed from audit team and the security team's regular and irregular audits are referred to the Disciplinary Committee. Then, the disciplinary actions are decided through the audit process and the necessary corrective procedures are carried out accordingly.

Category	Operational Standards	Details
Security Management	Personnel Security	• Employees security • External personnel security • Data protection training and awareness building
	Physical Security	• Physical security plans and control
	Business Continuity	• Establish and operate business continuity plans
	Security Accident Response	• Security accident response system
	Personal Data Protection	• Personal data protection principles • Personal data processing standards
	Information Asset Management	• Roles and responsibilities per each information asset • Management of internal information
Monitoring	Compliance Inspection	• Regular inspection on security logs • Data protection compliance inspection
	IT Infra Security Management	• Authentication and access management • Internet and network security management • Server security management • Application security management • DB security management • Security equipment and security solution • PC security management • Mobile security management
Security Discipline	Reward and Penalty Standards	• Security discipline procedure and standards • Level of security discipline

### Information Security Organization

In order to achieve the objectives of information security, each organization of HAMC is managed under the guidance and supervision of the Chief Information Security Officer (CISO). The information protection manager and the security manager of each company perform the management and monitoring of the company's information security activities, report the results to the Security Team who evaluate them, and deliver proper countermeasures. In addition, the IT Improvement Team, the HR Team, the Operation Team, and the Compliance Support Team conduct support activities for information security by disseminating security policies to the entire company and checking regulatory compliance. The Security Team of the holding company is responsible for regular monitoring, risk management, and ad hoc requests at the group level under the service of operating companies.

#### Information Security Organizational Structure



#### Roles & Responsibility of Information Security Organization

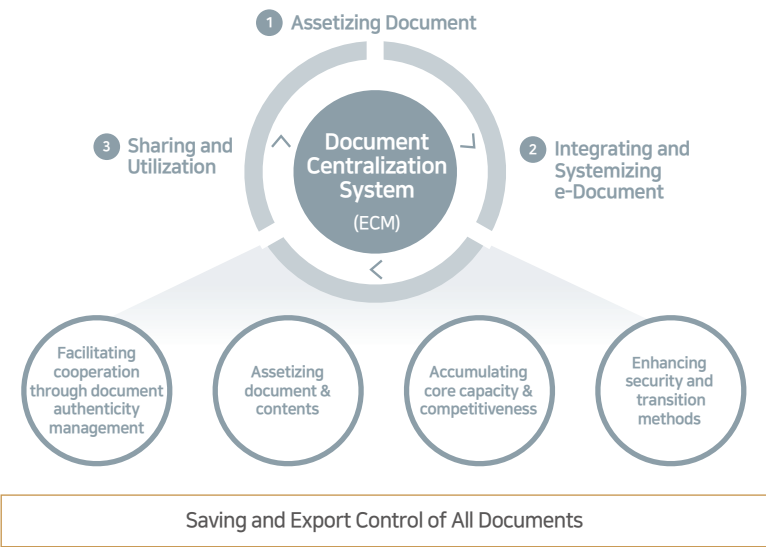
Security Organization	Roles and Responsibilities
CISO (Chief Information Security Officer)	• General guidance and supervision of information protection • Supervision of implementation of information security activities
Security Team (Security Manager)	• Information security planning and implementation • Security training, inspection, and monitoring of operating companies and business sites • Respond to the legal requirements of privacy issues
IT Improvement Team	• Review and execute IT security policies • Investment in security equipment, security solutions, and budget execution
HR Team	• Review and implement HR security policies • Collection of information security pledges
General Affairs Team	• Review and implement physical security policies • Manage protected zones and information asset transfer
Compliance Support Team	• Legal review and support of data protection activities



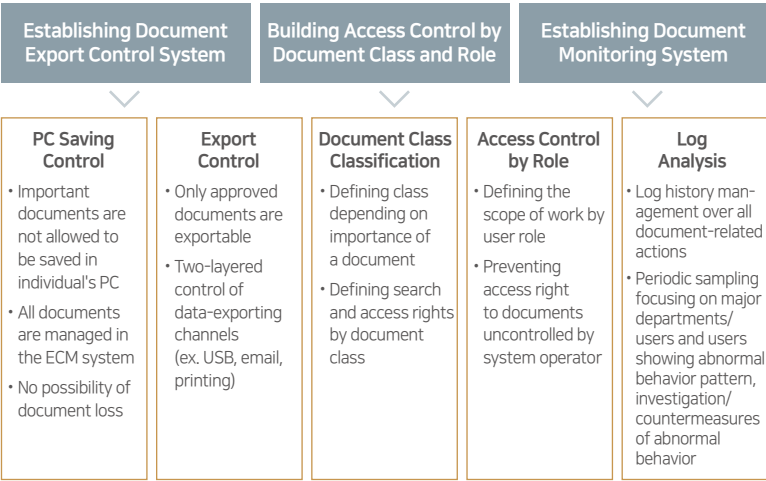
Major Information Security Activities

Document Centralization System (ECM)

Hyosung introduced the centralized document management system in 2019 in order to ensure fast data retrieval time and low restrictions in document sharing as well as to prevent data leakage in the process of document distribution.



We strengthen document security and reduce the possibility of information loss and leakage by establishing a robust control system over document export, storage to user PCs, and document distribution. Entire lifecycle of a document is managed through the system, and importing and sharing activities of documents are centrally controlled and monitored by the system.



Compliance with Document Management Regulations

Based on the regulations for the creation, processing, preservation, and control of documents, Hyosung sets the retention period according to type of document and guides the department in charge to discard the expired document. We are established regulations to prevent data leakage in the document destruction process. Modification and storage of important documents that require high level of security are possible only in the document centralization system, and only approved documents can be exported or shared.

Information Security Activities

HAMC conducts monitoring and inspection activities to detect and preemptively take actions on possible internal and external breaches. HAMC manages the security logs of employees on a weekly basis, and the security team of the holding company conducts a risk assessment on monitoring results from each operating company and takes additional measures if necessary. We also manage security-related risks across the company by delivering corrective measures through regular inspection in each sector. For protection of data provided by third parties as well as employees, HAMC is mandatorily encrypting the data when data is stored in the server and applying the database access control program to prevent external intrusion.

Details of Information Security Activities

Category	Description	Activity Counts in 2019
Security logs management	CISO finally checks the details of external mails received, offsite download, and use of external storage media (USB, etc.) after confirmation of team leader.	52 times (Weekly)
Information leakage solution	Perform a regular inspection of mail/media sent outside the company that can leak information (E.g. Google Cloud)	227 times (daily)
Business continuity training	Conduct regular simulation training according to scenarios of an information security accident	1 time/year
IT vulnerability inspection	Inspect key websites and infrastructure equipment for information security vulnerabilities	1 time/year
Business site vulnerability inspection	Visit each business site to check the status of information security	1 time/year
Security control	Personnel from third-party security company is stationed to monitor external attacks such as hacking	Scheduled to operate in 2020
Spear-phishing detection	Set keywords related to spear-phishing and monitor mail history	Scheduled to operate in 2020
Inspection of entrusted personal data protection organizations	If personal data is entrusted to an outside company, inspect the recipient for the status of personal data protection	Scheduled to operate in 2020

Personal Data Expiry System

Hyosung sets an expiry period for personal data that is not used for a certain period of time in order not to keep unnecessary personal information, and destroys the data on expiration date. When we destroy personal information, We make sure there is no problem in other systems in connection with the data destruction. We also inform our stakeholders of their personal information destruction before expiry date so that we can earn their trust in our information security system.

Strengthening Information Security Awareness

Information Security Pledge

HAMC is promoting awareness of information security by obligating new employees and retiring employees to sign a pledge for information protection. We also request external employees their pledge of information protection when there is a joint project with other companies or business partners.

Information Security Accident Prevention Activities

To prevent information security accidents, Hyosung conducts preemptive monitoring including monitoring on logs and computer system, inspection on workplace security status, as well as scenario-based response training to accidents. Through such activities, we effectively manage information security risks that may occur inside and outside the company.

Information Security Training

Every year, HAMC conducts information security training for employees both online and offline, including awareness of information breaches, personal data protection including customer data, and sharing data breach cases, to enhance security awareness continuously. Online training is provided to all employees once a year, and offline training is conducted once a year separately to the information security staffs. In addition, we inform employees of relevant regulatory updates and notifications through e-mail and company bulletin boards, and improve accessibility to related education sources by creating pop-up windows once a day announcing information security notice when entering groupware platform.

Information Security Training Program Cycle

- ✓ Announcement via email / company-wide bulletin board - Constantly
- ✓ Pop-ups at groupware - Daily
- ✓ Offline training for security staffs - Yearly
- ✓ Online training for all employees - Yearly

# Sustainability Performance

Economic Performance	40
Social Performance	42
Environment & Safety Performance	45



HYOSUNG

ADVANCED MATERIALS

Economic Performance

Since its split from Hyosung in 2018, Hyosung Advanced Materials has been generating profits based on its robust business capabilities. We continuously pursue growth in order to fairly distribute our profits to various stakeholders including customers, local communities, partner companies, employees, shareholders, investors and the government.

Financial Statements (Consolidated)

Unit: KRW 1 million

Category	2018	2019
i .Current assets	1,030,998	982,899
Cash and cash equivalents	84,773	31,839
Trade and other current receivables	442,526	439,444
Inventories	466,559	472,116
Other current assets	37,140	39,500
ii .Non-current assets	1,503,700	1,548,200
Long-term trade and other non-current receivables	3,956	4,675
Tangible assets	1,196,736	1,276,038
Investments in properties	151,964	150,397
Intangible assets	107,704	71,743
Other non-current financial assets	716	4,183
Other non-current assets	42,624	41,164
<b>Total assets</b>	<b>2,534,698</b>	<b>2,531,099</b>
i .Current liabilities	1,474,716	1,540,234
Trade and other current payables	369,241	301,758
Borrowings	1,088,357	1,211,066
Other current liabilities	17,117	27,410
ii .Non-current liabilities	593,966	585,464
Long-term trade and other non-current payables	7,716	11,977
Long-term borrowings	553,076	540,076
Other non-current liabilities	33,174	33,411
<b>Total liabilities</b>	<b>2,068,682</b>	<b>2,125,698</b>
[Capital stock]	22,400	22,400
[Retained earnings]	(26,584)	(100,800)
[Other components of equity]	389,990	401,832
[Non-controlling interest]	80,210	81,968
<b>Total capital</b>	<b>466,016</b>	<b>405,400</b>

Consolidated Statements of Comprehensive Income

Unit: KRW 1 million

Category	2018	2019
Sales	1,767,487	3,053,616
Cost of sales	1,584,713	2,696,624
Gross profit	182,774	356,992
SG&A	101,363	169,628
R&D expenses	17,269	29,037
Operating income	64,143	158,327
Other gains	13,902	23,255
Other loss	24,843	56,339
Finance income	21,419	37,988
Finance expenses	80,063	110,958
Profit before tax	(5,442)	52,273
Income tax expense	18,303	105,180
Net profit	(23,745)	(52,907)
Other comprehensive gain(loss)	2,478	9,984
Total comprehensive gain(loss)	(21,267)	(42,923)



### Major R&D Activities

As a materials company, Hyosung Advanced Materials recognizes the possession of original technology as a basic condition for its business and has secured the original technology for all its products since the early stages of business. Based on the research capabilities of the Hyosung R&DB Labs, which was established as the first research institute affiliated with a private company in Korea, the company continues its research in textiles and functional materials to develop safer and more comfortable products and to provide optimized solutions to customers. In particular, HAMC operates R&D organizations within Industrial Textile Business, Steel Wire Business, and Carbon Composite Business in conjunction with the Hyosung R&D Business Center, and is continuously improving its R&D capabilities through experience, passion, and constant challenges. R&D requests related to the steel wire business are mainly developed by the Steel Wire Technical Center at HAMC, and the industrial textile and carbon composite materials are developed by the respective research teams in R&D Business Center at Hyosung Group. For these areas, holding company is responsible for the R&D under the service agreement with operating companies. The HAMC Steel Wire Center continues to expand its research capabilities as a research institute not only in Korea, but also in global business sites such as Vietnam and China so that it can immediately meet the needs of customers anywhere in the world.

#### ■ Development of Application Technology for Special Polyester Tirecord Fabric for PCR Tires

The Tire Adhesion Research Team in Hyosung R&DB Labs has developed an application technology for special polyester tirecord fabric with improved heat resistance and adhesion. With this technology, we have managed to apply polyester tirecord to special cord fabric of PCR (Passenger Car Radial) tire for the first time in the world. Currently, Hyosung's polyester special cord fabric technology is used in the products of domestic and global tire companies. In addition, we have developed ultra-high heat-resisting technology that can be applied to new use cases (Bias Tire Carcass) to expand the use of polyester tire cords, and through quality improvement and localization of adhesive components, we are contributing to the improvement of quality and cost reduction of customer products.

#### ■ Development of Precision-controlled Heat Treatment Technology on Steel Tire Reinforcements

The Steel Wire Technical Center at HAMC developed a precision-controlled heat treatment technology through a metal microstructure prediction program in 2019. By doing so, we are contributing to improving the quality of our products by producing high-strength, high-quality steel cords by optimizing the process conditions for creating and homogenizing metal micro-organisms.

#### ■ Research on the Performance Improvement of Carbon Fiber for Hydrogen Vessel

The Carbon Materials Research Team, which has succeeded in product development for high-pressure containers for compressed natural gas used in city buses, continues to develop carbon fiber for its application in hydrogen high-pressure containers, in preparation for the upcoming advent of hydrogen-powered economy. In 2019, Carbon Materials Research Team has succeeded in developing carbon fiber with improved properties.

### R&D Expenses

Hyosung Advanced Materials invests steadily in R&D every year to ensure sustainable technological competitiveness.

Category	Unit	Hyosung Advanced Materials		
		2018(Actual)	2019(Plan)	2019(Actual)
R&D expenses	KRW 1 million	17,269	14,687	29,037

### Patent Registration and Application

Hyosung Advanced Materials registers patents for its own technology every year to secure its intellectual property rights and use them as KPIs for performance management.

Category	Unit	Hyosung Advanced Materials		
		2017	2018	2019
Patent registration(accumulated)	Cases	775	825	840
Patent application(accumulated)	Cases	1,563	1,597	1,610

### Supplier Status (Domestic)

Hyosung Advanced Materials maintains a stable supply chain by supporting sustainable growth of its supplier companies.

Category	Unit	Hyosung Advanced Materials	
		2018	2019
Number of suppliers	Companies	24	53
Total purchase from suppliers	KRW 1 million	900,515	1,471,572

Social Performance

Hyosung Advanced Materials is a large company with over 1,000 employees in Korea, 5,000 in Vietnam, and 2,000 in China, and has a high sense of responsibility for fulfilling its corporate social responsibility. In 2019, 131 new employees in Korea, 2,707 in Vietnam, and 292 in China were hired, in line with job creation initiative for the local community. Moreover, in order to promote women’s active social engagement, we are increasing the proportion of female employees and female managers.

Employees Status

As of the end of 2019, Hyosung Advanced Materials has 8,822 employees including Korea, Vietnam, and China. Contract-based workers account for about 3.7% of the total, with the majority of employees employed as regular employees. We are also increasing the proportion of female employees and female managers in order to promote women’s active social engagement.

Category	Subcategory	Unit	Hyosung Advanced Materials								
			Korea <sup>1)</sup>		Vietnam			China			
			2018	2019	2017	2018	2019	2017	2018	2019	
Total employees		Persons	1,142	1,038	5,229	5,519	5,943	2,047	1,990	1,841	
Gender	Male	Persons	1,044	932	4,093	4,376	4,730	1,526	1,501	1,376	
	Female	Persons	98	106	1,136	1,143	1,143	521	489	465	
Employment type	Permanent (male)	Persons	1,042	911	3,941	4,344	4,597	1,397	1,337	1,296	
	Permanent (female)	Persons	91	97	1,099	1,107	1,098	471	429	423	
	Subtotal	Persons	1,133	1,008	5,040	5,451	5,695	1,868	1,766	1,719	
	Temporary (Male)	Persons	2	21	152	22	133	129	164	80	
	Temporary (Female)	Persons	7	9	37	46	45	50	60	42	
	Subtotal	Persons	9	30	189	68	178	179	224	122	
Place of work	Domestic	Persons	1,012	1,038	5,152	5,447	5,873	2,006	1,955	1,808	
	Overseas <sup>2)</sup>	Persons	130	-	-	-	70	41	35	33	
Job category (based on permanent employment)	Office work	Persons	560	456	734	779	816	395	383	400	
	Manufacturing	Persons	573	552	4,306	4,672	5,057	1,652	1,607	1,441	
Fostering female human resource	Female employee ratio	%	8.6	10.2	21.7	20.7	19.2	25.5	24.6	25.3	
	Number of female at manager-level or higher	Persons	13	15	32	38	40	23	27	29	
	Female manager ratio	%	4.3	7.0	24.2	27.5	26.2	17.4	18.8	19.8	
Diversity	Disabled	Persons	22	26	-	-	-	3	5	12	
	Veterans	Persons	22	16	-	-	-	-	-	-	
	Foreigner <sup>3)</sup>	Persons	1	-	77	72	92	41	35	33	
	Subtotal	Persons	45	42	77	72	92	44	40	45	
Creating job opportunities (the newly employed)	Male	Persons	42	107	1,127	1,955	2,323	296	333	223	
	Female	Persons	4	24	428	362	384	60	72	69	
	Subtotal	Persons	46	131	1,555	2,317	2,707	356	405	292	
Number of employees who voluntarily changed jobs (amongst permanent employees)	Male	Persons	42	40	1,138	1,655	1,839	236	252	234	
	Female	Persons	7	11	269	288	281	45	54	58	
	Subtotal	Persons	49	51	1,407	1,943	2,120	281	306	292	
Turnover rate		%	4.32	5.06	27.92	35.64	37.23	15.04	17.33	16.99	

1) The company was newly established on June 1, 2018, thus, there is no data for 2017. / 2) Number of Korea in 2018 are korean nationals working as expatriates outside Korea. From 2019 there numbers was recognized as 'foreigners' at respective business sites. / 3) Foreigners refer to employees who are not national citizens of countries in which the business sites are located.

Overseas Employees Status

Hyosung Advanced Materials aims to realize localization of its overseas corporations by fostering local managers. In order to successfully integrate with the local community and improve the loyalty of local employees, the company continues to educate and foster local employees for management positions such as CEO and plant manager. As of 2019, the ratio of local managers is about 50%, and we will make efforts to further increase it in the future.

Category	Unit	Hyosung Advanced Materials					
		Vietnam			China		
		2017	2018	2019	2017	2018	2019
All managers (head of team/department, supervisor or higher)	Persons	70	65	92	66	62	67
Local managers (head of team/department, supervisor or higher)	Persons	35	39	41	35	35	37
Ratio of local managers	%	50	60	45	53	56	55

Maternity Leave and Childcare Leave

For the purpose of supporting career development of female employees, we actively encourage both male and female employees to use maternity and childcare leave, which has a high return rate. The company operates various systems that support employees’ work-life balance even after their maternity leave childcare. Also, the ratio of continuous working after returning to work is gradually increasing as we provide equal job opportunities without discriminating against those that took childcare leave.

Category	Subcategory	Unit	Hyosung Advanced Materials							
			Korea		Vietnam			China		
			2018	2019	2017	2018	2019	2017	2018	2019
Maternity leave (male)	Employees under maternity leave	Persons	-	-	381	376	408	-	41	70
	Returning rate	%	-	-	99	99	100	-	97	99
Maternity leave(female)	Employees under maternity leave	Persons	2	7	138	142	131	57	24	9
	Returning rate	%	100	100	85	81	92	95	92	100
Childcare leave (male)	Employees under childcare leave	Persons	2	4	122	159	201	-	-	-
	Returning rate	%	-	100	98	100	99	-	-	-
	Rate of working more than 12 months after return	%	-	N/A	70	82	84	-	-	-
Childcare leave (female)	Employees under childcare leave	Persons	2	8	104	192	179	57	24	9
	Returning rate	%	-	100	98	98	99	93	87	100
	Rate of working more than 12 months after return	%	-	100	68	77	78	64	95	100

### Regular Performance Evaluation

As of the end of 2019, Hyosung Advanced Materials conducts regular performance evaluations for all the employees in Korea, Vietnam, and China. Regular performance evaluation is conducted by the team leader's first evaluation after the employee's self-evaluation of his or her performance, and the second evaluation by the executive in charge. The evaluation includes not only performance, but also feedbacks on the way of working and CDP(Career Development Path). Feedback session is stipulated to be conducted face-to-face, and during the session, employees can request task assignment considering individual CDP. At the HR counseling center, employees can also consult position transfer with the HR team leader based on their job satisfaction. In 2019, we reorganized and upgraded the existing evaluation system so that individual KPIs can be changed flexibly according to business conditions, and evaluators can give feedback on the progress of the work on a semi-annual basis.

Category	Unit	Hyosung Advanced Materials							
		Korea		Vietnam			China		
		2018	2019	2017	2018	2019	2017	2018	2019
Number of employees subject to performance evaluation	Persons	1,129	1,004	4,980	5,167	5,536	2,000	1,949	1,799
Performance evaluation rate	%	99	97	93	95	94	98	98	98

### Labor Union Membership Status

Besides the Hyosung Labor Union, the Hyosung Polyester Labor Union and the Hyosung Democratic Labor Union are operating, and the employees are guaranteed to pursue their labor union membership and activities. Employees can join local and industrial unions outside of the company's labor unions. Each business site transparently discloses the corporate management status to the employees through regular management briefing sessions and multi-layer meetings. In addition, we hold regular quarterly meetings to discuss welfare, grievances, and health and safety issues for each business site. Complaints received are managed throughout the company and are continuously monitored for improvement. More than 90% of employees in Vietnam and China are subject to collective agreements.

Category	Unit	Hyosung Advanced Materials							
		Korea		Vietnam			China		
		2018	2019	2017	2018	2019	2017	2018	2019
Employees covered by collective agreements	Persons	567	571	5,238	5,447	5,597	2,019	1,966	1,817
Number of union workers	Persons	494	435	4,905	5,151	5,260	1,827	1,731	1,686
Rate of union workers	%	87.1	76.2	93.6	94.6	94.0	90.5	88.0	92.8

### Retirement Pension

Executives and employees in Korea can choose between DB-type (defined benefit) and DC-type (defined contribution) retirement pensions systems according to their will. In Vietnam and China, retirement pensions are operated as national social insurance.

Category	Unit	Hyosung Advanced Materials							
		Korea		Vietnam			China		
		2018	2019	2017	2018	2019	2017	2018	2019
Total operating fund for retirement pension (DB+DC)	KRW 1 million, VND 1 million, CNY 1,000	50,631	61,505	7,041	7,765	16,806	20,901	22,430	21,298
Operating fund of DB pension		49,979	60,439	* Not applicable as retirement pension is managed by national social insurance					
Operating fund of DC pension		652	1,066						
Total number of members	Persons	1,155	1,172	4,954	5,245	5,577	9,587	9,546	8,001
Number of DB pension members	Persons	947	976	* Not applicable as retirement pension is managed by national social insurance					
Number of DC pension members	Persons	208	196						

### Basic Salary and Remuneration

Hyosung Advanced Materials pays new employees in Korea, Vietnam, and China 1.7 times more than the legal minimum wage to guarantee their welfare and increase their motivation to work.

Category	Unit	Hyosung Advanced Materials							
		Korea		Vietnam			China		
		2018	2019	2017	2018	2019	2017	2018	2019
Basic salary for entry-level	KRW 1,000, VND 1,000, CNY 1	3,118	3,272	4,780	5,080	5,310	2,954	3,136	3,136
Rate of entry-level salary to local minimum wage by law (%)	Male	%	184.6	174.7	136.6	145.1	127.0	164.1	174.2
	Female	%	184.6	174.7	136.6	145.1	127.0	164.1	174.2
Average basic salary	KRW 1,000, VND 1,000, CNY 1	4,389	4,594	4,964	5,415	5,973	4,411	4,739	4,904

• Basic salary for entry-level, rate of entry-level salary to local minimum wage, and average basic salary are based on the representative corporation in the country concerned.

### Employees Medical Checkup Rate

We provide annual medical checkups to all executives and employees in Korea, Vietnam, and China, and plan to enlarge the scope of the benefits, reinforcing welfare system of the company.

Category	Unit	Hyosung Advanced Materials		
		Korea	Vietnam	China
		2019	2019	2019
Employees who are able to receive medical checkup	Persons	1,038	5,873	1,808
Employee who received medical checkup	Persons	1,004	5,187	1,745
Rate of medical checkup	%	97	88	97

### Major CSR Activities

Hyosung Advanced Materials is carrying out various social contribution activities based on three CSR focus areas that will realize the company's CSR vision, CSE (Creating Social Eco-system). The company has established a paid volunteer system to realize 'one voluntary work per employee', and actively promotes social contribution activities by operating matching grant. Every year, we award outstanding volunteers with Volunteer Awards. Since 2012, the headquarter has been serving as a meal helper for children with severe disabilities and has been holding an annual sports festivall based on the relationship formed through the long service period. In recognition of such achievements, the company was selected as a 'CSR in the Community 2019' by Ministry of Health and Welfare.The business site provides necessary help to the local community through a 'one-company one-village committee' including environmental cleanup activities. Overseas corporations also are engaged in various CSR activities for local community stakeholders, and in recognition of such efforts, our corporation in Jiaxing was selected as an excellent philanthropy firm by the Jiaxing Economic Development Zone in February 2019.



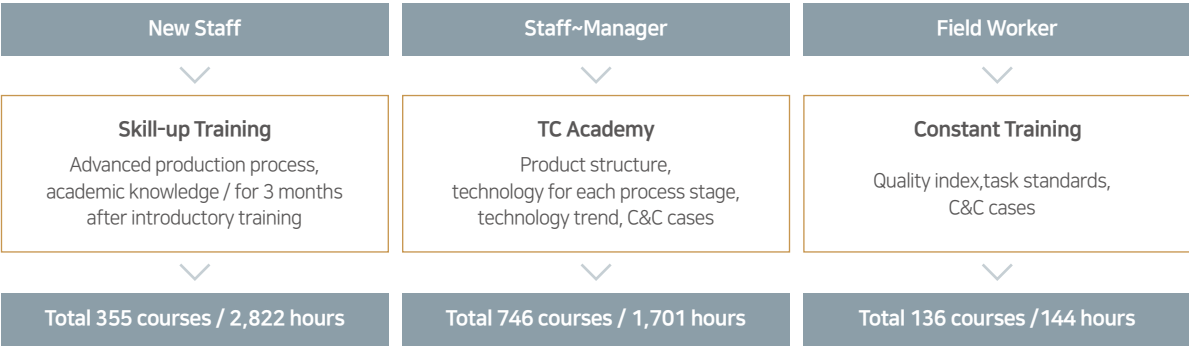
CSR Strategy of Hyosung Advanced Materials ([http://www.hyosungadvancedmaterials.com/kr/csr/win\\_win\\_management.do](http://www.hyosungadvancedmaterials.com/kr/csr/win_win_management.do))



Differentiated Training for Employees

Hyosung Advanced Materials provides differentiated education by job category, position, and department to develop employees’ capabilities, and the total training expenses and per capita training investment has more than doubled compared to 2018. As a producer of high-performance materials, Hyosung Advanced Materials provides systematic training by technical advisors and process engineers to improve technology / product / process awareness of all employees. We also extended the scope of the differentiated training program to include hourly workers (manufacturing) so that enhanced competencies of employees are directly reflected to the quality of products.

■ Training for Improving Awareness of Technology/Product/Process



Category	Unit	Hyosung Advanced Materials							
		Korea		Vietnam			China		
		2018	2019	2017	2018	2019	2017	2018	2019
Number of training participants	Persons	10,429	14,896	7,424	13,792	16,940	13,609	10,636	12,083
Total training expenses	KRW 1,000, VND 1 million, CNY	318,076	832,816	3,080	5,571	4,702	218,125	309,477	635,372
Total training hours	Hours	38,708	41,372	114,748	160,672	216,982	55,428	52,954	78,650
Average training hours per person	Hours	38.9	39.9	22.0	29.0	13.0	27.1	26.6	42.7
Average training expenses per person	KRW, VND, CNY	278,525	802,327	558,955	1,009,465	791,173	107	156	345

Training for Sustainable Management

In 2019, the company strengthened training for sustainable management involving various fields, such as human rights, ethics, safety, and environment, and raised employees’ awareness of corporate social responsibility.

Category (Total number of employees who completed trainings)	Unit	Hyosung Advanced Materials	
		2018	2019
Environment training (i.e. GHGs & Recycling)	Persons	352	465
Ethics and anti-corruption training (i.e. Legal Violation & Bribery)	Persons	65	95
Fair trade training (i.e. Fair Trade Act, Subcontracting Act, and Act on Fair Transaction in Franchise and Retail Business)	Persons		23
Safety and health training	Persons	1,027	3,674
Human rights training (i.e. Sexual Harassment & Workplace Harassment Prevention )	Persons	2,284	2,355
Information security training	Persons	223	556

## Environment and Safety Performance

Hyosung Advanced Materials operates the Green Management Committee to effectively practice environmental management, while setting up environmental management goals and implementing detailed action plans. We are also working on developing green technologies to reduce environmental pollutants including air and water pollutants and hazardous chemical substances, finally minimizing the environmental impact in the local society.

### Green Management Committee

Hyosung Advanced Materials has expanded the scope of management of the CSR Committee, a consultative body directly under the CEO, and established the Sustainability Steering Committee, with the CEO as the chairman and C-level executives having authority for making decisions, and specialized subcommittees (Green Management Committee, Social Contribution Management Committee, Stakeholders Committee, Risk Management Committee). The Green Management Committee reviews and resolves issues related to safety, health and overall environmental activities, such as climate change response, environmental impact reduction, and developing and purchasing eco-friendly products.

### Energy Consumption

Hyosung Advanced Materials has decreased both direct and indirect energy consumption in 2019, reducing total energy use by about 8% in Korea compared to the previous year.

Category	Subcategory	Unit	Hyosung Advanced Materials							
			Korea		Vietnam			China		
			2018	2019	2017	2018	2019	2017	2018	2019
Direct energy consumption	Diesel	TJ	9.00	7.40	-	-	-	-	-	-
	Kerosene	TJ	0.03	-	-	-	-	-	-	-
	LNG	TJ	312.79	283.23	-	-	-	-	-	-
	NG	TJ	-	-	1,447.00	1,553.00	1,556.56	3,297.95	3,679.51	3,739.78
	Gasoline	TJ	0.92	0.77	-	-	-	-	-	-
	Propane	TJ	290.41	241.95	-	-	-	-	-	-
	B-C oil	TJ	-	-	-	1.00	-	-	-	-
	Off-gas	TJ	-	-	-	-	-	-	-	-
	LPG	TJ	0.20	0.07	15.97	19.97	26.55	303.40	-	-
	Biogas	TJ	-	-	-	-	-	-	-	-
	Subtotal	TJ	613.35	533.41	1,462.97	1,573.97	1,583.11	3,601.35	3,679.51	3,739.78
Indirect energy consumption	Electricity	TJ	3,828.66	3,554.81	3,444.00	3,549.00	3,614.43	9,603.73	10,545.05	10,724.10
	Steam	TJ	229.05	220.11	507.00	618.00	591.50	30,799.34	32,227.56	21,490.62
	Process waste heat	TJ	-	-	-	-	-	-	-	-
	Waste incinerated heat	TJ	-	-	-	-	-	-	-	-
	Subtotal	TJ	4,057.71	3,774.92	3,951.00	4,167.00	4,205.92	40,403.07	42,772.61	32,214.72
Total		TJ	4,671.06	4,308.33	5,413.97	5,740.97	5,789.03	44,004.41	46,452.12	35,954.50
Energy intensity		TJ/KRW 100 million	0.444	0.403	0.442	0.451	0.412	11.123	11.094	8.498

• Until 2018, Hyosung Corp. reported GHGs emissions and energy usage including the four spun off operating companies, one of which is HAMC. As of November 2019, the emission rights and all obligations were succeeded to each operating company in accordance to the GHGs-related laws and regulations. In the process of transfer of rights, the amount of energy use and emissions of each company have been partially changed from the figures reported in 2018 Hyosung Sustainability Report. (The total sum of energy use and emissions of Hyoung as a whole remain unchanged.)

• Energy consumption amount and GHGs emissions were calculated in basic unit using sales revenue of the entity in the corresponding region.

### Greenhouse Gase(GHGs) Emissions

Through various efforts to reduce GHGs emissions, Hyosung Advanced Materials has achieved a decrease in both direct and indirect emissions compared to 2018.

Category	Subcategory	Unit	Hyosung Advanced Materials							
			Korea		Vietnam			China		
			2018	2019	2017	2018	2019	2017	2018	2019
Direct GHG emissions (Scope 1)	Fixed combustion	tCO <sub>2</sub> eq	32,723	28,409	82,265	88,470	89,085	192,668	206,622	210,007
	Mobile combustion	tCO <sub>2</sub> eq	709	578	-	-	-	-	-	-
	Process emissions	tCO <sub>2</sub> eq	-	-	-	-	-	-	-	-
	Waste disposal	tCO <sub>2</sub> eq	4,809	4,835	-	-	-	-	-	-
	Subtotal	tCO <sub>2</sub> eq	38,241	33,822	82,265	88,470	89,085	192,668	206,622	210,007
Indirect GHG emissions (Scope 2)	Electricity	tCO <sub>2</sub> eq	185,950	172,649	369,255	380,512	387,528	2,225,930	2,444,108	2,485,608
	Steam	tCO <sub>2</sub> eq	2,574	2,636	30,914	37,682	36,066	1,877,959	1,965,043	1,310,369
	Subtotal	tCO <sub>2</sub> eq	188,524	175,285	400,169	418,194	423,594	4,103,889	4,409,151	3,795,977
GHG emissions intensity		tCO <sub>2</sub> eq/ KRW 1 million	0.216	0.196	0.394	0.398	0.365	10.861	11.024	9.468

• The figures of emissions correspond to the information submitted to the Korean Ministry of Environment for conformity assessment in 2019.

• Since the calculation method applied to assess overseas emissions is different from domestic method, we disclose the data additionally through third-party verification such as Carbon Footprint

### Energy Saving and Emissions Reduction Performance

Hyosung Advanced Materials has established and executed various investment plans, such as facility replacement with high-efficiency ones and installation of inverters, to reduce greenhouse gas emissions while saving at its workplace.

Business Site	Project Name	Execution Date	Hyosung Advanced Materials		
			Budget (KRW 1 million)	Energy Saving Amount (kWh/year)	Emissions Reduction Amount (tCO <sub>2</sub> eq/year)
Ulsan	Extruder motor replacement	2017.06	20.3	29,070	14
Ulsan	Cooler	2017.08	295	1,017,151	474
Ulsan	Improving utility operation efficiency (cooler replacement)	2018.02	339	1,173,409	547
Ulsan	Changing heat treatment method	2018.12	33.8	187,952	88
Ulsan	Improving of utility operation efficiency (cooler replacement)	2019.02	339	1,144,856	534
Ulsan	Heater replacement	2019.05	99.2	392,966	183
Ulsan	Installing scrubber inverter	2019.09	33.8	771,639	360
Ulsan	Changing energy source of heat treatment	2019.11	15.6	187,952	88

### Water Resources Management Status

Production control team at HAMC minimizes unnecessary water consumption. In addition, we collect the water used in the process and discharge it to an emergency reservoir in the plant for reuse as cooling water, reducing the amount of water used, and increasing water recycling rate.

Category	Subcategory	Unit	Hyosung Advanced Materials								
			Korea		Vietnam			China			
			2018	2019	2017	2018	2019	2017	2018	2019	
Water consumption by source of water	Waterworks	Tons	14,294	19,719	3,143,971	3,808,158	3,572,339	479,963	504,496	478,201	
	Groundwater	Tons	-	-	-	-	-	26,792	3,438	-	
	Industrial water	Tons	3,707,272	4,512,253	-	-	187,511	289,550	319,446	208,264	
Total water consumption		Tons	3,721,566	4,531,972	3,143,971	3,808,158	3,759,850	796,305	827,380	686,465	
Amount of recycled water		Tons	1,287,800	2,442,607	-	-	6,601	-	-	-	
Water recycling rate		%	34.6	53.9	-	-	0.2	-	-	-	

### Wastewater and Water Treatment Status

Hyosung Advanced Materials minimizes environmental damage to the local community by thoroughly and regularly analyzing water quality to identify the status of water pollutant emissions. Domestic business sites conduct water quality analysis every half year by an external specialized agency for certain hazardous substances which have become a social issue recently.

Category	Unit	Hyosung Advanced Materials								
		Korea		Vietnam			China			
		2018	2019	2017	2018	2019	2017	2018	2019	
Wastewater discharge amount	Tons	783,869.33	895,712.17	299,872.00	510,870.00	484,239.00	412,836.00	441,800.00	296,532.00	
Biological Oxygen Demand(BOD)	Tons	1,023.69	1,062.10	-	-	-	-	-	2.17	
Chemical Oxygen Demand(COD)	Tons	10,736.71	9,408.80	182.21	242.79	183.92	37.73	35.91	23.74	
Suspended Solids(SS)	Tons	1,269.64	1,366.16	82.90	102.71	102.51	-	1.90	1.06	
Total Nitrogen(T-N)	Tons	9,303.73	7,512.59	34.89	89.26	66.33	2.72	2.56	4.43	
Total Phosphorus(T-P)	Tons	167.37	75.87	-	-	-	0.08	0.07	0.09	

### Waste Disposal Status

Hyosung Advanced Materials is improving its waste disposal method so that resource circulation is achieved through recycling rather than incineration or landfill. We used to entrust large-scale waste synthetic fibers and organic solvents to waste treatment company in incineration method, but now waste synthetic fibers are reused as auxiliary fuel after intermediate processing, and waste organic solvents are entrusted to companies that process the waste organic solvents with other substances into mixed fuel. Furthermore, we are researching and applying technologies to convert the waste plastics, such as wasted fishing net, to recycled PET, Nylon chips which enable waste recycling and reduction of raw materials consumption.

Category	Subcategory	Unit	Hyosung Advanced Materials								
			Korea		Vietnam			China			
			2018	2019	2017	2018	2019	2017	2018	2019	
Industrial waste (General)	Recycled	Tons	2,890.5	4,500.2	18,199.6	22,054.3	20,665.9	-	-	-	
	Incineration	Tons	457.8	849.4	1,156.1	1,341.9	1,611.0	-	-	-	
	Landfill	Tons	27.1	67.4	700.8	734.3	831.0	-	-	-	
	Others	Tons	0.0	0.0	-	-	165.70	482.2	556.4	689.4	
	Subtotal	Tons	3,375.4	5,417.0	20,056.5	24,130.5	23,273.6	482.2	556.4	689.4	
Industrial waste (designated)	Recycled	Tons	485.7	514.6	15,234.0	16,377.0	16,632.00	3,739.6	2,028.9	2,251.3	
	Incineration	Tons	13.5	51.0	10,557.0	11,444.0	11,707.00	1,201.6	1,386.3	394.1	
	Landfill	Tons	0.0	1.0	-	-	-	1,634.3	322.1	205.9	
	Others	Tons	2.5	2.6	-	-	-	6,731.4	4,090.3	3,313.1	
	Subtotal	Tons	501.7	569.2	25,791.0	27,821.0	28,339.0	13,306.8	7,827.6	6,164.4	
Total waste		Tons	3,877.1	5,986.1	45,847.5	51,951.5	51,612.6	13,789.0	8,384.0	6,853.8	
Amount of recycled waste		Tons	3,376.3	5,014.8	33,433.6	38,431.3	37,297.9	3,739.6	2,028.9	2,251.3	
Waste recycling rate		%	87.1	83.8	72.9	74.0	72.3	27.1	24.2	32.8	

• A small quantity less than 0.1 tons is marked as 0.0.



### Air Pollutant Emissions

At the Ulsan plant two aging scrubbers of air pollution prevention facilities were newly replaced to increase the efficiency of handling pollutants, and the fuel used in boilers was changed from B-C oil to a clean fuel, LNG. In addition, we have signed a voluntary agreement with Ulsan to reduce fine dust and are implementing detailed tasks. Jeonju plant carried out environmental assessment before the extension of production lines and installed additional air pollution prevention facilities to reduce and manage the air pollutants emissions in advance. In addition, Jeonju plant implemented a large-scale investment in supplementing the waste gas incineration plant (RTO) in 2019 in preparation for the strengthening emission standards of hydrogen cyanide (HCN) from 2020, and is managing it with internal standards that are stricter than the legal emission standards.

Category	Subcategory	Unit	Hyosung Advanced Materials								
			Korea		Vietnam			China			
			2018	2019	2017	2018	2019	2017	2018	2019	
General air pollutants	Nitrogen oxides (NOx)	Tons	44.0	41.4	88.0	71.0	74.0	15.0	18.5	15.5	
	Sulfur oxides (SOx)	Tons	2.1	12.8	54.0	50.0	69.0	0.0	0.7	0.1	
	Particulate matter (PM)	Tons	20.4	16.4	98.0	64.0	68.0	0.0	0.2	0.0	
Ozone depleting substances	CFC(R-11)	Tons	-	3.0	-	-	-	-	-	-	
	HCFC(R-123)	Tons	-	-	-	-	-	-	-	-	
	HCFC(R-22)	Tons	-	-	-	-	-	-	-	-	

### Hazardous Chemicals Management Status

Hyosung Advanced Materials is required to provide MSDS (Material Safety Data Sheet) at the purchase of all chemicals or substances that contain chemicals in all domestic factories. In addition to the regular legal inspection, we also identify and report on the risks that may arise during a series of purchase, storage, handling, and use of hazardous chemicals, through regular inspection activities of hazardous chemicals storage facilities, Off-site Risk Assessment and preparation of a risk management plan, and proactively inspect problems and take preemptive measures. Our business sites and overseas affiliates regularly conduct training about hazardous chemicals at least once a year including training for the staffs handling hazardous chemicals and chemical safety training. Ulsan plant appoints managers of hazardous chemicals and provides them with external training. In order to ensure workplace safety and protect local residents and ecosystem, Jeonju plant delivers two-hour chemical substance safety training every year not only to its own employees but also to employees from supplier and contractor companies.

Category	Unit	Hyosung Advanced Materials							
		Korea		Vietnam			China		
		2018	2019	2017	2018	2019	2017	2018	2019
Hazardous substances usage amount	Tons	12,202	12,353	74,771.0	75,958.0	77,145.0	-	-	-
Basic unit of hazardous substances usage amount	Tons/ KRW 1 million	0.01160	0.01156	0.06	0.06	0.05	-	-	-

• The basic unit of hazardous substances usage amount was calculated using sales revenue of our business entities in the corresponding region.

### Sales and Purchase of Green Products and Services

Hyosung Advanced Materials complies with the Green Purchasing Policy and purchases eco-friendly raw materials such as pulp and PET recycled chips, as well as environmental facilities instruments including air pollutant filters to strengthen eco-friendly purchasing activities. In 2020, we plan to expand the development and production of eco-friendly products that were promoted mainly in Korea to overseas.

Category	Unit	Hyosung Advanced Materials								
		Korea			Vietnam			China		
		2017	2018	2019	2017	2018	2019	2017	2018	2019
Sale	KRW 1,000	43,971,847	55,087,189	64,577,082	-	-	5,296,951	-	-	-
Purchase	KRW 1,000	2,169,001	537,315	1,127,331	1,064,653	92,066	3,065,010	-	-	-

• In accordance with the internal accounting management standards, Korea's performance includes amount of sales and purchase for green products and services, excluding Vietnam and China.

### Environmental Investment

Hyosung Advanced Materials establishes an investment plan for continuous green management activities such as waste treatment, environmental restoration, and prevention of environmental pollution, and ensures that investments can be executed reasonably through internal review procedures. After investment planning, we aggregate and manage implementation performance of additional investment that occurs specially so that green management is well practiced.

Category	Unit	Hyosung Advanced Materials							
		Korea		Vietnam			China		
		2018	2019	2017	2018	2019	2017	2018	2019
Waste treatment and environment restoration expenses	KRW 1,000	623,975	1,131,932	4,383,810	4,071,910	3,604,877	764,858	698,289	651,034
Pollution prevention and environmental management expenses	KRW 1,000	281,235	291,752	50,790	96,826	42,204	-	-	-
Total	KRW 1,000	905,210	1,423,685	4,434,600	4,168,736	3,647,081	764,858	698,289	651,034

### Environmental Performance Management

Jeonju plant establishes and manages environmental performance indicator goals every year. Typically, we have established our own standards for wastewater discharge, which is significantly lower than the legal standards, and since KPI is managed by the number of cases exceeding the self-standard rather than the emission concentration, we are tracking problems in the production process and wastewater treatment process every time they are exceeded to derive improvements. Ulsan plant also practices green management according to the plans derived from the established goals and environmental performance evaluation system based on ISO14001. From 2019, we have expanded the scope to overseas business affiliates.

### Environmental Cleanup Activities

Employees of Hyosung Advanced Materials at Jeonju plant participate in environmental cleanup activities near the plant once a year. We are working on maintaining the clean and pleasant scenery by picking up trash at gardens, flower beds, footpath and streets around the plant.

Environmental Product Certifications

As of the end of 2019, Hyosung Advanced Materials has obtained a total of 6 environmental certifications for its products. In the future, we will continue to develop green technologies and increase environmental certification products and green technology products.

Certification Organization	Certificate Number	Hyosung Advanced Materials	
		Product Name	Certification Period
Korea Environmental Industry & Technology Institute (KEITI)	10227	TRENDY(SPACE)(7mm)	2018.11.22 ~ 2020.11.21
KEITI	10793	MJ (7mm)	2019.05.27 ~ 2021.05.20
KEITI	10793	FS (6.5mm)	2019.05.27 ~ 2021.05.20
KEITI	10793	BS (6mm)	2019.05.27 ~ 2021.05.20
KEITI	17275	MAXIMA(8mm)	2019.11.11 ~ 2021.07.09
KEITI	20323	SWAN design tile	2019.06.17 ~ 2020.11.12

Safety and Health Activities

Hyosung Advanced Materials conducts various activities to promote the health of employees and suppliers’ employees. For example, we are operating programs for musculoskeletal disease prevention, hearing preservation, brain cardiovascular disease prevention, and raising three health funds, including obesity, non-smoking, and musculoskeletal. In recognition of its safety management activities not only in Korea but also in overseas affiliates Jiaxing Corporation was selected as the best company in safety management selected by the Jiaxing Economic Development Zone in February 2019. Hyosung Advanced Materials runs an environment and safety diagnosis day for each department every week, including supplier companies, to check the overall environment and safety in business sites including chemical-handling facilities. In addition, we provide MSDS (Material Safety Data Sheet) training to chemical-handling personnel to raise their awareness. Staff members of the Environment Safety Team, Production Team, and Quality Assurance Team are present to inspect the entire process of loading the chemicals from vehicle to input. Based on the regulations for management of safety protective equipment, Hyosung Advanced Materials provides designated safety equipment to all employees, including suppliers who work inside the factory for all production and construction activities regardless of their affiliation.

Occupational Accident Rate

Hyosung Advanced Materials continues a lot of occupational accident prevention activities for workplace safety, and occupational fatality has not occurred for the last two consecutive years.

Category	Unit	Hyosung Advanced Materials							
		Korea		Vietnam			China		
		2018	2019	2017	2018	2019	2017	2018	2019
Total number of occupational accidents : Accidental disaster + Occupational disease	Persons	18	27	7	6	7	20	31	24
Occupational accident rate : Total number of occupational accidents / Total number of employees x 100	%	1.58	2.61	0.13	0.11	0.12	0.98	1.56	1.30
Number of work-related fatalities	Persons	-	-	-	-	-	-	-	-
Work-related fatality rate per ten thousand employees : Number of work-related fatalities / Total number of employees x 10,000	‰	-	-	-	-	-	-	-	-

Environmental Emergency Response Manual

We have established environmental emergency response manual as part of our risk management in environmental risks. By using this manual, we can notify an emergency situation quickly across the company and ensure all departments and sectors respond to it systematically in the event of an environmental emergency. We strive to raise awareness of environmental emergency accidents and familiarize ourselves with manuals through regular training, such as joint fire drills with the public and corporation and education on hazardous chemicals. A separate emergency report system is operated for prompt communication, and the reporting formats are organized in advance to ensure accuracy of emergency-related information. The manual contains scenario-based guidelines for various environmental accidents and natural disasters such as earthquakes, typhoons, and heavy rains. Especially in the preparation for fire in the plant, we have established additional facilities and process necessary for prompt fire control as well as measures in the manual. We also prepared restoration measures for the aftermath of situation to ensure rapid recovery from damage.

# Appendix

Stakeholder Engagement	50
Materiality Assessment	51
Certifications Status and Association Membership Status By Business Site	52
Third Party Verification Statement	53
GRI Standards Index	54
UN SDGs	56



Stakeholder Engagement

Stakeholders’ Main Interests and Communication Channels

HAMC aims to provide differentiated value to stakeholders by identifying main interests of all stakeholders and establishing the right response target. We select stakeholders that have a significant impact on HAMC, analyze risks and opportunities, and establish appropriate communication strategies for each stakeholder group. From the supply of products and services, pursuing economic and social values, to CSR activities contributing to sustainable supply chain, human rights, environment and society, HAMC listens to stakeholders’ opinions sincerely and reflects them in its overall business activities.

Stakeholder Group	Main Interests	Our Response	Communication Channels
Customers	<ul style="list-style-type: none"><li>Producing innovative products through R&amp;D</li><li>Providing customer-tailored products</li><li>Continued post-purchase communication</li></ul>	<ul style="list-style-type: none"><li>We would like to strengthen the sustainability of our products and services by listening to customers feedback throughout entire product lifecycle, from R&amp;D to final delivery.</li></ul>	<ul style="list-style-type: none"><li>Company website</li><li>Global exhibitions</li><li>Technology exchange meetings</li><li>Customer satisfaction surveys</li></ul>
Employees	<ul style="list-style-type: none"><li>Providing fair evaluation and opportunities</li><li>Facilitating communication between employees and management</li><li>Creating pleasant working environment</li></ul>	<ul style="list-style-type: none"><li>We create an excellent working environment by ensuring various benefits and fair performance evaluation system, we encourage employees to actively participate in management.</li></ul>	<ul style="list-style-type: none"><li>Internal on-line bulletin boards (ex.Wa-gle Wa-gle)</li><li>Company-labor union meeting</li><li>CEO-Leader meeting</li><li>Performance sharing meeting / business briefing meeting</li><li>Company-union meetings</li></ul>
Suppliers	<ul style="list-style-type: none"><li>Fair distribution of performance outcomes</li><li>Preventing unfair terms or unnecessary business interferences</li><li>Promoting fair business practices</li></ul>	<ul style="list-style-type: none"><li>We continue to monitor the status of sustainable management of our suppliers and promote their voluntary practices for sustainability by providing training and supporting shared growth activities.</li></ul>	<ul style="list-style-type: none"><li>Suppliers meeting</li><li>Quality and safety improvement support</li><li>Whistleblowing center</li><li>Win-win cooperation program</li></ul>
Shareholders/ Investors	<ul style="list-style-type: none"><li>Acquiring sustainable growth engine for the future</li><li>Securing financial soundness and profitability</li><li>Ensuring governance soundness</li></ul>	<ul style="list-style-type: none"><li>In addition to the financial information, we disclose our sustainability performance and listen to opinions of shareholders/ investors on the improvement of sustainable management through performance evaluation.</li></ul>	<ul style="list-style-type: none"><li>Corporate IR activities</li><li>BOD and shareholders’ meeting</li><li>Business reports</li><li>Corporate disclosure on the Korea stock exchange</li><li>CSR Report and website</li></ul>
Local Communities	<ul style="list-style-type: none"><li>Interactive communication</li><li>Sincere CSR activities</li><li>Sustainable long-term support for capacity growth</li></ul>	<ul style="list-style-type: none"><li>Through various communication channels, we constantly communicate with the local community, and we would like to contribute to the its development by carrying out CSR activities customized to the nature of each business company.</li></ul>	<ul style="list-style-type: none"><li>Environmental cleanup activities</li><li>Open-house events at plants</li><li>Business-related CSR activities</li><li>Local community committees</li></ul>

Materiality Assessment

HAMC selects key issues by analyzing the interests of major domestic/international stakeholders and their impact on business. The materiality assessment will be conducted by comprehensively considering international standards for sustainable management, such as GRI Standards, UN SDGs, and ISO 26000, social issues exposed to the media, and related trends within the same industry. In 2019, we derive a total of 12 key issues, and this report reveals HAMC's management approach and major achievements on these issues.

Materiality Assessment Process

1. Constituting the Pool of Sustainability Issues

We have created a pool containing 51 sustainability issues based on the analysis of major international standards (i.e. GRI Standards, EcoVadis, ISO26000 and UN SDGs), internal corporate documents such as project plans, mid & long-term business strategies as well as market research.

2. Selecting Material Issues through Materiality Assessment

Material issues have been selected among 51 issues in the pool after evaluating materiality of each issue in the aspect of the business impact and the stakeholder interest. The stakeholder interest has been assessed by considering the level of interest in issues and information disclosure, and the business impact has been measured by level of management's interest and correlation with business strategy and financial performance.

3. Planning Structure and Contents of the Report

Key report issues have been derived in alignment with the material issues selected from the materiality assessment, based on which overall structure and detailed contents of this report have been planned.

Materiality Assessment

Peer Group Issues

Internal Data Review

Media Research

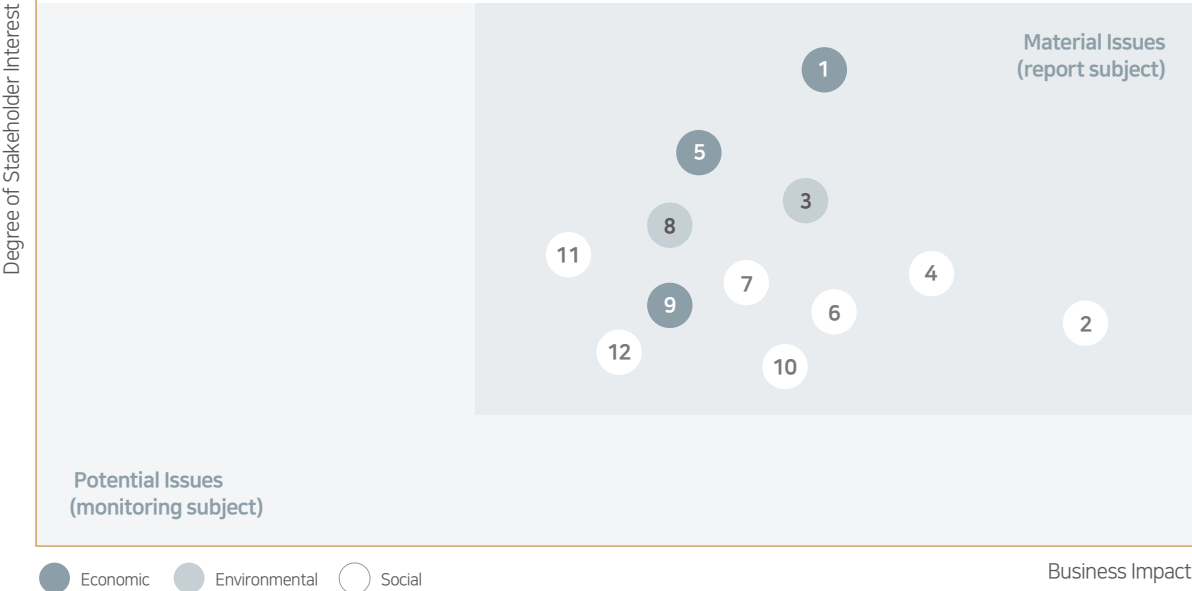
International Standards Analysis

Internal circle including key corporate strategy and industry issues

Key Report Issues

External circle including international standards and media sources

Focus Issues Derived from Materiality Assessment



Topic	Core Issues	GRI Aspect	Reporting Boundary	
			Internal	External
Economic	① Expansion to overseas markets for new growth engine	Market Presence	●	Customers, Suppliers
Social	② Customer relationship management (CRM) and maximizing customer satisfaction	Marketing and Labeling	●	Customers
Environmental	③ Green products and technology development	Energy	●	Customers
Social	④ Sustainable supplier chain management	Procurement Practices	●	Suppliers
Economic	⑤ Ethical management and anti-corruption activities	Ethics and Integrity	●	-
Social	⑥ Occupational safety and health	Occupational Health and Safety	●	-
Social	⑦ Mutual growth with local communities	Local Communities	●	Local Communities
Environmental	⑧ Climate change response	Energy, Emissions	●	-
Economic	⑨ Sound governance	Governance	●	-
Social	⑩ Product responsibility and safety	Customer Health and Safety	●	Customers
Social	⑪ Employees capacity building	Training and Education	●	-
Social	⑫ Respect for human rights	Human Rights Assessment	●	-

Certifications Status and Association Membership Status By Business Site

Certifications Status by Business Site

Company	Business Site	Business Area	Certification			
			Environmental Management	Quality	Safety&Health	Eco-friendliness
Hyosung Advanced Materials	Ulsan	Tire Cord	ISO 14001	ISO 9001 IATF 16949	KOSHA 18001	GRS
		Tech. Yarn	ISO 14001	ISO 9001 IATF 16949		GRS
		Aramid	ISO 14001	ISO 9001 IATF 16949		-
	Gyeongju	Steel Cord	ISO 14001	-	-	-
	Eonyang	Steel Cord	ISO 14001	ISO 9001 ISO/TS 16949	-	-
	Jeonju	Carbon	ISO 14001	ISO 9001 IATF 16949	-	-
	Daejeon	Interior	ISO 14001	ISO 9001	-	-
	Vietnam	Tire Cord	ISO 14001	ISO 9001 IATF 16949	ISO 45001	-
		Steel Cord	ISO 14001	ISO 9001 IATF 16949	-	-
	Quang Nam	Tire Cord	-	ISO 9001 IATF 16949	-	-
	Jiaxing	Tire Cord	ISO 14001	ISO 9001 IATF 16949	OHSAS 18001	Oeko-Tex® GRS
		Tech.Yarn	ISO 14001	ISO 9001 IATF 16949	OHSAS 18001	
		NPY	-	-	-	-
		Film	ISO 14001	ISO 9001 BRC	OHSAS 18001	
	Qingdao	Steel Cord	ISO 14001	ISO 9001 IATF 16949	ISO 45001	-
		Interior	ISO 14001	-	ISO 45001	-

Association Membership Status By Business Site

Category	Association Name
Hyosung Advanced Materials	Seoul Chamber of Commerce and Industry
	Seoul Bar Association
	Korea International Trade Association
	Korea Listed Companies Association
	The Federation of Korean Industries
	The Korea Enterprises Federation
	Korea Economic Research Institute
	Korea Mecenat Assocation
	Korea Chemical Fibers Association
	Korea Exchange
	Membership Society of the National Museum of Contemporary Art, Korea
Hyosung Group*	The Federation of Korean Industries
	The Korea Enterprises Federation
	Korea Economic Research Institute

\*Association that HAMC takes part in along with Hyosung Corp., and the other operating companies – Hyosung TNC, Hyosung Heavy Industries, and Hyosung Chemical



## Third Party Verification Statement

### Foreword

Hyosung Advanced Materials Corporation(“HAMC”) commissioned NetworksY to undertake independent assurance of the Sustainability Report 2019(the “Report”). Hyosung Advanced Materials has sole responsibility for the content of the Report. The responsibility of us in performing the assurance work is to the management of Hyosung Advanced Materials in accordance with the terms of reference and agreement. Our assurance engagements are based on the assumption that the data and information provided by the client to us as part of our review have been provided in good faith.

### Scope and Standard

Hyosung Advanced Materials describes its efforts and achievements of the corporate social responsibility activities in the Report. We conducted our engagement in accordance with ISAE 3000<sup>1)</sup> and AA1000AS(2008)<sup>2)</sup>. The term “moderate assurance” used in AA1000AS(2008) is designed to be consistent with “limited assurance” as articulated in ISAE 3000. Our assurance is a Type II assurance engagement as defined in the AA1000AS(2008). We evaluated the adherence to Principles of Inclusivity, Materiality and Responsiveness, and the reliability of the selected GRI Standards indices as below, where professional judgment of the team was exercised as materiality criteria.

We checked whether the Report has been prepared in accordance with the ‘Core Option’ of GRI Standards which covers the followings:

- GRI Standards Reporting Principles
- Universal Standards
- Topic Specific Standards
  - Management approach of Topic Specific Standards
  - Economic Performance : 201-1, 201-2, 201-3, 201-4
  - Anti-Corruption : 205-1, 205-2, 205-3
  - Energy : 302-1, 302-3, 302-3, 302-4, 302-5
  - Emissions : 305-1, 305-2, 305-3, 305-4, 305-5, 305-6, 305-7
  - Supplier Environmental Assessment : 308-1, 308-2
  - Occupational Health and Safety : 403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10
  - Training and Education : 404-1, 404-2, 404-3
  - Local Communities : 413-1, 413-2
  - Supplier Social Assessment : 414-1, 414-2
  - Customer Health and Safety : 416-1, 416-2
  - Marketing and Labeling : 417-1, 417-2, 417-3

### Limitations

The performance and reporting practices of partners, contractors and, third parties other than the reporting boundaries specified in the report are not within the scope of this assurance. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. The baseline data for environmental and social performance are not verified, while the aggregated data at the corporate level are used for the verification. We expressly disclaim any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

### Approach

In order to verify the contents of the Report within an agreed scope of assurance in accordance with the assurance standard, we have carried out an assurance engagement as follows:

- Reviewed overall report
- Reviewed materiality test process and methodology
- Reviewed stakeholder engagement process
- Interviewed people in charge of preparing the Report
- Reviewed strategies and internal systems for sustainability management performance and activities

### Conclusion

Based on the results we have obtained from material reviews and interviews, we had several discussions with Hyosung Advanced Materials on the revision of the Report. We reviewed the Report’s final version in order to confirm that our recommendations for improvement and our revisions have been reflected. When reviewing the results of the assurance, we could not find any inappropriate contents in the Report to the compliance with the principles stipulated below. Nothing has come to our attention that causes us to believe that the data included in the verification scope are not presented appropriately.

- **Inclusivity : Participation of Stakeholders**  
We could not find any evidence that any critical stakeholder group has been left out from the stakeholder engagement process mentioned in the Report. Also, we could not find any reason to conclude that Hyosung Advanced Materials did not apply the principle of inclusivity in practicing sustainable management.
- **Materiality : Determining and Reporting of Material Issues**  
We did not find any significant issues related to Hyosung Advanced Materials’s sustainability performance excluded from the Report, nor did we find any issues that make us determine that Hyosung Advanced Materials did not apply the process to derive important issues to be included in the Report.
- **Responsiveness : Organization’s Response to Material Issues**  
We could not find any evidence to conclude that Hyosung Advanced Materials did not apply the principle of responsiveness when considering what to include in the Report.

We could not find any evidence the Report was not prepared in accordance with the ‘Core Option’ of GRI standards.

### Recommendation for Improvement

Hyosung Advanced Materials identifies important issues related to sustainability management and reports its performance categorizing by major overseas subsidiaries as well as the headquarters. In particular, efforts to improve the sustainability management system and manage sustainability management performance can be highly appreciated. However, as the complexity of the business structure is increased and consideration on various overseas subsidiaries, Hyosung Advanced Materials' sustainability management activities must be able to spread throughout the whole supply chain. In the future, it is recommended that you communicate more actively with stakeholders by expanding the scope of reporting to all overseas subsidiaries and suppliers.

### Independence

With the exception of providing third party assurance services, we are not involved in any other Hyosung’s business operations that are aimed at making profit in order to avoid any conflicts of interest and to maintain independence.

July, 2020

CEO. **SUNG SANG LEE**



**AA1000**  
Licensed Assurance Provider  
000-297



\* AA1000AS (2008) : AA1000 Assurance Standard (2008) is a global verification standard established by AccountAbility and provides a method to report sustainability issues by evaluating an organization’s operation, compliance with principles, and reliability of performance information.  
\* AA1000AP (2018): AA1000 AccountAbility Principles (2018) provides the principles underlying the AA1000 standard as a global verification principle established by AccountAbility.

GRI Standards Index

General Standards				
Topic	Index	Index Description	Page	Comments
Organizational Profile	102-1	Name of the organization	5	
	102-2	Activities, brands, products, and services	5	
	102-3	Location of headquarters	5	
	102-4	Location of operations	5	
	102-5	Ownership and legal form	17~18	
	102-6	Markets served	10	
	102-7	Scale of the organization	40~42	
	102-8	Information on employees and other workers	23, 42~43	
	102-9	Supply chain	13, 41	
	102-10	Significant changes to the organization and its supply chain	-	No significant changes during reporting period
	102-11	Precautionary principle or approach	19	
	102-12	External initiatives	56	
	102-13	Membership of associations	52	
Strategy	102-14	Statement from senior decision-maker	4	
Ethics and Integrity	102-16	Values, principles, standards, and norms of behavior	21~22	
	102-17	Mechanisms for advice and concerns about ethics	21~22	
Governance	102-18	Governance structure	17~18	
Stakeholder Engagement	102-40	List of stakeholder groups	50	
	102-41	Collective bargaining agreements	43	
	102-42	Identifying and selecting stakeholders	50	
	102-43	Approach to stakeholder engagement	50	
	102-44	Key topics and concerns raised	50	
Reporting Practice	102-45	Entities included in the consolidated financial statements	-	Refer to the business report
	102-46	Defining report content and topic boundaries	51	
	102-47	List of material topics	51	
	102-48	Restatements of information	2	
	102-49	Changes in reporting	2	
	102-50	Reporting period	2	
	102-51	Date of most recent report	2	
	102-52	Reporting cycle	2	
	102-53	Contact point for questions regarding the report	2	
	102-54	Claims of reporting in accordance with the GRI Standards	2	
	102-55	GRI content index	54~55	
	102-56	External assurance	53	
Management Approach	103-1	Explanation of the material topic and its boundary	Each Material Issue	
	103-2	The management approach and its components	Each Material Issue	
	103-3	Evaluation of the management approach	Each Material Issue	

Topic-Specific Standards				
Topic	Index	Index Description	Page	Comments
Economic Standard Series(GRI 200)				
Economic Performance	103-1,2,3	Management approach	13, 28	
	201-1	Direct economic value generated and distributed	40	
	201-2	Financial implications and other risks and opportunities due to climate change	31	
	201-3	Defined benefit plan obligations and other retirement plans	43	
	201-4	Financial assistance received from government	47	
Anti-Corruption	103-1,2,3	Management approach	21	
	205-1	Operations assessed for risks related to corruption	21~22	
	205-2	Communication and training about anti-corruption policies and procedures	21~22	
	205-3	Confirmed incidents of corruption and actions taken	21~22	
Environmental Standards Series(GRI 300)				
Energy	103-1,2,3	Management approach	30	
	302-1	Energy consumption within the organization	45	
	302-2	Energy consumption outside of the organization	45	
	302-3	Energy intensity	45	
	302-4	Reduction of energy consumption	45	
	302-5	Reductions in energy requirements of products and services	11~12	
Emissions	103-1,2,3	Management approach	30	
	305-1	Direct (Scope 1) GHG emissions	45	
	305-2	Energy indirect (Scope 2) GHG emissions	45	
	305-3	Other indirect (Scope 3) GHG emissions	-	CDP
	305-4	GHG emissions intensity	45	
	305-5	Reduction of GHG emissions	31	
	305-6	Emissions of ozone-depleting substances (ODS)	47	
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	47	
Supplier Environmental Assessment	103-1,2,3	Management approach	13	
	308-1	New suppliers that were screened using environmental criteria	13	
	308-2	Negative environmental impacts in the supply chain and actions taken	13~15	
Social Standards Series(GRI 400)				
Occupational Health and Safety	103-1,2,3	Management approach	34	
	403-1	Occupational health and safety management system	34	
	403-2	Hazard identification, risk assessment, and incident investigation	34~35	
	403-3	Occupational health services	34~35	
	403-4	Worker participation, consultation, and communication on occupational health and safety	34~35	
	403-5	Worker training on occupational health and safety	34~35	
	403-6	Promotion of worker health	34~35	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	34~35	
	403-8	Workers covered by an occupational health and safety management system	34~35	
	403-9	Work-related injuries	48	
Training and Education	403-10	Work-related ill health	48	
	103-1,2,3	Management approach	24	
	404-1	Average hours of training per year per employee	44	
	404-2	Programs for upgrading employee skills and transition assistance programs	24~25	
Local Communities	404-3	Percentage of employees receiving regular performance and career development reviews	43	
	103-1,2,3	Management approach	28	
	413-1	Operations with local community engagement, impact assessments, and development programs	28~29, 43	
Supplier Social Assessment	413-2	Operations with significant actual and potential negative impacts on local communities	-	No significant changes during reporting period
	103-1,2,3	Management approach	13	
	414-1	New suppliers that were screened using social criteria	13	
Customer Health and Safety	414-2	Negative social impacts in the supply chain and actions taken	13	
	103-1,2,3	Management approach	11	
	416-1	Assessment of the health and safety impacts of product and service categories	11~12	
Marketing and Labeling	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	-	No significant changes during reporting period
	103-1,2,3	Management approach	11	
	417-1	Requirements for product and service information and labeling	12~12	
	417-2	Incidents of non-compliance concerning product and service information and labeling	-	No significant changes during reporting period
	417-3	Incidents of non-compliance concerning marketing communications	-	No significant changes during reporting period

GRI Standards Index

Other Standards				
Topic	Index	Index Description	Page	Comments
Strategy	102-15	Key impacts, risks, and opportunities	19, 51	
Governance	102-21	Consulting stakeholders on economic, environmental, and social topics	50	
	102-22	Composition of the highest governance body and its committees	17~18	
	102-23	Chair of the highest governance body	17~18	
	102-24	Nominating and selecting the highest governance body	17~18	
	102-25	Conflicts of interest	17~18	
	102-26	Role of highest governance body in setting purpose, values, and strategy	17~18	
	102-28	Evaluating the highest governance body's performance	17~18	
	102-29	Identifying and managing economic, environmental, and social impacts	6, 17~18, 20	
	102-30	Effectiveness of risk management processes	17~19	
	102-31	Review of economic, environmental, and social topics	51	
	102-32	Highest governance body's role in sustainability reporting	6, 51	
	102-34	Nature and total number of critical concerns	51	
	102-35	Remuneration policies	17	
	102-36	Process for determining remuneration	17	
Market Presence	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	43	
	202-2	Proportion of senior management hired from the local community	42	
Indirect Economic Impacts	203-1	Infrastructure investments and services supported	28	
	203-2	Significant indirect economic impacts	28~29, 43	
Procurement Practices	204-1	Proportion of spending on local suppliers	41	
Anti-Competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	14, 22	
Tax	207-1	Approach to tax	-	
	207-2	Tax governance, control, and risk management	-	
	207-3	Stakeholder engagement and management of concerns related to tax	-	
	207-4	Country-by-country reporting	-	
Materials	301-1	Materials used by weight or volume	-	
	301-2	Recycled input materials used	12, 32, 46~47	
	301-3	Reclaimed products and their packaging materials	-	
Water	303-1	Interactions with water as a shared resource	46	
	303-2	Management of water discharge-related impacts	32, 46	
	303-3	Water withdrawal	46	
	303-4	Water discharge	46	
	303-5	Water consumption	46	
Biodiversity	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	-	
	304-2	Significant impacts of activities, products, and services on biodiversity	-	
	304-3	Habitats protected or restored	-	
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	-	

Other Standards				
Topic	Index	Index Description	Page	Comments
Effluents and Waste	306-1	Water discharge by quality and destination	32, 46	
	306-2	Waste by type and disposal method	46	
	306-3	Significant spills	-	No significant spills during reporting period
	306-4	Transport of hazardous waste	-	
	306-5	Water bodies affected by water discharges and/or runoff	-	
Environmental Compliance	307-1	Non-compliance with environmental laws and regulations	-	No significant cases found during reporting period
Employment	401-1	New employee hires and employee turnover	42	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	-	
	401-3	Parental leave	42	
Labor/ Management Relations	402-1	Minimum notice periods regarding operational changes	-	
Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	17~18, 42	
	405-2	Ratio of basic salary and remuneration of women to men	42	
Non-Discrimination	406-1	Incidents of discrimination and corrective actions taken	21~22	
Freedom of Association and Collective Bargaining	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	-	No significant risk found during reporting period
Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor	-	No child labor during reporting period
Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	-	N/A
Security Practices	410-1	Security personnel trained in human rights policies or procedures	-	
Rights of Indigenous Peoples	411-1	Incidents of violations involving rights of indigenous peoples	-	No significant changes during reporting period
Human Rights Assessment	412-1	Operations that have been subject to human rights reviews or impact assessments	25, 44	
	412-2	Employee training on human rights policies or procedures	44	
	412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	-	
Human Rights Assessment	415-1	Political contributions	-	
Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	-	No significant changes during reporting period
Socioeconomic Compliance	419-1	Non-compliance with laws and regulations in the social and economic area	-	No significant changes during reporting period



UNGC & SDGs (Sustainable Development Goals)

Hyosung Advanced Materials (HAMC) joined the UNGC in 2019, and has faithfully continued its activities as an active signatory including COP(Communication on Progress). In particular, we were one of the 9 Korean companies whose CEO participated in the UNGC’s “Statement from Business Leaders for Renewed Global Cooperation” to communicate our support for cooperate in resolving the various issues including pandemic that the global society is facing. We support SDGs, and put in effort to align it with our overall business activities. SDGs are the follow-up goals after the MDGs (Millennium Development Goals) that the UN and the international society as a whole are committed to achieve between 2016 and 2030. The key sustainability issues in line with UN SDGs and main UN SDGs issues of HAMC are as follows.



UN SDGs 17 Goals

- Goal 1 - End poverty in all its forms everywhere
- Goal 2 - End hunger, improve food security, and promote sustainable agriculture
- Goal 3 - Ensure healthy lives and promote well-being for all at all ages
- Goal 4 - Ensure quality education and promote life-long learning opportunities for all
- Goal 5 - Achieve gender equality and empower all women and girls
- Goal 6 - Ensure availability and sustainable management of water and sanitation for all
- Goal 7 - Ensure access to sustainable energy for all
- Goal 8 - Promote sustainable economic growth, full employment and decent work for all
- Goal 9 - Build resilient infrastructure, promote sustainable industrialization
- Goal 10 - Reduce inequality within and among locations
- Goal 11 - Make cities and human settlements inclusive, safe, resilient, and sustainable
- Goal 12 - Ensure sustainable consumption and production patterns
- Goal 13 - Take urgent action to combat climate change and its impacts
- Goal 14 - Conserve and sustainably use the oceans, seas and marine resources
- Goal 15 - Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss
- Goal 16 - Establish and fair justice system for all
- Goal 17 - Strengthen the means of implementation and revitalize the global partnership for sustainable development

Key Sustainability Issues and Response Target

Key Sustainability Issues	UN SDGs	Response Activities
① Expansion to overseas markets for new growth engine	8, 9, 12	• Expand market through differentiated solutions for conventional and new materials • Continuously develop new applications to satisfy customer needs
② CRM and customer satisfaction	8, 9, 12	• Secure ViU(Value in Use) and achieve zero customer complaint • Reinforce quality management system through professional engineering training
③ Green products and technology development	6, 13, 14, 15	• Pursue green management through certifications of green technology, reduced use of hazardous chemicals and waste • Extend eco-product portfolio and sales share of such products
④ Sustainable supply chain management	8, 12	• Increase suppliers’ participation of the shared growth agreement and shared growth projects • Strengthen ESG evaluation of suppliers and support programs
⑤ Ethical management and anti-corruption activities	16	• Promote communication channels for ethical management (i.e. grievance center, HR counseling center) • Strengthen supplier ethical management
⑥ Occupational safety and health	3, 12	• Systematic response by segmenting safety management issues by process, facility, task, and handling materials
⑦ Mutual growth with local communities	1, 3, 4, 8, 9	• Ensure actual support to the underprivileged community members through effective and systematic CSR activities
⑧ Climate change response	6, 12, 13, 14, 15	• Reduce GHGs emissions and expand use of renewable energy • Reduce waste and pollutants to minimize environmental impact
⑨ Sound Governance	16	• Establish and implement detailed long-term sustainability action plans • Expand the engagement in global initiatives
⑩ Product responsibility and safety	8	• Develop and produce products that consider user comfort & safety, and product life cycle • Reinforce R&D Organization such as Hyosung R&DB Lab and R&D Committee)
⑪ Employees capacity building	4, 8	• Continuous development of programs to support actual capacity building • Introduce programs to enhance ESG awareness
⑫ Respect for human rights	5, 8, 10	• Expand quality jobs for the underprivileged and disabled • Minimize irregular/temporary positions

\* Risk management and R&D (SDGs 7,8,12,17) can be found in pages 19-20, 36.