

# Global Practice for Sustainability

2021 Hyosung Sustainability Report

**HYOSUNG**

### Additional Information

This report is published in the form of an interactive PDF that includes hyperlink features to direct readers to relevant pages both within and outside of the report.

### Glossary of Major Terms

**PG** Performance Group

**PU** Performance Unit

### Contact Information

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## About this report

After the first publication in 2012, Hyosung has been publishing a Sustainability Report every year since 2018 to communicate actively with our stakeholders. The '2021 Hyosung Sustainability Report' is the sixth sustainability report that we have published. Through this report, we would like to share and transparently disclose our sustainable management activities and achievements across the economic, social, and environmental domains.

### Reporting Principles

The 2021 Hyosung Sustainability Report was prepared in accordance with the Core option of the GRI Standards. In addition, external sustainability initiatives and indicators, including SASB, TCFD, EcoVadis, ISO 26000, and the UN SDGs, have been considered and reflected so that we meet the diverse interests and criteria that apply to different stakeholders.

### Reporting Period and Scope

The reporting period for this publication is January 1, 2021 to December 31, 2021. To allow for analysis of trends, data from the past three years, beginning in 2019, is included. In terms of qualitative activities and achievements, the report may include data up to May 2022. All financial data is based on the criteria set by the K-IFRS (Korean International Financial Reporting Standards).

On June 1, 2018, Hyosung was spun-off into the holding company and four operating companies. Hyosung Corporation, the holding company, is in charge of group-wide investment and the management of operating companies – Hyosung TNC Corp., Hyosung Heavy Industries Corp., Hyosung Advanced Materials Corp., and Hyosung Chemical Corp. The business areas of these operating companies cover textile and trading, heavy industries and construction, industrial materials, and chemicals, respectively, whilst the reporting period of financial information for each company ranges from the date of the spin-off to December 31, 2021. The scope of this report includes domestic business sites of Hyosung Corporation and its four operating companies, and some qualitative information includes overseas business. For matters requiring attention to the reporting scope, separate explanations are provided to avoid confusion. For readers' convenience, we have abbreviated company names. Some business outcomes and activities described in this report may not be applicable to some operating companies.

In cases where corrections are required for historical data presented in our previous reports, data has been re-calculated as of 2021. Reasons for, and the results of, corrections are indicated separately at the bottom of the relevant content.

### Reporting Cycle

Annually (Last report published: July 2021)

### Assurance

In order to ensure credibility and fairness, KFQ (Korean Foundation for Quality) has verified this report in accordance with the four principles of AA1000AS (v3) and AA1000AP (2018). The results of the assurance engagement can be found on page 104 of this report.

# Contents



- 04** CEO Message
- 05** Company Overview



- 17** Climate Change Response
- 24** Developing Eco-friendly Products and Technologies
- 30** Health and Safety at Business Sites
- 37** Managing the Supply Chain
- 41** Customer Satisfaction and Product Stewardship
- 46** Corporate Social Responsibility



- 50** Governance
- 52** Risk Management
- 53** Ethical Management
- 54** Human Rights Management
- 55** Talent Recruiting and Training
- 58** Human Resource Management
- 60** Research and Development
- 61** Information Security



- 63** Stakeholder Engagement
- 64** Materiality Assessment
- 65** Hyosung Corporation
- 72** Hyosung TNC
- 81** Hyosung Heavy Industries
- 89** Hyosung Advanced Materials
- 99** Hyosung Chemical



- 107** Certifications and Association Memberships by Business Site
- 109** Independent Assurance Statement
- 110** GRI Standards Index
- 112** TCFD
- 113** SASB
- 115** UN SDGs



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## CEO Message



Dear respected stakeholders,  
I appreciate your interest in and support for Hyosung.

We sincerely thank our stakeholders, including our shareholders, customers, business partners, local communities, and employees, for your continued interest and the generous support you have extended to Hyosung. Communities worldwide are facing changes that we have never experienced before due to the COVID-19 pandemic, climate change, and rapidly changes to ICT technology – and we are no exception. Amid such unprecedented change, Hyosung's growth engine that can turn crisis into opportunity is ESG (Environmental, Social and Governance). Fully aware of our role as a global citizen, Hyosung will communicate more actively with our stakeholders to share difficulties, fulfill our environmental responsibilities, including our climate change response, and build a sustainable society.

**Dear stakeholders,**

Regardless of industry, ESG has become an essential metric that global companies must consider in their business activities. The crises caused by COVID-19 and climate change emphasize the importance of corporate crisis management capabilities. A preemptive response to environmental change has now become a major challenge task that cannot be delayed any further.

To protect its immutable values in an era of change, Hyosung has been striving to reinforce its position as a reliable and trustworthy company that fulfills its roles and responsibilities in terms of ESG. As a result of implementing improvement tasks in every aspect of sustainability and establishing a working-level council to regularly check progress, Hyosung Corporation has received outstanding results in its ESG evaluations. Although we have made remarkable achievements so far, we will not rest on our laurels.

ESG is becoming a standard for current and future corporate value, and corporations are increasingly being called upon to elevate their ESG performance. Hyosung tirelessly strives to become the most trusted brand, fulfilling our roles and responsibilities toward the environment and society. We will pursue honest and transparent management, as well as innovation, which can create unique values beyond price. Our values include protecting human rights across our entire value chain and fulfilling our corporate social responsibility.

The Sustainability Report is the medium through which stakeholders can best check whether Hyosung has been faithfully implementing ESG. Our business operations are disclosed transparently within this report as concrete data and actions, as opposed to declarative slogans. Based on the objective data presented in this report, we hope to earn your trust and look forward to discussing the way forward together.

Thank you.

CEO and Chairman **HYUN-JOON CHO**



# Hyosung's Hydrogen Economy

Creating synergy among affiliated companies, Hyosung maintains a core value chain for the hydrogen economy as follows: 'production - storage - transport - supply - use'.

Hydrogen energy is seen as the basis of the energy revolution that will change the future of mankind. We will lead the paradigm shift towards hydrogen energy through continuous investment.  
CEO and Chairman HYUN-JOON CHO

## Hydrogen Economy Value Chain

Production

Storage

### Hyosung Heavy Industries: Establishment of the World's Largest Liquid Hydrogen Plant in 2022

We are planning to build a liquid hydrogen plant on a 30,000 m<sup>2</sup> site at Yongyeon plant in Ulsan, jointly with the Linde Group. Once the plant is completed, 13,000 tons of liquid hydrogen can be produced per year. Liquefied hydrogen will be supplied from the second half of 2023.



### Hyosung Chemical: Production of Byproduct Hydrogen

We are equipped with PDH (Propane De-Hydrogenation) facilities capable of producing byproduct hydrogen. Currently, 12,000 tons of byproduct hydrogen is being produced and sold annually.



### Hyosung Advanced Materials: Expansion of Carbon Fiber Plants

Carbon fiber is a key material for hydrogen fuel tanks that are used in hydrogen vehicles. Carbon fiber application reduces the tank weight as well as the risk of accidents. When the third expansion (+2,500 tons/year) of the plant is completed in April 2023, the carbon fiber production capacity will expand to 9,000 tons per year.



Use

Supply

Transport

### Hyosung Advanced Materials High-pressure Fuel Storage Container for Hydrogen Vehicles

Owing to its high-strength, TANSOME<sup>®</sup> has been delivered for many years to both domestic and global companies for high-pressure storage containers. By using carbon fiber to reduce material weight, high-pressure fuel storage containers, which are essential for hydrogen vehicles, are contributing to the improvement of fuel efficiency and emissions reduction.



### Hyosung Heavy Industries: No. 1 Market Share in Hydrogen Charging Stations in Korea

Among 104 hydrogen charging stations nationwide (as of the end of May 2022), Hyosung Heavy Industries operate 23 stations. Additionally, we are preparing to actively receive orders in the future, following the government's policy to expand the infrastructure for hydrogen charging stations.



### Hyosung Advanced Materials: Reinforcement Material for Hydrogen Fuel Transport Container

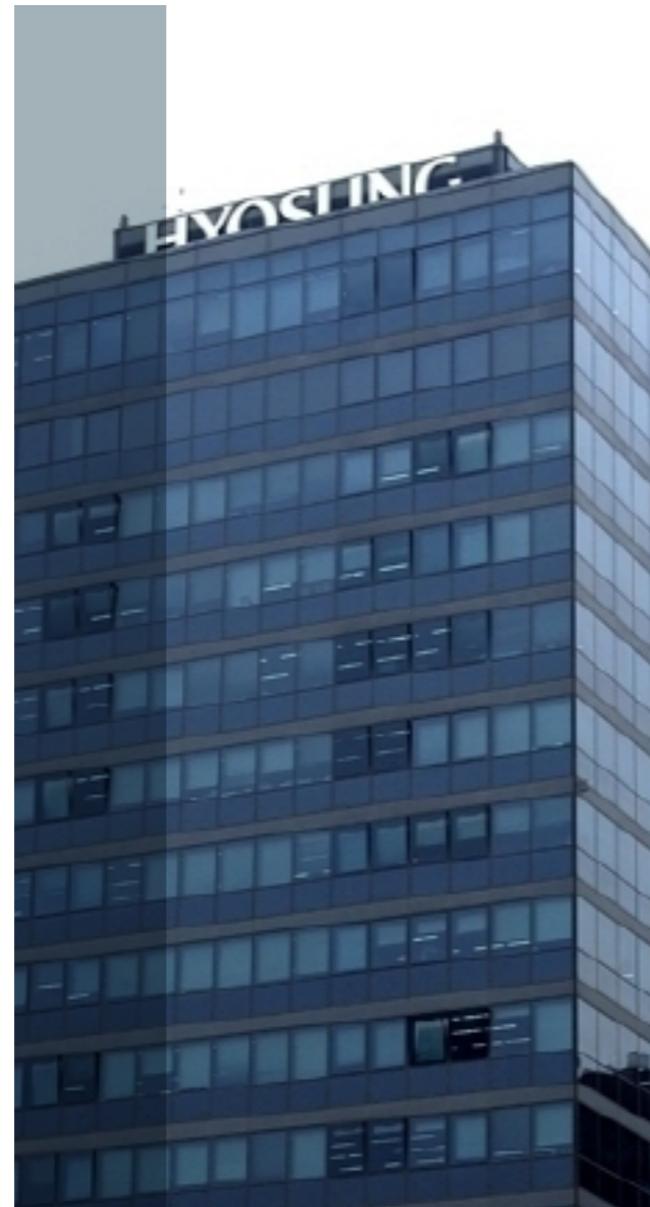
TANSOME<sup>®</sup>, produced by Hyosung Advanced Materials, is applied to hydrogen fuel container reinforcements mounted on hydrogen transport tube trailers as well as high-pressure hydrogen fuel tanks, contributing to the revitalization of hydrogen economy.



# Hyosung Corporation

## Hyosung, Creating Customer Value

Hyosung's changes are based on a process of endless challenges aiming to develop new technologies that can increase customer value. Hyosung's history, throughout which we have fearlessly pioneered a better path for tomorrow, continues along the same trajectory today. Hyosung aims to build a better life for mankind based on high-end technologies and management capabilities along with the HYOSUNG WAY, a value system dedicated to making dreams come true for Hyosung people all around the world. Always aware that we are a part of society, Hyosung will endeavor to contribute to society wherever possible.



### General Information

Company name	Hyosung Corporation
Date of establishment	November 3, 1966
CEO	Hyun-Joon Cho, Kyoo-Young Kim
Headquarters	119 Mapodaero, Mapo-gu, Seoul, Republic of Korea (Gongdeok-dong)
Main business areas	Management and investment of shares of affiliated operating companies, research services, group CI management, interiors, etc.
Major countries where we conduct business	28 countries, including Korea, China, and Vietnam

\* The list of major business countries is based on Hyosung Corporation and its four operating companies - Hyosung TNC, Hyosung Heavy Industries, Hyosung Advanced Materials, and Hyosung Chemical - as of the end of December 2021.

### Financial Performance



### 2022 Group Management Policy

<p>Customer-centered management through performance-oriented VOC activities</p>	<p>Increasing brand value through the highest quality and customer confidence</p>	<p>An agile organization that responds quickly and accurately to changes in the environment</p>	<p>Accelerating digital transformation for database management</p>	<p>ESG management to create a sustainable future</p>
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### ESG Management Performance

<p><b>A</b> KCGS rating</p>	<p><b>B</b> CDP rating</p>	<p>Family-friendliness certification</p>	<p>CSR in the community</p>
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## Global Network

To achieve successful overseas expansion and growth, Hyosung has been expanding its production sites worldwide so that it can respond to demand in overseas markets in a timely and stable manner. In addition, we are striving to provide unique products and services by establishing a global production system for flagship products at 106 business sites located in 28 countries worldwide, with the aim of offering products that can win customers' trust and affection based on a clear understanding of market features. In particular, we are expanding our business in emerging and fast-growing markets such as Vietnam, India, China, Brazil, and the Republic of Türkiye (Turkey). This is based on localization strategies targeting global markets and proactive facility investments to consolidate our dominant regional positions. In 2021, we continued to make large-scale investments to establish new production corporations and plants in China, Vietnam, India, and the Republic of Türkiye (Turkey), and have been working on the development and mass production of core products targeting global markets. Hyosung will continue to establish a strategic global network for continuous overseas business development and the strengthening of global competitiveness.



Production Network

Plants	Production entities
18	30

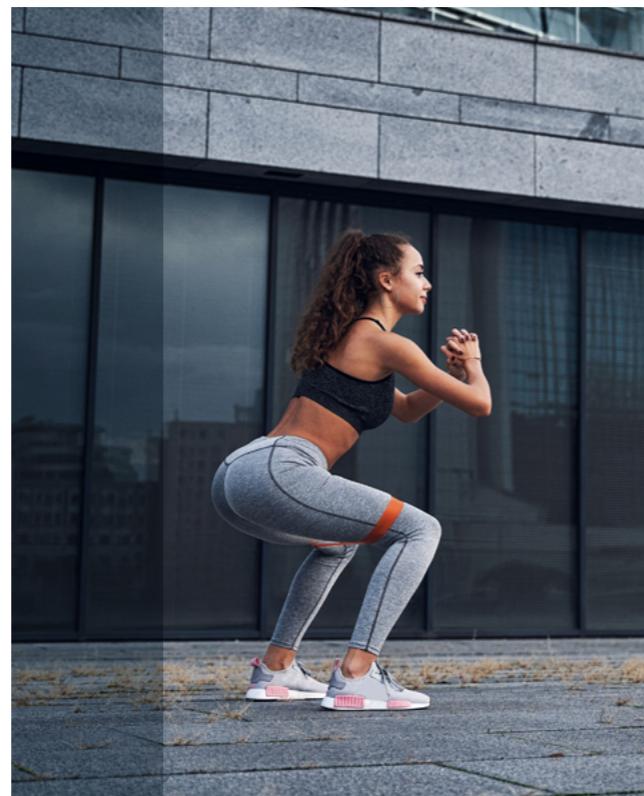
R&D and Marketing Network

R&D centers	Trading entities	Trading offices
4	28	30

# Hyosung TNC

## Maximizing Customer Value through Innovative Textile Technologies and Global Trade Network

Hyosung TNC's Textile Division is globally competitive in terms of technology, product quality, and customer service, thus leading the global chemical industry through the supply of yarn, textiles, and dyed products such as spandex, nylon and polyester. In addition, the Trade Division, which is equipped with more than 50 overseas branches worldwide, provides top-notch marketing services covering various fields such as distribution and logistics, focusing on steel and chemicals. Based on its rich experience and expertise, Hyosung TNC is steadily growing as a leader in the global trade landscape.



### General Information

Company name	Hyosung TNC Corporation
Date of establishment	June 4, 2018
CEO	Chi-Hyung Kim
Headquarter location	119 Mapodaero, Mapo-gu, Seoul, Republic of Korea (Gongdeok-dong)
Main business areas	Textiles, trade, etc.



Number of Employees >

1,501 persons

### Financial Performance



Sales >

KRW 8.59 trillion



Operating profit >

KRW 1.42 trillion

### ESG Management Performance



A

KCGS rating



A-

CDP rating



Family-friendliness certification



CSR in the Community

### Business Divisions

Textile Division			Trade Division			
Spandex PU	Nylon Polyester Fiber PU	Fabric Dyeing PU	Steel and Metal Products PU I, II	Chemical Products PU	LED Business Division	Sebitseom Business Division
<ul style="list-style-type: none"> <li>Global no.1 in terms of market share</li> <li>Global no.1 spandex brand, 'Creora'</li> <li>Selected as a 'World Best Product' by the Korean government</li> </ul>	<ul style="list-style-type: none"> <li>No.1 nylon yarn in Korea</li> <li>Development of the world's first microfiber</li> <li>Korea's first PET-recycled yarn, 'regen'</li> <li>Selected as a 'World Best Product' (m2, Aerocool, Askin)</li> </ul>	<ul style="list-style-type: none"> <li>Supplying various textile materials, including high-performance clothing, protective clothing, and cleaners</li> <li>Finestar<sup>®</sup>, a cleaning product made of ultra-fine fibers</li> <li>Nylon two-way spandex - 700,000 yards per month</li> <li>Dyeing capacity of 2.5 million yards per month</li> </ul>	<ul style="list-style-type: none"> <li>Leading the trade of steel products by strengthening import/export partnerships with various international clients</li> </ul>	<ul style="list-style-type: none"> <li>A leading chemical-specialized company providing the best services for customer satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>Leading the LED industry, the next-generation growth engine / Providing energy solutions based on LED lighting</li> </ul>	<ul style="list-style-type: none"> <li>Sebitseom, a water culture complex on the Han River</li> </ul>

# Hyosung TNC

## Spandex PU

### Global no.1 spandex brand, 'Creora'

Based on its production technology, R&D, and global marketing activities, Hyosung TNC's spandex brand 'Creora' has grown into the No. 1 brand in global market share. Hyosung TNC has a global spandex production system spread across 8 business sites located in 5 countries: China, the Republic of Türkiye (Turkey), Brazil, India, and Vietnam. In addition, we provide a variety of unique products and services and conduct sales activities that meet our customers' needs.



### Eco-friendly Spandex Production

In view of the recent increase in the need for eco-friendly materials, we are developing and selling bio-based spandex, produced using vegetable raw materials, and Creora regen, produced using by-products from our production activities. For these two products, we conducted environmental LCA (Life Cycle Assessment) to ensure that they were effective in reducing carbon emissions.



## Nylon Polyester Fiber PU

### No.1 nylon yarn in Korea

Through our production know-how accumulated over 50 years of business, Hyosung TNC has earned our customers' trust by supplying nylon yarn with excellent quality and diverse functions. We have also introduced 'Mypan regen', an eco-friendly material made by recycling by-products generated in the production stage. Further, we have facilitated high demand for eco-friendly nylon materials by developing recycling yarn technology that uses waste fishing nets.



### regen® - Recycled Polyester Yarn Made from Waste PET Bottles

Hyosung TNC's 'regen®' is Korea's first eco-friendly polyester yarn that is made from substances extracted from waste PET bottles. Through LCA, we have proved that regen has carbon emission reduction effect compared to regular products.



## Fabric Dyeing PU

### Fabric Development Using Hyosung's Yarn

Hyosung TNC is developing various fabrics using Hyosung's yarn. We supply fabrics that can be applied in a variety of ways, including general clothing fabrics, high-functional clothing, protective clothing, and IT material clothing.



## Steel and Metal Products PU I, II, Chemical Products PU, LED Business Division, Sebitseom Business Division

### Distribution, Logistics, LED Business and Sebitseom Project

Hyosung TNC exports and imports steel products, raw materials, and steel processing facilities in the steel sector. In the chemical sector, it exports and imports petrochemicals, precision chemical products, and raw materials. The LED business division promotes LED lighting, as well as an LED-based energy solutions and video information display business – thus driving forward eco-friendly businesses. Furthermore, we run Sebitseom, the world's first waterborne architecture, built in the Banpo Han River Park. Sebitseom serves as an integrated cultural complex, providing diverse options for entertainment.



# Hyosung Heavy Industries

## Leading Green Growth through Future Power Grid System and Eco-friendly Construction

Hyosung Heavy Industries possesses the world's best technology in the field of heavy electric devices, which is the backbone of industrial energy. It is recognized for excellence in power facilities, such as transformers and breakers, as well as in rotating equipment, such as motors and gears. Hyosung Heavy Industries will lead the era of low-carbon, green lifestyles based on core technologies that are necessary for building future power grid systems, such as energy storage systems (ESS), static synchronous compensators (STATCOM), ultra-high voltage DC transmission systems (HVDC), and Smart Grids. We are actively participating in various construction projects in areas such as housing, redevelopment and reconstruction, business and commercial facilities, civil engineering and environment, and SOC projects based on our rich experience and customers' trust. In addition, we are practicing eco-friendly management through continuous research and investment to promote the coexistence of humans and nature.



### General Information

Company name	Hyosung Heavy Industries Corporation
Date of establishment	June 4, 2018
CEO	Dong-Gi Yang / Takeshi Yokota
Headquarter location	119 Mapodaero, Mapo-gu, Seoul, Republic of Korea (Gongdeok-dong)
Main business areas	Heavy industries, construction, etc.

### Financial Performance



### ESG Management Performance



**A**

KCGS rating



**B**

CDP rating



Family-friendliness certification



CSR in the Community

### Business Divisions

Power & Industrial Systems Division			Construction Division
Power Systems PU	Industrial Machinery PU	Wind Energy Business Division	Construction PU
<ul style="list-style-type: none"> <li>No. 1 accumulated market share in the power transmission and distribution market in Korea</li> <li>Established China's production base and participate in building global power infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>No. 1 motor manufacturer in Korea</li> <li>Operating a system engineering business through a wide line-up of industrial products</li> </ul>	<ul style="list-style-type: none"> <li>Developing Korea's first 750kW / 2MW / 5.5MW wind power system</li> <li>Providing total solutions for wind power, such as wind power core components, wind turbines, EPC, O&amp;M, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Introduced a villa-type residential culture for the first time in Korea</li> <li>Participates in various construction projects, such as apartments and office buildings</li> </ul>

## Power Systems PU

### Developing Eco-friendly Electric Equipment

Hyosung Heavy Industries is a leader in the development of electric power devices such as transformers and switchgears, which are the main devices of the power transmission and distribution network. It is advancing the development and supply of eco-friendly products that replace the insulation materials used in electric equipment with eco-friendly material.

Eco-friendly insulation oil transformers
Replacing mineral oil with ester oil
Eco-friendly gas-insulated switchgear
Replacing SF6 gas with Eco-friendly gas (CO2, fluoronitrile mixed gas)

### Market Expansion of Electric Equipment

Based on its long-accumulated expertise in the domestic market, Hyosung Heavy Industries is actively expanding its business footprint in global overseas markets such as in Europe, America, and the Middle East. This requires high-end technology and strict quality assurance.

Europe	
England	A contract signed for a single order of 400 kV eco-friendly transformer and long-term supply
Iceland	A supply contract signed for the delivery of 245kV Gas Insulated Switchgear (GIS) at a digital substation and an additional 145kV GIS for other digital substations
Asia	
Singapore	An order for 300kV underground substations (Asia's highest voltage, excluding China)
Middle East	
United Arab Emirates, Saudi Arabia	A STATCOM supply contract signed
Korea	
An order for the supply of MV/LVDC (Medium/Low Voltage Direct Current) systems (to be installed in 2022)	
An order for a 345kV Variable Reactor Demonstration Project	



Static Synchronous Compensation (STATCOM) by Hyosung Heavy Industries

### Expanded Supply of ESS (Energy Storage System)

Hyosung Heavy Industries supplies ESS, a device that enables excess energy to be stored for subsequent use when power demand is low, for various purposes. In March 2021, Hyosung Heavy Industries entered the European market by winning an order for 50MW-scale high-capacity ESS in Southampton, UK, alongside Downing, the UK's largest power investment developer.



Energy Storage System (ESS) by Hyosung Heavy Industries

## Industrial Machinery PU

### Expanding Hydrogen Charging Stations and Developing Supply Technology

Based on the emerging hydrogen economy, Hyosung Heavy Industries is supplying gas hydrogen charging systems in line with the expansion of hydrogen fuel cell vehicles and commercial hydrogen vehicles. The company plans to build liquid hydrogen charging stations in Korea through a technology partnership with Linde Group, which has the world's only commercial model for liquid hydrogen charging stations. It also plans to produce green hydrogen using renewable energy in Jeollanam-do Province. For the storage and utilization of green hydrogen, we are planning to build two liquid hydrogen plants with an annual production capacity of 10,000 tons, as well as installing liquid hydrogen charging stations in nine major areas of Jeollanam-do Province.



Aerial View of a Liquid Hydrogen Station Installed by Hyosung Heavy Industries

### Customization and Green Products

Hyosung Heavy Industries specializes in producing rotating devices such as motors, generators, and gears, as well as industrial machinery such as chemical equipment and gas charging stations. Along with such specialty devices, Hyosung Heavy Industries has developed a shaft generator motor system, an eco-friendly hybrid propelling device, in collaboration with Daewoo Shipbuilding & Marine Engineering. As the energy efficient eco-ship market expands, we plan to secure orders for 2MW permanent magnet propulsion motors and large capacity 5MW permanent magnet accumulation motor systems, laying the foundation for entry into the electric propulsion market.

## Construction PU

### Stable and Profitable Project Orders

Based on its financial soundness and brand value, Hyosung Heavy Industries is primarily focusing on housing/construction/redevelopment private sector projects that are considered to be highly profitable, as well as increasing product standards – such as exterior beautification and floor plan development – by reflecting the voice of customers through active VOC activities. Alongside this, our presence in the public sector has also expanded. For example, we have participated as a preferred bidder for national key industries, such as the GTX-C business, in 2021.

### Strengthening New Growth Engines

Hyosung Heavy Industries has participated mainly as a contractor for simple contract projects. In 2022, the company plans to secure development profits, in addition to construction profits, by promoting its own development projects based on its capabilities as a project developer. To this end, preparations have been ongoing since 2021. Remodeling and redevelopment projects, which have been underway since 2020, are expected to be revitalized – including the First Generation New Town project. Hyosung Heavy Industries plans to expand orders by focusing on sales activities. In response to market changes caused by data growth and the expansion of the e-commerce market, the company expects to continue to win orders for logistics center projects, which began in 2020. Moreover, it plans to participate in housing and logistics center projects in Vietnam, where Hyosung Group companies and corporations have already entered the market.

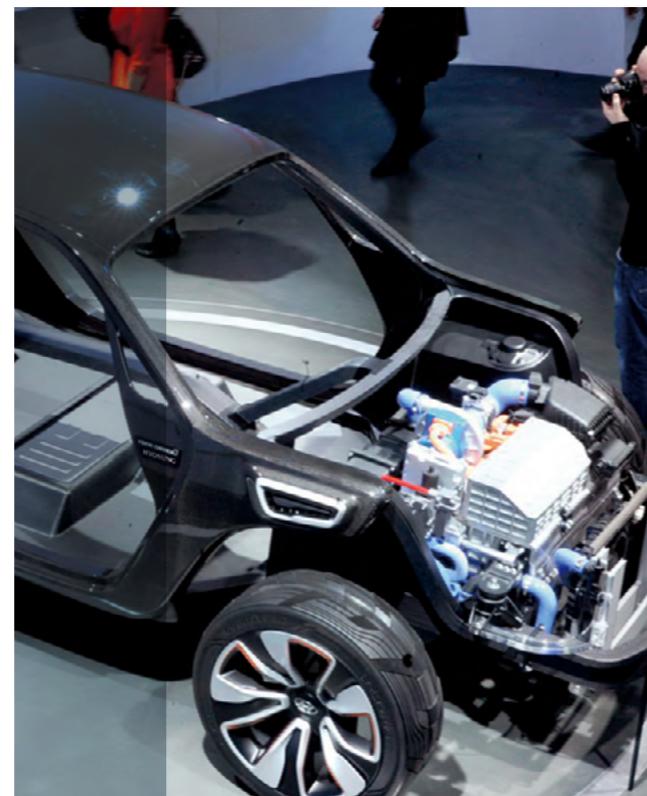


Sky Bridge at Busan Wooam Hyosung Harrington Place (Tentative name)

# Hyosung Advanced Materials

## Making Customers' Safety and Happiness the First Priority by Delivering the Best Advanced Materials

Hyosung Advanced Materials is producing high-strength industrial yarn, fabric, and steel wires that are widely used in a variety of industries, including automotive, civil engineering/construction, agriculture, and military products. Alongside tire cords, automobile seatbelt yarn, and airbag fabrics, which are products for which we have the largest global market share, we maintain and continually enhance our competitive edge through the development and commercialization of new materials that can induce sustainable growth.



### General Information

Company name	Hyosung Advanced Materials Corporation
Date of establishment	June 4, 2018
CEO	Kun-jong Lee
Headquarter location	119 Mapodaero, Mapo-gu, Seoul, Republic of Korea (Gongdeok-dong)
Main business areas	High strength industrial yarn and fabrics, steel wire materials, etc.



### Financial Performance



### ESG Management Performance

<p><b>A</b></p> <p>KCGS rating</p>	<p><b>2021</b></p> <p>EcoVadis rating</p>	<p><b>B</b></p> <p>CDP rating</p>	<p><b>A</b></p> <p>Win-win cooperation program</p>	<p><b>Low Risk</b></p> <p>15.1</p>	<p>Family-friendliness certification</p>	<p>CSR in the Community</p>
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### Business Divisions

Tire & Industrial Reinforcements PU	Technical Yarn PU	GST(Global Safety Textiles)	Interior PU	Carbon Aramid PU
<ul style="list-style-type: none"> <li>• Production of reinforcing materials for tires, including tire cords, steel cords, and bead wires</li> <li>• No. 1 global market share for polyester tire cords</li> <li>• Supplying 55% of car tires in the world</li> </ul>	<ul style="list-style-type: none"> <li>• Production of industrial high-strength yarn used extensively in construction, civil engineering, automotive, transportation, and industrial sites</li> <li>• No.1 global market share for seat belt yarn</li> </ul>	<ul style="list-style-type: none"> <li>• Production of airbag fabrics, airbag cushions, and One-Piece Woven (OPW)</li> <li>• World's largest airbag fabric manufacturer, equipped with all processes required to produce air bag fabrics and cushions</li> <li>• Close partnership with leading global Tier 1 companies</li> </ul>	<ul style="list-style-type: none"> <li>• Production of carpet yarn, and automotive and commercial carpets</li> <li>• Asia's only carpet manufacturer equipped with its own production facilities for the entire manufacturing process, from raw materials to finished products</li> <li>• No.1 market share in Korea for roll/tile carpets</li> </ul>	<ul style="list-style-type: none"> <li>• Production of high-strength aramid fiber (ALKEX®), which was developed in-house with our own technology and commercialized in 2009</li> <li>• Production of high-strength polyelastic carbon fiber (TANSOME®), which was developed with our own technology for the first time in Korea</li> </ul>

# Hyosung Advanced Materials

## Tire & Industrial Reinforcements PU

### Core Material inside Tires

Hyosung Advanced Materials produced Korea's first nylon tirecord in 1968. Since then, we grew into the world's largest player producing both fabric and steel tire reinforcements. Base on our integrated production lines, HAMC has earned customer trust through top quality and technology, and are supplying to global tire companies maintaining the global no.1 position in polyester tirecord.

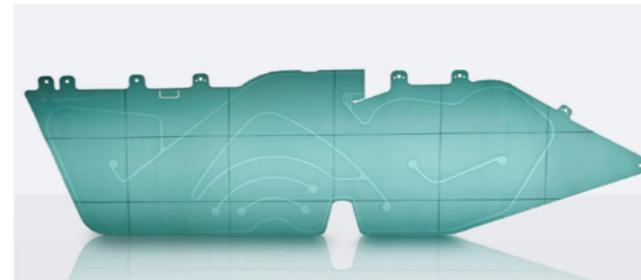


Tire cord

## Global Safety Textiles

### World's Largest Manufacturer of Airbag Fabric

Hyosung Advanced Materials produces flat fabrics for airbags, cushions, and OPW(one-piece woven), and is ranked No. 1 in global flat fabric market share in close cooperation with major global automotive companies. It owns the full process from yarn to airbag, and based on technical competitiveness built through the years, we supply a variety of airbag product types to meet our customers' needs.



OPW(One Piece Woven)

## Carbon Aramid PU

### Super Fiber, 'ALKEX'®

Hyosung Advanced Materials produces ALKEX®, an Aramid fiber that was developed with its own technology in 2003 and successfully commercialized in 2009. The fiber is used for bulletproof jackets & helmets, automotive rubber reinforcement, and industrial applications. We are making significant advances as a solutions provider by meeting customer needs with diverse and unique products.



'ALKEX'® Aramid fiber

## Technical Yarn PU

### Production of Versatile Industrial Yarn

Hyosung Advanced Materials, which developed nylon 66 and polyester yarn used in airbags for the first time in Korea, is producing and selling industrial yarn for various uses – such as seat belts and civil engineering – in Korea, China, and Vietnam. In particular, we maintain the world's No. 1 market share in industrial yarn and seat belts for automobiles.



Seatbelt yarn

## Interior PU

### Swan Carpet with In-house Production Facilities Covering Raw Materials to Finished Products

Interior PU is Korea's best in the commercial and automotive carpet sector, and the only carpet manufacturer in Asia with its own production facilities spanning the entire manufacturing process – from yarns to finished products. Beyond being the best in Korea, we are accelerating efforts to expand our business to the overseas carpet market by mass-producing the world's first polyester tufted carpet, as well as entering the automotive carpet market in the US and China based on our excellent quality.



Automotive carpets

### New Material, TANSOME®

Carbon arbon fiber, TANSOME®, contributes to emissions reductions by reducing vehicles' weight to improve fuel efficiency. It is applied in various products in recognition of its excellent stability as well as intensity, and is actively used in green energy industries, including CNG and compressed hydrogen storage. Hyosung Advanced Materials has announced the third expansion, adding an annual production capacity by 2,500 tons scheduled to be completed by April 2023, following those in 2020 and 2021. When this is completed, production capacity will increase to 9,000 tons per year.



TANSOME® - carbon fiber

## Delivering Convenience in Daily Lives through Hyosung's Chemical Technologies

Hyosung Chemical offers a variety of products, including polypropylene (PP), high purity terephthalic acid (TPA), industrial/packaging/optical PET film and nylon film, and NF3 and TAC film used in the state-of-the-art semiconductor and display industries. Polyketone, which was successfully commercialized for the first time in the world, is a new eco-friendly ENPLA material, and is gaining attention as a key material that will lead the global components/parts industry.



### General Information

Company name	Hyosung Chemical Corporation
Date of establishment	June 4, 2018
CEO	Kun-jong Lee
Headquarter location	235, Banpo-daero, Seocho-gu, Seoul, Republic of Korea (Banpo-dong)
Main business areas	Chemicals, etc.

### Financial Performance



### ESG Management Performance



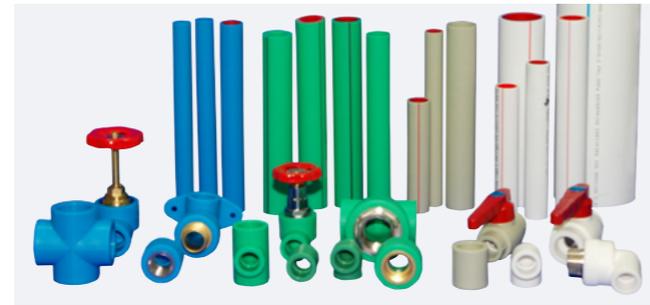
### Business Divisions

Chemical Division				Film Division	
PP/DH PU	TPA PU	Neochem PU	POK Business Division	Film PU	Optical Film PU
<ul style="list-style-type: none"> <li>Globally competitive polypropylene TOPILENE®</li> <li>No. 1 in the global market in terms of products for pipes</li> <li>Planning to achieve a production capacity of 600,000 tons in 2021 after the establishment of Hyosung Vietnam in 2018</li> </ul>	<ul style="list-style-type: none"> <li>TPA (Tere-Phthalic Acid) is used as a main raw material for polyester fiber/film, tire cords, and PET bottles.</li> </ul>	<ul style="list-style-type: none"> <li>Producing NF<sub>3</sub>, F<sub>2</sub>/N<sub>2</sub> (NF<sub>3</sub>: Nitrogen Trifluoride) gas used in production processes in state-of-the-art industries, including semiconductors and displays</li> </ul>	<ul style="list-style-type: none"> <li>POKETONE™, a polyketone brand based on a new, eco-friendly ENPLA material</li> <li>Non-toxic to the human body, and exhibiting abrasion resistance, chemical resistance, fuel resistance, and gas barrier properties</li> </ul>	<ul style="list-style-type: none"> <li>The PET/nylon film brand, Filmore®, is widely used for packaging, and industrial and optic materials</li> <li>No. 1 in the domestic nylon film market and No.3 in the global market</li> </ul>	<ul style="list-style-type: none"> <li>Producing TAC, Acryl films that protect the PVA film used in TV, monitors, and smartphones.</li> <li>No. 3 in the global market (TAC: Tri-Acetyl Cellulose)</li> </ul>

## PP/DH PU

### Product Lineup Focusing on Specialized Products and Market Expansion

We operate our polypropylene product line with a focus on unique and specialized products based on self-produced propylene, and strive to increase customer value by supplying products for a variety of applications – including pipes and medical packaging materials. We continue to identify new market demands for PPR pipes and are developing new markets and clients through web seminars and local seminars in India.



PPR pipe

## Neochem PU

### Development of Special Industrial Gas in Response to Customers' Needs

We are producing NF3 gas and 20% F2/N2, which are special gases used in the production processes for semiconductors and display products. We have also commercialized Cl2 gas as a new product and are expanding the market. Additionally, HCl gas is currently undergoing product development.



Nitrogen trifluoride (NF3)

## TPA PU

### Production of PTA, High-performance Polyester Textile Raw Material

PTA (Purified Terephthalic Acid) is used as the main raw material in high-performance polyester textiles. Its demand is increasing not only in the field of textiles, but also in applications such as packaging films, PET bottles, packaging materials for beer and milk, tire cords, paint, and glue. We are also striving to conserve the environment by developing clean process technologies, operating high-end pollution protection facilities, and carrying out activities to reduce environmental pollutants.



TPA

## POK Business Division

### Production of the New Material ENPLA POKETONE

Being non-toxic to the human body, POKETONE has acquired FDA certification and green certification, boasting excellent performance in terms of chemical resistance, impact resistance, and abrasion resistance. It is widely used in the making of food-contacting conveyors, packaging materials for cosmetic products, and toys for babies. Further, its application is being expanded to automotive connectors, electric/electronic gears, and crude oil mining pipes.



POKETONE

## Film PU

### Development of Films for Various Uses

Using PET (Polyethylene Terephthalate) and NYLON (PolyAmide6) materials, we manufacture high-quality products optimized for each application, ranging from packaging and pharmaceutical films that are widely used in daily lives to industrial optical films used in mobile products, windows, TVs, and tablets.



Applications: 1. food packaging, 2. pharmaceuticals, 3. windows, 4. optics

## Optical Film PU

### Development of TAC Film for Polarizer and Application in Next-generation Display Products

The Optical Film PU is the only manufacturer in Korea to produce TAC (Tri-Acetyl Cellulose) film that protects the PVA polarizing film inside LCD polarizers, which are fitted into TVs, monitors, and laptops. In addition, for the first time in the world, it has developed a thin acryl film using a solvent casting method. Based on such technical competitiveness, our films are applied to OLED and foldable display products, expanding our share of the market.



TAC Film



# FOCUS ISSUES

**17** Climate Change Response  
**37** Managing the Supply Chain

**24** Developing Eco-friendly Products and Technologies  
**41** Customer Satisfaction and Product Stewardship

**30** Health and Safety at Business Sites  
**46** Corporate Social Responsibility

# Climate Change Response

## UN SDGS LINKAGE



### Background

Recently, the South Korean government has recognized the seriousness of climate change, strengthened measures to adapt to the climate crisis, enacted the Framework Act on Carbon Neutrality and Green Growth, and revised upward the Nationally Determined Contribution (NDC) for transitioning to a carbon-neutral society. It is therefore important for corporations to prepare their responses to climate change as this becomes an emerging issue for governments around the world.

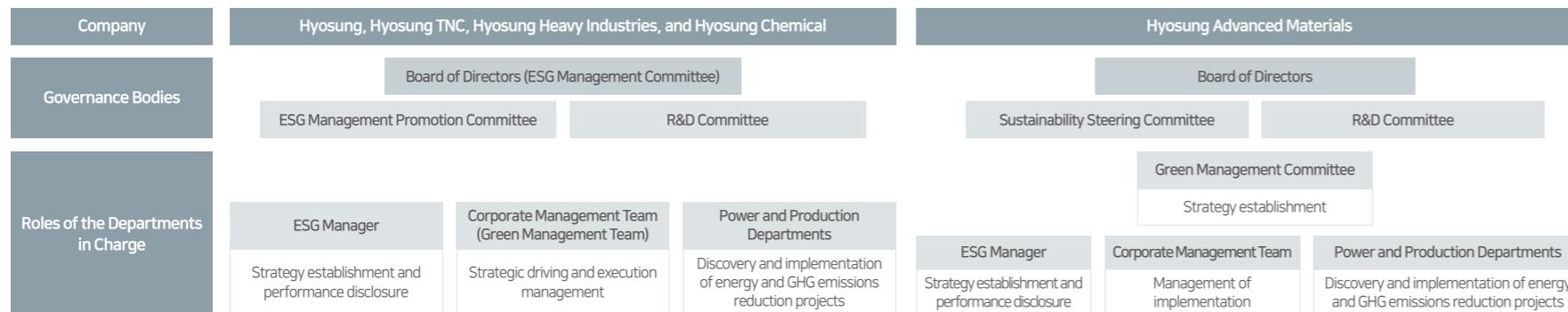
### Our approach

As a global corporation with interests in multiple business areas that have major impacts on climate change, including textiles, chemicals, industrial materials, and heavy industries, Hyosung has undertaken a variety of efforts to minimize its impact on the climate throughout its entire business processes. As part of these efforts, Hyosung and Hyosung Advanced Materials have been participating in CDP assessments. From 2021, all companies have incorporated a carbon management system, as required by the TCFD recommendations, and participated in CDP to share their carbon-related disclosures. As a result, Hyosung TNC acquired Leadership A- and won the Carbon Management Special Award at the 2021 CDP Climate Change Korea Awards.

### Our Achievement



## Climate Change Governance



### Hyosung TNC, Hyosung Heavy Industries, and Hyosung Chemical

In the second half of 2021, Hyosung TNC, Hyosung Heavy Industries and Hyosung Chemical restructured the EHS Committee and the CSR Committee, which were existing governance bodies, to establish the ESG Management Promotion Committee under the CEO. The ESG Management Promotion Committee reports major issues to the Board of Directors. It is convened twice a year for Hyosung TNC and Hyosung Heavy Industries, and once every quarter for Hyosung Chemical. The Committee has dealt with the following issues:

- Hyosung TNC: calculation of product carbon footprints, consulting services to improve the energy and greenhouse gas management capabilities of suppliers (hereinafter referred to as energy partnership project) and participating in CDP
- Hyosung Heavy Industries: applying internal carbon pricings, reporting greenhouse gas emissions and excesses/insufficiencies
- Hyosung Chemical: response to CDP assessments, greenhouse gas risk management, and participation in energy companion projects

## Strengthening the Climate Change System

### Hyosung

In April 2021, Hyosung expanded and restructured its existing Transparent Management Committee, which was in charge of governance in the BOD, into the ESG Management Committee, which integrates the environmental and social sectors. We review ESG-related policies, targets, risk management, investments, and action plans, and also cover climate change-related issues. Hyosung's Board of Directors (ESG Management Committee) is attended by the former Minister of Environment, a climate change expert. In 2021, the Board of Directors dealt with a variety of issues, such as modifying the Green Management Vision 2030 policy, setting reduction targets, introducing internal carbon pricing, and reporting excess and shortage of emissions and carbon credits in accordance with the emission trading system. Since July 2021, the existing EHS (Environment, Health, Safety) Committee and CSR Committee were integrated and expanded into the ESG Management Promotion

Committee under the CEO to promote not only the environment, safety, and health, but to also address issues in society and governance. The ESG Management Promotion Committee is held once a quarter to select major issues to be presented or reported to the BOD. The R&D Committee consists of the CEO and management representatives and is convened once every half year to establish R&D strategies based on the opinions of related departments such as sales, marketing, product development, and research related to climate change. The dedicated organization consists of the ESG Management Department under the CEO and the Green Management Team under the Strategy Division, and is responsible for establishing climate change strategies, managing implementation, and disclosing performance. Onsite power environment teams and production departments are charged with reducing energy usage and GHG emissions.

### Hyosung Advanced Materials

The highest governance body on climate change issues is the Sustainability Steering Committee(SSC) under the CEO. It is convened at least once every half year. Specifically, the SSC reviews issues that should be reflected in management plans, such as company-wide R&D strategies, investment in technology and equipment, and other policies to submit to the Board of Directors for final approval. Climate change strategies are discussed at meetings chaired by the PU Presidents, where issues related to climate change and environmental safety are shared once a month, and at the Green Management Committee. Issues that require decision-making are submitted to the SSC. In 2021, the Green Management Committee and the SSC were each held twice to discuss the SBTi participation plan and the results and expectations of the domestic emission trading system.

# Climate Change Response

## Climate Change Response Strategy

### Green Management Vision 2030

Hyosung has established its Green Management Vision 2030 to become an eco-friendly company that enhances and enriches quality of life for humanity. We have established four goals: reducing greenhouse gas emissions, developing eco-friendly technologies and expanding markets, creating an eco-friendly corporate culture, and enhancing stakeholder trust. A company-wide climate change response strategy has been established based on specific tasks for each goal.

To meet our industry-specific goal with respect to South Korea's Nationally Determined Contribution (NDC), we have set 14.5% GHG emission reduction by 2030 compared to the total emission of 2018, which is updated from the previous target 20.5% reduction compared to the 2030 BAU. In addition, we aim to realize green management in all our domestic business sites. Every year, Hyosung establishes and operates facility investment plans for saving energy to achieve the goal. In 2021, mid- to long-term reduction measures to achieve the 2030 reduction target were established by all related departments, including the departments for planning, research, production, and power, and reported to the management and the Board of Directors. In the case of a reduction target that is difficult to achieve through internal energy saving efforts, we plan to implement the target over the long term through the purchase of renewable energy certificates from domestic third-party PPAs, as well as the purchase of green electricity, and to gradually increase our proportion of renewable energy use.



## Climate Change Risk Management

Hyosung operates a risk management process that can identify and systematically respond to climate change risks and opportunities. The severity of risks is evaluated through an analysis of stakeholder requirements and the internal and external business environment. Climate change risk factors include transition risks arising from market and technological changes to the transition to a low-carbon economy, and short-term and long-term physical risks from the effects of climate change such as typhoons, droughts, and floods.

### Risk Management Process



Hyosung is raising the level of identifying new risks and concrete response measures by updating the risk management status every year. Important risks are reported to the ESG Management Promotion Committee and evaluations are performed every year to assess whether countermeasures have been achieved.

In 2021, we identified key policies, analyzed business opportunities and risks, and reported countermeasures to management, in accordance with the EU's Fit for 55 plan for a green transition.

In addition, internal carbon pricing<sup>1)</sup> has been introduced and implemented to manage risks and identify opportunities relating to climate change for strategic decision-making, such as business directions and investments. We distribute greenhouse gas emission calculators and guidelines for carbon emission calculations and economic feasibility evaluations throughout the company to conduct economic analyses based on accounting for the costs of excess and insufficient emission rights, energy use plans for workplaces, and carbon prices according to greenhouse gas emissions.

1) Internal Carbon Pricing: A mechanism by which companies voluntarily set a price on their carbon emissions to internalize the economic costs of greenhouse gas(GHG) emissions.

# Climate Change Response

## Management of Climate Change Indicators

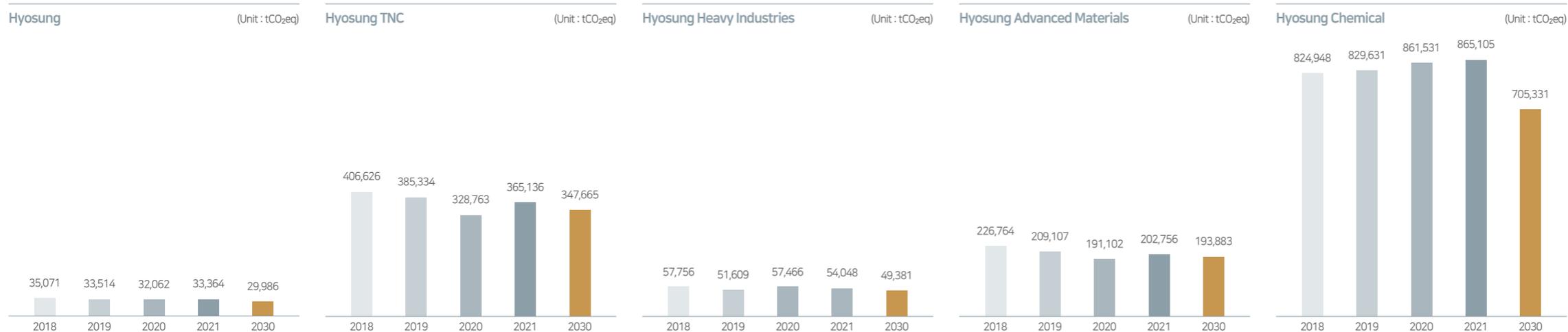
### Carbon Asset Management System

In 2011, Hyosung introduced an IT-based Carbon Asset Management System to effectively monitor emissions at workplaces. The Carbon Asset Management System has since been operated to build a greenhouse gas inventory for workplaces and systematically monitor activity data and GHG emissions by emission facilities in accordance with emission calculation plans. In 2022, the Carbon Asset Management System was applied to Hyosung's subsidiaries, including overseas subsidiaries, to voluntarily manage their GHG emissions. In June 2022, we established a product carbon footprint calculation system to measure and manage carbon emissions throughout our product processes.

### Carbon Emission Management

Hyosung has set a quantitative GHG emissions reduction target of 14.5% by 2030, against total emissions in 2018, in its Green Management Vision 2030. To achieve this, we have predicted the product production, energy consumption, and GHG emissions of each workplace by 2030 according to our business plan and established annual reduction business plans accordingly. Emissions reductions that are difficult to achieve through internal reduction projects require mid- to long-term investments, such as purchasing green premium electricity and renewable energy facilities. The financial impact of climate change risks was identified by calculating the cost by applying the internal carbon pricing.

### Annual Carbon Emissions and 2030 Targets



### Internal Carbon Pricing

In 2021, Hyosung introduced internal carbon pricing to identify risk and opportunity factors relating to climate change due to the transition to a low-carbon economy, and to take account of these factors in various decisions such as company-wide business directions and investments. By setting a price for business activities and carbon emissions generated from business activities, Internal carbon pricing means that a company voluntarily internalizes the economic cost of greenhouse gas emissions. Accordingly, Hyosung converts not only carbon emissions but also carbon emissions reductions from energy savings into amounts and reflects the amount in economic evaluations for energy facility replacement, workplace expansions and business investments. We will continue to strive towards achieving our Vision 2030 goals through our efforts to reduce GHG emissions.

### Climate Change-related Employee Key Performance Indicators (KPI) and Incentives

Hyosung has set energy reduction KPIs for climate change-related production executives or plant managers and GHG reduction KPIs for green management team members, and provides incentives based on their evaluation results. In order to embed ESG management in corporate culture, the ESG management KPI was decided for employees by the ESG Management Promotion Committee and the Board of Directors in 2021, and it has been implemented since 2022. Climate change indicators are evaluated for all executives (including C-Level) and teams related to energy and GHG reduction, such as the ESG Management Team, Green Management Team, Production Team, and Power Team.

## Building Awareness of Climate Change

### Climate Change Training for All Employees

In 2021, Hyosung provided training to all employees, including an overview of carbon neutrality and Green New Deal policies, to enhance their understanding of climate change. We uploaded two videos produced by government agencies, titled "Carbon Neutrality for the Future" and "The Green New Deal is the First Step Toward a Carbon-neutral Society," on our online learning site with the permission of the relevant organizations. In 2022, we also provided climate change and carbon neutrality training in the "Company and ESG Management" course for new employees.

### In-house Contest for Energy Saving and GHG Reduction Ideas

In the second half of 2021, Hyosung held an "In-house Contest for Energy Saving and GHG Reduction Ideas" for employees and received 211 idea submissions, including proposals for energy reduction at workplaces, commercialization of products, and reduction campaigns. 10 excellent ideas were awarded. In December 2021, the idea for "improving compressed air manufacturing efficiency and reducing operating pressure," which won the contest's grand prize, was applied to facility investment for Hyosung's Anyang plant. The annual GHG emissions reduction due to the investment is expected to be 1,549 tons, which is equivalent to 4.6% of Hyosung Corporation's total emissions. As a result of these efforts, Hyosung Corp. achieved energy saving and GHG emissions reduction performance of 4.9% compared to the 2018(35,071 tons in 2018 to 33,364 tons in 2021).



Poster for "In-house Contest for Energy Saving and GHG Reduction Ideas"

# Climate Change Response

## Climate Change Response Activities

### Transition to Eco-friendly Fuel

Hyosung TNC reduces emissions through a low-carbon energy transition at its business sites. Waste heat is received from incineration facilities in the vicinity of business sites, and biogas generated from wastewater treatment facilities within the plants are used to operate boilers. Our Gumi plant has been reducing its GHG emissions by replacing emission-intensive B-C oil with LNG and LPG, followed by a gradual reduction of emissions and an increase of the replacement ratio, which has allowed the plant to stop using B-C oil since November 2019. Through these efforts, Hyosung TNC is reducing GHG emissions and further contributes to the conservation of the environment.

### GHG Emissions Reduction through Process Improvement

Every year, Hyosung TNC establishes an environmental investment plan for each plant to reduce carbon emissions through energy saving. In addition to reducing power consumption through process improvements, we are replacing motors, refrigerators, and air compressors with high-efficiency facilities. In 2021, we set up an investment plan with a budget of KRW 555 million and executed investments reaching a total of KRW 506 million.

### Smart Energy Platform for Energy Efficiency Management

Hyosung TNC's Daegu Plant participated in the Seongseo Industrial Complex Smart Energy Platform Construction Project, which has been implemented by the Korea Industrial Complex Corporation as an energy efficiency management infrastructure construction project since 2020. A Factory Energy Managements System (FEMS) has been established and 20 measuring instruments have been installed in power facilities with a high rated capacity. Building on this progress, we plan to identify and manage energy saving factors.

## Climate Change Risk Management

The increase in physical risks, such as typhoons and increased rainfall due to climate change, is a risk factor that impacts not only Hyosung TNC but also the entire value chain. Hyosung TNC has acquired insurance to compensate for natural disasters to prepare against physical damage to buildings due to typhoons and floods. In addition, we are preparing for heavy rain by conducting regular facility inspections and waterproofing exterior walls.

## Management of Climate Change Indicators

### Greenhouse Gas Inventory for Global Sites

Hyosung TNC calculated the Scope 1 and 2 emissions of its Vietnam Dong Nai subsidiary in 2022, following calculations for its Jiaxing subsidiary in China and its subsidiary in Turkey, in order to build a greenhouse gas inventory for its global business sites. We plan to gradually expand our target sites with the goal of establishing an inventory to manage emissions at all of our global business sites.

### Climate Change Performance Indicators and Management

Hyosung TNC efficiently tracks and manages environmental performance at all business sites, including energy consumption and greenhouse gas emissions, in line with global standards such as ISO 14001 (Environmental Management System). Scope 1 and 2 emissions - as well as Scope 3 emissions - of domestic business sites are voluntarily calculated and reported to the CDP. In 2022, climate change indicators were evaluated for all executives and teams related to energy and GHG reduction, such as the ESG Management Team, Green Management Team, Production Team and Power Team.

## Building Awareness of Climate Change

### Received the Excellence Award for an Idea to "Increase the Concentration of NY Polymerization Recovery"

Hyosung TNC's Ulsan Plant won the Excellence Award, with a prize of KRW 2 million, for an idea to reduce steam by increasing the production concentration of the lactam water concentrator in the NY polymerization recovery process, at the 2021 In-house Contest for Energy Saving and GHG Reduction Ideas. This idea is expected to save 953 tons/year of steam.

### In-house Campaign to Reduce Greenhouse Gases and Energy

Since 2021, Hyosung TNC has conducted a campaign to "reduce the use of disposables in offices" to create an eco-friendly corporate culture. All employees at its Mapo and Banpo workplaces participated in this campaign. Accordingly, Hyosung TNC decided to remove disposables, such as paper cups, in pantries at its headquarters and provided personal tumblers based on the personal tumbler purchase cost for employees. In 2020, it was estimated that Hyosung TNC used about 190,000 paper cups in its headquarters. This campaign helps Hyosung TNC reduce GHG emissions by 2 tons per year just by limiting the daily use of paper cups.

## Gradual Transition to Environment-friendly Businesses

### (Textile) Recycled and Eco-friendly Textile Product Lineup

As the top global spandex manufacturer, Hyosung TNC is aware of the seriousness of environmental problems facing the textile industry. Hyosung TNC is taking the lead in introducing eco-friendly yarns using recycled raw materials through close cooperation with fashion companies, which are downstream industries. In addition, it is making continuous investments to ensure that spandex can be produced from eco-friendly biomaterials instead of fossil fuels.

In 2021, Hyosung TNC assessed the carbon footprint of three eco-friendly products (polyester regen recycled from transparent waste PET bottles, creora regen recycled from production by-products, and bio-based spandex based on non-food ingredients) and existing products with respect to the manufacturing and transportation of raw materials, packaging, and the entire product process. Based on the results, polyester regen was estimated to reduce carbon dioxide emissions by about 60%, and creora regene by about 66.8%, compared to existing products.

Hyosung TNC continues to work as a responsible corporate member in responding to climate change, having registered its bio-based spandex in the Material Sustainability Index (MSI) of the Higg Index. This is an environmental impact assessment metric developed by the Sustainable Apparel Coalition (SAC), which includes more than 250 global corporations from 35 countries.

### (Trade) Business Expansion of Eco-friendly Steel Products and Chemical Materials

Hyosung TNC's trading division, which operates a general trading business, is expanding trade in the eco-friendly industry of steel and chemical products, exports of eco-friendly certified products, and triangular trade in line with ESG management.

To this end, Hyosung TNC's steel division continues to expand the trading volume of steel products for renewable energy such as photovoltaic or wind power. Further, Hyosung TNC's chemical division obtained the International Sustainability Carbon Certification (ISCC EU and ISCC PLUS) for biofuels (biodiesel and bio heavy oil) and biofuel raw materials (UCO, palm oil, etc.) to verify that Hyosung TNC's items are distributed in compliance with the Renewable Energy Directive (RED) of the European Union.



International Sustainability and Carbon (ISCC EU and ISCC PLUS) Certification

# Climate Change Response

## Climate Change Response Activities

### Development of GHG Replacement Technology

We have developed a 170kV eco-friendly gas insulation system (GIS) that can replace SF6 with eco-friendly Novec Mixture gas (CO2, fluoronitrile mixed gas). This is expected to reduce 98% of such emissions (23,900kgCO2/kgSF6 → 500kgCO2/kg · Novec Mixture). Hyosung Heavy Industries plans to continue this development to ensure that SF6 gas replacement technology for GIS can be applied to other models as well.

### Korea's First Transmission and Distribution System for Renewable Energy

Hyosung Heavy Industries became the first South Korean company to sign a supply contract for 30MW MVDC, which is a medium-voltage direct current (MVDC) transmission and distribution system, along with the Green Energy Institute. A unit of 30MW-scale MVDC can provide electricity to approximately 67,000 households. The MVDC made contract this time will be installed in the Naju Innovation Industrial Complex in the first half of 2022. MVDC is a power system capable of transmitting medium-voltage electricity (1.5 – 100kV) via DC, boasting less power loss for long-distance transmission and a 40% higher transmission capacity utilizing existing transmission facilities. It is a notable achievement for a Korean company to have secured DC power distribution system technology based on its own technology. This will have a significant effect on import substitution in the electric power industry, which has thus far been dominated by major overseas companies, through the reduction of investment costs for key national industries and easy installation and maintenance in the domestic DC transmission distribution market.



Eco-friendly 170kV GIS

### Expansion of Renewable Energy Projects

Hyosung Heavy Industries is promoting a variety of projects related to renewable energy as part of its climate change response, with a view to embracing the new paradigm of the power industry.

#### Photovoltaic Power EPC

Over the past decade, since the construction of the PV plant in Samnangjin in 2007, we have implemented a variety of projects, including PV plant design, engineering and construction. Based on our wealth of experience and accumulated knowledge, we are building various PV plants, including conventional plants and customized plants in accordance with clients' requests. This includes PV plants installable in parking lots and water treatment facilities. Hyosung Heavy Industries is also providing a finance-combined business model utilizing project financing, going beyond simply supplying PV plants after planning, purchasing and construction. Furthermore, we are facilitating renewable energy projects by providing services related to business analysis, consulting, and permission support.

#### Photovoltaic Power Inverters

Based on its longstanding technical expertise in the power industry, Hyosung Heavy Industries provides high-efficiency photovoltaic (PV) power inverters to clients to stabilize the operation of PV power plants. These PV inverters, which are applied to plants with small to mid-level capacity, as well as large capacity amounting to dozens of megawatts, enable the stable operation of PV plants based on high efficiency and reliability.



Construction of Zara Photovoltaic Power Plant

### Construction of Buildings with Renewable Energy

Hyosung Heavy Industries applies photovoltaic power and fuel cell facilities to the construction of buildings. The power obtained from photovoltaic power facilities, which directly convert sunlight into electric energy, is used in the common areas of buildings such as elevators and parking lot lights, while the power obtained from fuel cell facilities is utilized in common areas and communities. In 2021, the facilities were applied to a construction site in Gangseo Hwagok Youth House, a reconstruction site in Taereung, and urban redevelopment sites in the Hongje #3 district.



Photovoltaic Power Facilities at a Reconstruction Site in Taereung

## Management of Greenhouse Gas Indicators

### Voluntary Calculation of GHG Emissions from Construction Sites

Hyosung Heavy Industries voluntarily estimated its GHG emissions from construction sites and completed third-party verification to accurately calculate emissions for 2018 and 2019 in the construction sector, which is not included in Korean emission trading system. In addition, the company has established a climate change response strategy in accordance with Vision 2030 to strengthen its greenhouse gas emission management system based on these estimated emissions.

## Building Awareness of Climate Change

### Environmental Management Campaigns and Education in Construction Sites

Construction sites conduct ESG environmental campaigns that include prohibiting on-site vehicle idling, turning off power during lunchtime, turning off unused PCs and monitors, and decreasing paper use to reduce GHG emissions. The company plans to produce and distribute posters to further increase the participation rate of such campaigns. In addition, site personnel engage in environmental education provided by the headquarters, conduct on-site clean campaigns, and actively participate in environmental protection activities.

# Climate Change Response

## Climate Change Risk Management

Hyosung Advanced Materials regularly monitors climate change risks and opportunities in connection with each project and reports the results to the CEO and representatives of business units. Climate change risks are managed across the entire supply chain, both upstream and downstream. The company monitors its suppliers' principles and the maturity of their climate change responses regarding physical risks such as storms and heavy rain. Additionally, to tackle the expanded need for eco-friendly and low-carbon products, we are working on introducing green raw materials and developing emission reduction technologies applicable in the use phase of a product, to hedge the risk of reduced sales of existing products. Moreover, the Risk Management Committee is responsible for reviewing overall risks relating to management, to which the key contents, risks, and required responses of the COP26 was reported in 2021.

## Climate Change Indicator Management

### Climate Change Performance Indicators and Incentives

We operate an incentive rewarding system whereby indicators related to performance evaluations are added and incentives are provided to employees such that they are motivated to enhance their climate change response and build their awareness in this respect. For instance, the CPO(Chief Production Officer) and heads of plants at domestic business sites are evaluated based on energy consumption reduction targets, while employees in charge of green management are evaluated based on emissions reduction targets as a performance indicator. Previously, only departments in charge of climate change were evaluated based on GHG emissions reduction, carbon labeling certification and water intensity reduction as KPIs. In 2022, the evaluation system will be improved to define ESG items as mandatory KPIs to expand these evaluation targets to ESG executives, all PU heads, and sales team leaders.

### Scope 1, 2, and 3 Greenhouse Gas Inventory for Global Worksites

In accordance with the strengthening of climate change response policies, we recognized the need to establish and implement science-based targets (SBT) aligned with risk assessments and decided to engage with SBTi at the SSC in the second half of 2021. In order to set up SBT and participate in SBTi, Scope 1 and 2 GHG inventories were established for 79% of global business sites by 2021. An additional inventory of 3 overseas business sites will be established and expanded to all business sites in 2022. In 2022, we will voluntarily calculate Scope 3 emissions for all global business sites to establish a foundation for setting SBT.

## Climate Change Response Activities

### GHG Emissions Reduction by Improving Non-renewable Energy Use

Hyosung Advanced Materials is continuously discovering, investing in, and implementing improvements to reduce the use of non-renewable energy. Major improvements in 2021 included a reduction of steam consumption by improving the condensate recovery process at the Jeonju plant, and reducing LNG usage by improving the waste heat recovery system of the RTO facility heat exchanger, saving 13.4TJ of energy. In 2022, the Jeonju Plant will improve its incinerator operation method and waste heat recovery system, and the Ulsan plant will carry out activities such as improving the condensate recovery system of Aramid.

### Expansion of ISO 50001 (Energy Management System) Certification

In 2014, Hyosung Advanced Materials acquired ISO50001 certification for GST Global GmbH in Germany to strengthen its energy management system. Further, Jiaying plant in China, which has high regional risks such as the pilot operation of the emission trading system, introduced the ISO 50001 energy management system in 2019. We continue to reduce energy consumption by identifying energy risks and developing and improving reduction measures.



### Support for the Energy Management Systems of Suppliers

Hyosung Advanced Materials is enhancing its level of climate change response, in conjunction with suppliers, by participating in climate change response projects run by the government. In 2021, we signed the Energy Partnership MOU with the Korea Energy Agency and provided one supplier with consulting services for energy diagnosis. Five improvement tasks were developed and an energy saving potential of 219GJ/year was identified through the consulting process. Among these reduction measures, Hyosung supported the investment cost for installation of a boiler air preheater to save 199 GJ/year. Major suppliers are regularly evaluated in terms of their energy use by Hyosung's purchasing department.

### Reduction of Energy Consumption through the Introduction of Renewable Energy

In order to reduce power consumption, Photovoltaic power facilities have been installed and used in office building in Korea, Jiaying Corporation and Qingdao plant in China. The Changshu plant of GST also consumed 27.2 MWh per year by using electricity through photovoltaic power generation and reduced GHG emissions by 12.5 tons. In 2022, Jiaying plant made investments to introduce additional photovoltaic power facilities.

## Building Awareness of Climate Change

### Received the Best Idea Prize for "Improving the Incinerator Waste Heat Recovery System"

At the 2021 In-house Contest for Energy Saving and GHG Reduction Ideas, the Jeonju Plant won the Best Idea Prize, and an award of KRW 5 million, for an idea to improve the steam production system through waste heat recovery in the incinerator. The idea is expected to reduce GHG emissions by 363 tons per year and respective investment will be made upon detailed review.

### Capacity-Building for Employees through Climate Change Response Education

Hyosung Advanced Materials continues to provide education to employees to spread awareness and strengthen their capabilities in climate change and energy management.

Classification	Content	Period
Employee Awareness Education	Introduction to SBT and LCA / Climate change	July 2021
Capacity-Building for Energy Managers	Energy saving reduction measure training	October 2021
Capacity-Building for SBTi Managers	Climate Ambition Accelerator Program hosted by UNGC	May to October 2022

# Climate Change Response

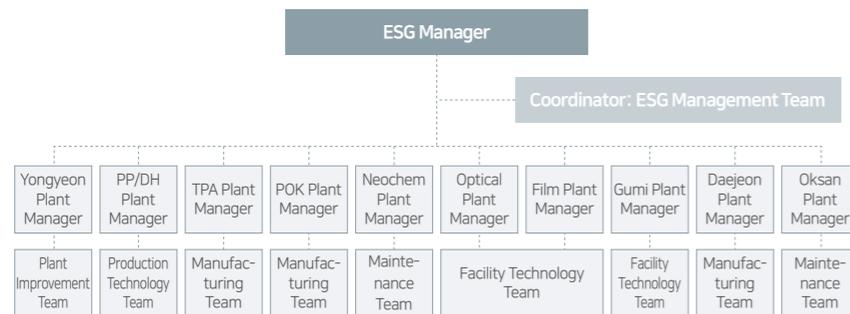
## Climate Change Response Activities

### Energy Saving by Optimal Operation through Smart Factory Construction

In 2020, Hyosung Chemical established a smart factory, in which all production-related resources across all business sites are connected on a real time basis. Collected data is analyzed to optimize the production environment. In 2021, 11 optimal operating conditions were identified to achieve KRW 11.7 billion in cost savings by improving production yields and saving energy. In 2022, the company plans to respond to climate change by reducing energy consumption through system advancement.

### Carbon Emission Reduction Taskforce Activities

Carbon neutrality is emerging as a global issue, and the 2030 national greenhouse gas reduction goal has been consolidated in South Korea. Hyosung Chemical set a quantitative GHG emissions reduction target of 14.5% by 2030 against the BAU-level in 2018. To achieve this GHG reduction target, the carbon emission reduction taskforce was formed. The team consists of the CEO, a team leader (ESG Manager), and team members (plant managers / maintenance team managers / facility technology team managers of divisions and workplaces), who worked to develop 20 GHG emissions reduction plans. We will start with the reduction plan with the greatest expected effect.



### Promoting the Use of Renewable Energy

Hyosung Chemical uses waste incineration steam, a renewable energy, supplied by a domestic waste incineration plant close to its business site, and utilizes 171,694kWh of power generated by PV power facilities installed in the plants. We plan to introduce photovoltaic power facilities across our business sites to increase the use of renewable energy. In addition, we plan to gradually increase the proportion of renewable energy use by purchasing third-party PPAs and RECs, produced by renewable energy in Korea, from a medium-term perspective.

### Facility Investment for Climate Change Response

Hyosung Chemical establishes annual investment plans for an effective climate change response. It aims to improve energy efficiency mainly through investment in process facilities. In 2021, the process was improved by reducing steam through the installation of a preheater during the PP process, minimizing heat loss through capa-up of the DH process heat exchanger, and increasing energy efficiency through the installation of a steam accumulator. In 2022, we plan to reduce energy and GHG emissions by installing photovoltaic power facilities (GHG emissions reduction: 470,000kwh/year, 216 ton/year) in Oksan plant, and by replacing existing facilities with high-efficiency facilities such as inverters and soft starters for high pressure compressor in the POK polymerization process in Yongyeon plant.

### Development of Eco-friendly Materials Using Captured Carbon Dioxide

Hyosung Chemical won an honorable mention for its idea on the "capture and utilization of carbon dioxide in process emissions" at the 2021 In-house Contest for Energy Saving and GHG Reduction Ideas. In connection with this idea, we are developing eco-friendly and low-carbon POKETONE products that use carbon monoxide produced by modifying carbon dioxide collected from process emissions as raw material for products. We plan to expand the commercialization of eco-friendly materials to reduce GHG emissions.

### Preemptive Response to Plastic Recycling Issues

Global companies that manufacture and use plastics are required to strengthen their environmental responsibilities, which have expanded to encompass manufacturing, use, and disposal. Hyosung Chemical recognized the need to undertake a preemptive response to meet these responsibilities and identified a way to replace plastic disposables with reusable PP containers through external consulting. In 2022, the company plans to invest KRW 500 million to implement a pilot project. Therefore the company plans to establish a plastic recycling business model and continuously respond to climate change.

### Supporting the Energy Management Systems of Suppliers

Hyosung Chemical is elevating the level of climate change response jointly with suppliers by participating in climate change response projects run by the government. In 2021, we signed an Energy Partnership MOU with the Korea Energy Agency and provided one supplier with a diagnosis of their energy use. We discovered measures to achieve 30.3 toe (ton of oil equivalent) of energy savings and 60.4 tons of GHG emissions reduction.

## Management of Climate Change Indicators

### Self-Audit on GHG Emissions

Hyosung Chemical conducts self-audits of its performance on GHG emissions, once a year. The environment and safety team distributes self-audit evaluation tables to each business division and performs monitoring. Improvements and recommendations are derived from the findings and announced to each business site immediately for follow-up actions. Follow-up actions after each audit must be reflected in next year's emission target and checked for revisions and corrections at the year-end audit.

## Building Awareness of Climate Change

### Training on Energy Saving Practices

Hyosung Chemical conducts regular training on energy saving activities to raise awareness of the importance of responding to climate change among employees. We conduct group training for all employees for 2 hours every year, and provide training on reduction methodologies for deriving cost-effective reduction measures to the production/process/tech-related departments of business sites that implement energy saving and greenhouse gas reduction.



Energy Saving Activity Training in the Yongyeon Plant

# Developing Eco-friendly Products and Technologies

## Background

Countries worldwide are implementing carbon taxes and revitalizing the carbon trading market with the goal of accomplishing Net Zero. The Korean government has also declared its Net Zero plan. Accordingly, companies in Korea and abroad are required to understand the need for the innovation of technologies and products in ways that can turn climate change risks into opportunities.

## Our approach

Hyosung is actively developing products and technologies, including hydrogen economy, resource recycling, and eco-friendly materials, to minimize the environmental impact of various business activities. Through such efforts, Hyosung will enhance green values and pursue sustainable growth.

## Our Achievement

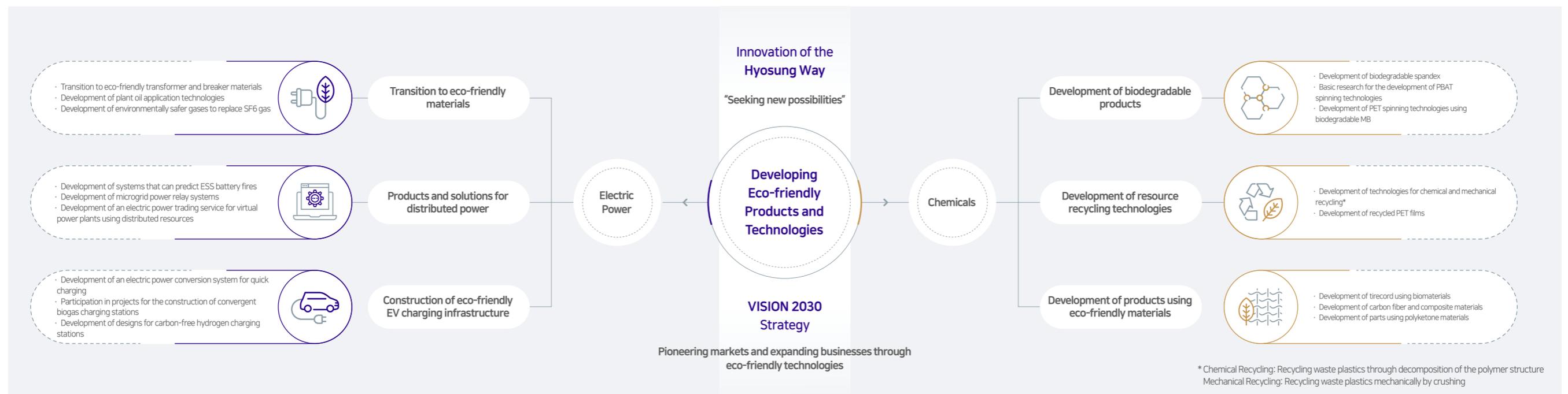
Investment in eco-friendly R&D > KRW 104.3 billion	Number of patents registered (Cumulative) > 3,310 cases	Hyosung TNC Spandex Creora regen > Acquired the first OBP certification in Korea	Hyosung Chemical Sales volume of polyketone in 2021 > KRW 58.0 billion
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## UN SDGS LINKAGE



## Strategies for Developing Eco-friendly Products and Technologies

Hyosung focuses entirely on eco-friendly products and technologies, based on its core value of innovative spirit and the Vision 2030 strategy 'to pioneer markets and expand businesses through eco-friendly technologies.' By doing so, Hyosung will secure future growth engines and accomplish sustainable growth. First, in terms of electric power, we will strengthen our capability in the Electricity Storage System (ESS) business to enhance the efficiency of energy use. In addition, we have initiated endeavors to explore future avenues for growth by expanding the eco-friendly and clean energy business through the hydrogen economy. We pursue low carbon and green growth by promoting renewable energy businesses. In the chemical area, we have introduced technologies to turn disposable waste into green products like regen® and MIPAN®regen. In the future, Hyosung will continue its efforts in response to climate change and create an eco-friendly business ecosystem by investing in green products and technologies.



# Developing Eco-friendly Products and Technologies

## Directions

### Transformation into a Circular Economy

Hyosung TNC has been striving to reduce carbon emissions and thereby fulfill its corporate social responsibility as a synthetic fiber company. We have initiated efforts to achieve sustainable growth by turning the traditional linear economy, which involves gathering, production, use, and disposal processes, into a circular economy, which reduces waste and improves the availability of resources. With such goals, Hyosung TNC has established an ESG goal of Complete a circular economic model using the world's best textile technologies and trading network and create a happy tomorrow. Furthermore, we have selected 'circular economy' as one of our four major ESG values (circular economy, carbon reduction, health and safety, win-win growth).

In addition, we continue to develop various eco-friendly products and acquire international green certifications to meet the evolving needs of the global fashion industry, which is undergoing a transition toward sustainability. Furthermore, we provide truly sustainable products to end consumers by conducting co-marketing in collaboration with other companies in Korea and abroad. Hyosung TNC has been continually increasing its R&D investment to develop eco-friendly products, as well as placing efforts to invent and implement advanced technologies related to recyclable raw materials and plant bio raw materials.

Moreover, Hyosung TNC has formed the 'VOC Committee,' a working-level council that supports product development, marketing, and technical assistance by sharing discussions, issues, and outcomes on a monthly basis to offer sustainable solutions in response to the voices of customers regarding eco-friendliness. Pending issues discussed at the VOC Committee are shared with the senior management of each division and considered in the decision-making process. Hyosung TNC has been developing eco-friendly materials like polyester, nylon, and spandex based on its in-house technologies, and will continue with ceaseless efforts to build a virtuous resource circulation system through ongoing discussions, planning, and investment.

### Tasks for eco-friendliness in 2021



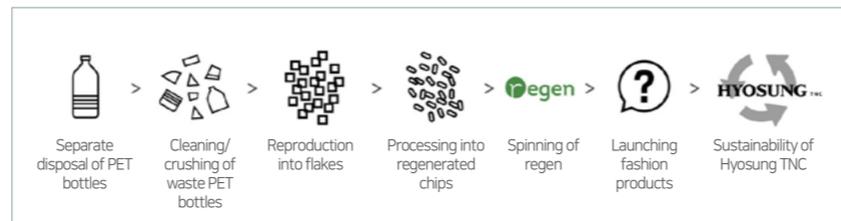
## Eco-friendly Products and Technologies

### 'regen' Made of Waste Fiber and Waste PET Bottles

Plastic garbage is one of the most serious issues causing environmental destruction worldwide. Hyosung TNC developed regen\*, a product made by extracting and recycling useful components from waste PET bottles, as part of our efforts to develop eco-friendly products and reduce environmental pollution. The first of its kind in Korea, this recycled product can significantly reduce landfill volume and bring down carbon dioxide emissions. Further, we have expanded resource recycling with 'MIPAN regen,' a nylon product made by recycling discarded yarns. Hyosung TNC's regen series is supplied to global fashion brands as a solution to the plastic issues faced by the textile fashion industry, presenting a circular economy model in the process.

\*regen can reduce carbon dioxide by about 60% compared to general polyester products.

### Process for the production of regen



### Technology for Recycling Waste Fishing Nets to Protect the Ocean

Waste fishing gear from fishery activities, such as fishing nets and lines, constitute about 46% of the garbage thrown into the ocean. Hyosung TNC has developed a technology for the recycling of waste fishing nets into nylon to improve the marine environment and create a resource circulation model. To do so, we built a depolymerization facility that increases the purity of raw materials by removing the impurities in fishing nets, as well as developing technology to recycle waste fishing nets. This technology also improves the quality of the products. Moving forward, by increasing our sales volume of recycled yarns, we expect to see our share of the recycled nylon market more than double by 2025.



### Global No. 1 Spandex with Enhanced Eco-friendliness

In terms of spandex, a product for which Hyosung TNC has the no. 1 global market share, we supply the market with products that are environmentally friendly. When evaluating the carbon footprint of general spandex products, we discovered that raw materials prior to the manufacturing stage had the biggest impact. Hyosung TNC has therefore developed bio-based spandex using plant materials and supplies this to global athleisure brands. With bio-based spandex and biodegradable yarn technologies currently under development, we continue to seek the diversification of our bio-yarn portfolio. We also aim to reinforce our position as an eco-friendly yarn maker by ceaselessly developing eco-friendly yarns.

## Finding and Supporting Eco-friendly Start-ups

Hyosung TNC has initiated endeavors to support the growth of eco-friendly fashion start-ups in Korea. We have made an equity investment in - and signed an MOU with - PLEATSMAMA, a company that uses eco-friendly textile materials to manufacture clothes and props without generating leftover fabrics. By supporting the stable supply of eco-friendly textile materials, business activities, branding, and entry into the global fashion market as a strategic partner, we will guide PLEATSMAMA to establish its presence as a leading eco-friendly fashion brand in Korea and beyond.



Finding and supporting eco-friendly start-ups

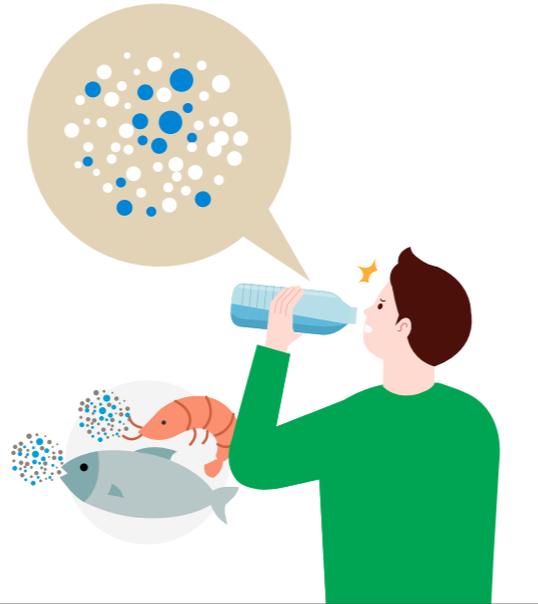
# Hyosung TNC's Efforts to Protect the Marine Environment Damaged by Microplastics

## Q. What are microplastics?

A. Microplastics are extremely small plastic pieces with a size of 5mm or smaller. It is difficult to spot these tiny plastics with unaided eyes.

## Q. How are microplastics generated?

A. Some microplastics are formed when discarded plastic products or fishing nets decompose into smaller pieces. They are also generated in the process of washing clothes and using cosmetic products. Microplastics have spread widely, and they can be found even in salts and mineral water. We cannot avoid consuming microplastics. According to the World Wide Fund for Nature (WWF), the global average indicates that one person ingests microplastics equivalent to a credit card per week.



## Q. What are the problems with microplastics?

A. The problem is that microplastics are too small, so marine organisms easily ingest them. Microplastics present a grave threat to marine life by affecting growth, development, breeding, and death. Scientific report published in January 2019 claimed that microplastics were found in the dead bodies of all 50 marine animals washed up on the coast of the UK. About 80% of such microplastics are synthetic textiles that come out of clothes and fishing gear. According to research data released by the Ministry of Maritime Affairs and Fisheries from 2015 to 2020, six kinds of clams and fishes living in the West Sea and South Sea showed a 100% plastic detection rate. Furthermore, plastics were found in five out of eleven seabird species (red-breasted merganser, Pacific diver, storm petrel, black-tailed gull, and auk). Amongst these, storm petrels had up to 20 different types of plastic in their digestive tract. Plastics were also found in 83% of dead sea turtles, with up to 229 plastic pieces present in a single body.

Microplastics are not only harmful to marine life - they are hazardous to human beings who ingest marine products. Although there are no data on the specific hazards to the human body, experts predict that microplastics can affect EDCs (Endocrine Disrupting Chemicals) and have an adverse impact on the nervous system by infiltrating cells.

Future predictions are not favorable, either. According to the WWF, plastic production will more than double by 2040, and the volume of marine plastic garbage will quadruple by 2050. The concentration of microplastics in pollution-intense areas like the Mediterranean Sea, East China Sea, and Arctic sea has already exceeded the ecological threshold beyond recovery, damaging the diversity of the surrounding ecosystems. Therefore, we must take urgent measures to protect the marine environment by reducing plastic waste.

As a company that manufactures synthetic textiles, Hyosung TNC has a strong sense of responsibility to resolve the issues caused by microplastics. Our solution is to overcome the microplastic garbage problem using the 3R methodology (Reuse, Recycle, Reduce), in accordance with the value of "circular economy."



'Reuse' refers to the act of reducing the use of new clothes by reusing products. Employees of Hyosung TNC voluntarily donate their clothes to an organization named Good Will, reducing the waste caused by clothes.



'Recycle' is about returning finished products to raw materials. Plastics are recycled to reduce the generation of plastic waste. Hyosung TNC has developed an economic model of resource circulation by implementing an open loop recycling method based on regen and technologies for the recycling of waste fishing nets, as well as a closed loop recycling method used to manufacture MIPAN regen and Creora regen by returning yarn byproducts to raw materials. In particular, regen minimizes the discharge of microplastics by recycling about 866 PET bottles of 500ml size per 1 ton of yarn. In addition, we launched the 'regen ocean' product in collaboration with the Yeosu Port Authority by recycling PET bottles used by ships that enter and leave ports in Jeolla Province and Busan. This product obtained the Ocean Bound Plastic (OBP) certification and was acknowledged for contributions to saving the marine environment.



'Reduce' is about reducing the discharge of microplastics by bringing down the absolute volume of waste. Hyosung TNC strives to minimize microplastics by releasing bio-span products and developing biodegradable span yarn technologies. We also conduct an in-house campaign to reduce the generation of plastic waste by encouraging tumbler use.

## Planning Activities to Protect the Marine Environment

### 1. Collecting Marine Garbage

By making lift bags, buoys, and catchers with recycled yarns and providing them to marine protection organizations like ReDi and Ocean Care, we will promote the green diving culture and continue improving the marine environment through purification activities.

### 2. Sponsoring the 7th International Marine Debris Conference

Hyosung TNC aims to show its sincerity toward resolving problems related to the marine environment through participation in the world's largest marine debris conference. We will sponsor t-shirts made of recycled yarns that have acquired OBP certification, as well as bags made of nylon from recycled waste fishing nets.

### 3. In-house Activities to Collect PET Bottles

We have developed a plan to manufacture fashion products using yarns made from recycled PET bottles collected within the company, and to return these products to our employees. Such participatory activities can raise employees' awareness of microplastics.



# Developing Eco-friendly Products and Technologies

## Directions

### Power Systems PU

The Power Systems PU at Hyosung Heavy Industries offers optimal solutions for power transmission and distribution networks. Solutions developed by Hyosung Heavy Industries meet customers' needs by supporting the worldwide trend towards Net Zero and the transition to renewable energy. With a focus on developing eco-friendly solutions for all products, the Power Systems PU has proactively developed switches that do not emit GHG, eco-friendly transformers that use ester oil, flexible electric power systems and energy storage systems for transmission and distribution networks, and static synchronous compensators (STATCOM) with increased stability. In addition, we are concentrating on building digital substations that have the capacity to produce vast substation information using optical fibers to provide a DC solution for power transmission and distribution, ranging from High Voltage (HV) to Low Voltage (LV). In the future, Hyosung Heavy Industries will strive to satisfy the need for high-efficiency and eco-friendly products and technologies by launching digital solutions and asset management solutions that address these needs.

### Industrial Machinery PU

The Industrial Machinery PU at Hyosung Heavy Industries has dominated the hydrogen charging system in the mobility market, which is introducing changes to attain Net Zero. We are supplying charging systems for passenger cars and commercial vehicles. Furthermore, exclusive charging systems will be provided after developing hydrogen fuels for heavy equipment such as excavators and forklifts. We are also constructing liquefied hydrogen plants to enhance the efficiency of hydrogen storage and transportation. By producing and supplying liquefied hydrogen, which has high transportation and storage efficiency due to its higher density compared to gas, we will contribute to revitalizing hydrogen mobility and achieving net zero. Further, we developed a 2MW induction shaft generator motor (SGM) with our client, Daewoo Shipbuilding and Marine Engineering, in 2017 to comply with global environmental regulations for ships. SGM has been applied to LNG carriers, LPG carriers, and container ships since 2020. Moreover, it can reduce annual fuel consumption by 2-3%, improving fuel economy for ship owners and reducing the emissions of CO<sub>2</sub>, SOX, NOX, and GHG. Considering the demand and feedback from ship owners, we plan to develop a compact size, 5MW large-capacity permanent magnet SGM with 2% higher efficiency for super-large container ships. We will continue to actively fulfill customers' needs for high-efficiency and eco-friendly products in this regard.

### Construction PU

The Construction PU at Hyosung Heavy Industries leverages various eco-friendly construction techniques, such as high early-strength concrete and detachable decks, to reduce carbon emissions and thereby reduce the adverse impact of climate change. Furthermore, the Construction PU has been engaged in efforts to expand eco-friendly landscapes, such as biotopes, to acquire green building certifications, including G-SEED. We will continue to collaborate with business partners to accomplish sustainable growth by developing and applying green construction techniques and materials.

## Eco-friendly Products and Technologies

### Power Systems Division

#### ESS(Energy Storage System)

ESS is a system that stores surplus electric power when the power demand is low and uses the stored power when necessary. ESS has become a core facility for future power and energy industries, in line with the increasing ratio of renewable energy sources in Korea and overseas. Hyosung Heavy Industries has been leading the Korean ESS industry and providing total ESS solutions, ranging from tailored consulting services to system construction and follow-up management.

#### Extra-high Voltage Devices

Hyosung Heavy Industries is a leader in power devices, such as transformers and breakers, that are used in power transmission and distribution networks. We have been pioneering the development and supply of eco-friendly products that use eco-friendly materials, for insulation purposes, in power devices. For example, transformers are filled with ester oil instead of mineral oil to remove the risk of environmental pollution and ensure fire safety. These transformers are sold worldwide, including in Europe and the Middle East. In terms of gas insulated switchgear, Hyosung Heavy Industries independently developed a 170kV eco-friendly gas insulated switchgear using Novec mixture gas in 2021. After a pilot test in the first half of 2022, the switchgear will be applied to newly built substations and old facilities, thereby reducing the GHG emissions caused by power systems. In addition, we will expand our green portfolio by developing a 145kV gas-insulated system that is completely free of GHG emissions in 2022.

#### DAIS Products

The Global Warming Potential (GWP) of SF<sub>6</sub> gas is 23,900. Due to the extremely high GWP, the use of SF<sub>6</sub> gas is likely to be restricted in the future. Accordingly, Hyosung Heavy Industries has successfully developed Dry Air-Insulated Switchgear (DAIS) that uses dry air with a GWP of 0, in addition to an optimal insulated design using materials that have excellent electric, mechanical, and chemical properties. With this switchgear product, we have been leading the Korean market since 2013.

The structure of the DAIS developed by Hyosung Heavy Industries enables safe execution of normal operations and maintenance work. Further, by acquiring various international standards (IEC, IEEE), it has received international recognition for stability and reliability. Hyosung Heavy Industries will continue to prioritize the safety of customers and provide optimal, eco-friendly solutions with tailored designs that meet various technical requirements.

### Construction Division

#### Utilizing Eco-friendly Construction Techniques

Hyosung Heavy Industries reduces the use of water by using high early-strength concrete in buildings, and continually strives to reduce air pollutants in the winter. High early-strength concrete can effectively shorten the use of hot air blowers during winter construction works due to the high strength development rate, minimizing CO<sub>2</sub> emissions and reducing the use of water by 20kg/m<sup>3</sup> through a high-performance water-reducing agent. In addition, Hyosung Heavy Industries is minimizing the discharge of waste by applying the detachable deck method when building underground parking lots. This construction method reduces the volume of construction waste generated by controlling the use of temporary construction materials, such as plywood forms and fixing ironware. When dismantling buildings, lifts are used to reduce noise and achieve zero dust scattering.

#### Obtaining Green Building Certifications and Building Eco-friendly Landscapes

Among buildings constructed by Hyosung Heavy Industries in 2021, three buildings acquired an Excellent Grade in the green building certification (G-SEED) system. We currently have 17 valid green building certifications, and many of the buildings that we have constructed have acquired these certifications in the past. In addition, Hyosung Heavy Industries actively promotes biotopes\*, or eco-friendly landscapes, in large-scale construction sites. Biotopes were applied at three sites in 2021. We will continue to promote low-carbon and eco-friendly construction, fulfilling the environmental needs of our customers and minimizing adverse impacts on the environment.

\*Biotope: An ecosystem where wild plants and animals can coexist, and especially referring to the creation of artificial biological habitats in cities

### Industrial Machinery Division

#### Wind Turbine

Hyosung Heavy Industries has long been an industry pioneer in wind power generation systems, which are the primary products for generating eco-friendly renewable energy. We developed and supplied Korea's first 750kW and 2MW wind power generation systems, and a 5MW offshore wind power generation system was developed to dominate the Korean market in the offshore wind power sector. With the expansion of the offshore wind power market in Korea, Hyosung Heavy Industries is in the process of establishing a joint venture for manufacturing wind power generation systems in 2022. This joint venture will produce and supply 10MW offshore wind power generation systems appropriate for the Korean environment, which is characterized by low-wind velocity and typhoons, starting in 2023. Moving forward, we will work toward the Korean government's 2050 Net Zero target by supplying competitive products based on large offshore wind turbine technologies, localization of parts, and power plant maintenance technologies.

# Developing Eco-friendly Products and Technologies

## Directions

### Vision 2030: Three Zeros



Hyosung Advanced Materials seeks to faithfully fulfill its environmental responsibilities in accordance to its vision of establishing a CSE(Creating Social Eco-system) that enhances human sustainability. We are conducting R&D activities aligned to our green management strategy : Zero Emission, Zero Waste, Zero Impact.

Hyosung Advanced Materials is constantly researching ways to develop lightweight materials and high-strength products that increase fuel efficiency of automobiles so that we can contribute to reducing GHG emissions and energy use in the mobility industry. In addition, by using conventional raw materials from petrochemical sources, we are focusing to develop products made from sustainable materials to help solve issues such as resource depletion and environmental pollution. Moreover, we have been making various efforts to minimize adverse environmental impacts throughout the product lifecycle, from raw materials to production, use of products, and treatment after use.

All R&D activities, including those concentrated on recyclable, eco-friendly materials, products, and technologies, are carried out based on a process of identifying customers' needs, requesting development, deciding on commercialization, and approving investments. By reflecting diverse stakeholders' needs and focusing on activities that can reduce negative impacts on the environment and users, we will improve the sustainability of our company and society.

## Eco-friendly Products and Technologies

### Low-Carbon tirecord using lyocell

Lyocell tirecord, made of cellulose extracted from wood, was developed as a substitute for rayon tirecord which is used to reinforce high-speed tires that require high durability. Lyocell tirecord emit about 30% less GHG emissions than rayon or nylon tirecord. It also releases very little harmful substances such as carbon disulfide and hydrogen sulfide, effectively preventing air and water pollution caused by release and treatment of harmful substances.

### TANSOME®-The Key to Automotive Fuel Efficiency

TANSOME® has ultra-lightweight and high-strength properties, is four times lighter than steel but 10 times stronger, and contributes to reducing carbon emissions by increasing fuel economy when used as a key material for lightweight automobiles. Moreover, TANSOME® sees use in various products because of its excellent stability and functionality. In particular, it has applications in eco-friendly energy industries, such as CNG and high-pressure hydrogen vessels essential for hydrogen energy. As the global demand for Net Zero increases, the automotive industry will drive further growth of TANSOME® through increased demand for hydrogen vessels, wind power, and lightweight materials.

### Bio-PET\* Product Launch

Hyosung Advanced Materials has developed an industrial Bio-PET yarn that is produced using Bio-EG, a material extracted from plants, to satisfy customer demand for eco-friendly materials. Developed products have been applied to Hyundai Motor's EV IONIQ and HV NEXO. We also manufacture and supply tirecord and automotive carpet products using the Bio-PET material.

\*Bio-PET: An eco-friendly polyester material produced using Bio-EG, extracted through catalyst reaction and fermentation of sugarcane and corn instead of ethylene glycol, which is ordinarily used when producing polyester.

### GHG Emissions Comparison of PET Tirecord

(Unit: kgCO<sub>2</sub>-eq/kg)



### Products using recycled-yarn

Hyosung Advanced Materials has developed a high-strength, recycled PET yarn using raw materials extracted from waste PET bottles. This yarn has acquired the Global Recycled Standard (GRS) certification from an international certification body. In addition, Responding to the customers' needs of products using recycled PET, we developed a car mat using recycled Bulk Continuous Filament (BCF), which is under commercialization evaluation with costumers. Furthermore, Eco-friendly products portfolio is being expanded by using recycled chips from discarded fish nets as well as spinning process waste and the process waste generated by recycled chip companies.

### Reducing Harmful Chemicals via Eco-friendly Chemical Dip Solution

In the final process of manufacturing tirecord, the half-finished products must be dipped with a chemical dip solution – prepared by mixing various chemicals – and dried using high heat. Hyosung Advanced Materials has developed an eco-friendly dip solution, based on research to increase the eco-friendliness of its manufacturing process. To reduce the use of harmful chemicals in this process, Hyosung Advanced Materials has developed a dip that does not use formalin and that reduces wastage of tires by extending their service life through increased fatigue resistance. The dip is currently undergoing approval for commercialization.

### Case

#### Transition to Sustainable Materials

Hyosung Advanced Materials' Tire & Industrial Reinforcements PU continues its efforts to make a transition to sustainable materials. Since 2020, it has been working with major business partners to develop a PET tirecord using flakes made by sorting and compressing mixed waste plastics. By recycling waste plastics, this next-generation eco-friendly product will help reduce waste sent to landfill. We will maintain amicable partnerships with customers and business partners, exchange information, and successfully develop joint technologies in order to accomplish a 100% transition to sustainable materials by 2050.



# Developing Eco-friendly Products and Technologies

## Directions

### Expanding the Eco-friendly Business Portfolio

Hyosung Chemical is committed to reducing the environmental damage caused by production activities and fulfilling our corporate social responsibilities. In this regard, we have built a virtuous resource circulation system and actively respond to climate change by developing eco-friendly products and technologies, such as expanding the application of Polyketone and promoting PCR businesses.

### Expanding the Application of Polyketone

Our 'Polyketone' product is an eco-friendly material with outstanding physical properties. By replacing existing materials, it contributes to a reduction in carbon emissions. In September 2020, we developed a water meter using Polyketone and supplied 23,000 units to the Seoul Metropolitan Government. This water meter was acknowledged for its carbon-reducing effect. We plan to assist the Seoul Metropolitan Government in accomplishing its carbon reduction goal, which is to 'replace 30% of annual demand (2.5 million units) in Seoul by 2030.' Moreover, various Polyketone products will be developed through continual R&D investments.

### Creating a Hydrogen Ecosystem

In response to the 'Hydrogen Economy Activation Road Map' announced by the Korean government, as well as the ongoing trend of eco-friendly mobility, Hyosung Chemical is working to create a hydrogen ecosystem in Korea in cooperation with the Linde Group, a global gas enterprise. Through a joint investment of KRW 300 billion with Hyosung Heavy Industries and the Linde Group by 2023, Hyosung Chemical plans to build a liquefied hydrogen plant, with a site area of 30,000 m<sup>2</sup> and an annual production capacity of 13,000 tons, at the Yongyeon Plant.

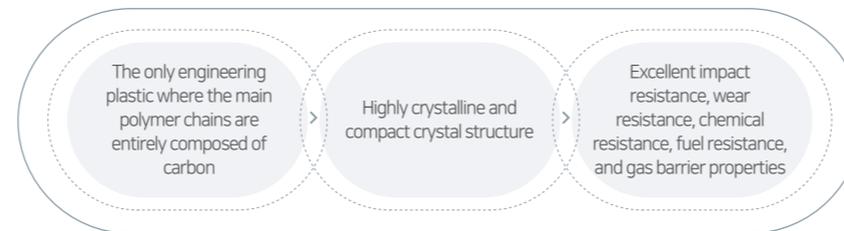
### Developing Post-Consumer Recycled (PCR) Technologies and Products

The European Union (EU) has announced a regulation to increase the recycling ratio of waste plastic packing materials to 50% or higher by 2025. Owing to the industrial changes caused by the emergence of contact-free lifestyles and the advancement of e-commerce, the demand for plastics has increased sharply, and plastic waste has become a serious social issue. Accordingly, various stakeholders are cautiously monitoring the connection between plastics and climate change and demanding eco-friendliness. Hyosung Chemical will secure various Post-Consumer Recycled (PCR) feedstocks, develop technologies, and build a vertical value chain based on production and sales partnerships with a view to strengthen the reuse and recycling of plastics. Such activities will be promoted not only in Korea but globally.

## Eco-friendly Products and Technologies

### Focusing on Developing the Eco-friendly New Material 'Polyketone'

Polyketone is the world's first eco-friendly engineering plastic, invented in 2013 using independent technologies developed by Hyosung Chemical. Carbon monoxide, the primary cause of air pollution, is used as its raw material, and for this reason it is seen as a core material that can represent the eco-friendly plastics market. Polyketone has a lower global warming potential than other engineering plastics, and the carbon dioxide reduction effects have been verified through a Life Cycle Assessment (LCA) and objective reviews. Hyosung Chemical has been developing eco-friendly products and technologies with a focus on Polyketone, as well as expanding its applications to various areas - including construction materials, engineering products, automobiles, daily supplies, and leisure supplies.



Further, Hyosung Chemical will conduct continuous marketing activities to enable clients to choose products with a low GWP and thereby mitigate global warming. By developing products in different industrial sectors, we will ceaselessly strive to expand our sales volume to KRW 170 billion by 2025.

### Developing and Commercializing Eco-friendly Water Treatment Systems

In view of the deepening water shortage crisis due to climate change, Hyosung Chemical has been developing and commercializing membrane water treatment systems. A membrane refers to a 'film' that only allows desired substances to pass through and filters unwanted substances. Our membrane water treatment systems of use hollow fibers with a hole size of 0.03  $\mu\text{m}$ . 'Submerged Type Water Treatment Technology' was developed in 2012, and we have acquired new environmentally friendly membrane technology certifications for our 'Pressurized Membrane Filter Treatment Technology' and 'Two-Stage Submerged Type Water Treatment System.' As of 2021, we maintain two such certifications.

## Eco-friendly Certifications

Hyosung Chemical has initiated company-wide efforts to acquire eco-friendly certifications, as part of our ESG goal to reduce environmental damage from our production activities. As a result, we have obtained the Recycled Claim Standard (RCS) for industrial films and optical films. Both the product and the technology for manufacturing Polyketone, a new polymer material made using carbon monoxide and olefin, have been certified as a green product and green technology, respectively, pursuant to Article 61 of the Framework Act on Carbon Neutrality and Green Growth to Confront Climate Crisis, as well as Article 27 of the Operating Guidelines for Green Certification System. The Green Certification System certifies green technologies that minimize GHG and pollutant emissions by saving and efficiently using energy resources through technologies for GHG reduction and energy efficiency. Furthermore, Hyosung Chemical has established an Environmental Management System (EMS) to systematically identify, evaluate, manage, and improve the environment. All plants have implemented ISO14001 to efficiently control environmental risks. In addition, we have established environmental goals and detailed promotion plans, as well as conducting annual internal audits and external audits (Korean Foundation for Quality) to manage performance and identify areas that require improvement.



### Yongyeon Plant

The Yongyeon Plant has acquired ISO14001 certification and performs environmental impact assessments on new unit processes and equipment before their implementation. Environmental impact assessments are performed every three years on existing processes to prevent environmental risks, and these processes are monitored through a process monitoring system. The plant manages energy usage based on intensity, and personnel in charge share and review the status of energy use on a weekly basis. As acknowledgement for such efforts, the Yongyeon Plant has acquired the Energy Champion certification provided by the Korea Energy Agency.

### Gumi Plant

The Gumi Plant acquired ISO14001:2004 in 2007 and upgraded the system to ISO14001:2015 in 2018. The environmental management system identifies and manages issues that affect the environment on a regular basis. Further, the plant has developed accident scenarios to conduct emergency training that would minimize the damage from possible accidents related to high-risk activities.

# Health and Safety at Business Sites

## Background

Industrial sites must pay attention to health and safety given the complex nature of their activities and the diversity of workers. It is especially necessary to identify the factors that present threats to workers' health and safety, and to establish a healthy and safe workplace. Companies can improve sustainability only by building an environment where workers can work healthily and safely.

## Our approach

Hyosung encourages all employees to comply with the Health and Safety Management Policy. In addition, we have established detailed action tasks and evaluate them periodically to fulfill this Policy. Evaluation results are reflected in subsequent implementation plans to create a safe workplace for all.

## Our Achievement

<b>Hyosung TNC</b> Health and safety management system certification (ISO45001)	Acquired by the Gumi Plant	<b>Hyosung Heavy Industries</b> Mitigated on-site risk factors	<b>976 cases</b>	<b>Hyosung Advanced Materials</b> Increased the ISO 45001 certification ratio of global business sites	<b>60% → 80%</b>	<b>Hyosung Chemical</b> Promoting a safe workplace	<b>2 consecutive years</b>
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## UN SDGS LINKAGE



## Strengthening Health and Safety Systems

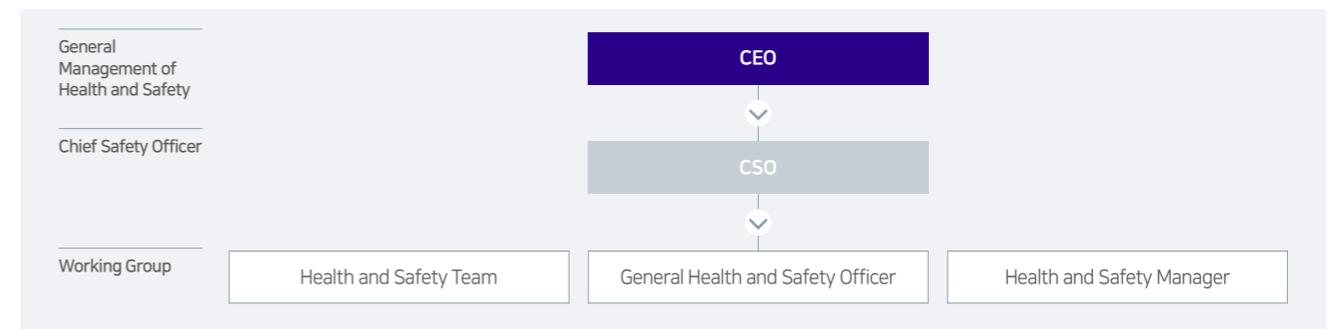
### Company-wide Health and Safety Management Policy

Hyosung considers workplace health and safety as the foremost priority of our corporate activities. All employees comply with the Health and Safety Management Policy to build accident-free business sites that are pleasant and safe. Internal and external stakeholders are also notified of the Policy.



### Formation of the CSO Safety Inspection Council

In line with the enforcement of the Serious Accidents Punishment Act, Hyosung has formed a dedicated health and safety team and appointed a Chief Safety Officer (CSO) under the direct supervision of the CEO. By operating the Safety Inspection Council – comprised of the CSOs of Hyosung Corp. and operating companies – and sharing major issues and best practice responses, Hyosung has been able to significantly improve its health and safety management. In March 2022, the CSO reported measures for strengthening safety inspections to the CEO.



### Responding to the Serious Accidents Punishment Act

Entity	Measures	Measures	Measures
Hyosung Corporation	Routine inspections - Regular revision of the safety inspection checklist, twice a year	Themed inspections - Complete inspection of predefined inspection items during patrols	Micro inspections - Micro inspections are autonomously conducted twice a month by direct production departments and once a month by indirect departments.
Hyosung TNC	Advice from fire prevention experts (weekly at the Gumi and Ulsan sites)	Professional diagnosis of safety and firefighting (twice a year)	ISO45001 certification acquired by the Gumi Plant
Hyosung Heavy Industries	Power & Industrial Systems PG CEO's inspection of business sites and product installation sites (four times a year)	Inspections to improve risk factors (12 times a year) and professional diagnoses of high-risk tasks (twice a year)	Recruitment of four exclusive patrol workers
	Construction PU Walk-around inspections at 27 sites (twice a year) and participation in the CSO Labor-Management Council and laborer opinion hearings (four times a year) by the CEO Shortened the cycle for Plant Manager inspections (twice a year to 12 times a year) and specified the scope (PU -> individual plants)	Seasonal training (monsoon, typhoon, etc.) to respond to potential serious accidents	Special Safety Division established to conduct safety inspection activities
Hyosung Advanced Materials	Formed a new decision-making body at the PU level: PU Health and Safety Meeting (hosted by plant managers and held monthly)	Reinforced the health and safety inspection processes for high-risk tasks	Appointed safety managers at each business site and regularized themed inspections
Hyosung Chemical		Expanded the safety mileage assessment scope (assessing the safety-related activities of each PU and offering incentives)	Conducting health and safety inspections twice a year

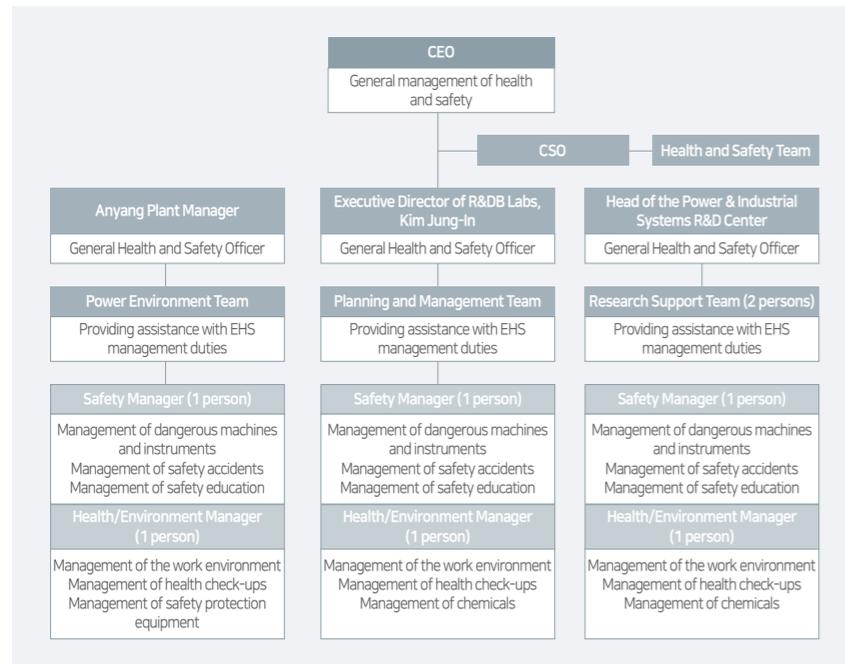
# Health and Safety at Business Sites

## Strengthening Health and Safety Systems

### Organization to Manage Health and Safety Promotion

Hyosung Corporation operates an organization, supervised by the CEO, for managing health and safety at business sites. The ESG Promotion Committee reports the results of safety inspections and the safety management status of each plant every quarter. In addition, Hyosung has appointed two EHS managers and a General Health and Safety Officer at each business site to inspect action tasks on a quarterly basis. We have also appointed a Chief Safety Officer (CSO) and formed the Health and Safety Team as a dedicated organization in this respect.

### Health and Safety Management Organization



### Health and Safety Management System Certification

Hyosung Corporation's Anyang Plant operates health and safety management systems to prevent industrial accidents, abide by environmental safety laws, and maintain a sustainable management system. Each department establishes and improves departmental health and safety plans addressing the risk factors identified through risk assessments, environmental impact assessments, and safety inspections. In 2020, the Anyang Plant raised its certification level by converting OHSAS18001 into ISO45001 to strengthen compliance with EHS laws. The plant has been maintaining this certification by undergoing annual reviews.

## Health and Safety Activities

### Inspecting the Implementation of Health and Safety Guidelines

Hyosung Corporation aims to maintain an accident-free workplace based on the Health and Safety Management Policy. Each business site establishes action tasks to improve awareness, systems, and the on-site environment, as well as inspecting implementation by means of quarterly monitoring.

Category	Action Task
Improving Awareness	Improving health and safety awareness (provision of education, related templates)
	Operating a reward system
	Employees (team/department) of business partners
Improving Systems	Introducing improvements through acquisition and maintenance of ISO45001
	Inspecting health and safety through various councils (business partner CEO meetings, the Occupational Health and Safety Committee)
	Maintaining and improving health promotion activities
	Daily safety inspections to check for non-compliance
Improving the On-site Environment	Inspecting non-conformities through patrol activities carried out by management
	Maintaining automatic fire detection and fire extinguishing systems through inspections
	Creating a pleasant work environment
	Investigating hazards to prevent musculoskeletal diseases

### Regular Safety Inspections at Anyang Business Sites

Hyosung Corporation conducts regular safety inspections and special fire prevention inspections at our business sites in Anyang (Anyang Plant, R&DB Labs, Power & Industrial Systems R&D Center) to identify areas of non-compliance and take countermeasures if necessary. In 2021, 126 non-conformities were found, all of which have since been corrected. The safety inspection conducted in the first quarter of 2022 found 54 items for improvement. Among them, 41 cases have since been improved, and improvements are currently underway for the remaining 13 cases.

#### Details of Inspections and Improvements

<b>Anyang Plant</b>	Inspection of safety and leakage of hazardous substances	29 non-conformities were identified (16 improvements complete, 13 in process)
<b>R&amp;DB Labs</b>	Inspection of 61 labs, routine inspection checklists, emergency contacts, fire extinguisher inspection checklists, and the industrial health and safety bulletin board	18 non-conformities (improvements complete)
<b>Power &amp; Industrial Systems R&amp;D Center</b>	Inspection of 71 fire prevention facilities (67 fire extinguishers, 4 fire hydrants)	Replacement of the fire extinguisher inspection checklist, 7 non-conformities (improvements complete)

### Executing Risk Assessments

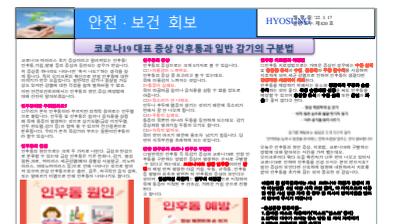
Hyosung Corporation conducts an annual risk assessment with the participation of supervisors and workers, identifying inadequacies and addressing them in the safety management plan. Accident cases at our company, and other companies, are shared with all plants to help establish proactive prevention plans for tasks that involve similar risks.



Executing Safety Education

### Publishing Health and Safety Newsletters

Hyosung publishes newsletters to raise EHS awareness and announces the requests of the Health and Safety Officer during monthly meetings. Moreover, we regularly share health and safety issues at executive meetings, as well as distributing pamphlets explaining health and safety compliance matters and emergency evacuation guidelines.



### Operating a 'Safety First' Work Rights System

Hyosung operates a 'safety first' work rights system, which allows workers to discontinue their work and immediately evacuate if a dangerous situation occurs. Safety measures are taken before resumption of work.

### Joint Labor-Management Inspections and Subcontractor Inspections

Safety managers and the heads of subcontractors conduct joint inspections on matters raised during meetings on a monthly basis, and the actual status of safety management for each subcontractor is assessed on a quarterly basis. In addition, joint labor-management inspections are executed quarterly, covering requirements raised by the labor union and employee representatives, as well as improvements suggested through surveys. The results of such inspections are reported to the CEO semiannually.

# Health and Safety at Business Sites

## Strengthening Health and Safety Systems

### Strategies for Promoting Health and Safety

Hyosung TNC has established an environmental and safety vision of 'building business sites where accidents cannot occur' to eradicate accidents in our plants, prevent serious accidents, and establish a robust safety culture. Our management goal is to attain 'zero health and safety accidents.' To ensure a sustainable management system, we have therefore selected four major environmental and safety goals, including 'ZERO serious accidents and industrial accidents,' 'an organizational culture where work is discontinued if it is unsafe,' 'Adoption of health and safety management systems from developed countries at all business sites,' and 'greater responsibility and ability to address emergencies at each business site.'



### Certification of Health and Safety Management Systems

Hyosung TNC has built a business system related to health and safety to attain its health and safety vision, creating a safe and pleasant work environment for its employees and those of its business partners. In addition, we have established Workplace Safety Principles and the Eight Safety Rules. At the Gumi Plant, the nylon and polyester business site and the spandex business site acquired certification for their health and safety management systems (ISO45001) in 2021. The nylon and polyester business site at the Ulsan Plant is also currently preparing to acquire certification.

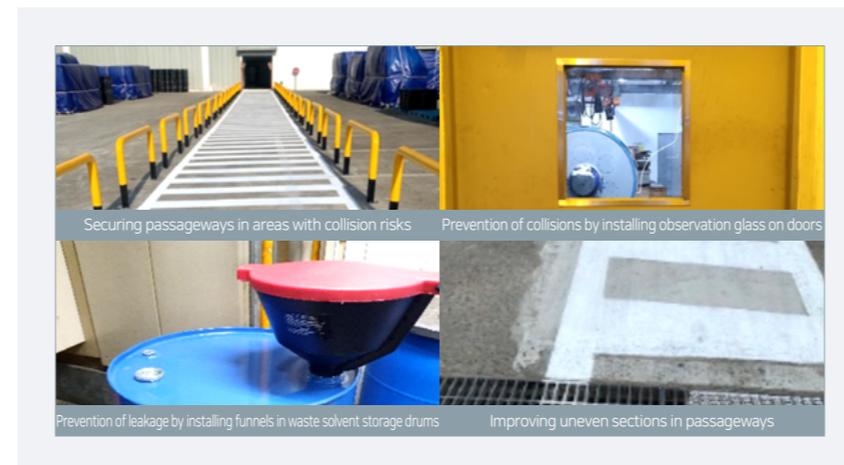
#### The Eight Safety Rules

- 1 Wear personal protective equipment.
- 2 Do not practice unsafe behaviors.
- 3 Do not use smartphones while at work.
- 4 Do not remove safety devices.
- 5 Handle chemical substances safely.
- 6 Promptly communicate information on hazards.
- 7 Shut down power sources immediately upon occurrence of danger.
- 8 Thoroughly check the front/back.

## Health and Safety Activities

### Operating the Safety Reporting Channel, 'Point Out Confidently'

On-site workers are the ones who directly encounter various risk factors in the field. In order to actively collect their opinions, Hyosung TNC operates 'Point out Confidently', a safety reporting program that guarantees anonymity. The 'Point out Confidently' program is operated on a social media channel that is easily accessible for anyone, and reporters are given incentives.

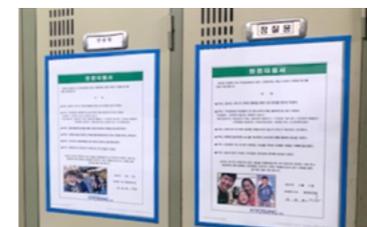


### Health Promotion Activities

Working with community health centers to promote the health of field workers, Hyosung operates smoking cessation and obesity control programs. Gifts are given to workers who participate in these programs, and workers who successfully quit smoking are given additional rewards.

### Publicity Activities on Safety

Hyosung continues to familiarize employees with safety rules within the work environment, spreading a safety culture and promoting safety awareness among employees. In this manner, employees naturally become aware of safety-related matters. In addition, to remind themselves of safety, our employees fill out a Safety Pledge and post them in their personal spaces.



### Safety Inspection Activities

Hyosung TNC has been striving to build a safe workplace through periodic on-site inspections. The EHS Committee, supervised by the CEO, is convened twice a year, and quarterly on-site inspections are conducted with the participation of business partners. Daily facility inspections are included in the safety inspection activities. In addition, each team manager supervises health and safety inspections each month, and a 94% improvement rate was accomplished in 2021.

Category	Participation	Cycle	Details
EHS Committee	CEO, plant managers, team managers, etc.	Semiannual	Non-regular, temporary meetings
TOP Patrol	Plant managers, team managers, etc.	Quarterly	Theme-specific worksite
Safety Patrol	Environmental Safety Team	Daily	Each patrol zone
Joint Inspections with Business Partners	Plant managers, business partners, Environmental Safety Team	Quarterly	On-site and document inspections conducted concurrently
Environmental Equipment	Production Team	Daily	On-site
Facilities Handling Harmful Chemical Substances	Production Team	Daily	On-site
Individual Teams	Field workers and operators	Daily	Safety of operating facilities and structures

### Safety Inspection Education and Training

In addition to safety inspection activities, Hyosung TNC conducts training to prepare employees for emergency situations. Large-scale, private-public training programs, such as firefighting education and training, as well as chemical substance training, are conducted for employees to prevent major accidents such as fires and chemical leaks. In this manner, Hyosung TNC is focusing on improving its early response capabilities.

### Hearing Conservation Program

Hyosung TNC operates a hearing conservation program for personnel who work on processes that exceed the noise exposure standard (90 dB), as well as for those who show noise-induced hearing impairment during special health check-ups. The program is also offered for employees of our business partners. We receive technical guidance from a specialized external agency to conduct individualized ear-fit tests, and appropriate ear protectors are selected by measuring earplug sizes. Hyosung TNC strives to minimize diseases caused by noise-induced hearing impairment by providing ear protectors and educating workers on how to use this protective equipment. In addition, noise-reducing booths have been installed at sites to lower the frequency of noise exposure.

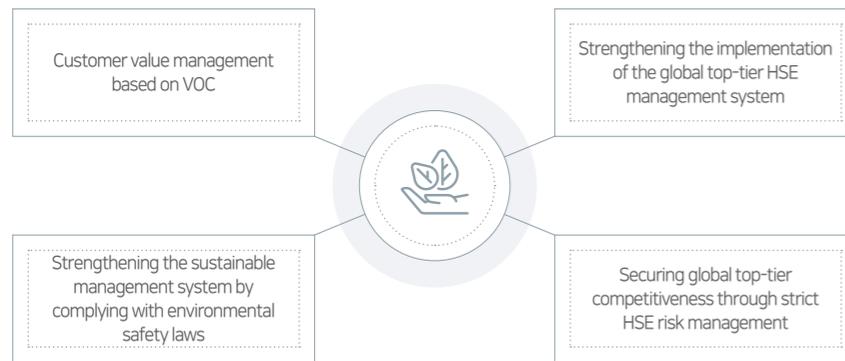
# Health and Safety at Business Sites

## Strengthening Health and Safety Systems

### Establishing Four Golden Safety Rules

Hyosung Heavy Industries has established the Environmental Safety Policy to fulfill its social responsibilities and become a company that grows together with its customers. In particular, the Four Golden Safety Rules have been adopted to create a safe on-site environment.

#### HSE Policy



#### The Four Golden Safety Rules

1. Ensure compliance with all laws and regulations related to health and safety.
2. All work must be carried out after deriving work standards and performing a risk assessment.
3. Work must start only after receiving instructions and safety education from the supervisor.
4. Risk factors must be reported to the supervisor, and protective safety equipment must be worn.

### Certification of the Health and Safety Management System

Hyosung Heavy Industries' Changwon Plant operates health and safety management systems to prevent industrial accidents, abide by environmental safety laws, and maintain a sustainable management system. Each department establishes and continually improves specific health and safety plans addressing risk factors that are identified through risk assessments, environmental impact assessments, and safety inspections. In addition to acquiring the ISO45001 international certification, Hyosung Heavy Industries became the first conglomerate in the Changwon Industrial Complex to obtain KOSHA-MS certification in 2020 by improving the system manual and enhancing on-site implementation. Furthermore, the Changwon Plant mitigates risk factors within the business site and prevents safety incidents by responding to environmental safety reviews (PQ) requested by customers in Korea and abroad.

## Health and Safety Activities – Power & Industrial Systems PG

### Accident-free Movement and Work Suspension System

The Power & Industrial Systems PG operates an accident-free movement and work suspension system to engage in efficient safety management on-site. Accident-free movement is an activity in which each field organization computes and accomplishes a target number of days through voluntary safety management by members. Once the target number of days is achieved, incentives are offered to inspire safety awareness among workers. The work suspension system is a system by which workers are instructed to suspend work when a safety accident occurs, or could possibly occur. If environmental and safety regulations are violated, the system identifies the fundamental cause, and establishes measures to prevent recurrence. In 2021, 87 suspensions were issued, and the Work Suspension Review Committee, supervised by an executive in charge, established recurrence prevention measures to prevent further safety accidents.

### Mitigating the Risk Involved in Handling Heavy Weights

The Power & Industrial Systems PG focuses on improving the risk of serious accidents related to the handling of heavy weights using cranes. Risk factors associated with heavy-weight accidents are identified through an assessment of workers for potential risk, as well as systems for suggesting improvements. By consulting related departments, we establish and improve fundamental measures, such as design improvements to ensure safety. In addition, heavy-weight instruments are comprehensively managed through monthly inspections. Round slings (superheavy-weight instruments) that are difficult to inspect with unaided eyes are reviewed by a specialized external agency to ensure safety.

### Pursuing TFT Activities to Build the Health and Safety Accident System

The Power & Industrial Systems PG pursues TFT activities to restructure health and safety work processes and facilitate the implementation of voluntary health and safety activities by line organizations (field departments). Executives in charge of each organization have been appointed as members of the TFT to build a management system in response to six major serious accidents. In particular, a dedicated health and safety organization has been formed to concentrate capabilities on creating a safe work environment by empowering safety workers, conducting on-site inspections led by management, agilely improving material risk factors through risk assessments, and increasing the number of safety managers.

### Preliminary Safety Review in the Product Design Stage

The Power & Industrial Systems PG reflects health and safety reviews in the design work manual of each division so that safety risk factors can be considered in the product design stage. In addition, workers' physical burdens are being minimized by promoting activities to improve the hand tools used in narrow spaces to assemble products.



Safety inspection by the CEO at external installation sites

#### Other Health and Safety Activities

Conducting Departmental Health and Safety Inspections
<ul style="list-style-type: none"> <li>• Selecting weekly themes for health and safety inspections and conducting inspections autonomously</li> <li>• Identified and mitigated 976 risk factors in 2021</li> <li>• Sharing exemplary cases of autonomous safety inspections with all departments on a monthly basis</li> </ul>
Operating the Labor-Management Health and Safety Council
<ul style="list-style-type: none"> <li>• Operating a Labor-Management Health And Safety Council, in addition to regular meetings of the Occupational Health and Safety Committee</li> <li>• Composed of three representatives each from labor and management, resolving complaints by discussing health and safety agenda on a weekly basis</li> <li>• Resolved 125 complaints in 2021, thereby building trust between labor and management in the field of health and safety</li> </ul>
Strengthening the Safety Management of Internal and External Contractors
<ul style="list-style-type: none"> <li>• Selecting constructors and contractors that have secured certain safety management capabilities through a safety eligibility assessment (12 health and safety items)</li> <li>• Monitoring the safety management level of contractors through regular health and safety assessments twice a year, and preventing safety accidents through focused management of companies that have not yet developed adequate systems for health and safety management</li> </ul>
Activities to Identify and Improve Workplace Risk Factors
<ul style="list-style-type: none"> <li>• Identified and mitigated 644 risk factors in 2021 through risk assessments involving all workers</li> <li>• Derived and mitigated 163 risk factors through safety diagnoses and consulting carried out by a specialized agency</li> <li>• Plans to carry out safety consulting twice a year and continue to identify and mitigate risk factors by expanding the scope of inspections to external installation sites in 2022</li> </ul>

# Health and Safety at Business Sites

## Health and Safety Activities – Construction PG

### On-site Safety Inspection Supervised by the CEO

Hyosung Heavy Industries' Construction PU conducts semiannual safety inspections, supervised by the CEO, at all sites to accomplish its health and safety goals – including 'zero serious accidents'. Inspection results are announced throughout the company to strengthen safety awareness among employees.



Safety inspection by the CEO at construction sites

### Conducting Joint Inspections with a Specialized External Agency

Further, the Construction PU periodically conducts joint inspections by the Health and Safety Team and a specialized external agency for construction safety. Expert consulting helps us to identify new risk factors, learn from exemplary cases and examples from other companies, and establish directions for future processes to ensure competitiveness.

### Conducting On-site Safety Audits

After on-site inspections, scores are aggregated to conduct safety audits on sites scoring in the lowest 30% each quarter. Safety audit results are reported to the CEO, who issues directions regarding corrective actions for each site. The results are announced company-wide to further encourage safety management.

### Conducting Inspections of Construction Machines and Equipment

To prevent accidents, Hyosung Heavy Industries' Construction PU adheres to the standards for carrying in construction machines and equipment, and conducts joint inspections with a specialized external agency before machines or equipment are carried in – as well as during their use. The structural safety and performance of construction machines and equipment are ensured by pre-filtering old or high-risk equipment, and by immediately suspending carry-in or operations when defects are found.

### Publishing Safety Newsletters

In-house safety issues and the status of safety are distributed to all sites every month, encouraging employees to voluntarily take part in safety management. Safety newsletters also share news on accidents and activities concerning the Construction Health and Safety Team.



Safety newsletters

### Hyosung Smart Safety (HSS) System

The Construction PU has established the HSS system as a part of smart safety management. The HSS system reduces unnecessary duties by standardizing on-site work formats, and can monitor all on-site safety activities in real-time. Further, the system includes features such as preliminary risk analysis, intense management of hazardous types of construction work, exercise of work suspension rights, and collection of workers' opinions. It can manage overall safety activities and measure safety performance by site, business partner, and individual.

### Distributing Body Cameras to On-site Health and Safety Managers

To remove blind spots in terms of safety, the Construction PU has implemented body cameras for managers, distributing about 370 body cameras at sites around the country. These body cameras will increase safety alertness amongst workers, prevent unsafe behavior, and help establish on-site safety rules. In addition, exemplary and poor practices recorded using body cameras can be shared throughout the company to enhance the level of safety education.



Distribution of body cameras to on-site managers

### Labor-Management Councils and Worker Opinion Hearings Supervised by the Construction CSO

The Construction CSO participates in on-site labor-management councils to gather opinions from all workers, including business partner employees, and supervises on-site meetings. The labor-management councils meet once every two months at each site. Agile measures are taken to reflect the opinions gathered, and the Construction CSO confirms the results through electronic approval. In 2022, as of May, we received 188 opinions from employees of our business partners and acted on 164 (87%).

### Managing Health and Safety of Business Partners

In light of the increase in occupational health and safety management expenses in the construction industry, our existing method of calculating the safety management expenses of business partners, using a rate between 0.7% and 0.1% of direct construction expenses, will be increased to 1.97% regardless of construction type. In addition, the ratio of health and safety indicators within the performance indicators for business partners has been raised from 15% to 30% to select companies with outstanding safety management. Furthermore, by selecting and rewarding companies based on their safety practices, we strive to improve safety performance and raise the safety management level of our business partners.

# Health and Safety at Business Sites

## Strengthening Health and Safety Systems

### Strengthening Health and Safety Management Systems through the SHE Committee

In response to the Serious Accidents Punishment Act (SAPA), Hyosung Advanced Materials is promoting TFT activities to build health and safety accident systems. We have appointed a CSO and established a Health and Safety Team exclusively responsible for responding to SAPA, as well as restructuring our health and safety management systems. Safety, health, and accident affairs, which were previously managed by the Green Management Committee, were transferred to the SHE Committee – supervised by the CSO – in February 2022. The Committee is held at domestic business sites each month, and the results are reported to the CEO. In the second half of 2022, the scope of management will be expanded to overseas plants. In addition, so that all parts of the company implement the same health and safety system, each PU will conduct health and safety inspections, report the results to the SHE Committee, and make decisions on health and safety management activities. Furthermore, health and safety activities are reported to the Board of Directors at least once a year to facilitate decision-making on major issues.

#### ▶ Main Activities of Safety, Health and Disaster System Establishment TFT



### Expanding the Health and Safety Management System

Hyosung Advanced Materials aims to realize accident-free business sites by internalizing health and safety management systems (ISO45001). In 2021, the Ulsan Plant acquired ISO45001 certification and strengthened the Process Safety Management (PSM) system, the PSM grade of Ulsan improved from M- in 2020 to M+ in 2021. The Jeonju Plant is maintaining PSM Grade S, and plans to acquire ISO45001 certification in the second half of 2022 to strengthen its capacity to prevent serious accidents – as well as reinforce its health and safety management systems. In addition, by conducting regular exchange meetings among business sites, we have prepared a system to manage 12 PSM elements, share the ISO45001 operating manual, prevent process safety accidents, and disseminate exemplary practices.

## Health and Safety Activities

### Top-Grade in Supplier Health and Safety Support Program

Hyosung Advanced Materials' Ulsan Plant supports the health and safety activities of 24 business partners. With the autonomous safety inspection system and safety-first system supervised by business partners, Ulsan Plant allows suppliers to independently identify and improve risks. In 2021, 507 risks were identified and improved. Outstanding business partners are rewarded, and the results are reflected in our evaluation of business partners. Our Ulsan Plant's win-win cooperation program has acquired the highest grade (A+) for two consecutive years from the government. A total of 24 business partners applied for the Risk Assessment Stability Review, conducted by the Korea Occupational Safety and Health Agency, and 22 were selected as excellent companies.

#### ▶ Major Activities by the Health and Safety Accident Systems TFT

Activity	Details	Cycle
Regular Health and Safety Meetings	Sharing technical guidance by external specialists, safety technology, regulations and review of results	Monthly
Joint Health and Safety Inspections	Discovering risk factors through joint on-site patrols to check improvement performance	Weekly
Health and Safety Education	Safety training for representatives and safety personals of suppliers & performance evaluation of supplier safety training	Monthly
Monitoring of health promotion businesses	Operation of injury(i.e musculoskeletal disorders, hearing preservation) prevention programs. Support for health fund that covers obesity, non-smoking, and musculature	Monthly
Health and Safety inspection evaluation	Analyzing non-compliances after safety inspection reflecting them to supplier safety evaluation	Monthly
Monitoring of risk management implementation	Monitoring of risk management, follow-up on improvements to high risk factors as well as final evaluation of the implementations	Semiannual
Regular supplier inspection	Checking suppliers' legal compliance regarding safety & health. Monitoring on safety & health management status	Semiannual
Supplier interview	Interview with the CEO and supervisors of the suppliers regarding safety & health issues	If nece
Evaluation of the Win-Win Cooperation Program	Evaluating risk mitigation performance and involvement in the risk management program	Annual
Program Satisfaction Survey	Enhancing the program satisfaction survey and future points for improvement	Annual

### Safety First Activities

Hyosung Advanced Materials inspects sites, takes safety measures, and conducts education by operating the Safety-First system. In 2021, 301 safety violations were found and improved. Moreover, Hyosung Advanced Materials implemented the Safety-First work rights system in August 2020 to prevent serious accidents at high-risk workplaces. The system was applied to eight tasks in 2021. All employees, including those of business partners, who work at high-risk workplaces can avail the Safety-First work rights in accordance with pre-established criteria. We review and improve the implementation results to help establish a Safety-First culture at all sites.

### Strengthening Health and Safety Inspection Activities

Hyosung Advanced Materials strives to identify and monitor possible risks, and promotes activities to prevent safety accidents. The Daejeon Plant, a small-scale business site, has strengthened its health and safety management systems through the Environmental Safety Team, which engages in health and safety inspections and support activities on a semiannual basis.

Activity	Details of Inspections	Cases Identified	Improvement Rate
Serious Disasters Inspection (Quarterly)	Finding risks of serious accidents and introducing improvements	56 cases	91%
Environemnt and Safety Top Patrol (Semiannual)	Environmental safety inspections by plant managers	232 cases	43%
Them Inspection (Weekly)	Special health and safety inspections on the aramid process	125 cases	97%
Diagnosis of External Organs (Annual)	Inspecting systems and equipment through a specialized agency	137 cases	100%

### Employees' Health Promotion Activities

Hyosung Advanced Materials operates various health promotion programs to improve the health of our employees, as well as the employees of our business partners.

Activity	Details
Health Promotion Programs	<ul style="list-style-type: none"> <li>Program for the prevention of cardiovascular diseases</li> <li>Operation of health funds related to obesity, smoking cessation, and musculoskeletal diseases</li> </ul>
Health Check-up	<ul style="list-style-type: none"> <li>On-site medical &amp; health care center operation</li> </ul>
Management of the Work Environment	<ul style="list-style-type: none"> <li>Program for the management of musculoskeletal diseases</li> <li>Program for the management of work in confined spaces</li> <li>Hearing conservation program</li> </ul>
Activities for the Prevention of Infection	<ul style="list-style-type: none"> <li>Preparation of infection action guidelines and company-wide announcements</li> <li>Real-time notification of COVID-19 situation via social media</li> <li>Contact-free body temperature measurement of persons accessing company buildings</li> <li>Use of remote work methods</li> </ul>

### Safety Culture Building

Hyosung Advanced Materials' Ulsan Plant established the 10 Absolute Safety Rules in March 2021 to strengthen the Safety-First culture. Spot inspections are conducted to check compliance, which is then reflected in evaluations. In addition, the plant hosted a safety campaign and a safety slogan contest in the first half of 2021 to boost safety awareness among employees. On-site employees also fill out a Safety Pledge every April and attach them to personal lockers, thus internalizing the health and safety culture.

# Health and Safety at Business Sites

## Strengthening Health and Safety Systems

### Health and Safety Promotion Systems

Since May 2020, Hyosung Chemical has been operating the monthly EHS Committee, a decision-making body for all on-site EHS matters, under the CEO's supervision. The EHS Committee deliberates on and resolves corporate EHS agenda, supervises the status of work implementation, and manages risks. In 2021, the EHS Committee standardized 9 environmental and safety duties, reported 12 pending issues, executed 7 investments and expenses, and mitigated 12 on-site non-conformities. Hyosung Chemical understands the importance of health and safety at business sites and will continue to carry out health and safety plans in line with our management organization and budget.



#### Current Status of Measures

<b>9 cases</b>	<b>12 cases</b>	<b>7 cases</b>	<b>12 cases</b>
	Completed 9 cases In process 3 cases	Completed 4 cases In process 3 cases	Completed 11 cases In process 1 case

### Restructuring Dedicated Health and Safety Organizations

Hyosung Chemical has reorganized its organizational system to respond effectively to the Serious Accidents Punishment Act, and to make agile decisions on health and safety. Accordingly, the CSO and the Health and Safety Team were appointed directly under the CEO to supervise safety affairs across the entirety of Hyosung Chemical's plants. Existing personnel in charge of environment and safety have been assigned to business divisions to conduct on-site risk prediction activities.

## Health and Safety Activities

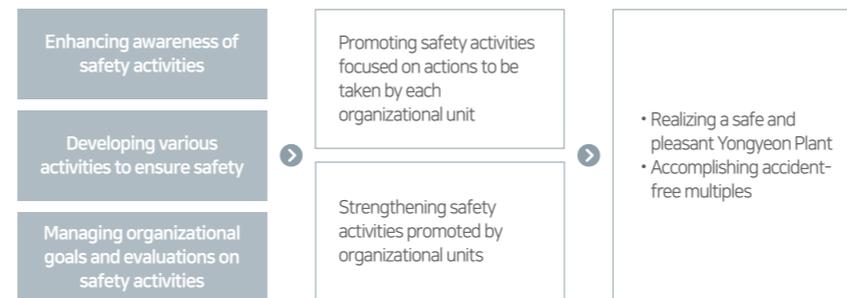
### Promoting Season 2 of the Safe Workplace Campaign

Hyosung Chemical has been operating the Safe Workplace Campaign since May 2020 to prevent safety accidents and raise safety awareness at its business sites. In 2021, Season 2 of the Safe Workplace Campaign was held. During Season 2, PU Plant Managers hosted environmental and safety meetings to strengthen organizational safety activities, and each PU actively promoted activities to reinforce the safety culture. Plants conducted various inspection activities to accomplish three-free<sup>1)</sup> goals, mitigating 10,050 non-conformities in total. Specifically, fire risk factors were identified, and 942 cases were mitigated by inspecting power outlets and heating appliances. By inspecting detectors and chemical containers, 1,074 cases were identified and mitigated to prevent the leakage of chemical substances. Ultrasonography and thickness measurements were also performed to mitigate 8,034 problems related to corrosion, the main cause of aging parts.

1) Three-free: Smoke, odor, discoloration



### Disseminating the Workplace Safety Campaign



### Strengthening Health and Safety at Business Partners' Workplaces

Hyosung Chemical regularly communicates with business partners and conducts workplace inspections to bring the level of health and safety management up to that of our company. In addition, we have been operating the Win-Win Cooperation Program, supervised by the Korea Occupational Safety and Health Agency, since 2016 to improve the health and safety management capabilities of our business partners and strengthen their health and safety responsibilities. In 2021, the program was operated for 15 internal and external companies. Major activities included the sharing of health and safety issues through business partner meetings (monthly), provision of information about health and safety manuals, safety walk-around inspections and joint inspections at the workplaces of our business partners, material and financial support, and quarterly walk-around inspections on health and safety (27 cases in total). Monthly risk assessments were performed to identify risks and introduce improvements (46 cases in total), selecting and awarding excellent companies. In 2022, Hyosung Chemical will strengthen the health and safety capabilities of business partners by expanding joint risk prediction activities and promoting various safety support policies.

<b>Communication</b>	<ul style="list-style-type: none"> <li>Operating councils with business partners (monthly)</li> <li>Conducting conferences with business partners (monthly)</li> </ul>	Sharing risk factors related to plants and providing necessary information
<b>Inspection</b>	<ul style="list-style-type: none"> <li>Joint workplace inspection for in-house business partners (each quarter)</li> </ul>	Improving the safety level at workplaces
<b>Participation in the Win-Win Cooperation Program</b>	<ul style="list-style-type: none"> <li><b>Material support</b> Implementing risk assessments and assistance with training, materials, facilities, and protective equipment</li> <li><b>Financial support</b> Financial support for expenses related to measuring the work environment and purchase of safety-related supplies</li> </ul>	Enhancing business partners' responsibility to adopt health and safety measures

### Conducting Regular Safety Inspection Activities

Hyosung Chemical conducts regular safety inspection activities at various business sites. Each PU performs company-wide safety inspections semiannually, and the Health and Safety Team designates one PU each month to conduct the safety inspections. One person in charge of environment and safety, appointed by each team, conducts on-site safety inspections of the corresponding PU in accordance with the monthly inspection theme defined by the Health and Safety Team. In 2022, we will sign a contract with a firefighting consultant as a means to prevent fire accidents, thereby improving our ability to cope with emergencies through targeted guidance and education. Major activities include firefighting education, fire training, emergency response, first aid measures, fire inspections, and other firefighting skills.

### Measuring the Work Environment

Hyosung Chemical measures the work environment every six months to identify health risks presented by processes that generate harmful substances and noise. Based on the results of our work environment measurements, efforts are made to reduce exposure - by improving equipment and processes - in the event that processes exceed the exposure standard.

# Managing the Supply Chain

## Background

When conglomerates and SMEs pursue maximal short-term profits, the foundation of existence for SMEs can weaken and lead to crises in the corporate ecosystem. It is necessary to form a system of mutual cooperation among companies from the mid- to long-term perspective. The supply chain is becoming increasingly important for companies aiming to secure sustainable global competitiveness, find growth engines, create jobs, and form an economic foundation for an equal society.

## Our approach

Hyosung has established, and manages, a shared growth promotion system for mutual growth with our business partners. In addition, we manage our business partners' risks by evaluating them based on fair and transparent criteria, and by establishing and operating action plans to ensure fair transactions.

## Our Achievement

<b>Strengthening and operating shared growth programs for our business partners</b>	Energy-saving diagnosis and consulting > <b>7</b> companies	Signed shared growth agreements > <b>889</b> companies	Provided ESG education and guidebooks to business partners > <b>10</b> companies
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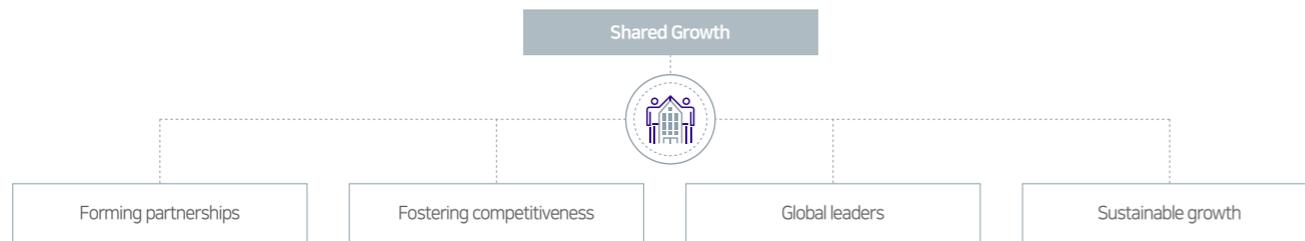
## UN SDGS LINKAGE



## Enhancing Shared Growth

### Shared Growth Promotion System

Based on the awareness that Hyosung and our business partners are bound by a common destiny, we strive to realize a future with a common goal. Hyosung has established a shared growth system based on the belief that the competitiveness of suppliers directly contributes to its own growth.



### Organizational System for Supplier Management

At each of our subsidiaries, the procurement department for each performance unit manages overall its suppliers with consideration for the characteristics of the supply chain. Subsidiaries with many business partners – owing to their industrial characteristics – install and operate a Corporate Partnership Team. This team communicates with business partners to understand their difficulties and suggestions to enable shared growth. Moreover, business partners are allowed to participate in joint research projects with Hyosung R&DB Labs and the Power & Industrial Systems R&D Center, thereby strengthening their technical capabilities and competitiveness.



### Shared Growth Support Programs



# Managing the Supply Chain

## Major Activities for Shared Growth

### Signing Shared Growth Agreements with Outstanding Business Partners

Common

Every year, Hyosung signs shared growth agreements with business partners to create a culture of fair trade, ensure compliance with fair trading laws, and make payments in cash.

Category	Hyosung Corporation	Hyosung TNC Corporation	Hyosung Heavy Industries Corporation	Hyosung Advanced Materials Corporation	Hyosung Chemical Corporation	Total
2019	113	56	639	53	34	895
2020	103	56	579	53	38	829
2021	107	56	636	50	40	889

### Conglomerate-SME Energy saving support project

Common

Hyosung signed a Shared Growth Business Agreement between Conglomerates and SMEs, in cooperation with the Korea Energy Agency, to reduce energy use and GHG emissions and provide energy diagnosis consulting services to business partners. Under this agreement, the consultant diagnose business partners' processes and on-site environments to identify energy usage patterns and GHG reduction factors. Issues and economic feasibility are analyzed, and potential improvements are proposed, with Hyosung providing necessary facility support after a review.

Category	Hyosung Corporation	Hyosung TNC Corporation	Hyosung Heavy Industries Corporation	Hyosung Advanced Materials Corporation	Hyosung Chemical Corporation	Total
Number of participating companies	1	1	3	1	1	7
Energy reduction (toe/year)	25	39	22.8	5.2	30.2	122.2
GHG reduction (tCO <sub>2</sub> )	50.1	78.3	45.8	14.5	60.7	249.4

### Awarding Excellent Business Partners

Common

Hyosung awards excellent business partners with the 'Proud Hyosung-er of the Year' Award, motivating them and helping them to understand the purpose of shared growth. In 2021, COTS Technology (Hyosung Corporation), Korea EPO (Hyosung TNC), and Duckshin Engineering (Hyosung Heavy Industries) were selected for this Award, receiving plaques and KRW 20 million each. In addition, Hyosung Advanced Materials operates a system that rewards outstanding companies by conducting on-site inspections twice a year at each business site, thereby supporting the health and safety management of business partners.

### Support for Energy Reduction Facilities

Hyosung Corporation Hyosung Heavy Industries Corporation Hyosung Advanced Materials Corporation

Hyosung diagnoses business partner sites to identify ways of reducing energy loss or usage, as well as promoting projects that support the swapping of aging/inefficient equipment with high-efficiency replacements. Through these efforts, Hyosung helps business partners reduce energy costs.

Category	Hyosung Corporation	Hyosung Heavy Industries Corporation	Hyosung Advanced Materials Corporation	Total
Number of companies supported	1	3	1	5
Energy reduction expenses (KRW 1,000/year)	655	12,284	1,354	14,293

### Providing Tailored ESG Education and an ESG Guidebook

Hyosung Corporation Hyosung Heavy Industries Corporation Hyosung Advanced Materials Corporation

Hyosung operates a support project that offers professional consulting services to business partners so they may easily integrate ESG measures within their management activities. ESG education covers topics including human rights, ethics, supply chain, environment, safety, and response to climate change. In addition, business partners are provided with customized ESG guidebooks to help them attain the required level of sustainable management, which is continuing to increase. Further, we also operate an incentive system that grants additional points to companies that attempt to build an ESG management system.

Category	Hyosung Corporation	Hyosung Heavy Industries Corporation	Hyosung Advanced Materials Corporation	Total
Number of companies supported	1	5	4	10

### Improving the On-site Working Environment

Hyosung Heavy Industries Corporation

Hyosung Heavy Industries continues to provide resting spaces for business partners' on-site workers to improve their relatively inferior working environments. In 2021, we provided ground cleaning vehicles to minimize scattered dust at construction sites, with a view to preventing respiratory diseases among workers. In addition, masks and hand sanitizers were handed out to about 850 employees of 76 business partners to prevent COVID-19 infections and foster a safe working environment for in-house business partners.

### Supporting Education for Business Partners

Hyosung TNC Corporation Hyosung Heavy Industries Corporation Hyosung Advanced Materials Corporation Hyosung Chemical Corporation

Hyosung TNC conducts regular environmental and safety education for business partners to help them reduce risks and cope with newly strengthened health and safety laws.

In cooperation with specialized external training institutions such as KMAC, Hyosung TNC also conducts on-the-job training appropriate for the characteristics of each business partner. This OJT is intended to enhance business partners' problem-solving capabilities in terms of productivity, quality innovation, waste management, reduced manufacturing costs, and process structure. In 2021, Hyosung Heavy Industries provided education on ethical management, construction quality, environmental and safety management, the Framework Act on Construction Industry, the State Contract Act, and the Subcontracting Act to the CEOs of 42 business partners. Hyosung Advanced Materials regularly offers education on sustainable quality and health and safety management for the benefit of our business partners. The Ulsan Plant participates in the Win-Win Cooperation Program that supports the risk assessment and technology activities of our business partners, guiding them on safety technologies and laws through external experts. In particular, health and safety mentorship services are provided to new business partners, and in-house health and safety managers collaborate periodically with external experts to manage the health and safety affairs of our business partners. As part of the Win-Win Cooperation Program, Hyosung Chemical conducted joint health/safety walk-around inspections, diagnoses, and improvement activities at business partners' workplaces, helping establish accident-free business sites. Moreover, we conducted safety management education to improve the safety management level of our business partners.

### Communication with Business Partners

Hyosung TNC Corporation Hyosung Heavy Industries Corporation Hyosung Advanced Materials Corporation Hyosung Chemical Corporation

In pursuit of shared growth with suppliers, Hyosung attends purchase consultation events or arranges onsite visits to business partners' workplaces. We conduct these meetings to understand their difficulties and listen to their opinions. Business partners can report any violations or unfair requests and transaction activities through online and offline channels, such as the Hotline and Shinmungo system. We continue to communicate with our partners and revise and operate various support programs so that all partners are provided fair opportunities, thereby building a firm basis of trust.

### Supporting Educational Places for Business Partners

Hyosung Heavy Industries Corporation

Hyosung Heavy Industries has opened its training center in Changnyeong to business partners and assists them in holding their own training and workshop programs for employees.



Training Center in Changnyeong

# Managing the Supply Chain

## Key Shared Growth Activities

### Improving the Productivity of Business Partners

Hyosung Corporation, Hyosung Heavy Industries Corporation, Hyosung Chemical Corporation

Hyosung actively participates in government projects for SMEs, such as the Performance-sharing system, Industrial Innovation Movement, Innovative Partnership, and the Facility support, to improve the productivity of our business partners. Among them, the performance-sharing system project has strengthened the technological capabilities of about 30 business partners. The reliability of inspections was enhanced through the introduction of a remote inspection monitoring system using wearable devices. In addition, we have helped to improve productivity and empower business partners by replacing customer inspections with videos and reduced the number of witness inspections. Hyosung Chemical has carried out management diagnoses through the Management Doctor System, conducting activities to increase profits through the reduction of process losses.

### Health and Safety Management Activities and Support for Business Partners

Hyosung TNC Corporation

Hyosung TNC provides various activities and support programs to manage the health and safety of business partners' employees.

1. Annual risk assessment for business partners and derivation of methods to mitigate risk factors
2. Support for education [programs (risk assessment, supervisor, etc.), materials, places]
3. Support for safety service costs at business sites with less than 50 employees
4. Support for health check-up expenses
5. Support for expenses related to work environment measurements, twice a year
6. Support for safety tools at business sites, such as protective safety equipment for all business partners
7. Selecting and awarding excellent companies in each quarter

### Supporting SMEs

Hyosung Advanced Materials Corporation

We participated in the Small Giant Selection Project, hosted by the Ministry of SMEs and Startups, for materials, parts, and equipment. Two business partners received package support from the Korean government for five years and completed product development tests in 2021. In addition, one of our business partners has been selected for the government's SME support project and will develop wet lubricants for tire steel cord production processes over the next two years.

### Strengthening the Safety Sector

Hyosung Advanced Materials Corporation, Hyosung Chemical Corporation

Hyosung Advanced Materials and Hyosung Chemical arrange various activities and support programs to manage the health and safety of business partners.

Hyosung Advanced Materials	<ul style="list-style-type: none"> <li>• Health and safety mentorship for new business partners</li> <li>• Daily safety inspections and guidance for maintenance and repair partners (Safety-First activities)</li> <li>• Conducting annual activities to prevent musculoskeletal diseases among employees of business partners</li> <li>• Awarding excellent companies twice a year based on findings from on-site inspections conducted by the Environmental Safety Team</li> <li>• Win-Win Cooperation Program to support risk assessments and technical activities by business partners (annual)</li> </ul>
Hyosung Chemical	<ul style="list-style-type: none"> <li>• Support for expenses to appoint safety managers</li> <li>• Support for on-site and document inspection expenses by arranging for an external agency to visit business partners' workplaces</li> <li>• Human/Material support for business partners through the annual Win-Win Cooperation Program</li> </ul>

## Compliance with Fair Trade

### Promoting Fair Business Practices

Common

In order to establish a fair business and trade culture together with our 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 covered in our corporate regulations, including making contracts, selection and management of partners, setup and operation of the Internal Deliberation Committee, and written issuance and retention. We have also announced guidelines for prohibiting retaliatory acts, such as unilateral restrictions or suspensions of transactions with suppliers, in order to establish healthy and transparent business relationships with our suppliers and to enable fair partnerships.



### Compliance with Fair Trade and Corporate Social Responsibility

Common

Hyosung takes all measures to comply with the Standard Subcontracting Contract issued by the Fair Trade Commission. The Standard Subcontracting Contract protects the material and intellectual property rights of business partners by stipulating clauses on technology escrow, the guarantee of intellectual property rights, the transfer of ownership, and prohibiting suppliers to be forced to provide technical data.

### Fair Trade Compliance Program

Common

Based on the revised version of the Fair Trade Compliance Program announced in June 2021, Hyosung proposes fair business guidelines for business partners and monitors voluntary compliance management. In addition, we use the checklist of the Preliminary Business Consultation System to reinforce anti-corruption activities.

### Disclosing the Principles of Fair Trade for Business Partners

Common

Hyosung pursues sustainable growth together with suppliers based on citizens' trust. Recognizing that business partners are an important source of our competitiveness, we have established the 'The Code of Conduct for Hyosung Business Partners,' through which we form a transparent and fair business relationship with our partner companies and recommend CSR practices to all suppliers dealing with Hyosung. In addition, by disclosing the principles on our website, we announce our commitment to fulfilling them as a social promise - not just a promise between Hyosung and our partner companies.

### Pre & Post-contract Deliberation System

Hyosung Heavy Industries Corporation

In subcontract transactions with business partners, Hyosung Heavy Industries identifies non-issuance of written contracts, unfair determination of subcontract prices, forced purchases of goods, unfair demands for economic gains, delays in payments, violations of laws related to technical materials, and unfair reductions of subcontract prices as major risks relating to subcontract transactions. Pre-contract and post-contract deliberations are therefore carried out to prevent risks associated with unfair trading, with emphasis on these risk factors. In 2021, 68 pre-contract deliberations and 30 post-contract deliberations were conducted. Based on these deliberations, we prevented legal violations and identified possible violations in advance. In 2021, by preventing risks of unfair transactions, we reduced the number of dispute arbitration requests from business partners to 0.

Category (Unit: Cases)	2018	2019	2020	2021
Pre-contract deliberations	127	63	89	68
Post-contract deliberations	96	104	55	30

# Managing the Supply Chain

## Managing the Risks of Business Partners

### Pledge to Comply with the Code of Conduct for Shared Growth with Business Partners

Common

Hyosung and its business partners sign a pledge to fulfill social responsibilities by actively participating in the Code of Conduct. The Code of Conduct Compliance Pledge was prepared by considering various international standards, such as the Universal Declaration of Human Rights, the 10 UNGC Principles, the Core Conventions of the ILO, and OECD Guidelines. The Pledge specifies four aspects of compliance, including ethical corporate operation with business partners, respect for the human rights of employees, creation of a safe work environment, and responsibility for environmental management.

### Cash Payment for Outstanding Business Partners

Common

Hyosung conducts an annual evaluation of its business partners, in accordance with ISO9001 and its own standards. Based on this evaluation, we select business partners to provide cash payment for goods received within ten days after the tax invoice is closed. We further contribute to improving the cash flow of our business partners by operating incentive systems for outstanding partners, and paid about KRW 804.8 billion in cash in 2021 (increase of 11% compared to 2020).

Category	Hyosung Corporation	Hyosung TNC Corporation	Hyosung Heavy Industries Corporation	Hyosung Advanced Materials Corporation	Hyosung Chemical Corporation	Total
Number of outstanding business partners in 2021	107	56	636	50	40	889
Cash payments (KRW 1million)	24,860	27,246	712,749	19,211	20,750	804,816

### Registering and Evaluating Business Partners

Common

Hyosung is working to establish fair and transparent criteria for the selection of business partners. We clearly announce the application criteria and recommendation requirements on our Shared Growth website, and any interested company can freely apply for registration as a business partner through an e-procurement system. In addition, in order to manage supply chain risks, we conduct registration screening for all new business partners before granting them approval to participate in the bidding process. When selecting new business partners, Hyosung examines and evaluates companies in terms of their financial soundness, sales performance, credit rating, and quality systems.



In addition, Hyosung re-evaluates existing business partners to differentiate their grades in accordance with the evaluation results, and takes follow-up measures where necessary.

**Evaluation Items and Scoring**

Evaluation Item	Management evaluation	Human rights evaluation	Environmental/Safety evaluation
Scoring	50 points	30 points	20 points

**Measures Based on the Evaluation of Suppliers**

- Ⓐ 90 points or above: Preferential right to sign contracts, exemption from re-evaluation in the following year
- Ⓑ 80 points or above: Preferential right to sign contracts
- Ⓒ 70 points or above: Maintenance of transactions
- Ⓓ 60 points or above: Warning and guidance, special screening within 3 months
- Ⓔ Below 60 points: Discontinuation of transactions

### Strengthening the Evaluation of Business Partners

Hyosung TNC Corporation | Hyosung Heavy Industries Corporation | Hyosung Advanced Materials Corporation | Hyosung Chemical Corporation

Hyosung TNC uses traditional standards such as quality, delivery, price, and management performance as criteria for evaluating business partners at the time of registration, as well as ethical management outcomes in terms of the environment, safety, legal requirements, human rights, and labor issues. The same criteria are also applied to regular evaluations of business partners, and the results are reflected in the review process for contract renewals. In 2021, 14 companies that met all requirements were newly registered, and we have formed a stable relationship with these partners.

Aiming to achieve stable management of the supply chain, Hyosung Heavy Industries conducts evaluations across three major areas when registering business partners: management, production, and quality. In particular, the Construction PU carries out two evaluations every year on business partners that have participated in construction projects lasting for more than a month. Key evaluation items include CSR risks in areas such as the environment, health/safety, and quality/delivery. Outstanding business partners are provided with incentives, such as an opportunity to participate in bidding, in accordance with the results of the evaluation. We manage supply chain risks thoroughly by excluding companies that fail to meet the qualifications.

In addition, when signing a new contract with a business partner, we visit the partner to carry out due diligence. In 2022, with the Serious Accidents Punishment Act coming into effect, we will strengthen the evaluation of health and safety items and add ESG scores when registering new business partners. Existing business partners will be required to undergo annual performance evaluations to prove their construction, quality, safety, and quotation capabilities. Hyosung Advanced Materials performs supplier evaluation for business partners in accordance with the annual audit plan. Annual audits are carried out on key suppliers of raw and subsidiary materials based on international standards, such as IATF 16949 and ISO14001, to evaluate their quality, price, delivery, management, and environmental performance. Moreover, in 2021, supplier evaluation was revised for the 8th revision by adding 'Energy Reduction Awareness Education and Reduction Activities' to the list of evaluation items to strengthen the management of social and environmental risks, as well as by expanding the scope of application to all business divisions. We evaluated all Korean business partners subject to evaluation in 2021.

Hyosung Chemical standardized the purchase order for supply chain ESG management by inserting the ESG management compliance cooperation agreement in the existing purchase order in Korean and English. Further, the same standards have been applied to regular evaluations of business partners, and the evaluation results are reflected in reviews for contract renewal.

### Implementing the Raw Material price indexation System

Hyosung Heavy Industries Corporation

Hyosung Heavy Industries enforces a price indexation system in line with fluctuations in material prices and monthly exchange rates for copper, aluminum, iron, and wood. This system manages the price risks faced by business partners due to changing raw material prices. Further, Hyosung Heavy Industries has decided to apply this price indexation system to 14 items for which it had previously signed contracts at fixed prices. For 13 items to which the price indexation system was previously applied, the criteria for the price indexation system were changed so that practical effects could be generated for business partners.

### Supply Continuity Emergency Scenarios and Response Manual

Hyosung TNC Corporation | Hyosung Advanced Materials Corporation | Hyosung Chemical Corporation

Hyosung TNC, Hyosung Advanced Materials, and Hyosung Chemical have developed scenario training and response manuals to systematically respond to supply emergencies related to all products supplied to customers. Examples of such emergencies include labor shortages caused by strikes, transportation accidents, environmental accidents, and cyber-attacks. Simulated training was carried out based on the established scenarios to identify damage status, scale, cause, and restoration and relief measures, so that the concerned teams can derive problems and improvement methods for each response stage. In addition, we are verifying the effectiveness of our response through such training simulations.

# Customer Satisfaction and Product Stewardship

## UN SDGs LINKAGE



### Background

Practicing customer-centered management involves not only collecting and responding to customer opinions, but also proactively identifying and resolving customers' problems and further continuing to reflect the feedback in business management. To this end, it is necessary to internalize a series of processes to derive improvements by collecting and analyzing customer voices throughout the entire business – not only domestically in Korea, but also abroad.

### Our approach

Hyosung carries out VOC activities based on the 4A+1A process (explained below). This process improves our ability to understand what customers want, or 'real VOC', and generates results by devising strategies to gain competitive advantages. We create practical outcomes by systematically managing the progress of strategy execution. Moreover, we analyze the factors affecting our outcomes and use the results to guide subsequent activities, implementing VOC activities for continued progress. Hyosung conducts VOC activities by defining the eradication of quality problems, the identification of new businesses, and the transition to markets with high growth potential as major strategic directions.

### Our Achievement

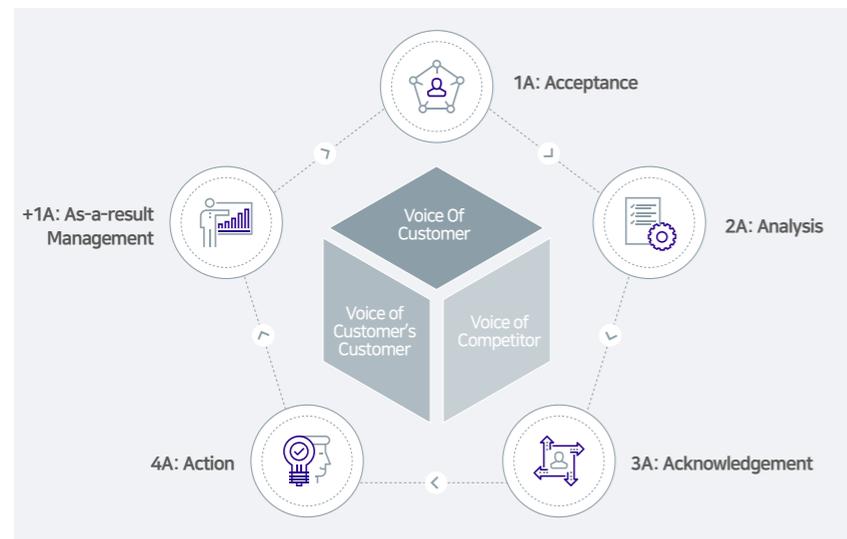
<b>Hyosung TNC Corporation</b> Spandex, nylon, polyester	Maintained GRS certification	<b>Hyosung Heavy Industries Corporation</b> Extra-high-voltage transformers, breakers, STATCOM	Acquired KOLAS certification	<b>Hyosung Advanced Materials Corporation</b> Quality management certification rate for global business sites	100%	<b>Hyosung Chemical Corporation</b> EcoVadis sustainable management evaluation	Silver Medal Grade achieved
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## Strengthening Customer-centered Management

### C-Cube Execution System

In 2019, Hyosung introduced C-Cube activities for all employees to collect the voices of customers and strengthen customer-centered management. C-Cube activities are aimed at collecting information on Voice of Customer (VOC), Voice of Customer's Customer (VOCC), and Voice of Competitor (VOCO). By implementing the 4A+1A process, the entire company can move organically and produce outcomes like a single merchant. In 2021, Hyosung regularly conducted activities to analyze the success and failure

#### 4A+1A Process



factors of measures taken in response to VOC, and to share the results of these analyses. In addition, we focused on executing VOCC and VOCO activities by inducing various divisions, including sales, plants, labs, and procurement, to communicate and collaborate with one another. Furthermore, each PU selected 'primary VOC tasks' and summarized them as a list to manage the progress and performance of each task on a regular basis. The outcomes of each task are expressed quantitatively to measure the performance of VOC activities, facilitating practical results with VOC activities – beyond simple improvements to the way of working. Hyosung has also introduced measures to enhance performance. In 2022, we will concentrate on exploring new tasks to supplement the 4A+1A process and enhance brand value by understanding market trends in depth and responding to eco-friendly trends for future growth.

## C-Cube Activities

### Strengthening the Global C-Cube System

#### Participation in Intertextile Shanghai 2021

To communicate with global customers, Hyosung TNC participated in 'Intertextile Shanghai 2021,' a three-day event held in China from October 9, 2021. Intertextile Shanghai is the world's largest annual textile exposition, with the participation of over 4,000 companies from about 30 countries. Hyosung TNC presented comfortable activewear to be worn at home, outdoor looks that are gaining popularity, and highly functional yarns that are excellent for activities. Further, Hyosung TNC actively promotes C-Cube activities overseas.

Hyosung TNC Corporation

### Finding and Entering New Markets

Hyosung Heavy Industries Corporation

Hyosung Heavy Industries actively pioneers new overseas markets by listening to the real VOC of clients. By collaborating with local companies, we identify the status of markets and competition and seek opportunities for entry into new markets. In 2021, through our Moscow entity, we identified customers' needs for Russian nuclear power plant extension plans and supply structures in various countries, including India, the Republic of Türkiye, Hungary, Egypt, Bangladesh, and Russia. Based on our strengths, Hyosung Heavy Industries has received orders – for motors used in nuclear power projects – in the Republic of Türkiye and Bangladesh.

### Reflecting the Eco-friendly Needs of Customers

#### Providing Eco-friendly Solutions

Hyosung Advanced Materials Corporation

Hyosung Advanced Materials is expanding the use of polyester yarns manufactured using ethanol derived from sugarcane, in response to clients' inquiries about the possible reduction of GHG emissions. In addition, we have expanded Carbon Labeling certifications, which had been limited to tirecord, to all business areas. GHG emissions are calculated proactively for each product before they undergo third-party verification.

#### Supplying Optimal Designs

Hyosung Chemical Corporation

Hyosung Chemical designs products that are optimized for customers' facility conditions to increase their production efficiency, while endeavoring to enhance customer value through the reduction of defect rates and minimizing changes in conditions. In addition, as restrictions on the use of environmentally regulated substances are being strengthened in response to eco-friendly measures, Hyosung Chemical has been supplying clients with materials that can replace these controlled substances.

# Customer Satisfaction and Product Stewardship

## Communication with Customers

Hyosung TNC Corporation

### Contact-free Communication to Overcome the COVID-19 Crisis

As people now have fewer chances to meet in-person due to the COVID-19 pandemic, Hyosung TNC has expanded video call counseling services to maintain the frequency of communication. Hyosung TNC also promotes development, sales, and marketing activities to maintain and increase sales. In particular, we constantly advertise our products to maintain communications with existing and new customers. As an example, a local marketer within the Global Marketing Team held a small-scale exhibition in New York, the leading city for denim fashion.

### Participating in Overseas Exhibitions

**ISPO Munich 2021** - In January 2021, we participated in ISPO, the world's best outdoor sportswear exhibition, which was held online due to COVID-19. We were acknowledged as a reliable and sustainable yarn maker by leading companies in the luxury, outdoor, and sports industries. Moreover, we received offers from many brands, including Burberry and Coach, for strategic partnerships to develop eco-friendly recycled products.

**2021 Summer Outdoor Exhibition in Denver, U.S.** - At the Denver Exhibition in June 2021, we received offers from many outdoor clothing and backpack brands, including Osprey, to jointly promote eco-friendly recycled products. By conducting such public relations activities, we were able to successfully increase our sales volume.

**2021 Dusseldorf International Trade Fair in Germany (A+A)** - In November 2021, we participated in the A+A Dusseldorf International Trade Fair in Germany. We were able to increase our sales in the work clothes category by developing high strength recycled yarns with Elis, the EU's largest work clothes rental brand.

**2021 FFF Portland** - In November, we participated in the Functional Fabric Fair held in Portland, U.S., where Hyosung TNC presented its functional fiber products to distinguished American sports brands.

### Participation in Korean Exhibitions

Hyosung TNC participated in the 2021 Preview In Seoul (PIS) event, held at Seoul COEX for three days from September 1, 2021. During this event, Hyosung TNC exhibited many products developed in collaboration with fashion brands using regen, our eco-friendly recycled fiber product. Through the exhibition, we were able to increase our contact points with the young generation, who place importance on eco-friendly value consumption and unusual experiences. Hyosung TNC presented the regen Jeju Fleece Jacket, made using waste PET bottles collected in Jeju, in cooperation with The North Face. Hyosung TNC also worked with National Geographic, Covernat, and PLEATSMAMA by collaborating on t-shirts and bags made of regen Seoul to emphasize diversity.

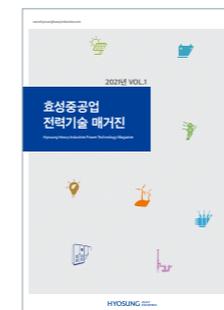
Hyosung TNC Corporation

In addition, Hyosung TNC employees who welcome visitors wear the 'Korean Hanbok for Earth' uniform designed in collaboration with LEESLE, a modern Korean dress brand. By concurrently showcasing eco-friendly values and traditional Korean lifestyle, Hyosung TNC informs customers of its roles as an eco-friendly company.

Hyosung Heavy Industries Corporation

### Publishing the Power Technology Magazine

Hyosung Heavy Industries publishes a technology magazine to share global trends and activities related to power technologies. The magazine introduces technologies and products that can pique customers' interests by sharing information from their perspective. The first issue was published in March 2021, and the second issue in March 2022. The Power Technology Magazine contributes to achieving profitability in the Power Systems division by improving our corporate image and strengthening our business capabilities.



### Contact-free Sales Activities

In view of the prolongation of the COVID-19 pandemic, Hyosung Heavy Industries has secured contact points with customers through contact-free sales activities, such as webinars and online meetings. In 2021, we introduced eco-friendly technologies to diverse customers around the world, in countries such as Chile, Finland, and the Middle East. By examining the specific needs of each client, we prepared opportunities to enter these markets and attract new customers.

### Securing Multiple Channels to Communicate with Customers

Hyosung Heavy Industries leverages various communication channels to reinforce its customer communication system. Regional defect repair centers and service task forces are divided into two regions - the Capital Area and Gyeongsang Region. Contractor management centers are composed of the Gangnam Center and Daegu Center. In addition, Hyosung Heavy Industries runs a YouTube channel called 'Harrington Tube' for ongoing communication.



Hyosung Advanced Materials Corporation

### Online Communication Channel

In view of the COVID-19 situation, Hyosung Advanced Materials has turned online meetings and web seminars, which commenced in 2020, into regular communication channels. In 2021, 5,624 VOCs were received in this regard. Thanks to the ease and low cost of hosting online meetings, we were able to shorten the cycle of customer meetings, which used to be held quarterly or semiannually, to once a month. Due to this change in communication channels, the number of VOCs increased sharply by 73%, from 3,249 cases in 2020 to 5,624 cases in 2021. Besides identifying customers' needs, we were able to share detailed information on progress.

### Providing Solutions through Professional & Specialized Manpower

Based on its understanding of products and tires as an industry leader, Hyosung Advanced Materials regularly promotes technical exchange meetings with local clients in Asia to share industrial and R&D trends. In particular, tailored solutions are provided to increase the utility of our products and enhance customer satisfaction. We have also established the Technical Marketing (TM) Team, composed of members who have experience in sales, production lines, and R&D. The TM Team specializes in introducing the performance of new products and resolving issues in the approval process by conducting technical meetings with clients' R&D departments. In 2021, we formed a new TM organization for the aramid and carbon fiber business divisions.

### Resuming Participation in Exhibitions

Though participation was limited in the second half of 2021, we have resumed participation in industrial exhibitions focused on the carbon fiber and aramid businesses. In October, we participated in Milipol Paris 2021 - held in Paris, France - and CAMX 2021, which was held in the United States. In November, we participated in JEC Korea 2021 to communicate directly with our customers.



# Customer Satisfaction and Product Stewardship

## Communication with Customers

Hyosung Advanced Materials Corporation

### Publishing Monthly Newsletters

In addition to online meetings, we publish monthly newsletters as a new channel for customer communication. Monthly newsletters have been published since September 2020 to deliver market information, including the operating status of our company, and to introduce new products, raw material prices, and logistics situations.

By publishing these newsletters, we have been able to communicate regularly with more customers than ever before. When Vietnam experienced a lockdown due to COVID-19 in the third quarter of 2021, we secured trust in terms of our supply stability by using our newsletters to transparently disclose the vaccination status and COVID-19 response system of our Vietnam Plant.

In addition, we have been able to attract customers' attention on new products by introducing the merits of using these products, leading to actual technical meetings. We were also able to broaden our client scope by sharing information about the positive effects of high-strength steel cords, eco-friendly products, and Ultra-High-Performance (UHP) PET.



Hyosung Chemical Corporation

### Distributing a Guidebook and Introducing the Online Order System

Hyosung Chemical's customers demand inspections to determine whether materials exhibit the desired performance when processed into products. Accordingly, Hyosung Chemical has prepared a Technical Guidebook that explains the data demanded by customers, and is distributing the guidebook through its website. An online order system has also been implemented, allowing customers to order products easily.

PIPE APPLICATIONS					MEDICAL APPLICATIONS				
Property	Modulus (GPa)	Tensile Strength (MPa)	Elongation at Break (%)	Applications	Property	Modulus (GPa)	Tensile Strength (MPa)	Elongation at Break (%)	Applications
K200P	0.20	840	N/8 / 2.5	Hot and cold water supply pipe, Hydrogen pipe	H200A	2	800	12	Hi-Bath (BMS), Prostheses
K300P-3002 (Eco-Cord)	0.20	840	N/8 / 2.5	Hot and cold water supply pipe, Hydrogen pipe	K300	7	1000	5.0	Hi-Bath (BMS), Prostheses, etc.
K300P-K300N (GF-PP)	0.3	2,300	18 / 5.5	Hot and cold water supply pipe, Hydrogen pipe	J800S	20	2,200	3.0	Disposable syringe (B&B, Gac, Purgur)
K300P-K40N (GF-PP)	0.3	4,400	17 / 7.5	Hot and cold water supply pipe, Hydrogen pipe	J804	20	1,500	3.5	Disposable syringe (B&B, Gac, Purgur)
H230P	0.20	1,300	N/8 / 3.0	Seepage-proof, Drainage pipe	K200G	20	1,500	6.5	Disposable syringe
H230P	0.3	1,500	N/8 / 3.0	Seepage-proof, Drainage pipe					
H230PA	0.3	1,500	N/8 / 3.0	Seepage-proof, Drainage pipe	SMALL ELECTRIC APPLIANCES				
H240TC	0.5	1,300	N/8 / 4.5	Compressed coolant pipes	H200SL	0.5	1,500	4.0 / 1	Coffee maker, Steam iron, Toaster, etc.
					H200SL	13	1,800	3.5 / 1	Coffee maker, Toaster, Toaster oven, etc.
					J800L	20	1,800	3.3 / 1	Coffee maker, Toaster, Toaster oven, etc.

### Participation in Online and Offline Exhibitions

#### Hosting an Online Web Exhibition

As COVID-19 restricted travel between countries, Hyosung Chemical hosted a web exhibition to overcome spatial restrictions. The web exhibition was an opportunity to find new customers and expand the market for specialized products. We communicated through live video conferences and listened to the voices of hundreds of customers.

#### Participation in Overseas Exhibitions

Hyosung Chemical introduced its products and attracted new customers through attendance at ChinaPlas 2022, one of the three major global plastics exhibitions (and Asia's largest) where about 3,400 companies participate. We also organized local seminars in India.

## Quality Control to Improve Customer Values

Hyosung TNC Corporation

### Certification of Customer Satisfaction

Hyosung TNC has acquired and maintains Global Recycle Standard (GRS) certification for its recycled spandex (Creora regen), nylon (Mipan regen), and polyester (regen) products. Life Cycle Assessments (LCA) have been carried out for two kinds of spandex (Bio Based Spandex, regen Span) and recycled polyester.

#### Comparison of Life Cycle Carbon Dioxide Emissions



In addition, our polyester material made of recycled marine plastics became the first in Korea to acquire the Ocean Bound Plastic (OBP) certification. We have also annually renewed our OEKO-TEX® Standard 100 certification, an eco-friendly certification issued by the International Association for Research and Testing in the Field of Textile and Leather Ecology, to continually ensure product safety.

### Efforts to Improve Quality

Hyosung TNC standardizes and operates production conditions to manufacture products of stable quality, and has acquired an ISO9001 quality management certification to enhance capabilities regarding quality. When developing new products for customers, we explain the functions of each product and offer test samples. Technical assistance is provided so that customers can better take advantage of the functions of our products. After development, we inform customers of any precautions to be taken, and products are released from plants only after confirming their quality or carrying out suitable tests using facilities that are the same as, or similar to, customers' facilities. After selling, we continually monitor the quality of our products to prevent any inconveniences.

<b>Customer Counseling</b> We recommend products optimized for our customer's needs, with consideration for the functions and characteristics of our products in the customer's product development stage.	<b>Sample Release</b> We provide samples to verify product conformity with the customer's intended purpose and suggest optimal products where required.	<b>Customer Test</b> When testing our products, we make sure to verify their conformity with the customer's specifications and requirements.	<b>Regular Sale</b> Quality monitoring of customers' patterns and experiences using the product.
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Case

Vietnam, a country where Hyosung Advanced Materials maintains a production plant, was locked down after the outbreak of COVID-19. During this time, many companies discontinued plant operations. Aware that customers had become uneasy about supply, Hyosung Advanced Materials shared its efforts through regular newsletters. We introduced support policies to increase the sustainability of plant operations and encourage employee vaccinations. Accordingly, customers were able to understand our efforts to maintain the health and safety of our employees, as well as supply chain stability. By transparently sharing information, customers gained trust in our company.

# Customer Satisfaction and Product Stewardship

## Quality Control to Improve Customer Values

Hyosung Heavy Industries Corporation

### Obtaining KOLAS Accreditation

Hyosung Heavy Industries continuously participate in domestic and international programs to improve the accuracy and reliability of our power equipment testing. Through such programs, we are able to ensure the quality and reliability of the results of testing carried out by Hyosung Heavy Industries, thus fulfilling customer needs.

In addition, we participated in the KOLAS\* Accredited Testing Institute scheme in 2021, and our Transformer and Gas Insulated Switchgear test labs were recognized as accredited testing institute in April. Our STATCOM laboratory was also accredited in September. Hyosung Heavy Industries has international-level laboratory and testing technology capabilities proven by KOLAS accreditation. As a result, the official test report issued by Hyosung Heavy Industries is mutually recognized by ILAC member countries and has external public credibility.

In the future, Hyosung Heavy Industries will continue to improve our quality system and technical capabilities by actively participating in related programs in order to maintain our qualification as an internationally accredited testing institute. Taking advantage of this opportunity, we will grow into a professional institute that provides new value to our customers.

\*KOLAS Accredited Testing Institute scheme: The scheme enable an evaluator with professional qualifications of the KOLAS, which complies with laws or international standards, to evaluate the testing institute's quality system and technical capability

### Quality Inspection in Each Construction Stage and Review of Design Documents

Hyosung Heavy Industries' Construction PU divides quality and non-regular inspections into eight stages, corresponding to stages of construction, to meet the increasing expectations of occupants. The design document review service, which inspects commencement documents and model houses upon commencement of construction work, as well as comparing the design documents and construction status upon completion, will be expanded to all construction sites.

#### Eight Stages of Quality Inspection



Hyosung Advanced Materials Corporation

### Promoting Zero Quality Issues

Hyosung Advanced Materials promotes systematic quality management in pursuit of "Zero Fatalities (provision of solutions for the safety and convenience of users)," which is one of our four sustainability philosophies & principles. The quality management system was built to supply stable products with zero quality issues to our customers. In addition, Hyosung Advanced Materials educates employees on fostering a quality mindset, and manages quality risks by monitoring quality throughout the supply chain – including business partners. In particular, we have established a quality assurance system for half-finished products, mixed materials, and finished products through statistical quality management and strengthened reliability tests.

### Quality Control of Products to Realize Optimal Performance

Industrial materials must accurately demonstrate the performance demanded by customers. We reflect an analysis of market characteristics in the development planning stage and develop products optimized for needs by identifying the characteristics required in each stage, from the manifestation of product characteristics to the development of finished products. For new entries, we acquire international standard certifications for quality management to secure customers' trust through product certification and preliminary quality control. The Jeonju Plant, which produces carbon fiber, acquired AS9100D – a global quality certification for aviation and defense – for the first time in June 2021, preparing the foundation for expanding the use of TANSOME®.

### Fostering Automotive Product Safety & Conformity Personnel

Hyosung Advanced Materials has acquired the PSCR\* license to ensure the capabilities of personnel who manage the safety and conformity of automotive products, and to facilitate understanding of the guidelines and tools for product integrity and non-conformity within the product life cycle. PSCRs perform quality management by securing the capabilities of product safety officers at German OEMs, and by using guidelines and tools to check for product integrity and non-conformity across the product life cycle.

\*Product Safety & Conformity Representative (PSCR): Product safety and conformity representatives within the automotive industry

Hyosung Chemical Corporation

### EU REACH, FDA, RoHS Certifications in Possession

Hyosung Chemical holds various chemical safety certifications, including the US FDA (2004), EU RoHS (2005), and REACH (EU: 2010; Republic of Türkiye: 2020; UK: 2021). Based on these certifications, we have built a system for managing harmful chemical substances and obtained confirmation that such substances are controlled at or below the prescribed level.

### Acquiring Eco-friendly Activity Certification

Hyosung Chemical ceaselessly strives to develop sustainable products to fulfill its social and environmental responsibilities. To this end, we have acquired the Recycled Claim Standard (RCS) certification for using recycled raw materials.

### Silver Grade for Sustainable Management

In 2021, Hyosung Chemical acquired Silver in the sustainable management evaluation by EcoVadis, an ESG evaluation agency. This is in line with the latest trend that stresses socially responsible supply chain management in the chemical film industry, especially by clients in developed countries. By acquiring a top sustainable management grade from a global evaluation agency, Hyosung Chemical has established the foundation for expanding its film product markets in North America and Europe.

### FSSC 22000 Certification

FSSC 22000 is an international standard, implemented by the Global Food Safety Initiative (GFSI), that reviews and certifies about 30 items related to sanitation and safety – including management responsibility, resource management, and product safety. Hyosung acquired FSSC 22000 in 2021. We produce safe and sanitary food packing materials to meet the needs of global food companies in compliance with food safety management systems.



### IATF16949 Certification

Hyosung Chemical's Polyketone product has acquired IATF 16949 certification to cater to the certification requirements of automobile manufacturers. By building a system suitable for the global automotive industry, we have prepared the foundations to enhance customer satisfaction and ensure reliability.



# Customer Satisfaction and Product Stewardship

## Managing Competencies by Reflecting Customer Needs and Industrial Trends

Hyosung Advanced Materials Corporation

### Expanding the Carbon Labeling Certification

Since the end of 2020, Hyosung Advanced Materials has received a large number of requests from customers throughout the sustainable management process. In 2021, major global customers demanded that we establish emission reduction targets at our business sites, as well as emissions data and reduction plans for each product, and Science Based Targets (SBT). Accordingly, Hyosung Advanced Materials' Sustainability Steering Committee, which was convened in the first half of 2021, resolved to expand our carbon labeling certification – which had been limited to three tirecord products – to the major products of all business departments. We will actively respond to climate change and build a system of sustainable consumption and production by accurately and transparently disclosing GHG emissions information for our products, reflecting customer needs and trends in the mobility industry. Up to October 2022, 11 domestic and overseas business sites will promote carbon labeling certification for 24 products, 5 of which have already acquired certification.

#### ➤ Status of Carbon Labeling Certification (as of June 2022)

Certification Complete	Ulsan	Tirecord (PET, Nylon, Lyocell), Aramid yarn
	Jeonju	Carbon fiber
	Vietnam	Tirecord (PET, Nylon) Steel Cord Bead Wire
	Qingdao	Steel Cord
To be Acquired in 2022	Anyang	Car mat (PET, Nylon, Bio-PET)
	Vietnam	Industrial yarn (PET, Nylon, Bio-PET, PET dope dyed)
	Qingdao	Car mat (PET, Nylon)
	Jiaxing	Industrial yarn (PET, Bio-PET)
	Decatur	Cat mat (PET, Nylon)
	Romania	Air bag (PET OPW, NY Flat Fabric)
	Mexico	Air bag (PET OPW, NY Flat Fabric)
Changshu	Air bag (PET OPW, NY Flat Fabric)	

## Developing Products that Reflect Customer Needs

Hyosung TNC Corporation

### Launching the regen Brand Lineup Reflecting the Needs of Local Governments

Hyosung TNC has signed an MOU with Jeju Province and Seoul (Gangnam-gu, Geumcheon-gu, Yeongdeungpo-gu) to collect waste PET bottles within these regions and launch regen Jeju and regen Seoul. PLEATSMAMA, an eco-friendly fashion start-up and partner of Hyosung TNC, is using these brands to make popular fashion items.

### Developing Products and Technologies for the Marine Environment by Collecting Marine Debris

Hyosung TNC collaborated with the Yeosu Port Authority to launch the 'regen ocean' product, which is made by recycling transparent PET bottles used by ships that enter and leave ports to resolve the problems associated with plastic garbage – which accounts for over 80% of all marine debris. 'regen ocean' is used by various fashion brands to make clothes and bags, and became the first Korean brand to acquire the Ocean Bound Plastic (OBP) certification – granted by the Control Union in the Netherlands. In addition, Hyosung TNC is conducting a project to collect waste fishing nets and make recycled nylon, in collaboration with Busan and South Jeolla Province. We will continue to contribute to the sustainability of the marine environment in various ways.

Hyosung Heavy Industries Corporation

### Entering the North American Market for Large Capacity Breakers

In 2021, Hyosung Heavy Industries identified the need to increase the capacity of breakers in the face of rising urbanization and power usage, as well as customer complaints reported by existing suppliers. Hyosung Heavy Industries has successfully received orders for large-capacity breakers in the United States, a market that was previously dominated by European and Japanese companies.

### Successful Suggestion of an Underground Substation Solution in Singapore

Hyosung Heavy Industries conducted research on reducing breaker oscillations and based on Singapore's underground infrastructure policy, obtained the highest score for the technical aspects of its 230kV and 66kV breakers for underground substations. Accordingly, despite a disadvantageous bidding price compared to our competitors, Hyosung Heavy Industries was selected for the demonstration project in 2021.

Hyosung Heavy Industries Corporation

### Developing Eco-friendly Products and Promoting Market Entry

Hyosung Heavy Industries will continue to develop eco-friendly breakers and electronic products. We are also planning to introduce general transformer products to the renewable energy market (offshore wind power market).

Hyosung Advanced Materials Corporation

### Developing Products Reflecting Eco-friendly Needs

In addition to the demand for high-strength products suitable for the trend towards lightweight materials in the automotive industry, the need for materials for eco-friendly vehicles, such as hydrogen and electric cars, has recently been increasing. Accordingly, Hyosung Advanced Materials has launched recycled PET and Bio-PET products, including tirecord, seat belts, and automobile carpets. In addition, we are in the process of acquiring eco-friendly certifications at business sites in Korea and overseas. In 2022, we will be the first company in Korea to acquire the Environmental Product Declaration (EPD) certification, which will quantify the overall environmental impact of our commercial carpet products.

Hyosung Chemical Corporation

### Developing Products that Reflect Global Trends

In response to the increasing demand for medical products amid the COVID-19 pandemic, Hyosung Chemical has developed eco-friendly products that are not only certified for ordinary sterilization methods, but also those that are certified for gamma sterilization. Further, we have launched highly transparent medical PP materials applicable to different sterilization methods.

Moreover, Hyosung Chemical has jointly developed highly transparent, random PP products with subsidiary material suppliers, in line with the global trend of eco-friendly materials and energy reduction. We are continually developing highly transparent, random PP products with UL energy certification, including food containers, cabinets, and bottles, for various customers.

We understand the problems associated with the presence of formaldehyde in existing cosmetics bottles that use POM materials. In response to this issue, Hyosung Chemical is replacing such materials with Poketone, an eco-friendly material that has acquired FDA approval and various other certifications of stability.

# Corporate Social Responsibility

## Background

In contemporary society, companies are called upon to fulfill various responsibilities beyond the traditional roles of production and employment, resolving various social problems as an active member of society. Accordingly, it has become important for companies to fulfill their social responsibilities and seek sustainable growth by gaining legitimacy and fostering a positive reputation.

## Our approach

Hyosung carries out social contribution activities based on our vision of being ‘a company that empowers beneficiaries to pioneer their future through education and sharing.’ A council of experts identifies community needs, listens to stakeholder views, and establishes mid- to long-term strategies in collaboration with NGOs and specialized agencies. Instead of providing one-time support, Hyosung aims to create a society where beneficiaries can become self-reliant. We also continue to work on achieving mutual benefit for the company and local communities by enhancing social contribution activities that are related to our business.

## Our Achievement



## UN SDGs LINKAGE



## Corporate Social Responsibility System

### CSR Implementation and Performance Measurement

Under the social contribution slogan, ‘We will stand with you through sharing’, Hyosung is carrying out CSR activities across three focus areas: support for vulnerable groups, sponsorship of cultural and artistic activities, and support for patriots and veterans. Hyosung evaluates social contribution activities through a CSR performance measurement process designed by experts to promote activities that are necessary for sustainability – such as those defined by the UN SDGs. We enhance the effectiveness of our CSR activities by conducting internal performance measurements, sharing the results with stakeholders, and identifying proper improvements. In 2022, we are practicing ESG management and promoting our climate change response through CSR activities using eco-friendly products.

### Recognition for CSR in the Local Community

Since 2019, Hyosung’s CSR activities have been officially recognized for three consecutive years by ‘CSR in the Community,’ which is jointly run by the Ministry of Health and Welfare and the Korea Social Welfare Council. The ‘CSR in the Community’ program recognizes and rewards companies with outstanding CSR activities in local communities.

Company name	Activities
Hyosung Corporation	Volunteer work by employees and sponsorship of the Janggunbong Daycare Center
Hyosung TNC Corporation	Support for the rehabilitation treatment of disabled children and their siblings
Hyosung Heavy Industries Corporation	Support for a project to restore the interior of Huijeongdang at Changdeokgung Palace
Hyosung Advanced Materials Corporation	Volunteer work by employees and sponsorship for Youngnak Aenea’s Home
Hyosung Chemical Corporation	Support for disabled artists at Seoul Art Space Jamsil
Hyosung TNC Corporation by the Ulsan Plant	One Company, One School (learning support for Jangseongpo Elementary School) and One Company, One Village (Junggosan Village) by the Ulsan Plant
Hyosung Advanced Materials Corporation by the Ulsan Plant	One Company, One School (learning support for Jangseongpo Elementary School) and One Company, One Village (Junggosan Village) by the Ulsan Plant
Hyosung Chemical Corporation by the Yongyeon Plant	Love Bakery volunteer work by the Yongyeon Plant

## Supporting Vulnerable Groups in Korea and Overseas

### Supporting the Independence of Single Mothers in Vietnam

In 2021, Hyosung supported 110 of the poorest, low-income single mother households in Thang Binh District, Quang Nam Province, Vietnam, in building financial independence. Swine housing, breeding pigs, and livestock medical supplies were provided to single mothers whose primary income came from daily labor, with the aim of helping them generate long-term income and become financially independent.

### Overseas Child Sponsorship

We provide sponsorship for vulnerable children in Vietnam through voluntary donations from employees. The funds raised are used for the benefit of these children through education, clean water supplies, environmental improvements, and living expenses. Further, our Matching Grant fund is used for classroom expansion, improvement of drinking water quality, awareness-building, and construction of libraries, in order to help develop the regions where these children live.

### Supporting a Health Promotion Project for Female Juveniles in Rwanda

Hyosung conducted activities to build ‘Girls Rooms’ and enhance public health and sanitation for the benefit of female juveniles in Rwanda. Facilities to manage menstrual sanitation were constructed to help juveniles – in Gisagara and Kamonyi in Rwanda – manage sanitation at school during their menstrual periods. Furthermore, we provided local community education to improve the rights of female children.

### Supporting Disabled Children and Non-disabled Siblings

Through the Purme Foundation, Hyosung sponsors rehabilitation treatment for disabled children and provides educational and counselling expenses for their non-disabled siblings. In 2021, the duration of remote learning increased due to the COVID-19 pandemic, and non-disabled siblings in welfare blind spots suffered a significant educational gap because they did not have devices with which to attend online classes. Recognizing this social issue, Hyosung provided IT devices to supplement their learning experience.



Delivery ceremony of rehabilitation funds for disabled children

# Corporate Social Responsibility

## Supporting Vulnerable Groups

### Creating Job Opportunities for Vulnerable Groups

#### Employment Promotion Program for Women from Vulnerable Groups

In line with the government's job creation goals, we are promoting the employment of middle-aged women and women with experience. In 2021, a total of 36 women received employment support, and 28 of them managed to find jobs. From 2013 to the present, out of a total of 363 participants in the employment support program, 271 have found jobs.

#### Sponsoring the Eden Welfare Foundation

Since 2014, we have been sponsoring the Eden Welfare Foundation, a social enterprise dedicated to job creation for the disabled. We have donated old PCs and monitors and financed the cost of replacing production facilities and lights in plants, thereby helping participants to work in a safe environment. As of 2021, we have provided a total of 8,391 units of computer equipment.

#### Sponsoring the Goodwill Store

The 'Goodwill Store' hires persons from vulnerable groups to contribute to their economic independence. Further, it uses profits from donated goods for job creation and vocational training for the disabled. Hyosung has installed donation boxes for the Goodwill Store in our head office and at each business site, and we deliver items donated by employees to the Goodwill Store (Hyosung Branch 1) in Eunpyeong-gu. In 2021, we donated a 1-ton truck to replace their old transport vehicle. The old truck was also previously donated by Hyosung in 2013, and had been used for 10 years to collect and transport donated goods.



Sponsoring the 'Goodwill Store'

## Sponsoring Cultural and Artistic Activities

### Certification of Exemplary Institution Supporting Culture and Arts

Since 2015, Hyosung has been certified by the Ministry of Culture, Sports and Tourism of Korea as an excellent institution for supporting culture and the arts. The certification recognizes and approves model organizations and companies that proactively implement sponsorship activities in the cultural and artistic sectors. We have been recognized for our continued support in this regard, including our sponsorship of Yeonwoo Theater, cultural heritage activities for Changdeokgung Palace, and funding the production of a musical show for preventing violence among youth.

### Selected as an Excellent CSR Company for Cultural Properties

Hyosung was appointed as a 'Korean Heritage Guardian' in 2018 and has been continually striving to preserve and purify the beautiful cultural properties of Korea. In 2021, we were selected as an excellent company for CSR relating to cultural properties, in acknowledgement of our contribution to the lighting and interior restoration project at Huijeongdang in Changdeokgung Palace, in cooperation with the Arumjigi Foundation.

### Sponsoring Art Activities for the Disabled

#### Support for Barrier-free Film Production

Since 2018, we have sponsored the production of two barrier-free films each year, and have donated the voices of our employees. Barrier-free films provide on-screen audio commentary for the visually impaired, and sound, music, and subtitles for the hearing impaired. In 2021, we sponsored two films titled 'Sibling's Summer Night' and 'Dreambuilders.'

#### Sponsoring Seoul Art Space Jamsil

Since 2018, to establish a firm foundation for creative visual artistic expression by the disabled, we have been sponsoring the expenses of creating artwork, as well as exhibition costs, for resident artists in Seoul Art Space Jamsil. In 2021, Hyosung conferred an artist, Hong Se-Jin, with an 'Artist of the Year' award, along with a prize of KRW 5 million.



Selected as an excellent company in terms of CSR for cultural properties

## Supporting Patriots and Veterans

### Support for National Veterans

#### Housing Support for Veterans

Over the ten years since our first donation in 2012, we have been working with many companies to improve residential environments for people of national merit. In 2021, we reconstructed and renovated 16 old houses belonging to war veterans, and supported 98 homeless war veterans in moving into rental houses. Through this project, we have provided pleasant residential spaces to 335 war veterans.

#### Supporting AI Care Robots for Patriots and Veterans

In 2021, Hyosung provided AI care robots to 40 elderly persons of national merit who live alone, and who have had limited in-person activities due to COVID-19. The AI care robot is a doll-type robot that assists elders with their daily activities, including the provision of 24-hour life management, meals, medication, and hospital appointments. The robot also uses a motion sensor to handle emergencies. Through this program, we became the only corporate recipient of the Patriotic Culture Award given by the Ministry of Patriots and Veterans Affairs.



Won the Patriotic Culture Award

### Welfare Support for the Korean Military

Since 2016, Hyosung has sponsored welfare benefits for the Korean Army, including book cafes and physical training supplies. In 2021, we expanded welfare benefits for soldiers by sponsoring laundry cafes. Laundry cafes are comfortable and pleasant places where soldiers can do their laundry. These spaces help soldiers to relieve stress and boost their morale by offering improved services and welfare conditions.

# Corporate Social Responsibility

## CSR Activities at Our Business Sites

Hyosung is implementing CSR activities that cohere with the local communities where our business sites are located, with the aim of contributing to local community development and the creation of social value.



### Hyosung Corporation - Anyang

<b>Environmental cleanup activities through the One Company, One River campaign</b>	We regularly clean up neighboring rivers in the region by picking up trash and dirt around the river, contributing to the maintenance of a clean environment for the benefit of the local community.
<b>Support for vulnerable groups in Hogye-dong</b>	We cooperate with the Hogye 2-dong Office and Saemaul Center to deliver donations, providing lunch boxes and kits to single elders and vulnerable groups in Hogye-dong and nearby areas. We practice sharing with the local community through these volunteer activities.

### Hyosung TNC Corporation - Ulsan, Gumi

<b>Industry-academia scholarship award ceremony</b>	We are providing scholarships to select students from Ulsan University who show excellent academic performance even under difficult financial circumstances.
<b>One Company, One Village farming volunteer activities</b>	We established the One Company, One Village Council to provide necessary support for Junggosan Village in Onyang-eup, Ulsan, since 2005. Our support covers diverse activities, including rice planting, harvesting, and parties for elderly residents in the village.
<b>Volunteer activities through the One Company, One School Campaign</b>	Employees visit the Jangsaengpo Elementary School in Ulsan to take care of the woodland and facilities inside and outside of the school. Vehicles are provided to support outdoor learning activities.
<b>Sponsoring the 2021 Sharing Kimchi of Love initiative and Gyeongbuk Community Chest</b>	From 2010 to 2019, the Gumi Plant conducted Kimchi-making (Gimjang) and sharing events with the participation of about 100 employees. Due to the COVID-19 pandemic in 2020 and 2021, we changed this activity to purchasing kimchi and delivering it to the local community. In 2021, we donated 2,000 heads of kimchi. We also donated 2,000 heads of kimchi through the 'Hope 2022 Fruit of Love' campaign by the Gumi City Government, as well as KRW 17 million to the Gyeongbuk Community Chest, for a total donation of KRW 33 million.
<b>Santa Expedition by ChildFund Korea in Gumi</b>	At the end of every year, the Gumi Plant has been regularly supporting local child centers in cooperation with ChildFund Korea. We have continued the 'Santa Expedition' activity, which involves sending gifts and providing emotional support for children who cannot spend time with their parents. In 2021, due to the COVID-19 situation, we donated KRW 10 million across 10 child centers in Gumi, providing various gifts to the children.

### Hyosung Heavy Industries Corporation - Changwon

<b>'Junior Engineering Class' for elementary school students</b>	With specialized research staff from the Changwon plant as lecturers, we deliver science classes to elementary school students so that they can learn the principles of Hyosung's flagship products and enjoy hands-on modeling exercises - fostering their interest in science. Since 2004, more than 3,000 students from Yanggok Elementary School, Changwon Elementary School, and Yumok Elementary School have participated and tried their hand at making transformers, circuit breakers, and hydrogen electric vehicles.
<b>Goodwill Store donations by employees</b>	Since 2014, employees of the Changwon Plant have been donating unused or reusable goods every month to the Goodwill Store. The total value of the goods donated by employees amounts to over KRW 10 million each year, and the profit made by selling the donated goods helps to create jobs for the disabled.

### Hyosung Advanced Materials Corporation - Mapo, Ulsan, Jeonju

<b>Support for Youngnak Aenea's Home</b>	We have sent donations and rice to Youngnak Aenea's Home, a residential facility for severely disabled children near our head office. Donations are typically used to renovate and repair aging facilities. We have also contributed to revitalizing the regional economy by purchasing donated rice from a social enterprise in Seoul.
<b>One Company, One Village farming volunteer activities</b>	We established the One Company, One Village Council to provide necessary support for Junggosan Village in Onyang-eup, Ulsan, since 2005. Our support covers diverse activities, including rice planting, harvesting, and parties for elderly residents in the village.
<b>Donation for Ulsan Child Care Institution</b>	We visited the Ulsan Child Care Institution, where we have been sharing Jijangmyeon (black bean noodles) every year, to donate Jangsaengpo whale-shaped bread and living necessities that were purchased from small business owners affected by the COVID-19 pandemic.

<b>Volunteer activities for 'Hoseong Nursery'</b>	Employees of the Jeonju Plant regularly visit Hoseong Nursery to conduct volunteer activities. In 2021, we remodeled vehicles used by the children for commuting and installed sports facilities in the nursery's auditorium.
<b>Scholarship for Jeonbuk Girls' High School</b>	Since 2017, the Jeonju Plant has been providing scholarships to students facing financial difficulties, as well as those showing excellent academic performance, at Jeonbuk Girls' High School. We are thereby helping to foster local talents in the region.
<b>Cleanup activities through the One Company, One Trail campaign</b>	The Jeonju Plant regularly cleans up walking trails near the plant for the benefit of local residents, as well as its employees.

### Hyosung Chemical Corporation - Yongyeon, Gumi, Oksan

<b>Appointment of members of the Local Community Security Council and implementation of volunteer activities</b>	In February 2021, we joined the Local Community Security Council of Seonam-dong in Nam-gu, Ulsan, holding monthly meetings, participating in volunteer activities, and supporting vulnerable groups through donations.
<b>Support for vulnerable children</b>	In cooperation with ChildFund Korea and Nammok Youth Culture House, we select and sponsor children facing difficult financial situations in Ulsan. On national holidays, we also deliver donations made by our employees to the Community Chest of Korea to support vulnerable groups.
<b>Partnership activities through the One Company, One Village campaign</b>	In a sisterhood partnership with Cheongsong Village in Yul-ri, Cheongnyang-myeon, Ulsu-gun, the Yongyeon Plant discusses and plans necessary support measures for the sister village during May, a month for family, including donations of exercise equipment to improve the health of elderly residents, and support for the provision of local agricultural products, volunteer activities, and other such welfare events.
<b>Sponsoring the Gumi Social Welfare Center</b>	Since 2012, the Gumi Plant has conducted various social contribution activities, such as 'Side Dish Cooking' and 'Filial Trip for Elderly', in cooperation with the Gumi Social Welfare Center. Recently, however, our in-person activities have been restricted by the COVID-19 pandemic. Accordingly, we replaced our existing social contribution activities with donations in 2020 and 2021, offering KRW 3 million to support vulnerable groups at the welfare center.
<b>Sponsorship of the 2021 Sharing Kimchi of Love initiative and Gyeongbuk Community Chest</b>	From 2010 to 2019, the Gumi Plant conducted Kimchi-making (Gimjang) and sharing events with the participation of about 100 employees. Due to the COVID-19 pandemic in 2020 and 2021, we changed this activity to purchasing kimchi and delivering it to the local community. In 2021, we donated 2,000 heads of kimchi. We also donated 2,000 heads of kimchi through the 'Hope 2022 Fruit of Love' campaign by the Gumi City Government, as well as KRW 17 million to the Gyeongbuk Community Chest, for a total donation of KRW 33 million.
<b>Santa Expedition by ChildFund Korea in Gumi</b>	At the end of every year, the Gumi Plant has been regularly supporting local child centers in cooperation with ChildFund Korea. We have continued the 'Santa Expedition' activity, which involves sending gifts and providing emotional support for children who cannot spend time with their parents. In 2021, due to the COVID-19 situation, we donated KRW 10 million across 10 child centers in Gumi, providing various gifts to the children.
<b>Sponsorship of local welfare centers and volunteer activities</b>	The Oksan plant carries out volunteer work and provides supplies to two nearby child centers, and has signed a relay CSR agreement with the Cheongju Industrial Complex Corporation to sponsor facilities for the disabled.



# ESG MANAGEMENT

50 Governance

52 Risk Management

53 Ethical Management

54 Human Rights Management

55 Talent Recruiting and Training

58 Human Resource Management

60 Research and Development

61 Information Security

# Governance

## UN SDGS LINKAGE



Hyosung is striving to be the first to present valuable changes under the mission of 'enhancing and enriching the quality of life for humanity through its leading technologies and management capability'. As the highest decision-making body of Hyosung, the Board of Directors (BOD) appoints directors with diverse backgrounds and expertise based on five main principles, thereby ensuring transparent and independent decision-making, as well as forming a governance structure that can conduct efficient management activities through a system of checks and balances. In pursuit of sustainable growth and protection of shareholder rights, the BOD reviews and decides on matters prescribed by law or the corporate articles of association, matters delegated by the general meeting of shareholders, or high-priority matters related to basic company policy and business operations. It also aims to fulfill the interests of various stakeholders, including shareholders.

### Principles of Hyosung BOD



## Board Members and Operation

### Independence and Transparency of the BOD

- Hyosung maintains a Board of Directors (BOD) that is majority independent, and appoints an outside director as the chair of the BOD.
- Director candidates are verified and appointed by the Outside Director Candidate Nomination Committee, which ensures that the BOD exercises checks and balances over the management.
- Resolutions of the BOD are reviewed and determined in accordance with the Articles of Association and the regulations of the BOD. Directors with special interests or other potential conflicts of interest shall be restricted from exercising their voting rights.
- The Audit Committee consists only of outside directors.
- The ESG Management Committee (previously the Transparent Management Committee) and the Outside Director Candidate Nomination Committee must maintain a ratio of outside directors of at least 2/3, and an outside director must be appointed to chair each committee to ensure independence and transparency.

### Expertise and Diversity of the BOD

- The BOD of Hyosung consists of outside directors who are experts in their fields, such as society, economy, finance, law, technology, and the environment.
- The Audit Committee includes one or more experts in finance and accounting.
- Regular training is conducted to improve the expertise of the board members.
- For newly appointed directors, we deliver training that covers an overview of the company, including visions, strategies, financial status, and major policies. The existing directors are also provided with training to improve their understanding of the industry.
- The BOD includes a female director.

### Organizational Chart of the Board of Directors (BOD)



### Efficient BOD Operation through Committees

- In line with related laws and regulations, Hyosung has established committees within the BOD for prompt and efficient decision-making.
- Some of the board's authority is delegated to such committees so that experienced professional directors can review issues and resolve them accordingly.

### Committees and Roles

Committees	Roles
Management Committee	Review and make resolutions on various agenda delegated by the BOD, including business principles and investments, in accordance with the articles of association and Board regulations.
Audit Committee	Audit-related matters, including audit plans, reviews on the suitability of important accounting standards and the feasibility of changes to accounting practices, evaluation of the internal control system, selection and evaluation of external auditors, etc.

Committees	Roles
Outside Director Candidate Nomination Committee	Verify the qualifications, competencies, and independence of outside director candidates and recommend suitable candidates to the BOD.
ESG Management Committee	Carry out preliminary deliberations on major business matters, including spin-offs, mergers, and business transfers and takeovers, as well as shareholder rights and shareholder return policies. Review and make decisions on large-scale internal transactions under the Fair Trade Act, ESG-related policies, targets and risk management, and investment plans.

\* In April 2021, the Transparent Management Committee, which was previously in charge of governance under the BOD, was expanded and reorganized as the ESG Management Committee after integrating the environmental and social domains to its scope of activity.

### Fair and Transparent Evaluation and Compensation

- Each year, directors are evaluated based on their expertise in corporate business and technology, as well as their performance in terms of Board activities. Standing directors are comprehensively evaluated based on quantitative indicators (sales, operating profits, and net profit) and non-quantitative indicators (company contributions towards ESG management and global management) and the results of evaluation are discussed within the BOD.
- Based on this evaluation, compensation for the Board is approved in the general meeting of shareholders, and is provided within the limits of compensation for directors.
- The retirement allowance for members of the BOD shall be paid in accordance with the provisions on retirement allowance for executives, which was determined by resolution of the general meeting of shareholders.

### Compensation for Directors and Auditors in 2021

(Unit: KRW 1 million)

Category	Persons	Total compensation	Average compensation per person
Standing directors	3	14,300	4,767
Outside directors	3	176	59
Directors who are members of the Audit Committee	3	164	55

\* Outside directors in the table above do not include directors who are members of the Audit Committee.

# Governance

## Board Members and Operations

### Board Members

- The Board of Directors (BOD) consists of directors who are appointed in the shareholder's meeting.
- The BOD is comprised of 3 inside directors and 6 outside directors.
- Inside directors are nominated by recommendation of the BOD. Outside director candidates are nominated through a separate resolution process by the Outside Director Candidate Nomination Committee.
- Relevant information is provided to shareholders through reference materials that are disclosed prior to the shareholders' meeting and via the shareholder circular and notice of shareholders' meeting. The resolution is approved by shareholders on the day of the shareholders' meeting.

### Members of subsidiaries' BOD

Hyosung TNC
 Hyosung Heavy Industries
 Hyosung Advanced Materials
 Hyosung Chemical

Category	Name	Gender	Roles	Date of appointment	Date of expiry of current tenure	Area of expertise
Inside Directors	Hyun-Joon Cho	Male	CEO, Member of the Outside Director Candidate Nomination Committee	1998.3.17	2024.3.17	Corporate management
	Kyoo-Young Kim	Male	CEO, Member of the ESG Management Committee, Member of the Management Committee	2017.3.17	2023.3.18	Corporate management
	Hyun-Sang Cho	Male	Member of the Management Committee	2014.3.21	2024.3.17	Corporate management
Outside Directors	Myung-Ja Kim	Female	Chair of the BOD, Member of the ESG Management Committee	2017.9.22	2023.3.18	Environment, Technology
	Young-Lae Son	Male	Chair of the Audit Committee, Member of the Outside Director Candidate Nomination Committee	2017.9.22	2023.3.18	Accounting, Finance
	Sang-Myeung Chung	Male	Chair of the ESG Management Committee, Member of the Audit Committee	2017.9.22	2023.3.18	Law (lawyer)
	O-Gon Kwon	Male	Chair of the Outside Director Candidate Nomination Committee, Member of the ESG Management Committee	2017.9.22	2023.3.18	Law (lawyer)
	Dong-Chae Jeong	Male	Member of the ESG Management Committee	2020.3.20	2024.3.19	Economy, Culture
	Ki-Ung Kim	Male	Member of the Audit Committee	2021.3.19	2023.3.19	Economy, Culture

\* As of March 2022

\* Details regarding the governance and board members of the four subsidiaries can be found in each companies' business report.

### BOD Operation

- In principle, regular board meetings shall be held once in each quarter in accordance with Article 6 of the Regulations on BOD Operation.
- Temporary meetings shall be convened whenever necessary.
- Number of Board Meetings held in 2021: 6 / Average attendance rate per director: 91%
- Outside directors may ask questions and present opinions on management. They may also request information, access and copy various minutes, books, and other materials, and if necessary, consult internal and external experts for the performance of their business responsibilities. The Company shall cooperate with outside directors to facilitate the seamless performance of their duties.

### Status of Board Subcommittees

Name of subcommittee	Members	Number of meetings convened in 2021
Management Committee	Inside director, Hyun-Sang Cho (Chair), Inside Director, Kyoo-Young Kim	38 times
ESG Management Committee (previously the Transparent Management Committee)	Outside Director, Sang-Myeung Chung (Chair), Outside Director, Myung-Ja Kim, Outside Director, O-Gon Kwon, Outside Director, Dong-Chae Jeong, Inside Director, Kyoo-Young Kim	6 times
Outside Director Candidate Nomination Committee	Outside Director, O-Gon Kwon (Chair), Outside Director, Young-Lae Son, Independent Director, Hyun-Joon Cho	2 times
Audit Committee	Outside Director, Young-Lae Son (Chair), Outside Director, Sang-Myeung Chung, Outside Director, Ki-Ung Kim	7 times

### Shareholder-friendly Management and Protection of Shareholders' Rights and Interests

- Hyosung has paid year-end dividends for 16 consecutive years, from 2006 to 2021, to return its business profits to shareholders.
- We implement shareholder-friendly management by announcing the general meeting of shareholders 17 to 22 days before the date of meeting to ensure adequate time to deliberate on the meeting agenda. Furthermore, shareholders may exercise their rights by proposing schedules in writing or electronically up to six weeks before the general meeting of shareholders.
- In addition to regular announcements of performance every year, the NDR (Non-Deal Roadshow) is held regularly for investors in Korea and Asia. We also provide IR (Investor Relations) materials to meet shareholders' requests for information.
- Moreover, we have established an internal control policy to prevent internal transactions and self-transactions by management or dominant shareholders for their personal interests.



# Risk Management

Unexpected risks and new business opportunities have grown due to the business environment and increases in social complexity. Accordingly, companies need a system that can proactively prevent and manage risks for their continued growth.

Hyosung recognizes risk management as one of the most important management activities, and has established a risk management system to minimize the negative environmental and social impacts that are directly or indirectly caused by corporate business activities. In order to respond to the increased interest of stakeholders in non-financial risks, and to faithfully fulfill our corporate social responsibilities, we are strengthening our management of not only traditional financial risks, but also non-financial risks from an environmental and social perspective.

## UN SDGS LINKAGE



### Corporate Risks



## Strengthening Risk Management

### Risk Management System

- Hyosung defines market uncertainties and internal/external risks and opportunities (that have a significant impact on business activities) as risks, with a view to managing them properly.
- Risks are categorized into financial risks and non financial risks(business continuity and management) and major risks are determined in consideration of their impact and likelihood of occurrence.
- We have established a prevention system to enable preemptive responses to major risks by identifying their causes in advance.
- Our risk management status is updated every year, and we evaluate whether the objectives of the response plan for the major risks have been achieved.

### Risk Management Organization

- Risk Management Organizations (risk management and reporting of key risks and responses): Hyosung - ESG Management Committee under the BOD; Hyosung TNC, Hyosung Heavy Industries, Hyosung Chemical - ESG Management Promotion Committee under the CEO; Hyosung Advanced Materials - Sustainability Management Committee and Risk Management Committee under the CEO.
- The ESG Management Promotion Committee, charged with company-wide financial and non-financial risk management, consists of the CEO as the Chair and risk management officer, and members: director of strategy (head of management strategy), director of finance (head of finance), director of corporate support, head of communications, plant manager, director of technology, and the director of the research institute.
- Financial risks are managed by the financial division (financial office). Hyosung periodically measures, evaluates, and hedges against financial risks through organic cooperation between our headquarter sales division and domestic and overseas subsidiaries.
- Non-financial risks are managed by the company-wide risk management organization [ESG management team under the CEO, strategy division (management strategy office), and the corporate support division (support office)], as well as working-level organizations led by the heads of PUs and plants for environment, safety, supply stability, orders, sites, and response to litigation.

### Risk Management Process



### Major Types of Risks for Hyosung

#### Financial Risks

- Finance-related market/credit/liquidity risks relating to risk factors such as liquidity, stock price, and changes in exchange rate.

#### Non-financial Risks

Business Continuity Risks	
Supply Chain Risks	Risk of delayed product delivery due to failure to maintain the supply of raw materials and product continuity
Disaster and Safety Risks	Risks that may arise from natural disasters such as earthquakes and fires, and safety incidents in the workplace
Environmental Risks	Risk of legal punishment and fines due to inappropriate response to environmental regulations concerning emissions of GHGs and hazardous substances
Management Risks	
Security Risks	Risk of data loss due to external cyberattacks or internal data leaks
Legal and Ethical Risks	Risks such as issues caused by unfair contract conditions, lawsuits, unfair business transactions, and corruption
Reputational Risks	Risk of deteriorating reputation due to misinformation or negative communication
Order Risks	Risk of malicious orders due to payment collection conditions, poisonous clauses, unclear specifications, insufficient delivery date, civil complaints, local conditions in other countries, etc.
General Management Risks	Operational risks due to errors by personnel or systems

### Risk Management Activities

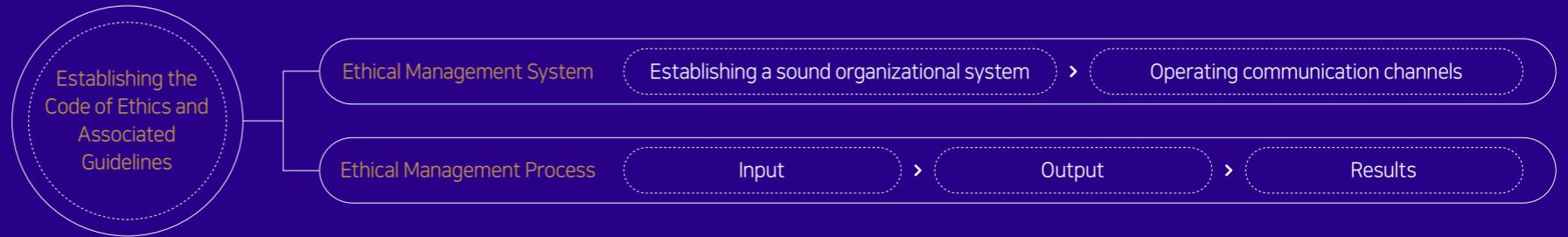
- In 2021, our risk management process and regulations were revised to strengthen company-wide risk management capabilities.

Supply Chain Risks	Updating the supply continuity emergency manual and conducting training, providing consulting support to strengthen the ESG management capabilities of our suppliers, regularly identifying directions for energy improvement for our suppliers, etc.
Disaster and Safety Risks	Established measures to strengthen safety inspections and conducted an inspection of safety, health, and disaster systems for all Hyosung sites, including the headquarters, via the Safety and Health Team - led by the CSO under the direct supervision of the CEO.
Environmental Risks	Implemented regular diagnoses and prevention of potential risks through environmental impact assessments, re-evaluations and self-assessments related to our ISO 14001 certification, and response training for each type of environmental incident.
Security Risks	Conducted security training for employees, strengthened the security system in preparation for telecommuting, etc.
Legal and Ethical Risks	Updated the Fair Trade Compliance Program, implemented ethics management and anti-corruption education, operated a review system for the prevention of unfair trade practices, and collected agreements from suppliers to follow the Code of Conduct
Order Risks	Order reviews, operation of the BAC (Bid Approval Committee)
General Management Risks	Management of COVID-19 risks (remote meetings, maintaining a 50% telecommuting rate, expanding IT support, and operating response processes)

# Ethical Management

Hyosung strives to internalize ethical management to establish an appropriate corporate culture. Based on 'Honesty and Trust', our core values of ethical management, we have prepared a Code of Ethics and guidelines to facilitate its practice. The Code of Ethics and guidelines are regularly reviewed, and we are making efforts to empower related organizations and processes to facilitate their implementation.

## Ethical Management Process



## UN SDGS LINKAGE



## Ethical Management System

### Establishing an Organizational System for Ethical Management

- Hyosung has set up a legal compliance team, directly under the CEO, to strengthen ethical management activities.
- Ethical management personnel are designated within each department to support the legal compliance team, and internal auditors are appointed to monitor overall business management.
- The CEOs of Hyosung and its four subsidiaries have participated in the 'CEO Ethical Management Pledge Ceremony', hosted by the Ethical Management ESG Forum, for three consecutive years starting in 2020, to declare our commitment towards compliance with ethics management at home and abroad.



### Communication Channels for Ethical Management

- Hyosung operates the 'HR Counseling Centre' and a 'Grievances Procedure' to provide employees with a counseling service for unethical behaviors and grievances.
- Such counseling can be accessed in-person and online to ensure employee confidentiality. We also operate various other communication channels, such as e-mail and mail.
- An online reporting channel is provided via our website to receive anonymous reports on unethical behavior, including bribery, solicitations, and unfair business transactions.

## Awareness Building Activities

### Awareness Building and Training for Ethical Management

- All new Hyosung employees sign a 'Pledge to Practice Ethical Management' and a 'Pledge for Prohibiting Solicitation and Bribery,' proving their commitment to the Code of Ethics and Guidelines.
- When we sign a contract with a new supplier, we also encourage the supplier to make a pledge to practice ethical management and adhere to the Hyosung code of conduct.
- We also make and distribute promotional videos and magazine-type publications through an online corporate platform to facilitate awareness of ethical management.
- For the purpose of promoting awareness and practice of ethical management, employees are provided with ethical management training every year.
  - > All onboarding employees and newly promoted employees are required to take ethical management training.
  - > The departments that are likely to have high supply chain risks undertake regular training on subtracting laws and contract violation cases.
  - > For sales departments, we provide information on compliance processes and standards applicable to the sales field, such as protection of trade secrets, cases of embezzlement, bribery and forgery, and regulations related to fair trade and franchise and agency transactions.
- Hyosung also implements a 'Pledge of Compliance with the Code of Conduct for Hyosung Suppliers' to ensure that our suppliers implement ethical management measures such as anti-corruption, and we provide ethical education materials and venues for our suppliers' employees.

### Internal Monitoring and Follow-up Management

- Hyosung conducts audits on overall business management, carries out on-site field work, investigates reported cases, and checks technology and product quality.
- The anonymity of reporters and persons subject to audits is guaranteed to prevent them experiencing any unfair treatment or disadvantage.
- We conduct regular audits in accordance with internal audit regulations and special audits when specific issues arise.
- Any suspicious incidents identified through audits are dealt with through countermeasures such as cautions, disciplinary actions, and compensation for injured parties, depending on the severity of the incident.
- The results of audits are also reported to the CEO. Persons found responsible by such audits are subject to mandatory and immediate action.
- The audit team regularly re-inspects the issues found to prevent re-occurrences.

### Reported Cases of Non-compliance with Anti-corruption and Status of Investigations

2021	Hyosung Corporation		Hyosung TNC		Hyosung Advanced Materials		Hyosung Heavy Industries		Hyosung Chemical	
	Korea	Overseas	Korea	Overseas	Korea	Overseas	Korea	Overseas	Korea	Overseas
Investigations	-	-	1	-	3	1	3	-	1	-
Disciplinary actions	-	-	-	-	-	2	3	-	-	-

1) Investigations: Excluding cases where investigation was impossible due to the simple nature of the complaints, duplicate complaints, or lack of clarity in the information received  
 2) Number of persons subject to disciplinary actions: Persons subject to reprimands, pay cuts, suspensions or dismissals (excluding written warnings)

# Human Rights Management

As corporate influence on society and the environment expands, corporate responsibility for respecting human rights has become an unavoidable trend. In accordance with the UNGC's first principle, 'businesses should support and respect the protection of internationally proclaimed human rights', Hyosung is working toward raising stakeholders' awareness of human rights management by establishing human rights policies and principles. Through a reporting center on our website, violations are identified and handled in timely manner. We also effectively manage human rights risks through our human rights impact assessment system.

## UN SDGS LINKAGE



## Establishing Human Rights Standards

### Human Rights Policies and Principles

Hyosung Human Rights Principles

- By means of the 'Hyosung Way', our value system aimed at 'enhancing and enriching quality of life for humanity with our leading technologies and management capability', we promise to pursue mutual growth with all stakeholders.
- Hyosung supports the 10 Principles of the UNGC, the OECD Guidelines for Multinational Enterprises, and the labor standards suggested by the ILO.
- We promise to comply with labor rights and standards regarding working conditions not only in Korea, but also in all other countries where we have a business presence.
- This promise applies equally not only to Hyosung's employees but also to all stakeholders, including customers, communities, and our suppliers' employees.

### Assessment of Human Rights Impact

- As of 2021, Hyosung has been conducting its own human rights impact assessment, from an operational perspective, for the holding company and each operating company. For the assessment, we use metrics derived from the human rights management guidelines and checklist distributed by the National Human Rights Commission of Korea.
- We conduct a human rights impact assessment at least once a year, starting with a self-evaluation.
- Improvement measures are continuously identified through reviews by external experts.

STEP 1 > STEP 2 > STEP 3 > STEP 4 > STEP 5

System Building	Risk Assessment	Implementation and Monitoring of Improvement Activities	External Communication on Activity Outcomes	Enhancement and Roll-out
Developing a Checklist	Identify current status, find areas for improvement	Implementation and confirmation of activities for improvement concerning relevant corporate entities	Reflect performance in the ESG Report	Adjust the scope and checklist

## Management of Human Rights Risks

- Based on the human rights impact assessment, Hyosung identifies potential risks related to human rights for each stakeholder group, and carries out preliminary response activities.
- We carry out prevention and mitigation activities by comprehensively investigating not only human rights issues and violations concerning our employees and customer-facing departments, but also causes of violation within our suppliers and local communities.

## Types of Potential Human Rights Risks and Responses

Category	Potential risks	Response plans
Employees	<ul style="list-style-type: none"> <li>• Discrimination and harassment</li> <li>• Gender equality</li> <li>• Employees' health and safety</li> <li>• Freedom of association</li> </ul>	<ul style="list-style-type: none"> <li>• Deriving metrics and targets</li> <li>• Regular disclosure of performance</li> <li>• Regular assessment at least once per year</li> <li>• Measures for the protection of human rights for pregnant women and disabled persons</li> </ul>
Customers	<ul style="list-style-type: none"> <li>• Infringement of customers' personal information</li> </ul>	<ul style="list-style-type: none"> <li>• Disclosure of relevant policies and guidelines</li> </ul>
Suppliers	<ul style="list-style-type: none"> <li>• Safety and health of suppliers</li> <li>• Forced or compulsory labor</li> <li>• Child labor</li> </ul>	<ul style="list-style-type: none"> <li>• Considering human rights risks during supplier assessment</li> <li>• Monitoring of suppliers</li> <li>• Mandatory human rights training for security staff</li> </ul>
Local Communities	<ul style="list-style-type: none"> <li>• Human rights violations against local residents near our workplaces</li> </ul>	<ul style="list-style-type: none"> <li>• Establishing a process for communication with local communities</li> </ul>

## Reporting Channel

- Hyosung operates a reporting channel to proactively collect feedback and grievances from all internal and external stakeholders, including employees. We make improvements based on feedback collected through the reporting channel, contributing to the improvement of human rights and the working environment, prevention of legal and ethics-related violations, and increasing stakeholders' satisfaction.
- Cases received via the reporting channel are directly processed by personnel from the Audit Team, which initiates an investigation in accordance with internal processes. The investigation takes place under strict confidentiality so that any details regarding the reported subject or informant are not disclosed. Progress is shared with the informant.
- A HR Counseling Center is operated to collect and deliver employees' work-related grievances directly to the HR Team, covering various issues such as conflict with colleagues, career aptitude, and workplace bullying. The HR Team takes appropriate action and resolves issues through interviews with employees.
- Recommendations from employees on topics such as improvement of internal systems and working facilities are reported through the anonymous bulletin board, and the HR Team delivers such recommendations to relevant departments to carry out improvement activities.
- We are considering the introduction of psychological counseling programs for employee stress management, based on employees' opinions received through the reporting channel.

## Human Rights Training and Creating an Environment to Protect Human Rights

- Hyosung carries out online and offline human rights training programs on diverse topics, including eradication of sexual harassment and assault, and the prevention of abuse of power and workplace bullying.
- To emphasize leaders' responsibility in preventing human rights violations and recurrence, we invite external instructors to carry out training.
- Through various campaigns, we work on creating a working environment that can safeguard human rights.
- Hyosung has established its own comprehensive countermeasures against Gapjil (power abuse) and continually carries out prevention activities to spread a culture of mutual respect.

# Human Resource Recruiting and Training

Hyosung recruits talented human resources and supports their growth as 'Global Leaders'. To secure a competitive edge for sustainable growth, each operating company has established a human resource development system and various training programs tailored to their business areas. By providing well-organized company adaptation programs to employees at the time of onboarding, we help them to quickly adapt and fully exert their capabilities. We have also established various strategies and training programs to nurture unique talents. In particular, we are striving to support company-wide sustainability management activities with a focus on promoting our management philosophy, nurturing leaders, enhancing job expertise, and building global capabilities. In light of the prolonged COVID-19 pandemic, we have reorganized a remote education system to provide employees with opportunities for continuous growth. Gather Town, a metaverse virtual education platform, has been introduced to provide various learning experiences to trainees and increase their concentration and educational effectiveness.

## UN SDGS LINKAGE



## Human Resource Recruiting and Onboarding Support

### Direction

- Hyosung would like to realize our mission: 'enhance and enrich quality of life for humanity with our leading technologies and management capability.'
- We plan to secure outstanding human resources equipped with the values of global excellence, Innovation, accountability, and integrity.
- Together with our employees, we aim to become a global leader in the market.



### Open Recruitment

- To attract 'global leaders' who can fulfill Hyosung's mission, we operate various channels for both regular and occasional recruitment.
- We transparently share information on employment contracts and the recruiting process through our own online recruitment site.
- All applicants are given equal opportunity in the recruitment process and are not subjected to discrimination based upon their academic background, gender, or religion.
- In order to serve the socially disadvantaged, we also implement preferential policies for persons of national merit and the disabled.
- In pursuit of fair and open recruitment, we deliver preliminary training to interviewers.

### Onboarding Program

- We operate onboarding programs for new employees so that they can quickly adapt to the company and demonstrate their capabilities.
  - New hires include junior-level employees selected through regular recruitment, experienced employees selected through occasional recruitment, and externally recruited executives.
- New employees participate in introductory training on Hyosung - which consists of lectures on Hyosung's core values, history, business skills, and special lectures - immediately after joining the company. Job training and OJT programs are provided for each operating company and department to help employees better understand their positions and easily adapt to the corporate environment.
- Experienced employees participate in a 3-day training program once a quarter to help familiarization with the core values, culture, organizational structure, and systems of their new organization.
- After joining the company, externally recruited executives participate in 1:1 intensive training, provided by in-house lecturers, to better understand the management status, organizational system, company culture, and management philosophy.
- Considering the constraints presented by the prolonged COVID-19 pandemic, a metaverse platform is in operation to help new employees more quickly adapt to the company and develop an emotional bond with their colleagues.

### On the Job Training (OJT) Program

#### Period

After finishing introductory training by Hyosung/subsidiaries, and following the placement of new employees in their assigned departments, this program takes place over a period of four months under the leadership of selected senior employees (details may differ by department)

#### Program Contents

Senior employees transfer required work skills to newcomers, so that they are ready for their new positions.

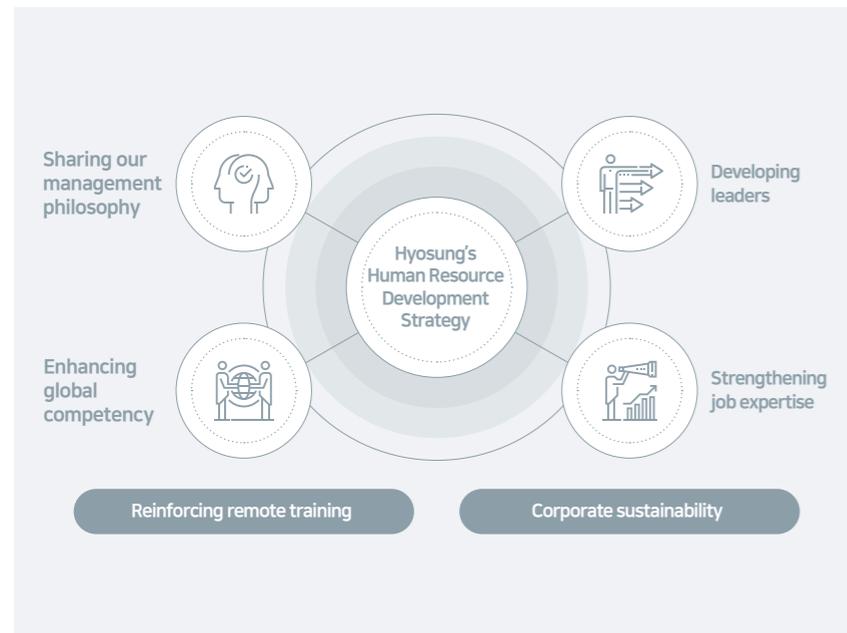
Qualification Requirements for Senior Employees	
	A person who has more than three years of work experience in a department where new employees are assigned
	A person who has an outstanding performance record and understanding of the company
	A person who is recommended by each team leader to which new employees are assigned
	<ul style="list-style-type: none"> <li>For the first three months, the training focuses on hands-on subjects related to the position to enhance employees' capacity to actually perform their jobs.</li> <li>Over the next month, basic knowledge and competencies for the position are delivered through the work manual and improvement tasks.</li> <li>In 2022, we will prepare and submit a human resource development plan for new employees to a team for which new employees are to be assigned, and we will change the program operation method to provide systematic training.</li> </ul>

# Human Resource Recruiting and Training

## Enhancing Employees' Competency

### Human Resource Development Strategy

- Hyosung has established a dual-track job training system to secure business competitiveness that is suitable for the nature and characteristics of each operating company, and we have laid the foundation for responding to training needs.
- Training managers in the Human Resources Development Center and each operating company collaborate to realize a human resource development system that reflects the company's needs, finds effective training cases, and supports the continuous growth of employees.
- The Human Resource Development Center of the holding company provides training in core values and management philosophy and leadership skills for all employees, while each operating company provides training to improve job expertise.
- In 2021, we focused on promoting remote education and expanding sustainable management education by sharing our management philosophy, developing leaders, strengthening job expertise, and enhancing global competency.
- We have secured a real-time lecture system and platform, and even after the pandemic ends, we plan to use remote education methods to respond quickly to on-site education needs without the constraints of time and space.



### Sharing our Management Philosophy

- By reflecting our management philosophy – our core values, the 'Hyosung Way', and the 'Work attitude' defined by these values – in our training programs, all Hyosung employees are encouraged to internalize this philosophy in their behavior, pursue the same direction, and furthermore practice these values in their workplaces.
- Equal training opportunities are provided to all employees. We define the roles and responsibilities of each position (executive / head of team / team member) in terms of working attitude and personal brand value, and encourage our employees to simultaneously achieve work and personal growth.
- We provide specific behavior model cases for each position, and encourage employees to practice them in the organization.
- We focus on introducing core corporate values to new employees, so that they can pursue the same direction as the company, grow together with us, and quickly adapt to the organization.
- Core management issues can be remotely shared and discussed in a timely manner, without time and space constraints, through collaboration with relevant departments.

### Activities to Practice Social Responsibility

- In parallel with the ever increasing importance of ESG (Environment, Social, Governance), relevant training is provided across the company.
- Sustainability training, including statutory and mandatory training, consists of six areas: environment, ethics, safety and health, business based on Fair business trades, human rights, and information security.
- In addition to legally mandated education, we are preparing additional human rights education in light of the increased social interest in human rights.
- Every year, all Hyosung employees are required to take training programs on topics including the prevention of workplace sexual harassment and workplace bullying, and disability awareness. They also receive training on health and safety and the protection of personal data.
- In 2021, occupational health and safety training was expanded to office workers, in addition to field technical staff, to emphasize the importance of the workplace safety environment.
- All employees have completed training on the environment, anti-corruption, and principles for fair business transactions (Subcontracting Act, Franchise Act, etc.). Through these efforts, Hyosung aims to proactively meet social expectations and requirements.

The Hyosung Way	Our Work Attitudes for Practicing Accountability Management	Directions
Mission + Core Values (Global Excellence, Innovation, Accountability, Integrity)	① Be aware of the essence (purpose) of business (work). ② Pursue global top-level goals. ③ Align business strategies with goals. ④ Thoroughly implement planned tasks and achieve goals by exposing problems early on when they arise. ⑤ Secure competitiveness for sustainable growth. ⑥ Check results and identify potential improvements.	① Maintain commitment to the company ② Achieve maximization of profit

Category	Description of Training	Trainees
Work attitude training for Accountability management Practice	Learning work attitudes for the practice of responsible management, based on best practices by each job position and deriving specific actions to efficiently perform individual tasks	All employees
Training for new employees	Training on corporate history, business, core values, and work attitude for quick onboarding of new employees	New hires (New/experienced)
Training by position	Improving capabilities, leadership, and brand value for each position	All employees

### Sustainability Training for Employees

<b>Environment</b> <ul style="list-style-type: none"> <li>• Greenhouse gas emissions and climate change</li> <li>• Hazardous chemical substances</li> </ul>	<b>Ethical Management</b> <ul style="list-style-type: none"> <li>• Anti-corruption guidelines</li> <li>• Cases of anti-corruption violation</li> </ul>	<b>Safety and Health</b> <ul style="list-style-type: none"> <li>• Management of the working environment</li> <li>• Guidelines for safety management</li> <li>• Healthcare</li> </ul>
<b>Fair business trades</b> <ul style="list-style-type: none"> <li>• Fair Trade Act</li> <li>• Subcontracting Act</li> <li>• Franchise Act</li> </ul>	<b>Human Rights</b> <ul style="list-style-type: none"> <li>• Prevention of discrimination and harassment</li> <li>• Prevention of sexual harassment</li> <li>• Improvement of disability awareness</li> </ul>	<b>Information Security</b> <ul style="list-style-type: none"> <li>• Improvement of security awareness</li> <li>• Protection of personal information</li> </ul>
<b>ESG Management Overview</b> <ul style="list-style-type: none"> <li>• Understanding the concept of ESG management</li> <li>• Management of social responsibility (brand)</li> </ul>		

# Human Resource Recruiting and Training

## Enhancing Employees' Competency

### Strengthening Job Competencies

- To provide timely training related to job competencies, Hyosung has strengthened HRD functions for each operating company, as well as establishing a dual-track job training system for both the holding company and operating company.
- The Human Resource Development Center is responsible for training all employees, and focuses on skills training for each job group to ensure employees have the required core knowledge, skills, and basic work competencies for each job group, regardless of business area.
  - In 2021, Hyosung updated job training methods for employees by transitioning to online, real-time lectures, contributing to the cultivation of basic knowledge and expertise among employees in sales/research/production/management/construction management positions.
- Each operating company conducts vocational training, delivered on a PU/business site/team level, corresponding to the specific characteristics of its business, and implements work and training at the same time.
  - In response to various niche needs arising in each business sector, Hyosung is working with two full-time professors to develop a unique training curriculum and thereby help strengthen the expertise of all employees.
  - To support external job training, which cannot be provided by all departments, an external training support system is operated so that individuals and teams can apply for – and receive – training in a timely and efficient manner.

#### ➤ Job Training by the Human Resource Development Center (mandatory for 1-4 years after joining the company): Core Knowledge/Skills by Job Group

Job Category	Description of Training
Sales	Understanding B2B marketing, market research, price negotiation, customer consultation skills, sales strategy, key clients, etc.
Production	In-house standardization, quality management based on ISO standards, QC tools, statistics management and analysis, DMAIC, project management, etc.
Research	Ideation, FMEA, QFD, utilization of patent information, DFSS methodology, commercialization of technology and valuation, etc.
Management	Documentation, reporting, analysis of internal data, financial statements, management analysis tools, planning, etc.

#### ➤ Occasional Training by PU/Business Site: Job Knowledge/Skills Differentiated by Business

Job Category	Description of Training
Sales	Comprehensive understanding of sales activities, including customers, markets, competition, credit, inventory, and logistics
Production	Comprehensive understanding of production activities, including processes, facilities, quality, innovation, and environmental safety
Research	Comprehensive understanding of R&D activities, including technology development, research methodologies, feasibility studies, etc.
Management	Comprehensive understanding of management and operations, including costs, accounting, regulations, HR, labor relations, etc.
Common competencies	Relevant knowledge and competencies required in each business division, including product knowledge, work attitude, organizational strategies, etc.

### Establishing a Remote Training System

- In view of the constraints presented by the prolonged COVID-19 pandemic and the growing demand for remote curricula, we have introduced methods such as the Micro Learning and Metaverse platforms, in addition to our existing online training.
- The basic online course section consists of about 290 online courses offered each month, covering job group/industry-specific areas such as job competency, basic work skills, and foreign languages. The online courses are continuously improved through regular opinion surveys and course review analysis.
- In order to strengthen the sales capabilities of our employees, we switched to remote sales training and developed customized content to meet the needs of each PU.
- Language training courses are also provided to overseas subsidiaries to support the need to improve the language skills of overseas employees.
- In 2021, about 1,200 micro-learning contents were secured so that all employees can access online training in a timely manner.

### Developing Leaders

- To ensure organizational competitiveness and nurture leaders capable of expanding the business in a sustainable way, Hyosung provides training to existing and newly appointed executives, team leaders, and scouted executives.
- Short-term MBA program: Entrepreneur training program for executives
  - In 2021, semi-MBA education on key management functions was provided to executives to cultivate their basic management capabilities.
- GMC (Global Management Course): Training for executive candidates
  - Training was provided to 31 executive candidates in 2021.
  - The training consists of online learning, case discussions, and challenges based on action learning to understand key management functions and to identify solutions for problems that need to be addressed.
- Insight Forum: A special lecture program that invites celebrities to address executives and team leaders
  - Based on critical real-world subjects such as management strategy, economic outlook, and brand management, participants engage in discussions to better understand the external business environment, which helps them make more well-informed business decisions.
  - In 2021, we provided both in-person and remote training.
- Training program for new team leaders: The program is designed to help newly appointed executives realize performance management, people management, and organizational management in a balanced manner.
  - We provide 8 weeks of feedback sessions after training so that trainees can put their learning into practice in real-world situations.
- Team leader training program: The program is designed to encourage existing team leaders to discuss and evaluate each team's 'working attitude', strengthening their team identities by creating team brand descriptions, promoting design thinking for customer-oriented activities, and taking training to improve work efficiency.

Job Category	Description of Training
Short-term MBA program	Support for the improvement of management capabilities and capacity to respond to environmental changes so that executives can act responsibly as entrepreneurs and contribute to the sustainable growth of the company through change and innovation
Scouted executives	Assisting the onboarding of scouted executives by providing education on core values, business status, and company policies
GMC	Assisting the onboarding of executive candidates by providing education on key management functions and assigning improvement tasks
Team leaders	Strengthening team identities through customer-oriented activity planning and applying assessments of each team's 'working attitude'
New team leaders	Supporting newly appointed personnel to fulfill their roles and responsibilities, as team leaders, in terms of performance/personnel/organization management
Insight forum	Providing the latest business trends and humanities-based insights to help leaders in the decision making process

### Enhancing Global Competency

- Hyosung pays attention to the training needs of overseas subsidiaries, based on which we provide training courses – for leaders, expatriates, and local recruits – such as vocational training and language courses, so that overseas subsidiaries can grow sustainably.
- In 2021, we focused on strengthening local employees' competencies and sense of belonging, and strengthened our educational support for overseas corporations.
  - Five overseas manufacturing entities were selected as priority targets for training support based on inspections and an analysis of the training status of overseas corporations.
  - Training materials and consulting were provided for establishing a customized training system.
  - Sales training was conducted on a quarterly basis for employees of 20 trading entities/branches to improve their business capabilities.
  - We provided contents and guides to enable expatriates to communicate with, and train, local employees. Further, we assisted them in conducting sales training optimized for overseas corporations/branches.
- In 2022, we plan to focus on improving the capabilities of local training managers, strengthening their global competitiveness to support the stable operation of overseas corporate education systems.

Business Sites	Description of Training
Manufacturing corporations	<ul style="list-style-type: none"> <li>• Strengthening training on Hyosung's history and core values</li> <li>• Review/Enhancement of training on Global Common Rules and Policies</li> <li>• Establishing a training system for common competencies</li> <li>• Enhancing the manager training system</li> <li>• Providing a standard guide for introducing the corporation</li> </ul>
Trading entities/branches	<ul style="list-style-type: none"> <li>• Training in sales job competencies</li> <li>• Training on consultation skills, collection of client information, proposition of customer value, sales negotiation process</li> </ul>

# Human Resource Management

Hyosung has established measures to support employees in pursuing a work-life balance, creating a desirable organizational culture to enhance job satisfaction and their concentration at work. Additionally, our family-friendly management plays an important role in making employees and their families happy together with Hyosung. We receive employees' feedback to create a pleasant working environment and corporate culture, further contributing to organizational innovation within the company. To enhance both internal and external communication, diverse communication channels are in operation, including 'Conversation with the Top Management', two-way communication through the internal bulletin board, and customer outreach channels.

## UN SDGS LINKAGE



## Human Resource Management Activities



## Work and Life Balance

### Family-friendly Management

- Hyosung endeavors to ensure that its employees are able to balance work and life by actively operating a family-friendly system, and encourages a culture of respect for human rights.
- In recognition of our continuous family-friendly management, Hyosung earned the Family-friendly Management Certification in 2015. Moreover, Hyosung TNC, Hyosung Heavy Industries, Hyosung Advanced Materials, and Hyosung Chemical also obtained this certification after the operating company spin-off in 2018. Five companies maintain the certification.
- Through the Family-friendly Management Certification, external experts have verified and certified that employees are making active use of our family-friendly system, such as the flexible work system and parenting support. We plan to continuously establish and supplement related systems to build a culture of respect for human rights across the company through re-certification and online self-inspection every year, with the aim of maintaining a family-friendly working environment.

### Maternity Protection Policy

- Hyosung practices 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, we offer reduced working hours of 2 hours per day within 12 weeks after pregnancy or after 36 weeks of pregnancy.
- We guarantee maternity leave and provide support for medical expenses in case of miscarriage or complications.
- 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 availed. In addition, employees can use the nursing room within the company and breastfeeding time is guaranteed for 30 minutes or more, twice a day, in the office.
- A special ID card is provided to pregnant employees to help their colleagues be more aware and considerate. We also provide family care leave and parental leave for spouses in case children or family members fall ill, and have enforced a policy to prevent overwork by pregnant women at night or during holidays.

### Flexible Working Arrangements

- Hyosung complies with the legal working hours (52 hours per week) and supports flexible working arrangements to increase employees' productivity.
- We have established an optional working hours system and flexible working hours system, and overtime pay is given for additional working hours.
- In this way, employees can manage their time flexibly and efficiently depending on their workloads.

### Workplace Daycare Centers

- Hyosung operates in-house daycare centers in the Mapo, Changwon, and Ulsan offices.
- We offer the best childcare environment at these centers by regularly conducting inspections for toxic substances and ensuring high-quality education and reliable childcare by teachers from professional childcare service agencies.



사내어린이집 숲체험 활동

### Refresh Day and Designated Holiday System

- Through the 'Refresh Day Policy', Hyosung encourages employees to use a maximum of five annual paid holidays in a row in cases where they find it difficult to use up their paid holidays due to plant operation schedules.
- We also operate the designated holiday system through which employees are given days off, usually in connection to one-day national holidays or traditional holidays. In 2021, eight days were designated as holidays under this system, even in months when there were no statutory holidays.
- This allows employees to fully recharge and return to work with vigor.

### Retirement Support System

- Hyosung provides career design training for prospective retirees to help them plan their second lives.
- Career design training consists of assistance with re-employment, launching start-ups, and career planning after retirement.

# Human Resource Management

## Expanding Organizational Culture Activities

### Conversation with Top Management

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

### Team Building Activities (HOT, Hyosung One Team)

- Hyosung operates a team building program, Hyosung One Team (HOT), so that all teams can deliver the best capabilities based on communication and cooperation.
- The HOT program took place by voluntary participation of company teams until 2018. Since 2019, it has been linked to the training program for new team leaders so that they are provided with opportunities to quickly restructure their teams and communicate smoothly with team members.
- Through this program, participants can reflect on their team culture, identify underlying problems, and derive countermeasures together, using it as an opportunity to make new progress.
- In 2020, we temporarily paused the HOT training program due to the COVID-19 pandemic. However, we are currently revising and supplementing the program with a view to resuming it in 2022.

### Proud Hyosung-er Award

- The Proud Hyosung-er Award is awarded on a quarterly and annual basis to executives or employees who achieve outstanding performance in contributing to our growth and development.
- Winners are selected from the marketing, technology, research, and management support divisions, and monetary incentives and promotion-related advantages are given as rewards.

## Expanding Communication

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

- Hyosung operates communication boards such as 'Tong Tong Bulletin Board' and 'Wa-gle Wa-gle' on the company intranet so that all employees can widely share business information and news, as well as freely exchange their opinions.
- The Tong Tong Bulletin Board serves as a communication platform across entire business units, with communicators from each unit sharing posts along with photos to promote business activities.
- The Tong Tong Bulletin Board also facilitates interactive communication by actively responding to the suggestions posted by employees (437 posts in 2021).
- We share diverse news both within and outside the company - including major corporate news, updates on social responsibility activities, and employee stories - through the Hyosung blog, 'MY FRIEND HYOSUNG', the company magazine, and HBS.
- We also created YouTube and NAVER TV channels for internal and external communication.

#### ▶ Status of Internal Bulletin Boards in 2021



#### ▶ External Communication Channels

- Hyosung Official Facebook Page**  
<https://www.facebook.com/myfriendhyosung>
- Hyosung Official Naver Post Page**  
<https://post.naver.com/hyosungpr>
- YouTube Channel - Hyosung TV**  
<https://www.youtube.com/channel/UCpR8UwUbf20GCWJy4hxCOdQ>
- Hyosung Blog - MY FRIEND HYOSUNG**  
<https://blog.hyosung.com>
- Hyosung Kakao Talk Channel**  
[Http://pf.kakao.com/\\_vxfxdPj](http://pf.kakao.com/_vxfxdPj)

### Selection and Management of Communicators

- In order to facilitate cross-departmental communication in PGs and PUs, we are designating 'Communicators' at each business site.
- At least one employee at each site should be selected as a communicator. Once appointed as a communicator, the employee is responsible for communicating and sharing information on issues pertaining to their business site, after undergoing proper training related to organizational communication.

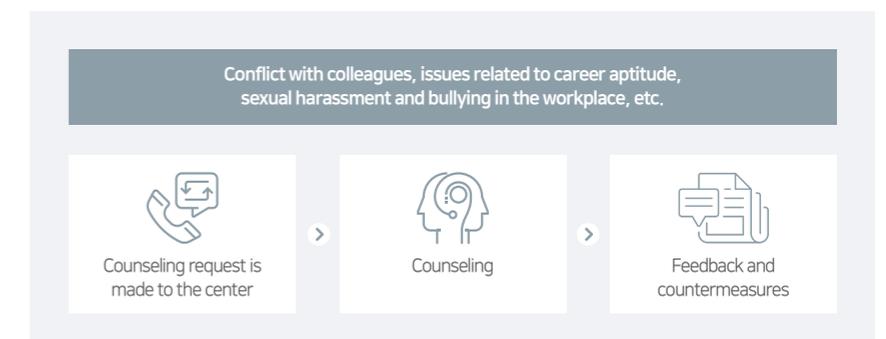
### Enhanced Communication on Employee Relations

- Labor unions exist within the company. At each business site, they transparently disclose our management status to employees through regular briefing sessions or round-table meetings for each labor-management level.
- We operate the Labor-Management Committee at our headquarters, as well as at each business site, and hold quarterly meetings to discuss welfare, grievances, and the health and safety concerns of employees. Received complaints are handled company-wide, and the status of improvements is constantly monitored.

### HR Counseling Center

- The HR Counseling Center acts as a communication channel to collect and deliver employees' work-related grievances regarding various issues, such as sexual harassment, embezzlement, and personnel corruption, to our executives.
- HR executives conduct direct interviews with employees and give them feedback under strict confidentiality.
- As a result, we have been able to increase employee satisfaction and lower the employee turnover rate by providing them with grievance counselling and opportunities to change job duties.

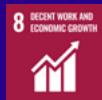
#### ▶ HR Counselling Process



# Research and Development

Hyosung is strengthening its brand value through management of customer value and ceaseless quality improvement, as well as implementing R&D projects based on field-specific, expert research systems. R&D organizations are operated under the leadership of the R&D Committee, consisting of the CEO and relevant personnel, thereby spreading a culture of technology convergence and introducing up-to-date products and technologies. We plan to further enhance our product capacity by continuing with our R&D and investments related to technology.

## UN SDGS LINKAGE



### R&D Organization System



## Establishing the R&D System

### R&D Promotion Framework

#### R&D Committee

- The R&D Committee fulfils its role in discussing the status of R&D regarding the main business items of our subsidiaries, as well as reflecting customers' requirements in our R&D strategies.
- The Committee is held twice every year to define the direction of R&D activities and to comprehensively review the opinions shared by related departments.

#### Internal Technology Exchange Meetings

- We hold internal technology exchange meetings to share technologies among related departments within the company and thereby enhance our R&D efficiency.
- We regularly operate fundamental technology taskforces to acquire core base technologies and internalize our research capacity.
- We are working on facilitating a corporate culture driven by technology convergence.
- We are tackling research challenges with a high level of effectiveness.

### Plans and Outcomes of R&D Expenses

(Unit: KRW 1 million)

Company	2021 R&D expenses planned	2021 R&D expenses outcome
Hyosung TNC	15,937	18,057
Hyosung Heavy Industries	37,119	33,498
Hyosung Advanced Materials	28,685	30,955
Hyosung Chemical	20,669	21,783

\*Based on consolidated financial statements within the business report for the relevant year.

\*\*Hyosung signed a development service contract with its subsidiaries to conduct R&D and patent registration and application work at the Hyosung R&D Center, under Hyosung Corporation.

### R&D Organization

- The R&D organization consists of Hyosung R&DB Labs, the Power & Industrial Systems R&D Center, and the Steel Wire Technical Center.
- In 2019, the Production Technology Center was established to strengthen technology competitiveness throughout the company by connecting Hyosung R&DB Labs with each production organization, and to nurture human resources specialized in core technologies.

#### Hyosung R&DB Labs

- As Korea's first R&D center affiliated with a private corporation, Hyosung R&DB Labs has extended its research areas to include chemical products, raw materials, and new materials, based on its research capabilities in synthetic textiles.
- Besides securing research technology for promising new businesses that will serve as our growth engine in the future, we are striving to develop new products and processes for existing business areas and are applying these at an early stage.

#### Steel Wire Technical Center

- The Steel Wire Technical Center was established for the purpose of developing Steel Cord and Bead Wire, as well as enhancing their production processes.
- As a research institute specialized in steel wire materials, it is strengthening its research capabilities and operates research centers in China and Vietnam, and seeks to apply new technologies to production sites to promptly meet customers' needs.
- The Center is leading research on improving the performance of tires and making them increasingly lightweight, as well as developing new eco-friendly products that could reduce the use of hazardous substances.
- We have expanded our advanced analysis equipment, pilot research facilities, and research organization to reinforce our base technology and research capabilities.

### Power & Industrial Systems R&D Center

- Since its foundation, the Power & Industrial Systems R&D Center has been at the forefront of the technological development of heavy electric machines in Korea. It is currently focused on developing new technologies such as ESS, STATCOM, and voltage-source HVDC to better cope with the power industry's paradigm shift to DC grids in the future.
- The Center focuses on the establishment and development of asset management solutions that provide systematic management services for facility assets through a combination of products, services, and operation systems – based on Industry 4.0 technologies.

### Production Technology Center

- The Production Technology Center was established to efficiently apply newly developed technologies to the production line.
- It is charged with reviewing the newest facilities required by plants, the optimization of process design and operating conditions using computer simulation technology, support for new construction and extension projects, and plans for the application of new technology. The results of these reviews are reflected in our production organization.

### Patent Registration and Application (Accumulated)

Company	Registration (Unit: Case)	Application (Unit: Case)
Hyosung TNC	789	1,581
Hyosung Heavy Industries	449	635
Hyosung Advanced Materials	963	1,709
Hyosung Chemical	1,109	2,121

# Information Security

Hyosung has established a robust information security system that can derive prompt countermeasures to constantly changing security issues. Confidential information is separately managed by different sectors in accordance with information security regulations and standards. The organizations in charge of information security efficiently carry out various activities through the clear assignment of roles and responsibilities, as well as mutual cooperation. We also conduct diverse awareness building activities for our employees.

## Organizational Structure for Information Security



### UN SDGS LINKAGE



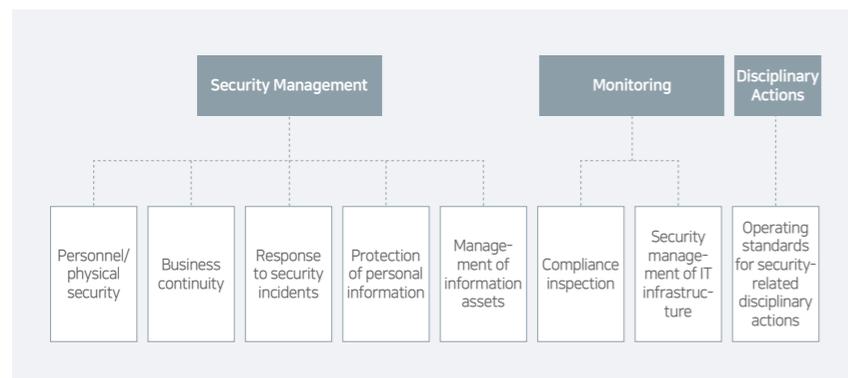
## Strengthening the Information Security System

### Organizational Structure for Information Security

- Each organization manages security-related activities under the guidance and supervision of the Chief Information Security Officer (CISO), who has at least five years of dedicated experience in information security.
- The Security Team is responsible for regular monitoring, risk management, and the management of ad hoc requests at the group level.
- The CISO and security officer of each operating company manages and monitors the company's information security activities, reporting the results to the Security Team who, in turn, evaluates these results and communicates appropriate countermeasures.

### Regulations and Operating Standards for Information Security

- In order to protect important information and data assets held by the company, and to create an environment in which data is used more safely, Hyosung has categorized its information security regulations and operating standards in terms of employees, visitors, trainees, temporary employees, and contract-related personnel.



## Main Activities for Information Security

### Protection of Personal Information

- In order to comply with the Personal Information Protection Act, we constantly keep track of any amendments to the Act, while also ensuring stringent protection of the personal information we hold.
- We regularly check to confirm deletion of personal information after expiry of the retention period, and we monitor our personal data processing system to meet technical requirements.
- Hyosung TNC, Hyosung Heavy Industries, and Hyosung Advanced Materials have subscribed to damage liability insurance, as stipulated by the Information and Communications Network Act, to fulfill their obligations to compensate for damages caused in the event of personal data leaks.

### Monitoring of Security Logs

- In order to prevent the leakage of confidential business information by internal stakeholders, such as employees or prospective retirees, we monitor the PC logs and email histories of employees to keep track of any abnormal user behavior.
- In each department, team leaders review the security logs (external emails, external download histories, USB use logs, etc.) of team members and register any relevant feedback.

### Prevention of Cyber Security Incidents

- Since 2020, Hyosung has been collecting data on domestic and international cyber security incidents through an external security management company, with a view to updating our security equipment and protecting the company from similar accidents. In addition, we monitor security logs on a real-time basis to immediately respond in the event abnormal activities are detected.
- In 2021, we minimized the risk of cyber security incidents arising from leakage of account information by applying double (2-factor) authentication using OTP (One Time Password) when accessing our in-house network from smart work environments, such when as working from home.

### External Cooperation System

- Hyosung cooperates closely with The Korean Association for Industrial Technology Security, which provides association members with services such as conferences, newsletters on the latest security issues, training, and consulting.
- Through continuous exchanges and cooperation with the Association and its member companies, we are making various efforts to improve our resilience to security incidents and to implement a security policy that complies with global standards – as well as governmental policies.
- In 2021, in recognition of our efforts to protect industrial technology, we received a Commendation from the Ministry of Trade, Industry and Energy on "Industrial Technology Protection Day".

### Building Information Security Awareness among Employees

- We have been continuously improving employees' awareness of security issues by providing them with online/offline information security training that includes data breach awareness programs, measures for the protection of personal information, and real-world examples of data breaches.
- To prevent security incidents, we conduct awareness building activities such as mock training on malicious emails for all employees, which helps them understand which actions to take when receiving suspicious emails.
- As a result of our annual self-assessment of personal security, employees' security capabilities are improving – including in terms of compliance with security regulations.

Category	Trainees	Training cycle
Announcement via Email/Internal Bulletin	All employees	Frequently
Pop-ups on the Groupware Platform	All employees	Daily
Offline Training for Security Personnel	Persons in charge of information security in each department	Once a year
Online Training for Employees	All employees	Once a year



# ESG PERFORMANCE

63 Stakeholder Engagement   64 Materiality Assessment   65 Hyosung Corporation   72 Hyosung TNC   81 Hyosung Heavy Industries   89 Hyosung Advanced Materials   99 Hyosung Chemical

## Stakeholder Engagement

### Main Interests and Engagement Channels by Stakeholder Group

Hyosung would like to provide stakeholders with unique values based on a clear understanding of their interests and subsequent integration of these interests in our strategy. We have selected material stakeholder groups and established communication strategies suitable for each based on an analysis of risks and opportunities. Moreover, we pursue sincerity in our communication with stakeholders across our management activities, while providing products and services that create economic and social values, building a sustainable supply chain, fostering a human rights and environment-conscious workplace, and carrying out CSR activities for local communities.

Stakeholder Group	Main Interests	Our Responses	Communication Channels
<p>Customers</p>	<ul style="list-style-type: none"> <li>· Producing innovative products through R&amp;D</li> <li>· Providing products tailored to our customers</li> <li>· Continued communication after purchase</li> </ul>	<ul style="list-style-type: none"> <li>· We aim to enhance 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 (Occasional)</li> <li>· Global exhibitions (Occasional)</li> <li>· Technology exchange meetings (Occasional)</li> <li>· Customer satisfaction surveys</li> <li>· Regular newsletter (Monthly, yearly)</li> </ul>
<p>Employees</p>	<ul style="list-style-type: none"> <li>· Providing fair evaluation and opportunities</li> <li>· Facilitating communication between employees and management</li> <li>· Creating a pleasant working environment</li> </ul>	<ul style="list-style-type: none"> <li>· By providing diverse benefits and a fair performance evaluation system, we strive to create an excellent working environment. We also encourage employees to actively participate in management.</li> </ul>	<ul style="list-style-type: none"> <li>· Wa-gle Wa-gle, Tong Tong Bulletin Board (Occasional)</li> <li>· Communicator system</li> <li>· Conversation with management meeting (Quarterly)</li> <li>· Performance sharing meeting / business briefing meeting (Quarterly)</li> <li>· Multi-level meetings (Occasional)</li> <li>· Regular newsletter (1 to 2 times a month)</li> </ul>
<p>Suppliers</p>	<ul style="list-style-type: none"> <li>· Fair distribution of outcomes</li> <li>· Preventing unfair demands or unnecessary business interference</li> <li>· Promoting fair business practices</li> </ul>	<ul style="list-style-type: none"> <li>· We continue to monitor the status of our suppliers' sustainable management, promoting their practice of sustainability by providing training and supporting shared growth activities.</li> </ul>	<ul style="list-style-type: none"> <li>· Meeting with suppliers (Occasional)</li> <li>· Support for quality and safety improvements (Occasional)</li> <li>· Hotline / whistleblowing (Occasional)</li> <li>· Win-win cooperation program (Occasional)</li> </ul>
<p>Shareholders and Investors</p>	<ul style="list-style-type: none"> <li>· Ensuring sustainable growth engines</li> <li>· Ensuring financial soundness and profitability</li> <li>· Ensuring sound governance</li> </ul>	<ul style="list-style-type: none"> <li>· In addition to financial information, we disclose our sustainability performance and, through performance evaluations, listen to the opinions of shareholders and investors on improving our sustainable management.</li> </ul>	<ul style="list-style-type: none"> <li>· Corporate IR activities (Occasional)</li> <li>· BOD (at least once a quarter) and shareholders' meeting (Yearly)</li> <li>· Business reports (Yearly)</li> <li>· Corporate disclosure via the Korea Exchange (Occasional)</li> </ul>
<p>Local Communities</p>	<ul style="list-style-type: none"> <li>· Interactive two-way communication</li> <li>· Dissemination of sincere CSR activities</li> <li>· Sustainable long-term support for skills growth instead of one-off support</li> </ul>	<ul style="list-style-type: none"> <li>· Through various communication channels, we constantly communicate with local communities and seek to contribute to their development by carrying out CSR activities aligned with the characteristics of each operating company.</li> </ul>	<ul style="list-style-type: none"> <li>· Environmental clean-up activities (Monthly at workplaces)</li> <li>· Open-house events at plants (Occasional)</li> <li>· Business-related CSR activities (Occasional)</li> <li>· Local community councils (Occasional)</li> </ul>

## Materiality Assessment

Hyosung selects core issues by analyzing their impacts on the business and the interests of major domestic and international stakeholders. The materiality assessment is conducted by comprehensively considering international standards for sustainable management, such as the GRI Standards, UN SDGs, and ISO 26000, as well as social issues in the media and relevant trends within our industry. In 2021, we identified a total of 12 core issues. This report outlines our management approach and major achievements in terms of these issues.

### Materiality Assessment Process

#### 1. Establishing a Pool of Sustainability Issues

We created a pool of 53 sustainability issues based on an analysis of key international standards (GRI Standards, EcoVadis, ISO26000, UNGC, UN SDGs, TCFD, SASB, etc.), internal corporate documents – such as project plans – and mid- to long-term business strategies, as well as market research.

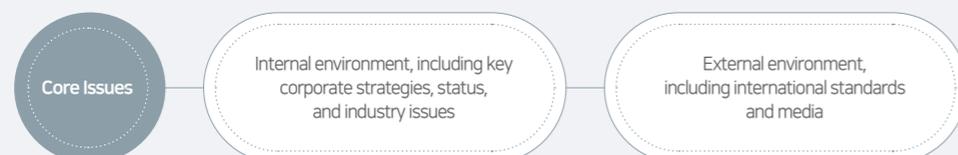
#### 2. Selecting Material Issues

Material issues were selected from among the 53 issues in the issue pool, after evaluating the importance of each issue in terms of business impact and stakeholder interest. Business impact was measured in terms of the level of management interest and correlation with business strategy and financial performance.

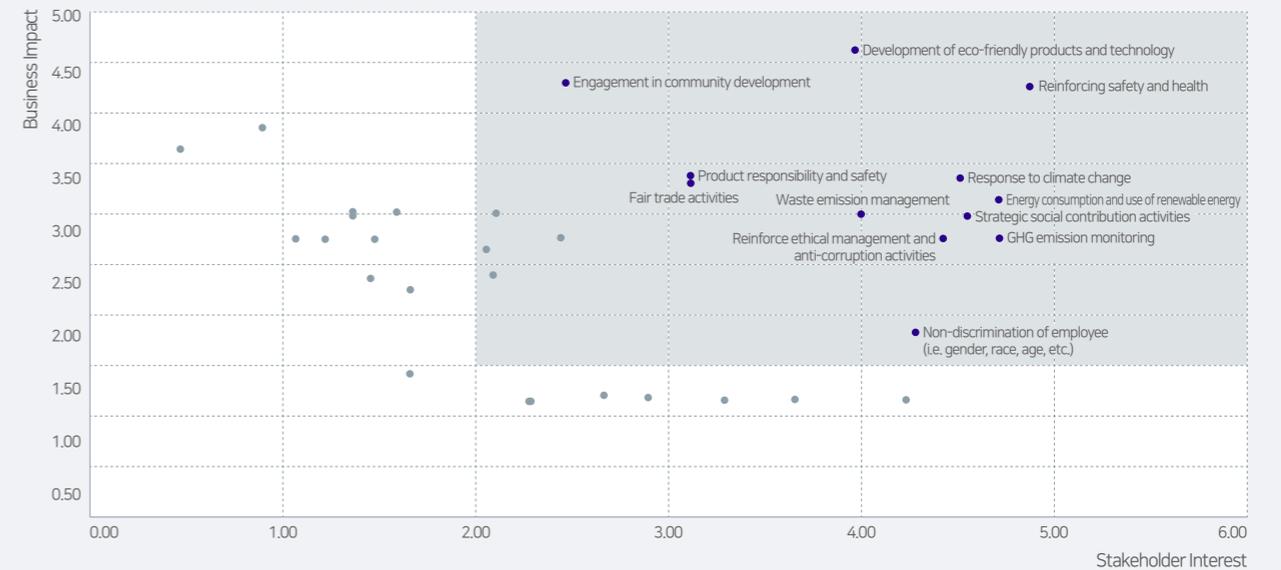
Materiality Assessment			
<p><b>Peer Group Issues</b></p> <p>Analyzing issues from a total 30 peer companies from the same or relevant industries</p>	<p><b>Internal Data Review</b></p> <p>Analyzing data reported to the Sustainable Management Committee, as well as the direction of major projects</p>	<p><b>Media Research</b></p> <p>Analysis of 6,224 articles in terms of economic, social and environmental issues</p>	<p><b>Analysis of International Standards</b></p> <ul style="list-style-type: none"> <li>·GRI Std.</li> <li>·SDGs</li> <li>·EcoVadis</li> <li>·TCFD</li> <li>·ISO26000</li> <li>·SASB</li> <li>·UNGC</li> <li>·KCGS</li> </ul>

#### 3. Report Structure and Content Planning

Within the 12 core issues identified via in the 2021 materiality assessment, there are less economic issues compared to 2020, while issues relating to the environment and society have increased. Hyosung selected key issues for reporting based on the core issues identified via the Materiality Assessment, and planned the structure and content of this Report accordingly.



### Core Issues Derived from the Materiality Assessment



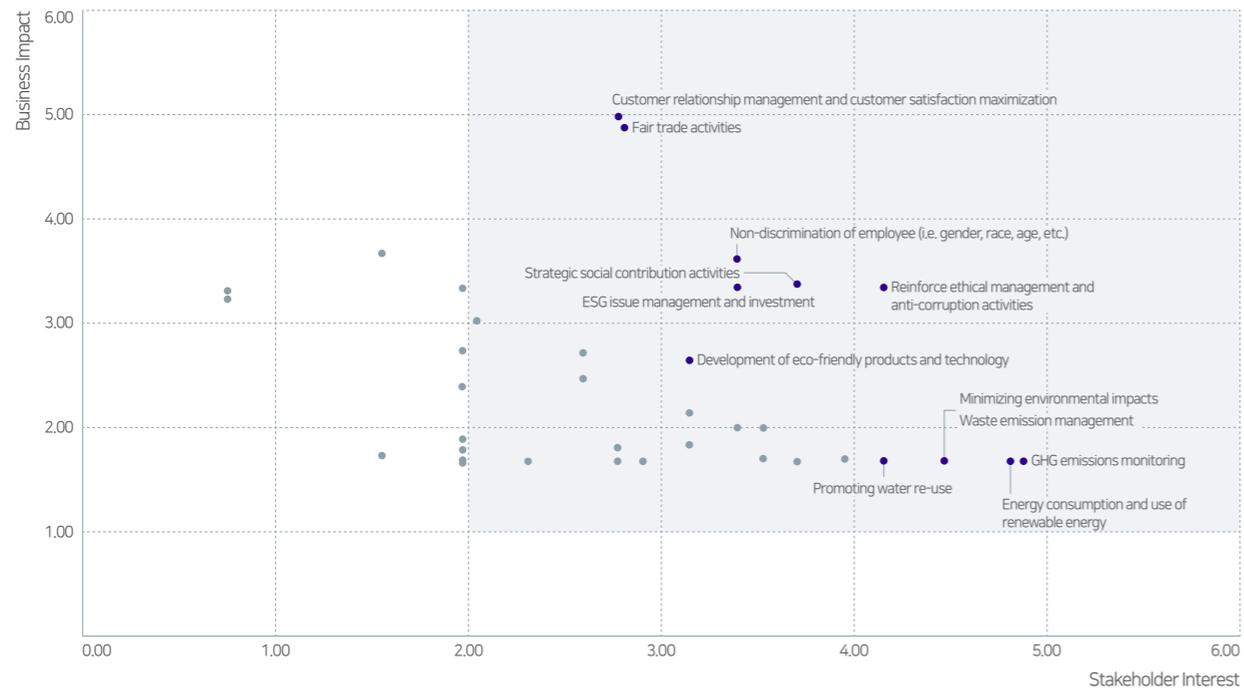
Category	Core Issues	GRI Topic	Stakeholder Importance					Reporting Page
			Customers	Employees	Suppliers	Shareholders and Investors	Local Communities	
Society	① Reinforcing safety and health	GRI 403 (Occupational Health and Safety)		●	●			30-36
Environment	② Development of eco-friendly products and technology	-	●			●		24-29
Environment	③ Response to climate change	GRI 305 (Emissions)	●	●	●	●	●	17-23
Environment	④ Energy consumption and use of renewable energy	GRI 302 (Energy)		●	●			69
Society	⑤ Strategic social contribution activities	GRI 203 (Indirect Economic Impacts)					●	46-48
Environment	⑥ GHG emissions monitoring	GRI 305 (Emissions)		●	●			69
Economic	⑦ Reinforce ethical management and anti-corruption activities	GRI 205 (Anti-corruption)	●	●	●	●		53
Environment	⑧ Waste emission management	GRI 306 (Waste)		●	●			70
Society	⑨ Engagement in community development	GRI 413 (Local Communities)					●	46-48
Economic	⑩ Product responsibility and safety	GRI 416 (Customer Health and Safety)	●					41-45
Economic	⑪ Fair trade activities	-			●			39
Society	⑫ Non-discrimination of employee (i.e. gender, race, age, etc.)	GRI 406 (Non-discrimination)		●				54

\* Materiality assessment results cover Hyosung, Hyosung TNC, Hyosung Heavy Industries, Hyosung Advanced Materials, and Hyosung Chemical.

## Economic Performance

In 2021, the economy was expected to show signs of recovery due to the continued fiscal expansion policies of major countries such as the United States and Europe, as well as the spread of COVID-19 vaccines. In the second half of 2021, external economic uncertainty has spread further due to global supply chain disruption, increased raw material prices, and the spread of COVID-19 variants. Hyosung strives to increase its shareholder value by securing its market status and enhancing brand value in the face of these external uncertainties.

### Core Issues Derived from the Materiality Assessment



Category	Core Issues	GRI Topic	Stakeholder Importance					Reporting Page
			Customers	Employees	Suppliers	Shareholders and Investors	Local Communities	
Economic	① Customer relationship management and customer satisfaction maximization	GRI 417 (Marketing and Labeling)	●			●		41
Economic	② Fair trade activities	-			●			39
Economic	③ Reinforce ethical management and anti-corruption activities	GRI 205 (Anti-corruption)	●	●	●	●		53
Society	④ Strategic social contribution activities	GRI 203 (Indirect Economic Impacts)					●	46-48
Society	⑤ Non-discrimination of employee (i.e. gender, race, age, etc.)	GRI 406 (Non-discrimination)		●				54
Economic	⑥ ESG issue management and investment	-	●			●		52
Environment	⑦ GHG emissions monitoring	GRI 305 (Emissions)		●	●			69
Environment	⑧ Energy consumption and use of renewable energy	GRI 302 (Energy)		●	●			69
Environment	⑨ Waste emission management	GRI 306 (Waste)		●	●			70
Environment	⑩ Minimizing environmental impacts	-	●	●	●	●	●	17-19
Environment	⑪ Promoting water re-use	GRI 303 (Water and Effluents)		●	●		●	70
Environment	⑫ Development of eco-friendly products and technology	-	●			●		24

### Financial Statements (Consolidated)

(Unit: KRW 1 million)

Category	2019	2020	2021
<b>Current assets</b>	1,312,040	1,626,795	1,906,512
Cash and cash equivalents	189,328	222,015	181,960
Trade and other current receivables	403,089	493,060	738,947
Inventories	573,742	463,206	696,362
Other current assets	145,881	448,515	289,243
<b>Non-current assets</b>	5,215,015	2,802,955	3,351,362
Long-term trade and other non-current receivables	48,054	41,676	29,792
Tangible assets	918,325	930,909	1,000,116
Investment in properties	300,262	278,154	263,733
Intangible assets	160,511	73,081	67,740
Investment in subsidiaries and affiliates	1,280,661	1,257,906	1,785,826
Other non-current financial assets	2,507,202	221,229	204,156
<b>Total assets</b>	<b>6,527,055</b>	<b>4,429,750</b>	<b>5,257,874</b>
<b>Current liabilities</b>	2,238,402	1,090,338	1,561,239
Trade and other current payables	431,206	404,628	538,403
Borrowings	1,513,215	392,008	837,517
Other current liabilities	293,981	293,701	185,318
<b>Non-current liabilities</b>	1,578,411	825,089	704,361
Long-term trade and other non-current payables	206,091	20,751	15,070
Long-term borrowings	988,378	448,281	270,436
Other non-current liabilities	383,942	356,058	418,855
<b>Total liabilities</b>	<b>3,816,813</b>	<b>1,915,427</b>	<b>2,265,600</b>
<b>Capital stock</b>	105,355	105,355	105,355
<b>Retained earnings</b>	6,336,611	6,180,531	6,498,302
<b>Other components of equity</b>	(4,001,579)	(4,052,618)	(3,978,408)
<b>Non-controlling interest</b>	269,855	281,055	367,025
<b>Total equity</b>	<b>2,710,242</b>	<b>2,514,323</b>	<b>2,992,274</b>

### Consolidated Statements of Comprehensive Income

(Unit: KRW 1 million)

Category	2019	2020	2021
Sales	2,970,708	2,596,176	3,538,943
Cost of sales	2,514,330	2,199,348	2,601,583
Gross profit	456,378	396,828	937,360
SG&A	238,171	239,904	277,362
R&D expenses	18,203	19,783	19,435
Operating profit	200,005	137,141	640,563
Other gain	12,552	57,869	29,657
Other loss	20,744	35,384	16,794
Finance income	39,783	46,951	63,896
Finance expenses	68,313	98,324	78,412
Profit before tax	163,282	108,236	638,910
Income tax expenses	42,619	14,109	95,906
Net profit	150,009	1,220	540,587
Other comprehensive income	74,711	(28,658)	(3,904)
<b>Comprehensive income</b>	<b>615,297</b>	<b>(27,438)</b>	<b>146,105</b>

## Economic Performance

In 2021, the economy was expected to show signs of recovery due to the continued fiscal expansion policies of major countries such as the United States and Europe and the spread of COVID-19 vaccines. In the second half of 2021, external economic uncertainty has spread further due to global supply chain disruption, increased raw material prices, and the spread of COVID-19 variants. Hyosung strives to increase its shareholder value by securing its market status and enhancing brand value in the face of these external uncertainties.

### Corporation Tax by Country

Hyosung has business operations in different countries around the world. Complying with the tax regulations of each country, we faithfully pay taxes on the profits generated in each region. To date, we have not been involved in any disputes related to tax in the countries in which we conduct business.

Category	Sub-category	Unit	2019	2020	2021
Republic of Korea	Sales	KRW 1 million	1,978,082	1,826,403	2,891,085
	Profit before tax	KRW 1 million	204,031	88,544	627,550
	Corporate tax	KRW 1 million	43,455	31,794	56,742
	Tax rate	%	24.2	24.2	24.2
	Effective tax rate	%	21.3	35.9	9.0
United States	Sales	KRW 1 million	1,528,960	1,312,738	1,428,735
	Profit before tax	KRW 1 million	386,735	416,416	32,221
	Corporate tax	KRW 1 million	2,282	(2,376)	7,186
	Tax rate	%	22.0~24.0	22.0~24.0	22.0~24.0
	Effective tax rate	%	0.6	(0.6)	22.3
Mexico	Sales	KRW 1 million	25,387	22,800	38,993
	Profit before tax	KRW 1 million	2,157	(1,341)	(3,307)
	Corporate tax	KRW 1 million	-	624	(382)
	Tax rate	%	30.0	30.0	30.0
	Effective tax rate	%	0.0	(46.6)	11.6
Brazil	Sales	KRW 1 million	208	32	100
	Profit before tax	KRW 1 million	140	(2)	(4)
	Corporate tax	KRW 1 million	11	-	2
	Tax rate	%	34.0	34.0	34.0
	Effective tax rate	%	7.9	(2.9)	(50.0)
China	Sales	KRW 1 million	244,422	230,572	256,157
	Profit before tax	KRW 1 million	5,609	6,524	7,431
	Corporate tax	KRW 1 million	1,556	1,677	1,807
	Tax rate	%	20.0	20.0	20.0
	Effective tax rate	%	27.7	25.7	24.3
Russia	Sales	KRW 1 million	231,267	177,755	142,055
	Profit before tax	KRW 1 million	6,252	(152)	1,791
	Corporate tax	KRW 1 million	1,223	718	323
	Tax rate	%	20.0	20.0	20.0
	Effective tax rate	%	19.6	(473.4)	18.0
Indonesia	Sales	KRW 1 million	32,345	25,481	28,609
	Profit before tax	KRW 1 million	475	(305)	59
	Corporate tax	KRW 1 million	314	140	-
	Tax rate	%	25.0	25.0	25.0
	Effective tax rate	%	66.1	(45.9)	0.0

\* Values may differ from those in the consolidated financial statements due to internal transactions among consolidated companies, as well as unrealized gains or losses.

### Financial Losses

Hyosung abides by fair business practices in its corporate management. Fines from non-compliance issues have not occurred for three consecutive years.

Category	Unit	2019	2020	2021
Total amount of monetary losses as a result of legal proceedings associated with fraud, insider trading, anti-trust, anti-competitive behavior, market manipulation, malpractice, or other related financial industry laws or regulations	KRW 1 million	-	-	-
Total amount of monetary losses as a result of legal proceedings associated with marketing and communication of financial product related information to new and returning customers	KRW 1 million	-	-	-
Total amount of monetary losses as a result of violation of environmental regulations, such as pollutant emissions	KRW 1 million	-	-	-

### Status of Suppliers

Hyosung conducts effective supplier management and contributes to the facilitation of fair subcontracting practices by enhancing transparency and fairness throughout the selection and management of suppliers.

Category	Unit	2019	2020	2021
Number of suppliers	No.	262	247	290
Total purchase from suppliers	KRW 1 million	20,003	14,115	31,103

Category	Unit	Anyang plant	R&DB Labs	R&D Center	Total
Number of suppliers	No.	132	3	155	290
Total purchase from suppliers	KRW 1 million	20,685	1,122	9,296	31,103

\* The number of suppliers includes companies that supply raw materials, whilst the number of suppliers for R&DB Labs includes only suppliers with shared growth agreements.

## Social Performance

Hyosung actively hires new employees through processes such as open recruitment and employment of discharged military officers, even under difficult business conditions. We have also focused on fostering female human resources, resulting in a 4% increase in the ratio of female managers compared to the previous year. In order to balance work and family, male employees were encouraged to use parental leave. We have achieved a 100% 'return rate after parental leave' for three consecutive years by creating an environment that facilitates their return to work, including by assigning departments in consideration of their experience and needs.

### Employee Status

As of the end of 2021, Hyosung has 668 employees in total. We have been a leader in actively hiring new employees even under difficult business conditions, and have worked on fostering female human resources – leading to increase in the ratio of female managers (manager level or higher) by 4% compared to the previous year.

Category	Sub-category	Unit	2019	2020	2021
Total employees		Persons	587	627	668
Gender	Male	Persons	478	514	510
	Female	Persons	109	113	158
Employment type	Permanent (male)	Persons	459	488	484
	Permanent (female)	Persons	93	102	136
	<b>Subtotal</b>	<b>Persons</b>	<b>552</b>	<b>590</b>	<b>620</b>
	Contract (male)	Persons	19	26	26
	Contract (female)	Persons	16	11	22
	<b>Subtotal</b>	<b>Persons</b>	<b>35</b>	<b>37</b>	<b>48</b>
Region	Domestic	Persons	587	627	668
	Overseas	Persons	27	23	24
Job category (based on permanent workers)	Office	Persons	497	525	560
	Technical	Persons	55	65	60
Fostering female talent	Female employee ratio	%	18.6	18.0	23.7
	Number of women at manager level or higher	Persons	45	45	63
	Female manager ratio	%	12.8	12.7	17.0
Diversity	Persons with disabilities	Persons	8	15	15
	Veterans	Persons	2	2	3
	Foreigners	Persons	5	4	3
	<b>Subtotal</b>	<b>Persons</b>	<b>15</b>	<b>21</b>	<b>21</b>
Creating job opportunities (new hires)	Male	Persons	37	64	26
	Female	Persons	15	13	24
	<b>Subtotal</b>	<b>Persons</b>	<b>52</b>	<b>77</b>	<b>50</b>
Employee turnover (voluntary turnover amongst permanent employees)	Male	Persons	29	10	32
	Female	Persons	12	5	12
	<b>Subtotal</b>	<b>Persons</b>	<b>41</b>	<b>15</b>	<b>44</b>
Turnover rate		%	7.4	2.5	7.1

### Parental Leave and Childcare Leave

The number of both male and female employees using parental leave has increased compared to the previous year, with the number of male employees using parental leave increasing significantly. In addition, the number of employees using childcare leave has also increased compared to the previous year, whilst the return rate after parental leave remains the same at 100%.

Category	Subcategory	Unit	2019	2020	2021
Male (parental leave)	Employees on parental leave	Persons	13	23	19
	Return rate	%	100.0	100.0	100.0
Female (parental leave)	Employees on parental leave	Persons	4	10	7
	Return rate	%	100.0	100.0	100.0
Male (childcare leave)	Employees on childcare leave	Persons	3	3	2
	Return rate	%	100.0	100.0	100.0
	Rate of working more than 12 months after return	%	100.0	67.0	25.0
Female (childcare leave)	Employees on childcare leave	Persons	6	8	7
	Return rate	%	100.0	100.0	100.0
	Rate of working more than 12 months after return	%	75.0	70.0	66.7

### Regular Performance Evaluations

Hyosung operates a fair, skills-based performance management system to emphasize performance and capabilities across the entirety of personnel management, including evaluations, promotions, and transfers, as well as to prevent corruption and foster a sound organizational culture.

Category	Unit	2019	2020	2021
Number of employees subject to performance evaluation	Persons	552	590	620
Performance evaluation rate	%	94	94	93

### Basic Wage and Remuneration

The basic wage and the average wage of new employees have increased by 3% and 7%, respectively.

Category	Unit	2019	2020	2021
Basic salary for entry-level hires	KRW 1,000	3,272	3,501	3,606
Ratio of entry-level salary to mandatory local minimum wage (%)	Male	174.7	181.7	175.5
	Female	174.7	181.7	175.5
Average basic salary	KRW 1,000	4,921	5,449	5,816

## Social Performance

Hyosung actively hires new employees through processes such as open recruitment and employment of discharged military officers, even under difficult business conditions. We have also focused on fostering female human resources, resulting in a 4% increase in the ratio of female managers compared to the previous year. In order to balance work and family, male employees were encouraged to use parental leave. We have achieved a 100% 'return rate after parental leave' for three consecutive years by creating an environment that facilitates their return to work, including by assigning departments in consideration of their experience and needs.

### Labor Union Membership Status

After the spinoff in 2018, Hyosung has encouraged labor union membership amongst our employees, leading to a 10% increase in the union membership rate. We have also established the Labor-Management Council in our headquarters and each business site, holding quarterly meetings to discuss various issues to improve employee welfare. To ensure employees' right to know relevant information, our management status is transparently disclosed to on-site employees through regular business briefing sessions and job-specific group meetings.

Category	Unit	2019	2020	2021
Employees covered by collective bargaining agreements	Persons	60	57	51
Proportion of employees subject to collective bargaining agreements among total employees	%	10.2	9.1	7.6
Number of union workers	Persons	47	44	37
Proportion of union workers	%	78.3	77.2	72.5

### Retirement Pension

Hyosung operates both DB-type and DC-type retirement pensions systems, allowing employees free choice between the two. We comply with all legal standards governing retirement pensions.

Category	Unit	2019	2020	2021
Total operating fund for retirement pensions (DB+DC)	KRW 1 million	79,745	61,892	91,880
Operating fund for DB pension	KRW 1 million	79,322	61,450	91,441
Operating fund for DC pension	KRW 1 million	423	442	439
Total number of members (Persons)	Persons	606	643	684
Number of DB pension members (Persons)	Persons	529	563	609
Number of DC pension members (Persons)	Persons	77	80	75

### CSR Status

Hyosung is ceaselessly carrying out CSR activities with our local communities. In 2021, although in-person volunteer activities were not possible due to COVID-19, we focused on employee participation in salary sharing to provide safe and clean educational environments for children – such as providing separate toilets for men and women, and drinking water and sanitation facilities for elementary schools in underprivileged areas near our workplace in Vietnam. Beginning in 2019, Hyosung has been recognized by the Ministry of Health and Welfare in its 'CSR in the Community' awards scheme for three years running.

Category	Unit	2019	2020	2021
CSR investment	KRW 1 million	606	741	578
Number of CSR programs	Cases	17	17	21

\* The number of CSR programs in 2021 has increased significantly due to an increase in the number of target business sites (headquarters only in 2020 to all business sites in 2021).

### Employee Training Status

Hyosung promotes employee training so that all employees have equal opportunity in terms of capacity-building, thereby helping them grow into specialists in their fields. Our main research organizations, including Hyosung R&DB Labs, Power & Industrial Systems R&D Center, and Production Technology Center, have arranged their own R&D training systems tailored to each department in order to enhance the expertise of our researchers. Employing in-company experts as training instructors, we ensure cross-department knowledge-sharing and provide effective internal training for each job position. We are also working on fostering professional capacities through technology exchanges and joint research projects with external research centers and renowned universities.

Category	Unit	2019	2020	2021
Number of training participants	Persons	9,792	10,860	14,097
Total training expenses	KRW 1,000	432,019	129,622	166,092
Total training hours	Hours	32,577	25,836	32,533
Average training hours per person (total training hours / number of employees)	Hours	55.50	41.21	49
Average training expenses per person (total training expense / number of employees)	KRW	735,978	206,734	248,641
Environmental training	Persons	118	902	508
Ethics and anti-corruption training	Persons	1	538	525
Fair trade training	Persons	14	476	499
Safety and health training	Persons	1,652	3,654	6,426
Human rights training (sexual harassment/disability awareness/workplace harassment prevention)	Persons	1,006	1,561	1,888
Information security training	Persons	931	671	98
Sustainability management training	Persons	-	21	1,065
Retiree training	Persons	-	-	-

### Occupational Accident Rate

In 2021, Hyosung achieved 0 occupational accidents.

Category	Unit	2019	2020	2021
Total number of occupational accidents: Accidents + Occupational disease	Persons	1	1	-
Occupational accident rate: Total number of occupational accidents / Total number of employees x 100	%	0.17	0.16	-
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)	‰	-	-	-

\* In December 2020, an industrial accident case was reported to Hyosung concerning the occupational disease (noise-induced deafness) of a worker who retired in 2005. The accident rate in 2020 was changed to 0.16 following approval as an industrial accident (noise-induced deafness) in September 2021.

## Environmental Performance

Hyosung is contributing to environmental conservation by reducing greenhouse gas emissions and wastewater generated from manufacturing facilities. In addition, we are actively developing technologies for resource recycling and energy saving, and seeking businesses opportunities to make use of new energy sources.

### Energy Consumption

Hyosung reduced its total energy consumption by approximately 3.7% compared to 2018. In 2021, actual production exceeded planned production due to better than expected recovery from COVID-19. Accordingly, energy consumption also increased (our energy consumption plan is established by considering the production plan and planned reduction activities).

Category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)	
Direct energy consumption	Diesel	TJ	0.83	0.89	0.90	1.12
	Kerosene	TJ	0.06	0.10	0.10	0.10
	LNG	TJ	188.30	178.00	176.03	184.48
	Gasoline	TJ	5.76	4.45	4.47	4.18
	Propane	TJ	0.88	0.77	0.77	0.88
	B-C oil	TJ	-	-	-	-
	Hard coal	TJ	-	-	-	-
	Other solid fuels	TJ	-	-	-	-
	Off-gas	TJ	-	-	-	-
	LPG	TJ	-	-	-	-
	Biogas	TJ	-	-	-	-
	<b>Subtotal</b>	<b>TJ</b>	<b>195.83</b>	<b>184.22</b>	<b>182.26</b>	<b>190.75</b>
	Indirect energy consumption	Electricity	TJ	476.01	459.66	446.18
Steam		TJ	9.60	8.35	8.35	8.87
Waste heat from processes		TJ	-	-	-	-
Heat from incinerating waste		TJ	-	-	-	-
<b>Subtotal</b>		<b>TJ</b>	<b>485.61</b>	<b>468.01</b>	<b>454.53</b>	<b>495.38</b>
<b>Total</b>	<b>TJ</b>	<b>681.44</b>	<b>652.22</b>	<b>636.79</b>	<b>686.12</b>	
Energy intensity (Total energy consumption/Sales)	(TJ/KRW 100 million)	0.199	0.221	-	0.065	

\* Emissions intensity was calculated based on sales recorded in general financial statements and not on a consolidated basis, since energy consumption and emissions are calculated only for domestic business sites.

### Greenhouse Gas (GHG) Emissions

Hyosung achieved about 4.9% in emissions reductions compared to the previous year through various efforts to reduce our GHG emissions. However, total GHG emissions in 2020 were relatively low due to a decrease in production arising from COVID-19. Therefore, in 2021, our total GHG emissions increased compared to the previous year.

Category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)	
Direct GHG emissions (Scope 1)	Fixed combustion	tCO2eq	9,610.27	9,086.41	8,975.43	9,409.48
	Mobile combustion	tCO2eq	445.60	359.60	360.42	356.64
	Process emissions	tCO2eq	-	-	-	-
	Waste disposal	tCO2eq	-	-	-	-
	<b>Subtotal</b>	<b>tCO2eq</b>	<b>10,055.87</b>	<b>9,446.02</b>	<b>9,335.85</b>	<b>9,766.12</b>
Indirect GHG emissions (Scope 2)	Electricity	tCO2eq	23,118.76	22,324.66	21,352.16	23,282.08
	Steam	tCO2eq	338.79	290.51	290.51	318.88
	<b>Subtotal</b>	<b>tCO2eq</b>	<b>23,457.56</b>	<b>22,615.17</b>	<b>21,642.67</b>	<b>23,600.96</b>
<b>Total</b>	<b>tCO2eq</b>	<b>33,513.42</b>	<b>32,061.19</b>	<b>30,978.52</b>	<b>33,367.08</b>	
GHG emissions intensity (Total GHG emissions/Sales)	(tCO2eq/KRW 1 million)	0.098	0.109	-	0.032	

\* The data are based on the Guidelines for Reporting and Certification of GHG Emission Trading System (Notice No. 2021-278 of the Ministry of Environment) and the ETS report submitted to the government in the given years, in accordance with the conformity assessment by the Ministry of Environment.

\* CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O are only greenhouse gases emitted. The above GHG emissions total differs from the GHG emissions disclosed in our Business Report due to differences in rounding values for each business site.

### Energy Saving and Emissions Reduction Performance

For an effective response to climate change, Hyosung has established investment plans to save energy and reduce GHG emissions through high-efficiency facility replacements and inverter installation.

Business site	Project name	Date of introduction	Investment budget (KRW 1 million)	Energy savings (kWh/year)	Energy savings (TJ/year)	Emissions reduction (tCO <sub>2</sub> eq/year)
Anyang	High-efficiency refrigerator replacement Oil-free inverter turbo refrigerator 500RT	2019.01	180	1,095,000	10.5	503
Anyang	Small-scale inverter screw compressor	2019.06	95	324,120	3.1	149
Anyang	Installing roots BL for transporting PET chips in the BCF packing room (Operational suspension of the existing high pressure turbo compressor by saving compressed air)	2020.03	30	225,570	2.2	104
Anyang	Installing roots blower inverters at wastewater treatment plants	2020.12	18	197,100	1.9	91
Anyang	20% improvement in compressed air manufacturing efficiency (Introduction of new air compressors and change of piping line)	2021.12	350	2,610,480	25.1	1,199
Anyang	0.9kg/cm <sup>2</sup> decompression of compressed air operating pressure (Operating pressure reduced to low pressure - 7.0kg/cm <sup>2</sup> and high pressure - 9.0kg/cm <sup>2</sup> )	2021.12	105	761,244	7.3	350

## Environmental Performance

### Management of Water Resources

Hyosung is reducing each type of water use, including waterworks and industrial water. Total water usage in 2021 amounted to 550,000 tons, representing a 5.7% reduction from our original target.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Consumption by water source	Waterworks	Ton	83,997	76,595	80,000	81,410
	Groundwater	Ton	-	-	-	-
	Industrial water	Ton	566,910	422,415	500,000	465,796
	River water	Ton	-	-	-	-
Total water consumption	Ton	650,907	499,010	580,000	547,206	
Water re-used	Ton	-	-	-	-	
Water re-use rate	%	-	-	-	-	

### Wastewater and Water Treatment

At Hyosung's Anyang plant, general water pollutants and priority toxic pollutants are inspected by an external specialized agency four times a month and once a quarter, respectively. In addition, to strictly control water quality, we have established our own standard for the release of water pollutants that is within 30% of the legal criteria.

Category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Wastewater discharge	Ton	126,609	93,586	100,000	62,856
Biochemical Oxygen Demand (BOD)	Ton	0.30	0.16	0.20	0.08
Chemical Oxygen Demand (COD)	Ton	1.15	0.64	1.00	0.35
Suspended Solids (SS)	Ton	3.27	1.98	2.00	0.98
Total Nitrogen (T-N)	Ton	0.63	0.54	1.00	0.38
Total Phosphorus (T-P)	Ton	0.01	0.03	0.03	0.01

### Chemical Substances Management

Hyosung manages all chemical substances used in our manufacturing processes through an internal chemicals management system. All purchased materials are checked to confirm whether they contain chemical substances, and the person in charge of chemicals at each business site grants purchase approval after confirming whether they are substances controlled by regulation. Hyosung has not used any hazardous chemical substances for the last three years.

Category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Hazardous chemicals usage	Ton	-	-	-	-
Hazardous chemicals usage intensity	Ton/KRW 1 million	-	-	-	-
Chemical substance emissions	Ton	13,384	15,750	15,000	12,951

### Waste Treatment

Hyosung's Anyang plant reduces waste by processing defect chips and yarns, generated in the production process, into a form that enables them to be resold to recycling enterprises.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Industrial waste (general)	Recycling	Ton	992.0	1,524.0	1,500.0	1,745.3
	Incineration	Ton	-	-	50.0	62.8
	Landfill	Ton	25.1	14.5	20.0	45.6
	Others	Ton	-	-	-	-
	<b>Subtotal</b>	<b>Ton</b>	<b>1,017.1</b>	<b>1,538.5</b>	<b>1,570.0</b>	<b>1,853.8</b>
Industrial waste (designated)	Recycling	Ton	50.4	86.4	70.0	102.8
	Incineration	Ton	-	44.5	10.0	1.2
	Landfill	Ton	-	-	-	-
	Others	Ton	-	11.1	-	-
	<b>Subtotal</b>	<b>Ton</b>	<b>50.4</b>	<b>142.0</b>	<b>80.0</b>	<b>103.9</b>
Total waste	Ton	1,067.4	1,680.5	1,650.0	1,957.7	
Waste recycling amount	Ton	1,042.3	1,610.4	1,570.0	1,848.1	
Waste recycling rate	%	97.6	95.8	95.2	94.4	

### Air Pollutant Emissions

Hyosung's Anyang plant has established its own internal standard for discharging air pollutants, which is 20% of the legal standards for air pollutants such as NOx and SOx. If emissions are found to exceed internal standards after constant monitoring, improvement measures - such as facility replacement - are immediately carried out and air pollutant emissions are minimized by installing low-NOx burners.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
General air pollutants	Nitrogen oxides (NOx)	Ton	12.2	5.8	6.0	1.1
	Sulfur oxides (SOx)	Ton	-	-	-	-
	Particulate matter (PM)	Ton	-	-	-	-
Ozone depleting substances	CFC(R-11)	Ton	-	-	-	-
	HCFC(R-123)	Ton	-	-	-	-
	HCFC(R-22)	Ton	-	-	-	-

## Environmental Performance

### Sales and Purchase of Eco-Friendly Products and Services

Hyosung follows a green purchasing policy, and our Anyang plant continues to implement this policy across different products – including NY recycled chips, bio-PET, LED, and fire extinguishers.

Category	Unit	2019	2020	2021
Sales	KRW 1,000	956,705	703,439	2,595,621
Purchases	KRW 1,000	97,688	72,448	319,822

### Environmental Investments

Hyosung practices green management through continuous environmental investment in waste treatment, environmental restoration, and pollution prevention, as well as environmental management systems, energy efficiency, and greenhouse gas reduction.

Category	Unit	2019	2020	2021
Waste treatment and environment restoration expenses	KRW 1,000	164,380	268,677	327,638
Pollution prevention and environmental management expenses	KRW 1,000	107,063	125,915	228,168
<b>Total</b>	<b>KRW 1,000</b>	<b>271,443</b>	<b>394,592</b>	<b>555,806</b>

Key environmental investment plans and outcomes reported via the ESG Management Promotion Committee are as follows.

(Unit: KRW 1 million)

Category	Description of investment	2021 (Plan)	2021 (Outcome)
Waste treatment expenses and environment insurance	Waste treatment expenses, such as sewage sludge treatment	127.2	160.6
	Environmental liability insurance	2.4	1.6
Preventing environmental pollution	Replacement of boiler #1 with an eco-friendly burner	80.0	80.0
	Installation of an automatic chimney measuring device	-	95.0
	Enhancing storage of wastewater, atmospheric emissions, and waste	88.0	88.0
	Replacement of water tanks, screen tanks and chemical reaction tanks at the wastewater treatment plant / tarpaulin replacement for waste storage (filling replacement waste) sites at non-point pollution prevention facilities	39.0	39.0
Environment management system	Certifications for environment management and safety and health management systems (Acquisition of ISO14001 and transition to ISO45001)	-	5.7
	Establishment of an electronic system for chemical substance management	210.0	190.0
	Establishment of a computer system for calculating CO2 LCA by product	74.0	30.0
	Assurance and consulting service expenses for responding to ETS	14.7	10.2
	Expenses relating to participation in, reporting, and verification of carbon information disclosures	6.7	4.1
Energy efficiency	Reduced power consumption by introducing Tufting high-speed facilities	495.0	100.0
	Reduced power consumption by introducing Tufting high-speed loop exhalation	495.0	495.0
	Enhancing automatic control facilities for compressed air operating pressure	-	57.0

### Environmental Cleanup Activities

Until 2019, employees at the Hyosung Anyang plant carried out environmental cleanup activities every month at Anyangcheon Stream and Hogue Park on an alternating basis, contributing to improving the water quality and ecosystem of our local community. Since 2020, external environmental cleanup activities have been temporarily suspended due to the COVID-19 pandemic.

### Emergency Scenario Response Training

Hyosung establishes contingency plans for emergency scenarios, based on which all employees are trained every year in order to effectively respond to natural disasters such as typhoons, heavy rain, earthquakes, as well as emergency situations such as electrical shocks, suffocation, fires, collapse, crush injuries, and leakage of harmful chemicals. Simulating actual disasters, the training is conducted with the goal of minimizing impacts on the environment and humans by strengthening our emergency response abilities. We protect lives and raise employees' awareness of safety incidents through training and work on ensuring safety through prevention, preparation, response, and recovery in the event of emergency situations, thus mitigating physical and human damage.

### Global Recycled Standard (GRS)

Hyosung has obtained GRS certification for NY and PET-recycled yarn and fabrics produced at the Anyang plant, in response to the expanding recycled textile market and growing customer demands.

Business site	Certification code	Certification subject	Certification date	Expiry date
Anyang plant	CU1059738GRS-2021-00098300	Fabrics: Nylon pre, Nylon post, Polyester post	2020.8.3	2022.8.30
		Dyed yarns: Nylon pre, Nylon post, Polyester post		
		Greige yarns: Nylon pre		

### Zero Emission Vehicles

Hyosung operates zero emission vehicles that help reduce air pollutant and GHGs.

Category (Unit: no. of vehicles)	On-road vehicles			Off-road vehicles			Total
	Electric vehicles	Hydrogen vehicles	Subtotal	Electric vehicles	Hydrogen vehicles	Subtotal	
Hyosung	-	-	-	16	-	16	16

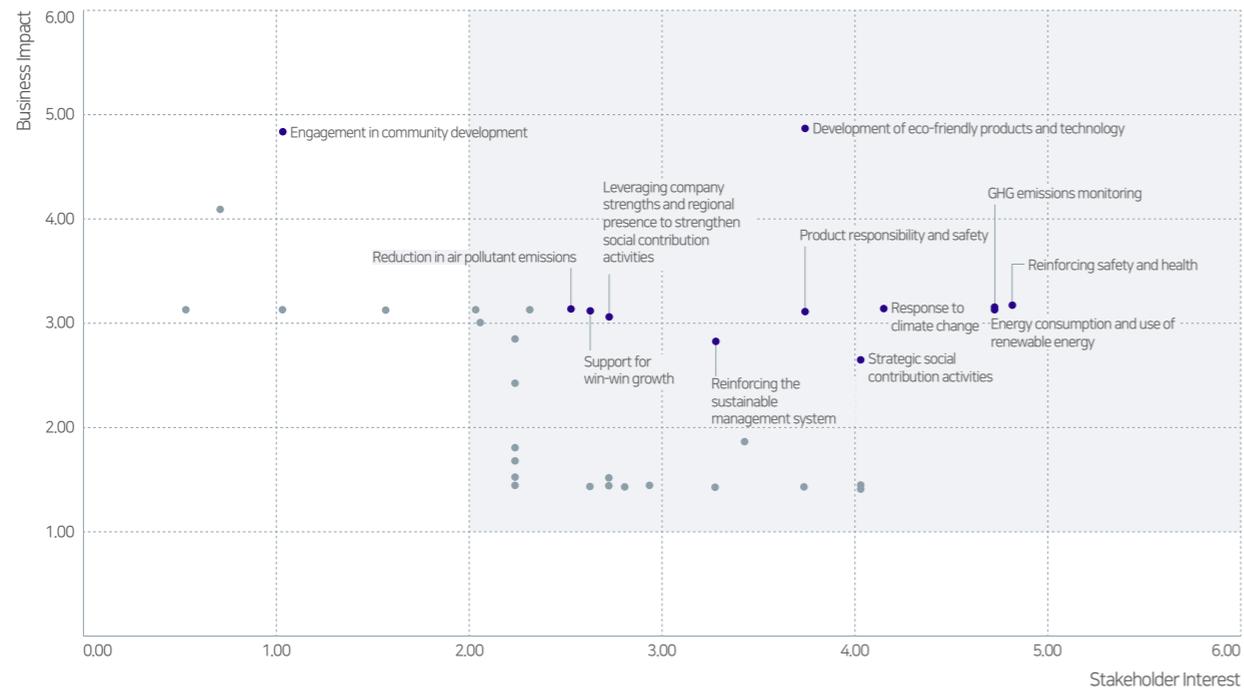
\* On-road vehicles: Passenger cars, vans, trucks, special vehicles, two-wheeled vehicles (excluding electric bicycles)

\* Off-road vehicles: Includes non-specified vehicles such as construction machinery, agricultural machinery, etc. E.g., forklifts, tool cars, and carts used in workplaces

## Economic Performance

In 2021, Hyosung TNC overcame the COVID-19 crisis and achieved a significant increase in both sales and net profit compared to the previous year through active corporate management. In addition, we are securing our mid- and long-term competitiveness through continuous R&D activities.

### Core Issues Derived from the Materiality Assessment



Category	Core Issues	GRI Topic	Stakeholder Importance					Reporting Page
			Customers	Employees	Suppliers	Shareholders and Investors	Local Communities	
Environment	① Development of eco-friendly products and technology	-	●			●		25-26
Society	② Reinforcing safety and health	GRI 403 (Occupational Health and Safety)		●	●			30, 32
Environment	③ Energy consumption and use of renewable energy	GRI 302 (Energy)		●	●			78, 80
Environment	④ GHG emissions monitoring	GRI 305 (Emissions)		●	●			78
Environment	⑤ Response to climate change	GRI 305 (Emissions)	●	●	●	●	●	17-20
Economic	⑥ Product responsibility and safety	GRI 416 (Customer Health and Safety)	●					41-45
Society	⑦ Strategic social contribution activities	GRI 203 (Indirect Economic Impacts)					●	46-48
Economic	⑧ Reinforcing the sustainable management system	-	●			●		17-18
Society	⑨ Engagement in community development	GRI 413 (Local Communities)					●	46-48
Society	⑩ Leveraging company strengths and regional presence to strengthen social contribution activities	GRI 413 (Local Communities)					●	46-48
Society	⑪ Support for win-win growth	-			●			37-39
Environment	⑫ Reduction in air pollutant emissions	GRI 305 (Emissions)					●	79

### Financial Statements (Consolidated)

(Unit: KRW 1 million)

Category	2019	2020	2021
<b>Current assets</b>	1,470,103	1,245,072	2,605,431
Cash and cash equivalents	89,365	122,242	143,763
Trade and other current receivables	821,326	713,180	1,359,913
Inventories	524,232	354,691	1,009,135
Other current assets	35,180	54,959	92,620
<b>Non-current assets</b>	1,754,204	1,553,283	1,921,038
Long-term trade and other non-current receivables	11,168	13,594	434
Tangible assets	1,455,283	1,248,720	1,556,634
Investment in properties	124,523	125,063	123,726
Intangible assets	91,950	30,621	26,570
Other non-current assets	71,280	135,285	213,674
Non-current assets held for sale	-	25,772	-
<b>Total assets</b>	<b>3,224,307</b>	<b>2,824,127</b>	<b>4,526,469</b>
<b>Current liabilities</b>	2,074,422	1,681,903	2,249,513
Trade and other current payables	626,878	551,994	1,083,946
Borrowings	1,381,779	1,053,683	899,433
Other current liabilities	65,765	76,226	266,134
<b>Non-current liabilities</b>	566,931	426,869	513,360
Long-term trade and other non-current payables	31,161	28,818	13,624
Long-term borrowings	28,818	298,035	333,883
Other non-current liabilities	84,225	100,016	165,853
<b>Total liabilities</b>	<b>2,641,353</b>	<b>2,108,772</b>	<b>2,762,873</b>
<b>Capital stock</b>	21,638	21,638	21,638
<b>Retained earnings</b>	102,735	228,149	971,280
<b>Other components of equity</b>	364,584	351,187	427,600
<b>Non-controlling interest</b>	93,996	114,382	343,079
<b>Total equity</b>	<b>582,953</b>	<b>715,356</b>	<b>1,763,597</b>

### Consolidated Statements of Comprehensive Income

(Unit: KRW 1 million)

Category	2019	2020	2021
Sales	5,983,145	5,161,617	8,596,030
Cost of sales	5,419,332	4,663,097	6,896,953
Gross profit	563,813	498,520	1,699,077
SG&A	227,192	217,078	257,369
R&D expenses	13,708	14,882	18,057
Operating profit	322,913	266,560	1,423,651
Other gain	31,333	29,740	50,725
Other loss	27,983	23,321	20,248
Finance income	113,780	179,241	117,523
Finance expenses	209,965	228,665	167,423
Profit before tax	230,078	223,554	1,404,228
Income tax expenses	108,056	55,282	396,325
Net profit	122,023	168,272	1,007,903
Other comprehensive income	(1,366)	(18,680)	96,350
<b>Comprehensive income</b>	<b>120,657</b>	<b>149,592</b>	<b>1,104,252</b>

## Economic Performance

### Corporation Tax by Country

As a global company with business operations in various countries around the world, Hyosung TNC pays taxes in 12 countries, including Korea. We do not commit tax evasion, such as claiming false deductions through unfair internal trading among affiliated business companies, and we faithfully pay taxes on profits generated in each country of business.

Category	Sub-category	Unit	2019	2020	2021
Republic of Korea	Sales	KRW 1 million	3,748,469	3,149,126	4,565,355
	Profit before tax	KRW 1 million	45,592	61,290	376,844
	Corporate tax	KRW 1 million	48,985	17,200	106,696
	Tax rate	%	24.2	24.2	24.2
	Effective tax rate	%	107.4	28.1	28.3
China	Sales	KRW 1 million	1,515,088	1,551,718	3,703,984
	Profit before tax	KRW 1 million	22,633	85,265	505,482
	Corporate tax	KRW 1 million	6,216	6,216	124,857
	Tax rate	%	25.0	25.0	25.0
	Effective tax rate	%	27.5	14.5	24.7
Hong Kong	Sales	KRW 1 million	92,808	92,808	41,024
	Profit before tax	KRW 1 million	(688)	(2,804)	2,602
	Corporate tax	KRW 1 million	-	(559)	(430)
	Tax rate	%	16.5	12.0	16.5
	Effective tax rate	%	-	19.9	(16.5)
Japan	Sales	KRW 1 million	531,527	438,536	565,683
	Profit before tax	KRW 1 million	1,118	248	5,270
	Corporate tax	KRW 1 million	395	224	1,830
	Tax rate	%	30.8	30.8	34.6
	Effective tax rate	%	35.3	90.3	34.7
Taiwan	Sales	KRW 1 million	2,819	2,264	2,297
	Profit before tax	KRW 1 million	146	173	3
	Corporate tax	KRW 1 million	59	53	26
	Tax rate	%	20.0	20.0	20.0
	Effective tax rate	%	40.4	30.7	751.7
Singapore	Sales	KRW 1 million	63,213	-	0
	Profit before tax	KRW 1 million	384	(98)	(115)
	Corporate tax	KRW 1 million	(2)	(5)	2
	Tax rate	%	17.0	17.0	17.0
	Effective tax rate	%	(0.6)	5.4	(1.6)

\* Values may differ from consolidated financial statements due to internal transactions among consolidated companies and unrealized gains or losses.

Category	Sub-category	Unit	2019	2020	2021
Vietnam	Sales	KRW 1 million	886,351	886,351	1,742,871
	Profit before tax	KRW 1 million	59,539	31,456	347,050
	Corporate tax	KRW 1 million	2,167	2,126	19,066
	Tax rate	%	-	5.0	5.0
	Effective tax rate	%	3.6	6.8	5.5
India	Sales	KRW 1 million	24,323	24,323	250,474
	Profit before tax	KRW 1 million	(3,908)	(11,682)	87,202
	Corporate tax	KRW 1 million	568	420	15,409
	Tax rate	%	27.8	27.8	25.2
	Effective tax rate	%	(14.5)	(3.6)	17.7
Italy	Sales	KRW 1 million	55,987	50,186	69,015
	Profit before tax	KRW 1 million	1,713	(52)	2,793
	Corporate tax	KRW 1 million	558	134	789
	Tax rate	%	27.9	27.9	27.9
	Effective tax rate	%	32.6	(256.9)	28.2
Republic of Türkiye (Turkey)	Sales	KRW 1 million	176,622	159,966	389,641
	Profit before tax	KRW 1 million	26,912	55,405	248,225
	Corporate tax	KRW 1 million	8,718	10,761	59,420
	Tax rate	%	22.0	22.0	25.0
	Effective tax rate	%	32.4	19.4	23.9
Mexico	Sales	KRW 1 million	3,279	3,279	1,835
	Profit before tax	KRW 1 million	261	5	496
	Corporate tax	KRW 1 million	69	9	118
	Tax rate	%	30.0	30.0	30.0
	Effective tax rate	%	26.3	175.2	23.8
Brazil	Sales	KRW 1 million	123,681	99,169	211,326
	Profit before tax	KRW 1 million	23,115	34,081	62,964
	Corporate tax	KRW 1 million	7,957	11,337	16,396
	Tax rate	%	34.0	34.0	34.0
	Effective tax rate	%	34.4	33.3	26.0

## Economic Performance

### Production Output by Business Sector

Hyosung TNC's business areas are divided into textiles and trade, and the production output for each division has increased compared to the previous year, indicating a recovery from the effects of COVID-19.

Category	Unit	2019	2020	2021
Textiles	KRW 1 million	1,887,762	1,674,082	4,408,553
Trading and other	KRW 1 million	354,444	308,277	449,694

### Sales of Specific Products

Hyosung TNC is manufacturing eco-friendly yarn products by recycling waste PET bottles and the by-products of production processes, as well as through the use of bio-materials. Sales corresponding to these products have increased by KRW 32.9 billion compared to the previous year.

Category	Unit	2019	2020	2021
Sales of resource-efficient products	KRW 1 million	23,054	31,515	64,413

Hyosung TNC (trade division) sells materials for renewable energy generation (such as solar and wind power), materials for electric vehicle components, and raw materials for biomaterials. Sales corresponding to these products have increased by KRW 42.1 billion compared to the previous year.

Category	Unit	2019	2020	2021
Sales of resource-efficient products (green industrial material products)	KRW 1 million	193,134	160,062	202,185

### Financial Losses

Hyosung TNC minimizes financial losses caused by non-compliance with laws and regulations in its business activities through strict legal risk management. Moving away from shareholder-oriented management, we consider all stakeholders and strive to comply with rules and regulations from various sectors, including fair business practices, data protection, the environment, and anti-corruption.

Category	Unit	2019	2020	2021
Financial losses incurred from violations of environmental regulations, such as pollutant emissions	KRW	-	-	7,348,480 (Wastewater penalty in Gumi: KRW 480,000, Various penalties in Ulsan: KRW 6,868,480)

### Supplier Status

Hyosung TNC maintains a stable supply chain by supporting the sustainable growth of its suppliers.

Category	Unit	2019	2020	2021
Number of suppliers	No.	200	161	212
Total purchase from suppliers	KRW 1 million	656,666	414,215	661,257

### Major R&D Activities

#### Green Bio-based Spandex Textile

The Spandex Research Team at Hyosung R&DB Labs has successfully developed and commercialized a bio-based spandex yarn made of bio-originated materials. Over 30% of this textile consists of substances extracted from natural raw materials such as corn, and yet it boasts similar physical properties as conventional spandex products made of 100% petrochemical raw materials. Our bio-based spandex contributes to promoting eco-friendly products with extended applications to high-performance products, including outdoor wear and swimwear, as well as jeans and underwear. Based on such cutting edge technologies, Hyosung TNC is stabilizing its position as the No. 1 spandex producer in the world.

#### Eco-friendly, High-strength Nylon Yarn Made of Process Waste

The NYPET yarn research team is developing eco-friendly yarn by recycling waste generated from textile manufacturing processes. By recovering waste from nylon production processes in cooperation with manufacturing plants, the team produces high-strength NY threads. Further, by reusing process waste as raw materials for new products, we prevent the depletion of petroleum resources and reduce carbon emissions.

#### Cation Dyeable Yarn Made of Waste PET Bottles

The NYPET yarn research team has also managed to develop cation dyeable (CD) PET yarn using waste PET bottles as raw materials. As CD PET yarn is cation dyeable, it demonstrates clearer color tone and superior discoloration resistance compared to general PET yarn. The research team has introduced cation dyeability to recycled yarn by developing a technology for the recycling and special treatment of waste PET bottles. As such, we are able to manufacture high-performance yarn with better dyeing properties and improved discoloration resistance during washing compared to existing recycled yarn.

### R&D Expenses

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

Category	Unit	2019	2020	2021
R&D Expenses	KRW 1 million	13,708	14,882	18,057

### Patent Registration and Application

Hyosung TNC registers patents for in-house technologies every year to secure intellectual property rights, and uses these as KPIs for performance management.

Category	Sub-category	Unit	2019	2020	2021
Patent registration (accumulated)	Domestic	Cases	580	584	591
	Overseas		184	195	198
Patent application (accumulated)	Domestic	Cases	1,199	1,216	1,219
	Overseas		336	352	362

## Social Performance

Hyosung TNC, a large company with more than 1,500 employees, possesses a deep sense of responsibility for corporate social contribution. 134 new employees were hired in line with job creation initiatives for the local community. Moreover, to promote the active social engagement of women, we are increasing the proportion of female employees and female managers. In addition, we are increasing training hours and training investment costs per employee to further develop their capabilities.

### Employee Status

As of the end of 2021, Hyosung TNC has 1,501 employees. About 4% are contract-based workers, and the majority are permanent employees. In addition, we are increasing the proportion of female employees and female managers and encouraging them to actively participate in society.

Category	Sub-category	Unit	2019	2020	2021
Total employees		Persons	1,537	1,528	1,501
Gender	Male	Persons	1,237	1,236	1,231
	Female	Persons	300	292	270
Employment type	Permanent (male)	Persons	1,129	1,113	1,188
	Permanent (female)	Persons	228	238	252
	<b>Subtotal</b>	<b>Persons</b>	<b>1,357</b>	<b>1,351</b>	<b>1,440</b>
	Contract (male)	Persons	108	123	43
	Contract (female)	Persons	72	54	18
	<b>Subtotal</b>	<b>Persons</b>	<b>180</b>	<b>177</b>	<b>61</b>
Region	Domestic	Persons	1,537	1,528	1,501
	Overseas	Persons	168	144	159
Job category (based on permanent employment)	Office	Persons	760	766	743
	Technical	Persons	597	585	697
Fostering female talent	Female employee ratio	%	19.5	19.1	18.0
	Number of women at manager level or higher	Persons	33	39	41
	Female manager ratio	%	10.4	11.7	12.1
Diversity	Persons with disabilities	Persons	18	40	49
	Veterans	Persons	7	7	7
	Foreigners	Persons	3	2	2
	<b>Subtotal</b>	<b>Persons</b>	<b>28</b>	<b>49</b>	<b>58</b>
Creating job opportunities (new hires)	Male	Persons	72	73	93
	Female	Persons	55	35	41
	<b>Subtotal</b>	<b>Persons</b>	<b>127</b>	<b>108</b>	<b>134</b>
Employee turnover (voluntary turnover amongst permanent employees)	Male	Persons	78	59	67
	Female	Persons	42	20	51
	<b>Subtotal</b>	<b>Persons</b>	<b>120</b>	<b>79</b>	<b>118</b>
Turnover rate		%	8.8	5.9	8.2

### Parental Leave and Childcare Leave

Hyosung TNC encourages parental and childcare leave to improve female employees' work-life balance. As of 2021, the return rate after childcare leave for male employees and female employees was found to be 75% and 86%, respectively. In particular, female employees' rate of working more than 12 months after return has increased significantly.

Category	Sub-category	Unit	2019	2020	2021
Male (parental leave)	Employees on parental leave	Persons	23	19	24
	Return rate	%	100.0	100.0	100.0
Female (parental leave)	Employees on parental leave	Persons	14	10	6
	Return rate	%	100.0	100.0	100.0
Male (childcare leave)	Employees on childcare leave	Persons	1	2	2
	Return rate	%	100.0	100.0	75.0
	Rate of working more than 12 months after return	%	100.0	-	-
Female (childcare leave)	Employees on childcare leave	Persons	14	14	9
	Return rate	%	100.0	94.0	86.0
	Rate of working more than 12 months after return	%	63.0	82.0	93.0

### Regular Performance Evaluation

As of the end of 2021, Hyosung TNC has conducted a regular performance evaluation for 1,440 employees, or 96% of the total 1,501 employees. We have established a fair evaluation system that covers the majority of our employees.

Category	Unit	2019	2020	2021
Number of employees subject to performance evaluation	Persons	1,357	1,351	1,440
Performance evaluation rate	%	88	88	96

### Basic Wage and Remuneration

Hyosung TNC pays new employees 1.8 times more than the legal minimum wage to guarantee their welfare and increase their motivation to work.

Category	Unit	2019	2020	2021
Basic salary for entry-level hires	KRW 1,000	3,272	3,501	3,606
Rate of entry-level salary to legally defined local minimum wage (%)	Male	%	174.7	181.7
	Female	%	174.7	181.7
Average basic salary	KRW 1,000	4,643	5,218	5,899

## Social Performance

### Labor Union Membership

Besides the Hyosung Labor Union, employees can sign up to the Hyosung TNC Democratic Labor Union, the Hyosung TNC Gumi Factory Labor Union, and the Hyosung Polyester Labor. Each business site transparently discloses the status of corporate management status to employees through regular management briefing sessions and multi-level meetings. In addition, we have established the Labor-Management Council in the headquarters and each business site, holding quarterly meetings to discuss welfare, grievances, and health and safety issues. Complaints and grievances received are managed through the company-wide system and are continuously monitored for improvements.

Category	Unit	2019	2020	2021
Employees covered by collective agreements	Persons	603	585	579
Proportion of employees subject to collective agreements among total employees	%	39.2	38.3	38.6
Number of union workers	Persons	507	523	520
Proportion of union workers	%	84.1	89.4	89.8

### Retirement Pension

Hyosung TNC operates both DB-type and DC-type retirement pension systems to ensure employees' freedom of choice, and complies with all related legal standards.

Category	Unit	2019	2020	2021
Total operating fund for retirement pensions (DB+DC)	KRW 1 million	79,712	89,582	99,555
Operating fund for DB pension	KRW 1 million	78,148	88,002	97,828
Operating fund for DC pension	KRW 1 million	1,563	1,580	1,727
Total number of members (Persons)	Persons	1,719	1,668	1,659
Number of DB pension members (Persons)	Persons	1,417	1,353	1,330
Number of DC pension members (Persons)	Persons	302	315	329

### Occupational Accident Rate

Hyosung TNC maintains a very low occupational accident rate by promoting a safe working environment. No occupational fatalities have occurred in the last four consecutive years.

Category	Unit	2019	2020	2021
Total number of occupational accidents: Accidents + Occupational disease	Persons	4	2	7
Occupational accident rate: Total number of occupational accidents / Total number of employees x 100	%	0.26	0.13	0.83
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)	‰	-	-	-

### CSR Status

Hyosung TNC has developed unique CSR programs and is ultimately carrying out activities that allow beneficiaries to stand on their own feet. In particular, the company ensures that people from vulnerable social groups, who have suffered due to COVID-19, can benefit.

Category	Unit	2019	2020	2021
CSR investment	KRW 1 million	668	585	413
Number of CSR programs	Cases	11	4	27

\* The number of CSR programs in 2021 increased significantly due to a rise in the number of target business sites (headquarters only in 2020 to all business sites in 2021).

Hyosung TNC is supporting rehabilitation treatment for disabled children, psychological therapy and education expenses for non-disabled siblings of disabled children, and travel expenses for their families in cooperation with the Purme Foundation. We focus on rehabilitation treatment for disabled children from underprivileged groups, and since 2014, we have further extended our support to non-disabled siblings of disabled children in welfare blind spots. In 2021, we supported the provision of IT devices to non-disabled siblings who have difficulty participating in online classes due to the prolonged COVID-19 pandemic, thus supporting a quality learning environment and resolving educational gaps. Hyosung TNC was selected as an outstanding company for contributions to local society for three consecutive years, beginning in 2019, with the recommendation of the Purme Foundation.

### Employee Training

To establish a unique, in-house vocational training system, Hyosung TNC designed a training system for sales positions and conducted sales training for all PGs in 2021. We also provide various programs to quickly build the work capacity of new employees. For example, we assist new employees in successfully adapting to the company by conducting O.J.T activities, 1:1 feedback and interviews, and sending newsletter emails for their onboarding. In addition, we provide ethics and human rights training to all employees, including contract workers.

Category	Unit	2019	2020	2021
Number of training participants	Persons	23,406	20,109	23,931
Total training expenses	KRW 1,000	1,127,321	582,597	773,020
Total training hours	Hours	582,597	41,535	59,609
Average training hours per person (total training hours / number of employees)	Hours	41,535	27	40
Average training expenses per person (total training expense / number of employees)	KRW	733,456	381,281	515,003
Environmental training	Persons	1,592	1,981	1,238
Ethics and anti-corruption training	Persons	6	1,266	1,028
Fair trade training	Persons	13	645	773
Safety and health training	Persons	5,576	4,337	8,201
Human rights training (sexual harassment/disability awareness/workplace harassment prevention)	Persons	3,270	4,408	4,224
Information security training	Persons	1,342	1,362	512
Sustainability management training	Persons	-	17	1,417
Retiree training	Persons	-	26	40

## Social Performance

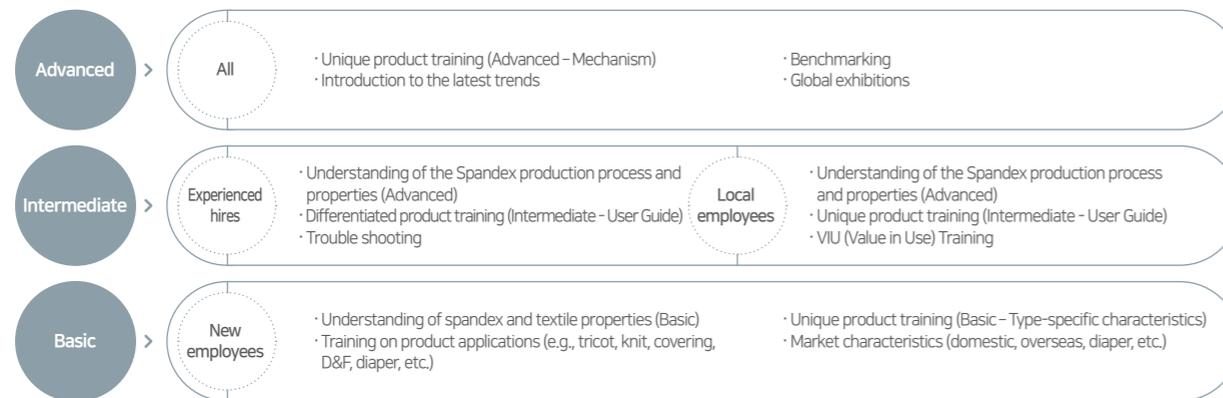
### Vocational Training to Achieve PU Strategic Tasks and to Strengthen Employee Capabilities

Hyosung TNC has selected essential training based on a review of the needs of each PG/PU to systematically foster talented salespeople, and plans to provide this training from 2021 onwards.

- Common:** Sales PG finance/accounting training (from 2021), customer financial analysis, etc
- Textile PG:** Sales strategy (from 2021), sales presentation, customer consultation skill (basic/advanced), sales negotiation, etc
- Trade PG:** Forward exchange/exchange risk management (from 2021), L/C, export insurance, trade practices, etc

Hyosung TNC has delivered customized vocational training taught by in-house instructors and industry experts. For example, we have carried out Creora School for the Spandex PU, a product/market development program for the Chemical PU, and a technology seminar for the Gumi plant. We plan to expand such trainings to more PUs in the future.

#### Spandex PU Creora School



The above training sessions were remotely conducted in consideration of the spread of COVID-19. In 2022, a remote training center was prepared in Hyosung TNC's Mapo Building to provide high-quality remote training.

### In-house Training Program to Quickly Build New Employees' Work Capacity

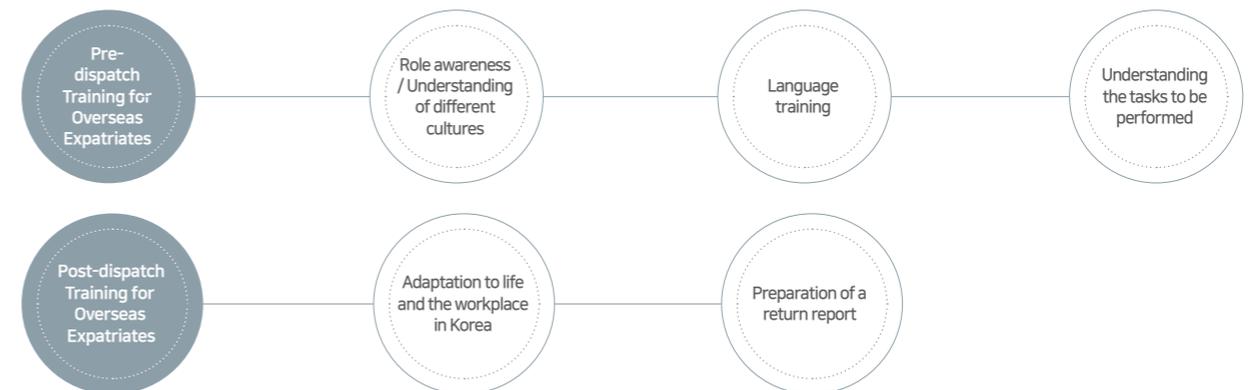
Hyosung TNC provides in-house basic vocational training to new employees to quickly build their work capacity during common O.J.T activities. Further, 1:1 feedback and interviews on O.J.T. activities, as well as information to support their adaptation to their work, are provided online. At the end of the O.J.T., a final training session is provided to share their experiences of O.J.T activities to help them successfully adapt to the company.

### Pre-dispatch and Post-dispatch Training Programs for Overseas Expatriates

Since 2020, Hyosung TNC has operated pre-dispatch and post-dispatch training programs for expatriates to facilitate their adaptation and better work performance.

In 2020 and 2021, to replace group training during the COVID-19 pandemic, we have provided video training materials and booklets to inform expatriates of their roles and responsibilities and overall tips for adaptation, as well as foreign language courses through 1:1 telephone and video calls.

We help expatriates who have returned to domestic business sites to quickly adapt to the workplace by providing them with informative materials on domestic circumstances, corporate policies, culture, and systems. We also collect information on expat life, establishing a database so that expertise can be shared among prospective expatriates.



### Outplacement Support Program

From 2020, Hyosung TNC has provided online outplacement training so that prospective retirees are given opportunities to make a new start after retirement, in consideration of the COVID-19 pandemic. In 2021, the support program was expanded to office workers as well as field workers. In 2022, we are discussing/reviewing the joint support program with the Human Resource Development Center and operating projects to provide quality offline training. In 2022, we also plan to provide customized life-design training for prospective retirees, as well as employees aged 50 or older.

## Environmental Performance

Hyosung TNC receives and uses recycled water that is re-processed from sewage flowing into the Nakdong River. In this way, we are preventing the flow of polluted water into rivers and resolving the shortage of industrial water in Gumi by minimizing water consumption. In addition, we place safety and health as our top priority throughout our corporate activities. We foster employee awareness of health and safety in the belief that creating an accident-free workplace is an important factor for the continuous maximization of profit and the development of both company and individuals.

### Energy Consumption

Hyosung TNC continues to promote energy efficiency activities. In 2020, energy consumption temporarily decreased due to the impact of COVID-19. In 2021, total energy consumption increased compared to the previous year. Actual energy consumption was higher than planned due to an increase in actual output compared to the 2021 production plan, which was established with consideration for the impact of COVID-19. However, energy intensity decreased significantly from 0.733 to 0.507 compared to the previous year through continuous energy efficiency activities.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)	
Direct energy consumption	Diesel	TJ	7.83	6.42	1.43	4.09	
	Kerosene	TJ	0.42	0.35	0.35	0.34	
	LNG	TJ	959.01	823.57	834.97	956.71	
	Gasoline	TJ	1.75	1.64	1.45	1.39	
	Propane	TJ	778.03	681.98	702.48	766.81	
	B-C oil	TJ	26.79	19.67	20.93	11.08	
	Hard coal	TJ	-	-	-	-	
	Other solid fuels	TJ	-	-	-	-	
	Off-gas	TJ	-	-	-	-	
	LPG	TJ	1.11	2.24	2.41	0.96	
	Biogas	TJ	32.54	48.93	-	36.28	
	<b>Subtotal</b>	<b>TJ</b>	<b>1,807.48</b>	<b>1,584.81</b>	<b>1,564.02</b>	<b>1,777.67</b>	
	Indirect energy consumption	Electricity	TJ	5,666.91	4,859.88	5,479.38	5,513.85
		Steam	TJ	796.62	658.22	1,111.05	783.22
Waste heat from processes		TJ	-	-	-	-	
Heat from incineration of waste		TJ	409.58	397.41	-	332.03	
<b>Subtotal</b>		<b>TJ</b>	<b>6,873.11</b>	<b>5,915.51</b>	<b>6,590.44</b>	<b>6,629.10</b>	
<b>Total</b>	<b>TJ</b>	<b>8,680.59</b>	<b>7,500.32</b>	<b>8,154.46</b>	<b>8,406.77</b>		
Energy intensity (Total energy consumption/Sales)	(TJ/KRW 100 million)	0.657	0.733	-	0.507		

\* Emissions intensity was calculated based on sales from the textile division (excluding sales from the trade division).

### Zero Emission Vehicle

Hyosung TNC operates zero emission vehicles that help reduce air pollutant and GHGs.

Category (Unit: ea)	On-road vehicles			Off-road vehicles			Total
	Electric vehicles	Hydrogen vehicles	Subtotal	Electric vehicles	Hydrogen vehicles	Subtotal	
Hyosung TNC	-	-	-	138	-	138	138

\* On-road vehicles: Passenger cars, vans, trucks, special vehicles, two-wheeled vehicles (excluding electric bicycles)

\* Off-road vehicles: Includes non-specified vehicles such as construction machinery, agricultural machinery, etc. E.g., Forklifts, tool cars, and carts used in workplaces

### Greenhouse Gas (GHG) Emissions

Hyosung TNC strives to reduce GHG emissions. In 2020, GHG emissions decreased due to the impact of COVID-19. In 2021, whilst total GHG emissions increased compared to the previous year, the intensity of GHG emissions decreased significantly.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Direct GHG emissions (Scope 1)	Fixed combustion	tCO2eq	95,792.52	82,822.31	92,615.95	93,808.07
	Mobile combustion	tCO2eq	734.14	695.46	36.88	436.94
	Process emissions	tCO2eq	-	-	-	-
	Waste disposal	tCO2eq	4,101.68	5,674.19	5,503.97	506.31
	<b>Subtotal</b>	<b>tCO2eq</b>	<b>100,628.34</b>	<b>89,191.96</b>	<b>98,156.79</b>	<b>94,751.32</b>
Indirect GHG emissions (Scope 2)	Electricity	tCO2eq	275,229.25	236,033.51	258,287.29	263,866.88
	Steam	tCO2eq	9,477.17	3,534.43	7,794.84	6,518.24
	<b>Subtotal</b>	<b>tCO2eq</b>	<b>284,706.43</b>	<b>239,567.94</b>	<b>266,082.13</b>	<b>270,385.12</b>
<b>Total</b>	<b>tCO2eq</b>	<b>385,334.77</b>	<b>328,759.90</b>	<b>364,238.92</b>	<b>365,136.44</b>	
GHGs emissions intensity (Total GHG emissions/Sales)	(tCO2eq/KRW 1 million)	0.292	0.321	-	0.220	

\* The data are based on the Guidelines for Reporting and Certification of GHG Emission Trading System (Notice No. 2021-278 of the Ministry of Environment) and the ETS report submitted to the government in the given years, in accordance with the conformity assessment by the Ministry of Environment.

\* CO2, CH4, and N2O are only greenhouse gases emitted. The above GHG emissions total differs from the GHG emissions disclosed in our Business Report due to differences in rounding values for each business site.

### Energy Saving and Emissions Reduction Performance

Hyosung TNC has established investment plans, such as replacement with high-efficiency facilities and LED lights, to reduce emissions and save energy at its business sites.

Business site	Project name	Execution date	Investment budget (KRW 1 million)	Energy saving (kWh/year)	Energy savings (TJ/year)	GHG emissions reduction (tCO2eq/year)
Ulsan	Extruder motor replacement (BL motor → induction motor)	2017.06	330	1,103,760	10.6	507
Ulsan	Aging dehydrator replacement	2019.12	393	219,600	2.1	101
Daegu	Lighting improvement for fabric inspection machines	2017.03	6	9,712	0.1	4
Daegu	LED lighting replacement	2018.03	14.91	46,116	0.4	21
Gumi	High-efficiency cooler replacement (800RT)	2019.10	240	1,152,000	11.1	529
Gumi	Air compressor replacement (supply pressure optimization)	2019.10	330	1,190,000	11.4	547
Gumi	Q6-2 Lower heat medium pump inverter reduction	2021.09	9.32	14,030	0.1	6

## Environmental Performance

### Management of Water Resources

Hyosung TNC minimizes unnecessary water use through close cooperation with production processes. The Ulsan plant uses reservoirs in the factory to store rainwater and reuses it for cooling, as well as recycling water used during plant processes to minimize water consumption. Hyosung TNC's Ulsan Gumi plant discharges first-stage processed water to the Gumi City sewage treatment plant and receives and uses water that is reprocessed from this plant. In this way, we are preventing polluted water from flowing into the Nakdong River and resolving the shortage of industrial water by minimizing water consumption.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Consumption by water source	Waterworks	Ton	79,892	80,725	80,881	80,589
	Groundwater	Ton	-	-	-	-
	Industrial water	Ton	7,573,653	6,276,576	6,653,829	6,756,354
	River water	Ton	-	-	-	-
Total water consumption	Ton	7,653,545	6,357,301	6,734,710	6,836,943	
Water re-use (plant)	Ton	2,920,091	3,502,690	-	3,383,350	
Water re-use (plant + industrial water re-used)	Ton	3,995,782	4,665,190	-	4,498,213	
Water re-use rate	%	38	55	-	49	
Water re-use rate (plant + industrial water re-used)	%	52	73	-	66	

### Wastewater and Water Treatment

Hyosung TNC operates a wastewater treatment facility. All wastewater generated in the manufacturing process is primarily treated in this facility and discharged below legal standards. In addition, we conduct a water quality inspection every month through an external specialized agency, thus monitoring our water pollutant emissions and minimizing any damage to the ecosystem of the Nakdong River.

Category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Wastewater discharge	Ton	1,235,251	1,227,242	1,278,000	1,297,689
Biochemical Oxygen Demand (BOD)	Ton	3.06	3.65	3.84	5.01
Chemical Oxygen Demand (COD)	Ton	30.31	33.44	33.46	36.11
Suspended Solids (SS)	Ton	5.23	6.98	7.08	6.43
Total Nitrogen (T-N)	Ton	9.45	10.33	11.03	11.97
Total Phosphorus (T-P)	Ton	0.25	0.46	0.50	0.39

### Waste Treatment

Hyosung TNC makes various efforts to increase its waste recycling rate. The Gumi plant recycles steam – generated by incinerating waste from external incinerators – in the manufacturing process, and evaporates and reuses the moisture in the emulsion used by the Gumi plant. Meanwhile, the Ulsan plant recycles most of its wastewater sludge and plans to continuously reduce the amount of this sludge by installing a high-efficiency dehydrator.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)	
Industrial Waste (General)	In-house treatment	Ton	-	-	-	-	
	Outsourced treatment	Recycling	Ton	13,561.6	13,455.4	13,650.0	13,002.3
		Incineration	Ton	1,643.8	1,475.1	1,600.0	1,604.6
		Landfill	Ton	745.4	592.8	687.0	450.9
	<b>Subtotal</b>	<b>Ton</b>	<b>15,950.8</b>	<b>15,523.3</b>	<b>15,937.0</b>	<b>15,055.7</b>	
Industrial Waste (Designated)	Industrial Waste (Designated)	Ton	5,767.8	596.8	600.0	598.4	
	Outsourced treatment	Recycling	Ton	1,851.3	443.9	480.0	486.1
		Incineration	Ton	1,028.2	1,557.7	1,650.0	1,630.0
		Landfill	Ton	2.0	1.3	2.0	-
	<b>Subtotal</b>	<b>Ton</b>	<b>8,649.3</b>	<b>2,599.7</b>	<b>2,732.0</b>	<b>2,714.5</b>	
<b>Total waste</b>	<b>Total</b>	<b>Ton</b>	<b>24,600.1</b>	<b>18,123.0</b>	<b>18,669.0</b>	<b>17,770.2</b>	
<b>Waste recycled</b>	<b>Total</b>	<b>Ton</b>	<b>21,180.7</b>	<b>13,899.3</b>	<b>14,130.0</b>	<b>13,488.4</b>	
Waste recycling rate		%	86.1	76.7	75.7	75.9	

### Emissions of Atmospheric Pollutants

Hyosung TNC measures atmospheric pollutants and monitors whether they are discharged within legally defined emission standards. The Ulsan plant has installed TMS for key facilities to monitor air pollutant emissions in real time, and an expansion of TMS installation is planned to establish a real-time monitoring system for all worksites.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
General air pollutants	Nitrogen oxides (NOx)	Ton	62.3	47.8	55.0	58.9
	Sulfur oxides (SOx)	Ton	6.2	1.2	1.0	3.1
	Particulate matter (PM)	Ton	4.7	5.0	4.6	4.0
Ozone depleting substances	CFC(R011)	Ton	0.8	0.8	0.6	0.3
	HCFC(R0123)	Ton	-	-	-	-
	HCFC(R022)	Ton	2.5	-	-	-

## Environmental Performance

### Chemical Substances Management System

Hyosung TNC reports all chemical substance use to the Basin and Regional Environmental Offices. Hazardous substances are transparently disclosed to the public through the Chemical Information System. Further, we control all chemical substances used in production processes through our ERP-based electronic system. This system checks all purchased materials to confirm whether they contain chemical substances subject to control, and purchases are only possible when the personnel in charge of chemicals at each business sites gives approval. Material safety and health data (MSDS) are required for all chemical substances purchased and are provided for on-site workers. We have also prepared a management plan for preventing chemical incidents to strengthen our management of chemical substances. In addition to the annual legal inspection, hazardous chemical treatment facilities are inspected once a week by the teams in charge, as well as the Environmental Safety Team. In April 2016, a chemical safety community group was set up between Hyosung TNC's Gumi plant and the regional environmental agency in Daegu so that prompt actions can be taken in the event of a chemical incident. The Gumi plant attends emergency training to improve its response capacity and has established an emergency response system based on information exchanges and cooperation with fellow companies in the community group. The Ulsan plant participates in the Ulsan Environmental Engineers' Association and the Public-Private Response Council for Chemical Accidents in South Gyeongsang Province, and has promised to share information on chemical substances through cooperation with fellow companies in the event of chemical accidents.

Category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Hazardous substances usage	Ton	8,375	7,510	8,200	7,619
Emission of chemical substances	Ton	0.75	0.35	0.13	0.29
Hazardous substance usage intensity	Ton/KRW 1 million	0.0063	0.0057	0.0062	0.0058

\* Sales from the trade division were excluded when calculating intensity.

### Sales and Purchase of Eco-Friendly Products and Services

Hyosung TNC follows a green purchasing policy and practices green management by selling and purchasing eco-friendly products and services. In 2021, our purchases of eco-friendly products and services amounted to KRW 13.2 billion – nearly twice as much as the previous year.

Category	Unit	2019	2020	2021
Sales	KRW 1,000	10,622,738	31,514,910	64,412,557
Purchase	KRW 1,000	142,620	11,326,858	13,201,928

### Environmental Investments

Hyosung TNC practices green management through continuous environmental investments in environmental restoration, prevention, management, and improvement facilities.

Category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Waste treatment and environment restoration expenses	KRW	1,603,576,380	1,699,386,730	1,845,802,000	1,748,524,490
Pollution prevention and environmental management expenses	KRW	792,574,000	1,055,731,000	1,213,950,000	1,406,097,800
Investment in environmental improvement facilities	KRW	49,600,000	204,700,000	543,500,000	527,115,000
<b>Total</b>	<b>KRW</b>	<b>2,396,150,380</b>	<b>2,755,117,730</b>	<b>3,059,752,000</b>	<b>3,154,622,290</b>

Category	Investment description	Unit	2021 (Plan)	2021 (Outcome)
Environment restoration expenses	Waste treatment expenses	KRW 1 million	1,375	1,340
	Wastewater treatment expenses		843	717
Environmental management expenses	Environmental liability insurance expenses	KRW 1 million	104	107
	ISO and other environmental certification expenses		79	79
	Assurance and consulting service expenses for responding to ETS		13	13
	Expenses relating to participation in, reporting, and verification of carbon information disclosures		32	32
Investment in environmental improvement facilities	Enhancement of hazardous chemical treatment facilities at the Gumi plant	KRW 1 million	384	382
	Enhancement of wastewater treatment facilities at the Gumi plant		50	49
	Improvement of anti-odor facilities at the Gumi plant		90	76
	Repair of the wastewater dehydrator at the Gumi plant		20	20

### Renewable Energy Consumption

Hyosung TNC receives heat from waste incineration, a renewable energy source, from the waste incineration plants near its business sites, and uses biogas generated from anaerobic processes at water treatment facilities in its production plants to operate its boilers.

Category	Workplace	Unit	2019	2020	2021
Waste energy	Gumi	GJ/year	338,793	314,476	251,623
	Daegu	GJ/year	70,786	82,933	80,403
	<b>Subtotal</b>	<b>GJ/year</b>	<b>409,579</b>	<b>397,409</b>	<b>332,026</b>
Bio energy	Gumi	GJ/year	8,993	2,036	4,402
	Ulsan	GJ/year	23,546	46,895	31,877
	<b>Subtotal</b>	<b>GJ/year</b>	<b>32,539</b>	<b>48,932</b>	<b>36,279</b>

### Disclosure of Green Product Information

Based on eco-friendly certifications and LCA, Hyosung TNC strives to reduce energy and resource consumption and helps preserve the environment by calculating GHG emissions for its products. We plan to continue these activities and practice sustainable management.

#### 1. GRS Certification

Category	Certification number	Certification scope	Certification date	Expiry date
Yarn	CU811380GRS-2021-00123338	Dyed yarns: Polyester pos	2020.12.16	2022.11.29
		Greige yarns: Polyester post, Nylon pre, Nylon post		
		Processed materials: Polyester post, Nylon pr		
		Undyed yarns: Spandex pre		
Fabric	CU1026916GRS-2021-00125051	Dyed Knitted Fabrics: Polyester post, Nylon Pre	2020.12.06	2022.12.05
		Dyed Woven Fabrics: Polyester post, Nylon Pre, Nylon Post		

#### 2. Life Cycle Assessment

Category	Number of cases	Item name
Spandex	3	Regular, Bio-based Spandex, Creora Spandex
Polyester	2	Regular, Regen
Nylon	-(Scheduled for 2022)	-

#### 3. Ocean Bound Plastic Certification

Category	Certification number	Item name	Certification date	Expiry date
Polyester	C8113800BP.REC-01.2021	Regen® ocean	2021.09.17	2022.09.16

#### 4. Oeko-Tex

Category	Certification number	Certification scope	Certification date	Expiry date
Fabric	SEMO 073358	Commission dyeing and finishing: Woven fabrics made of 100% polyester (medical fabric), polyester with carbon (medical fabric), polyester/spandex, polyester/nylon and nylon/spandex including recycled polyester & nylon, dyed with or without water & oil repellent finish	2022.01.17	2023.01.31

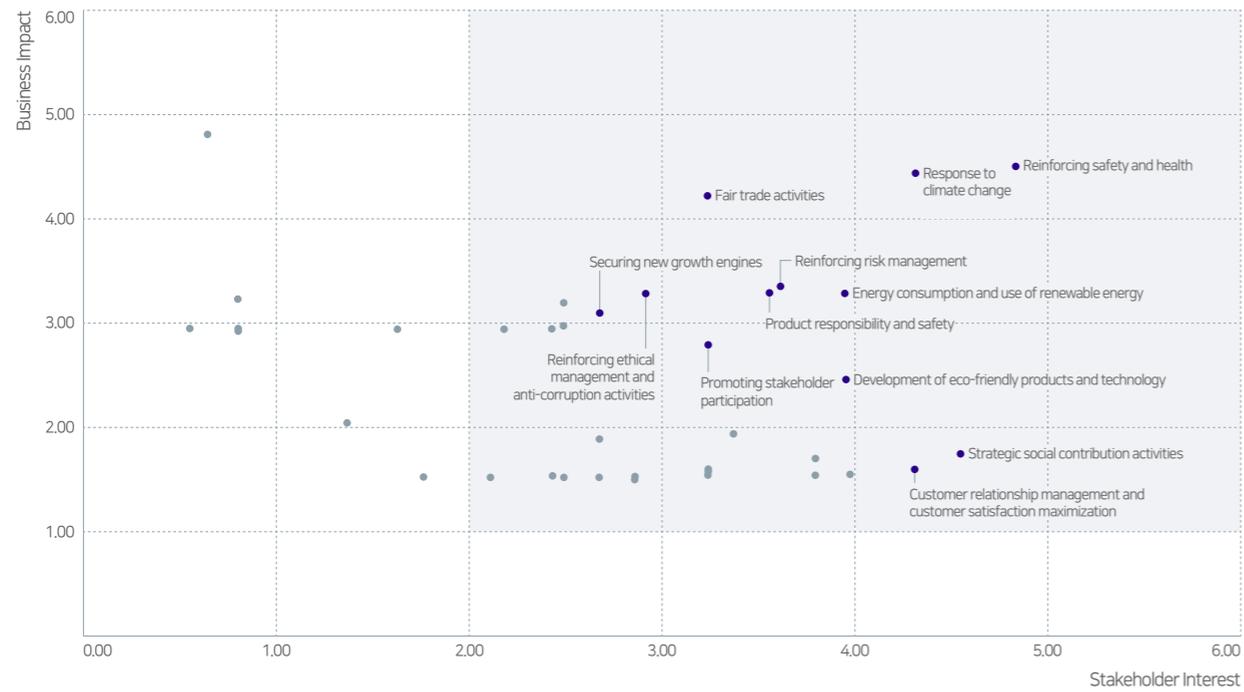
#### 5. International Sustainability and Carbon Certification

Category	Certification number	Item name	Certification date	Expiry date
Trade	EU-ISCC-Cert-DE105-86978803	Used Cooking Oil	2022.02.12	2023.02.11

## Economic Performance

Hyosung Heavy Industries is steadily creating economic value despite the long-term recession in the construction industry. In 2021, we achieved KRW 3,947 trillion in total sales, and as a result of our efforts to maintain a stable financial structure along with improved management performance, our debt ratio remained at a similar level compared to the end of the previous year.

### Core Issues Derived from the Materiality Assessment



Category	Core Issues	GRI Topic	Stakeholder Importance					Reporting Page
			Customers	Employees	Suppliers	Shareholders and Investors	Local Communities	
Society	① Reinforcing safety and health	GRI 403 (Occupational Health and Safety)		●	●			30, 33-34
Environment	② Response to climate change	GRI 305 (Emissions)	●	●	●	●	●	17-19, 21
Economic	③ Fair trade activities	-			●			39
Environment	④ Energy consumption and use of renewable energy	GRI 302 (Energy)		●	●			86
Economic	⑤ Reinforcing risk management	GRI 201 (Economic Performance)	●			●		52
Economic	⑥ Product responsibility and safety	GRI 416 (Customer Health and Safety)	●					41-45
Environment	⑦ Development of eco-friendly products and technology	-	●			●		27
Society	⑧ Strategic social contribution activities	GRI 203 (Indirect Economic Impacts)					●	46-49
Economic	⑨ Reinforcing ethical management and anti-corruption activities	GRI 205 (Anti-corruption)	●	●	●	●		53
Economic	⑩ Promoting stakeholder participation	-	●	●	●	●	●	63
Economic	⑪ Customer relationship management and customer satisfaction maximization	GRI 417 (Marketing and Labeling)	●					41-45
Economic	⑫ Securing new growth engines	-	●			●		27

### Financial Statements (Consolidated)

(Unit: KRW 1 million)

Category	2019	2020	2021
<b>Current assets</b>	1,579,014	1,238,408	1,561,558
Cash and cash equivalents	38,216	52,294	81,009
Trade and other current receivables	811,512	542,936	651,997
Inventories	306,018	318,971	413,135
Other current assets	423,268	324,207	415,417
<b>Non-current assets</b>	2,421,816	2,465,046	2,461,143
Long-term trade and other non-current receivables	513,376	514,552	478,571
Tangible assets	1,077,233	1,134,914	1,256,151
Investment in properties	568,109	547,335	441,018
Intangible assets	160,600	145,920	147,943
Other non-current financial assets	-	48	22,709
Other non-current assets	102,498	122,277	114,751
<b>Total assets</b>	<b>4,000,830</b>	<b>3,703,454</b>	<b>4,022,701</b>
<b>Current liabilities</b>	2,116,804	1,740,041	1,944,011
Trade and other current payables	684,688	633,275	805,864
Borrowings	965,109	598,704	630,641
Other current liabilities	467,007	508,062	507,506
<b>Non-current liabilities</b>	893,529	995,163	1,041,548
Long-term trade and other non-current payables	238,988	237,838	236,750
Long-term borrowings	467,145	575,801	631,281
Other non-current liabilities	187,396	181,524	173,517
<b>Total liabilities</b>	<b>3,010,333</b>	<b>2,735,204</b>	<b>2,985,559</b>
<b>Capital stock</b>	46,623	46,623	46,623
<b>Retained earnings</b>	(1,611)	(19,648)	28,987
<b>Other components of equity</b>	863,231	856,607	856,614
<b>Non-controlling interest</b>	82,254	84,668	104,918
<b>Total equity</b>	<b>990,497</b>	<b>968,250</b>	<b>1,037,142</b>

### Consolidated Statements of Comprehensive Income

(Unit: KRW 1 million)

Category	2019	2020	2021
Sales	3,781,445	2,983,971	3,094,699
Cost of sales	3,388,813	2,588,586	2,690,410
Gross profit	392,633	395,385	404,289
SG&A	227,407	317,808	250,724
R&D expenses	34,973	33,503	33,499
Operating profit	130,252	44,075	120,066
Other gain	16,273	25,831	47,754
Other loss	22,077	37,070	39,234
Finance income	75,222	118,355	89,204
Finance expenses	143,750	169,167	122,401
Related companies profit	-	(4)	(1,032)
Profit before tax	55,920	(17,980)	94,357
Income tax expenses	39,898	1,278	17,840
Net profit	16,023	(19,258)	76,517
Other comprehensive income	(10,452)	(2,989)	(8,861)
<b>Comprehensive income</b>	<b>5,571</b>	<b>(22,247)</b>	<b>67,656</b>

## Economic Performance

### Corporation Tax by Country

As a multinational corporation with business operations in different regions, including the US, China, and India, Hyosung Heavy Industries complies with the tax regulations of each country in which it conducts business. Beyond legal obligations, we pay corporation taxes to comply with our moral obligations.

Category	Sub-category	Unit	2019	2020	2021
Republic of Korea	Sales	KRW 1 million	3,658,757	2,905,631	2,822,339
	Profit before tax	KRW 1 million	54,333	1,045	161,005
	Corporate tax	KRW 1 million	43,013	3,587	26,209
	Tax rate	%	22	22	22
	Effective tax rate	%	79	343	20
China	Sales	KRW 1 million	108,030	111,719	107,934
	Profit before tax	KRW 1 million	(4,039)	2,662	18
	Corporate tax	KRW 1 million	-	-	-
	Tax rate	%	25	25	25
	Effective tax rate	%	-	-	-
India	Sales	KRW 1 million	73,342	32,548	82,740
	Profit before tax	KRW 1 million	2,065	(6,531)	(1,925)
	Corporate tax	KRW 1 million	1,094	2,272	234
	Tax rate	%	33	33	33
	Effective tax rate	%	53	(35)	(10)
Vietnam	Sales	KRW 1 million	30,519	11,213	35,477
	Profit before tax	KRW 1 million	497	217	1,323
	Corporate tax	KRW 1 million	93	43	284
	Tax rate	%	20	20	20
	Effective tax rate	%	19	20	20
United States	Sales	KRW 1 million	-	10,151	223,641
	Profit before tax	KRW 1 million	-	(16,885)	(28,785)
	Corporate tax	KRW 1 million	-	-	(2,996)
	Tax rate	%	-	26	26
	Effective tax rate	%	-	-	10
South Africa	Sales	KRW 1 million	533	484	758
	Profit before tax	KRW 1 million	18	50	24
	Corporate tax	KRW 1 million	66	4	14
	Tax rate	%	28	28	28
	Effective tax rate	%	366	8	60

\* Values may differ from consolidated financial statements due to internal transactions among consolidated companies and unrealized gains or losses.

### Production Output by Business Sector

Hyosung Heavy Industries consists of the Power & Industrial Systems division that produces transformers, switch gears, and electric motors, and the construction division that carries out construction and civil engineering. The Power & Industrial Systems division is highly competitive in terms of technology, quality, and delivery, while the construction division has gained solid trust based on its project management capability and competitiveness.

Category	Unit	2019	2020	2021
Transformers	KRW 1 million	452,467	516,202	445,463
Switch gears	KRW 1 million	429,395	393,530	529,374
Electric motors	KRW 1 million	287,047	266,505	222,957
Others	KRW 1 million	152,778	200,290	172,905

### Sales of Specific Products

In parallel with global green policies focused on low-carbon and renewable energy, Hyosung Heavy Industries is supplying and selling a variety of eco-friendly products.

Category	Unit	2019	2020	2021
Sales from products that include IEC 62474 declarable substances	KRW 1 million	-	-	-
Sales from products that meet ENERGY STAR® standards	KRW 1 million	-	-	-
Sales from products related to renewable energy and energy efficiency	KRW 1 million	303,470	277,707	194,872

### Financial Loss

Hyosung Heavy Industries faithfully complies with all laws and regulations related to corporate management, including those concerning the economy, society, and environment. Our reputational risk is effectively managed by minimizing fines from non-compliance with these laws and regulations.

Category	Unit	2019	2020	2021
Financial loss incurred as a result of legal proceedings associated with bribery or corruption	KRW 1 million	-	-	-
Financial loss as a result of legal proceedings associated with product safety	KRW 1 million	-	-	-
Financial loss as a result of legal proceedings associated with anti-competitive behaviors	KRW 1 million	99	-	300
Total amount of monetary losses as a result of violation of environmental regulations, such as pollutant emissions	KRW 1 million	8	12	5

## Economic Performance

### Construction Projects

Hyosung Heavy Industries is pioneering a new construction market by stepping away from the existing paradigm of the labor and capital-centered construction industry and attempting the convergence of cutting-edge technology. We are achieving continuous growth based on the company's brand value and long-standing business expertise.

Category	Unit	2019	2020	2021
Number of projects underway	Cases	45	31	40
Number of outsourced projects received	Cases	11	16	16
Total backlog*	KRW 1 million	3,575,266	3,814,690	4,352,735

\* Backlog: projects in the backlog

Category	Unit	2019	2020	2021
Number of incidents of non-compliance with environmental permits, standards, and regulations	Cases	-	-	-
Number of projects operated in accordance with sustainability standards and certifications	Cases	4	6	3
Number of pending projects related to hydrocarbon and renewable energy	Cases	-	-	-

### Supplier Status

Hyosung Heavy Industries maintains a stable supply chain by supporting the sustainable growth of its suppliers.

Category	Unit	2019	2020	2021
Number of suppliers	No.	3,329	3,962	4,004
Total purchase from suppliers	KRW 1 million	2,442,794	1,868,226	1,695,648

\* Suppliers are component manufacturers of transformers, switch gears, electric motors, and reducers produced by the Heavy Industries PG, and construction companies, material suppliers, equipment rental companies, and service companies for residential and commercial complexes, apartments, officetels, offices, and logistics centers constructed by the Construction PU.

### Major R&D Activities

#### Technology Certification by the Korean Society of Steel Construction (KSSC CST No. 2021-01) – CFT (Concrete Filled Tube) Column Connection Top-down Method

This is a construction method that applies to both the ground floor and underground floors in confined construction sites such as downtown areas, drastically shortening the construction period. The CFT column is filled with high-strength concrete in a tube made of steel (steel pipe), which has the advantage of reducing the amount of steel by about 10% compared to conventional H-shaped steel. However, Hyosung Heavy Industries has developed a new type of CFT column technology since the existing CFT columns are prone to various problems, including a lack of welding quality and difficulty in quality control and field safety management. The newly developed CFT column has recently been certified by the Korean Society of Steel Construction for its high performance and is currently being applied to actual construction sites in Korea – including Munjeong Station Youth Housing, Seocho Nambu Terminal Officetel, and the Daegu Gamsam Residential Complex III.

#### New Construction Technology No. 833 – Removable Deck Plate Method

The detachable deck method was recently introduced to facilitate reasonable frame construction, as it has become difficult to find construction engineers. Frame construction is now being systemized through pre-production in factories, and the detachable deck method can reduce labor costs by cutting down on processing work at the construction site. Combining the advantages of conventional molding technology and steel truss deck plates, this new method provides the convenience of deck plate installation, the ease of fixing defects using conventional molding technology, and the reusability of plywood. It also boasts high usability from through upgraded joint parts, cost reduction effects, as well as the convenience of maintenance and repair work. In January 2018, Hyosung Heavy Industries acquired certification for new construction technology with this construction method. It has been applied to actual construction sites, including the construction of multi-family housing in Yongin Seocheon II, Pyeongtaek Sosa II, and Cheongdam II. Moreover, the technology is expected to further contribute to cost reduction and quality improvement through on-site applications.

#### New Construction Technology No. 897 – Prefabricated Modular Elevator Pit Method

When installing elevators, a prefabricated modular pit can be applied at the bottom of the shaft. In this way, the impact of leakages can be minimized, and the construction duration can be reduced by about 3 to 4 days per installation. Further, construction costs can be reduced by about 30% compared to conventional methods. As excavation depths increase during the construction of apartment buildings nowadays, layers of soft and hard rock are often found, requiring extra rock-fracturing and deep excavation when building the foundations – prolonging the entire construction period. This new construction method, using a modular elevator pit, could solve such problems. We acquired New Construction Technology (No. 897) certification for the prefabricated modular elevator pit in September 2020. The method has already been applied to some construction sites, including the Gongneung reconstruction site in Taereung and urban redevelopment sites in Hongje #3 district, Daegu Sinam #6 district, the Daejeon Seonhwa Redevelopment site, the Asan Smart Valley site, and the Suseo LH site.

#### Development and Demonstration of Hydrogen Fusion Charging Station Using Biogas

As the government's hydrogen industry support policy has expanded the supply of hydrogen fuel cell vehicles, the demand for distributed hydrogen supply systems in cities and regions has increased. Chungju-si is conducting a pilot project for a carbon-free hydrogen charging station that uses biogas as a raw material, rather than by-product hydrogen from fossil fuels. We participated in this project, together with the Institute of Advanced Engineering, to develop the charging station design technology. This is the first hydrogen charging station in Korea to produce green hydrogen, receiving biogas produced by the Chungju Food and Energy Center through a pipe. The construction of the hydrogen charging station will be completed in 2022, with demonstrations and commercial operations subsequently carried out to produce 500kg of green hydrogen per day.

### R&D Expenses

The Power & Industrial Systems R&D Center steadily invests in R&D every year to ensure sustainable technological competitiveness.

Category	Unit	2019	2020	2021
R&D Expenses	KRW 1 million	34,973	33,503	33,498

### Patent Registration and Application

The Power & Industrial Systems R&D Center registers patents for in-house technology every year to secure intellectual property rights and use them as KPIs for performance management.

Category	Sub-category	Unit	2019	2020	2021
Patent registration (accumulated)	Domestic	Cases	310	341	334
	Overseas	Cases	65	81	115
Patent application (accumulated)	Domestic	Cases	350	363	386
	Overseas	Cases	232	216	249

## Social Performance

As a large corporation with over domestic 3,000 employees, Hyosung Heavy Industries influences the economies of local communities. We newly hired 268 employees in 2021, helping to revitalize the job market that had shrunk due to the COVID-19 pandemic, and increased the ratio of female employees to promote active social engagement by women. In addition, we pursue fair performance evaluations and actively promote labor-management communication to facilitate a healthy corporate culture.

### Employee Status

As of the end of 2021, Hyosung Heavy Industries had 3,125 employees. Permanent employees represent 93% of all employees. The proportion of permanent female employees is 10%, and there are 101 female managers. We are increasing our recruitment of disabled and veterans each year in consideration of the socially disadvantaged.

Category	Sub-category	Unit	2019	2020	2021
Total employees		Persons	3,483	3,154	3,125
Gender	Male	Persons	3,143	2,844	2,809
	Female	Persons	340	310	316
Employment type	Permanent (male)	Persons	3,124	2,769	2,708
	Permanent (female)	Persons	250	222	213
	<b>Subtotal</b>	<b>Persons</b>	<b>3,374</b>	<b>2,991</b>	<b>2,921</b>
	Contract (male)	Persons	19	75	101
	Contract (female)	Persons	90	88	103
	<b>Subtotal</b>	<b>Persons</b>	<b>109</b>	<b>163</b>	<b>204</b>
Region	Domestic	Persons	3,483	3,154	3,125
	Overseas	Persons	27	40	44
Job category (based on permanent employees)	Office	Persons	2,494	2,424	2,228
	Technical	Persons	819	730	693
Fostering female talent	Female employee ratio	%	10.0	10.0	10.1
	Number of women at manager level or higher	Persons	89	96	101
	Female manager ratio	%	10.3	6.5	7.2
Diversity	Persons with disabilities	Persons	75	92	90
	Veterans	Persons	82	68	66
	Foreigners	Persons	22	19	16
	<b>Subtotal</b>	<b>Persons</b>	<b>179</b>	<b>179</b>	<b>172</b>
Creating job opportunities (new hires)	Male	Persons	154	154	179
	Female	Persons	89	70	89
	<b>Subtotal</b>	<b>Persons</b>	<b>243</b>	<b>224</b>	<b>268</b>
Employee turnover (voluntary turnover amongst permanent employees)	Male	Persons	79	72	96
	Female	Persons	14	12	17
	<b>Subtotal</b>	<b>Persons</b>	<b>93</b>	<b>84</b>	<b>113</b>
Turnover rate		%	2.76	2.81	3.87

### Parental Leave and Childcare Leave

Hyosung Heavy Industries encourages employees to take parental and childcare leave to contribute to resolving the country's low birthrate issue.

Category	Sub-category	Unit	2019	2020	2021
Male (parental leave)	Employees on parental leave	Persons	97	71	77
	Return rate	%	100	100	100
Female (parental leave)	Employees on parental leave	Persons	24	13	19
	Return rate	%	96	92	89
Male (childcare leave)	Employees on childcare leave	Persons	132	69	64
	Return rate	%	99	98	100
	Rate of working more than 12 months after return	%	96	92	100
Female (childcare leave)	Employees on childcare leave	Persons	14	19	19
	Return rate	%	95	89	89
	Rate of working more than 12 months after return	%	73	81	88

### Regular Performance Evaluations

As of the end of 2021, Hyosung Heavy Industries has conducted a regular performance evaluation of 2,921 employees, or 93% of the total 3,125 employees. We have established a fair evaluation system that covers the majority of our employees.

Category	Unit	2019	2020	2021
Number of employees subject to performance evaluation	Persons	3,374	2,991	2,921
Performance evaluation rate	%	97	95	93

### Basic Wage and Remuneration

Hyosung Heavy Industries pays new employees 1.8 times more than the legal minimum wage to guarantee their welfare and increase their motivation to work.

Category	Unit	2019	2020	2021
Basic salary for entry-level hires	KRW 1,000	3,272	3,501	3,624
Rate of entry-level salary to legally defined local minimum wage (%)	Male	%	174.7	181.7
	Female	%	174.7	181.7
Average basic salary	KRW 1,000	4,746	4,393	4,730

## Social Performance

### Labor Union Membership Status

We notify the labor union as soon as any important business matters arise. Each business site transparently discloses the status of corporate management to employees through regular management briefing sessions and multi-level meetings. In addition, we have established the Labor-Management Council at each business site and hold quarterly meetings to discuss welfare, grievances, and health and safety issues. Complaints and grievances received are managed through the company-wide system and are continuously monitored for improvements.

Category	Unit	2019	2020	2021
Employees covered by collective agreements	Persons	813	785	693
Proportion of employees subject to collective bargaining agreements among total employees	%	23.3	24.9	22.2
Number of union workers	Persons	731	682	657
Proportion of union workers	%	89.9	89.9	94.8

### Retirement Pension

Hyosung Heavy Industries operates both DB-type and DC-type retirement pension systems to ensure employees' freedom of choice, and complies with all related legal standards.

Category	Unit	2019	2020	2021
Total operating fund for retirement pensions (DB+DC)	KRW 1 million	224,657	217,734	189,752
Operating fund for DB pension	KRW 1 million	204,525	182,154	150,689
Operating fund for DC pension	KRW 1 million	20,132	35,580	39,063
Total number of members (Persons)	Persons	3,425	2,967	3,083
Number of DB pension members (Persons)	Persons	2,934	2,256	2,404
Number of DC pension members (Persons)	Persons	491	711	679

### Occupational Accident Rate

Hyosung Heavy Industries strives to create a safe workplace.

Category	Unit	2019	2020	2021
Total number of occupational accidents: Accidents + Occupational disease	Persons	16	19	19
Occupational accident rate: Total number of occupational accidents / Total number of employees x 100	%	0.46	0.6	0.94
Number of work-related fatalities	Persons	-	-	1
Work-related fatality rate per ten thousand employees (Number of work-related fatalities / Total number of employees x 10,000)	‰	-	-	4.97

### Introduction of a Professional Course on System Engineering

Hyosung Heavy Industries conducts diverse training to improve its sales employees' technical capabilities. In order to offer customized sales proposals to customers, we have subdivided the competency levels of existing employees and diagnosed their capabilities. We have been able to increase the effectiveness of training by organizing programs and providing customized training tailored to different technical competency levels, and we plan to expand such training in 2022.

### CSR Status

Hyosung Heavy Industries provides financial and non-financial support to listen to the difficulties of our local communities and solve problems as one. Hyosung Heavy Industries actively participate in CSR activities based on a sense of responsibility for vulnerable groups in society.

Category	Unit	2019	2020	2021
CSR investment	KRW 1 million	825	858	560
Number of CSR programs	Cases	8	12	19

\* The number of CSR programs in 2021 increased significantly due to an increase in the number of target business sites (headquarters only in 2020 to all business sites in 2021).

### Major CSR Activities

Along with the Areumjigi Foundation, we are carrying out a palace restoration project in Changdeokgung Palace. In the first and second stage projects, the interior lighting and chandeliers were restored, allowing the visitors to see the palace inside. In the third stage project, we plan to identify more sites for restoration. In recognition of these achievements, we have been selected as an outstanding company for contributions to local society for three consecutive years, since 2019. In addition, Hyosung Heavy Industries has provided AI nurse robots for elderly people of national merit. These AI nurse robots for elderly veterans who live alone, who have had limited in-person interactions due to COVID-19, help them with their daily lives through 24-hour life management, medication and hospital reservation notifications, and responding to emergencies with motion detection sensors. For our achievements in this respect, we received the Veterans Culture Awards a company alone from the Ministry of Patriots and Veterans Affairs.

### Employee Training Status

Hyosung Heavy Industries carries out a variety of training programs to develop the competencies of its employees. In 2020, due to COVID-19, safety training for business site managers and supervisors, as well as training for construction site managers, were converted to online and remote (letters) methods.

Category	Unit	2019	2020	2021
Number of training participants	Persons	167,343	125,299	117,002
Total training expenses	KRW 1,000	2,284,723	1,067,897	1,434,366
Total training hours	Hours	237,474	147,849	169,968
Average training hours per person (total training hours / number of employees)	Hours	68.18	46.88	54.39
Average training expenses per person (total training expense / number of employees)	KRW	655,964	338,585	458,997
Environment training	Persons	19,611	3,430	1,931
Ethics and anti-corruption training	Persons	116	1,494	1,134
Fair trade training	Persons	117	1,477	1,099
Safety and health training	Persons	52,473	50,321	44,942
Human rights training (sexual harassment/disability awareness/ workplace harassment prevention)	Persons	6,775	7,260	6,796
Information security training	Persons	3,673	1,917	481
Sustainability management training	Persons	-	11	2,975
Retiree training	Persons	-	-	-

## Environmental Performance

Hyosung Heavy Industries listens to the voices of its internal and external customers and strives to save energy, minimize pollutants, and prevent occupational accidents together with all employees. We are effectively responding to potential risks and environmental impacts by combining cutting-edge technologies at every stage of the product life cycle, including design, purchase, manufacture, use, and disposal. Through continuous training and capacity-building, we are innovating our HSE management system to a top global level and regularly evaluating our performance.

### Energy Consumption

Hyosung Heavy Industries' Changwon plant has introduced a high-efficiency inverter operation method to save electricity and increase the operational efficiency of production process facilities. We have also introduced an integrated management system for air conditioners and heaters installed in new buildings. The system centrally controls target facilities whenever necessary - for example, in the event of a power peak - thus enabling energy saving. We also plan to introduce an integrated management system for power usage to continue promoting energy saving activities.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)	
Direct energy consumption	Diesel	TJ	11.74	10.21	10.51	9.54	
	Kerosene	TJ	0.03	21.88	21.88	21.68	
	LNG	TJ	113.82	109.71	108.03	94.12	
	Gasoline	TJ	3.02	2.50	3.18	2.31	
	Propane	TJ	7.37	8.00	7.98	5.51	
	B-C oil	TJ	-	-	-	-	
	Hard coal	TJ	-	-	-	0.46	
	Other solid fuels	TJ	-	-	-	7.28	
	Off-gas	TJ	-	-	-	-	
	LPG	TJ	0.33	0.38	0.40	0.50	
	Biogas	TJ	-	-	-	-	
	<b>Subtotal</b>	<b>TJ</b>	<b>136.32</b>	<b>152.68</b>	<b>151.98</b>	<b>141.39</b>	
	Indirect energy consumption	Electricity	TJ	892.03	984.06	976.87	928.67
		Steam	TJ	-	3.34	3.35	17.60
Waste heat from processes		TJ	-	-	-	-	
Heat from incineration of waste		TJ	64.37	60.53	51.50	51.50	
<b>Subtotal</b>	<b>TJ</b>	<b>956.40</b>	<b>1,047.93</b>	<b>1,031.72</b>	<b>997.78</b>		
<b>Total</b>	<b>TJ</b>	<b>1,092.72</b>	<b>1,200.61</b>	<b>1,183.70</b>	<b>1,139.17</b>		
Energy intensity (Total energy consumption/Sales)	(TJ/KRW 100 million)	0.064	0.048	0.050	0.048		

\* Emissions intensity was calculated based on sales recorded in general financial statements and not on a consolidated basis, since energy consumption and emissions are calculated only for domestic business sites.

### Energy Saving and Emissions Reduction Performance

For the purpose of practicing green management, Hyosung Heavy Industries has implemented investment plans for LED light replacement, thus reducing emissions and saving energy across its business sites.

Business site	Project name	Execution date	Investment budget (KRW 1 million)	Energy saving (kWh/year)	Energy saving (TJ/year)	GHG emissions reduction (tCO <sub>2</sub> e/year)
Changwon	LED lighting replacement	2017.07	97	111,142	1.1	51

### Greenhouse Gas (GHG) Emissions

Through a variety of activities to reduce GHGs emissions, Hyosung Heavy Industries has achieved a decrease in GHG emissions intensity by 23% compared to the previous year.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Direct GHG emissions (Scope 1)	Fixed combustion	tCO <sub>2</sub> eq	6,345.75	7,598.62	7,460.97	7,177.07
	Mobile combustion	tCO <sub>2</sub> eq	910.11	814.52	589.94	771.84
	Process emissions	tCO <sub>2</sub> eq	963.12	1,107.17	573.00	613.51
	Waste disposal	tCO <sub>2</sub> eq	65.82	37.95	37.95	442.96
<b>Subtotal</b>	<b>tCO<sub>2</sub>eq</b>	<b>8,284.80</b>	<b>9,558.25</b>	<b>8,661.86</b>	<b>9,005.38</b>	
Indirect GHG emissions (Scope 2)	Electricity	tCO <sub>2</sub> eq	43,324.07	47,793.67	46,861.65	44,441.74
	Steam	tCO <sub>2</sub> eq	-	114.20	116.39	662.77
	<b>Subtotal</b>	<b>tCO<sub>2</sub>eq</b>	<b>43,324.07</b>	<b>47,907.87</b>	<b>46,978.04</b>	<b>45,104.51</b>
<b>Total</b>	<b>tCO<sub>2</sub>eq</b>	<b>51,608.87</b>	<b>57,466.12</b>	<b>55,639.90</b>	<b>54,109.89</b>	
GHG emissions intensity (Total GHG emissions/Sales)		(tCO <sub>2</sub> eq/KRW 1 million)	0.030	0.023	0.024	0.023

\* The data are based on the Guidelines for Reporting and Certification of GHG Emission Trading System (Notice No. 2021-278 of the Ministry of Environment) and the ETS report submitted to the government in the given years, in accordance with the conformity assessment by the Ministry of Environment.

\* CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O are the only greenhouse gases emitted. The above GHG emissions total differs from the GHG emissions disclosed in our Business Report due to differences in rounding values for each business site.

### Renewable Energy Consumption

Hyosung Heavy Industries uses steam from incineration waste heat, produced by municipal waste incineration plants near its business sites, as a renewable energy source.

Business Name	Business site	Unit	2019	2020	2021
Waste energy	Changwon	GJ/year	64,369	60,530	62,920

### Management of Water Resources

In 2021, total water usage at Hyosung Heavy Industries amounted to 430,000 tons. We are reducing water consumption from each water source, including groundwater and industrial water. The Changwon plant periodically replaces aging water pipes and minimizes unnecessary water consumption by conducting self-checks for leaks.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Consumption by water source	Waterworks	Ton	704	3,715	-	157,968
	Groundwater	Ton	4,916	-	-	-
	Industrial water	Ton	424,634	347,318	368,800	361,867
Total water consumption		Ton	430,254	351,033	368,800	519,835
Water re-use		Ton	430,254	-	500	-
Water re-use rate		%	0.20	-	0.14	-

\* From 2021, we have been including water consumption (157,968 tons) at construction sites, which was not previously counted.

## Environmental Performance

### Wastewater and Water Treatment

At the Changwon plant, water quality tests are conducted every month to constantly monitor water pollutant concentrations. Filter materials in the wastewater treatment plant, such as activated carbon and sand, are regularly replaced. Further, we release wastewater with concentrations under 70% of the legally accepted criteria.

Category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Wastewater discharge	Ton	8,141.40	8,872.80	8,900.00	8,880.10
Biochemical Oxygen Demand (BOD)	Ton	0.48	0.02	0.02	0.03
Chemical Oxygen Demand (COD)	Ton	0.50	0.11	0.12	0.25
Suspended Solids (SS)	Ton	0.05	0.03	0.03	0.01
Total Nitrogen (T-N)	Ton	1.78	0.22	0.03	0.04
Total Phosphorus (T-P)	Ton	0.15	0.03	0.03	0.02

### Waste Treatment

For systematic waste management, Hyosung Heavy Industries conducts regular waste sorting training for employees. First, departments that produce waste separately discharge the waste in accordance with their characteristics, such as combustible waste, wastepaper, and nonflammable waste. Some mixed waste is reclassified in the waste storage facility. In the process of reclassification, we separately collect and recycle waste metal, including containers, molds, and scrap iron. In terms of waste oil and waste paint, we have introduced a real-name waste discharge system so that each department can monitor and manage their waste discharge, thereby facilitating waste discharge reductions. Waste that is transported to waste storage is stored separately in accordance with each material. Further, waste is managed in consideration of storage limits and storage periods, and is taken out for disposal by a subcontracted service provider. When waste disposal is complete, relevant information is collected, such as disposal amounts and disposal companies, via the waste management system (Allbaro). We also continue to identify new companies to improve the efficiency and effectiveness of our waste disposal processes.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Industrial waste (general)	Recycling	Ton	4,115.3	4,177.5	4,100.0	5,036.7
	Incineration	Ton	1,027.5	1,229.0	1,233.0	147.8
	Landfill	Ton	124.5	370	363.0	278.2
	Subtotal	Ton	5,267.3	5,776.5	5,696.0	5,462.7
Industrial waste (designated)	Recycling	Ton	291	288.3	293.0	216.4
	Incineration	Ton	108.2	177	170.0	125.3
	Landfill	Ton	-	0.8	5.0	5.4
	Subtotal	Ton	399.2	466.1	468.0	347.1
Total waste	Ton	5,666.5	6,242.6	6,164.0	5,809.8	
Waste recycled	Ton	4,406.3	4,465.8	4,393.0	5,253.1	
Waste recycling rate	Ton	77.8	71.3	71.3	90.4	

### Emissions of Atmospheric Pollutants

Hyosung Heavy Industries' Changwon plant has established a strict internal emission acceptance standard, which is defined at 60% of the legally accepted standard for air pollutant emissions. When external criteria are exceeded, the active carbon and bag filters are preemptively replaced. Further, we constantly monitor production volume and have set a reasonable replacement cycle for activated carbon and bag filters to replace filter materials in a timely manner. The UHV Production Team has come up with various solutions for the existing problems, such as extending the lifetime of bag filters through the introduction of injector pulses for descaling. In addition, the Casting Team has managed to shorten the replacement cycle by introducing an adsorption and catalytic oxidation facility (Veraria), which uses regenerative filters for the first time in Korea.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
General air pollutants	Nitrogen oxides (NOx)	Ton	1.2	1.1	1.0	1.3
	Sulfur oxides (SOx)	Ton	-	-	-	-
	Particulate matter (PM)	Ton	10.0	8.9	7.1	5.8
Ozone depleting substances	CFC(R-11)	Ton	-	-	-	-
	HCFC(R-123)	Ton	-	-	-	-
	HCFC(R-22)	Ton	-	-	-	-

### Chemical Substances Management

Hyosung Heavy Industries has enhanced its management efficiency by establishing a new Electronic Chemical Management System (ECMS) based on the existing ERP-based electronic system, increasing the efficiency of all chemical substances used in the production process. The system checks all purchased materials to confirm whether they contain controlled chemical substances, and purchases are only possible after approval by personnel in charge of chemicals at each business site following a review of data concerning regulations and permission status stored in the database of each business site. In addition, a system has been established to provide training on MSDS at the same time as all substances are received, ensuring more systematic management. The Changwon Plant replaces existing hazardous chemicals with non-hazardous chemicals every year to establish an eco-friendly business site, and strives to prevent new hazardous chemicals through environmental safety reviews.

Category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Hazardous substances usage	Ton	151	127	88	34
Hazardous substances usage intensity	Tons/KRW 1 million	0.00009	-	-	-
Emissions of chemical substances	Ton	353.700	254.100	230,500	194,000

### Zero Emission Vehicle

Hyosung Heavy Industries operates zero emission vehicles that help reduce air pollutant and GHGs.

Category (Unit: no. of vehicles)	On-road vehicles			Off-road vehicles			Total
	Electric vehicles	Hydrogen vehicles	Subtotal	Electric vehicles	Hydrogen vehicles	Subtotal	
Hyosung Heavy Industries	1	1	2	165	-	165	167

\* On-road vehicles: Passenger cars, vans, trucks, special vehicles, two-wheeled vehicles (excluding electric bicycles)

\* Off-road vehicles: Includes non-specified vehicles, such as construction machinery, agricultural machinery, etc. E.g., Forklifts, tool cars, and carts used in workplaces

## Environmental Performance

### Sales and Purchase of Eco-Friendly Products and Services

Hyosung Heavy Industries follows a green purchasing policy and practices green management by selling and purchasing eco-friendly products and services. In 2021, we sold KRW 723.1 billion worth of eco-friendly products and services, and purchased KRW 12.8 billion. Green purchases include eco-label certified materials, high-efficiency energy certified materials, energy and environmental pollution reduction materials (e.g., ozone layer protection) specified in the renewable energy product certification analysis report, and recyclable resource materials.

Category	Unit	2019	2020	2021
Sales	KRW 1,000	689,692,364	1,498,226,412	723,117,057
Purchase	KRW 1,000	34,846,686	61,436,059	12,822,586

### Environmental Investments

Hyosung Heavy Industries practices green management through continuous environmental investments in areas such as waste treatment, environmental restoration, and pollution prevention.

Category	Unit	2019	2020	2021
Waste treatment and environment restoration expenses	KRW 1,000	404,342	408,070	373,727
Pollution prevention and environmental management expenses	KRW 1,000	334,103	265,087	205,959
<b>Total</b>	<b>KRW 1,000</b>	<b>738,445</b>	<b>673,157</b>	<b>579,686</b>

### Environmental management system certification

To ensure the effective operation of the environmental management system, Hyosung Heavy Industries conducts an ISO 14001 surveillance audit once a year. We also implement internal audits and monitor HSE compliance twice a year. The internal environmental audit is carried out in the first and second half of the year by three groups of two internal auditors, and covers 42 departments.

### Environmental Performance Management

Hyosung Heavy Industries' Changwon plant operates an environmental performance evaluation system, establishing HSE goals and detailed implementation tasks for each department every year. Major KPIs include zero cases of environmental non-compliance, compliance with emission allowances, eco-friendly designs for reduction of waste (flammable, waste paint) emissions, and conserving raw materials. Two persons from the Safety Environment Team are divided into sectors – environment and safety – to collect the quarterly performance of all departments in order to monitor the achievement of set targets. When KPIs are unfulfilled, improvement measures are derived after identifying causes and methods for improvement.

### Environmental Education

The Changwon plant mandates new employees (including in-house suppliers) to complete environmental education at their onboarding introductory training, and carries out regular environmental education for all employees twice a year. In addition, customized training is provided to environmental facility operators through on-site visits.

### Participation in State-run Projects for Green Technology Development

Hyosung Heavy Industries participates in state-run research projects for improving energy efficiency and facilitating renewable energy. We are strengthening our position as a market leader in eco-friendly technologies by participating in state-run projects in areas such as facility lifespan extension, energy efficiency improvement, and renewable energy.

Project Site	Project Period	Project Budget (Unit: KRW 1 million)			Remarks
		In cash	In kind	Total	
Development of Diagnosis Technology for Voltage-type HVDC Power Equipment	2017.11~2022.04	327	75	402	Facility lifetime extension (Environment)
Development/operation/demonstration of ±200kV DC voltage-type MMC	2017.01~2023.04	65,817	7,500	73,317	Energy efficiency
Development and demonstration of ESS products for emergency power peaks in North America	2017.12~2021.11	812	202	1,014	Renewable energy
Development of an integrated lightweight semiconductor transformer and a lightweight high-efficiency magnetic synchronous motor for urban railway carriages	2018.04~2022.09	135	765	900	Energy efficiency
Development of a 1MVA multi-channel charger for electric vehicles using SiC devices	2019.05~2022.12	756	504	1,260	Environment
Establishment of an experience complex for the demonstration of future power service models	2019.10~2023.09	869	215	1,084	Renewable energy
Technology development and demonstration of a hydrogen fusion charging station using biogas	2019.05~2022.04	369	246	615	Environment
Establishment of a small-scale hydrogen extraction facility	2020.11~2022.08	306	204	510	Environment

### Green Building Certifications

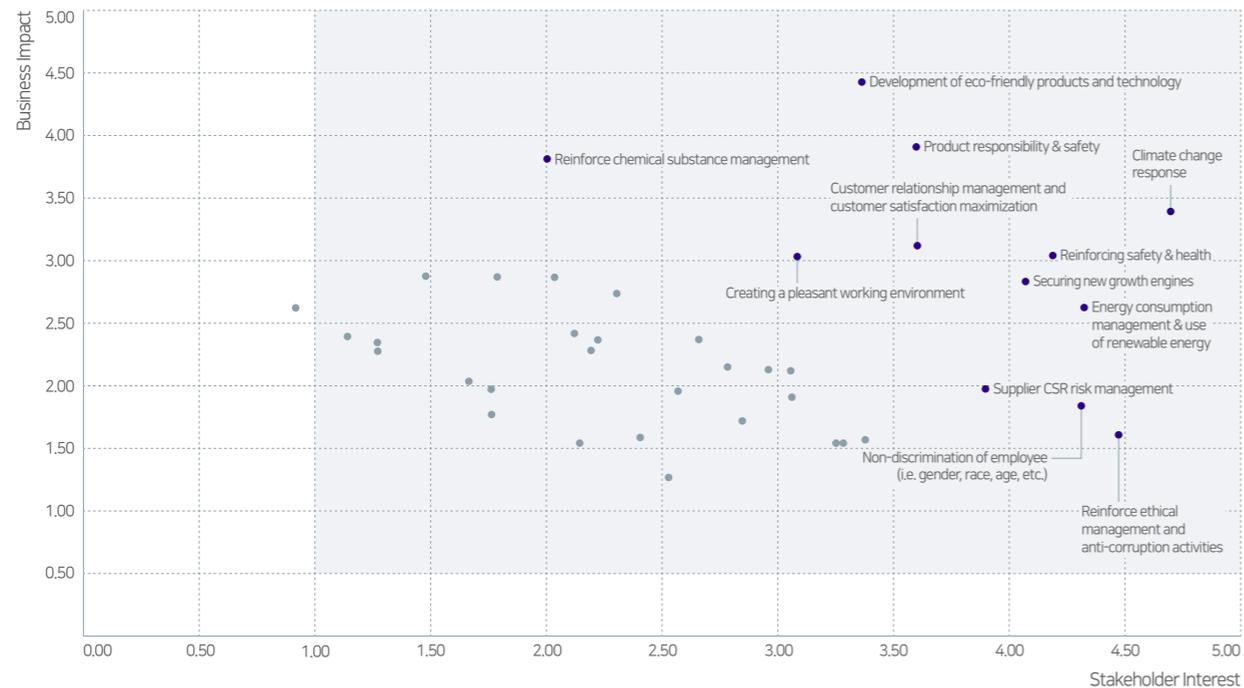
Three buildings completed by Hyosung Heavy Industries in 2021 have obtained an Excellent Rating in the Green Building Certification (G-SEED) system. Many other completed buildings (including 17 buildings with currently valid certifications) have also acquired Green Building Certification.

Certified building	Certification authority	Certification code	Certification date	Rating
Misa Riverside Hyosung Harrington Place LHF	Korea Productivity Center Quality Assurance	2017-1358	2017.12.6	General (Green Level 4)
Munji Hyosung Harrington Place	Korea Research Institute of Eco-Environmental Architecture	KRI-17-778	2017.8.4	General (Green Level 4)
Yongin Giheung Hyosung Harrington Place	Korea Appraisal Board	2019-258	2019.6.5	General (Green Level 4)
Pyeongtaek Hyosung Harrington Place Complex 2	Korea Appraisal Board	2019-283	2019.6.25	General (Green Level 4)
Dream Forest Harrington Place	Korea Appraisal Board	2019-419	2019.9.25	Excellent (Green Level 2)
Cheongdam 101 Villa	Korea Green Building Council	KGBC-C-b-327	2019.7.17	Good (Green Level 3)
Cheongdam 101-17 Villa	Korea Green Building Council	KGBC-C-b-328	2019.7.17	Good (Green Level 3)
Jungdong Harrington Place	Korea Research Institute of Eco-Environmental Architecture	KRI-19-1567	2019.11.8	Excellent
Construction of Seogyo-dong Enterprise-Type Rental Housing	Korea Appraisal Board	2020-078	2020.3.26	Excellent (Green Level 2)
Center Point Donuimun Gate	Korea Green Building Council	KGBC-C-b-427	2020.6.12	Excellent (Green Level 2)
Cheonan Dujeong Hyosung Harrington Place	Korea Productivity Center Quality Assurance	2020-2627	2020.4.23	General (Green Level 4)
Yongsan Central Park Harrington Square	Korea Productivity Center Quality Assurance	2020-2816	2020.8.5	Best (Green Level 1)
Siheung Eungye LH Arantree Complex 8	Korea Productivity Center Quality Assurance	2020-2941	2020.10.13	General (Green Level 4)
Godeok Station Hyosung Harrington Tower The First	Korea Productivity Center Quality Assurance	2020-2952	2020.10.19	Good (Green Level 3)
Gongneung 1 (Taerung Hyundai) Housing Reconstruction Project	Korea Real Estate Board	2021-427	2021.11.3	Excellent (Green Level 2)
Gyeyang Hyosung Harrington Place	Korea Green Building Council	G-SEED-C-2021-0239-6	2021.4.8	Excellent (Green Level 2)
Hongje Station Hyosung Harrington Place	Korea Research Institute of Eco-Environmental Architecture	G-SEED-C-2021-0881-9	2021.12.22	Excellent (Green Level 2)

## Economic Performance

Hyosung Advanced Materials overcame the sales decrease in 2020 and recorded its highest ever post-spinoff profit through technology management based on optimal quality, despite a decrease in demand due to COVID-19 and unstable supply of raw materials. We will continue to create economic value by fostering new growth engines, such as carbon fiber, and providing solutions that meet customer needs.

### Core Issues Derived from the Materiality Assessment



Category	Core Issues	GRI Topic	Stakeholder Importance							Reporting Page
			Customers	Suppliers	Employees	Shareholders and Investors	Local Communities	Association/Expert	Government	
Environment	① Climate change response	GRI 305 (Emissions)	●	●	●	●	●	●	●	17-19, 22
Environment	② Development of eco-friendly products and technology	-	●			●		●	●	28
Economic	③ Product responsibility & safety safety	GRI 416 (Customer Health and Safety)	●							41-45
Society	④ Reinforcing safety & health	GRI 403 (Occupational Health and Safety)		●	●				●	30, 35
Environment	⑤ Energy consumption management & use of renewable energy	GRI 302 (Energy)			●					95-96
Economic	⑥ Securing new growth engines	-				●		●	●	28
Economic	⑦ Customer relationship management and customer satisfaction maximization	GRI 417 (Marketing and Labeling)	●							41-45
Society	⑧ Non-discrimination of employee (i.e. gender, race, age, etc.)	GRI 406 (Non-discrimination)			●					54
Society	⑨ Creating a pleasant working environment	GRI 403 (Occupational Health and Safety)			●					58-59
Economic	⑩ Reinforce ethical management and anti-corruption activities	GRI 205 (Anti-corruption)	●	●	●	●			●	53
Society	⑪ Supplier CSR risk management	GRI 308 (Supplier Environmental Assessment)		●				●	●	37-40
Environment	⑫ Reinforce chemical substance management	GRI 306 (Waste)		●	●		●			97

### Financial Statements (Consolidated)

(Unit: KRW 1 million)

Category	2019	2020	2021
<b>Current assets</b>	982,899	842,036	1,355,009
Cash and cash equivalents	31,839	47,128	33,590
Trade and other current receivables	439,444	442,619	703,260
Inventories	472,116	324,696	563,967
Other current assets	39,500	27,594	54,192
<b>Non-current assets</b>	1,548,200	1,534,557	1,553,673
Long-term trade and other non-current receivables	4,675	5,216	5,236
Tangible assets	1,276,038	1,204,360	1,304,610
Investment in properties	150,397	151,387	155,310
Intangible assets	71,743	36,615	36,625
Other non-current financial assets	4,183	4,215	7,246
Other non-current assets	41,165	132,764	44,646
<b>Total assets</b>	<b>2,531,099</b>	<b>2,376,593</b>	<b>2,908,682</b>
<b>Current liabilities</b>	1,540,234	1,574,912	1,744,511
Trade and other current payables	301,758	335,239	508,575
Borrowings	1,211,066	1,223,496	1,160,771
Other current liabilities	27,410	16,177	75,165
<b>Non-current liabilities</b>	585,464	420,571	442,582
Long-term trade and other non-current payables	11,977	12,573	7,086
Long-term borrowings	540,076	376,233	380,039
Other non-current liabilities	33,411	31,765	55,457
<b>Total liabilities</b>	<b>2,125,698</b>	<b>1,995,483</b>	<b>2,187,093</b>
<b>Capital stock</b>	22,400	22,400	22,400
<b>Retained earnings</b>	(100,800)	(101,357)	147,307
<b>Other components of equity</b>	401,832	391,797	434,294
<b>Non-controlling interest</b>	81,968	68,272	117,588
<b>Total equity</b>	<b>405,400</b>	<b>381,112</b>	<b>721,589</b>

### Consolidated Statements of Comprehensive Income

(Unit: KRW 1 million)

Category	2019	2020	2021
Sales	3,053,616	2,394,623	3,597,777
Cost of sales	2,696,624	2,185,965	2,961,805
Gross profit	356,992	208,658	635,972
SG&A	169,628	146,524	167,707
R&D expenses	29,037	27,926	30,955
Operating income	158,326	34,208	437,310
Other gain	23,255	11,371	19,113
Other loss	56,339	9,455	12,365
Finance income	37,988	47,731	35,266
Finance expenses	110,958	82,750	67,525
Profit before tax	52,273	1,105	411,799
Income tax expenses	105,180	(5,705)	81,776
Net profit	(52,907)	6,810	330,023
Other comprehensive income	9,984	(12,940)	48,522
<b>Comprehensive income</b>	<b>(12,940)</b>	<b>(6,130)</b>	<b>378,545</b>

## Economic Performance

### Corporation Tax by Country

Hyosung Advanced Materials faithfully pays corporation taxes on profits generated in each country in which it conducts business activities.

Category	Sub-category	Unit	2019	2020	2021
Republic of Korea	Sales	KRW 1 million	1,068,273	722,534	963,266
	Profit before tax	KRW 1 million	11,634	41,775	170,154
	Corporate tax	KRW 1 million	87,930	(5,802)	17,923
	Tax rate	%	24.2	24.2	24.2
	Effective tax rate	%	755.8	(13.9)	10.5
Vietnam	Sales	KRW 1 million	1,403,669	1,091,823	2,108,160
	Profit before tax	KRW 1 million	66,460	15,309	288,468
	Corporate tax	KRW 1 million	9,753	4,999	5,305
	Tax rate	%	15.0	15.0	5.0
	Effective tax rate	%	14.7	32.7	1.8
China	Sales	KRW 1 million	423,067	351,871	518,724
	Profit before tax	KRW 1 million	(10,974)	9,901	75,325
	Corporate tax	KRW 1 million	477	2,608	31,760
	Tax rate	%	25.0	25.0	25.0
	Effective tax rate	%	(4.4)	26.3	42.2
Germany*	Sales	KRW 1 million	472,467	380,715	352,568
	Profit before tax	KRW 1 million	(57,463)	(19,041)	(10,415)
	Corporate tax	KRW 1 million	9,795	(1,487)	2,678
	Tax rate	%	28.1	28.1	28.1
	Effective tax rate	%	(17.1)	7.8	(25.7)
Luxembourg	Sales	KRW 1 million	254,672	185,114	260,123
	Profit before tax	KRW 1 million	4,620	1,147	5,516
	Corporate tax	KRW 1 million	1,016	501	2,008
	Tax rate	%	29.3	28.5	27.2
	Effective tax rate	%	22.0	43.7	36.5

\* Refers to taxes paid by GST Global GmbH (GST), which includes taxes in Romania, Mexico, and South Africa, as well as Germany.

### Production Output by Business Sector

With the production capacity and technology to comprehensively manufacture tire reinforcement materials, various industrial fabrics, and commercial/automotive carpets, Hyosung Advanced Materials stably provides price-competitive products to global customers through the continuous expansion of overseas sites, as well as the optimization of existing production bases. As a global industry leader, Hyosung Advanced Materials not only focuses on making products lighter, high functional, and more diversified, but also leads the ever-changing industrial yarn market through active product development – such as carbon fiber.

Category	Unit	2019	2020	2021
Tire cords, steel cords, industrial yarn, carpets, car mats, airbag fabrics, cushions, etc.	KRW 1 million	2,565,649	1,989,815	2,713,500
Spandex, polyester yarn	KRW 1 million	487,967	404,808	884,277

### Sales of Specific Products

Hyosung Advanced Materials is pushing to enter new markets to expand its business by developing products that can enhance resource efficiency. By reducing the resources used in the production process, we can minimize the environmental impacts of our production activities and customers' product use phase. We are also striving to increase our sales of high-strength products that reduce resource use due to their greater strength, as well as recycled fabric products that reduce process waste.

Category	Unit	2019	2020	2021
Sales of resource-efficient products	KRW 1 million	237,804	203,693	218,052

\* Sales were revised in accordance with the 2019 and 2020 consolidated financial statements.

### Financial Losses

In 2021, the Ulsan plant incurred a fine of KRW 6,600,000 for failing to conduct safety training or reporting changes to hazardous chemicals permissions in accordance with the Toxic Chemicals Control Act, as well as a fine of KRW 1,480,000 for non-compliance with the report on changes to air emission facilities, and for omitting SEMS operations from records in accordance with the Clean Air Conservation Act.

Category	Unit	2019	2020	2021
Total amount of monetary losses as a result of violation of environmental regulations, such as pollutant emissions	KRW 1,000	5,600	480	8,080

\* In 2019, a fine of KRW 4,800,000 for the Ulsan plant, due to non-reporting of hazardous chemical imports, was omitted. In 2020, a fine of KRW 6,000,000 for the Ulsan plant, due to non-reporting of new NOx emissions, was reduced by 20%, resulting in a payment of KRW 4,800,000.

### Supplier Status

Hyosung Advanced Materials maintains a stable supply chain by working to establish an industrial ecosystem that supports sustainable growth, with the recognition that it needs to grow together with suppliers and enhance mutual competitiveness.

Category	Unit	2019	2020	2021
Number of key suppliers in Korea	No.	53	53	64
Total purchase from suppliers	KRW 1 million	237,522	199,009	478,692

\* Key domestic suppliers were defined as those suppliers that account for the top 95% of total purchase amount.

## Economic Performance

### R&D Organization

Based on the technology development contract signed between Hyosung Advanced Materials and the Hyosung Corp., Hyosung R&DB Labs – under Hyosung Corp. is responsible for the R&D of industrial textiles and compound materials. All intellectual property rights from the execution of the R&D contract, or R&D outcomes, belong to Hyosung Advanced Materials. For steel wire materials, the Steel Wire Technical Center under Hyosung Advanced Materials directly conducts related R&D projects.

R&D > Commercialization & Investment Decision-Making		
Hyosung R&DB Labs - Textile Research Group	Hyosung R&DB Labs - Composite Research Center	Steel Wire Technical Center
Aramid Tire reinforcements Tire adhesion Technical yarn	Functional materials	Steel Cords and Bead Wires Production technology

### R&D Process

All our R&D activities, including green products and technologies, are carried out through a series of stages, including needs identification, development request, decision on commercialization, and investment approval. We listen to our customers' needs with respect to technology and product development via various customer contact points. Identified needs are then delivered to the corresponding R&D organization (Hyosung R&DB Labs: textiles, compound products; Steel Wire Technical Center: steel wires) as a request for development. The R&D Committee decides on the commercialization of developed technologies or products, and final investment decisions are made by the Investment Review Committee.

### R&D Expenses

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

Category	Unit	2019	2020	2021
R&D Expenses	KRW 1 million	29,037	27,926	30,954

### Patent Registration and Application

Hyosung Advanced Materials strives to combine intellectual property rights with the experience and know-how of its employees to pioneer new technological inventions.

Category	Sub-category	Unit	2019	2020	2021
Patent registration (accumulated)	Domestic	Cases	641	652	674
	Overseas		278	284	289
Patent application (accumulated)	Domestic	Cases	1,255	1,269	1,272
	Overseas		430	436	437

## Social Performance

Hyosung Advanced Materials is striving to fulfill its corporate social responsibility to satisfy the requirements and expectations of various stakeholders. We are actively recruiting new employees in line with our organizational growth and development, and making efforts to ensure that our employees have a positive work-life balance. In addition, we are investing generously in employee training to develop their capabilities, as well as conducting social contribution activities to pursue harmonized coexistence with the local community.

### Employee Status

As of the end of 2021, Hyosung Advanced Materials has 955 employees in Korea. Contract-based workers account for 3.8% of the total, with the majority of workers employed as permanent employees. We are increasing the proportion of female employees and female managers in order to promote active social engagement by women, and our employment of disabled workers is maintained above the minimum legal rate.

Category	Sub-category	Unit	2019	2020	2021
Total employees		Persons	1,038	1,000	955
Gender	Male	Persons	932	903	857
	Female	Persons	106	97	98
Employment type	Permanent (male)	Persons	911	892	834
	Permanent (female)	Persons	97	88	85
	<b>Subtotal</b>	<b>Persons</b>	<b>1,008</b>	<b>980</b>	<b>919</b>
	Contract (male)	Persons	21	11	23
	Contract (female)	Persons	9	9	13
	<b>Subtotal</b>	<b>Persons</b>	<b>30</b>	<b>20</b>	<b>36</b>
Region	Domestic	Persons	1,038	1,000	955
	Overseas	Persons	-	-	-
Job category (based on permanent employees)	Office	Persons	456	429	436
	Technical	Persons	552	551	483
Fostering female talent	Female employee ratio	%	10.2	9.7	10.2
	Number of women at manager level or higher	Persons	15	14	17
	Female manager ratio	%	7.0	6.5	7.5
Diversity	Persons with disabilities	Persons	26	26	25
	Veterans	Persons	16	23	25
	Foreigners	Persons	-	-	-
	<b>Subtotal</b>	<b>Persons</b>	<b>42</b>	<b>49</b>	<b>50</b>
Creating job opportunities (new hires)	Male	Persons	107	62	60
	Female	Persons	24	6	5
	<b>Subtotal</b>	<b>Persons</b>	<b>131</b>	<b>68</b>	<b>65</b>
Employee turnover (voluntary turnover amongst permanent employees)	Male	Persons	40	41	36
	Female	Persons	11	9	8
	<b>Subtotal</b>	<b>Persons</b>	<b>51</b>	<b>50</b>	<b>44</b>
Turnover rate		%	5.1	5.1	4.8

\* Data for overseas employees exclude local employees directly hired at our overseas corporations.

### Parental Leave and Childcare Leave

To support the career development of female employees, we actively encourage them to use parental and childcare leave. We also encourage male employees to do the same, and the rate of male employees availing such leave has been increasing.

Category	Sub-category	Unit	2019	2020	2021
Male (parental leave)	Employees on parental leave	Persons	-	27	29
	Return rate	%	-	100	100
Female (parental leave)	Employees on parental leave	Persons	7	3	8
	Return rate	%	100	100	100
Male (childcare leave)	Employees on childcare leave	Persons	4	3	9
	Return rate	%	100	75	89
	Rate of working more than 12 months after return	%	-	50	100
Female (childcare leave)	Employees on childcare leave	Persons	8	2	9
	Return rate	%	100	86	89
	Rate of working more than 12 months after return	%	100	100	100

### Regular Performance Evaluations

As of the end of 2021, Hyosung Advanced Materials conducted regular performance evaluations of 96% of its employees. Regular performance evaluations are conducted such that team leaders carry out a first-stage evaluation following a self-evaluation of performance by the employees themselves. A second-stage evaluation is then conducted by the executive in charge. The evaluation considers feedback on work attitudes, as well as performance. Feedback sessions are conducted in-person, and employees can request task assignments considering their individual CDPs (Career Development Plan) during the session. At the HR counseling center, employees can also receive consultations from the HR team leader on transferring positions, based on their job satisfaction. We have improved the flexibility of the evaluation system by making individual KPIs changeable in accordance with employees' work conditions. Further, we enhance communication between evaluators and employees through semi-annual feedback sessions on work progress.

Category	Unit	2019	2020	2021
Number of employees subject to performance evaluation	Persons	1,004	979	919
Performance evaluation rate	%	97	98	96

## Social Performance

### Labor Union Membership Status

Besides the Hyosung Labor Union, employees can join the Hyosung Polyester Labor Union and the Hyosung Democratic Labor Union. Employees are guaranteed the right to pursue labor union membership and activities, and may also join local and industrial unions outside of those within the company. Each business site transparently discloses the status of corporate management to employees through regular management briefing sessions and multi-level meetings. In addition, we hold regular quarterly meetings to discuss welfare, grievances, and health and safety issues for each business site. Complaints and grievances are managed through the company-wide system and are continuously monitored for improvements.

Category	Unit	2019	2020	2021
Employees covered by collective bargaining agreements	Persons	571	553	483
Proportion of employees subject to collective bargaining agreements among total employees	%	55.0	55.3	50.6
Number of union workers	Persons	435	419	343
Proportion of union workers	%	76.2	75.8	71.0

### Retirement Pension

Hyosung Advanced Materials operates both DB-type and DC-type retirement pension systems to ensure employees' freedom of choice, and complies with all related legal standards.

Category	Unit	2019	2020	2021
Total operating fund for retirement pensions (DB+DC)	KRW 1 million	61,505	67,355	73,854
Operating fund for DB pension	KRW 1 million	60,439	66,291	72,713
Operating fund for DC pension	KRW 1 million	1,066	1,064	1,141
Total number of members (Persons)	Persons	1,172	1,126	1,070
Number of DB pension members (Persons)	Persons	976	930	871
Number of DC pension members (Persons)	Persons	196	196	199

### Basic Wage and Remuneration

Hyosung Advanced Materials pays new employees 1.6 times more than the legal minimum wage to guarantee their welfare and increase their motivation to work. Wage levels are the same for both male and female employees.

Category	Unit	2019	2020	2021
Basic salary for entry-level hires	KRW 1,000	3,272	3,501	3,606
Rate of entry-level salary to legally defined local minimum wage (%)	Male	%	174.7	181.7
	Female	%	174.7	181.7
Average basic salary	KRW 1,000	4,594	4,979	5,701

### CSR Status

Hyosung Advanced Materials has established CSE (Creating Social Ecosystem) as a vision for social contribution, and is carrying out CSR activities in accordance with three CSR strategies. We provide help to members of society through close communication and cooperation with civil society and the government, creating an environment in which the vulnerable can stand on their own feet, and conducting business activities that facilitate coexistence with members of society. Along with the operation of the Matching grant, we are implementing a paid volunteer system so that each employee can realize one volunteer service. And every year, we award outstanding volunteers a volunteer award so that they can be recognized by their colleagues.

Category	Unit	2019	2020	2021
CSR investment	KRW 1 million	572	771	495
Number of CSR programs	Cases	5	38	28

\* The number of CSR programs in 2020 has risen significantly due to an increase in the number of target business sites (headquarters only in 2019 to all business sites in 2020).

Hyosung Advanced Materials strives to listen to and resolve difficulties in the local community. We provide 'kimchi of love' through the Mapo-gu Office, scholarships through the Mapo Human Resources Development Foundation, and daily necessities through the Ahyeon-dong Community Center for the vulnerable in Mapo-gu, where our head office is located. Further, we contributed donations and rice to 'Young Nak Aenea's Home', a residential facility for severely disabled children near our head office. The donations were used for the renovation of aging facilities, and the rice was purchased through a social enterprise located in Seoul, thereby contributing to the economic revitalization of the local community. In recognition of these achievements, we have been selected as an outstanding company for contribution to local society for three consecutive years, beginning in 2019.

## Social Performance

### Employee Training Status

As a producer of high-performance materials, Hyosung Advanced Materials provides systematic training, through technical advisors and process engineers, to improve employee awareness of technologies, products, and processes. We have extended the scope of the unique training program to include hourly workers (manufacturing), so that enhanced employee competencies are directly reflected in the quality of our products. Moreover, we strive to improve the capabilities of our employees through regular level-specific training. In 2021, training was reduced compared to the previous year due to the prolonged COVID-19 pandemic. By introducing diverse, remote education methods, such as the metaverse, we provide continuous growth opportunities for our employees.

Category	Unit	2019	2020	2021
Number of training participants	Persons	14,896	17,895	9,736
Total training expenses	KRW 1,000	832,816	473,972	252,590
Total training hours	Hours	41,372	32,463	22,228
Average training hours per person (total training hours / number of employees)	Hours	40	32	23
Average training expenses per person (total training expense / number of employees)	KRW	802,327	473,972	264,492

### Sustainability Management Training

In 2021, we provided sustainability management training in various fields, such as human rights, ethics, safety, and environment. This enabled us to raise employees' awareness of corporate social responsibility in our domestic and overseas subsidiaries.

Category	Unit	2019	2020	2021
Environmental training	Persons	465	1,477	916
Ethics and anti-corruption training	Persons	95	805	940
Fair trade training	Persons	23	912	901
Safety and health training	Persons	3,674	6,991	821
Human rights training (sexual harassment/disability awareness/workplace harassment prevention)	Persons	2,355	2,769	3,294
Information security training	Persons	556	996	92
Chemical management	Persons	-	54	-
Purchasing training	Persons	-	19	19
Sustainability management training	Persons	-	16	820
Retiree training	Persons	-	-	8

### Occupational Accident Rate

Hyosung Advanced Materials maintains a very low occupational accident rate by promoting a safe working environment. No occupational fatalities have occurred in the last three consecutive years.

Category	Unit	2019	2020	2021
Total number of occupational accidents: Accidents + Occupational disease	Persons	27	8	5
Occupational accident rate: Total number of occupational accidents / Total number of employees x 100	%	2.5	1.15	1.07
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)	‰	-	-	-

### Medical Checkups for Employees

Hyosung Advanced Materials provides customized medical checkup programs for employees, helping them improve their health. We continuously provide professional health checkup programs to support employees in fully demonstrating their capabilities. In 2021, 98.0% of those eligible received health checkups.

### Diagnosis of Organizational Issues for a Desirable Corporate Culture

With millennials recently becoming the main driving force behind the company, they are freely raising organizational issues or problems through internal social media channels, including Blind, Wa-gle Wa-gle, and the Tong Tong Bulletin Board. We conduct organizational issue diagnoses so that related problems and issues can be addressed in advance to foster a desirable corporate culture. The diagnosis takes place every quarter for teams facing difficulties in organizational management, checking their management of attendance, ways of working (R&R, inter-departmental cooperation, work processes), and leadership (instructions and reporting systems, communication methods). Following an organizational issue diagnosis at the Jeonju plant in 2020, we also conducted a diagnosis on three teams from the Finance Office in 2021. The targets of such diagnoses will be gradually expanded.

Step	Step I	Step II	Step III	Step IV
	Preliminary diagnosis and status analysis	Issue identification interviews	Identification of core issues and report on results	Follow-up
Detailed Activities	1) Preliminary organizational diagnosis survey 2) Survey analysis (identifying strengths and weaknesses) 3) Hypotheses regarding organizational issues 4) Attendance status analysis (annual leave, overtime work) 5) Retirement status analysis 6) HR status analysis (job, period, age)	1) Arrangement of interview schedule 2) Confirmation of interview questions - Attendance management (annual leave, overtime work, etc.) - Ways of working * Organizational structure (R&R, inter-departmental cooperation) * Work processes (processes, support systems) - Leadership (instructions, reporting systems, communication methods) - Other topics related to corporate culture 3) Interview conducted	1) Summary of interview results 2) Identifying organizational core issues and problems 3) Sharing interview results with executives and team leaders, and discussion on improvements 4) Preparing an organizational diagnosis report (core issues, countermeasures)	1) Monthly monitoring (until D+3 months) 2) Feedback from executives and team leaders regarding the results of monitoring
Period	5-7 days	3-5 days	3-5 days	3 days (Conducted on the last day of the month for 3 months)
Result	1) Analysis of preliminary diagnosis results 2) Analysis of attendance/retirement status 3) HR status table	1) Interview schedule 2) Interview questionnaire	1) Summary of interview 2) Organizational diagnosis report	1) Report on monitoring of changes

### Human Rights Impact Assessment

Once a year, Hyosung Advanced Materials conducts a human rights impact assessment for its domestic and overseas corporations. For the assessment, we use the human rights management guidelines and checklist published by the National Human Rights Commission of Korea. We carry out an in-house human rights impact assessment, and continuously identify improvements through reviews by external experts. Further, through the human rights impact assessment, we plan to identify the actual and potential human rights risks relating to our corporate activities and promote human rights-friendly management activities.

## Environmental Performance

Hyosung Advanced Materials is aware that environmental and safety-related competencies are critical to ensuring business competitiveness, and we are constantly making efforts in this regard. All employees are aware of our environmental and safety strategies, and they strictly comply with related policies and guidelines to minimize environmental incidents and pollution. Based on the SHE policy led by the Green Management Committee, we effectively manage environmental risks and impacts that may occur throughout our business activities, and have established the SHE Committee to strengthen safety management.

### Green Management Committee

Hyosung Advanced Materials has expanded the scope of management of the CSR Committee, a consultative body directly under the CEO, as well as establishing the Sustainability Steering Committee and specialized subcommittees (SHE Committee, Green Management Committee, Social Contribution Committee, Stakeholders Committee, Risk Management Committee, SCM Committee) with the CEO as the chair and C-Suite executives granted decision-making authority. In the second half of 2021, the Green Management Committee passed resolutions on the performance of environmental and safety investments relative to plans in 2021, as well as plans for 2022 and improvement measures for green management metrics. Further, it received reports on the importance of activities to strengthen the response to climate change and GHG emission reductions.

### Energy Consumption

Hyosung Advanced Materials has decreased its direct energy consumption compared to the previous year, and is conducting direct/indirect energy reduction activities by improving processes and introducing high-efficiency facilities.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Direct energy consumption	Diesel	TJ	7.40	4.23	4.10	0.85
	Kerosene	TJ	-	-	-	0.01
	LNG	TJ	283.23	467.92	453.89	483.24
	Gasoline	TJ	0.77	0.72	0.70	0.95
	Propane	TJ	241.95	193.81	187.99	176.18
	B-C oil	TJ	-	-	-	-
	Hard coal	TJ	-	-	-	-
	Other solid fuels	TJ	-	-	-	-
	Off-gas	TJ	-	-	-	-
	LPG	TJ	0.07	0.08	0.08	0.13
	Biogas	TJ	-	-	-	-
	<b>Subtotal</b>	<b>TJ</b>	<b>533.41</b>	<b>666.76</b>	<b>646.76</b>	<b>661.36</b>
Indirect energy consumption	Electricity	TJ	3,554.81	3,006.15	2,645.42	3,250.64
	Steam	TJ	220.11	216.53	190.55	303.62
	Waste heat from processes	TJ	-	-	-	-
	Heat from waste incineration	TJ	-	-	-	-
		<b>Subtotal</b>	<b>TJ</b>	<b>3,774.92</b>	<b>3,222.68</b>	<b>2,835.96</b>
<b>Total</b>		<b>TJ</b>	<b>4,308.33</b>	<b>3,889.45</b>	<b>3,482.72</b>	<b>4,215.61</b>
Energy intensity (Total energy consumption/Sales)	(TJ/KRW 100 million)		0.403	0.538	-	0.438

\* Energy intensity was calculated based on sales recorded in general financial statements and not on a consolidated basis, since energy consumption and emissions are calculated only for Korea business sites.

### Greenhouse Gas (GHG) Emissions

Hyosung Advanced Materials is exploring ways to reduce its GHG emissions. The accuracy and objectivity of its GHG emissions data are verified every year through external assurance.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Direct GHG emissions (Scope 1)	Fixed combustion	tCO2eq	28,409.17	34,987.75	33,938.11	34,712.64
	Mobile combustion	tCO2eq	577.84	352.01	341.45	131.53
	Process emissions	tCO2eq	-	-	-	-
	Waste disposal	tCO2eq	4,835.27	8,616.67	8,358.17	9,597.36
	<b>Subtotal</b>	<b>tCO2eq</b>	<b>33,822.28</b>	<b>43,956.43</b>	<b>42,637.73</b>	<b>44,441.53</b>
Indirect GHG emissions (Scope 2)	Electricity	tCO2eq	172,649.00	146,002.12	128,481.87	155,560.11
	Steam	tCO2eq	2,636.09	1,144.20	1,006.90	2,516.33
	<b>Subtotal</b>	<b>tCO2eq</b>	<b>175,285.09</b>	<b>147,146.33</b>	<b>129,488.77</b>	<b>158,076.44</b>
<b>Total</b>		<b>tCO2eq</b>	<b>209,107.36</b>	<b>191,102.75</b>	<b>172,126.50</b>	<b>202,517.97</b>
GHG emissions intensity (Total GHG emissions/Sales)	(tCO2eq/KRW 1 million)		0.196	0.264	-	0.210

\* The data are based on the Guidelines for Reporting and Certification of GHG Emission Trading System (Notice No. 2021-278 of the Ministry of Environment) and the ETS report submitted to the government in the given years, in accordance with the conformity assessment by the Ministry of Environment.

\* CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O are only greenhouse gases emitted. The above GHG emissions total differs from the GHG emissions disclosed in our Business Report due to differences in rounding values for each business site.

### Carbon Footprint Certification

In order to provide carbon emission information based on product life cycle assessments (LCA), Hyosung Advanced Materials is proceeding with the acquisition of international carbon footprint certification based on ISO 14067 - starting with tire reinforcement products from the Ulsan plant.

Category	Korea	China	Vietnam	Europe
Tirecord(fabric)	4 cases	1 case	2 cases	-
Tirecord(Steel)	-	1 case	2 cases	-
Technical Yarn	-	2 cases (in progress)	-	-
Aramid Yarn	1 case	-	-	-
Carbon fiber	1 case	-	-	-
Car mat, carpet	-	2 case	-	-
Airbag	-	2 cases (in progress)	-	2 cases (in progress)

### Zero Emission Vehicles

Hyosung Advanced Materials operates zero emission vehicles that help reduce air pollutant and GHGs.

Category (Unit: no. of vehicles)	Unit	On-road vehicles			Off-road vehicles			Total
		Electric vehicles	Hydrogen vehicles	Subtotal	Electric vehicles	Hydrogen vehicles	Subtotal	
Hyosung Advanced Materials	ea	-	-	-	77	-	77	77

\* On-road vehicles: Passenger cars, vans, trucks, special vehicles, two-wheeled vehicles (excluding electric bicycles)

\* Off-road vehicles: Includes non-specified vehicles such as construction machinery, agricultural machinery, etc. E.g., Forklifts, tool cars, and carts used in workplaces

## Environmental Performance

### Energy Saving and Emissions Reduction Performance

Hyosung Advanced Materials carries out reduction activities, including maximization of energy efficiency through recovery process improvements and the installation of high-efficiency facilities, to reduce energy consumption and GHG emissions.

Business site	Project name	Execution date	Energy saving (TJ)	GHG emissions reduction (tCO2eq)
Ulsan	Improved operation efficiency of common utilities(replacement of cooler)	2019.02	11	534
Ulsan	Installed as a high-efficiency induction heater	2019.05	4	183
Ulsan	Installed inverters in spinning scrubber #2,4	2019.09	7	360
Ulsan	Changing the energy source of the heating device for Let Off raw fabric in the dipping process	2019.11	2	88
Jeonju	Optimization of utility low-pressure compressor operation	2020.01	5	241
Jeonju	Reduction of steam consumption through recovery process improvements	2021.01	7	378
Jeonju	Reduction of steam consumption through waste heat recovery from RTO heat exchangers at Spinning Unit 1 and Firing Unit 2	2021.01	6	297
Ulsan	Maximize energy efficiency by changing the dryer type in the aramid polymerization process(electricity, steam)	2021.06	3	60
Ulsan	Reduction the no-load loss of the transformer	2021.08	4	176

### Renewable Energy Consumption

Hyosung Advanced Materials has installed photovoltaic power facilities at the Songpa S Tower building to make use of renewable energy generation.

Category	Business site	Unit	2019	2020	2021
Solar energy	Songpa S Tower	kWh/year	9,678	7,400	5,900

### Management of Water Resources

Hyosung Advanced Materials works closely with production process teams to minimize unnecessary water consumption. In addition, we collect the water used in production processes and discharge it into an emergency reservoir in the plant for re-use as cooling water.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Consumption by water source	Waterworks	Ton	24,381	15,198	11,388	19,136
	Groundwater	Ton	-	-	-	-
	Industrial water	Ton	3,812,178	3,462,965	3,613,936	4,071,689
	River water	Ton	-	-	-	-
Total water consumption	Ton	4,105,065	3,478,163	3,625,324	4,090,825	
Water re-used	Ton	1,730,912	555,126	-	550,702	
Water reuse rate	%	42.2	16.0	-	13.5	

\* Data corrected due to an error in aggregating the amount of industrial water used, and water recycled, at the Ulsan Plant in 2019 and 2020, as well as the addition of water usage at our head office.

### Wastewater and Water Treatment

Hyosung Advanced Materials minimizes environmental damage to the local community by preemptively identifying water pollutant emissions through regular water quality analyses. Ulsan plant has installed a chemical pre-treatment facility (collection, neutralization, oxidization, chemical reaction, clarification) that is capable of treating 2,000 tons of water per day, with the aim of effectively treating highly concentrated wastewater.

Category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Wastewater discharged	Ton	895,712	1,044,753	1,250,000	1,120,416
Biochemical Oxygen Demand (BOD)	Ton	1.14	1.73	2.85	1.97
Chemical Oxygen Demand (COD)	Ton	11.78	8.97	16.10	10.36
Suspended Solids (SS)	Ton	2.08	3.27	5.50	2.80
Total Nitrogen (T-N)	Ton	10.13	9.50	14.40	13.06
Total Phosphorus (T-P)	Ton	0.09	0.15	0.76	0.23

\* Data has been corrected due to errors in the units for BOD, COD, SS, T-N, and T-P emissions in 2019 and 2020.

### Waste Treatment

Hyosung Advanced Materials' Jeonju plant is working on improving its waste treatment method, switching its focus from incineration or landfill consignment to recycling. Whilst we used to entrust the large-scale incineration of waste synthetic fibers and organic solvents to an external company, we now re-use waste synthetic fibers as an auxiliary fuel after intermediate processing, with waste organic solvents recycled as fuel by a waste treatment company. Furthermore, we are researching and applying technologies to convert waste into recycled PET chips to facilitate the re-use of waste and reduce the consumption of raw materials. The Ulsan plant also continues to identify recycling companies to outsource the treatment of waste that is currently subject to incineration and landfill. Moving forward, we will continue to expand our efforts to increase our waste recycling rate.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Industrial waste (general)	Recycling	Ton	4,514.5	4,238.1	4,539.0	3,559.2
	Incineration	Ton	849.5	728.0	827.0	888.2
	Landfill	Ton	67.9	202.7	259.0	750.3
	Subtotal	Ton	5,431.9	5,168.8	5,625.0	5,197.8
Industrial waste (designated)	Recycling	Ton	514.8	880.0	897.0	978.1
	Incineration	Ton	51.4	49.0	51.0	65.5
	Landfill	Ton	1.0	4.6	5.0	-
	Others	Ton	2.6	-	-	-
Subtotal	Ton	569.7	933.6	953.0	1,043.5	
Total waste	Ton	6,001.6	6,102.4	6,578.0	6,241.3	
Waste recycled	Ton	5,029.3	5,118.1	5,436.0	4,537.3	
Waste recycling rate	%	83.8	83.9	82.6	72.7	

\* Data has been corrected due to the omission of landfill data at the Daejeon plant in 2020 (32 tons), as well as the addition of waste data for our head office in 2019 and 2020.

## Environmental Performance

### Air Pollutant Emissions

At Hyosung Advanced Materials' Ulsan plant, TMS (Automatic Chimney Measuring System) has been installed for facilities that exceed 4 tons of nitrogen oxide (NOx) emissions per year, in accordance with the Air Control Zone Management Act. This enables data to be checked in real time to ensure emissions stay below the legal air pollutant emission standards. At the Jeonju plant, bag-filters made of ceramic material, specialized for use in high temperatures, have been installed to minimize the emission of fine dust. In expansion lines, we plan to install a facility that can remove not only dust but also NOx (Nitrogen Oxides) at the same time, by adopting a reduction method in which the ceramic bag is coated with a catalyst. In addition, real-time automatic measuring instruments have been installed at two outlets to monitor the emission of specific air pollutants and NOx (scheduled to be installed at 3 additional outlets). We plan to collect big data on the increase in emission concentrations, as well as the operating conditions of production processes, and conduct a correlation analysis to derive operating conditions that can actively help to prevent atmospheric environmental disasters.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
General air pollutants	Nitrogen Oxides (NOx)	Ton	41.4	100.1	122.2	99.5
	Sulfur Oxides (SOx)	Ton	12.8	-	-	0.5
	Particulate Matter (PM)	Ton	16.5	15.1	33.6	11.1
Ozone depleting substances	CFC(R-11)	Ton	1.2	0.9	1.2	0.4
	HCFC(R-123)	Ton	-	-	-	-
	HCFC(R-22)	Ton	-	-	-	-

\* Data has been corrected due to errors in aggregating dust emissions at the Ulsan plant in 2020.

### Chemical Substances Management

Hyosung Advanced Materials manages all chemicals used in the production process through an ERP system, in which the purchase of controlled substances is approved only after confirming compliance with their related regulations. We are required to provide MSDS (Material Safety Data Sheet) upon the purchase of chemicals in all Korea factories. In addition to regular legal inspections, we conduct monthly inspections of hazardous chemical storage and storage facilities, conduct off-site impact assessments, and prepare plans for risk management. Through these efforts, we have a strong awareness of the risks that can occur in the process of purchasing, storing, handling, and using hazardous chemicals, and we therefore proactively inspect problems and take countermeasures. As part of systematic facility management based on external impact assessments and risk management plans, the Ulsan plant conducts weekly self-inspections for each hazardous chemical management unit, led by the personnel in charge. Further, the Environment and Safety Team inspects each hazardous chemical handling facility once a month to identify problems and prevent serious industrial accidents. Every year, the Jeonju plant conducts a two-hour safety training session on treating chemical substances to ensure workplace safety, and to protect local residents and ecosystems. To reduce risk exposure for all, the training is also delivered to employees of suppliers and subcontractors.

Category	Unit	2019	2020	2021
Hazardous substances usage	Ton	12,353	16,688	21,056
Hazardous substances usage intensity	Ton/KRW 1 million	0.012	0.023	0.022
Emission of chemical substances	Ton	21	26	29

### Sales and Purchase of Eco-Friendly Products and Services

To minimize harmful environmental and chemical effects, Hyosung Advanced Materials sells products that have been tested for hazardous substances, from raw materials to finished products, in accordance with international recycling standards. In accordance with our green purchasing policy, we purchase eco-friendly products, such as bio-based raw materials, that can be recycled and that help to resolve issues of resource exhaustion and environmental pollution.

Category	Unit	2019	2020	2021
Sale (Korea)	KRW 1,000	225,366,928	210,397,261	241,102,117
Purchase (Korea)	KRW 1,000	1,127,331	735,343	995,542

\* Sales were revised in accordance with the 2019 and 2020 consolidated financial statements.

### Environmental Investments

Hyosung Advanced Materials has established an investment plan for continuous green management activities, such as waste/wastewater treatment, environmental restoration, and prevention of environmental pollution. Through internal review procedures, we ensure that reasonable investment decisions are made.

Category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Waste treatment and environmental restoration expenses	KRW 1,000	1,131,932	1,115,001	1,194,934	1,698,595
Pollution prevention and environmental management expenses	KRW 1,000	776,070	904,094	1,207,990	1,482,022
Investment in environmental improvement facilities	KRW 1,000	-	-	-	896,700
<b>Total</b>	<b>KRW 1,000</b>	<b>1,908,002</b>	<b>2,019,095</b>	<b>2,402,924</b>	<b>4,077,317</b>

### Environmental Product Certifications

Hyosung Advanced Materials has obtained a total of 3 Eco-Label certifications. We will continue to develop green technologies and increase our provision of Eco-Label products, CFP/EPD certified products, and Green Technology products.

Business site	Certification code	Product Name	Certification date	Expiry date
Daejeon plant	23724	Space (Thickness: 7.0mm)	2021/02/19	2024/02/18
Daejeon plant	25518	Major (Thickness: 6.5mm)	2021/11/08	2024/11/07
Daejeon plant	25519	Trendy (Thickness: 7.0mm)	2021/11/08	2024/11/07

## Environmental Performance

### Biodiversity Conservation

Hyosung Advanced Materials recognizes the risk of damage to natural ecosystems due to climate change and is working on activities to preserve biodiversity. KPIs for biodiversity have been established to strengthen our implementation in this respect. Starting with Jeonju, where our Korea manufacturing plant is located, we plan to identify activities to preserve the natural ecosystem in Ulsan and Daejeon. On April 1 2022, which has been designated as 'Endangered Species Day' by the National Institute of Ecology, a campaign was launched to raise employees' awareness of biodiversity. We also conducted a survey on employees' awareness of biodiversity and provided training on basic biodiversity-related knowledge.

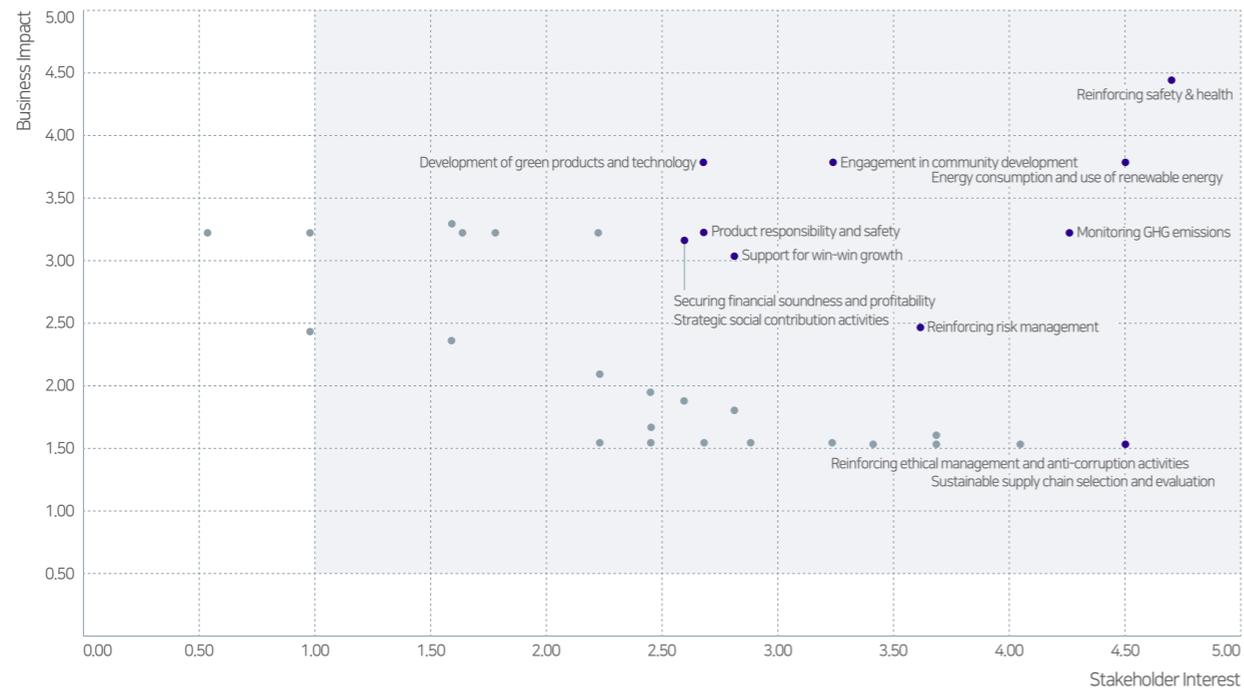
Category	KPI	2025 Goal	2022 Activities and Plans	Schedule
Raising Awareness of Biodiversity	Campaign participants	30% or more (number of participants/ total employees)	'Endangered Species Day' campaign Mapo Han River Plogging on 'Earth Day'	April 1, 2022 April 21, 2022
	Employees' recognition of biodiversity	Survey participation rate: more than 40%	Employee biodiversity awareness survey (27.5% participated in Korea) Training will be conducted based on the survey results	April 1, 2022 Scheduled in June 2022
Removal of Ecosystem Risks	Removal fauna and flora species disturbing the ecosystem	3 species	Ecological disturbance and harmful species removal activities	be looking for
Biodiversity Conservation and Promotion	litter picking amount	Scheduled for calculation post-activity (kg/time)	Incheon Yeongjongdo Yongyu Beach protection activities (Completed in May 2022, and scheduled for next September and October)	2022 - 2025
	Protection of endangered species and indigenous species	3 species	Signed a business agreement to promote the 'Jeonju pogostemon' conservation project (Class II endangered plant)	May 2022 to April 2025

\* Removal and restoration activities are carried out in the vicinity of Korea manufacturing sites (Jeonju, Ulsan, Daejeon).

## Economic Performance

Hyosung Chemical achieved an increase in sales compared to the previous year by discovering new growth engines, such as overseas investments, despite the global downturn in industrial activities and the decreasing demand for petrochemicals in the aftermath of the COVID-19 pandemic. However, we will not settle for the status quo and will seek new growth engines to maximize economic value and distribute this value equitably to our stakeholders.

### Core Issues Derived from the Materiality Assessment



Category	Core Issues	GRI Topic	Stakeholder Importance					Reporting Page
			Customers	Employees	Suppliers	Shareholders and Investors	Local Communities	
Society	① Reinforcing safety & health	GRI 403 (Occupational Health and Safety)		●	●			30, 36
Environment	② Energy consumption and use of renewable energy	GRI 302 (Energy)		●	●			103, 105
Environment	③ Monitoring GHG emissions	GRI 302 (Energy)		●	●			103
Society	④ Engagement in community development	GRI 413 (Local Communities)					●	46-48
Environment	⑤ Development of eco-friendly products and technology	-	●			●		29
Economic	⑥ Reinforcing risk management	GRI 201 (Economic Performance)	●			●		52
Economic	⑦ Reinforcing ethical management and anti-corruption activities	GRI 205 (Anti-corruption)	●	●	●	●		53
Society	⑧ Sustainable supply chain selection and evaluation	GRI 308 (Supplier Environmental Assessment)			●			40
Economic	⑨ Product responsibility and safety	GRI 416 (Customer Health and Safety)	●					41-45
Society	⑩ Support for win-win growth	-			●			37-39
Society	⑪ Strategic social contribution activities	GRI 203 (Indirect Economic Impacts)					●	46-48
Economic	⑫ Securing financial soundness and profitability	-	●			●		99

### Financial Statements (Consolidated)

(Unit: KRW 1 million)

Category	2019	2020	2021
<b>Current assets</b>	446,058	435,749	797,621
Cash and cash equivalents	46,059	10,181	34,797
Trade and other current receivables	150,973	222,339	327,974
Inventories	127,510	143,162	401,004
Other current assets	121,516	60,067	33,846
<b>Non-current assets</b>	1,617,458	1,981,616	2,258,582
Long-term trade and other non-current receivables	4,947	3,467	3,409
Tangible assets	1,448,333	1,923,348	2,188,122
Investment in properties	0	0	0
Intangible assets	73,072	23,126	33,971
Other non-current financial assets	10,738	15,716	16,189
Other non-current assets	80,368	15,959	16,891
<b>Total assets</b>	<b>2,063,516</b>	<b>2,417,365</b>	<b>3,056,203</b>
<b>Current liabilities</b>	431,320	627,538	1,083,164
Trade and other current payables	219,882	295,090	438,810
Borrowings	185,916	303,764	582,592
Other current liabilities	25,522	28,684	61,762
<b>Non-current liabilities</b>	1,177,488	1,387,474	1,471,585
Long-term trade and other non-current payables	12,519	13,186	13,270
Long-term borrowings	1,155,850	1,356,429	1,437,382
Other non-current liabilities	9,119	17,859	20,933
<b>Total liabilities</b>	<b>1,608,808</b>	<b>2,015,012</b>	<b>2,554,749</b>
<b>Capital stock</b>	15,951	15,951	15,951
<b>Retained earnings</b>	98,175	67,607	138,223
<b>Other components of equity</b>	340,582	318,795	347,280
<b>Non-controlling interest</b>	-	-	0
<b>Total equity</b>	<b>454,708</b>	<b>402,353</b>	<b>501,454</b>

### Consolidated Statements of Comprehensive Income

(Unit: KRW 1 million)

Category	2019	2020	2021
Sales	1,812,470	1,817,190	2,452,990
Cost of sales	1,568,885	1,664,137	2,203,716
Gross profit	243,585	153,053	249,274
SG&A	68,705	71,922	78,919
R&D expenses	20,993	20,203	21,783
Operating profit	153,887	60,928	148,572
Other gain	3,973	7,007	7,431
Other loss	6,312	17,879	3,067
Finance income	43,762	47,307	31,026
Finance expenses	89,349	95,611	69,917
Related companies profit	4,053	1,669	325
Profit before tax	110,014	3,421	114,370
Income tax expenses	22,191	15,037	43,956
Net profit	87,823	(11,616)	70,414
Other comprehensive income	2,815	(24,850)	28,687
<b>Comprehensive income</b>	<b>90,638</b>	<b>(36,466)</b>	<b>99,101</b>

## Economic Performance

### Corporation Tax by Country

Through the payment of corporation taxes in the countries where it conducts business, Hyosung Chemical helps governments increase their financial independence and provide stable public services. We prevent tax disputes by faithfully paying our taxes, consolidating our foundation for long-term business operations in the countries in which we operate.

Category	Sub-category	Unit	2019	2020	2021
Republic of Korea	Sales	KRW 1 million	1,813,137	1,643,262	2,108,872
	Profit before tax	KRW 1 million	115,685	56,663	173,976
	Corporate tax	KRW 1 million	23,519	13,881	43,956
	Tax rate	%	24.20	24.20	24.20
	Effective tax rate	%	20.33	24.50	25.27
Vietnam	Sales	KRW 1 million	-	176,680	345,048
	Profit before tax	KRW 1 million	(5,108)	(54,395)	(60,504)
	Corporate tax	KRW 1 million	(122)	-	-
	Tax rate	%	-	-	-
	Effective tax rate	%	2.38	-	-

### Production Output by Business Sector

In response to changes in the supply environment, and as China becomes more self-sufficient in the production of general-purpose petrochemical products, Hyosung Chemical is focusing on producing specialized products based on its outstanding quality and technical competencies. In terms of electronic materials, we are expanding our supply through product localization and overseas market expansion as the demand for various IT products – such as displays, semiconductors, and OLED – is increasing and therefore, the associated parts market is also expected to grow.

Category	Unit	2019	2020	2021
Chemicals	KRW 1 million	1,524,357	1,581,337	2,098,665

### Sales of Specific Products

Hyosung Chemical possesses unique brand value for products such as polypropylene, film, and polyketone, based on long-standing business expertise and industry-leading technology. We are enhancing our corporate image and consolidating our position as a global company based on the eco-friendliness and stellar quality of our products.

Category	Unit	2019	2020	2021
Sales of resource-efficient products	KRW 1 million	-	-	-

### Financial Losses

Through strict legal risk management, Hyosung Chemical minimizes financial losses incurred as a result of non-compliance and violation of laws and regulations. Moving away from shareholder-oriented management, we value all stakeholders and strive to comply with rules and regulations from various sectors – such as fair trade practices, data protection, environment, and anti-corruption.

Category	Unit	2019	2020	2021
Total amount of monetary losses as a result of violation of environmental regulations, such as pollutant emissions	KRW 1,000	-	480	1,440

### Supplier Status

Hyosung Chemical maintains a stable supply chain by supporting the sustainable growth of its suppliers.

Category	Unit	2019	2020	2021
Number of major suppliers in Korea	No.	900	843	885
Total purchase from suppliers	KRW 1 million	1,022,410	1,079,226	1,586,505

### Key R&D Activities

For the future of mankind, Hyosung Chemical is pioneering the world of technology through unique and competitive technology, expertise in R&D, and constant challenges and passion.

#### Development of Multi-purpose Polypropylene (PP)

The Polymerization Research Group of Hyosung R&DB Labs has developed a PP-based new material that is applicable to packaging films for instant food products. We have improved impact resistance and heat sealability and plan to expand the market with a focus on Asia. With our polypropylene plant in Vietnam beginning operations, we have been actively developing new materials, including non-woven polypropylene used in face masks and diapers and high liquidity polypropylene used in disposables, as well as high impact-resistant polypropylene used in industrial containers. We plan to subsequently expand their applications by improving the physical properties of these propylene materials through continuous research on catalysts, products, and manufacturing processes.

#### Development of Multi-purpose PET and Nylon Films

The Film Research Team in Hyosung R&DB Labs is developing PET\* and nylon-based high-function films using additives and surface primer coating. Boasting flawless transparency and excellent post-processing adhesion, this optical film is widely applied to display products. Silicon release coating products provide the desired release properties, serving to protect the various types of adhesive layers. Antistatic coating products are used as protective films during advanced manufacturing processes, owing to their excellent antistatic performance, solvent resistance, and environmental resistance. We are currently striving to develop high value-added films, including smart window films with rainbow free and oligomer blocking functions, and processing films for multi-layer ceramic capacitors (MLCC) with uniform surface quality.

\* PET : Polyethylene Terephthalate

#### Development of Chemical-resistant and Adhesion-resistant Polyketone Materials Used in Glove Conveyors

The Polyketone Research Team in Hyosung R&DB Labs has developed an injection molding-purpose polyketone material for use in glove conveyors. With excellent resistance to chemicals and adhesion, they are suitable for use in glove conveyor components. The relevant component moves on the SUS rail and therefore requires abrasion resistance against metal, as well as chemical resistance to endure the latex solution and acid gas generated in the vulcanization process during the production of latex gloves. Production of the polyketone material is currently underway after about two years of demonstration, and their applications are gradually expanding. We plan to expand the market through continuous development of polyketone materials and their applications.

### R&D Expenses

Hyosung Chemical invests in R&D to ensure sustainable technological competitiveness.

Category	Unit	2019	2020	2021
R&D Expenses	KRW 1 million	20,993	20,203	21,783

### Patent Registration and Application

Hyosung Chemical invests in R&D to ensure sustainable technological competitiveness.

Category	Sub-category	Unit	2019	2020	2021
Patent registration (accumulated)	Domestic	Cases	862	895	916
	Overseas		176	182	193
Patent application (accumulated)	Domestic	Cases	1,739	1,757	1,758
	Overseas		358	361	363

## Social Performance

Despite the global economic downturn caused by COVID-19, Hyosung Chemical has actively carried out recruitment of new employees. Most are hired on permanent contracts, increasing their job stability. Further, in order to bridge the gender gap, we are continuously increasing the ratio of female employees and managers and ensuring a stable working environment by encouraging them to use childcare leave.

### Employee Status

Hyosung Chemical has doubled the number of new hires compared to the previous year, despite the COVID-19 pandemic. Moreover, we are actively participating in job sharing for socially vulnerable groups, such as the disabled and veterans.

Category	Sub-category	Unit	2019	2020	2021
Total employees		Persons	1,165	1,183	1,213
Gender	Male	Persons	1,038	1,050	1,084
	Female	Persons	127	133	129
Employment type	Permanent (male)	Persons	1,028	1,020	1,019
	Permanent (female)	Persons	108	118	113
	<b>Subtotal</b>	<b>Persons</b>	<b>1,136</b>	<b>1,138</b>	<b>1,132</b>
	Contract (male)	Persons	10	30	65
	Contract (female)	Persons	19	15	16
	<b>Subtotal</b>	<b>Persons</b>	<b>29</b>	<b>45</b>	<b>81</b>
Region	Domestic	Persons	1,165	1,183	1,213
	Overseas	Persons	44	48	43
Job category (based on permanent employees)	Office	Persons	520	542	532
	Technical	Persons	616	596	600
Fostering female talent	Female employee ratio	%	10.9	11.2	10.6
	Number of women at manager level or higher	Persons	18	22	20
	Female manager ratio	%	7.4	8.3	7.7
Diversity	Persons with disabilities	Persons	19	27	26
	Veterans	Persons	21	22	23
	Foreigners	Persons	1	1	1
	<b>Subtotal</b>	<b>Persons</b>	<b>41</b>	<b>50</b>	<b>50</b>
Creating job opportunities (new hires)	Male	Persons	31	57	118
	Female	Persons	30	12	18
	<b>Subtotal</b>	<b>Persons</b>	<b>61</b>	<b>69</b>	<b>136</b>
Employee turnover (voluntary turnover amongst permanent employees)	Male	Persons	28	48	54
	Female	Persons	10	4	15
	<b>Subtotal</b>	<b>Persons</b>	<b>38</b>	<b>52</b>	<b>69</b>
Turnover rate		%	3.35	4.57	6.10

### Parental Leave and Childcare Leave

Hyosung Chemical encourages parental leave and childcare leave to ensure a positive work-life balance for employees, and provides various support programs to prevent difficulties in returning to work. As a result, the rate of working for more than 12 months after returning to work for female employees was found to be 75%, representing an increase of 8% compared to the previous year.

Category	Sub-category	Unit	2019	2020	2021
Male (parental leave)	Employees on parental leave	Persons	15	49	24
	Return rate	%	100	100	100
Female (parental leave)	Employees on parental leave	Persons	7	4	3
	Return rate	%	100	100	100
Male (childcare leave)	Employees on childcare leave	Persons	-	-	6
	Return rate	%	-	-	8.3
	Rate of working more than 12 months after return	%	-	-	-
Female (childcare leave)	Employees on childcare leave	Persons	9	5	5
	Return rate	%	89	100	100
	Rate of working more than 12 months after return	%	100	67	75

### Regular Performance Evaluation

As of the end of 2021, Hyosung Chemical conducted a regular performance evaluation of 1,132 employees, or 93% of the total 1,213 employees. We have established a fair evaluation system that covers most of our employees.

Category	Unit	2019	2020	2021
Number of employees subject to performance evaluation	Persons	1,136	1,138	1,132
Performance evaluation rate	%	97	96	93

### Basic Wage and Remuneration

Hyosung Chemical pays new employees 1.8 times more than the legal minimum wage to guarantee their welfare and increase their motivation to work.

Category	Unit	2019	2020	2021	
Basic salary for entry-level hires	KRW 1,000	3,272	3,501	3,606	
Ratio of entry-level salary to legally defined local minimum wage (%)	Male	%	174.7	181.7	184.4
	Female	%	174.7	181.7	184.4
Average basic salary	KRW 1,000	4,608	4,987	5,471	

## Social Performance

### Labor Union Membership Status

Hyosung Chemical has two labor unions (Hyosung Chemical Labor Union, Film Labor Union) and enters into collective bargaining agreements through negotiations with each labor union. In principle, we notify the labor union as soon as possible in the event of an important management matter, in accordance with the collective bargaining agreement. Each business site transparently discloses the status of corporate management to employees through regular management briefing sessions and multi-level 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.

Category	Unit	2019	2020	2021
Employees covered by collective bargaining agreements	Persons	615	596	600
Proportion of employees subject to collective bargaining agreements among total employees	%	52.8	50.4	49.5
Number of union workers	Persons	588	578	591
Proportion of union workers	%	95.6	97.0	98.5

### Retirement Pension

Hyosung Chemical operates both DB-type and DC-type retirement pension systems to ensure employees' freedom of choice, and complies with all related legal standards.

Category	Unit	2019	2020	2021
Total operating fund for retirement pensions (DB+DC)	KRW 1 million	59,322	69,625	74,731
Operating fund for DB pension	KRW 1 million	58,337	68,528	73,530
Operating fund for DC pension	KRW 1 million	985	1,097	1,201
Total number of members (Persons)	Persons	1,209	1,231	1,262
Number of DB pension members (Persons)	Persons	1,027	1,035	1,060
Number of DC pension members (Persons)	Persons	182	196	202

### Occupational Accident Rate

By promoting a safe working environment, Hyosung Chemical maintains a very low occupational accident rate. No occupational fatalities have occurred in the last three years at Hyosung Chemical.

Category	Unit	2019	2020	2021
Total number of occupational accidents: Accidents + Occupational disease	Persons	4	6	4
Occupational accident rate: Total number of occupational accidents / Total number of employees x 100	%	0.34	0.51	0.45
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)	‰	-	-	-

### Employee Training Status

In the face of the fast-changing business environment, Hyosung Chemical regularly conducts training on sales, production, and technology. In terms of sales, we provide intensive capacity training for sales employees in response to the altered sales environment post COVID-19. In particular, we are promoting the real-life applicability of our training by focusing on action plans and practices. For production and technology, training includes the establishment and operation of smart factories aimed at Industry 4.0. In 2020, all plant employees received SPC (Statistical Process Control) training using Minitab to improve their process analysis capabilities. In 2021, we plan to train employees on their process management capabilities, including 6 Sigma and experimental design methodology.

Category	Unit	2019	2020	2021
Number of training participants	Persons	15,824	13,245	10,423
Total training expenses	KRW 1,000	976,805	541,605	679,770
Total training hours	Hours	37,346	27,606	30,638
Average training hours per person (total training hours / number of employees)	Hours	32	23	25
Average training expenses per person (total training expense / number of employees)	KRW	838,459	457,823	560,404
Environmental training	Persons	929	1,106	514
Ethics and anti-corruption training	Persons	36	1,139	544
Fair trade training	Persons	2	502	492
Safety and health training	Persons	1,153	206	533
Human rights training (sexual harassment/disability awareness/workplace harassment prevention)	Persons	2,208	3,336	3,390
Information security training	Persons	704	740	137
Sustainability management training	Persons	-	14	1,101
Retiree training	Persons	-	15	20

### CSR Status

Hyosung Chemical is currently diversifying its CSR programs in consideration of various stakeholders' requests and expectations relating to CSR. We approach our company's social contributions from a strategic perspective, focusing on enhancing our corporate value and image, rather than a simple charitable approach.

Category	Unit	2019	2020	2021
CSR investment	KRW 1 million	400	481	427
No. of social contribution programs	Cases	5	5	32

\* The number of CSR programs in 2021 has risen significantly due to an increase in the number of target business sites (headquarters only in 2020 to all business sites in 2021).

### Key CSR Activities

By funding their artwork and exhibition costs, we are supporting visual artists in Seoul Art Space Jamsil, which is run by the Seoul Foundation for Arts and Culture and is the first art residency studio for disabled artists in Korea. In 2021, we successfully held a special exhibition, 'PAREIDOLIA in the form of images side by side' with 12 resident artists. In addition, we selected an 'Artist of the Year with Hyosung' to provide new opportunities to realize the possibility of expanding the artistic works of former and current artists at Seoul Art Space Jamsil. In recognition of these achievements, we have been selected as an outstanding company for contributions to local society for three consecutive years, beginning in 2019, with recommendation by the Seoul Foundation for Arts and Culture.

## Environmental Performance

At Hyosung Chemical, all employees are fully aware of their responsibility towards the environment and safety. We consider environmental safety as a top priority when making business decisions. Further, we are realizing a safe, pleasant, and environmentally friendly workplace through continuous improvements and prevention activities across our corporate business activities.

### Energy Consumption

In order to reduce power consumption and practice green management, Hyosung Chemical installed solar panels on the rooftop of the DH electrical room building in 2015 and has been continuously expanding these facilities. The solar power generation facilities are used for internal power, thereby reducing power consumption.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Direct energy consumption	Diesel	TJ	13.08	8.47	8.49	8.00
	Kerosene	TJ	0.60	-	-	-
	LNG	TJ	360.46	455.83	456.78	742.00
	Gasoline	TJ	1.19	1.03	1.03	-
	Propane	TJ	52.51	54.28	54.40	50.00
	B-C oil	TJ	-	-	-	-
	Hard coal	TJ	-	-	-	-
	Other solid fuels	TJ	-	-	-	-
	Off-gas	TJ	5,300.41	5,541.80	5,553.43	5,698.00
	LPG	TJ	0.05	0.61	0.62	-
	Biogas	TJ	-	-	-	-
	<b>Subtotal</b>	<b>TJ</b>	<b>5,728.30</b>	<b>6,062.02</b>	<b>6,074.75</b>	<b>6,498.00</b>
	Indirect energy consumption	Electricity	TJ	11,226.54	11,592.25	11,616.59
Steam		TJ	-	-	-	-
Waste heat from processes		TJ	-	-	-	-
Heat from waste incineration		TJ	562.05	562.83	564.01	496.00
<b>Subtotal</b>	<b>TJ</b>	<b>11,788.59</b>	<b>12,155.07</b>	<b>12,180.60</b>	<b>12,352.00</b>	
<b>Total</b>	<b>TJ</b>	<b>17,516.89</b>	<b>18,217.10</b>	<b>18,255.35</b>	<b>18,850.00</b>	
Energy intensity (Total energy consumption/Sales)	(TJ/ KRW 100 million)	0.966	1.109	-	0.894	

\* Emissions intensity was calculated based on sales recorded in general financial statements and not on a consolidated basis, since energy consumption and emissions are calculated only for domestic business sites.

### Greenhouse Gas (GHG) Emissions

Hyosung Chemical is striving to reduce GHG emissions. Our annual GHG emissions statement is verified by an external assurance agency to ensure accuracy and objectiveness.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Direct GHG emissions (Scope 1)	Fixed combustion	tCO <sub>2</sub> eq	256,674.48	272,684.20	273,256.84	271,238.89
	Mobile combustion	tCO <sub>2</sub> eq	607.98	628.23	629.99	635.00
	Process emissions	tCO <sub>2</sub> eq	26,850.77	24,526.23	24,577.74	24,764.81
	Waste disposal	tCO <sub>2</sub> eq	249.33	674.00	666.64	1,044.81
	<b>Subtotal</b>	<b>tCO<sub>2</sub>eq</b>	<b>284,382.56</b>	<b>298,512.66</b>	<b>299,131.21</b>	<b>297,683.50</b>
Indirect GHG emissions (Scope 2)	Electricity	tCO <sub>2</sub> eq	545,247.63	563,018.00	564,236.84	567,421.95
	Steam	tCO <sub>2</sub> eq	-	-	-	-
	<b>Subtotal</b>	<b>tCO<sub>2</sub>eq</b>	<b>545,247.63</b>	<b>563,018.00</b>	<b>564,236.84</b>	<b>567,421.95</b>
<b>Total</b>	<b>tCO<sub>2</sub>eq</b>	<b>829,630.19</b>	<b>861,530.66</b>	<b>863,368.05</b>	<b>865,105.46</b>	
Energy intensity (Total energy consumption/Sales)	(tCO <sub>2</sub> eq/ KRW 1 million)	0.458	0.524	-	0.410	

\* The data are based on the Guidelines for Reporting and Certification of GHG Emission Trading System (Notice No. 2021-278 of the Ministry of Environment) and the ETS report submitted to the government in the given years, in accordance with the conformity assessment by the Ministry of Environment.

\* CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O are the only greenhouse gases emitted. The above GHG emissions total differs from the GHG emissions disclosed in our Business Report due to differences in rounding values for each business site.

### Management of Water Resources

Through close cooperation with production processes, Hyosung Chemical minimizes unnecessary water consumption by re-using some discharged water to clean belt presses (dehydrators). Wastewater discharged from the production process is recovered in the emergency reservoir within the plant to be re-used for cooling.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Consumption by water source	Waterworks	Ton	108,337	106,932	75,393	97,006
	Groundwater	Ton	105,330	99,424	110,690	119,563
	Industrial water	Ton	7,802,511	7,631,100	7,340,036	7,376,650
	River water	Ton	-	-	-	-
Total water consumption	Ton	8,016,178	7,837,456	7,526,119	7,593,219	
Water re-used	Ton	345,310	370,595	340,131	309,990	
Water re-use rate	%	4.3	4.7	4.5	4.1	

### Wastewater and Water Treatment

At Hyosung Chemical's Gumi plant, wastewater from production processes is collected in the wastewater treatment plant and then discharged to the sewage treatment plant following minimization of water pollutants via wastewater prevention facilities. Meanwhile, the Yongyeon plant treats wastewater using physical, chemical, biological, and advanced treatment methods, with internal water quality standards about 30% of the legal standard. In addition, treatment of highly contaminated wastewater is entrusted to an external agency so that it does not affect the wastewater treatment plant.

Category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Wastewater discharged	Ton	1,766,125	1,915,197	2,165,060	1,902,480
Biochemical Oxygen Demand (BOD)	Ton	7.01	11.06	10.49	5.01
Chemical Oxygen Demand (COD)	Ton	14.39	19.18	20.97	17.25
Suspended Solids (SS)	Ton	10.42	13.54	16.24	11.09
Total Nitrogen (T-N)	Ton	8.59	10.17	15.53	6.94
Total Phosphorus (T-P)	Ton	0.46	0.53	0.91	0.20

## Environmental Performance

### Waste Treatment

Hyosung Chemical safely treats its waste in accordance with internal waste management policies. We reduce carbon emissions by using waste steam generated by nearby incineration plants, and increase energy efficiency by improving facilities – such as pumps and heat exchangers. In particular, the Yongyeon plant has established a network to trade external steam and process-generated steam among nearby plants (including external companies), thereby facilitating optimal conditions to each plants through use of steam to increase energy efficiency.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Industrial waste (general)	Recycling	Ton	13,892.3	14,890.1	12,437.2	15,986.8
	Incineration	Ton	663.2	642.1	759.0	739.5
	Landfill	Ton	6,627.0	5,870.3	5,451.0	5,435.0
	Others	Ton	544.8	1,506.5	760.0	1,974.4
	<b>Subtotal</b>	<b>Ton</b>	<b>21,727.3</b>	<b>22,909.0</b>	<b>19,407.2</b>	<b>24,135.7</b>
Industrial waste (designated)	Recycling	Ton	681.8	618.2	771.4	781.9
	Incineration	Ton	431.4	331.5	440.4	401.0
	Landfill	Ton	10.5	19.2	8.6	11.7
	Others	Ton	7,944.7	5,635.5	4,449.0	4,323.5
	<b>Subtotal</b>	<b>Ton</b>	<b>9,068.4</b>	<b>6,604.4</b>	<b>5,669.4</b>	<b>5,518.1</b>
Total waste	Ton	30,795.7	29,513.4	25,076.6	29,653.8	
Waste recycled	Ton	14,574.1	15,508.4	13,208.6	16,768.7	
Waste recycling rate	%	47.3	52.5	52.7	56.5	

### Emission of Atmospheric Pollutants

Hyosung Chemical's Yongyeon plant and Gumi plant have installed low-NOx burners to reduce NOx emissions and air pollutants generated from boilers. On-site manager conduct daily inspections to confirm that pollution prevention facilities are operating properly. Moreover, in the PET film production process at the Gumi plant, hazardous workplace substances and atmospheric pollutants are emitted during the operation of the in-line coating machine. To resolve this, local exhaust systems and air pollutants prevention facilities (activated carbon adsorption towers) have been installed to minimize the emission of atmospheric pollutants.

Category	Sub-category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
General air pollutants	Nitrogen oxides (NOx)	Ton	268.2	192.7	277.7	289.7
	Sulfur oxides (SOx)	Ton	20.5	17.4	28.1	11.7
	Particulate matter (PM)	Ton	8.6	6.3	9.0	6.1
Ozone depleting substances	CFC(R-11)	Ton	-	-	-	-
	HCFC(R-123)	Ton	-	-	-	-
	HCFC(R-22)	Ton	95	99	105	95

### Zero Emission Vehicles

Hyosung Chemical operates zero emission vehicles that help reduce air pollutant and GHGs.

Category (Unit: no. of vehicles)	On-road vehicles			Off-road vehicles			Total
	Electric vehicles	Hydrogen vehicles	Subtotal	Electric vehicles	Hydrogen vehicles	Subtotal	
Hyosung Chemical	-	1	1	45	-	45	46

\* On-road vehicles: Passenger cars, vans, trucks, special vehicles, two-wheeled vehicles (excluding electric bicycles)

\* Off-road vehicles: Includes non-specified vehicles such as construction machinery, agricultural machinery, etc. E.g., Forklifts, tool cars, and carts used in workplaces

### Chemical Substances Management

Hyosung Chemical has installed leak detectors in hazardous chemical storage facilities to detect harmful chemicals in the event of an emergency and prevent damage from environmental incidents.

Category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Hazardous substances used	Ton	292,408	292,714.2	304,895	299,730
Hazardous substances usage intensity	Ton/KRW 1 million	0.161	0.178	-	0.142
Emission of chemical substances	Ton	273	269	343	442

### Sales and Purchase of Eco-Friendly Products and Services

Hyosung Chemical has established a policy to encourage purchases of eco-friendly products. We operate a principle of preferential procurement of eco-friendly products, and have expressed our commitment to use eco-friendly products through our green purchasing policy. In addition, we are using eco-friendly LED lamps that save energy, as well as green packaging materials, such as inks and cleaners, to prevent environmental pollution. We also encourage the purchase of eco-friendly products in terms of the various equipment used in our manufacturing plants.

Category	Unit	2019	2020	2021
Sales	KRW 1,000	22,207,000	27,745,000	58,283,325
Purchase	KRW 1,000	138,870	206,050	314,806

### Environmental Investments

Hyosung Chemical implements an annual environmental investment plan to practice green management and improve the quality of the environment. We mainly focus on investments in waste treatment, environmental restoration, the prevention of environmental pollution, and process facilities improvement. We have invested in facilities that convert methyl acetate, a byproduct of the oxidation reaction process, into acetic acid that is re-used in the production process, enabling lower production costs and a reduction in the emission of harmful chemicals. In addition, we have made constant environmental investments, including in improvements to wastewater treatment systems, the expansion of solvent recovery equipment, and the maintenance of gas detection facilities.

Category	Unit	2019	2020	2021 (Plan)	2021 (Outcome)
Waste treatment and environmental restoration expenses	KRW 1,000	1,975,568	4,647,304	4,253,697	4,404,715
Pollution prevention and environmental management expenses	KRW 1,000	4,360,359	781,027	307,587	991,618
Investment in environmental improvement facilities	KRW 1,000	2,534,406	2,001,334	1,890,300	4,890,550
<b>Total</b>	<b>KRW 1,000</b>	<b>8,870,333</b>	<b>7,429,666</b>	<b>6,451,585</b>	<b>10,286,883</b>

### [Key Environmental Investments in 2021]

Category	Unit	2021 (Plan)	2021 (Outcome)
Wastewater treatment plant system improvement	KRW 100 million	8.9	8.9
Environmental pollution prevention facility improvement	KRW 100 million	0.7	0.9
Maintenance of gas detection equipment	KRW 100 million	11.7	10.2
Purchase of analytical equipment	KRW 100 million	0.6	0.2
<b>Total</b>	<b>KRW 100 million</b>	<b>21.9</b>	<b>20.2</b>

## Environmental Performance

### Green Technology and Green Enterprise Certifications

To date, Hyosung Chemical has obtained a total of three green technology and green enterprise certifications. Through continuous R&D of green technologies, we will expand our acquisition of such certifications.

Certification Body	Certification Title	Certification Code and Product Name	Certification Period
KITC (Korea Industry Technology Certificate)	Green Technology	GT-16-00103	2016.08.11~2022.08.17
KITC (Korea Industry Technology Certificate)	Green Technology Product	GTP-16-00185	2016.08.11~2022.08.17
KITC (Korea Industry Technology Certificate)	Green Specialized Enterprise	Yongyeon Plant 2	2019.04.28~2022.04.27

### Energy Saving and Emissions Reduction Performance

Hyosung Chemical has established and implemented investment plans to install inverters and introduce high-efficiency replacements for existing facilities, with a view to reducing emissions while saving energy at our business sites.

Business site	Project name	Execution date	Investment budget (KRW 1 million)	Energy saving (kWh/year)	Energy saving (TJ/year)	GHG emissions reduction (tCO2eq)
Yongyeon 2	Heat exchanger replacement	2019.02	485	1,638,605	15.7	764
Yongyeon 2	Sand filter pump replacement	2020.04	42	151,110	1.5	70
Yongyeon 3	Installation of an air compressor intake duct	2021.11	5	32,651	0.3	15
Oksan	SR heat exchanger efficiency improvement (improvements to cleaning and cleaning footplates)	2019.12	20	2,703	-	208.5
Oksan	Optimized management of adsorption tower steam usage (reduction of steam usage)	2021.01	18	1,922	-	151.8
Oksan	Optimization of CO2 compressor operations to reduce power use	2021.03	-	889,000	8.5	408.4
Oksan	Optimization of the steam consumption of SR distillation column reboilers	2021.05	-	459,375	4.4	247.6

### Renewable Energy Consumption

Hyosung Chemical receives steam – a renewable energy source – generated by heat from the incineration of waste from domestic waste incineration plants near its business sites, and uses electricity generated by solar power facilities within its plants.

Category	Business site	Unit	2019	2020	2021
Waste energy	Oksan	GJ/year	224,441	194,693	201,561
	Yongyeon 1	GJ/year	172	2,894	10,192
	Yongyeon 2	GJ/year	88,421	81,718	39,700
	Yongyeon 3	GJ/year	192,952	228,386	67,522
	Gumi	GJ/year	56,064	55,134	57,085
	Subtotal	GJ/year	562,051	562,825	376,060
Solar energy	Yongyeon 1	kWh/year	57,551	54,213	37,008
	Yongyeon 2	kWh/year	34,756	68,945	67,164
	Yongyeon 3	kWh/year	68,205	68,468	67,522
	Subtotal	kWh/year	160,512	191,626	171,694

### Ecosystem Conservation

Hyosung Chemical conducted a Plogging campaign in the Banpo district of the Han River to participate in ecosystem conservation activities and raise awareness of environmental protection on Earth Day. We supported our employees in conducting activities to clean up the environment around the workplace to protect the environment in their daily lives. In addition, we are contributing to the protection and improvement of the local environment by promoting campaigns at our plants (e.g., environmental protection activities in the vicinity of our plants).

\* Plogging: A combination of jogging with picking up litter (merging the Swedish verbs 'plocka upp' (pick up) and 'jogga' (jog), plogging refers to eco-friendly activities in daily life that involve picking up trash while walking or exercising.

### Activities to Reduce Raw and Subsidiary Materials

Hyosung Chemical is also contributing to environmental improvement by reducing the use of raw and subsidiary materials, which may cause negative environmental impacts. Our Neochem PU produces NF3 gas, which is widely used in semiconductors, displays, and solar cells, by using HF (hydrogen fluoride), a colorless toxic gas, as a raw material. HF should be treated with extra caution in accordance with related laws and regulations. We have therefore established a process for recovering HF, and are increasing the amount of HF recovery every year. In this way, we can reduce the use of raw materials and further secure price competitiveness. We will continue to explore additional activities for reducing raw and subsidiary materials to enhance price competitiveness and protect the environment.

### Safety Inspection of Chemicals Prior to Receipt

Hyosung Chemical conducts safety inspections of suppliers upon receipt of chemical substances. In addition, training on MSDS – containing information on the hazards and dangers of all chemical substances handled on-site – is provided to all on-site personnel in charge of handling chemicals. Suppliers are expected to conduct inspections prior to shipping, and vehicles transporting the chemicals can enter company premises only after passing pre-shipment inspections using a supplier self-checklist, with no issues found. Following this, related personnel from each team begin an inspection upon receipt of the chemicals, and the entire process – including parking the transport vehicles, connection of loading pipes, and injection of chemicals – is conducted under the supervision of the Environmental Safety Team, the Production Team, and the Quality Team.

### Environmental Audit

Hyosung Chemical conducts in-house environmental audits once a year. The Environmental Safety Team distributes an audit assessment sheet to each business unit to facilitate their self-inspections, allowing them to immediately correct any issues found through recommendations and notifications for improvement. Corrective actions must be reflected in the following year's environmental, safety, and health targets, and improvements are checked during the environment audit at the end of the year.

### Environmental Assessment

Hyosung Chemical has revised its environmental, safety, and health targets, as well as its guidelines for detailed target management, seven times since their enactment in 2002. Detailed targets are established, monitored, and evaluated in terms of their implementation and outcomes. Key targets for 2022 have been 90% achieved to date, including compliance with environmental safety regulations and internal regulations, continuous identification and mitigation of risk factors, operation and improvement of the communication system, continuous education and training, investment in environmental safety facilities, and a reduction of environmental indicators. Hyosung Chemical will continue to conduct environmental assessments to identify and mitigate environmental and safety risks.

### Environmental and Safety Training

Hyosung Chemical provides regular environmental and safety training to prevent related accidents. With the aim of strengthening awareness of environmental and safety management, education on areas such as air quality, water quality, waste, and energy saving are provided for employees every year, with two hours allocated for each different topic. In addition, we provide annual training on waste sorting during disposal, which has become a recent issue, and quarterly training for employees – including employees of suppliers – on all hazardous chemicals. Further, we promote environmental safety awareness through training on process safety management (PSM), compliance with safety rules, and accident case studies relating to other companies. We also provide online environmental safety training to employees at our headquarters to enhance their environmental safety awareness.



# APPENDIX

**107** Certifications and Association Memberships by Business Site

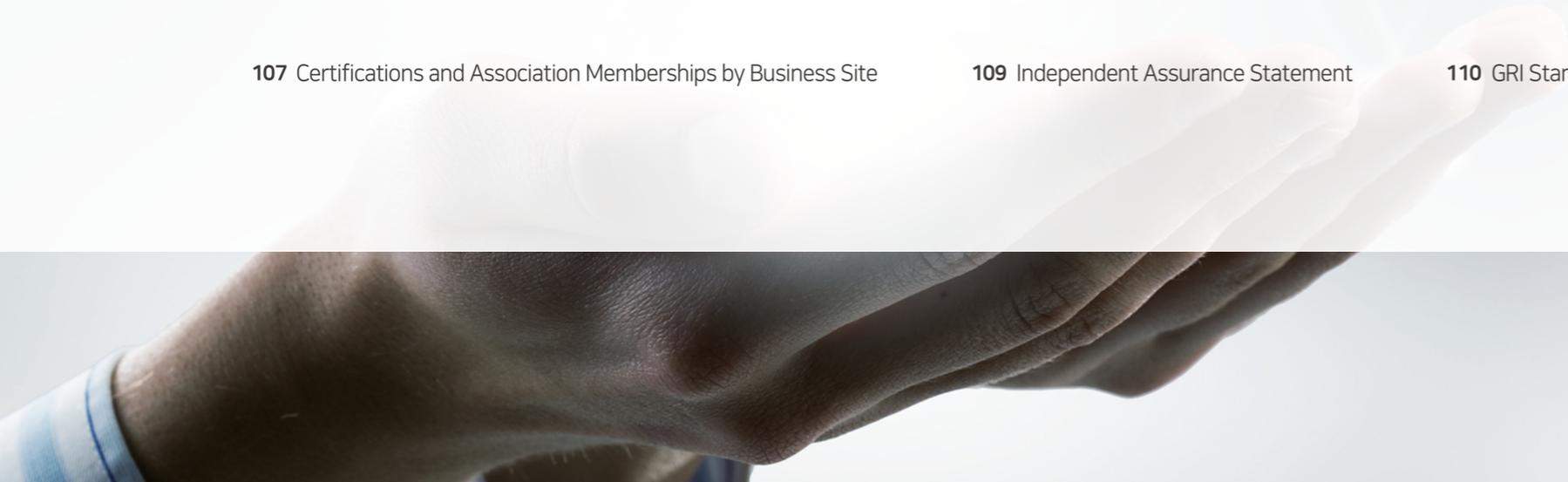
**109** Independent Assurance Statement

**110** GRI Standard Index

**112** TCFD

**113** SASB

**115** UN SDGs



## Certifications and Association Memberships by Business Site

### Certifications

Company	Business site	Certification Name				
		PU/Business Division	Environmental Management	Quality	Health and Safety	Eco-friendliness (GRS/Green Certification/ Environmental New Technology, etc.)
Hyosung Corporation	Headquarters	Interior	ISO 14001	ISO 9001	-	-
	Anyang	Interior	ISO 14001 -	ISO 9001 IATF 16949	- ISO 45001	GRS (Fabrics, Dyed yarns, Greige yarns)
Hyosung TNC	Headquarters	Headquarters	ISO 14001	ISO 9001	-	-
	Gumi	NPY	ISO 14001	ISO 9001	ISO 45001	-
		Spandex	ISO 14001	ISO 9001	ISO 45001	-
	Ulsan	NPY	ISO 14001	ISO 9001	-	-
	Daegu 1	NPY	-	-	-	Oeko-Tex®
Hyosung Heavy Industries	Changwon	Power Systems & Industrial Machinery	ISO 14001	ISO 9001	ISO 45001	GRS(NYpre PETpost)
			Self-Monitoring business (1)	ISO 3834-2	KOSHA 18001	GRS (Conventional Yarn pre, Dyed yarns & Fabrics pre post)
			Self-Monitoring business (2)	KEPIC	-	-
			Self-Monitoring business (3)	ISO 17025	-	-
			Self-Monitoring business (4)	Ex proof motor	-	-
			-	ASME	-	-
			-	KS	-	-
			-	KR	-	-
	-	Nuclear performance verification	-	-		
	Sejong <sup>1)</sup>	Power Systems	ISO 14001	ISO 9001	ISO 45001	-
Hoehyeon <sup>2)</sup>	Construction	ISO 14001	ISO 9001	-	Green Building	
Hyosung Advanced Materials	Domestic	Tire Cord	ISO 14001	ISO 9001 IATF 16949	ISO 45001	ISCC Plus (22.12)
		Technical Yarn	ISO 14001	ISO 9001 IATF 16949	ISO 45001	GRS, Oeko-Tex®
		Aramid	ISO 14001	ISO 9001 IATF 16949	ISO 45001	Oeko-Tex®
		Interior	ISO 14001	-	ISO 45001	GRS
	Jeonju	Carbon Fiber	ISO 14001	ISO 9001 ISO 9100 IATF 16949	ISO 45001 (22.11)	-
Daejeon	Interior	ISO 14001	ISO 9001	-	Eco-Label	

Company	Business site	Certification Name				
		PU/Business Division	Environmental Management	Quality	Health and Safety	Eco-friendliness (GRS/Green Certification/ Environmental New Technology, etc.)
Hyosung Chemical	Headquarters	Headquarters	-	ISO 9001	-	New Excellent Technology (NET) for the Environment
		R&D Center	-	ISO 9001	-	-
	Yongyeon 1	PP/DH	ISO 14001	ISO 9001	KOSHA MS	-
		Neochem	ISO 14001	ISO 9001	ISO 45001	-
	Yongyeon 2	TPA	ISO 14001	-	KOSHA MS	Green Enterprise
		POK	ISO 14001	ISO 9001 IATF 16949		
	Yongyeon 3	Film	ISO 14001	ISO 9001	-	RCS BL
		Opt. Film	ISO 14001	ISO 9001	-	RCS BL
		Neochem	ISO 14001	ISO 9001	ISO 45001	-
	Gumi	Film	ISO 14001	ISO 9001	NAVI	Ecovadis
					FSSC22000	RCS BL
	Daejeon	Film	-	ISO 9001	ISO 22000 (FSSC22000)	RCS BL
-					RCS BL	
Oksan	Opt. Film	ISO 14001	ISO 9001	-	RCS BL	

1) As of May 2021, the Sejong Plant has moved its production facilities and personnel to the Changwon Plant. ISO certification tasks also were transferred starting from the date of relocation.  
2) As of November 22, 2021, Hyosung Heavy Industries has moved office from Bangbae to Hoehyeon.

**\*RCS BL(Recycle Claim Standard Blended)**

RCS certification is a standard for certifying the contents of recycled raw materials in finished products, and can be applied to products that contain at least 5% recycled raw materials. It is divided into two label grades according to recycled raw material content; 'RCS Blended': 5% ~ 95% and 'RCS 100': above 95%.

New Excellent Technology (NET) for the Environment				
Company	Certification code	Product Name	Certification date	Expiry date
Hyosung Chemical	534	Ultra-filtration membrane water treatment technology based on an automatic coagulant control system and effluent flushing.	2017.10.17	2022.10.16
	538	Two-stage submerged membrane water filtration system with a suction-type sludge collector applied in the sedimentation pre-processing and filtration tank.	2018.01.31	2023.01.30

## Certifications and Association Membership by Business Site

### Association Membership

Category	Association Name	Category	Association Name	Category	Association Name	Category	Association Name
Hyosung Group	Korea Management Association		Korea Management Association		Seoul Chamber of Commerce and Industry	Hyosung Advanced Materials	Korea Chamber of Commerce and Industry
	Korea Mecenat Association		Korea Mecenat Association		American Chamber of Commerce in Korea		Korea International Trade Association
	Korean-American Association		Korean-American Association		Gyeongnam Chamber of Commerce and Industry		Korea Listed Companies Association
	Korea-Japan Economic Association		Korea-Japan Economic Association		Korea International Trade Association		Federation of Korean Industries
	Asia Society		Asia Society		Korea Listed Companies Association		Korea Employers Federation
	World Economic Forum (WEF)		World Economic Forum (WEF)		Federation of Korean Industries		Korea Economic Research Institute
	WEF YGL(Young Global Leader)		WEF YGL(Young Global Leader)		Korea Employers Federation		Korea Chemical Fibers Association
	KOREA - U.S. Economic Council		KOREA - U.S. Economic Council		Gyeongnam Enterprises Federation		Korea Exchange
	YPO Korea Chapter		YPO Korea Chapter		Korea Economic Research Institute		Membership Society for the National Museum of Modern and Contemporary Art, Korea (New)
	American Chamber of Commerce in Korea		The American Chamber of Commerce in Korea		Construction Association of Korea		Korea Carbon and Nano Industry Association
	The Korea Society		Korea Chemical Fibers Association		Korea Electrical Contractors Association		Korea Carbon Society
	Federation of Korean Industries		Korea Textile Trade Association		Korea Fire Facility Association		Korea Defense Industry Association
	Korea Economic Research Institute		Korea Outdoor & Sport Industry Association		Korea Specialty Construction Association		Korea Bobsleigh Skeleton Federation
	Korea Employers Federation		Korea International Trade Association		Korea Mechanical Construction Contractors Association		UN Global Compact Network Korea
	The Seoul Forum for International Affairs		ICMC Signatory		International Contractors' Association of Korea		Korea Fire Safety Association
	Hyosung Corporation		Korea Chamber of Commerce and Industry		Hyosung TNC		Korean Bar Association
Korea International Trade Association		AMCHAM	Korea Housing Association	Korea Chamber of Commerce and Industry			
Korea Listed Companies Association		Seoul Chamber of Commerce and Industry	Korea Federation of Construction Contractors	Korea International Trade Association			
Federation of Korea Human Resource Development Representatives		Asia Society	Korea Remodeling Association	Korea Listed Companies Association			
Korea Personnel Improvement Association		Federation of Korean Industries	H2KOREA	Federation of Korean Industries			
HRD Forum		Korea Economic Research Institute	Korea Hydrogen Industry Association	Korea Employers Federation			
Korea Association For Chief Financial Officers		Korea Employers Federation	Korea Construction Engineers Association	Korea Economic Research Institute			
KOREA Investor Relations Service		Korea Personnel Improvement Association	Korea Hydro Power Industry Association	Korea Semiconductor Industry Association			
SETO Forum		Korea Listed Companies Association	Korea Electrical Manufactures Association	Korea Industry Special Gas Association			
Korean Institute of Electrical Engineers		Korea Exchange	Korea Smart Grid Association	Korea Petrochemical Industry Association			
The Korea Fiber Society		Korea Defense Industry Association	Korea Electrical Manufactures Association	Korea Packaging Engineers Association			
Industry-Academic Cooperation at Seoul National University Electricity Power Research Institute		Korea Institute of Electrical Engineers	Korea Exchange	Korean Institute of Chemical Engineers			
International Council on Large Electric Systems (CIGRE)		Daegu-Gyeongbuk Fashion Color Industry Cooperative	The Korean Society of Rotating Engineers	Korea Display Industry Association			
Korea Industrial Technology Association (KOITA)		Korea Industrial Safety Association	Korea Electric Association	Korean Packaging Association			
International Shipping Agencies Association of Korea		Korea Customs Logistics Association	Korea Plant Industries Association	Korea Personnel Improvement Association			
Korea Plastic Pipe Research Society		Environmental Preservation Association	Korea Atomic Industrial Forum	Korea Exchange			
Korea International Freight Forwarders Association		Korea Fire Safety Institute	Korea Electric Engineers Association				
Korean Chemical Engineering Research		Korea Fire Facility Association	Korea Engineering & Consulting Association				
Korea Industrial Safety Association		Korea Fire Safety Association	Korean Nuclear Society				
The Polymer Society of Korea.		Daegu-Gyeongbuk PSM Safety Management Association	Korea Wind Energy Industry Association				
Korea Intellectual Property Association		Gumi Gimcheon Safety Management Association	Changwon Industrial Complex Factory Managers Association				
Gyeonggi-do Environmental Engineers Association		Korea Industrial Safety Association	Korea Management Association				
Carbon Composites Technology Research Association		Korea Environmental Engineers Association	Seoul Bar Association				
The Korean Institute of Power Electronics		Gumi Chamber of Commerce and Industry	Energy Alliance				
Korean Association for Industrial Technology Security			Korea TCFD Alliance				

## Assurance Statement on The Sustainability Report for Hyosung

### Dear Stakeholders of Hyosung

Korean Foundation for Quality(further 'KFQ') has been requested by Hyosung to conduct an independent assurance on the 2021 Sustainability Report for Hyosung(further the 'Report'). The Report contains non-financial data of Hyosung Corp., Hyosung TNC Corp., Hyosung Heavy Industries Corp., Hyosung Advanced Materials Corp., and Hyosung Chemical Corp.(further "Hyosung Corp. and 4 operating companies"). KFQ has responsibility to provide an independent assurance statement in accordance with the standards and scope of assurance as specified below. Hyosung has sole responsibility for the preparation of the Report.

### Standards and Scope of Assurance

- Standards : AA1000AS(v3) and AA1000AP(2018)
- Type : Type 1, covers the assessment of adherence to the Accountability principles of inclusivity, materiality, responsiveness, and impact.
- Level : Moderate, limited evidence has been obtained to support our assurance statement.
- Scope :
  - GRI Standards(2020) Core option
  - Reporting Principles
  - Universal Standards
  - Topic Specific Standards

Topic	GRI Disclosure	Topic	GRI Disclosure
Management Approach	103-1, 103-2, 103-3	Environmental Compliance	307-1
Economic Performance	201-1, 201-2, 201-3	Employment	401-1, 401-3
Market Presence	202-1	Occupational Health and Safety	403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-9, 403-10
Indirect Economic Impacts	203-1, 203-2	Training and Education	404-1, 404-2
Anti-Corruption	205-2, 205-3	Diversity and Equal Opportunity	405-1, 405-2
Tax	207-4	Freedom of Association and Collective Bargaining	407-1
Energy	302-1, 302-3, 302-4	Child Labor	408-1
Water and Effluents	303-3, 303-4, 303-5	Forced or Compulsory Labor	409-1
Emissions	305-1, 305-2, 305-4, 305-5, 305-6, 305-7	Human Rights Assessment	412-1, 412-2
Waste	306-3, 306-4	Local Communities	413-1, 413-2

### Methodology

In order to assess the reliability of disclosures about the sustainability performance in the Report by applying the standards, we reviewed sustainability-related processes, systems, internal control procedures, and available data. The documentation reviewed during the assurance engagement includes:

- Non-financial information e.g., data provided to us by Hyosung disclosed Business Reports, the previous sustainability report, and information obtained from media and/or the internet; and
- Financial information i.e., Financial statements reported on the DART (Data Analysis, Retrieval and Transfer System, <http://dart.fss.or.kr>), the Electronic Disclosure System managed by Financial Supervisory Service.

The assessment was performed by document review and onsite inspection. We interviewed employees who are responsible to prepare the Report, where we evaluated the validity of the materiality assessment processes, a stakeholder-centric approach to select material issues, data collection and management procedures, report preparation procedures, and validation of claims stated in the report. It was confirmed that errors, inappropriate information, and ambiguous expressions identified during the assessment were properly corrected prior to the Report being published.

### Competency and independence

The assurance team was organized in accordance with KFQ's internal regulations. KFQ has no conflict of interest which could threaten the independence and impartiality of verification, other than providing third-party audit services to the business of Hyosung Corp. and 4 operating companies.

### Limitations

The completeness and responsiveness of sustainability performance represented in the Report have inherent limitations due to its nature and the methodology used to determine, calculate and estimate its performance. In accordance with the terms of the contract, we assessed the information and evidence provided by the company. We did not perform any further assessment procedures on raw data.

### Findings and Conclusions

As a result of the assessment, we confirm that the content of the Report fulfills the requirements of the 'Core option' of GRI Standards and secured reasonable basis to assurance level of Type 1 in accordance with AA1000AS(V3). Within the scope of the assurance activities above, we could not find further significant error or inappropriate information from the final Report against the following principles:

#### ➤ Inclusivity

Hyosung Corp. and 4 operating companies are gathering opinions from various stakeholders including customers, employees, suppliers, shareholders and investors, and local communities through communication channels such as customer satisfaction survey, online message board, social contribution activities, and shareholders' meetings. Nothing came to our attention to suggest that the main stakeholders are not stated in the Report.

#### ➤ Materiality

Hyosung Corp. and 4 operating companies identify important issues by conducting a materiality assessment in terms of stakeholders' interests and business impacts, followed by prioritization. It is confirmed that the Report properly describes the identified issues resulting from the materiality assessment without any omission.

#### ➤ Responsiveness

Hyosung Corp. and 4 operating companies consistently engage with stakeholders to respond to their feedback and main interests. Nothing came to our attention to suggest that its responses and performance are inappropriately described in the Report.

#### ➤ Impact

Hyosung Corp. and 4 operating companies are identifying and monitoring impacts relating to stakeholders and reporting them to the extent possible. Nothing came to our attention to suggest that it does not properly assess and report impacts relating to material issues.

### Recommendation for improvement

KFQ recommends following developmental approaches in order to systematize sustainability management in the future and to disclose the results of the report effectively.

- The sustainability report for Hyosung presented systematic group-wide ESG governance. We look forward to seeing each company's sector-specific ESG strategies and performances continuously in upcoming reports.
- In the future, we hope that Hyosung regularly discloses its environmental and social performance data related to sustainability, and hence stakeholders could confirm the company's efforts for ESG performance management.

July, 2022 Seoul, Korea



CEO Ji Young Song  
Korean Foundation for Quality (KFQ)

*Ji Young Song*

## GRI Standards Index

### General Standards

Topic	Index	Description	Page	Comments
Organizational profile	102-1	Name of organization	6, 8, 10, 12, 14	
	102-2	Activities, brands, products, and services	6, 8, 10, 12, 14	
	102-3	Location of headquarters	6, 8, 10, 12, 14	
	102-4	Location of operations	6, 7	
	102-5	Ownership and legal form	50-51	
	102-6	Markets served	7, 9, 11, 13, 15	
	102-7	Scale of the organization	6, 8, 10, 12, 14	
	102-8	Information on employees and other workers	67, 75, 84, 92, 101	
	102-9	Supply chain	66, 74, 83, 90, 100	
	102-10	Significant changes to the organization and its supply chain	-	No significant changes during reporting period
	102-11	Precautionary Principle or approach	52	
	102-12	External initiatives	112-115	
	102-13	Membership of associations	108	
Strategy	102-14	Statement from senior decision-maker	4	
	102-15	Key impacts, risks, and opportunities	18, 52	
Ethics and Integrity	102-16	Values, principles, standards, and norms of behavior	53	
	102-17	Mechanisms for advice and concerns about ethics	53	
Governance	102-18	Governance structure	50-51	
	102-20	Executive-level responsibility for economic, environmental, and social topics	17, 30, 50-51	
	102-22	Composition of the highest governance body and its committees	50-51	
	102-23	Chair of the highest governance body	50-51	
	102-24	Nominating and selecting the highest governance body	50-51	
	102-25	Conflicts of interest	50-51	
	102-26	Role of highest governance body in setting purpose, values, and strategy	50-51	
	102-28	Evaluating the highest governance body's performance	50-51	
	102-29	Identifying and managing economic, environmental, and social impacts	50-51	
	102-30	Effectiveness of risk management processes	52	
	102-31	Review of economic, environmental, and social topics	52	
	102-35	Remuneration policies	50	
	102-36	Process for determining remuneration	50	

Topic	Index	Description	Page	Comments
Stakeholder Engagement	102-40	List of stakeholder groups	63	
	102-41	Collective bargaining agreements	68, 76, 85, 93, 102	
	102-42	Identifying and selecting stakeholders	63	
	102-43	Approach to stakeholder engagement	63	
	102-44	Key topics and concerns raised	63	
Reporting practice	102-45	Entities included in the consolidated financial statements	-	Refer to the business report p129
	102-46	Defining report content and topic boundaries	64	
	102-47	List of material topics	64, 65, 72, 81, 89, 99	
	102-48	Restatements of information	2	
	102-49	Changes in reporting	64	
	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	110-111	
102-56	External assurance	109		

## GRI Standards Index

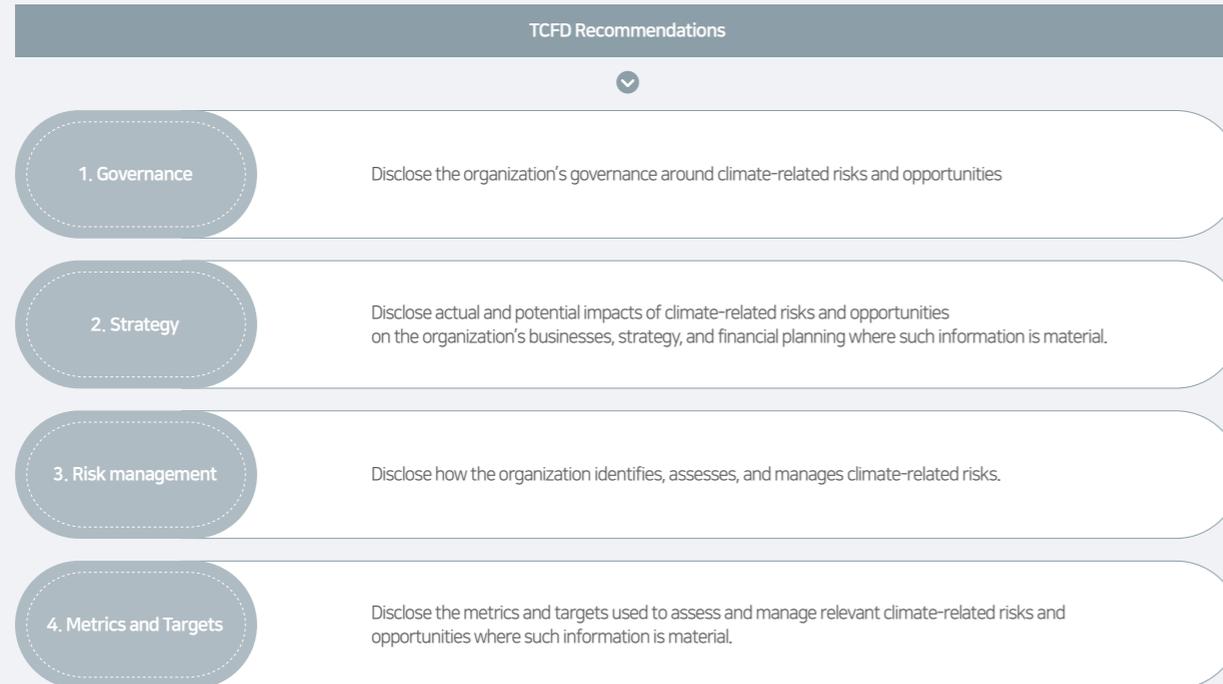
### Topic-Specific Standards

Topic	Index	Description	Page	Comments
<b>GRI 103: Management Approach</b>				
	103-1	Explanation of the material topic and its Boundary	17, 24, 30, 37, 41, 46	
	103-2	The management approach and its components		
	103-3	Evaluation of the management approach		
<b>GRI 201: Economic Performance</b>				
	201-1	Direct economic value generated and distributed (EVG&D)	65, 72, 81, 89, 99	
	201-2	Financial implications and other risks and opportunities due to climate change	18-23, 71	
	201-3	Defined benefit plan obligations and other retirement plans	68, 76, 85, 93, 102	
<b>GRI 202: Market Presence</b>				
	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	67, 75, 84, 93, 101	
<b>GRI 203: Indirect Economic Impacts</b>				
	203-1	Infrastructure investments and services supported	46-48	
	203-2	Significant indirect economic impacts	46-48	
<b>GRI 205: Anti-corruption</b>				
	205-2	Communication and training about anti-corruption policies and procedures	68, 76, 85, 94, 102	
	205-3	Confirmed incidents of corruption and actions taken	53, 66, 82	
<b>GRI 207: Tax</b>				
	207-4	Country-by-country reporting	66, 73, 82, 90, 100	
<b>GRI 302: Energy</b>				
	302-1	Energy consumption within the organization	69, 78, 86, 95, 103	
	302-3	Energy intensity	69, 78, 86, 95, 103	
	302-4	Reduction of energy consumption	69, 78, 86, 95, 103	
<b>GRI 303: Water and Effluents</b>				
	303-3	Water withdrawal	70, 79, 86, 96, 103	
	303-4	Water discharge	70, 79, 86, 96, 103	
	303-5	Water consumption	70, 79, 86, 96, 103	
<b>GRI 305: Emissions</b>				
	305-1	Direct (Scope 1) GHG emissions	69, 78, 86, 95, 103	
	305-2	Energy indirect (Scope 2) GHG emissions	69, 78, 86, 95, 103	
	305-4	GHG emissions intensity	69, 78, 86, 95, 103	
	305-5	Reduced GHG emissions	69, 78, 86, 95, 103	
	305-6	Emissions of ozone-depleting substances (ODS)	70, 79, 87, 97, 104	
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	70, 79, 87, 97, 104	
<b>GRI 306: Waste</b>				
	306-3	Waste generated	70, 79, 87, 96, 104	
	306-4	Waste diverted from disposal	70, 79, 87, 96, 104	
<b>GRI 307: Environmental Compliance</b>				
	307-1	Non-compliance with environmental laws and regulations	74, 90, 100	

Topic	Index	Description	Page	Comments
<b>GRI 401: Employment</b>				
	401-1	New employee hires and employee turnover	67, 75, 84, 92, 101	
	401-3	Parental leave	67, 75, 84, 92, 101	
<b>GRI 403: Occupational Health and Safety</b>				
	403-1	Occupational health and safety management system	30-36	
	403-2	Hazard identification, risk assessment, and incident investigation	30-36	
	403-3	Occupational health services	30-36	
	403-4	Worker participation, consultation, and communication on occupational health and safety	30-36	
	403-5	Worker training on occupational health and safety	30-36, 68, 76, 85, 94, 102	
	403-6	Promotion of worker health	30-36	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	30-36	
	403-9	Work-related injuries	68, 76, 85, 94, 102	
	403-10	Work-related ill health	68, 76, 85, 94, 102	
<b>GRI 404: Training and Education</b>				
	404-1	Average hours of training per year per employee	68, 76, 85, 94, 102	
	404-2	Programs for upgrading employee skills and transition assistance programs	55-57	
<b>GRI 405: Diversity and Equal Opportunity</b>				
	405-1	Diversity of governance bodies and employees	67, 75, 84, 92, 101	
	405-2	Ratio of basic salary and remuneration of women to men	67, 75, 84, 92, 101	
<b>GRI 407: Freedom of Association and Collective Bargaining</b>				
	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	-	Not applicable to our business sites
<b>GRI 408: Child labor</b>				
	408-1	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor	-	Not applicable to our business sites
<b>GRI 409: Forced or compulsory labor</b>				
	409-1	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor	-	Not applicable to our business sites
<b>GRI 412: Human Rights Assessment</b>				
	412-1	Operations that have been subject to human rights reviews or impact assessments	54	
	412-2	Employee training on human rights policies or procedures	68, 76, 85, 94, 102	
<b>GRI 413: Local Communities</b>				
	413-1	Operations with local community engagement, impact assessments, and development programs	46-48	
	413-2	Operations with significant actual and potential negative impacts on local communities	-	Not applicable to our business sites

## TCFD

Since 2015, nearly every nation on earth has endorsed the Paris Agreement, setting emission reduction targets and declaring commitments to implement goals against global warming. Additionally, the Financial Stability Board (FSB) established the Task Force on Climate-related Financial Disclosures (TCFD) in December 2015 and developed a global framework for information disclosure in recognition of the importance of economic decision-making in response to climate change. Within the framework, disclosures are structured around four thematic areas that represent core elements of how organizations operate: governance, strategy, risk management, and metrics and targets. Companies may disclose their climate change-related financial information in line with the recommendations of the TCFD, and the information is actively used in decision-making by stakeholders and investors. As such, Hyosung and our four subsidiaries are disclosing climate change-related information via our sustainability report, in accordance with the TCFD's recommendations. Through this effort, we hope to renew the response system to climate change and take the lead in fulfilling corporate responsibilities.



### TCFD Index

Category	Index	Page
Governance	Describe the board's oversight of climate-related risks and opportunities	17
	Describe management's role in assessing and managing climate-related risks and opportunities.	
Strategy	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	18
	Describe the impact of climate related risks and opportunities on the organization's businesses, strategy, and financial planning.	
	Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	-
Risk management	Describe the organization's processes for identifying and assessing climate-related risks	18
	Describe the organization's processes for managing climate-related risks.	
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	
Metrics and Targets	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	19
	Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	
	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	

## SASB

In 2011, the Sustainability Accounting Standards Board (SASB) was established to set up industry-specific sustainability accounting standards.

Since then, SASB has derived financially significant sustainability issues with consideration for the specific characteristics of each industry, announcing material sustainability issues for a total of 77 industries across 11 areas in accordance with the Sustainable Industry Classification System (SICS). Accordingly, and in an effort to communicate more actively with our stakeholders, Hyosung and our four subsidiaries disclose relevant information through the sustainability report, in line with the SASB standards and our SICS industry classification.

## Chemical

Sustainability Disclosure Topics & Accounting Metrics							
Topic	Code	Accounting Metric	Category	Page			Comments
				Hyosung TNC	Hyosung Advanced Materials	Hyosung Chemical	
Greenhouse Gas Emissions	RT-CH-110a.1	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Quantitative	78	95	103	
	RT-CH-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Qualitative	78	95	103	
Air Quality	RT-CH-120a.1	Air emissions of the following pollutants: (1) NOX (excluding N2O), (2) SOX, (3) volatile organic compounds (VOCs), and (4) hazardous air pollutants (HAPs)	Quantitative	79	96	104	
Energy Management	RT-CH-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable, (4) total self-generated energy	Quantitative	78	95	103	
Water Management	RT-CH-140a.1	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Quantitative	79	96	103	
	RT-CH-140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	Quantitative	-	-	100	
	RT-CH-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	Qualitative	79	96	103	
Hazardous Waste Management	RT-CH-150a.1	Amount of hazardous waste generated, percentage recycled	Quantitative	79	96	104	
Community Relations	RT-CH-210a.1	Discussion of engagement processes to manage risks and opportunities associated with community interests	Qualitative	46-48			
Workforce Health & Safety	RT-CH-320a.1	(1) Total recordable incident rate (TRIR) and (2) fatality rate for (a) direct employees and (b) contract employees	Quantitative	76	94	102	
	RT-CH-320a.2	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	Qualitative	32	35	36	
Product Design for Use-phase Efficiency	RT-CH-410a.1	Revenue from products designed for use-phase resource efficiency	Quantitative	74	90	100	
Safety & Environmental Stewardship of Chemicals	RT-CH-410b.1	(1) Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, (2) percentage of such products that have undergone a hazard assessment	Quantitative	-	-	-	Not applicable
	RT-CH-410b.2	Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact	Qualitative	80	97	104	
Genetically Modified Organisms	RT-CH-410c.1	Percentage of products by revenue that contain genetically modified organisms (GMOs)	Quantitative	-	-	-	Not applicable
Management of the Legal & Regulatory Environment	RT-CH-530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	Qualitative	74	90	100	
Operational Safety, Emergency Preparedness & Response	RT-CH-540a.1	Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR), and Process Safety Incident Severity Rate (PSISR)	Quantitative	76	94	102	

Activity Metric						
Code	Accounting Metric	Category	Page			Comments
			Hyosung TNC	Hyosung Advanced Materials	Hyosung Chemical	
RT-CH-000.A	Production by reportable segment	Quantitative	74	90	100	

\* In terms of process safety and emergencies, data on occupational accidents are managed in accordance with domestic laws and regulations, and will be subsequently added in accordance with the SASB standards.

## Electrical & Electronic Equipment

Sustainability Disclosure Topics & Accounting Metrics					
Topic	Code	Accounting Metric	Category	Page	Comments
				Hyosung Heavy Industries	
Energy Management	RT-EE-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Quantitative	86	
Hazardous Waste Management	RT-EE-150a.1	Amount of hazardous waste generated, percentage recycled	Quantitative	87	
	RT-EE-150a.2	Number and aggregate quantity of reportable spills, quantity recovered	Quantitative	-	No significant spill cases
Product Safety	RT-EE-250a.1	Number of recalls issued, total units recalled	Quantitative	-	Not applicable
	RT-EE-250a.2	Total amount of monetary losses as a result of legal proceedings associated with product safety	Quantitative	82	
Product Lifecycle Management	RT-EE-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	Quantitative	82	
	RT-EE-410a.2	Percentage of eligible products, by revenue, that meet ENERGY STAR® criteria	Quantitative	82	
	RT-EE-410a.3	Revenue from renewable energy-related and energy efficiency-related products	Quantitative	82	
Materials Sourcing	RT-EE-440a.1	Description of the management of risks associated with the use of critical materials	Qualitative	33	
Business Ethics	RT-EE-510a.1	Description of policies and practices for prevention of: (1) corruption and bribery and (2) anti-competitive behavior	Qualitative	53	
	RT-EE-510a.2	Total amount of monetary losses as a result of legal proceedings associated with bribery or corruption	Quantitative	82	
	RT-EE-510a.3	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	Quantitative	82	

Activity Metric				
Code	Accounting Metric	Category	Page	Comments
			Hyosung Heavy Industries	
RT-EE-000.A	Number of units produced by product category	Quantitative	82	
RT-EE-000.B	Number of Employees	Quantitative	84	

## Engineering & Construction

Sustainability Disclosure Topics & Accounting Metrics					
Topic	Code	Accounting Metric	Category	Page	Comments
				Hyosung Heavy Industries	
Environmental Impacts of Project Development	IF-EN-160a.1	Number of incidents of non-compliance with environmental permits, standards, and regulations	Quantitative	82	
	IF-EN-160a.2	Discussion of processes to assess and manage environmental risks associated with project design, siting, and construction	Qualitative	21	
Structural Integrity & Safety	IF-EN-250a.1	Amount of defect- and safety-related rework costs	Quantitative	-	Not applicable
	IF-EN-250a.2	Total amount of monetary losses as a result of legal proceedings associated with defect- and safety-related incidents	Quantitative	82	
Workforce Health & Safety	IF-EN-320a.1	(1) Total recordable incident rate (TRIR) and (2) fatality rate for (a) direct employees and (b) contract employees	Quantitative	85	
Lifecycle Impacts of Buildings & Infrastructure	IF-EN-410a.1	Number of (1) commissioned projects certified to a third-party multi-attribute sustainability standard and (2) active projects seeking such certification	Quantitative	88	
	IF-EN-410a.2	Discussion of process to incorporate operational-phase energy and water efficiency considerations into project planning and design	Qualitative	88	
Climate Impacts of Business Mix	IF-EN-410b.1	Amount of backlog for (1) hydrocarbon-related projects and (2) renewable energy projects	Quantitative	83	
	IF-EN-410b.2	Amount of backlog cancellations associated with hydrocarbon-related projects	Quantitative	83	
	IF-EN-410b.3	Amount of backlog for non-energy projects associated with climate change mitigation	Quantitative	83	
Business Ethics	IF-EN-510a.1	(1) Number of active projects and (2) backlog in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	Quantitative	-	No related project available
	IF-EN-510a.2	Total amount of monetary losses as a result of legal proceedings associated with charges of (1) bribery or corruption and (2) anti-competitive practice	Quantitative	82	
	IF-EN-510a.3	Description of policies and practices for prevention of (1) bribery and corruption, and (2) anti-competitive behavior in the project bidding processes	Qualitative	53	

Activity Metric				
Code	Accounting Metric	Category	Page	Comments
			Hyosung Heavy Industries	
IF-EN-000.A	Number of active projects	Quantitative	83	
IF-EN-000.B	Number of commissioned projects	Quantitative	83	
IF-EN-000.C	Total backlog	Quantitative	83	

## Asset Management

Sustainability Disclosure Topics & Accounting Metrics					
Topic	Code	Accounting Metric	Category	Page	Comments
				Hyosung Corporation	
Transparent Information & Fair Advice for Customers	FN-AC-270a.1	(1) Number and (2) percentage of covered employees with a record of investment-related investigations, consumer-initiated complaints, private civil litigations, or other regulatory proceedings	Quantitative	-	*Not applicable
	FN-AC-270a.2	Total amount of monetary losses as a result of legal proceedings associated with marketing and communication of financial product-related information to new and returning customers	Quantitative	66	*Not applicable
	FN-AC-270a.3	Description of approach to informing customers about products and services	Qualitative	-	*Not applicable
Employee Diversity & Inclusion	FN-AC-330a.1	Percentage of gender and racial/ethnic group representation for (1) executive management, (2) non-executive management, (3) professionals, and (4) all other employees	Quantitative	67	
Incorporation of Environmental, Social, and Governance Factors in Investment Management & Advisory	FN-AC-410a.1	Amount of assets under management, by asset class, that employ (1) integration of environmental, social, and governance (ESG) issues, (2) sustainability themed investing, and (3) screening	Quantitative	-	*Not applicable
	FN-AC-410a.2	Description of approach to incorporation of environmental, social, and governance (ESG) factors in investment and/or wealth management processes and strategies	Qualitative	-	*Not applicable
	FN-AC-410a.3	Description of proxy voting and investee engagement policies and procedures	Qualitative	-	*Not applicable
Ethics	FN-AC-510a.1	Total amount of monetary losses as a result of legal proceedings associated with fraud, insider trading, anti-trust, anti-competitive behavior, market manipulation, malpractice, or other related financial industry laws or regulations	Quantitative	66	
	FN-AC-510a.2	Description of whistleblower policies and procedures	Qualitative	53	Website
Systemic Risk Management	FN-AC-550a.1	Percentage of open-end fund assets under management by category of liquidity classification	Quantitative	-	*Not applicable
	FN-AC-550a.2	Description of approach to incorporation of liquidity risk management programs into portfolio strategy and redemption risk management	Qualitative	-	*Not applicable
	FN-AC-550a.3	Total exposure to securities financing transactions	Quantitative	-	*Not applicable
	FN-AC-550a.4	Net exposure to written credit derivatives	Quantitative	-	*Not applicable

Activity Metric				
Code	Activity Metric	Category	Page	Comments
			Hyosung Corporation	
FN-AC-000.A	(1) Total registered and (2) total unregistered assets under management (AUM)	Quantitative	-	*Not applicable
FN-AC-000.B	Total assets under custody and supervision	Quantitative	-	*Not applicable

\*Hyosung Corporation is the holding company of Hyosung Group. Since it is not a general financial holding company, financial indicators are not applicable.

**UN SDGs**  
(UN Sustainable Development Goals)

Succeeding the MDGs (Millennium Development Goals), the UN SDGs (Sustainable Development Goals) are follow-up goals that the UN and international society as a whole are committed to achieving between 2016 and 2030. The SDGs include 17 goals and 169 targets for the sustainable development of all countries around the world, including responding to climate change, economic growth, and decent jobs. Through the sustainability report, Hyosung Corporation and our four subsidiaries disclose key sustainability issues and their connection with the UN SDGs.

Material Issue	UN SDGs	Our Responses				
		Hyosung Corporation	Hyosung TNC	Hyosung Heavy Industries	Hyosung Advanced Materials	Hyosung Chemical
① Occupational health and safety	 	<ul style="list-style-type: none"> <li>Strengthening health and safety systems</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening safety inspections</li> <li>Promoting safety training</li> </ul>	<ul style="list-style-type: none"> <li>Establishing 4 Focus Tasks and Top 10 Safety Practices</li> </ul>	<ul style="list-style-type: none"> <li>Reorganizing the health and safety disaster system</li> <li>Establishing 5 major strategies</li> </ul>	<ul style="list-style-type: none"> <li>Establishing the EHS Committee</li> <li>Strengthening supplier health and safety</li> </ul>
② Product stewardship and safety	 	<ul style="list-style-type: none"> <li>Establishing the C-Cube system</li> </ul>	<ul style="list-style-type: none"> <li>Acquiring quality improvement and safety certifications</li> </ul>	<ul style="list-style-type: none"> <li>Establishing a Global Management System (GMS)</li> </ul>	<ul style="list-style-type: none"> <li>Advancing C-Cube activities</li> <li>Acquiring quality management certifications</li> <li>Hazardous chemicals analysis</li> </ul>	<ul style="list-style-type: none"> <li>Acquiring quality and safety certifications</li> </ul>
③ Customer relationship management (CRM) and maximizing customer satisfaction	 	<ul style="list-style-type: none"> <li>Internalization of C-Cube activities</li> </ul>	<ul style="list-style-type: none"> <li>VOC-based brand launching</li> </ul>	<ul style="list-style-type: none"> <li>VOC-based product development</li> </ul>	<ul style="list-style-type: none"> <li>VOC-based product development</li> </ul>	<ul style="list-style-type: none"> <li>VOC-based product development</li> </ul>
④ Expansion to overseas markets for new growth engines	  	<ul style="list-style-type: none"> <li>Expansion of global production bases</li> </ul>	<ul style="list-style-type: none"> <li>Facility expansion in the Republic of Türkiye (Turkey) and Brazil</li> <li>Expanding investments in China</li> </ul>	<ul style="list-style-type: none"> <li>Expansion into overseas power equipment markets</li> </ul>	<ul style="list-style-type: none"> <li>Cooperation with major global automakers</li> <li>Expansion of carbon fiber</li> </ul>	<ul style="list-style-type: none"> <li>Expanding Vina Chemical's production facility</li> </ul>
⑤ Development of green products and technology	    	<ul style="list-style-type: none"> <li>Building an eco-friendly product portfolio</li> </ul>	<ul style="list-style-type: none"> <li>Bio-based spandex development</li> <li>Expanding the regen recycling project</li> </ul>	<ul style="list-style-type: none"> <li>Expanding hydrogen charging stations and development of supply technology</li> <li>Development of green power equipment</li> </ul>	<ul style="list-style-type: none"> <li>Bio-based PET development</li> <li>Product development using recycled materials and expansion of delivery</li> </ul>	<ul style="list-style-type: none"> <li>Producing eco-friendly ENPLA, a new polyketone material</li> </ul>
⑥ Supplier CSR risk management	 	<ul style="list-style-type: none"> <li>Strengthening the supplier risk management system</li> </ul>	<ul style="list-style-type: none"> <li>Enhancing supplier registration evaluations and supply chain risk management</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening the supplier risk assessment system</li> </ul>	<ul style="list-style-type: none"> <li>Expanding the scope of supplier risk management and conducting regular monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening supplier registration evaluations and supply chain risk management</li> </ul>
⑦ Energy consumption and use of renewable energy	 	<ul style="list-style-type: none"> <li>Applying the TCFD recommendations</li> <li>Establishment of climate change response strategies</li> </ul>	<ul style="list-style-type: none"> <li>Increasing renewable energy use</li> <li>Energy saving efforts</li> </ul>	<ul style="list-style-type: none"> <li>Developing alternative technologies to replace GHGs</li> <li>Energy saving efforts</li> </ul>	<ul style="list-style-type: none"> <li>Expansion of scope of overseas subsidiaries subject to GHG calculations</li> <li>Energy saving and expanding renewable energy</li> </ul>	<ul style="list-style-type: none"> <li>Increasing renewable energy use</li> <li>Energy saving efforts</li> </ul>
⑧ Ensuring production efficiency and price competitiveness		<ul style="list-style-type: none"> <li>Securing unique competitiveness through the global production system</li> <li>Expanding facility investment in global production bases</li> </ul>				
⑨ Expanding R&D and infrastructure	 	<ul style="list-style-type: none"> <li>Strengthening the organizational system for R&amp;D</li> </ul>	<ul style="list-style-type: none"> <li>Promoting the R&amp;D Committee and in-company technology exchange meetings</li> <li>Continuous support for major research projects (green materials, new materials, and other new technologies)</li> </ul>			
⑩ Supporting shared growth	 	<ul style="list-style-type: none"> <li>Establishing a shared growth system</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening suppliers' competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening shared growth programs</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening shared growth programs</li> <li>Fostering outstanding small companies</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening shared growth programs</li> </ul>
⑪ Response to climate change	 	<ul style="list-style-type: none"> <li>Establishing a climate change response system</li> <li>Participating in CDP (Carbon Disclosure Project)</li> </ul>	<ul style="list-style-type: none"> <li>Calculating product carbon footprints</li> <li>Expanding facility investments for emissions reduction</li> </ul>	<ul style="list-style-type: none"> <li>Projects for renewable energy transmission and distribution systems</li> <li>Expanding renewable energy projects</li> </ul>	<ul style="list-style-type: none"> <li>Expanding the product scope/regions for carbon labeling certification</li> <li>Establishing a climate change response system for overseas business sites</li> <li>Decision to participate in SBTi</li> </ul>	<ul style="list-style-type: none"> <li>Expanding facility investments for emissions reduction</li> </ul>
⑫ Ensuring financial soundness and profitability		<ul style="list-style-type: none"> <li>Continuous overseas market expansion</li> <li>Localization strategy targeting the global market and strategy for mass production of core products</li> </ul>				