

Sustainable Warmth For Everyone

Hanwha Systems Sustainability Report 2023



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Interactive User Guide

The **Hanwha Systems** Sustainability Report was thoughtfully designed as an interactive PDF, providing an enhanced experience for readers. Through its interactive features, such as embedded web links and video playback, it aims to facilitate a deeper understanding of the content presented.

 Cover Page

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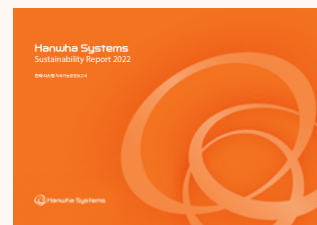
 Relevant Webpage

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Sustainability Report 2021



Sustainability Report 2022

Report Outline

The **Hanwha Systems** Sustainability Report 2023 provides a comprehensive overview of the company's performance and sustainability initiatives, focusing on environmental, social, and economic responsibility. By transparently disclosing its findings on an annual basis, **Hanwha Systems** is actively communicating with stakeholders, fostering a culture of openness and accountability.

Report Standards

The current report laid the groundwork following the Global Reporting Initiative (GRI) Standards, which provide a recognized framework for global sustainable management reporting. The report also incorporates indicators from the Task Force on Climate-related Financial Disclosures (TCFD), the Sustainability Accounting Standards Board (SASB), and the United Nations Sustainable Development Goals (UN SDGs). This approach enables **Hanwha Systems** to transparently disclose its activities and address key industry-specific issues.

Report Period

The current report provides an overview of **Hanwha Systems'** environmental, social, and economic activities and performance for the period from January 1 to December 31, 2022. Additionally, selected performance results include data up to the first half of 2023, offering a more up-to-date perspective. To showcase yearly trends in quantitative performance, the report utilizes data from the past three years (2020–2022), providing a comprehensive view of the company's progress over time.

Report Issue Date

The current report was issued on May 30, 2023.

Scope

The report includes both financial and non-financial data that was collected and reported based on comprehensive data from all of **Hanwha Systems'** domestic and foreign networks in the defense and ICT sectors. The financial data is prepared in accordance with the Korean International Financial Reporting Standards (K-IFRS). To provide clarity to readers, certain information regarding the scope and boundaries of the report has been added in separate annotations.

Report Assurance

The financial data for the current report underwent an independent accounting audit by Deloitte Anjin LLC, while the nonfinancial data was independently verified by the Daishin Economic Research Institute to ensure objectivity and credibility.

Contact Information

For any inquiries or questions regarding the report, please refer to the contact information provided below.

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CEO Message

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The past three years have presented us with numerous trials and disruptions due to the impact of the COVID-19 pandemic. It has hindered our hurried steps toward growth and made face-to-face interactions a rarity. However, our unwavering determination to return to a sense of normalcy amidst the Covid-19 has resulted in valuable experiences and the development of future technologies that are as equally remarkable as our past growth.

During this period, **Hanwha Systems** has expanded its business portfolio beyond land, sea, and air, diving into space and focusing on the development of advanced technologies. We consider this expansion as our peaceful responsibility towards global security and duty toward the betterment of human society.

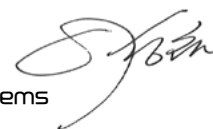
Building upon our existing defense industry and ICT businesses, we have diversified our portfolio to include eco-friendly and pro-humanity new businesses, such as our 'urban flight mobility' and 'low Earth orbit satellite communication' projects. Additionally, we have obtained international certifications for compliance (ISO 37301) and anti-bribery (ISO 37001) management systems, strengthened our fair trade compliance system by advancing the company's compliance program (CP), acquired a family-friendly business certification, obtained an 'Excellent' rating for the Shared Growth Index, declared support for the Task Force on Climate-Related Financial Disclosures (TCFD), and consistently met ESG standards, including the supply chain ESG diagnosis one. These achievements have been recognized by the Korea Institute of Corporate Governance and Sustainability (KCGS), which awarded us the comprehensive A-grade (November 2022) for two consecutive years, and by the global credit-rating firm MSCI, which upgraded our ESG rating by one class (March 2023).

We promise to continue our commitment to ESG management and fair trade compliance throughout the entire company. We will also focus on developing eco-friendly new businesses to continue shaping a trustworthy company, foster a healthy workplace, and contribute to a happier society. Through these efforts, we aim to contribute to achieving a sustainable today and tomorrow in Korea, enhancing its reputation on the international stage.

We hope that **Hanwha Systems'** three 'cho' (超 = hyper) technologies—hyperconnectivity, hyperintelligence, and hyper-convergence—will contribute to world peace and improve the Earth's environment. Moreover, these hope that these technologies will serve as a vision for the future, propelling us into the space age. We are deeply grateful to present our sustainability report for three consecutive years as part of our ongoing commitment to ESG management. We humbly ask for our stakeholders for their continued support and encouragement as we strive to achieve meaningful outcomes.

Thank you all.

Sung-Chul Eoh
CEO, Hanwha Systems




“ We are committed to making continuous contributions toward achieving a sustainable today and tomorrow in Korea. Additionally, we strive to enhance the global reputation of Korea on the international stage.

With **Hanwha Systems'** three 'cho' (超 = hyper) technologies—hyperconnectivity, hyperintelligence, and hyper-convergence—we aim to promote peace for humanity and envision a future where space exploration leads to a better global environment.

Brief Introduction about Hanwha Systems

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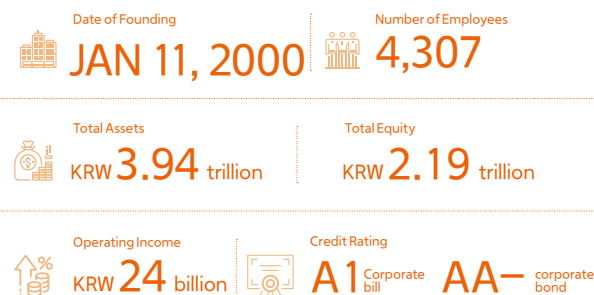
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Company Overview

Company Name	Hanwha Systems Co., Ltd.
CEO	Sung-Chul Eoh
Date of Founding	January 11, 2000
HQ Location	244, 1gongdan-ro, Gumi-si, Gyeongsangbuk-do
Business Fields	Defense, ICT, New Businesses
Number of Employees	4,307
Total Assets (Consolidated)	KRW 3.94 trillion
Total Equity (Consolidated)	KRW 2.19 trillion
Sales (Consolidated)	KRW 2.18 trillion
Operating Income (Consolidated)	KRW 24 billion
Credit Rating	Corporate bill (A1), corporate bond (AA-)

* Based on the 23rd Financial Report



Vision and Strategy

Hanwha Systems envisions a future of prosperity and security by emerging as a global leader in defense and ICT smart solutions. As Korea's premier defense electronics company, **Hanwha Systems'** Defense division stands at the forefront of its field, boasting cutting-edge technology and know-how that play a pivotal role in safeguarding our national security and spearheading the future of Korea's smart defense. Moreover, our ICT division delivers tailored and comprehensive IT solutions to various business sectors. By leading the way in digital transformation, we are constantly enhancing competitiveness and customer business innovation.

In anticipation of forthcoming transformations in the Fourth Industrial Revolution era, **Hanwha Systems** is actively exploring, investing in, and expanding into new businesses such as urban air mobility (UAM) and low Earth orbit (LEO) satellite projects. We will continue to expand our business model and constantly innovate to make humanity more vulnerable and safer through hyperconnected, hyperintelligent, and hyper-convergent technologies.



Brief Introduction about Hanwha Systems

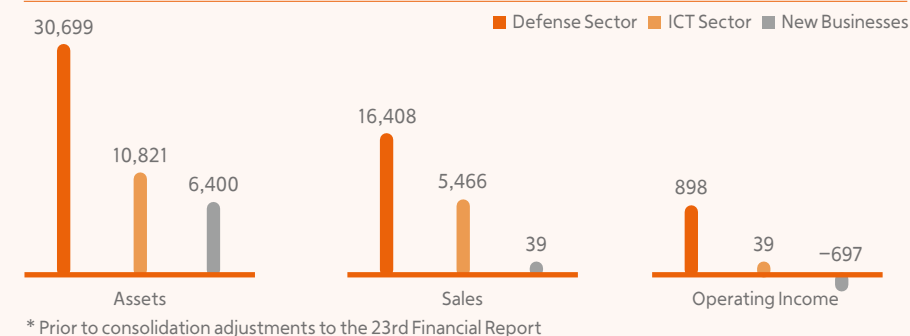
Businesses

As the exclusive total solutions global company in Korea, **Hanwha Systems** excels in advanced defense electronics and IT-based smart technologies. We offer new services that converge the defense and civilian sectors, leveraging our defense electronics technologies within the ICT industry and our competitive ICT solutions. In addition, we prioritize enhancing our competitive edge in digital innovation to cater to the needs of our customers. Through our relentless efforts, we are continuously exploring and developing new growth engines that will propel us into the future. These include ventures into urban air mobility (UAM), our space internet business utilizing LEO satellites and satellite communication antennas, and our electronic components business focused on automotive semiconductors.

Hanwha Systems is committed to driving economic growth for our society and country. We are dedicated to serving the community and continuously innovating for the future, including taking the lead in sustainable management preparations and responses.

2022 Financial Key Figures

(Unit: KRW 100 million)



Defense Sector

- **Surveillance and Reconnaissance:** The surveillance and reconnaissance business develops and produces reconnaissance equipment assets for land, sea, and air forces in the fields of radar and electro-optics.
- **Command, Control, Communication:** **Hanwha Systems** is actively engaging in next-generation projects related to command, control, and fire control (C2, FCS), command and control systems (C4I), military satellite communication, tactical communication, and cyber warfare/electronic warfare. These initiatives are vital for future network-centered warfare (NCW).
- **Avionics:** Our avionics business specializes in the development and production of advanced electronic equipment for aircraft. This includes mission computers (MC), multifunction displays (MFD), smart control display units (SCDU), radar warning receivers (RWR), smart audio command and control systems (ACCS), and audio interface units (AIU).
- **Marine Systems:** Our focus in this sector is the development and production of unmanned maritime systems, specifically naval combat systems and autonomous underwater vehicles.

ICT Sector

- **IT Outsourcing:** Through our IT outsourcing services, we operate and manage customer computer systems. Our goal is to provide comprehensive IT infrastructure operation services, ensuring efficient and stable business continuity for our clients.
- **System Integration (SI) / Convergence**
 - SI: **Hanwha Systems** also specializes in building information systems that enable businesses to operate effectively. Our services encompass consulting, system building, and computer network building that includes servers and networks.
 - Convergence: Our convergence services focus on enhancing industrial system engineering for social infrastructure and production/work/residential facilities. We strive to create an efficient and effective work environment by integrating such infrastructure and facilities into an 'industrial system-IT convergence system.'

New Businesses

- **UAM:** The UAM business is a next-generation transportation system, capable of transporting people or cargo through urban skies. Our vision of becoming a global UAM solution provider, drives us to actively explore diverse business opportunities. Our goal is to offer comprehensive solutions for future mobility, encompassing advanced eVTOL aircraft, UAMservices, and infrastructure.
- **Satellite Communication Business:** Our company is actively promoting and planning businesses centered on satellite communication antennas and satellite communication services, with a particular focus on LEO satellites. We are also establishing partnerships to participate in both foreign and domestic satellite communication service industries.
- **Digital Platform:** Our platform business aims to provide convenient and innovative digital services. By leveraging user data obtained through the platform, we aim to offer a wide range of customized additional services optimized for each individual.

Brief Introduction about Hanwha Systems

Hanwha Systems' Past Steps toward Sustainability

In 2022, Hanwha Systems engaged in various partnerships and activities to promote its sustainable management. Moving forward, we remain committed to building upon these efforts and guiding them towards a sustainable future.

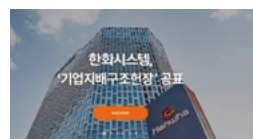
Sustainability Activities in 2022

March 2022

Growing its 'K-Defense,' Hanwha Systems establishes a KRW 100 million venture fund for the Military Mutual Aid Association



Official announcement of the 'Corporate Governance Charter' Declaration of ethical management



April 2022

Acquired Level 8, the highest level in Korea's 'Productivity Management System'



Made 'Sharing in Love Donation' charitable contributions to the Red Cross in support of vulnerable groups



May 2022

Review of green building certification for the new plant in Gumi



June 2022

Hanwha Systems' Gumi Business Site donates lunch boxes to the Daegu Red Cross



'Going Far Together' – the first ESG management support project for suppliers, fostering shared growth



June 2022

Delivered 'Boxes of Hope' to 6,000 veterans



Completion ceremony for a housing improvement project between Hanwha Systems and the Daegu Regional Veterans Affairs Administration



July 2022

Awarding international certification for both compliance and anti-bribery management systems coincidentally



ChildFund Korea Gyeonggi Regional Headquarters partners with Hanwha Systems to deliver donations to children



August 2022

Donation of 1,000 sacks of rice to vulnerable groups in the community



October 2022

Adoption of a position-based executive system



December 2022

Recognized for 'Corporate Social Responsibility in the Community' and newly certified as a 'Family Friendly Business'



'Defense Technology Protection Commendation' for three consecutive years



Partners Day – 'A Joint Declaration of Commitment to ESG Management' supporting sustainable cooperation and shared growth



Introduction

ESG Highlights

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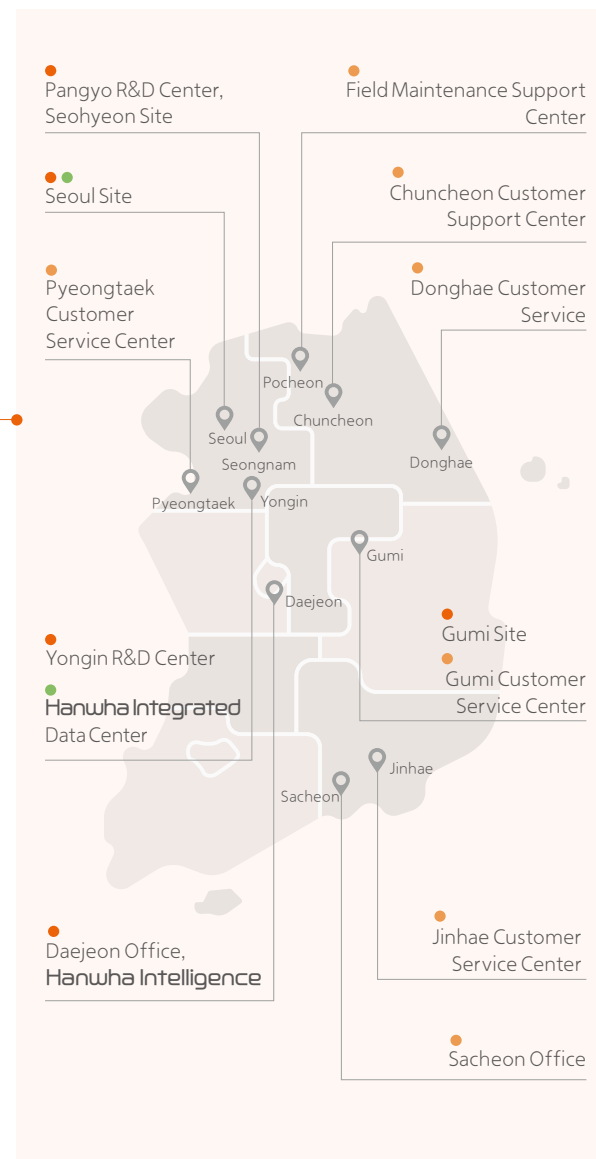
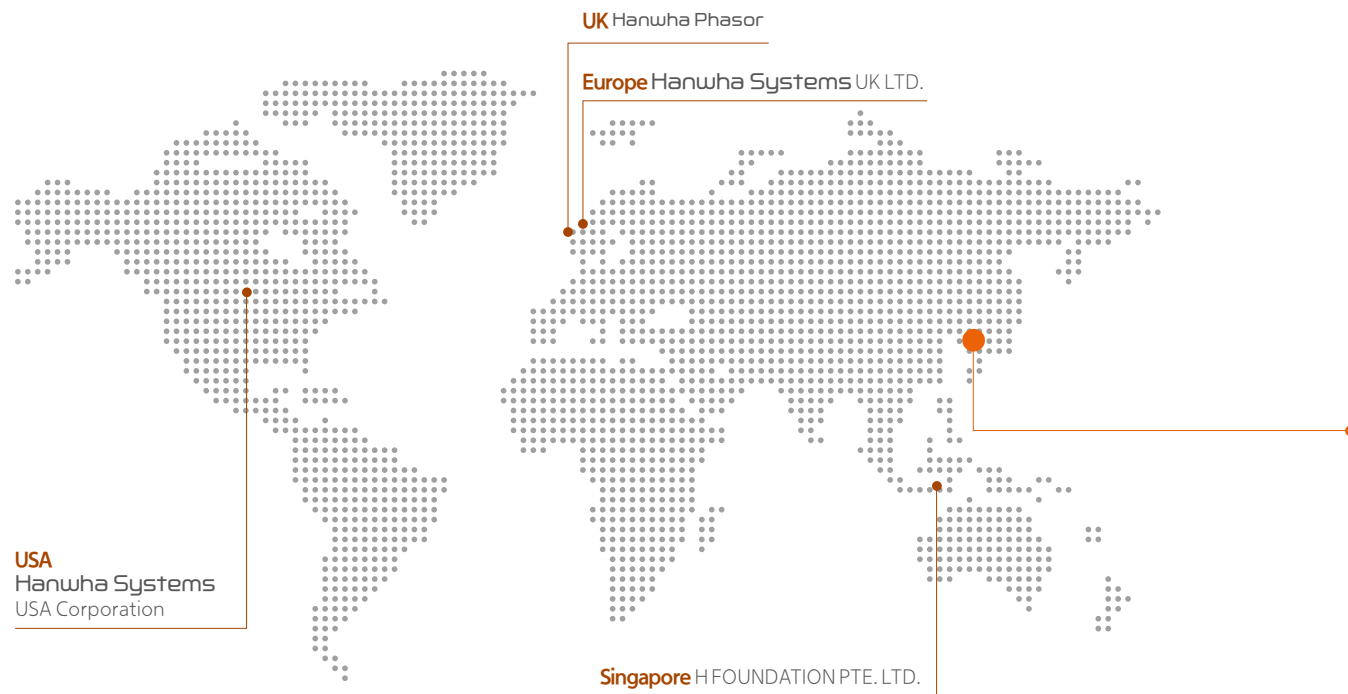
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Brief Introduction about Hanwha Systems

Global Networks



Business Sector	Defense	ICT	New Businesses
Category/No. of Business Sites	<ul style="list-style-type: none"> Korean network: 7 sites Korean customer support centers: 7 sites 	<ul style="list-style-type: none"> Korean network: 2 sites 	<ul style="list-style-type: none"> Overseas network: 4 sites
Product/Service Category	Military Equipment	Designing and building computer systems; Outsourced management of computer systems; IT convergence engineering services, etc.	Satellite communication antennas; Digital platforms

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ESG Management System



Sustainable wArmth For Everyone

Our technology aims to create a sustainable and caring world, where individuals in societies can envision a safe and comfortable tomorrow.

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ESG Management

Hanwha Systems is at the forefront of advancing future technologies for the benefit of the world. Our approach to future technologies goes beyond meeting ‘obligations,’ and focuses on sustainable values that contribute to the enrichment of society while considering the global environment.

To foster a sustainable future, Hanwha Systems took a significant step by establishing the ESG Charter and Policy in 2021. This framework represents our clear intention and direction to promote ESG management policies.

We declare our commitment to four major ESG management policies: ‘Environmental Management’; ‘Integrity Management’; ‘Human Rights Management’; and ‘Responsible Management.’ To put these into practice, we are dedicated to implementing tasks aligned with our four major directions. These include fulfilling an ‘eco-friendly digital future society’; building ‘sustainable business partnerships’; building a ‘safe and pleasant work environment and a culture of respecting employees’; and establishing ‘transparent and fair governance’. By carrying out these initiatives, we strive to expand our global business and ensure compliance with ESG standards worldwide.

We will achieve positive ESG management results to ensure that our ESG activities earn the trust of our stakeholders.

ESG Charter and Policy



ESG Strategy



ESG Management System

ESG Management Governance

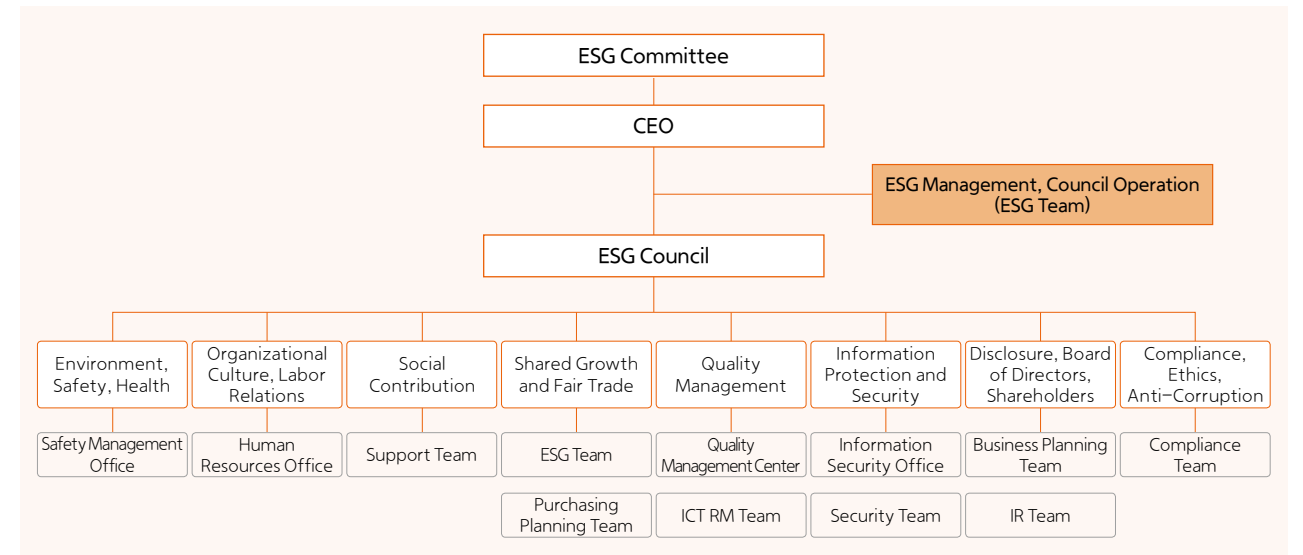
In order to ensure the practice of systematic ESG management policies, Hanwha Systems installed the 'ESG Committee' in 2021 and operates an 'ESG Council,' consisting of relevant departments responsible for each key ESG issue. We have also established and implemented an ESG management system to ensure prompt compliance with global ESG disclosure standards.

ESG Management Structure

Hanwha Systems has established an ESG management system that includes the ESG Committee and the ESG Council. The Board of Directors convenes on a quarterly basis to provide regular updates on ESG management plans and performance, and to disclose significant items resolved and approved during the meetings.

A dedicated ESG organization (ESG Team) facilitates ESG activities through monthly ESG council meetings. These activities are recorded in the ESG management system (ESG ON), which serves as a disclosure indicator. The standards for ESG activities are regularly updated to ensure compliance with global ESG initiatives.

ESG Committee and ESG Council Organizational Chart



ESG Committee Key Activities

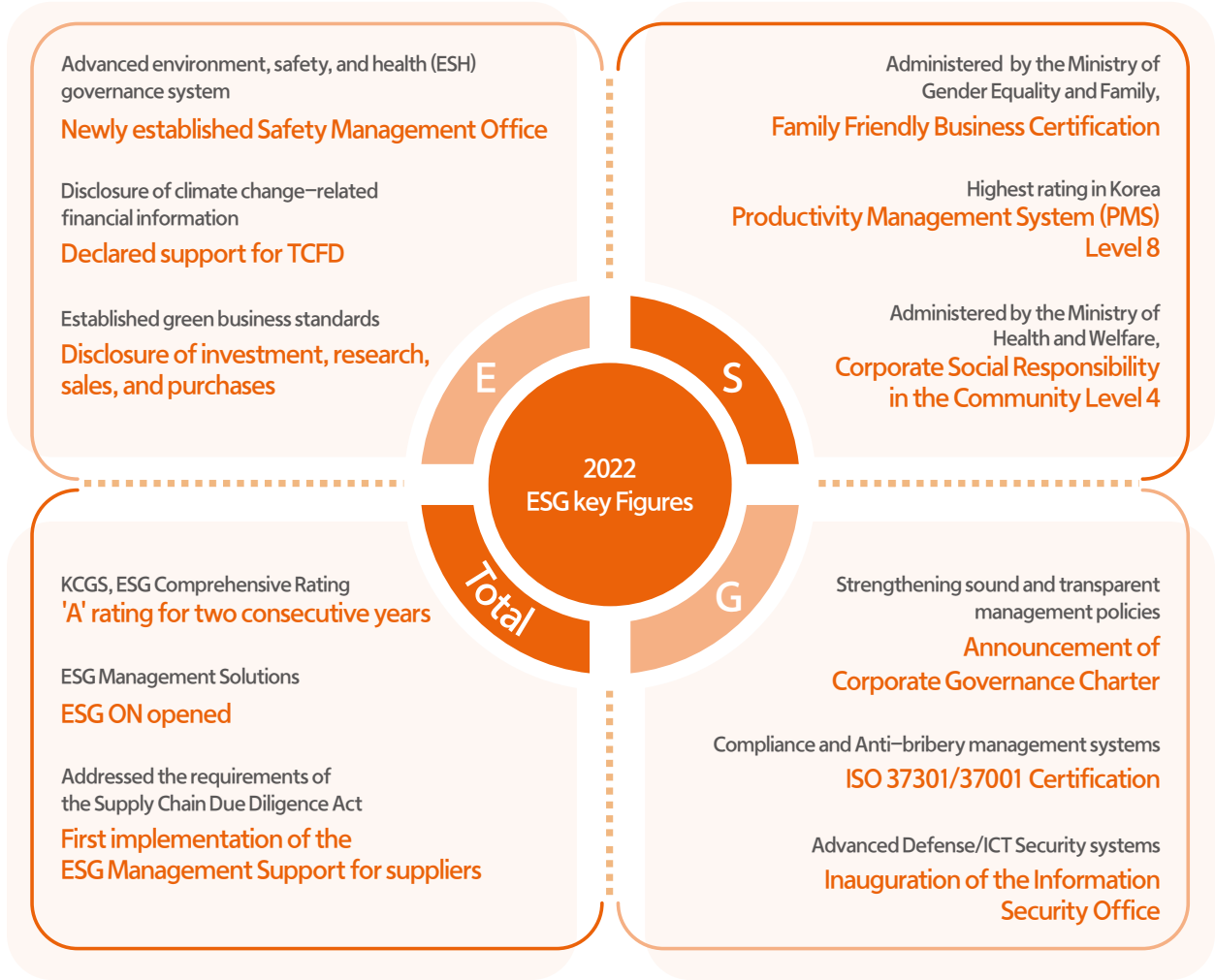
Meeting Dates	Major Agendas	Attendance of inside and outside directors
2022.03.24	Report on the ESG Management Plan 2022	100%
2022.06.14	Publication of the Sustainability Report 2022	100%
2022.09.26	Report on major ESG activities and progress	100%
2022.12.16	2022 Management evaluation results / Results for key ESG activities (Declaration of support for TCFD)	100%
2023.03.27	ESG Management Plan for 2023 / report on plan to publish the Sustainability Report	100%

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2022 ESG Key Figures

Hanwha Systems' Key ESG Achievements and External Awards in 2022

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-  Overall ESG rating of 'A' for the second year in a row, as assessed by the KCGS
-  Declared support for TCFD (Task Force on Climate Change Financial Disclosures)
-  Acquired Family Friendly Business Certification by the Ministry of Gender Equality and Family
-  Acquired a 'Level 4' rating in the Corporate Social Responsibility in the Community System in our first assessment under the Ministry of Health and Welfare's supervision
-  Secured an 'Excellent' rating in our first assessment for the Shared Growth Index
-  Selected for the 'Win-Win Ball' of the month as an excellent example of a win-win partnership by the Ministry of Trade, Industry and Energy
-  Acquired the highest level rating (Level 8) of the Productivity Management System (PMS) certification in Korea
-  Acquired the international certifications for ISO 37301/37001, compliance and anti-bribery management systems

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Our Approach to Sustainability

Developing New Businesses and Technologies for an Eco-friendly Future

Hanwha Systems is committed to leading sustainable and green business practices. By leveraging our advanced defense and ICT capabilities, we aim to proactively secure LEO satellite communication solutions to support the reality of an eco-friendly UAM industry. Additionally, we focus on achieving high-speed data transmission and reception to foster a hyper-connected society that enriches our lives.

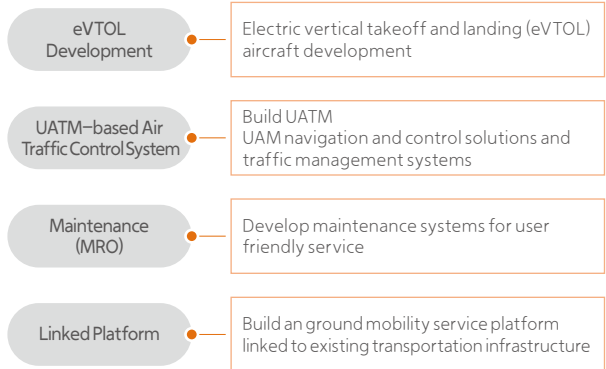
A Sustainable and Eco-friendly Future Transportation System

Achieving mobility through eco-friendly eVTOL development, traffic management navigation control solutions, and services

Urban air mobility (UAM) is gaining prominence as a future transportation system that offers a potential solution to the issue of traffic congestion resulting from high vehicle density in Seoul, a densely populated megacity of 10 million residents.

To achieve our objective of delivering total solutions for future mobility and spearheading the sustainable future mobility industry, Hanwha Systems is forging alliances with prominent domestic and international companies in the domains of aircraft development, urban air traffic management and control solutions, and infrastructure. Through these partnerships, we aim to uncover business opportunities in all directions.

Eco-Friendly UAM Total Solutions



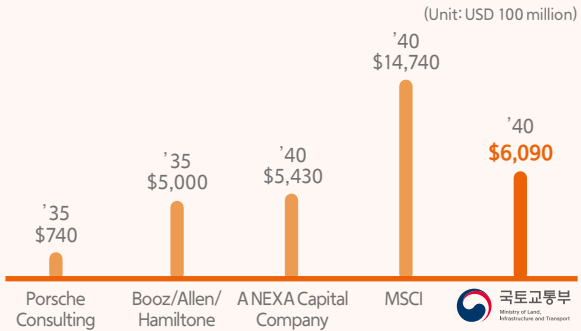
Achieving Eco-Friendly UAM

Latest Performances	Parties Involved	Purpose
K-UAM Grand Challenge (Korea Urban Air Mobility project) GC-1 agreement	Organized by the Ministry of Land, Transport and Maritime Affairs, Overseen by the Korea Aerospace Research Institute	• Verify reliability and safety through the Korean future mobility (UAM) demonstration project
Took part in the UAM infrastructure safety verification assignment	Ministry of Land, Transport and Maritime Affairs (2 cases) Ministry of Trade, Industry and Energy (1 case)	• Secure the initiative for the infrastructure business • Verification Process of technological safety to perform the government's UAM infrastructure construction tasks
Collaboration with local governments	Multiple local governments, including those for Jeju Island, Gyeongbuk, and Namwon	• Take a leading role in national balanced development projects and support communities through contribution and development

Market Growth Forecast

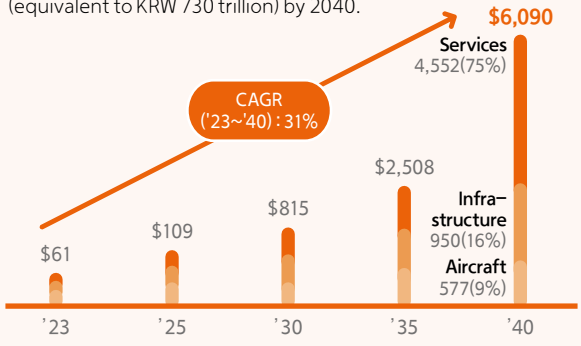
Market Size by Global Consulting Reports

Growth projected to reach roughly USD 1.4 trillion by 2040 (MSCI)



Estimated market size according to the Ministry of Land, Infrastructure and Transport

Expected to reach a market size of up to USD 609 billion (equivalent to KRW 730 trillion) by 2040.



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Hyperconnected LEO Satellite Communication

Space Internet, the Foundation toward a Hyperconnected Society

In recent years, 'space internet' technology has emerged as a next-generation growth engine, capable of providing 5G and LTE internet access anywhere in the world. However, access to internet services continues to be unequal, especially considering the increasing volume of internet traffic.

Currently, approximately 48% of the world's population still lacks access to reliable internet services. Moreover, the existing satellite communication systems rely on geostationary satellites positioned at a significant distance from the Earth, resulting in relatively long communication delays.

Drawing on its 20 years of experience in the satellite business, **Hanwha Systems** has been actively developing electronic satellite communication antennas and LEO satellite technology.

LEO satellite communication and electronic beam steering antennas are technologies that enable stable high-speed communication anywhere in the world, including at sea and in the air, where internet access is challenging, and in countries with limited resources to build traditional internet networks. In addition, LEO satellite communication offers resource conservation advantages compared to existing terrestrial networks. It achieves resource efficiency through low installation, maintenance, and expansion costs for communication networks.

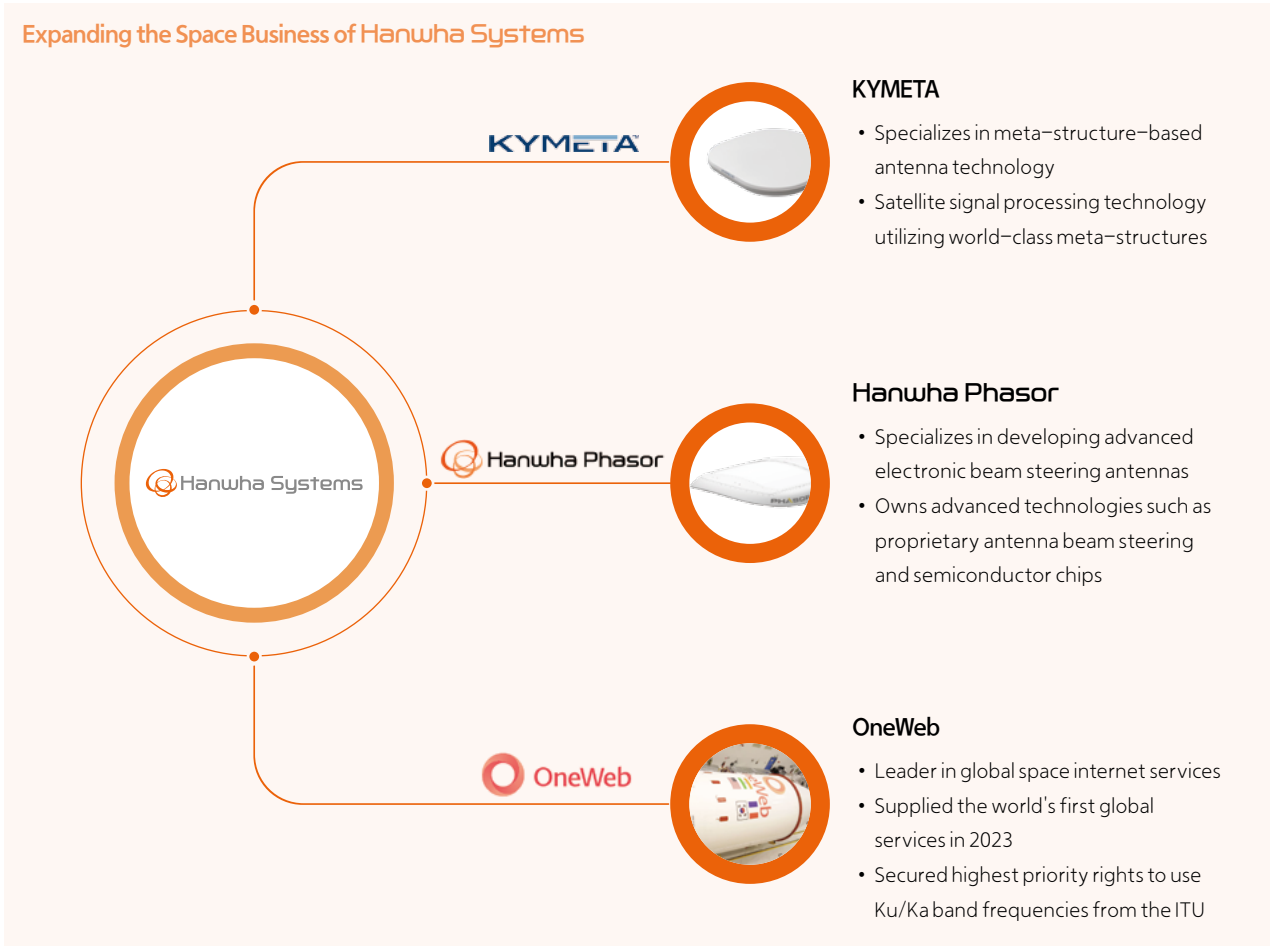
By developing an integrated platform that guarantees a 'multilayered, hyperconnected network,' Hanwha is addressing the digital information gap caused by national and geographical differences while expanding global business opportunities. To this end, they have entered strategic partnerships with OneWeb, which holds global use rights for LEO communication satellite frequencies, and Kymeta, a leader in electronic beam steering antenna technology. Additionally, in June 2020, Hanwha acquired Phasor Solutions, a UK-based satellite communication antenna company, and established **Hanwha Phasor**. Their current focus is on developing specialized aviation communication equipment for LEO satellites.

Hanwha Systems is dedicated to realizing a future society where everyone has equal access to digital information opportunities, irrespective of national, regional, or geographical disparities.



Hyperconnected LEO Satellite Communication and Integrated Platforms

Goals	Specific Goals	Expected Effects
LEO satellite communication & electronic beam steering antennas	Stable high-speed communication technology that remains unrestricted by place/location (sea, air, etc.)	Lower costs for communications network installation, maintenance, and expansion
Developing integrated platforms for a multilayered, hyperconnected network	Developing aviation communication equipment specialized for LEO satellites (LEO communication satellite frequency licenses, electronic beam steering antenna technology, satellite communication antenna technology, etc.)	Bridging the digital information gap between countries, regions, and geographies



ESG ON for Sustainable Growth

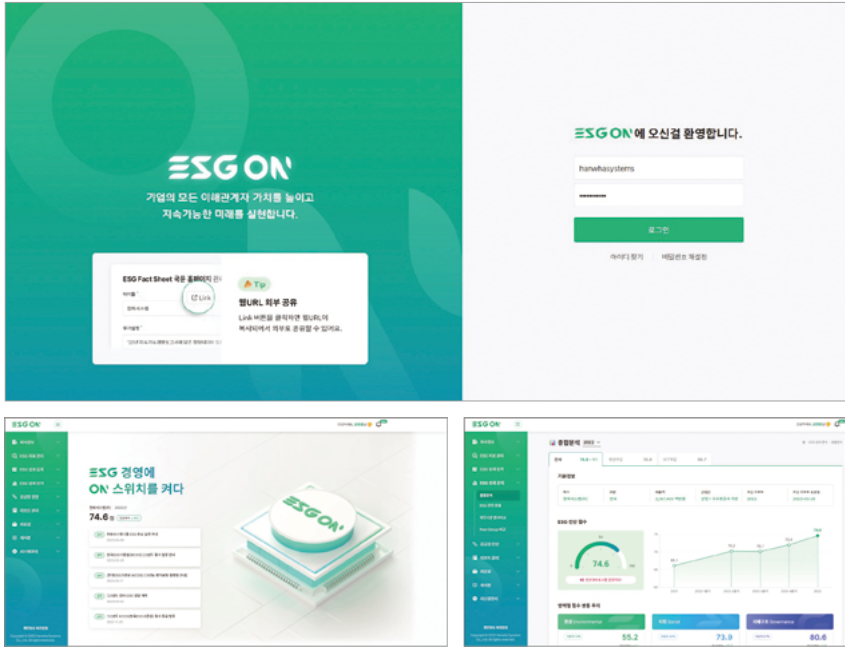
ESG ON | ESG management system (ESG ON) for streamlining ESG management and improving competency

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With the impending mandatory disclosure of sustainability-related non-financial information in 2025, companies face a mounting volume of data required by ratings and disclosure organizations. This includes data from consolidated companies and overseas subsidiaries, placing a heavier burden on companies and ESG-related departments.

To address this challenge, **Hanwha Systems** has developed an ESG Management System (ESG ON) to facilitate internalized ESG management processes and their efficient handling. ESG ON offers a variety of services that assist services that assist clients in managing non-financial data and effectively responding to ESG assessments and disclosures.

In order to effectively meet the ESG information demands of various stakeholders, we are committed to supporting companies in enhancing their ESG management systems. This includes the implementation of various ESG analysis and statistical functions, such as the systematization of the ESG information management, system-based ESG performance management, and ESG risk analysis functions.



ESG ON (www.ESGON.com)

1. Overall support for ESG tasks

- ESG data management, performance analysis, external evaluation and disclosure response, risk management, etc.

2. Supply chain ESG diagnosis and analysis

- ESG level diagnosis and current risk analysis for the company's suppliers

3. ESG Diagnosis Framework

- Provides flexible management functions enabling a universal response to various ESG evaluation and disclosure organizations

4. Integrated ESG DB

- Integrates performance data by ESG indicators, internal system data, and external company data

5. Cloud-based Services

- Usage-based subscription that provides fast service, free from constraints on ESG data volume

ESG Manager

- Reduces lead time for external agency response tasks
- Expected to improve external agency ESG ratings
- Ensures ESG disclosure data consistency

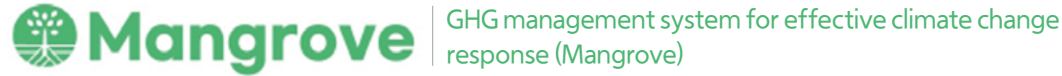
Onsite Staff

- Minimizes manual work and improves work efficiency
- Proactively prevents data entry errors

Management

- Systematizes ESG management
- Proactively responds to ESG risks
- Internalizes and enhances ESG management

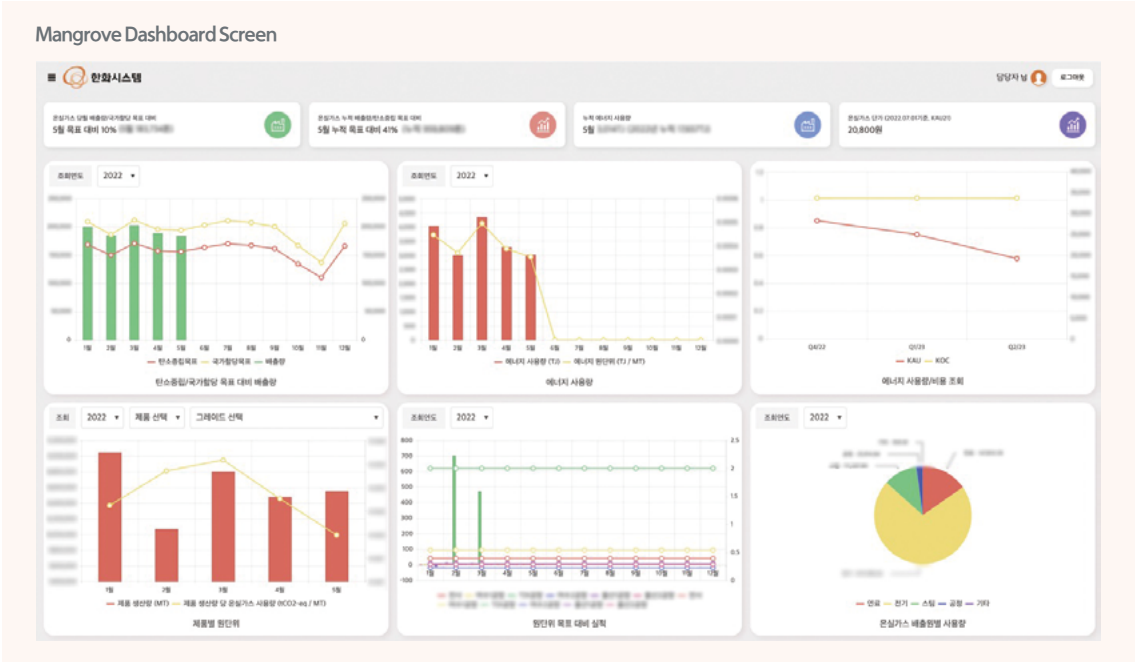
Mangrove, GHG Management System Supporting Climate Change Response and Carbon Neutrality



Hanwha Systems has developed Mangrove, a greenhouse gas management system, leveraging AWS Cloud-based IoT and AI/ML platforms. This system has been applied to the 63 Building, as well as affiliates in the chemical sector.

Hanwha's Mangrove solution offers intelligent features including prediction of carbon credit prices and calculation of energy usage and carbon emission, through data analysis of intensive management areas, cloud-based data collection, and real-time monitoring. The solution also uses AI models to determine optimal operating conditions for higher energy efficiency based on operation and weather data, as well as solutions to minimize carbon emissions.

Hanwha Systems will further advance the Mangrove solution, expanding its implementation in areas such as smart buildings, smart cities, and smart factories. This continued effort toward solution advancement aims to assist companies in effectively managing greenhouse gases and reducing carbon emissions.



Key Characteristics

IoT Platform-Based Data Collection and Monitoring

- Cloud data collection using IoT platforms
- Builds a cloud-based building facilities monitoring screen
- Links data analysis platforms

Cloud-based GHG management system

- Builds an integrated building/smart factory energy and GHG operation system
- Implements and operates cloud-based infrastructure

Predicting electricity consumption and carbon emissions using SageMaker

- Collects and analyzes building and factory data
- Derives insights from a combination of external variables, such as weather and utility prices
- Forecasts and compares energy usage a carbon emissions

Powerful data integration and linkage

- Supports the data integration of legacy systems such as ERP, RTDB, etc., and enables linkage to NGMS/KRX through standard interfaces

Support for GHG management at the business site/product unit level

- Supports business sites in managing GHG emissions through GHG inventory building
- Support for product (group) life cycle assessment (LCA) management

Quantum Red, Intelligent Thermal Imaging Engine Module



Launched in February 2021, QUANTUMRED, the intelligent thermal imaging engine module developed by **Hanwha Systems**, has been instrumental in detecting human fever using thermal imaging cameras. This technology has significantly contributed to the early identification and prevention of COVID-19 cases.

Since the onset of the Covid-19 pandemic, QUANTUMRED has been widely applied in fire safety and various other sectors. **Hanwha Systems** has developed a comprehensive solution that incorporates a "thermal imaging module + communication + control" package, enabling the detection of signs of fire. This solution has successfully obtained business references in various fields, such as department stores and factories. It has also proven invaluable in enhancing fire preparedness for substations, switchboards, and distribution boards, which are prone to electrical fire risks. Additionally, the solution has been instrumental in ensuring the safety of electric vehicles and their charging stations, which are experiencing rapid growth.

Hanwha Systems remains committed to utilizing these advanced technologies to proactively address the enforcement of the Serious Accidents Punishment Act and fulfill its social responsibility in promoting safety.



한국건설생활환경시험연구원 한화시스템 열화상 기기 분야 최초 Q마크 획득 인증식
일시: 2022년 7월 17일(수) 장소: 한화시스템 본사

Reliability

100% Made in Korea

Accuracy: HW Blackbody enables accurate detection even outdoors
 Convenience: Wireless network application
 Technology/Experience: Provides Korea's top technology in this field with extensive business experience

Effectiveness of Thermal Imaging Cameras for Fire Prevention

Type	Smoke Detector	Flame Detector	Heat Detector	Earth Leakage Circuit Breaker	Arc-Fault Circuit Interrupter	Thermal Imaging Camera
Detection Point	Smoke	Flames	Heat	Leakage Current	Arc (electrical spark)	Temperature Change
Moment of Detection	When smoke occurs from a fire	When a flame exceeds a specified threshold	When a temperature difference occurs due to fire	When an overcurrent or a leakage current occurs	When an arc is caused by poor contact	At all times (24-hour)
Limitations	<ul style="list-style-type: none"> • Detects after smoke occurs • Malfunctions due to dust, not smoke 	<ul style="list-style-type: none"> • Detects after a flame occurs • Malfunctions due to ambient energy wavelengths, thick smoke, etc. 	<ul style="list-style-type: none"> • Works only when the temperature rises rapidly • Vulnerable to backdrafts and smoldering fires 	<ul style="list-style-type: none"> • More effective in preventing electrocution than fires • Limited response against fire hazards 	<ul style="list-style-type: none"> • Detects when a fire occurs or is about to occur • Reliable operation • 10~20 times more expensive than an earth leakage circuit interrupter 	<ul style="list-style-type: none"> • Requires a separate system for fire protection in addition to communicating information about possible fires • Relatively high cost

Distinctive Features of QUANTUMRED

Quantum Red, equipped with **Hanwha Systems'** thermal camera module (featuring the **Hanwha Intelligence** thermal sensor chip), has achieved recognition by obtaining the first Q-mark certification among all foreign and domestic thermal cameras distributed in South Korea.

Thermal Imaging

- Equipped with **Hanwha Intelligence** infrared sensor (low cost, advantageous for maintenance)
Wavelength: 8~14μm
Resolution: 80×60
Angle of view: 50 degrees (within 5m)
Accuracy: ±2°C
Measurement range: ~100°C
- Supplied to S Group for monitoring their distribution boards and charging stations.



Networks

- Wireless: LORA, WiFi
- Wired: Ethernet, USB
- For new electrical facilities, wired construction is easy. However, when it comes to retrofitting existing facilities, wireless interfaces are supported to facilitate easier installation.
- Through its involvement in the military's largest communication network business, **Hanwha Systems** has gained valuable expertise in building wireless networks, including base stations, terminals, and repeaters.

Control

- NVR linkage for corporate control rooms/disaster prevention rooms (applies an ONVIF protocol)
- Provides real-time alarms to administrators through a mobile APP
- Subscription-type control service under construction
- **Hanwha Systems** has a separate division specializing in ICT system integration technology, and a lot of experience in building various control systems
- **Hanwha Systems** manages a data center for the entire **Hanwha Group** and operates a 24-hour control center for cyber intrusion prevention and security.

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Environment and Safety Management



Enhanced Environment and Safety Management Governance system
Newly established Safety Management Office

Raising awareness for environment and safety management
Announcement of safety management policy

Established green business standards
Disclosure of investment, research, sales, and purchases

Climate Change Response



Disclosure of climate change-related financial information
Declared support for TCFD

Establishing a TCFD roadmap and adhering to guidelines
Mid-to longterm goal of 30% reduction from BAU emissions by 2040

Safety and Health Management



ESH Committee
Operation

Number of serious accidents
0

Environmental Impact Management



GHG emissions and energy use
Disclosure of 3-year energy use data

Diversifying carbon and waste reduction efforts
Encouraging employee participation
Conducting a variety of campaigns

Respecting local ecosystems and biodiversity
Publication of Gumi and Yongin ecomaps



Environmental

Hanwha Systems has upgraded the existing Safety and Environment Team to the Safety Management Office in order to create a safe work environment for employees in compliance with the increasingly important climate change, environmental impacts, and legal requirements of the Serious Accident Punishment Act. The ESH committee appointed the CEO as the final decision-maker to establish a company-wide responsible ESH management system.

Environment and Safety Management

Our technology aims to create a sustainable and caring world, where individuals in the society can envision a safe and comfortable tomorrow.

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Environment and Safety Management System

Environment and Safety Management Vision and Strategy

Hanwha Systems is enhancing its company-wide management system to prioritize ESH at all management levels, ensuring a safe and comfortable work environment and a healthy community. We are committed to fostering a mature S.H.E (Safety, Health, Environmental) culture that contributes to the ongoing growth and development of the company. Our dedication extends to fulfilling our social and environmental responsibilities and duties by establishing a sustainable safety and health management system, maintaining a safe and healthy workplace, and striving for continuous improvement in environmental practices and energy efficiency.

Environment and Safety Governance

Hanwha Systems, in line with its environment and safety vision and strategy, has upheld its social responsibility for the safety and health of its employees by establishing an ESH committee. Furthermore, we have enhanced our governance system for environment and safety management by elevating the dedicated organization from the existing team to the newly formed Safety Management Office. To meet the growing need for stronger corporate social responsibility and compliance with the Serious Accidents Punishment Act, the CEO, as the highest authority within the company, is actively assuming the role of general manager of safety and health affairs to cultivate a safety culture within the workplace.

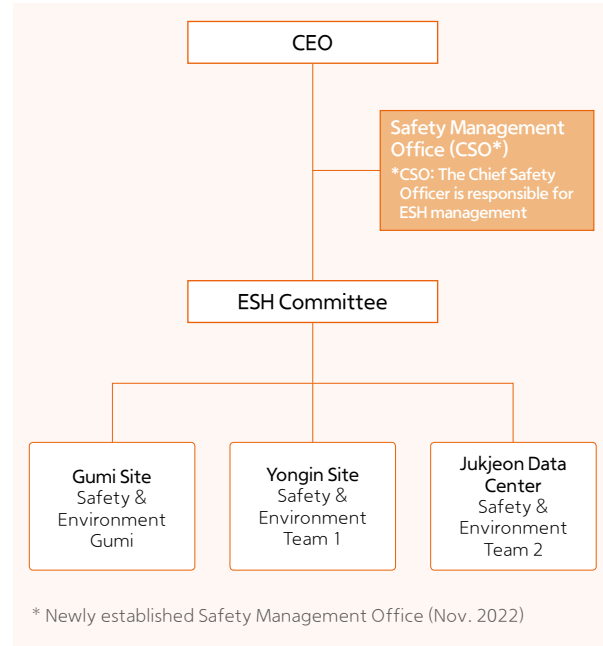
Environment and Safety Management Regulations and Systems

Hanwha Systems establishes and discloses an environment and safety policy that conveys management's dedication to addressing environmental concerns across the organization. Additionally, we proactively share our environment and safety policy with external stakeholders (including suppliers) to demonstrate our commitment and foster trust in our environmental initiatives.

Category	Company-wide Environment and Safety Management System	Internal regulations
Common	<ul style="list-style-type: none"> • ECO-YHES System • Absolute safety rules 	<ul style="list-style-type: none"> • Environment, safety, and management Manual and 12 others • Goals, management programs
Environment	<ul style="list-style-type: none"> • Clean Air Conservation Act and 24 others • Chemical management system • System for products subject to recycling obligations 	<ul style="list-style-type: none"> • Environmental impact registration rules and 4 others
ESH	<ul style="list-style-type: none"> • Occupational Safety and Health Act and 14 others • Risk assessment system • Environment and safety training 	<ul style="list-style-type: none"> • Environment and safety accident management rules and 9 others
Firefighting	<ul style="list-style-type: none"> • Framework Act on Fire-Fighting Services and 4 others • Emergency scenario training 	<ul style="list-style-type: none"> • Fire prevention management rules
Energy	<ul style="list-style-type: none"> • Framework Act on Energy and 7 others 	<ul style="list-style-type: none"> • Energy Management Rules and 1 other

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Environment and Safety Management System Organizational Chart



Roles for the Company-Wide Environment and Safety Management System

Category	Company-Wide Environment and Safety Management System	Notes
CEO	<ul style="list-style-type: none"> • Final deliberation and resolution on environment and climate change-related safety items • Final deliberation and resolution on safety and health-related items • Environment and safety performance review 	CEO
ESH Committee	<ul style="list-style-type: none"> • Review of annual environmental management plan • Deliberation on the organization and personnel dedicated to environment and safety • Deliberation on environment and safety budgeting and execution • Review of environment and safety-related risks • Results of listening to employee opinions • Deliberation on new and changed environment and safety regulations • Review of environment and safety performance 	ESH Committee
Safety Management Office	<ul style="list-style-type: none"> • Collect information on key plans, personnel, budget management, etc., for each business site • Convene and preside over the ESH Committee meetings • Checking the implementation of improvement and follow-up measures 	Safety Management Office
Safety and Environment Team at each site	<ul style="list-style-type: none"> • Compile key plans, personnel, budget management, etc., for each business site • Implement improvement and follow-up measures 	Safety and Environment Team at each site

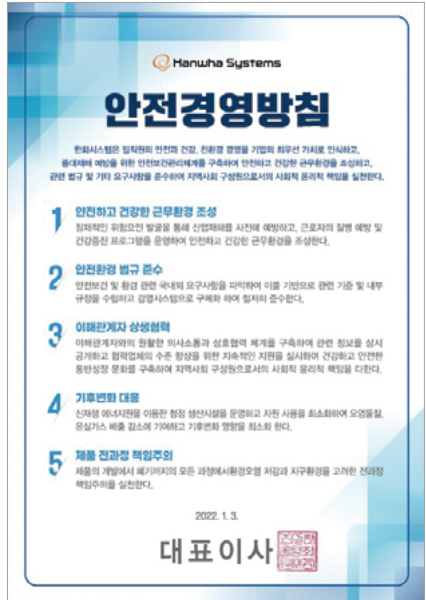
Safety and Health Management

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Safety and Health Management System

Official Announcement of Safety and Management Policy

Hanwha Systems places high importance on the safety and health of employees, as well as eco-friendly management policies, considering them as fundamental corporate values. To ensure the prevention of environmental accidents and serious disasters, we have implemented an ESH system. Our objective is to establish a safe and healthy work environment while adhering to applicable laws, regulations, and other requirements. As part of our commitment as responsible community members, we have developed and made public our safety management policy to fulfill our social and ethical responsibilities.



ESH Committee

Following safety management policies, the committee deliberates and votes on safety, health, and environmental budgeting and evaluates corporate activities, adhering to the principle of convening the ESH Committee at least once a year.

Safety-related roles of the ESH Committee	Key deliberations and resolutions of the ESH Committee
<ul style="list-style-type: none"> Inspecting the establishment and implementation of a safety, health, and environment plan in accordance with safety management policies Deliberating the appropriateness of the composition and staffing/ budgeting of the company-wide safety and health organization Participating in other key safety and health-related decisions Review of key safety and health-related risks 	<ul style="list-style-type: none"> Evaluating the performance of the previous year's safety and health activities Adequacy of the composition and human resource management of the organization dedicated to safety and health Adequacy of safety and health budgeting and execution Results of collecting opinions from employees on safety and health issues Matters related to off-site contracting, services, and consignment New revised or supplemented key safety and health-related regulations



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Near Field Communication (NFC) Based Smart Safety Management System

To ensure the safety of our employees, **Hanwha Systems** has implemented a digital-based system that enables real-time transmission of fire monitoring status and notifications through individual smart devices used by employees in the field. Through the utilization of NFC, a digital monitoring system, we aim to enhance the implementation of a work environment centered around safety, health management, and work efficiency.

This system offers the advantage of allowing employees to monitor fires in real time while adhering to the established systems and regulations outlined in the Fire Services Act. Additionally, we have installed weather monitors throughout our business sites and implemented mobile systems to provide operators and workers with pertinent information about the weather conditions (apparent temperature, strong winds, heavy rain, and precipitation, etc.). These proactive measures enable us to identify and mitigate potential risks in advance, thereby improving both the safety and efficiency of our work environment.



Efforts toward Improving the Environment

In 2011, the company earned the distinction of being designated a green company, in recognition of our efforts to improve the environment by effectively managing pollutants and establishing a green management system. Since then, our commitment to eco-friendly management has driven the implementation of various voluntary environmental management campaigns involving our employees, thus creating an eco-friendly workplace.

ESH-Related Stakeholders and Response

Site	Stakeholder	Response	Date
Yongin	Korea Occupational Safety and Health Agency	Sending manuals for industrial accident prevention of contractors	February
	Yongin City Hall	Guidance on reporting results for designated waste disposal and treatment	February
	Yongin Fire Department	Issuing an order to inspect the operation and function of firefighting facilities	April, October
	Bundang-gu Health Center	Request for mobile smoking cessation clinic	September
Gumi	Korea Environment Corporation	Waste levy for 2022	May
	Gumi Kimcheon Safety Management Council	Serious disaster prevention training and meeting	May
	Gumi City Hall	Self-reported results report for the first half of 2022	July
	Ministry of Environment	Request and submission of loan emission source form	July
	Gumi Gimcheon Safety Management Council	Industrial accident prevention rally/safety management seminar	December
	Ministry of Employment and Labor	Regular meeting of honorary industrial safety inspectors in the second half of the year	December
IDC Center	Korea Industrial Safety Association	Briefing session on policy to reduce serious disasters	December
	Yongin Fire Department	Submission of a results report on the inspection of firefighting facility functions	April, October

Business Site Work Environment Management

Hanwha Systems conducts biannual work environment surveys in compliance with the Occupational Safety and Health Act and internal regulations. These surveys aim to establish an optimized work environment that ensures not just safety and comfort, but also the emotional and psychological well-being of employees. The survey results are transparently disclosed to employees through the internal bulletin board, following approval by the Occupational Safety and Health Committee.

Employee Health Management

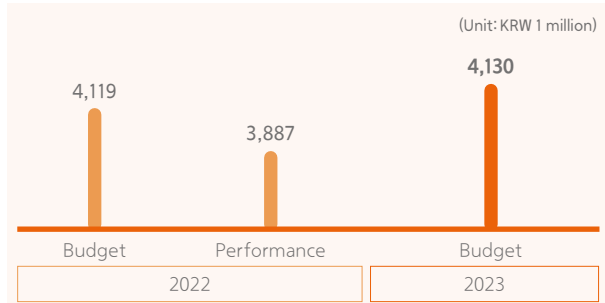
To improve employee health, **Hanwha Systems** implements programs addressing musculoskeletal and cerebrovascular disease prevention, mental health, mobile healthcare, obesity, and smoking cessation.

Hanwha Systems Employee Health Promotion Programs

Name	Notes
Let's Walk	Musculoskeletal and cerebrovascular disease prevention program <ul style="list-style-type: none"> Separate participation space for people with diagnoses Encourage exercise using a walking app and musculoskeletal disease prevention lectures by professionals
Get a grip	Mental health and occupational stress prevention program <ul style="list-style-type: none"> Job stress surveys, campaigns, and expert counseling
Mobile Healthcare	Hope to improve health risk factor groups <ul style="list-style-type: none"> Enhances follow-up management for health risks, health management
Diabetes and hypertension self-help group	Health improvement program for diabetes and hypertension patients <ul style="list-style-type: none"> Prevention of brain/cardiovascular diseases by strengthening self-management competency according to each disease
Drinking/smoking cessation Campaign	Smoking and drinking cessation campaigns <ul style="list-style-type: none"> Being aware of the problems of smoking, throwing away cigarettes and lighters Smoking cessation clinic registration and counseling for those interested

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Environment and Safety Investment



Major Investments in 2022

- Installation of renewable solar photovoltaic (PV) power generation facilities, replacement of activated carbon in air pollution prevention facilities, and self-measurement of air pollution
- Precision diagnosis of structural safety, replacement of emergency broadcasting facilities

Environmental Management Plans and Implementation Performance

Environmental Goals	Implementation Plan	Performance	Achievement Rate
Environmental Management System	<ul style="list-style-type: none"> • Zero environment and safety accidents • Progress rate for environment and safety training • Internal audits • Environment and safety inspections • Improving environment and safety facilities • Improving environment and safety processes • Environmental accident and emergency response drills 	<ul style="list-style-type: none"> - Environment and safety accidents: 0 - 11,375 employees completed the environment and safety training - 49 internal audit improvement measures - 51 environment and safety inspections - 69 facility improvements - 25 process improvements - 11 environmental accident response drills 	100%
Environment and Safety Compliance	<ul style="list-style-type: none"> • Environment and safety compliance activities - Evaluate compliance with environment and safety laws and regulations - Confirmation of enactment and revision of environment and safety laws and regulations 	<ul style="list-style-type: none"> - Compliance assessments for the first and second half of the year - 40 compliance assessment improvement measures - Review of 105 enacted and revised laws and regulations 	100%

Environment and Safety Management System Certification

Acquired environment and safety management certification

Hanwha Systems implements an advanced environmental management system certified to global standards. Our management plans are designed using a comprehensive approach to address environment and energy matters across all levels of operations. By continuously improving and monitoring our practices, we ensure the maintenance of international certifications such as the environmental management system (ISO 14001) and energy management system (ISO 50001) through annual external audits.

Current Environment, Safety and Health, Energy Certifications

Site	Certification Name	Certification Period
Yongin R&D Center	KOSHA-MS	2020.06.08 ~ 2023.06.07
Gumi Site	KOSHA-MS	2022.11.12 ~ 2025.11.11
	Green Company Designation	2020.10.07 ~ 2023.10.06
	ISO 50001	2021.08.10 ~ 2024.08.09
	ISO 14001	2021.08.18 ~ 2024.08.17
	ISO 45001	2021.08.18 ~ 2024.08.17



Safety and health management system certificate(KOSHA-MS) Green company designation certificate ISO 50001 ISO 14001 ISO 45001

Safety and Health Management System Certification

Hanwha Systems has obtained and maintained certifications in safety and health management systems, including the ISO 45001 and KOSHA-MS certifications. We have updated safety manuals and procedures to align with international standards, establishing a robust safety and health management system. Throughout our various business sites, workers and proprietors actively engage in the Zero Accident Movement, ensuring continuous efforts to prevent industrial accidents.

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Environment and Safety Training

Hanwha Systems provides environmental management training for employees and other stakeholders to enhance their awareness of the importance of environmental management practices. Through this training, we encourage employees to develop an eco-friendly mindset in the course of their work.

Environment and Safety Training System Chart

Improving employee awareness of our environment and safety culture through laws and diversified training systems.

Environment and Safety Training

- Regular training

 - Occupational Safety and Health Act training
 - Team-based mandatory training (lesson plan)
- All employees
- Supervisors


 - Role of supervisors
 - Safety and health technical training
- Promoters, leaders
- New

 - Basic training on environment, safety, health, firefighting
 - Workplace hazards
 - Special safety and health targets
- New/experienced recruits
- Hazmat workers
- Task changes

 - Material safety data sheets for changed processes
 - Batch process equipment and machinery
 - Special hazardous process risks
- Indirect: Team transfer
Direct: Section transfer
- 5-minute pre-job training

 - Team-based mandatory training content
 - Risk assessment results
 - Work safety guidelines, etc.
- Manufacturing Team
- Risk assessment

 - Risk assessment techniques
 - Hazard identification/assessment
- Team manager



Training Implementation Management System

Confirms individual environment and safety training implementation through a computerized system



Environment and safety training system registration



Verification of evidence of training completion



Individualized audible training



Traffic safety education

Environment and safety training system registration

Verification of evidence of training completion

Individualized audible training

Traffic safety education

Environmental Management Training Program

Category	Training	Training cycle	Trainees
Environmental Management System	Policies and goals, goal achievement programs, environmental laws and regulations, environmental policy trends	Once a year	Department heads
Initial training for new employees	Policies, environmental management status, status of air pollutant emission and prevention facilities, environmental management	Upon hiring	New employees
Departmental training	Policies and goals, environmental impact factors by department, specific goals and action plans by department, emergency response, miscellaneous training	Once a year	All employees
Statutory training	Environment-related statutory training (air, waste, etc.)	Legal cycle	Managers
Environment-related technological training	Environmental policies and regulations, air pollutant treatment technology, environmental analysis, building and implementing environmental management systems, waste treatment technology, etc.	As needed	Hands-on staff

Environment and Safety Training Performance

Training	Date	Number of Trainees	Training Cycle
Environmental management employee training	October 2022	947	Once a year
Environmental technician training	May 2022	1	Once every three years
Environmental training upon hiring	January–December, 2022	123	Upon hiring
Waste disposal training	November 2022	1	Once every three years

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Enhanced Environmental Impact Management

Air Pollution Management

Hanwha Systems implements policies to reduce air pollution from its business sites, and systematically manages data on air pollutant emissions.

We conduct regular monitoring of these emissions and strive to minimize them by adhering to internal standards that are 50% more stringent than the government-mandated emission allowance limits. To further minimize air pollutants, we enhance emission management activities through regular training programs to strengthen the skills of our field personnel.

Reducing Air Pollutants

To reduce air pollutants, **Hanwha Systems** implements various measures, such as replacing activated carbon in adsorption towers, regularly assessing the performance of prevention facilities, and conducting daily inspections. Additionally, we voluntarily monitor air pollutant concentrations through self-measurements and conduct air pollution emergency drills to proactively respond to air pollution incidents.

Air Pollutant Emissions & Levels

Site	Pollutant	2020	2021	2022
Gumi Site	Dust (kg)	58.68	32.03	15.6
Yongin Site	Dust (kg)	-	-	10.6
Jukjeon Data Center	Dust (kg)	-	-	-
Total (kg/year)		58.68	32.03	26.2

* The Yongin Site started managing dust emissions in 2022.
 * The Jukjeon Data Center does not generate any air pollutants.

Waste Management Policy

Hanwha Systems remains committed to fulfilling performance reporting requirements in accordance with waste management-related laws, policies, and systems. Specifically, we ensure transparent management and disclosure of **Hanwha's** waste discharge status through the Allbaro system. This integrated IT system allows real-time management of the entire process, including discharge, transportation, and final treatment, providing transparency via the internet.



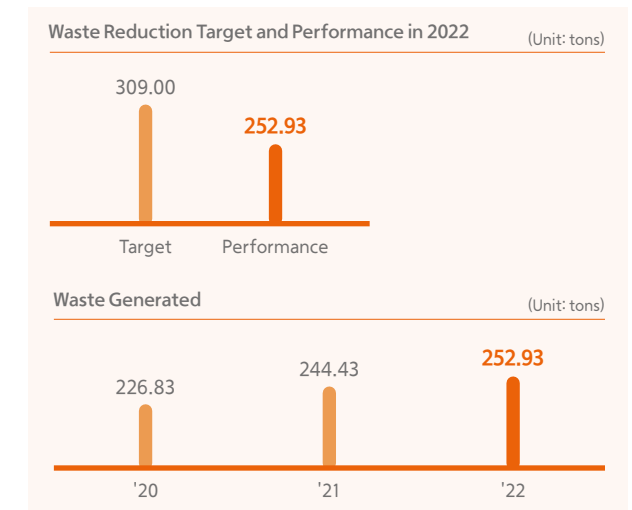
Replacing activated carbon in adsorption towers (first and second half of the year)



Prevention facility inspection

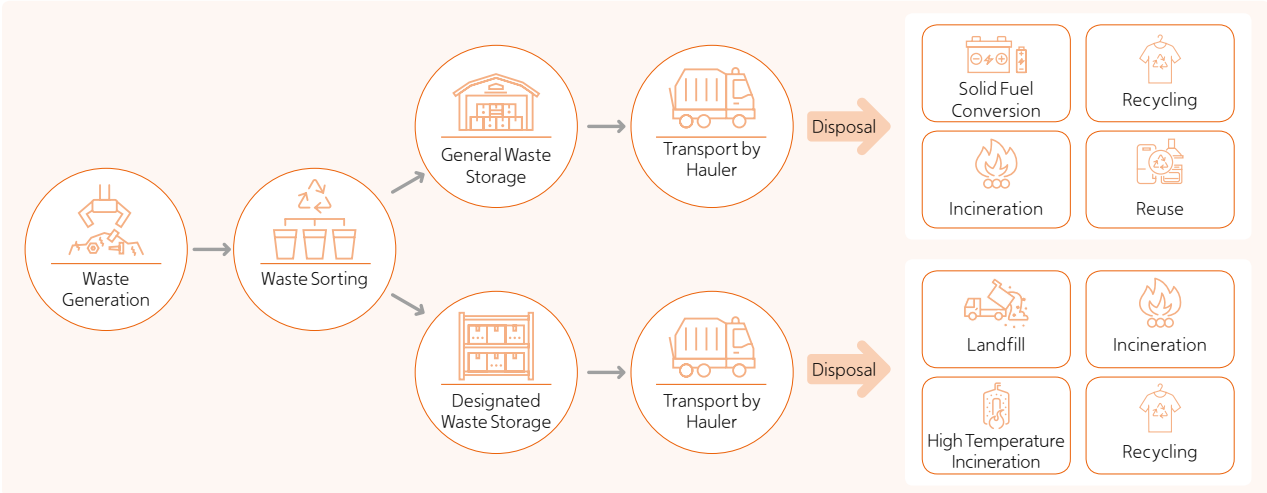
Waste Management Solution: Life Cycle Assessment (LCA) for Ecolabels only

To reduce waste and minimize environmental impact, we improve our design and production processes, aiming to reduce waste generation and decrease reliance on recycling, landfilling, and incineration. To quantify the raw materials, energy, and emission of pollutants throughout our production process, we utilize the dedicated LCA software TOTAL for ecolabeling which allows us to assess environmental impacts and devise solutions accordingly. Additionally, we are committed to enhancing waste management by implementing clear regulations regarding waste types and disposal methods for our employees. To ensure compliance, we conduct regular training and inspection activities.



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Key Processes of Waste Disposal



Other Waste Disposal Processes



Routine Inspection Items for Waste Disposal Companies

Category	Key Inspection Items
Waste transport and disposal	<ul style="list-style-type: none"> • Collection and storage by type/properties • Transportation and disposal by type/properties • Installation of covers on vehicle load bins • Leakage of leachate from treatment facilities, etc.
Relevant documentation	<ul style="list-style-type: none"> • Personnel training certificates • License and permit bonds • Vehicle registration certificates • Waste disposal permits, etc.

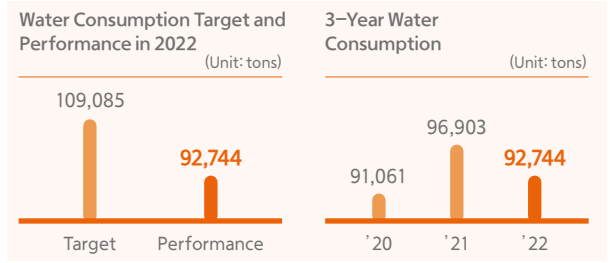
* Other waste resources: Electronic waste, waste plastics, scrap metal, paper, etc.
 * Waste emissions are calculated by excluding other waste resources.

Water Saving Activities through Water Management

Hanwha Systems consistently monitors and manages water consumption data to enhance efficiency in water consumption across all business sites. In 2021, water consumption experienced an 11% year-on-year increase, attributed to heightened orders in the defense sector and expanded operations in areas such as AI and DT within the ICT sector, which led to an increase in facilities and personnel. However, in 2022, water consumption decreased by 4% year-on-year due to efforts to reduce water consumption at the Yongin site. Through effective water management practices and site-specific improvements, we achieved a 13% year-on-year reduction in emissions intensity in 2021 and a 9% year-on-year reduction in 2022.

Water Pollution Reduction Activities using Eco-Friendly Deicing Agents

After identifying issues associated with conventional deicing agents, such as water pollution, undercarriage corrosion, and concrete damage, **Hanwha Systems** proactively explored alternative solutions. Through this exploration, we discovered an eco-friendly deicing agent derived from starfish, a marine waste byproduct, which we implement at our business sites. By utilizing this eco-friendly deicing agent, we aim to address concerns surrounding marine waste from starfish while also mitigating issues such as vehicle corrosion and damage to concrete structures. This approach reflects our commitment to identifying and improving potential pollutants that may arise at our business sites.



Three-Year Water Consumption (Unit: tons)

Year	Total	Gumi Site	Yongin Site	Jukjeon Data Center	Water use intensity by sales
2022	92,744	54,415	14,590	23,739	4.2
2021	96,903	52,374	21,258	23,271	4.6
2020	91,061	49,851	19,502	21,708	5.5

Water Resource Management Status by Business Site in 2022 (Unit: tons)

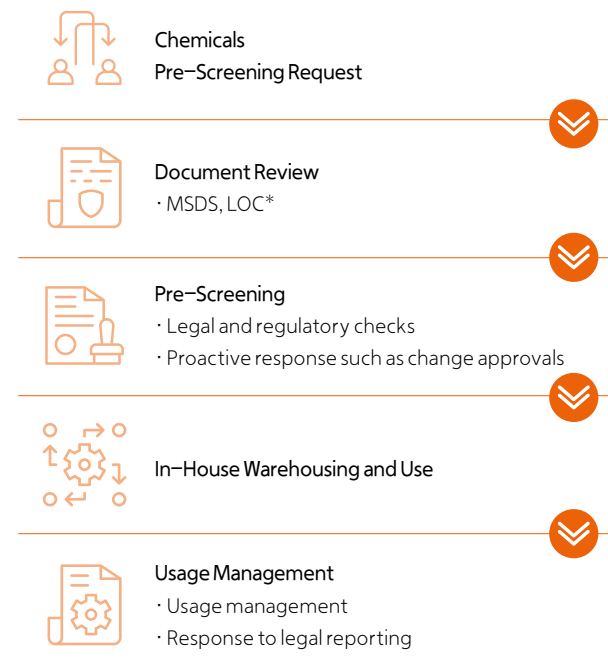
Category	Total	Gumi Site	Yongin Site	Jukjeon Data Center
Domestic Water	92,744	54,415	14,590	23,739
Wastewater	92,744	54,415	14,590	23,739
Industrial Water	0	0	0	0
Groundwater	0	0	0	0
Water use intensity	4.2			

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Building chemical Management System

To ensure chemical safety and comply with regulations, **Hanwha Systems** has established a chemical management system that includes pre-screening for all chemicals. Before bringing any chemicals into the company for workplace use, the chemicals must undergo a pre-screening process and receive approval from personnel in charge of environment, safety, health, and fire. This pre-screening involves thorough checks and adherence to regulatory requirements outlined in domestic laws such as the Chemicals Control Act and the Act on the Registration and Evaluation of Chemicals.

Chemical Management Pre-Assessment Process



*MSDS : Material Safety Data Sheets

*LOC : Letter of Certification

Chemical Management and Inspection

Hanwha Systems conducts chemical risk assessments and environmental impact assessments to effectively evaluate and manage chemicals, prioritizing the safety and health of its workers while minimizing environmental impacts. Our comprehensive approach includes monitoring legal risks and hazards associated with both newly registered and existing chemicals through an annual survey of workplace chemical usage. We ensure proper chemical management and handling by conducting on-site and special inspections across all departments. Furthermore, we conduct regular accident response drills, including scenarios involving chemical leaks, to ensure our ability to respond promptly and effectively in the event of an actual chemical-related incident.

Chemical Usage

(Unit: tons)

Site	2020	2021	2022	Notes
Gumi Site	0.27	0.25	0.27	PRTR** applicable substances: 0 tons
Yongin Site	0.32	0.38	0.49	
Jukjeon Data Center*	-	-	-	

*Jukjeon Data Center does not use chemicals.

**We are not subject to the PRTR -Pollutant Release and Transfer Register. (Our types of business do not use hazardous chemicals)

Environmental Impact Reduction Activities

Energy Consumption Reduction Activities

Energy Impact Assessment

We conduct energy impact assessments to categorize and analyze energy generation by sector, distinguishing between Scope 1 and 2 emissions. From the analysis findings, we identify improvement tasks and implement energy reduction activities accordingly. Based on the assessment results, we establish annual improvement targets.

Replacing old and low-efficiency equipment

To reduce electricity consumption, we systematically replace outdated and inefficient equipment at our business sites. Annual inspections of transformers enable us to identify those requiring replacement, and we develop a replacement plan accordingly. Additionally, we replace workplace electrical equipment, like large motors, with high-efficiency alternatives.

Reducing carbon emissions from our infrastructure operating facilities

We optimize energy usage by adjusting the operating hours of air conditioners and boilers based on seasonal needs, ensuring an optimal workplace temperature and humidity. Moreover, we modify air handler inverter settings to reduce greenhouse gas emissions associated with heating and cooling. We have also replaced 100% of lighting fixtures with LED lighting across our entire facilities.

Furthermore, we actively reduce electricity consumption by replacing traditional streetlights with solar PV street lights.

Employee Energy Saving Activities

Hanwha Systems employees actively engage in energy-saving activities through practices such as turning off lights and standby power during lunch and after work. Furthermore, to raise awareness about the gravity of environmental pollution, all of our business sites participate in switching off the lights for 10 minutes on Earth Day.

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Encouraging Employee Participation in Environmental Management

Category	Details
Environmental cleanup activities near business sites	Environmental cleanup activities near business sites
World Water Day Events	Throwing EM soil balls along the Nakdong River Environmental cleanup activities along the river
Earth Day Events	Workplace lights off event
Environment and Safety Newsletter	Domestic and international environmental issues, energy saving activities, etc.
Environment and Safety Quiz	Environment and safety training
Find hidden dangers	Improving workplace environment and safety and identifying risks

GHG Reduction Activities

High-Efficiency LED Replacement Project
Hanwha Systems is dedicated to reducing electricity consumption through the ongoing replacement of conventional general lighting lamps with LEDs. Since 2015, we have replaced approximately 9,650 lights at the Gumi Site and around 560 lights at the Yongin Site with energy-efficient LED lamps. This initiative has made a contribution to the reduction of GHG emissions, thanks to the enhanced efficiency of LED lamps. Furthermore, we conducted a precision analysis of office and field illumination levels, which led to a reduction of 1,251 fluorescent lamps, effectively decreasing GHG emissions.



Energy saving experiment LED lamp prototype

Adequate Seasonal business attire for the summer and the winter
 In accordance with government policy for the summer, we adjust the office temperature. To minimize employee discomfort, we promote the wearing of cool business attire (short sleeves and shorts). Similarly, during the winter, we adjust the office temperature to reduce heating expenses and decrease GHG emissions.

Full adoption of video conferencing and video interviews
 In response to the extensive domestic and international meetings within the defense industry, we have taken measures to minimize GHG emissions associated with travel. This includes the implementation of video conferencing infrastructure in 56 meeting rooms company-wide as well as facilities that enable employees to participate in meetings from their own desks using internal messengers. As a result, business travel has been reduced by 30%. Additionally, we have implemented video interviews as a means to reduce GHG emissions during the recruitment process, starting from 2020.

Carbon Emission Reduction Activities

No driving on the 10th day system
 At **Hanwha Systems'** Gumi Site, we have implemented a system of no driving on the 10th day for vehicles entering and leaving the site. This policy aims to alleviate traffic congestion and reduce GHG emissions in the city. To enforce this policy, the parking lot barriers are systematized in a way that prevents vehicles with license plates ending in the same digit as the date from entering on the same day. We encourage employees to utilize public transportation on their assigned days and actively participate in our collective effort to reduce greenhouse gas emissions.



Back gate parking lot barrier 1 Back gate parking lot barrier 2

Shuttle bus support policy for encouraging public transportation use

To address the GHG emissions associated with employees using their own cars and the need for transportation to our business sites, **Hanwha Systems** has implemented a shuttle bus system. We have established dedicated routes and coordination regulations to ensure efficient operation and meet the demand for shuttle bus services at each site.

Waste Reduction Activities

Zero disposable product campaigns
 To promote environmental sustainability, **Hanwha Systems** has implemented several measures to reduce the use of disposable products. In our in-house cafes, we encourage the use of personal tumblers instead of disposable cups, minimizing waste. Similarly, in our cafeterias, we have introduced insulated bags to replace disposable bags, reducing the need for single-use containers.

Moreover, we have initiated a campaign to eliminate disposable products as a pilot project at our Gumi business site by prohibiting the use of disposable cups in certain offices and introducing multi-use cups (recycled ECO cups).



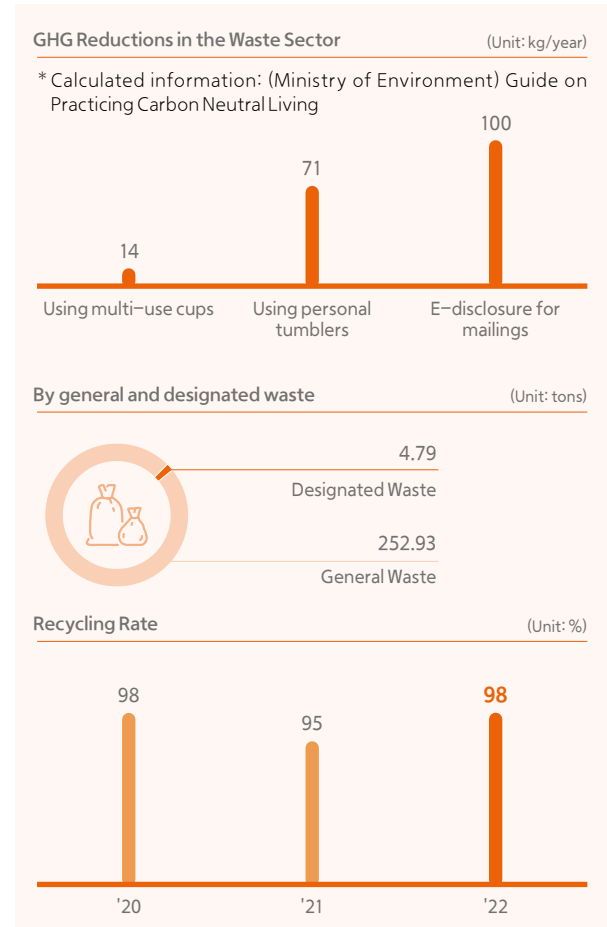
Use of personal tumblers in in-house cafes
 Introducing multi-use cups (recycled ECO cups) and insulated bags

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Carbon Emission Reduction Activities

Substituting shareholder meeting mailings with E-disclosures

We have reduced mailings for the annual general meeting by about 30,000 A4 sheets by switching to electronic disclosures for conveying notices and shareholder letters. Manufacturing a single A4 sheet consumes 10 liters of water and emits 2.88 grams of carbon dioxide. This resulted in an annual reduction of 350,000 liters of water and 100 kilograms of GHG emissions. We have also introduced an electronic voting system to further reduce GHG emissions from traditional voting.

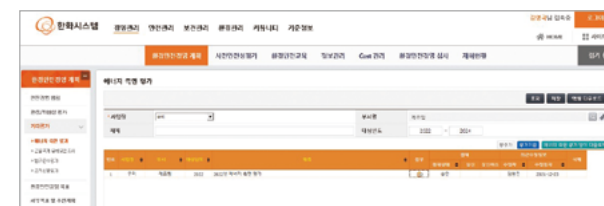


Environmental impact assessments and energy assessments

Hanwha Systems conducts yearly environmental impact and energy assessments as per ISO 14001 and ISO 50001 certifications. These assessments evaluate the organization's activities, designs, products, and services in terms of air, water, soil, noise, waste, ecosystem destruction, resource use, and energy. We assess the frequency and impact of the environment and energy in our business operations to derive improvement activities.



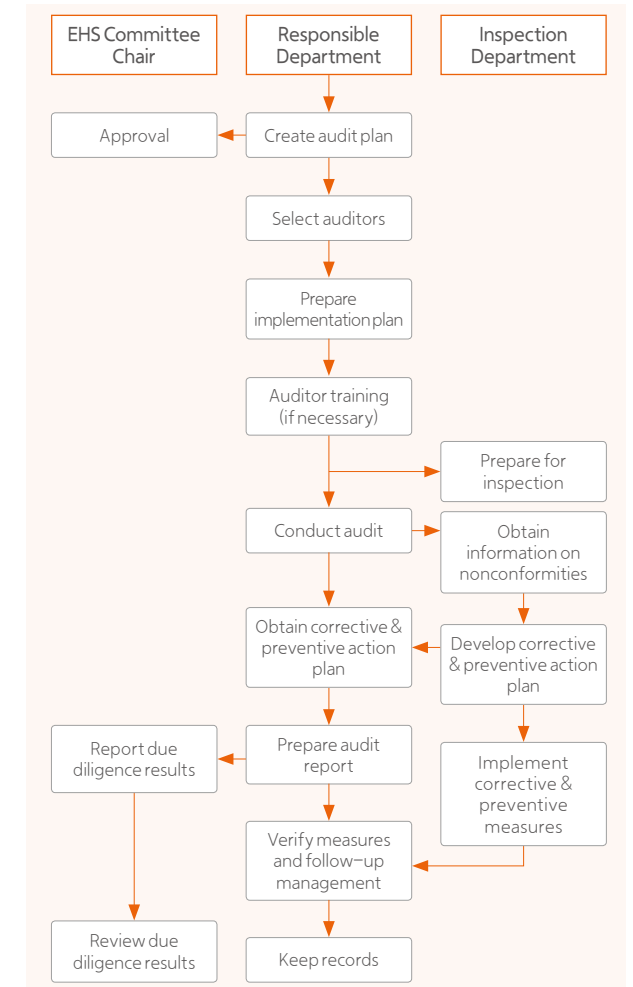
Environmental impact assessment registration screen



Energy assessment registration screen

Internal Audit Process

Hanwha Systems conducts biannual audits to ensure the proper implementation of ISO 14001 and ISO 50001 certifications, identifying any deficiencies and areas for improvement. Special audits are conducted for specific departments as needed. We also conduct follow-up audits to validate the effectiveness of improvement measures for nonconformities and report the results to the Chair of the ESH Committee.



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Rewarding Environment and Safety Management Performance

Hanwha Systems places great importance on rewarding systematic environment and safety management performance. We conduct environment and safety assessments for executives and department heads to ensure the stable operation of our environment, safety, and health management system, as well as to encourage active involvement and interest from field managers in accident prevention. In addition, we annually recognize and reward employees and suppliers who actively participate in environment and safety activities, as well as top environment and safety teams. The evaluation criteria are based on a comprehensive assessment of their performance in environment and safety management activities, which includes their contributions to environmental improvement and eco-friendly activities throughout the past year.



Rewarding employees

Letter of approval

Specific Items of Evaluation

Category	Description
Accident-free (60 points)	<ul style="list-style-type: none"> Serious disasters: -30 points Industrial accidents: -15 points (deducted per case) * Deductions are combined for both accidents and serious accidents
ESG management (40 points)	<ul style="list-style-type: none"> Wastewater emissions (10): Reductions compared to the last 3 years Air pollutants (10): Below 30% of the emission standard Waste recycling rate(10) : Recycling rate of 95% or higher GHG emissions(10) : Year-on-year reduction of 5.0%

Evaluation Items

Category	Description	Candidates
Executives	Evaluation items: Evaluation criteria for existing business sites Accident-free: 60 ESG management: 40	Heads of business sites, research centers, etc.
Supervisors (department heads)	Evaluation item: Accident prevention + compliance Accident-free: 40 Compliance: 25 On-site inspection: 20 Target Management: 15	Production, technology, R&D quality, etc.

Evaluation Process



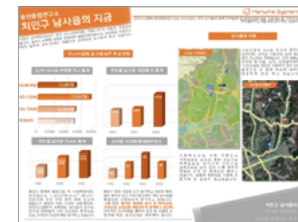
Respecting Biodiversity

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Business site biodiversity impact study

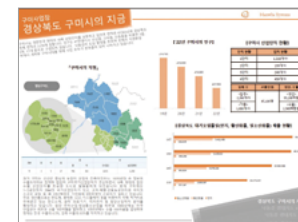
Hanwha Systems conducts studies to understand the potential impact of our sites on biodiversity in the surrounding areas and implements measures to minimize any negative effects. Each site prepares an annual ECOMAP, which examines local characteristics (population, number of businesses, and the presence of environmentally related companies) as well as terrain characteristics and ecological maps. Based on these assessments, we develop and implement environmental protection plans.

ECOMAP Terrain Characteristics



Yongjin Site: Namsa-eup

ECOMAP Ecological Map



Gumi Site: Nakdong River



Ecosystem conservation activities

Hanwha Systems actively engages in ecosystem conservation activities and environmental cleanup campaigns in collaboration with stakeholders at our business sites nationwide. Since 2013, we have been involved in capturing ecosystem-disrupting fish species to protect native fish and maintain a healthy water ecosystem. Additionally, we have participated in events aimed at eradicating the bur cucumber, a prominent ecosystem-disrupting plant along the Nakdong River, to contribute to the preservation of the local ecosystem.



Combating invasive fish species



Bur cucumber removal event (organized by the Daegu Regional Environmental Agency)

Environmental cleanup activities

Hanwha Systems' employees actively contribute to environmental cleanup efforts as responsible members of the local community. We regularly organize cleanup activities in selected ecosystems and locations identified through our ECOMAP assessment for each business site. Additionally, on World Water Day (March 22) each year, we distribute EM (effective microorganism) soil balls along the Nakdong River, which greatly aid in water purification, odor removal, and organic matter decomposition. Moreover, on Earth Day (April 22), we raise awareness among employees about environmental importance by organizing lights-off events at each business site.



Earth Day lights-off event



Cleanup activities near business sites

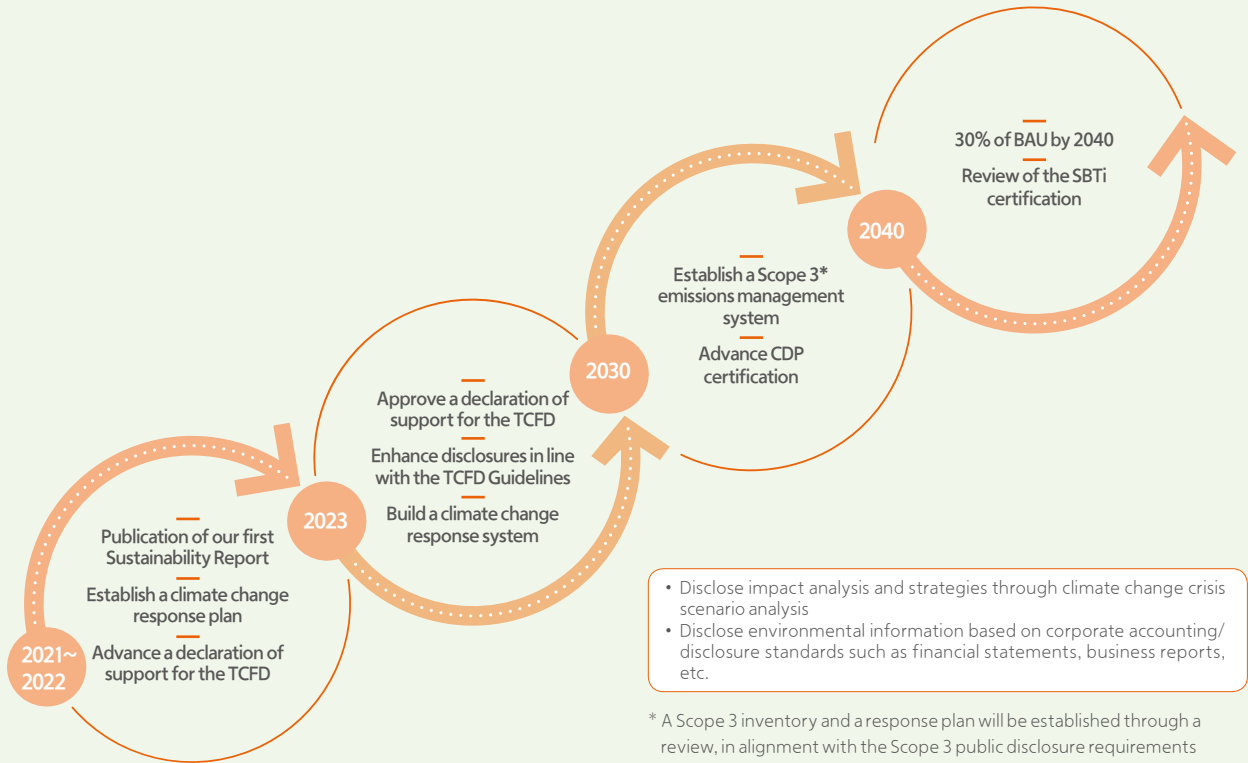
TCFD Special Section

Hanwha Systems is taking significant steps to address climate change and reduce greenhouse gas emissions. We have developed a climate change response strategy and publicly declared our support for the TCFD. Additionally, we are actively investing in renewable energy along with building and implementing green business sites to achieve our target of reducing greenhouse gas emissions by 2040.

TCFD Roadmap

Hanwha Systems has announced climate change response strategies in line with the TCFD framework across its business divisions. We have also declared our support for the TCFD since 2022, actively working towards establishing a robust climate change response system. Furthermore, we are

committed to engaging with external stakeholders, including shareholders, to ensure consistent communication regarding our climate change response system. Our goal is to incorporate environmental information into future financial statements for more comprehensive disclosures.



Report Summary

Hanwha Systems has prepared this report in accordance with TCFD guidelines.



Governance

Hanwha Systems engages in management and oversight activities to address climate change under the guidance of its ESG Committee, overseen by the Board of Directors. This includes establishing a corporate governance charter, reporting on ESG activities and plans, reviewing membership in the UNGC, adjusting the company's ESG management strategy and strategic framework, and developing a roadmap for climate change response. Additionally, the company's CEO communicates the ESG management advancement plan, determined by the ESG Committee, to employees, encouraging company-wide collaboration.



Strategy

Hanwha Systems has developed a roadmap and implementation strategy to achieve the target of reducing 30% of emissions from the BAU scenario by 2040 for our business sites and facilities. This plan aligns with the evolving business landscape, in step with future carbon regulations.



Risk Management

Based on the environmental risk assessment process (ISO 14001), Hanwha Systems assesses and identifies risks associated with climate change and develops countermeasures, following the company-wide risk management system and TCFD guidelines.



Indicators/Targets

Hanwha Systems conducts regular measurement, aggregation, and management of environmental data, including general energy, renewable energy, greenhouse gases, waste, and water. We pay special attention to greenhouse gas emissions and align them with our annual targets in order to achieve a 30% reduction from BAU emissions by 2040.

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Climate Change Response System

Hanwha Systems is actively promoting climate change response activities under its stated aim of 'leading in climate change response through the establishment of a low-carbon management system.'

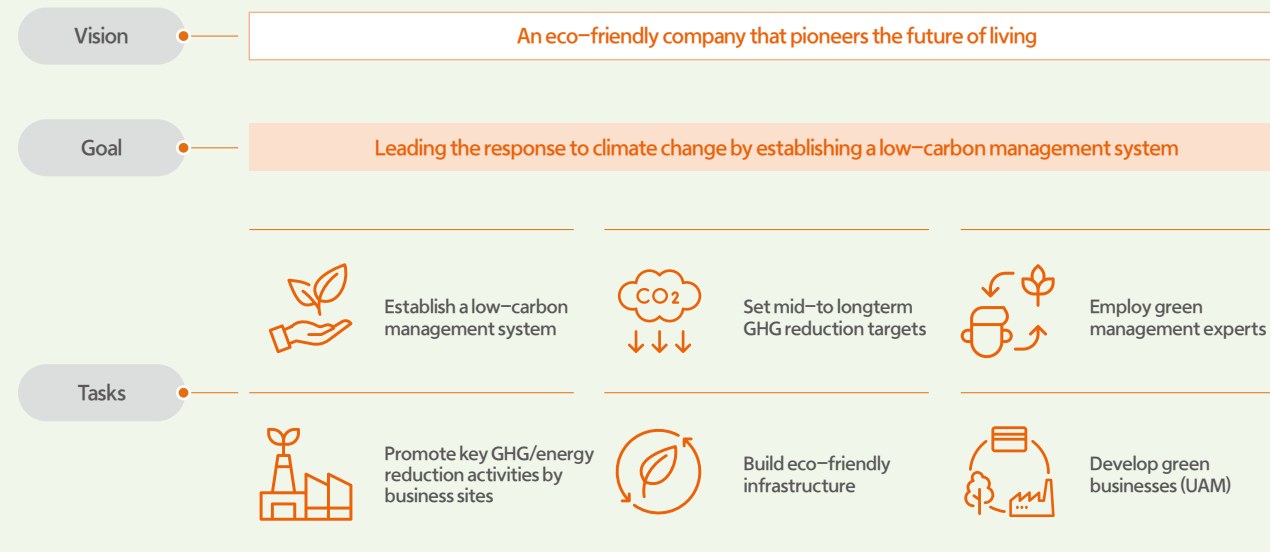
In 2021, we enhanced our reporting system to ensure effective communication of key updates and issues to management and the ESG Committee. We are committed to maintaining constant communication with our stakeholders, including shareholders, by sharing our vision and strategy for climate change response as well as providing environmental information.

Climate Change Response Vision and Strategy

With the goal of reducing emissions by 30% from the BAU scenario by 2040, **Hanwha Systems** is actively addressing climate change risks and opportunities. We are committed to incorporating these considerations into our business, strategy, and financial information, aiming to become an environmentally conscious company and future industry leader.

To effectively respond to climate change and achieve our mid- to longterm target of 30% reduction from BAU emissions by 2040, we have implemented six key initiatives. These include establishing a low-carbon management system, setting GHG reduction targets for the mid-to longterm, employing experts in green management, implementing significant GHG and energy reduction activities at each business site, building eco-friendly infrastructure, and developing an eco-friendly mobility (UAM) business.

Strategic Framework for Climate Change Response



Climate Change Response Governance

Hanwha Systems is actively pursuing significant investments and climate change response strategies to address the challenges of climate change. These efforts are coordinated by the Board of Directors and its subcommittee, the ESG Committee.

The Board oversees the direction and implementation plan of our climate change response strategy. The environmental departments within each business division and their ESG council are responsible for overseeing climate change response goals and performance. This includes implementing measures to address climate change and reduce energy consumption.

Furthermore, the ESG councils and the environmental departments closely monitor changes in the global market and assess the company's policies concerning domestic and international climate change, as determined by the Board. Their aim is to proactively identify potential risks in advance and effectively manage the company's environmental issues as a whole. They provide regular reports to the Board and seek its approval.

ESG Committee

Composition	Members	Description
Outside Directors (Chair)	Lim Ju-jae	<ul style="list-style-type: none"> Purpose: Deliberate on ESG policies and activities Mandate
Outside Directors	Hong Sung-chil	<ol style="list-style-type: none"> Deliberate on ESG policies and all matters necessary for ESG activities Report to the Board on deliberation results
Outside Directors	Hwang Hyung-Joo	

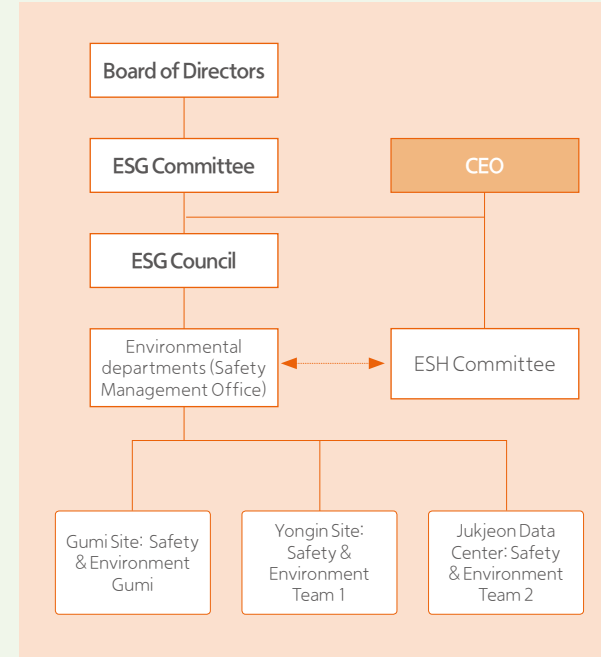
* As of December 31, 2022

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ESG Committee Roles

Category	Roles
Board of Directors	<ul style="list-style-type: none"> Final deliberation and resolution on environment and climate change-related items Review of safety and health-related risks, final deliberation and resolution on issues Review of environment and safety performance
ESG Committee	<ul style="list-style-type: none"> Final deliberation and resolution on environment, climate change, and carbon neutrality-related issues Risk review, final deliberation and resolution on water pollution, biodiversity, chemicals, etc. Risk review, final deliberation and resolution on safety and health-related issues Review of environment and safety performance Risk review, final deliberation and resolution on human rights-related issues Risk review, final deliberation and resolution on supply chain ESG-related issues Risk review, final deliberation and resolution on community-related issues
ESG Council	<ul style="list-style-type: none"> Uncover environment and climate change response issues and detailed implementation tasks Uncover safety and health-related response issues and detailed implementation tasks
Environmental departments (Safety Management Office)	<ul style="list-style-type: none"> Collect opinions on key environment and climate change issues by business site Collect opinions on key safety and health-related issues by business site
Safety and Environment teams at each site	<ul style="list-style-type: none"> Identify/manage risks associated with business operations Uncover and operate detailed implementation tasks by business site

ESH Governance Organizational Chart



Management’s Role: Assessing and Managing Climate Change Risks and Opportunities

- Management at **Hanwha Systems** acknowledges the significance of addressing internal and external demands for climate change response and its potential impact on the company’s management and strategy. Efforts are therefore made to engage in communication with stakeholders, including investors and customers, regarding climate change response. Furthermore, management takes the lead in investing in and expanding green businesses and fostering cooperation across the company. They also integrate environmental performance factors into the overall performance management system, enabling systematic management of the company’s environmental impact.
- Hanwha Systems** implements the Environmental Management System (ISO 14001) to conduct management reviews, including assessments of environmental risks and impacts, as well as internal audits. The findings are then reported to management.
- Hanwha Systems** manages and supervises policies and systems for rewarding organizational or individual work performance based on environmental management performance monitoring.

History of ESG Committee Activities

Date	Agenda Item Contents	Status	Attendance
2022.03.24	<ul style="list-style-type: none"> Agenda item 1: Proposal to enact the Corporate Governance Charter Report: Report on the status of ESG activities and key plans 	Passed	100%
2022.06.14	<ul style="list-style-type: none"> Report: Publication of the Sustainability Report 2022 (draft) Report: Review of joining the UN Global Compact (UNGC) Report: Report on key ESG activities and progress in 2022 	Passed	100%
2022.09.26	<ul style="list-style-type: none"> Report: Report on key ESG Activities and progress in 2022 	Passed	100%
2022.12.16	<ul style="list-style-type: none"> Report: Results of ESG management assessment in 2022 Report: Performance of key ESG activities in 2022 	Passed	100%

Climate Change Risks

Hanwha Systems identifies climate change risks following the TCFD guidelines, categorizing them into physical and transition risks. We analyze the short-, mid-, and long-term impacts of these risks, considering various climate change scenarios such as Representative Concentration Pathways (RCP) 2.6 and 8.5. In addition, we have integrated management activities for climate change risks into our overall risk management process through internal and external expert reviews. The insights and recommendations from these reviews are then incorporated into our climate change response strategy.

Risk Types	Scenarios	Identified Risks in Detail	Potential Financial Impact	Current Responses	Impact Level			
					Short-term	Mid-term	Long-term	
Transition Risks	Policies and Laws	T1	Expanding renewable energy transition for achieving 30% less emissions from the BAU scenario by 2040, and the rise in power procurement costs (carbon pricing)	Transition costs of expanding the use of low-carbon energy sources	Reviewing the use of renewable energy in the mid-to longterm	LOW	MID	HIGH
		T2	Rising costs of purchasing emission credits driven by increased electricity consumption and fluctuations in emission credit prices	Increase in investment costs due to the introduction of carbon reduction facilities	ISO 50001 certification and maintenance Enhanced IoT-based monitoring	LOW	LOW	MID
		T3	Growing demand for response driven by international regulations (Carbon Border Adjustment Mechanism) and domestic policy requirements	Increase in contingent fees due to carbon emissions and the insufficient response to climate change causing restrictions on business and measures	Pursuing carbon emission reductions and implementing a proactive climate change response, with the aim of driving regulatory and policy changes across product and service value chains as we transition towards a low-carbon society	LOW	MID	MID
		T4	Risk of penalties, fines, and lawsuits for non-compliance with environmental laws and regulations		Enhanced continuous monitoring even though the future impact of this risk is expected to be significantly lower	LOW	LOW	MID
	Technology	T5	Rising technology investment costs for high-efficiency facilities, self-generation facilities, and new technology solutions	Increased R&D costs following the development of low-carbon, high-efficiency technologies	Proactive expansion of eco-friendly businesses such as UAM	HIGH	HIGH	HIGH
	Market risks	T6	Failure of growth engines such as future new businesses, decline in sales, and losses in investment related to technology development	Increased investment costs for future new business initiatives and technology development	Preemptively expanding green businesses such as UAM for mid-to longterm business growth, including services for local communities and renewable energy development by utilizing ICT competency.	HIGH	HIGH	HIGH
		T7	Loss of customer confidence and customer attrition resulting from the failure of green businesses	Losses due to investment restrictions and loss of customers	Expanding eco-friendly green purchasing and continuing to expand supply chain management activities	LOW	MID	HIGH
	Reputation	T8	Deterioration of investor relations, decline in brand value, etc.		Disclosure of information based on the TCFD framework	MID	MID	HIGH
Physical Risks	Acute Risks	P1	Facility damage, production interruptions, and service disruptions caused by an increase in large-scale natural disasters	Human and material losses due to building damage and equipment failure caused by typhoons, torrential rains, abnormally high temperatures, etc.	Emergency response drills by situation to enhance disaster preparedness	HIGH	HIGH	HIGH
	Chronic risks	P2	Rising power costs for data center cooling/heating systems due to global warming and climate change	Increased costs due to increased cooling and heating loads during typhoons, heavy rains, abnormally high temperatures, and cold waves, etc.	Regular safety inspections	MID	HIGH	HIGH

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Transition Risks: Policies and Laws

[T1] Expanding renewable energy transition for achieving net zero emissions, and the rise in power procurement costs (carbon pricing)

Business Impact

In 2022, **Hanwha Systems'** total electricity consumption amounted to 55,486,086 kWh of electricity. However, only 15,426 kWh, or 0.03%, was self-generated through renewable solar photovoltaic (PV) energy. To reduce greenhouse gas emissions, it is important for **Hanwha Systems** to expand the use of renewable energy, such as solar PV self-generation.

Mitigation

In line with its self-generation policy, **Hanwha Systems** has constructed solar PV facilities on its business sites, utilizing available space and land. The company is also exploring opportunities for future expansion and increased self-generation of solar energy.

*Based on electricity consumption at the Yongin, Jukjeon, and Gumi sites

[T2] Rising costs of purchasing emission credits driven by increased electricity consumption and fluctuations in emission credit prices

Business Impact

Hanwha Systems is currently not included in the Ministry of Environment's list of companies that are allocated emissions credits through the third-party emissions trading system. As a result, we are not obligated to purchase emission credits for exceeding the government's allocation (emission allowance). However, we are proactively assessing the potential increase in GHG emissions associated with our upcoming new plant in Gumi, planned for 2025. Thus, we are evaluating the possibility of acquiring emission credits.

Mitigation

Hanwha Systems has established and is implementing a roadmap and reduction plan to decrease emissions, including self-generation of electricity, utilization of renewable energy, and construction of green buildings and renewable energy facilities at IDC centers and new plants.

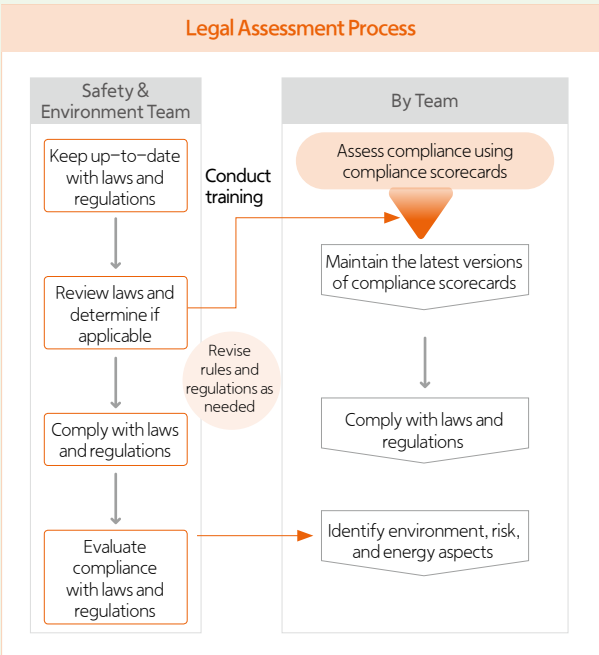
[T3] Growing demand for response driven by international regulations (Carbon Border Adjustment Mechanism) and domestic policy requirements

The US SEC's 'Draft Climate Disclosure Rule' and the International Accounting Standards Foundation's 'Draft International Standard for IFRS Sustainability Disclosures,' both released in March 2022, are strengthening global disclosure requirements for GHG emissions (including Scope 3) and climate change risk information.

Although **Hanwha Systems** is not obligated to comply in accordance with the Korean emissions trading system's regulations, we are closely monitoring the global business impact and the potential introduction of the Carbon Border Adjustment Mechanism in Korea. We are also enhancing our GHG management competency, including Scope 3, by aligning with domestic and international regulatory policies through our dedicated ESH organization.

[T4] Risk of penalties, fines, and lawsuits for non-compliance with environmental laws and regulations

Hanwha Systems operates in compliance with various domestic environmental laws and regulations, including the Act on the Allocation/Trading of Greenhouse Gas Emission Credits, the Enforcement Decree, the Environmental Technology Industry Act (requiring the public disclosure of environmental information), and the Eco-Friendly Vehicle Act (mandating the purchase of eco-friendly vehicles). To date, we have maintained a clean record, with no history of environmental lawsuits or violations, and thus we believe the likelihood of future lawsuits and violations related to the environment is minimal.



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Related Laws and Regulations	Description
Act on the Promotion of the Development, Use, and Diffusion of New and Renewable Energy	Stipulates essential matters concerning supply obligations and reference prices associated with renewable energy projects such as solar, wind, and hydropower.
Environmental Technology and Environmental Industry Support Act	Stipulates registration requirements for specialized environmental construction businesses and necessary provisions for fostering environmental technology and industry.
Water Quality and Aquatic Ecosystem Conservation Act	Stipulates matters concerning the preservation of water quality and water ecosystems in public water bodies.
Clean Air Conservation Act	Stipulates matters concerning harm prevention, management, and conservation of public health and the environment resulting from air pollution.
Groundwater Act	Stipulates matters concerning the proper development, utilization, and efficient conservation of groundwater.
Waste Management Act	Stipulates matters concerning the maximum restriction of waste generation and the eco-friendly treatment of generated waste.
Chemicals Control Act	Stipulates matters for the prevention of harm to public health and the environment due to the use of chemicals and for their proper management.
Act on the Registration and Evaluation of Chemicals	Stipulates matters concerning the registration and reporting of chemicals, screening, and assessment of their hazards and risks, and designation of hazardous chemicals.
Soil Environment Conservation Act	Stipulates matters for the appropriate management and conservation of soil, including the prevention of harm to public health and the environment resulting from soil pollution and the remediation of contaminated soil.
Malodor Prevention Act	Addresses the prevention of odors generated by business activities and other sources.
Noise and Vibration Control Act	Stipulates matters to prevent and manage noise and vibrations from factories, construction sites, roads, railways, and other sources.

Transition Risks: Technology

[T5] Rising technology investment costs for high-efficiency facilities, self-generation facilities, and new technology solutions

Business Impact
Hanwha Systems is actively evaluating the implementation of high-efficiency facilities and new technology solutions, starting from the design phase of new buildings at its Gumi site, to address growing electricity consumption. This approach is resulting in increased investment costs for high-efficiency facilities, new technology solutions, and the self-generation of renewable energy..

Mitigation
 In 2022, **Hanwha Systems** installed a 12.48 kWh solar PV facility at its Yongin R&D Center, demonstrating its commitment to energy savings through the utilization of solar power at its business sites. Moreover, for the planned new buildings at the Gumi site in 2025, **Hanwha Systems** is actively considering the integration of significant renewable energy facilities right from the design stage. The aim is to achieve green building certification by incorporating advanced technologies such as energy facilities (such as solar PV), water reuse facilities, and power efficiency facilities at the new Gumi site.

Renewable Energy Investment in 2022 [As of late December 2022]

Energy source	Facility name	Capacity (kWh)	Investment date	Investment amount (KRW 1,000)
Electricity	Solar PV panels	12.48	'22.9	31,460

Renewable Energy Generation [As of late December 2022]

Category	Energy source	Facility name	Installation period	Amount generated (kWh)	Annual power generation (MWh)
Yongin	Electricity	Solar PV panels	'22.9	12.48	5
Jukjeon			'10.10	9.45	10.5



Solar PV at the Yongin Site

Solar PV at the Jukjeon Data Center

Transition Risks: Market Risks

[T6] Delays in the implementation of future new business, decline in sales, and losses in investment related to technology development

Business Impact
 The economic transition towards a low-carbon society, including the goal of achieving Net Zero emissions, has led to a rapid acceleration in the development of climate change response-related industries and technologies worldwide. As a result, there is increasing competition among companies to secure new businesses in this emerging market.

In line with these global trends, the Korean government is advancing its low-carbon and decarbonization policies, including a carbon-neutral scenario. Meanwhile, domestic companies are increasingly encouraged to develop climate change response technologies to help businesses manage risks and expand business models.

Mitigation
Hanwha Systems is leveraging its ICT technology competency to drive mid-to longterm business growth and contribute to local communities and renewable energy development. This includes conducting research tasks such as developing a solar power generation prediction model in 2022, a green algae prediction model for the Nakdong River, and an AI learning curation model. Furthermore, by integrating big data platforms and data analytics technologies, **Hanwha Systems** is undertaking various projects that include developing a GHG management solution in 2021 and researching a carbon credit price prediction model using IoT-based machine learning and deep learning technologies.

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[T7] Loss of customer confidence and customer attrition resulting from the failure of green businesses

Business Impact

While **Hanwha Systems'** defense and ICT businesses do not experience high customer demand for environmentally certified products, the company is actively promoting green purchasing policies to enhance customer trust and fulfill its social responsibility.

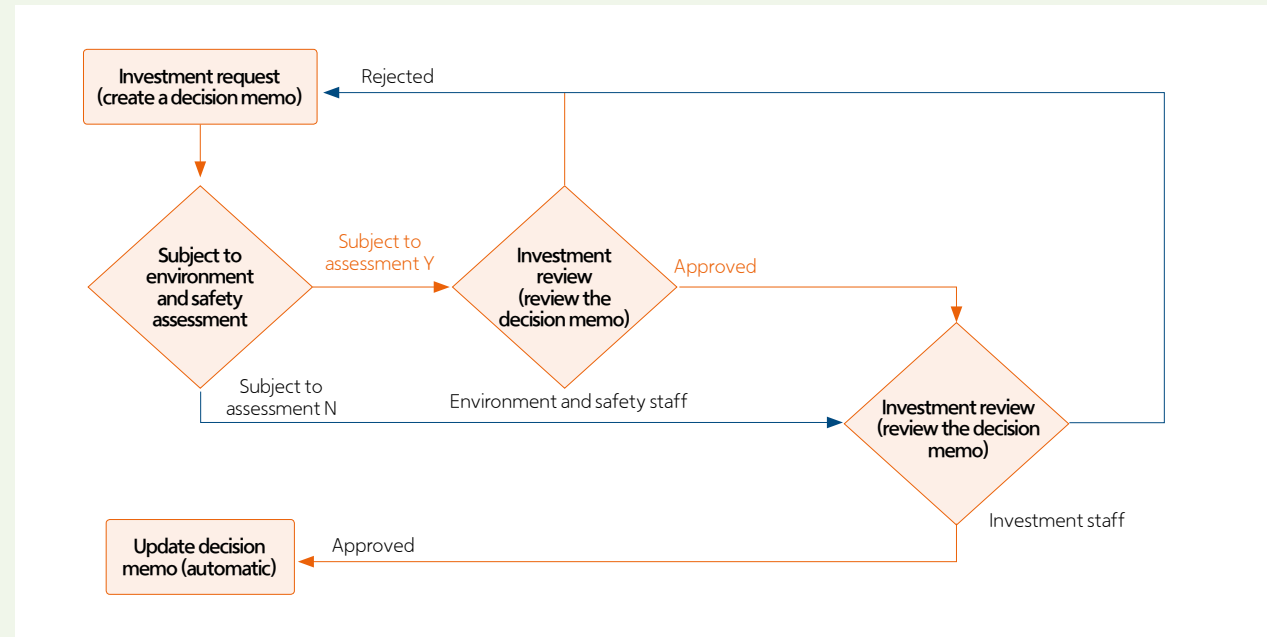
Mitigation

Hanwha Systems intends to expand its green purchasing efforts and further promote supply chain management activities that motivate suppliers to address climate change and establish their own targets.

Environmental risk factor inspection system for evaluating new investment projects

During the decision-making process for acquiring new fixed assets (tangible/intangible assets), **Hanwha Systems** records information about all investment matters in the Hanwha Asset Management System (HAMS) and assesses environmental risk factors to determine if they require an environment and safety review. If a review is necessary, staff of the Safety and Environment teams will implement a process to review and check the identified environmental risk factors using an internal investment review checklist.

Environment and Safety Assessment Process for New Investment Projects



Environment and Safety Assessment Checklist for New Investment Projects

Items to be checked	2022	Notes
Is there a risk for substantial generation of environmental pollutants?	<ul style="list-style-type: none"> Not applicable () Anomalies identified () 	<ul style="list-style-type: none"> Soil pollution Air pollution Water pollution Noise, etc.
Does it have a significant impact on both direct and indirect GHG emissions?	<ul style="list-style-type: none"> Not applicable () Anomalies identified () 	
Is there a risk of non-compliance with environmental laws and regulations or potential environmental accidents?	<ul style="list-style-type: none"> Not applicable () Anomalies identified () 	

Green Investment and R&D Performance (Unit: KRW 100 million)

Category	2020	2021	2022	Notes
Investment	0.0	0.0	0.3	Solar PV panel installation
R&D	4.6	4.9	12.6	R&D expenses for UAM business
Purchase of equity interests	289.6	350.7	645.7	Equity investment in UAM business, etc.
Other	0	0	0	
Total	294.2	355.6	658.6	

* Includes stakes for UAM business purposes

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Establishing green purchasing policies and guidelines

Hanwha Systems announced its intention to build an eco-friendly supply chain through the public announcement of green purchasing guidelines.

We are actively taking measures to reduce environmental pollution and carbon emissions throughout our supply chain. To achieve this, we prioritize the procurement of eco-friendly and low-carbon products and services as part of our commitment to sustainable management practices. Accordingly, we have implemented a green purchasing policy since 2022.



Criteria for Assessing Green Purchasing

Category	Criteria for recognizing green purchases
Asset (PC/OA) purchases	<ul style="list-style-type: none"> • Products with excellent standby power reduction • Products with eco-friendly certification marks
Solar PV projects	<ul style="list-style-type: none"> • Certified products for renewable energy facilities (Solar PV modules, inverters for solar PV power generation, etc.)

Green Purchasing Performance

(Unit: KRW 100 million)

Category	2020	2021	2022
Asset (PC/OA) purchases	1.8	1.0	3.2
Solar PV projects	5.7	374	199.3
Total	7.5	375	202.5

녹색구매 지침

1. 목적
이 지침은 친환경 구매를 통해 환경오염을 방지하고 온실가스 감축에 기여하여 지속가능한 경영에 이바지함을 목적으로 한다.

2. 적용범위
한원시스(주)에서 개발 또는 생산하는 제품 또는 원/부자재의 구매, 외주 외가공품(제조외도 포함), 용어 구매, 시설투자용 설비구매, 개발용 자재구매 관련업무에 적용한다.

3. 정의

3.1 녹색제품이란, 지친소 녹색성질 기본법 제2조제5호에 따른 제품을 말한다.

1) 환경표지제품
「환경기술 및 환경산업 지원법」제17조제1항에 따라 같은 용도의 다른 제품에 비하여 제품의 환경성을 개선하여 환경표지 인증받은 제품 및 등 기중에 적합한 제품

2) 저탄소제품
「환경기술 및 환경산업 지원법」제18조제1항에 따른 환경성적표지와 인증을 받은 제품 중 환경부장관이 정하여 고시하는 기준에 따라 「지친소 녹색성질기본법」제2조제9호에 따른

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New supplier registration assessment criteria

To ensure compliance with our eco-friendly green purchasing policy, **Hanwha Systems** conducts a comprehensive evaluation of the development and mass production processes of products and services. This involves the introduction of evaluation indicators for environment and safety during the registration of new suppliers. In 2022, out of 111 new suppliers in the defense sector, we completed due diligence assessments for 19 companies during the development process and 14 companies during the mass production process.

Evaluation Items	Evaluation Index	Specific evaluation subject	Key Word	Scoring	
				Weighting	Scoring Criteria
Safety management	Environment and safety	Management over the safety of the production process or office environment	1. Presence of an environment and safety officer or organization 2. Existence of environment and safety regulations 3. Environment and safety training results 4. Various accident prevention activities (accident-free initiatives) 5. Inspection records of various facilities (including firefighting facilities) - Specially processed safety clothing, and management status of the environment surrounding fire extinguishers - Storage conditions and procedures for dangerous goods 6. Waste disposal procedures and conditions	100%	Essential: No.1 and No. 2 Supplementary: At least two from No. 3 to No. 6
				80%	Essential: No. 1 and No. 2 Supplementary: At least one from No. 3 to No. 6
				60%	Essential: No. 1 Supplementary: N/A
				40%	Essential: N/A Supplementary: At least one from No. 2 to No. 6
				20%	Essential: N/A Supplementary: None from No. 2 to No. 6

Transition Risks: Reputation

[T8] Deterioration of investor relations, decline in brand value, etc.

Business Impact

Hanwha Systems recognizes the potential negative consequences of an inadequate response to climate change, which may result in unfavorable evaluations from stakeholders such as investors, media, and governments. This can lead to damage to our brand, a decrease in corporate value, and a loss of reputation concerning our products.

Given the nature of our business, we understand that any sustainability-related damage caused by climate change could have severe consequences. While there have been no immediate changes in investment due to climate change response and environmental risks, it is important to note that insufficient climate change response in the long run may lead to a reduction in investment. Furthermore, the National Pension Service, along with minority shareholders, holds a significant share of 35.8% (as of December 31, 2022). As the National Pension Service is considered a socially responsible investment institution, any withdrawal of shares, even of 1%, could potentially result in an estimated market capitalization decrease of around KRW 27 billion (as of April 23). Such a decrease in market capitalization may have an impact on overall investment, including a potential decline in share price.

Mitigation

Hanwha Systems proactively addresses external demand for climate change response and has demonstrated its commitment by declaring support for the TCFD in January 2023. We remain dedicated to ongoing improvement in our climate change initiatives.



Physical Risks: Reputation

[P1] Facility damage, production interruptions, and service disruptions caused by an escalation in large-scale natural disasters

Business Impact

To prevent human and material losses resulting from building and facility damage and equipment failure during typhoons, heavy rains, and abnormally high temperatures, **Hanwha Systems** recognizes the importance of robust facility management for each weather scenario. As a specific measure, we regularly conduct emergency response drills for different types of disasters. Additionally, we proactively minimize potential risks by conducting periodic safety inspections of our facilities.

Category	Details
Review categories	Environmental facilities, work environment facilities, energy use facilities, safety target facilities, disaster prevention facilities
Review items	Presence of installed preventive facilities, adherence to design drawings during construction, assurance of safety factors for various preventive facilities, utilization of appropriate chemicals for preventive facilities, incorporation of high-efficiency energy materials, etc.

[P2] Rising power costs for data center cooling/heating systems due to global warming and climate change

Business Impact

To address the heavy cooling load and reduce costs in Hanwha's data centers, it is essential to enhance the efficiency of the cooling system and mitigate the impact of external temperatures. Fluctuations in external temperatures and humidity caused by typhoons, heavy rains, and abnormally high temperatures can directly result in additional power expenses to maintain a consistent temperature and humidity within the data center.

Mitigation

Hanwha Systems aims to reduce the impact of climate change by implementing high-efficiency facilities that enhance air conditioning efficiency based on external temperature variations. We have also set up monitoring facilities in form of real-time weather monitors.

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Climate Change Opportunities

Hanwha Systems understands that the key to achieving Net Zero lies in the innovation and widespread adoption of eco-friendly core technologies. We are actively researching solutions to address the root causes of climate change and securing new business models to shape our future businesses. By doing so, we aim to position ourselves as leaders in the future Net Zero market and transform it into a strategic advantage that allows us to flexibly adapt to technological changes.

Opportunities	Scenarios	Opportunity Types	Impact		
			Short-term	Mid-term	Long-term
Eco-friendly UAM	O1	Product and service market <ul style="list-style-type: none"> • Increased sales of carbon-reducing products or services • Enhanced corporate competitiveness of low-carbon, eco-friendly companies 	MID	HIGH	HIGH
Eco-friendly electronic satellite communication antennas	O2		MID	MID	MID
Renewable energy generation	O3	Energy source, product, and service markets <ul style="list-style-type: none"> • Reduced energy costs, reduced exposure to risk from fossil fuel price fluctuations • Increased access to capital and improved reputation for low-carbon companies • Increased sales of carbon-reducing products and services • Enhanced competitiveness of low-carbon companies 	MID	HIGH	HIGH
Hybrid power supply system	O4	Resource efficiency, product, and service markets <ul style="list-style-type: none"> • Reduced operating costs for business sites, increased profits from more efficient production, and increased value of fixed assets • Reduced energy costs and reduced exposure to risk from fossil fuel price fluctuations • Increased access to capital and improved reputation for low-carbon companies 	LOW	MID	HIGH
Microgrid construction/operation					
Energy Management System					
Energy consulting/diagnosis					
Renewable energy manufacturing execution system (MES)	O5	Energy source, product, and service markets <ul style="list-style-type: none"> • Reduced energy costs, reduced exposure to risk from fossil fuel price fluctuations • Increased access to capital and improved reputation for low-carbon companies 	HIGH	HIGH	HIGH



Green Business UAM Butterfly



Aircraft under development 1:1 Propulsion

[O1] Eco-friendly UAM Business

Business Impact

Based on analysis of major reports by global consulting firms (Porsche and MSCI among others), the eco-friendly UAM business is expected to reach a total value of KRW 731 trillion (\$609 billion) by 2040, considering global trends. (2020, Ministry of Land, Infrastructure, and Transport K-UAM Roadmap, Strategic Consulting WITH WISERS)

Hanwha Systems aims to become a total solution provider for building air mobility platforms, including navigation and air traffic management solutions for urban centers and interlocking ground transportation systems. We have successfully secured two Ministry of Land, Infrastructure, and Transport projects: 'Developing UAM virtual operating environments and integrated verification technology'; and 'Developing CNSi utilization system verification technology for UAM traffic management system for low density area.' Through these projects, we are not only focused on aircraft development but also on building the necessary infrastructure.

Furthermore, **Hanwha Systems** has formed a consortium called the 'K-UAM Dream Team' in collaboration with the Korea Airports Corporation and SK Telecom. We are actively working with various local governments in Korea, including Jeju Island, Namwon, and Incheon, to provide the first safe UAM operating environment and services in Korea in 2025. Through these efforts, we aim to contribute to balanced regional development.

Mitigation

Hanwha Systems is actively involved in the development of a carbon industry ecosystem to foster an eco-friendly environment for the UAM industry. We recognize the UAM industry as a key sector for the Korean version of the New Deal, and we are committed to creating an eco-friendly UAM industry by incorporating carbon materials in airframes. This approach helps to reduce weight, conserve battery power, and lower fares. We are also applying OSTR* and IBC** technologies in the form tilt rotors. By doing so, **Hanwha Systems** aims to reduce carbon emissions and improve energy efficiency. These technologies enable quieter and more efficient operations, allowing for longer flights with less energy consumption.

* OSTR: Optimum Speed Tilt rotor
 ** IBC: Individual Blade Control is a technology that actively reduces vibration.

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[02] Eco-friendly electronic satellite communication antennas

Business Impact
Hanwha Systems is dedicated to tackling the issue of limited internet access for 48% of the world's population. Leveraging its technological competency accumulated through 20 years of experience in the satellite business, **Hanwha Systems** is actively developing electronic satellite communication antennas and LEO satellite technology. These advancements aim to overcome the relatively long communication delays associated with geostationary satellites, enabling faster and more reliable internet service.

Mitigation
Hanwha Systems is at the forefront of developing LEO satellite communication antennas based on advanced communication and sensor capabilities. These antennas represent the next generation of technology, enabling high-speed internet services comparable to 5G-LTE through satellites orbiting closer to the Earth. They serve as a core technology in realizing space internet and have the potential to enrich our lives by providing high-speed internet access anywhere in the world. Additionally, this project aligns with our commitment to eco-friendly practices by reducing the need for extensive communication network installations (reducing raw materials), lowering maintenance and expansion costs (reducing environmental pollution during construction), and minimizing power consumption (reducing energy).

[03] Renewable energy generation business

Hanwha Systems actively promotes the expansion of renewable energy sources in accordance with the government's directions. In 2022, we launched a nationwide roof-type solar PV project for factories, and are currently in the process of constructing a 56 MW power plant. We are also participating in the "Daegu Smart Industrial Complex Roof-type Solar PV



Agreement ceremony for the 'Smart Industrial Complex Rooftop Solar PV Project' in Daegu (Third from the right, Sung-Chul Eoh, CEO of **Hanwha Systems**)

Project," scheduled to begin construction in 2023. We have also secured a 36 MW floating PV project in Hasari, Yeonggwang-gun, and are preparing for its construction.

In addition to these initiatives in the private sector, **Hanwha Systems** has also actively contributed to the government's renewable energy supply project for the past nine years (2015-2023). This year, we are further expanding our efforts by conducting a renewable energy convergence project to supply clean energy to general households. (2021: Gongju, Andong, Yecheon-gun, Muju-gun / 2022: Yecheon-gun, Uisung-gun, Muju-gun / 2023: Yecheon-gun, Uisung-gun)



Andong Renewable Energy Convergence Support Project

[04] Eco-friendly Services/Solutions Business

- Our core business revolves around developing solutions for various sectors, including stabilizing renewable power generation output, supporting transmission and distribution grids, providing consumers with emergency power supply, and managing demand.
- By combining our engineering and integration capabilities with renewable power generation systems, hybrid source chargers (HSC), and energy IT systems, we are able to design and operate optimized microgrid systems.
- Our Eagle EMS solution plays a vital role in optimizing energy operation management for our clients through real-time monitoring, analysis, control, and prediction of renewable energy generation, system status, and energy consumption.
- Our team of energy experts offers precision diagnosis and efficiency consulting services. Through energy use analysis, facility efficiency diagnosis, operation pattern analysis, and economic feasibility evaluation, we help our clients maximize energy use efficiency.

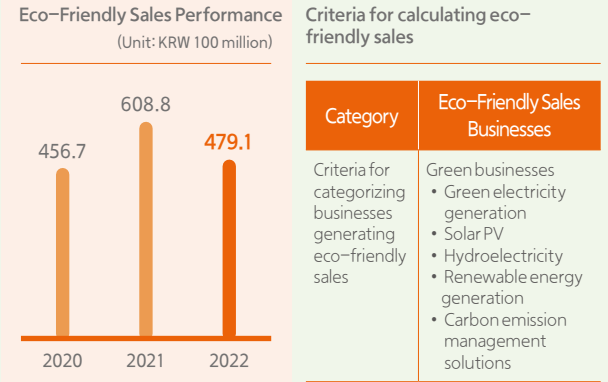
* Eagle EMS: Eagle Energy Management System

[05] Renewable energy manufacturing execution system (MES)

Based on our experience in implementing an MES solution at the **Hanwha QCELLS** factory, **Hanwha Systems** is actively developing the renewable energy MES business, which focuses on providing solutions for the solar PV industry. Our plan is to foster an MES business that covers production planning, material input, quality control, and facilities based on real-time data from solar PV-related manufacturing sites. Our MES solutions not only improve work efficiency across the entire production process but also facilitate energy reduction initiatives. In addition to solar power, we are expanding our scope to include other renewable energy sectors, such as hydrogen and wind power. By implementing MES solutions at these sites, we create eco-friendly workplaces while showcasing enhanced productivity and cost-effectiveness.

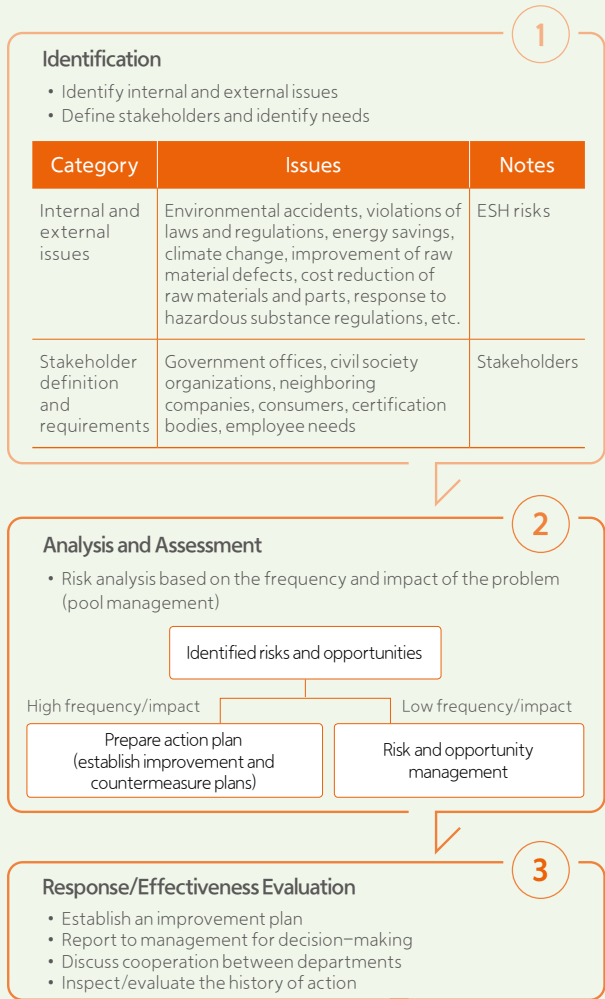
This fosters business synergies among our group companies and facilitates the expansion of our operations in the renewable energy sector. Moreover, we are actively involved in research and development to create IoT-based solutions for solar PV operation and maintenance (O&M). Our goal is to provide MES solutions and services not only to our group companies but also to customers in the solar downstream business. By doing so, we can enhance productivity and cost-effectiveness across the entire eco-friendly business sector while exploring ways to expand business value.

* MES: Manufacturing Execution System



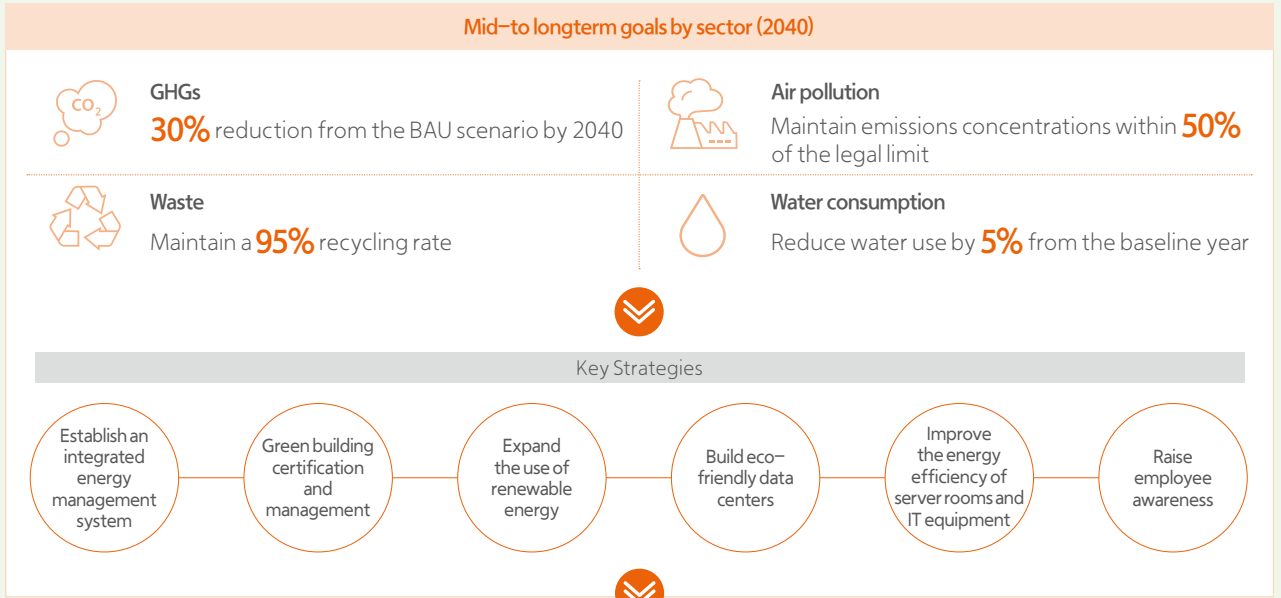
ESH Risk and Opportunity Management Governance

Hanwha Systems has implemented an integrated risk management system to minimize losses through rational decision-making. We identify and register risks and opportunities through our risk and opportunity management process. These are then incorporated into our management system, where the results of risk and opportunity assessments, as well as the corresponding measures, are reported to the Board of Directors.



Carbon Neutrality Goals and Indicators

In 2022, Hanwha Systems had company-wide GHG emissions of 20,921 tons (tCO₂e), and the largest emission site, the data center, emitted 11,406 tons (tCO₂e). Although Hanwha Systems is not subject to mandatory GHG reduction under the GHG target management system, we have developed our own GHG reduction response plan to actively reduce emissions. Our goal is to achieve the national GHG emission target for 2030 and strive for a 30% reduction from BAU emissions by 2040 in the mid-to longterm.

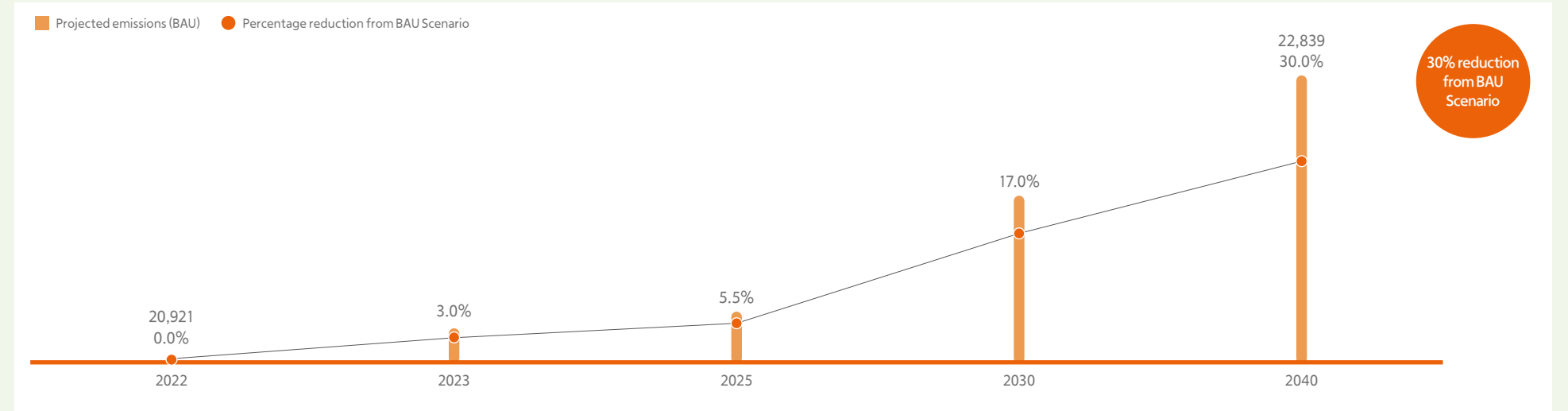


Category	Specific Goals
Establish an integrated energy management system	<ul style="list-style-type: none"> Reduce energy by introducing a building energy management system (BEMS) when building new business sites Advance intelligent (state-of-the-art) certifications (integrated SI, BEMS, FMS, etc.)
Green building certification and management	<ul style="list-style-type: none"> Acquire green building and energy efficiency ratings and certifications Reduce GHG emissions and save energy
Expand the use of renewable energy	<ul style="list-style-type: none"> Install renewable solar PV facilities at business sites
Build eco-friendly data centers	<ul style="list-style-type: none"> Advance the construction of eco-friendly data centers when building new data centers
Improve energy efficiency	<ul style="list-style-type: none"> Improve high-efficiency equipment by evaluating low-efficiency facilities
Raise employee awareness	<ul style="list-style-type: none"> Implement environment-related campaigns (reduce standby power, identify GHG-reducing items, etc.)
Reduce waste	<ul style="list-style-type: none"> Implement a campaign for zero disposable products, identify items to reduce waste generation, and reduce leftover food
Reduce air pollution	<ul style="list-style-type: none"> Improve air pollution prevention facilities and make the change to low environmental pollutants
Reduce water consumption	<ul style="list-style-type: none"> Install water reclamation facilities at business sites, identify reusable items, and implement campaigns to reduce water use

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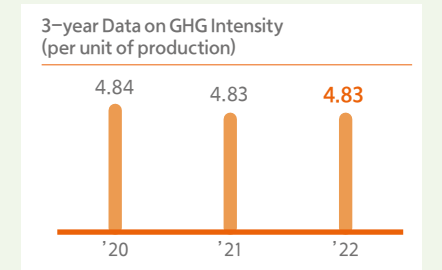
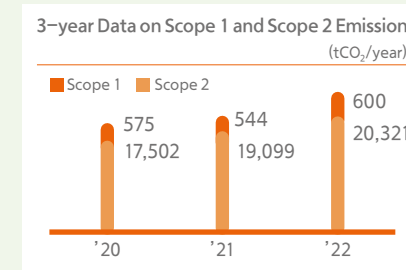
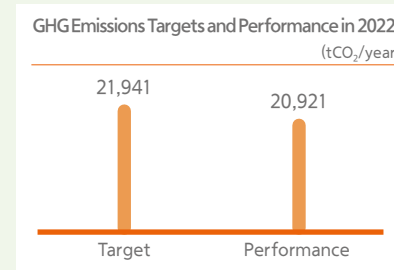
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GHG Reduction targets by 2040 (mid-to longterm roadmap)



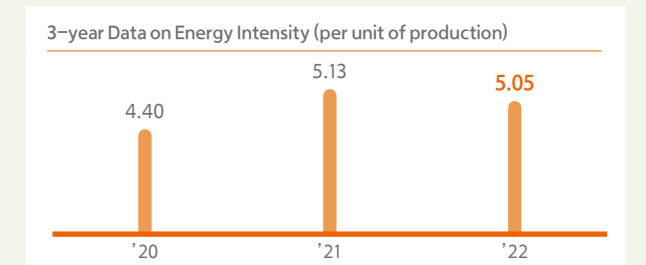
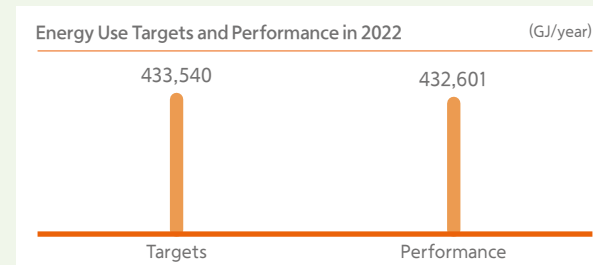
GHG

	'20	'21	'22
Emissions (tCO ₂ /year)	18,078	19,642	20,921
Sales (KRW billion)	16,428	20,895	21,880
Energy Intensity (per unit of production)	4.84	4.83	4.83



Energy

	'20	'21	'22
Consumption (GJ/year)	373,249	406,628	432,601
Sales (KRW billion)	16,428	20,895	21,880
Energy Intensity (per unit of production)	4.40	5.13	5.05



* GHG emissions and energy consumption are calculated by conducting third-party energy verification for selected business sites.

Key Performance

Employees, Human Rights



Human rights management and raising awareness

Implementing various education and mutual respect campaigns

Respecting employee diversity
Surpassed the Ministry of Employment and Labor's affirmative action target (113.6%)

Competency building, organizational culture
New businesses and internal corporate ventures, technology blogs

Family-friendly corporate culture
Family friendly business certification

Shared Growth



Shared Growth Index Assessment by the Korean Commission for Corporate Partnership
'Excellent' rating for its first assessment

Addressed the requirements of the Supply Chain Due Diligence Act
Launched the first ESG management support program for suppliers

Various win-win partnership programs
Financial, technological, and educational support

Quality Management



The best quality management system in Korea

PMS Level 8, ISO 9001 certification

Proactive management of customer complaints and diversification of customer feedback channels

Quality service satisfaction rate of 99.1%

Counterfeit electronic parts avoidance rate
100%

Social Contribution



Mid-to longterm strategy for social contribution
CSV 3.0 Value Enhancement

Diversified local community cooperation channels
Identified and managed negative impact by region
Operated the Social Contribution Steering Committee



Social

Corporate social responsibility has evolved from a mere campaign to a legal obligation. **Hanwha Systems** recognizes the importance of upholding human rights, ensuring the health and safety of our employees, and fostering a path of coexistence with suppliers and local communities. We are committed to staying ahead of social changes and embodying the corporate spirit of 'Going Further Together.'

Human Rights Management

Hanwha Systems adheres to the principle of respecting human rights and aims to cultivate a happy corporate culture that prioritizes the growth and satisfaction of its employees. We work towards creating an efficient work environment and consistently engage in open communication with our employees to foster a positive workplace.

Establishing a Culture of Respecting Human Rights

Declaration of Human Rights Management

Hanwha Systems adheres to labor laws and regulations and is committed to fostering a corporate culture that values respect for all employees and stakeholders. We are actively working towards publicly supporting the 10 principles of the United Nations Global Compact (UNGC) in the 4 major areas: human rights, labor, environment, and anti-corruption. Beyond our own human rights declaration, we will strive to develop a human rights management policy with clear goals. This will involve conducting a company-wide human rights impact assessment in the future as part of our ongoing commitment to fostering a culture that respects human rights.

Activities to Safeguard Employee Human Rights

Hanwha Systems has established and enforces regulations to prevent and address instances of employee human rights violations, such as workplace bullying and sexual harassment. In case of any related incidents, we promptly implement stringent disciplinary measures against the perpetrators in accordance with the established regulations.

To address grievances that may arise during work, Hanwha Systems maintains various internal and external communication channels, resolving issues related to human rights protection in a timely manner. These channels include a cyber reporting system accessible through the intranet, counselors, labor-management organizations (such as the Labor Committee, Labor Union, Labor-Management Council, and ICT Council), as well as a direct reporting system to the HR team. When grievances are received, immediate preliminary measures are taken to protect the victims, and a disciplinary committee is convened to resolve the issues after verifying the facts. Additionally, we

have an internal council to directly receive grievances and take action, supported by grievance resolution counseling training and workshops. Throughout the process, strict confidentiality is maintained to prevent any secondary victimization.

Raising employee awareness of human rights

Hanwha Systems actively promotes human rights awareness and encourages employees to practice respect for human rights through various campaigns and training programs.

We have implemented the 'Three Commandments of a Mature Hanwha Systems Employee,' which are prominently displayed on banners and bulletin boards at our business sites, outlining behavioral guidelines for creating a happy company. To increase human rights awareness, we have developed a webtoon that emphasizes the importance of respecting human rights.

Furthermore, we conducted a human rights education program from July to September 2022, focusing on topics such as workplace bullying prevention, sexual harassment prevention, disability awareness, and privacy protection. Additionally, we regularly distribute newsletters to employees in leadership positions, providing guidance on preventing workplace bullying. On a quarterly basis, we share human rights messages to foster a culture that promotes respect for human rights.

Performance in Resolving Grievances

Category	Unit	2020	2021	2022
Number of employee grievances filed	Cases	104	170	27
Number of employee grievances resolved	Cases	104	170	27
Employee grievance resolution rate	%	100%	100%	100%

Category	Trainees	Period	Main activities
Training and dissemination	Company-wide employees	2022.07 ~ 08	Group training on workplace bullying prevention
			Group training on workplace sexual harassment prevention
		2022.08 ~ 09	Online Training on workplace bullying prevention
			Online Training on workplace sexual harassment prevention
			Online Training on raising disability awareness
			Online Training on privacy protection

Mutual Respect Campaign

The Three Commandments of a Mature Hanwha Systems Employee

Promoting mutual respect

Fostering consideration for others

Creating employee harmony

Seven behaviors that we all need to follow to be happy

- Challenge** Support, recognize, and give rewards even for small challenges.
- Innovation** Find ways to say 'yes', not reasons to say 'no.'
- Communication** Don't read between the lines in every conversation.
- Customers** Engage with my customers every day to be the best expert I can be.
- Collaboration** Together, no task is too hard.
- Trust** Trust and acknowledge each other based on mutual respect.
- Growth** Be proud of being an extraordinary expert in my field.

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Promoting employee happiness

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Recruiting top talent

Recruiting non-face-to-face employees

Hanwha Systems operates a fair and transparent recruitment process to attract exceptional talent in various fields, both for new and experienced employees. Our recruitment process is facilitated through the Hanwha Group recruitment portal (Hanwhain <https://hanwhain.com>). In order to enhance convenience for applicants and optimize the efficiency of the recruitment process, we have transitioned the recruitment briefing and interview procedures to an online format.



Respecting diversity and promoting an inclusive culture

Hanwha Systems promotes a corporate culture that values diversity and strictly prohibits discrimination in all aspects of employment, such as recruitment, compensation, and promotion, based on gender, race, nationality, religion, age, disability, and place of origin. To enhance employee diversity, we diligently prepare a report on the implementation of affirmative action measures, as mandated by the Ministry of Employment and Labor, and annually disclose our goals and accomplishments to government agencies. Additionally, we have implemented policies to ensure compliance

with wage standards and working hours, as well as to prevent workplace bullying and sexual harassment. These policies are aimed at safeguarding the human rights of our employees.

Recruiting from socially vulnerable groups

Hanwha Systems actively hires veterans each year in alignment with our corporate characteristics. Our efforts in employing veterans have been recognized by the Veterans Affairs Administration, earning us the distinction of being an excellent company in this regard. Furthermore, we contribute to creating a stable work environment for socially disadvantaged individuals by increasing the number of direct and indirect job opportunities for people with disabilities. This includes positions in in-house facilities, printing and business card production, and the Health Keeper System.

Creating a family-friendly corporate culture

To foster a harmonious work environment, Hanwha Systems implements a variety of gender-neutral family support policies. We strive to prevent women from facing career interruptions due to pregnancy and childcare by offering flexible working hours and promoting the utilization of family-friendly leave options, including pre- and postpartum leave and paternity leave. Additionally, we are expanding our support measures to cater to diverse family structures. This includes providing infertility leave, financial assistance for fertility treatments, and parental leave for children with disabilities.

From submitted data in the Affirmative Action Performance Report 2023

Item	Target number in 2022 (submitted in the action plan)	Actual number in 2022	Achievement Rate
Number of women in the workforce	566 / 3,975 (14.24%)	643 / 4,343 (14.81%)	113.6%

* Employee counting standards are different in the Business Report and the Sustainability Report.

Employee Diversity

Category		Unit	2020	2021	2022
Female Managers	Number of female managers (assistant manager and above)	Persons	313	321	402
	Percentage of female managers	%	10.2	9.9	11.5
Recruiting socially disadvantaged individuals (regular + non-regular positions)	Number of people with disabilities hired	Persons	49	51	57
	Percentage of people with disabilities hired	%	1.33	1.30	1.33
	Number of veterans hired	Persons	60	59	62
	Percentage of veterans hired	%	1.63	1.50	1.44
	Number of foreigners hired	Persons	2	4	0
	Percentage of foreigners hired	%	0.05	0.10	0.00

Top talent acquisition efforts

Employment-linked internship program

Hanwha Systems implements a short-term internship program specifically for (prospective) graduates, with the goal of recruiting top-tier talent. Through active utilization of this internship system, we aim to enhance our company's competitive edge by nurturing individuals with the necessary skills and capabilities gained from prior hands-on experience. In 2022, a total of 54 interns successfully transitioned into full-time employment, further solidifying the strong correlation between our internship program and hiring initiatives.

Recruiting talent with the competencies linked to future new businesses

To bolster our competitiveness in the global business landscape, Hanwha Systems places significant emphasis on recruiting top talent who align with our future new businesses and key business strategies.

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Hanwha offers an easy and streamlined recruitment process designed to save time.



Hanwha Systems offers internship opportunities that allow individuals to witness the passion and drive of our employees firsthand. Through our internships, we offer applicants the chance to discover and ignite their inner spark, while also experiencing the dynamic spirit of our Hanwha team in action.



Applications can be submitted through Hanwha's website, www.hanwhain.com. Click on the apply button in the internship recruitment posting and complete the application form.

Submit an application form



We conduct an initial competency assessment based on an applicant's basic qualifications and cover letter.

Document screening



Our recruitment process involves one to two rounds of interviews, where we conduct a thorough assessment of an applicant's job competency, personality, and compatibility with our organization. To find the right candidate for the position, we utilize various interview techniques such as presentation interviews, discussion interviews, training camp interviews, situational interviews, and English proficiency interviews. Please refer to the specific recruitment posting for details on the interview format and stages, as they may vary depending on the group company.

Recruitment Process



During the internship program, which typically lasts for a week or more, interns will have the opportunity to engage in actual work and immerse themselves in the company's environment. Throughout this period, we will comprehensively assess their job competency, adaptability to the organization, and potential for growth. Within the internship period, a final interview will be conducted to determine an intern's final acceptance into the company.

Internship



Successful candidates will undergo a medical examination and then have the opportunity to fulfill their dreams as official employees of Hanwha.

Final selection and acceptance

Developing and Training Employee Competency

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Developing and Training Employee Competency

Talent Development System

Hanwha Systems is committed to actively supporting the development of its employees competitiveness through a range of talent development programs. We prioritize the direct development of high-quality educational content and deliver effective training using both online and offline methods.

We are dedicated to providing diverse training opportunities to cultivate global leaders and exceptionally talented individuals. Our training programs encompass job competency training, language proficiency development, and support for outstanding individuals pursuing advanced degrees such as master's and doctoral degrees. We also make an extra effort by offering financial support for education expenses that surpasses the industry average on a per capita basis.

Measuring training effectiveness

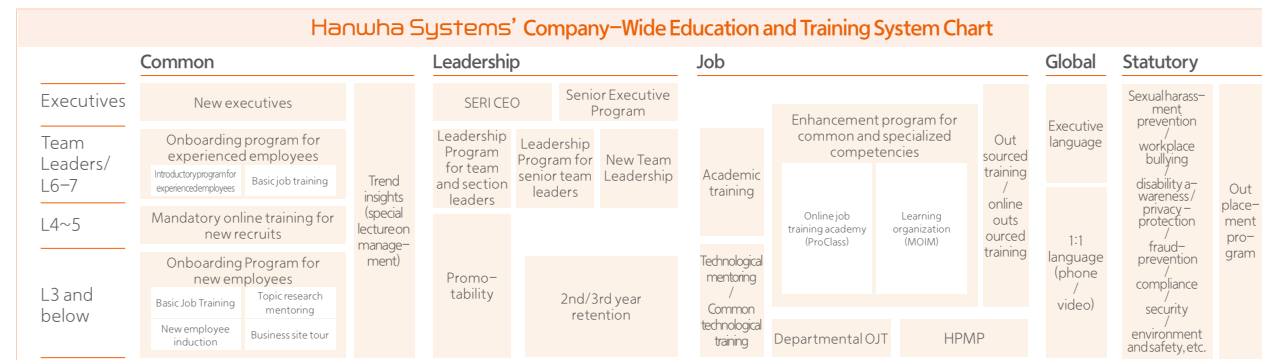
To continuously enhance the quality of our training programs, **Hanwha Systems** conducts surveys on all the training conducted over the years and closely monitors key indicators of training effectiveness. We collect quantitative data on training satisfaction and gather qualitative feedback on areas for improvement.

Employee Human Rights Education

Category		Unit	2020	2021	2022
Human Rights Education	Total	Hours	12,276	10,938	12,525
	Sexual harassment prevention training (Defense)		4,970	3,603	2,621
	Sexual harassment prevention training (ICT)				1,554
	Disability awareness training (Defense)		3,653	3,732	2,621
	Disability awareness training (ICT)				1,554
	Workplace bullying prevention training (Defense)		3,653	3,603	2,621
	Workplace bullying prevention training (ICT)				1,554

Company-Wide Education and Training Status

Category		Unit	2020	2021	2022
Total training costs	Subtotal	KRW million	578	1,178	3,047
	Defense Sector		350	966	1,317
	ICT Sector		228	212	1,730
Total training hours	Subtotal	Hours	67,472	144,628	140,829
	Defense Sector		42,886	65,169	73,267
	ICT Sector		24,586	79,459	67,562
Total number of employees participating in training	Subtotal	Persons	3,706	3,779	4,288
	Defense Sector		2,348	2,559	2,707
	ICT Sector		1,358	1,220	1,581
Training cost per employee	Subtotal	KRW thousand/person	317	551	1,581
	Defense Sector		150	380	487
	ICT Sector		429	1,041	1,094
Training hours per employee	Subtotal	Hours/person	36	90	70
	Defense Sector		18	25	27
	ICT Sector		18	65	43
Number of online job training academy courses	Courses		46	89	110
Online job training academy course completions	Persons		1,927	3,447	2,934
Academic trainees (cumulative/enrolled students + graduates)	Persons		132	141	155



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Employee Competency Enhancement Programs

Onboarding program for new employees
Hanwha Systems has been consistently developing and improving upon the Metaverse Introductory Course, which was launched in 2021. In 2022, we introduced two-way communication training and activities using 'Gather Town' for new recruits, facilitating corporate understanding and fostering networking opportunities among employees.

As social distancing restrictions eased after the COVID-19 pandemic, we reintroduced face-to-face activities, including business site tours, team building, and social contributions as part of our offline curriculum during the induction and onboarding process. These activities aimed to strengthen employees' understanding of our corporate culture and cultivate a sense of belonging within the organization.



Onboarding Program for new recruits (handing out coal briquettes, baking the bread of Love)



Gather Town

Employee Job Competency Enhancement Program
Hanwha Systems offers step-by-step online learning courses that cover basic competencies for each job category. This enables employees to access training for areas where they may have knowledge gaps at any time and from anywhere. Additionally, through our voluntary learning organization support system, we

utilize in-house job experts who share valuable work knowledge and skills with fellow employees. This approach has garnered positive feedback from our workforce as it addresses their unique training needs and enhances their job competencies.

'Frontier Program' for supporting new businesses
 Since 2021, **Hanwha Systems'** defense division has implemented the Frontier Program, which offers resources such as grants, infrastructure, and mentoring to support the commercialization of new business ideas selected through a company-wide voting process. This program fosters an environment where employees, regardless of their position or seniority, can present innovative ideas. In 2021, three teams were selected for the first program, and in 2022, two teams were chosen for the second program. The selected ideas undergo regular feasibility assessments, and if deemed viable for commercialization, we provide continued support through business unit transfers or independent spin-offs. Through this program, we cultivate a culture of taking on new challenges and create new opportunities for employees with a passion for new ventures, while expanding avenues for the discovery of new businesses.

Training programs for developing technological professionals
 To proactively address the challenges posed by the Fourth Industrial Revolution and enhance our competitiveness in the digital platform market, **Hanwha Systems** has implemented training programs to cultivate specialized talented individuals in the field of information and communication technology. We have designed and implemented diverse curricula aimed at enhancing our employees' AI literacy, including introductory and advanced training on AI technology for practical application in the corporate setting. Additionally, we offer company-wide position-specific and stage-specific AI training programs.



Modulabs - Joint operation of AI talent development and recruitment linking programs

In June 2022, **Hanwha Systems** entered into a memorandum of understanding (MOU) with Modulabs, a startup that operates an AI education community, with the aim of fostering and acquiring AI experts.

Under this agreement, **Hanwha Systems** and Modulabs will collaborate on the development of educational content aimed at enhancing the AI competency of employees. Additionally, joint efforts will be made in the operation of recruitment-linked programs targeting AI experts. The collaboration will extend to various activities, including the development and operation of step-by-step AI educational content, recruitment-linked programs for exceptional human resources, and AI-related business endeavors.

The collaboration between **Hanwha Systems'** next-generation digital transformation business optimization AI brand, HAIQV, and Modulabs' self-directed AI coding training system, AIFEEL, is creating innovative synergies.



Retiree assistance program
Hanwha Systems offers post-retirement life planning and re-employment support services to employees aged 50 and above who are planning on retiring due to involuntary circumstances. The training curriculum comprises seven modules (change management, life planning, self-diagnosis life check, career understanding, career deepening, self-development, and career planning). These modules are available online, enabling participants to complete the course at their own pace and convenience, based on their individual schedules and circumstances.

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Performance Evaluation and Compensation

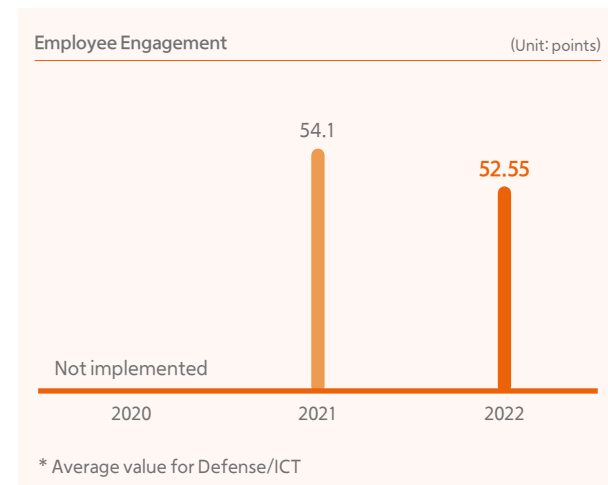
A fair performance evaluation system

Hanwha Systems implements a compensation system that upholds the principle of fair evaluation for all employees, regardless of their gender or position. The system includes regular assessments of individual work performance and competencies twice or three times a year. Employees are rewarded based on their performance level, which is categorized on a five-level sliding scale of S, A, B+, B, and C. To ensure transparency in the compensation system, we provide feedback and appeal procedures based on the evaluation results. These processes serve to encourage employees' long-term growth and development within the organization.

A fair compensation system

Hanwha Systems implements a range of monetary compensation systems aimed at motivating employees to achieve short-term performance goals and sustain performance levels. These systems incorporate differentiated performance-based pay and individual base wage rates, ensuring a fair compensation structure.

Furthermore, we engage in annual wage negotiations with the Workers' Committee and Labor Union, as well as biennial collective bargaining agreements, to maintain and enhance favorable working conditions for our employees. This process involves periodic communication and discussions between labor and management.



A Positive Corporate Culture

A fair performance evaluation system

Every year, **Hanwha Systems** conducts an organizational culture diagnosis to assess employee engagement, corporate direction, core values, work atmosphere, and systems. Concurrently, we have introduced a pioneering smart work system and remote work infrastructure, leveraging digital contactless solutions in the defense industry. These measures have allowed us to create a non-face-to-face work environment, aligning with our ongoing efforts to enhance employee satisfaction.

The first smart work system among affiliates

Hanwha Systems, the leading company in the defense industry and the leading affiliate of the **Hanwha Group**, has established a smart work system and remote work infrastructure based on digital contactless solutions, successfully creating a non-face-to-face work environment. A key aspect of this initiative is the separation of the defense development network from the general business network, ensuring the protection of defense technology while enabling employees to perform their duties from any location. We are also transforming the traditional fixed office commuting method by introducing flexible office spaces, which promote various forms of work. Moreover, we have adapted our training and employee communication programs to be conducted in a non-face-to-face manner, allowing for active and organized lifestyles even in remote work situations.

Work-life balance for employees

Hanwha Systems is committed to improving employee satisfaction by offering a range of employee benefits and amenities. We strive to enhance the work environment, provide living support, prioritize healthcare, and support leisure activities for our employees.

A happy workplace

Our goal is to create a workplace where employees feel happy and fulfilled. To achieve this, we provide various amenities and benefits. Employees can go on leave, relax in our various break facilities, and have access to quality meals (including breakfast, lunch, and dinner) right at the workplace. We also support housing stability through housing loans for those who need to relocate. In addition, we offer personal leave for self-development as well as period sabbaticals.

Enhanced employee communication channels

To enhance communication among employees, **Hanwha Systems** publishes a kiosk letter on a monthly basis. This newsletter includes important company news and introductions of new recruits. It is distributed through various channels, including internal bulletin boards and non-face-to-face channels (IPTV and kiosks with reserved seats). Additionally, we organize various organizational activation programs, such as clubs and cultural centers, to promote communication within the company. To further enhance internal communication, we select Blue Board members in support of gathering innovative opinions from creative individuals as well as healthy organizational culture activities.

Collective agreements

To enhance communication among employees, **Hanwha Systems** engages in negotiations with employee representative organizations (Workers' Committee and Labor Union). These negotiations occur annually for wage negotiations and every two years for collective agreements. They ensure that diverse employee opinions are collected through a collective agreement. Furthermore, in situations where employee dismissals are necessary due to urgent management reasons, the company is committed to notifying and consulting with employee representative organizations at least 50 days in advance.



New Recruit Manual

Blue Board

A healthy workplace

To support the healthy lives of our employees, we provide mental health programs, health checkups, and medical expense support systems for our employees and their families.

Quality Management

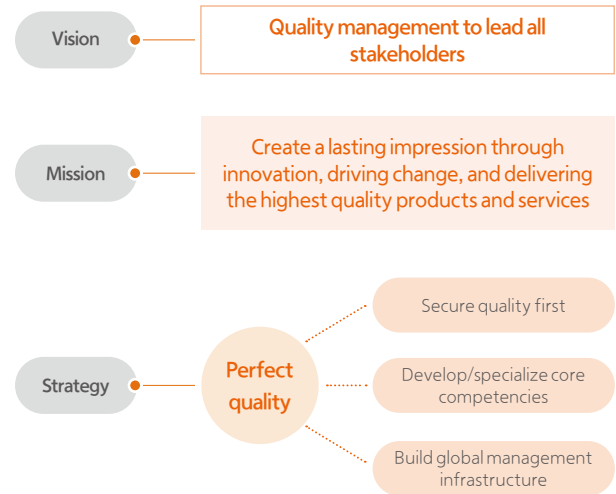
Hanwha Systems strives to meet the highest quality standards and customer needs, as evidenced by our quality management system (ISO 9001) certification and productivity management system (PMS) Level 8. We are committed to enhancing the trust and satisfaction of all stakeholders.

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Quality Management System

Quality Management Vision and Strategy

Guided by an unique vision described as ‘quality management that can lead all stakeholders,’ Hanwha Systems has implemented a proactive and preventive quality management system, leveraging top-notch global product development and implementation along with stable production practices. We have implemented a quality management strategy to meet the expectations of customers and the market, and by ensuring global quality competitiveness, we strive to not only satisfy customers but also leave a lasting impression.



Quality management policy

Hanwha Systems is a global total solution company leading smart technologies in the fields of advanced defense electronics and IT. All employees at Hanwha Systems strive to achieve the highest level of global quality competitiveness by adhering to four principles: customer satisfaction, change and innovation, perfect quality, and observance of the basics.

Customer Satisfaction	Always strive to listen to the customer's point of view and aim to satisfy not only our customers but also their own customers with the highest quality products and swift and accurate services.
Perfect Quality	Take personal and company pride in delivering perfect quality with your own hands.
Change & Innovation	Continuously learn and fearlessly embrace change to gain a competitive edge and shape future markets.
Observance of the basics	Make quality the top priority and adhere strictly to regulations and processes for flawless execution from the start.

Quality management goals and plans

Hanwha Systems sets quality management strategies and goals annually and reports on the progress of strategy implementation, quality performance, and core quality issues at the quarterly quality management meetings led by the CEO. We take proactive measures to address significant internal and external quality matters, issues, and risks, and promptly resolve customer complaints to ensure customer satisfaction and meet our management objectives.

Category	KPI	Unit	2021		2022	
			Plan	Result	Plan	Result
Market quality (customer)	Number of customer complaints (defects)	Cases	0	0	0	0
	Market defect rate	%	0.40	0.282	0.36	0.165
	System supplier process defect rate	%	1.09	0.949	1.00	0.627
Development quality	Control Gate Conformity	Point	91.2	94.85	92.36	94.9
	Customer test failure rate (development)	%	0.09	0.017	0.086	0
	Compliance level with the development process	Point	90.0	94.69	91.32	94.78
Manufacturing quality	Process defect rate	%	1.00	0.870	0.95	0.671
	Supplier attributable defect rate	%	0.41	0.271	0.37	0.218
Services	On-time service rate	%	95.0	99.2	95.0	99.0
	Service satisfaction	%	95.0	98.7	95.0	99.1

<p>Quality services satisfaction 99.1%</p>	<p>Productivity management system (PMS) Level 8</p>	<p>Counterfeit electronic parts avoidance rate 100%</p>	<p>Quality management training Completed by 1,000 employees</p>
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Quality Management System

To maintain a comprehensive quality assurance system throughout the total life cycle of our products and services, **Hanwha Systems** has implemented a collaborative system involving relevant departments. We operate a three-stage quality assurance system that is specifically optimized for each stage: R&D, mass production, and operation maintenance.

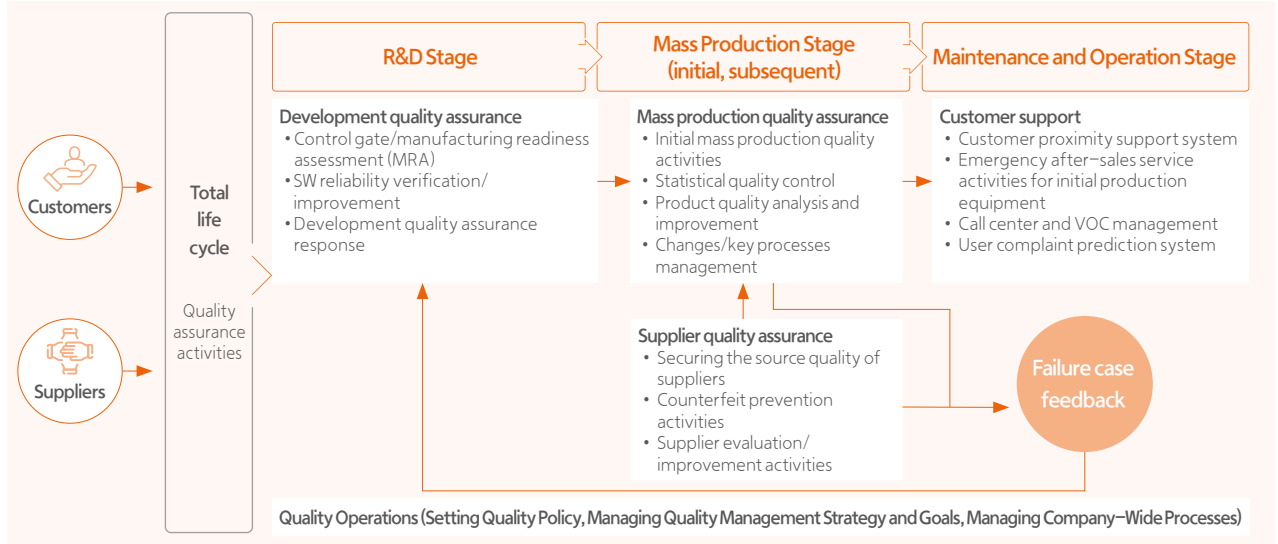
In the R&D stage, we implemented a proprietary control gate system, a first in the defense industry, for each development stage to ensure the highest level of reliability and design quality. Additionally, we established a dedicated Cross-Functional Team (CFT) responsible for verifying the design quality of our products. Simultaneously, we diligently review the approval process for entering the mass production stage, ensuring that design quality is effectively managed and that mass production can be successfully achieved.

During the mass production stage, we implemented a real-time statistical process management system that allows us to monitor and manage all processes. This system is integrated with our Manufacturing Execution System (MES) and Quality Information System (QIS), which are based on our company-wide ERP system.

We also developed a Supplier-Quality Information System (S-QIS) that facilitates real-time communication with our suppliers and enables effective management of their quality performance. This ensures the stable supply of high-quality parts to **Hanwha Systems**. Moreover, we conduct periodic process quality assessments (PQA) of our internal processes and suppliers to identify and improve areas for improvement.

Lastly, in the operation maintenance stage, we strive to maintain service quality at the post-supply stage and respond to customer complaints in a timely manner through various customer support activities. This includes implementing a customer proximity support system centered on major base areas, conducting emergency after-sales service activities, utilizing a user complaint prediction system, operating a call center, and managing the Voice of Customer (VOC) platform.

In addition, we are committed to creating the best quality and service by implementing a failure case feedback system. This system allows us to address and resolve quality problems and defects that occur at each stage, ensuring that they do not recur in the future.



Quality-related certifications

Hanwha Systems is dedicated to establishing and operating a global-level quality management system through continuous acquisition and maintenance of relevant certifications.

We have obtained and maintained ISO 9001 certification, a global quality management system. Additionally, we have secured certifications for defense quality management systems (KDS 0050-0090), as well as AS9100 and AS9110 certifications specific to aviation and satellite products. During the first half of 2022, we attained the Level 8 certification, the highest industry level, in the Productivity Management System (PMS) recertification examination. Furthermore, we have obtained and sustained the highest certifications for R&D maturity, including CMMI Level 5 and TMMi Level 3. These certifications recognize our ability to meet international standards not only in our management system but also in the quality level pertaining to research and development.



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Failure rate management

Hanwha Systems is committed to preventing service and system failures through proactive and continuous monitoring. By doing so, we aim to minimize any potential damage to our stakeholders, including customers and suppliers. Our approach involves implementing consistent failure rate management to effectively reduce failure rates and enhance stakeholder satisfaction.

Category	Description	2021		2021		2022	
		Cases	Time (hrs./min)	Cases	Time (hrs./min)	Cases	Time (hrs./min)
Performance issues	Number of failures over 10 minutes and under 30 minutes	27	4 hrs. 33 min	21	1 hr. 59 min	23	2 hrs. 47 min
Service interruptions	Number of failures over 30 minutes	14	61 hrs. 29 min	6	50 hrs. 42 min	8	49 hrs. 14 min
Customer downtime	Failures lasting more than 10 minutes (based on ICT sector management)	41	66 hrs. 2 min	27	52 hrs. 41 min	31	52 hrs. 1 min

Developing a big data-based customized quality management system

Hanwha Systems has undertaken research to analyze and predict quality issues using product and service quality data. This effort has enabled us to establish a linkage of quality data across various stages and redefine our cause analysis system for quality issues based on data. Moving forward, our focus is on operating an efficient and effective quality management system that is built upon a foundation of high reliability. To achieve this, we are committed to upgrading our quality data analysis system and establishing a foundation for Quality 4.0.

Product management and improvement activities

Hanwha Systems diligently manages problems related to malfunctioning products or those that have been recalled for improvement through continuous monitoring of shipped products. In addition, we proactively conduct improvement activities to enhance product quality and address process vulnerabilities. This involves a thorough analysis of quality performance data to identify improvement targets, such as persistently recurring defects.

Counterfeit electronic parts management

Hanwha Systems verifies electronic parts procured from suppliers using our own counterfeit electronic parts inspection procedures. We require suppliers to follow AS5553 standards and quality assurance methods (IDEA-STD-1010-B, AS6081, etc.) to manage counterfeit suspect parts. We ensure the systematic management of counterfeit electronic parts by supporting suppliers in identifying suspected counterfeit parts (history searches) and through non-destructive inspections (X-ray).

Quality Management Training

At **Hanwha Systems**, all employees recognize the importance of project completion as the primary driver in quality management. To enhance individual quality competency, we provide regular annual training.

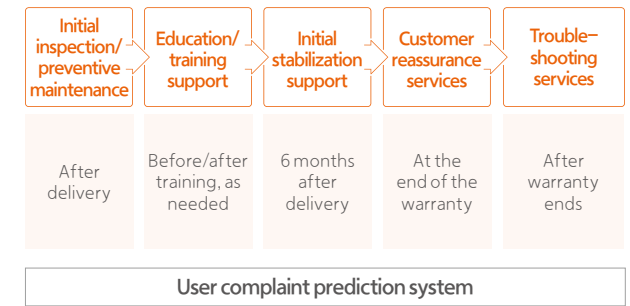
Category	Schedule	Number of completions (attendees)
Quality Mind-set	Apr	812
Customer mindset improvement (basic, advanced)	Feb, May, Jul, Aug	113
Quality management training (Counterfeit, ESD, MSD, etc.)	Mar, May, Jun, Jul, Aug, Sep	1,000
Process training (understanding quality management systems)	Feb, May, Jul	5
Statistical quality management training (Minitab, basic/advanced)	Feb, Apr, May, Jul	23
Measurement system analysis (beginner/intermediate/advanced)	Apr, May, Jul	18
Electrical and electronic assembly training (IPC-A-610, 620)	Feb, Apr, Jul	28
Quality instructor training (CQE certification class, SW reliability test, correlation/regression analysis)	Nov	387

Improving Customer Satisfaction

Customer satisfaction management strategies

Hanwha Systems places customer satisfaction as its top priority in sustainable management. We have implemented a proactive process to manage customer complaints and fulfill their needs. We take full responsibility for ensuring that our products' quality directly translates to customer satisfaction. Additionally, we closely monitor the performance of quality assurance activities for both our suppliers and in-house processes through a robust verification system. In the event of any identified issues, we take prompt action to prevent them from reaching our customers. Furthermore, we consistently engage in quality improvement activities to proactively address potential failures.

Proactive complaint management process



Assisting customers in using our services and products

Hanwha Systems goes above and beyond to provide comprehensive assistance to our customers. Upon delivery, we offer a range of support including initial inspection, education/training, and assistance in stabilizing product use for a period of 6 months. At the conclusion of the warranty period, we conduct a joint military/company inspection in addition to a reassurance service that transfers valuable know-how related to operation and maintenance. Even after the warranty period, we offer a troubleshooting service, where our experts visit customers or attentively listen to VOC through our dedicated call center.

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Hanwha Systems has also developed an integrated system support (IPS) to ensure efficient and cost-effective logistics support. Through the application of techniques such as Product Support Analysis (PSA) and Reliability, Availability & Maintainability (RAM) analysis, we develop and deliver high-quality IPS elements that contribute to the smooth operation and maintenance of systems. Furthermore, we actively support the Depot Maintenance business, providing services to extend equipment lifespan and enhance performance.

Hanwha Systems also establishes satisfaction targets for services and products we deliver to our customers, which are continuously managed and monitored. In 2022, our service satisfaction target was set at 95%, and we exceeded this target with an actual annual performance of 99.1%. To ensure high service satisfaction and minimize customer complaints, we continuously strive to provide exceptional quality services during the product maintenance phase. We proactively address any concerns or complaints received from our customers, providing responses promptly and effectively.

Improve Communication with Customers

Hanwha Systems actively gathers feedback from our customers regarding our products and services by expanding communication channels and carefully considering the most suitable methods for each channel, in order to facilitate effective communication.

Customer consultation channels

Operating customer consultation channels

Hanwha Systems receives VOC communication by phone and email through the customer center on our website. We have also diversified our customer channels by transparently disclosing contacts for each business site.

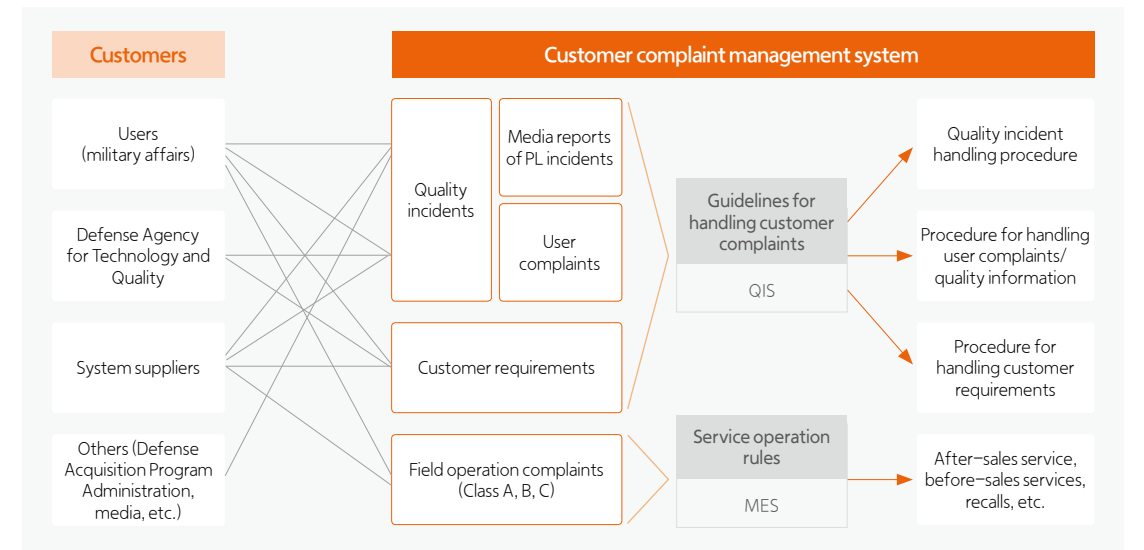
Quick access to business site and customer support center contacts

Hanwha Systems' diversification of customer touchpoint channels

Listening to customer requirements by utilizing diverse channels, and improving customer loyalty by promoting products



Customer complaint management process



Shared Growth

At **Hanwha Systems**, we embrace the philosophy of 'Going Further Together,' which embodies a harmonious balance between competition and cooperation with our suppliers.

Our focus is on creating new growth engines that can unlock future value, and we actively seek out and expand various win-win policies to foster a sustainable ecosystem of shared growth.

In recognition of these achievements, we received an 'Excellent' rating in the first evaluation of the 2022 Shared Growth Index.


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Shared Growth System

Shared Growth Direction

Hanwha Systems is dedicated to fostering sustainable future value through collaborative growth and building trust with our suppliers. We actively engage in a range of activities aimed at establishing a clear direction and key initiatives for shared growth. Additionally, we place great emphasis on creating a trade culture that is fair and transparent.

Key Shared Growth Activities in 2022

- 
Installing institutions and apparatuses
 - Established an apparatus for swift dispute resolution
 - Established a procedure for supplier feedback
 - Established and operated an internal review committee for subcontracting transactions
 - Established and operated a system to block unfair subcontracting practices
 - Set up a department dedicated to promoting fair trade within the company
 - Conducted post-verification procedures to ensure the legality of subcontracting transactions
 - Implemented appropriate personnel measures for employees found to violate subcontracting/fair trade laws
 - Conducted monthly surveys on subcontracting practices, led by the compliance team, and reported findings to management
- 
Financial and technological support/protection
 - Established a co-investment fund for technology development projects
 - Established a win-win fund in collaboration with financial institutions
 - Conducted on-site visits to suppliers by technology protection and security experts and provided guidance for improvement
 - Promoted the use of the win-win fund by secondary suppliers and provided support for process quality certification
- 
Training and staffing support
 - Supported suppliers in their human resources and recruitment efforts (reached an agreement for 165 workers)
 - Contributed to the Win-Win Partnership Fund to support the Fill-In Tomorrow Subsidy Program for core personnel (support for 25 workers)
 - Conducted the military blueprints expert certification program (140 trainees completed the program)
 - Operated the online job training website, Win-Win Academy (2,000 individuals signed up for classes)

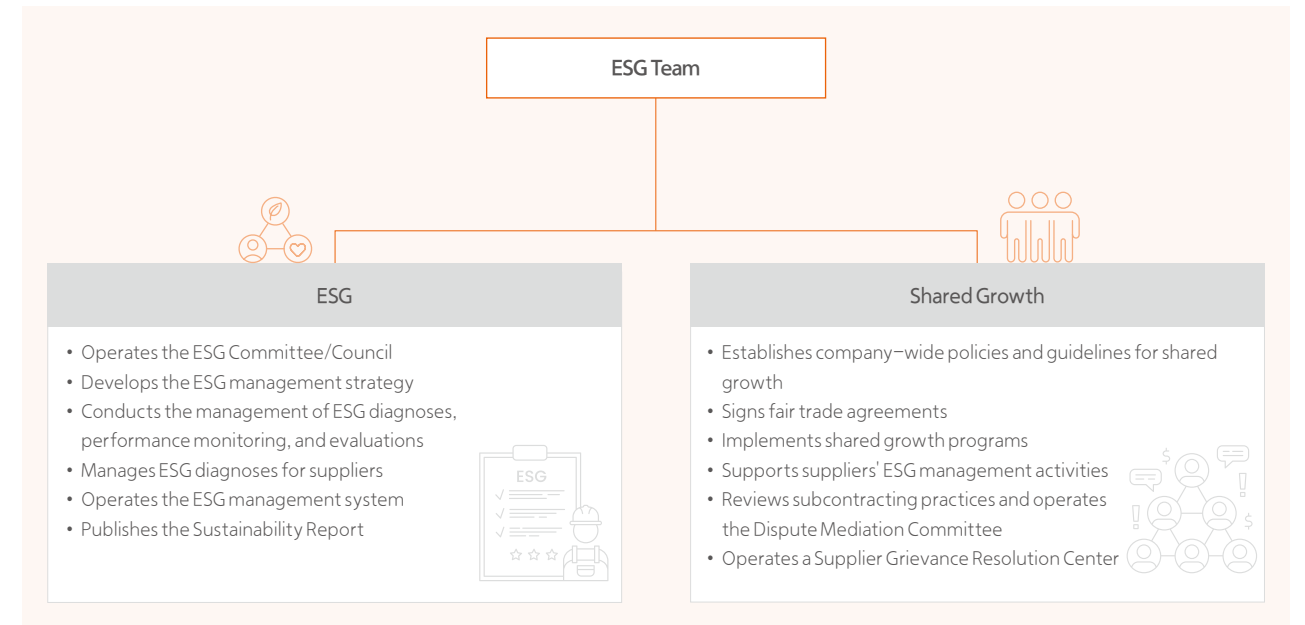
Shared growth support organization

Hanwha operates a dedicated department to support shared growth. The department is responsible for establishing a sustainable cooperation system with our suppliers to promote shared growth initiatives. Through this department, we systematically implement support activities for management and supply chain risk management.

Establishing an internal department for promoting fair trade

- Created the 'Fair Trade and Win-Win Partnership Bureau' within the Planning Office in 2020
- Established the ESG Team in 2021, expanding its responsibilities to include ESG, as well as shared growth.
- The ESG Team was separated from the Purchasing Department and established as a dedicated department for promoting fair trade and win-win partnerships.

Organizational Structure for Supporting Shared Growth



Key Achievements in Shared Growth

Win-Win Partnership Program

To achieve sustainable growth with our suppliers, **Hanwha Systems** has signed agreements with various agencies to strengthen their future competencies and expand support programs for their development.

In May 2021, **Hanwha Systems** was selected as a 'Caring Company 2.0' by the Ministry of SMEs and Startups. This recognition acknowledges our contribution to fostering promising SMEs and startups in the materials, parts, and equipment (defense) sectors, as well as the new business sector (UAM, satellite, AI, and blockchain).

In December 2021, **Hanwha Systems** entered into a business agreement with the Korean Commission for Corporate Partnership and collaborating SMEs. The agreement focuses on 'closing the wage gap through innovation and discovering technologically innovative SMEs'. Over the next three years, we will operate a comprehensive win-win partnership program worth KRW 54.9 billion. This program includes co-investment in technology development projects, productivity innovation support, competency development training, payment monitoring services, rewards for outstanding suppliers, incentives, operation of a shared growth mall, support for domestic sales channels, and a win-win fund.

Ministry of SMEs and Startups – Caring Company 2.0

A Caring Company is commonly known as a "voluntary win-win partnership company" that proactively shares its strengths and accumulates know-how not only with its active trading suppliers but also with non-trading SMEs. In particular, a 'Caring Company 2.0' focuses on entering into win-win agreements in relevant fields to promote ESG management between large companies and SMEs.

Hanwha Systems supports promising SMEs with core technologies in materials, parts, and equipment by establishing a co-investment fund of KRW 10 billion over a three-year period. This fund provides technology development funding to help these SMEs thrive. Additionally, we actively provide opportunities for joint participation in large government projects by signing strategic business agreements with SMEs and startups. In the defense field, **Hanwha Systems** is building a strategic cooperation system that offers expert courses in military blueprints and organizing technological briefings and symposiums tailored to SMEs, enhancing their technological competency in the process.

Early payment of 'KRW 9.8 billion' to suppliers

To alleviate the financial burden faced by suppliers, especially during holidays like Lunar New Year and Chuseok, **Hanwha Systems** has been providing early payments every year.

Given the economic crisis and high-interest rates resulting from the impact of a prolonged pandemic, suppliers face increased funding requirements, including bonuses, wages, and payments for raw materials ahead of the holidays. By making early payments, **Hanwha Systems** aims to support our suppliers and help reduce their financial burden while ensuring stable business operations.

Category (2022)	First half of the year (Lunar New Year)	Second half of the year (Chuseok)
Eligible companies	138 companies	75 companies
Early payouts	KRW 6.28 billion	KRW 3.96 billion
Earlier by (compared to the payment date)	11 days	12 days



Caring Company 2.0 Business Agreement

Agreement on closing the wage gap through innovation

Category	Support Activities	Details
Fostering promising companies in materials, parts, and equipment	Identifying and funding technology development projects (Co-investment fund for technology development: KRW 10 billion over 3 years)	List of key supported technologies <ul style="list-style-type: none"> • Technology development for localizing module power converters • Development of HD-class uncooled thermal imaging modules (localized) and dual IP cameras with high-magnification middle modules • Development of high-performance cooled thermal imaging cameras using HOT sensors • Standardized power distribution unit development for naval vessels • Development of rotary joints for radar (localized)
Signed MOUs with SMEs in the defense sector	Signed MOUs with SMEs	Opportunities for joint participation in government projects/joint participation assignments <ul style="list-style-type: none"> • Development of a tactical communications system based on moving APs • Development of integrated communications terminals and network technology for battlefield adaptive multi-layer communications
	Support for improving technological competency	Support for improving technological competency <ul style="list-style-type: none"> • Held technological briefings and symposiums for SMEs
Creation of a win-win fund for shared growth	Support for the discovery of hidden champion enterprises, startups, and SMEs in the software field	<ul style="list-style-type: none"> • Established a win-win fund for shared growth totaling KRW 31 billion and provided low-interest loans for operating funds to SME suppliers • Supported loans amounting to KRW 22 billion for 20 SME suppliers

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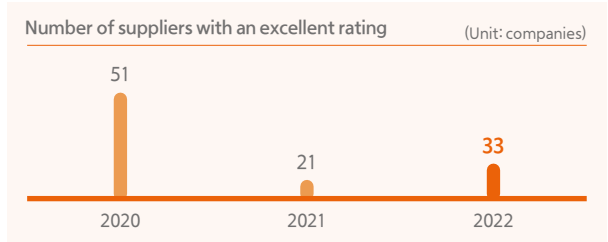
Selecting and incentivizing excellent suppliers

Hanwha Systems is dedicated to promoting ESG management systems among our suppliers. Each year, we carefully select outstanding suppliers and provide them with incentives as a means to enhance interest in price, quality, and delivery, while fostering shared growth.

Supplier Type	Selection Criteria	Details	Incentives (Common)
Defense	Regular evaluation S grade	Selecting excellent mass production companies	<ul style="list-style-type: none"> Exemption from advance payment guarantee insurance (1 year) Sharing of key business plans: Provision of key business information for the current year Selective priority in quotation opportunities Media coverage Individual rewards
		Selecting excellent development companies	
ICT	General evaluation 40%	Credit rating (S), number of transactions (15), purchasing manager evaluation (15), number of unfair transactions (5)	
		Performance evaluation 40%	

* Preferential treatment for suppliers with excellent ESG evaluations (including compliance with the Code of Conduct)

Evaluation History of Suppliers



Support 'Food Trucks' to send encouragements for excellent performance suppliers



Open Innovation Program

Hanwha Systems is actively promoting the 'Connect: H' open innovation program, focused on identifying and supporting innovative startups in defense technology. This program is designed to foster a network of win-win partnerships. It promotes open innovation by enabling companies to discover new technologies by sharing innovative ideas and future technologies through partnerships with suppliers rather than relying solely on their own R&D efforts.



Company Name	Core Technologies:	Applicable Business Areas:
DeepX	Neural Processing Unit (NPU)	Firearm control equipment and autonomous driving
DeltaX	AI image analysis and 3D reconstruction solutions	3D image estimation
Mopic	3D effects on flat displays without the need for wearing a head-mounted display (HMD)	rearview camera and drone remote control
Clika	Machine learning model optimization technology	Compression of SW capacity through lightweighting
ThermoEye	Thermography distance measurement and AI-based object detection	Observation of high-speed moving objects

In September 2021, Hanwha Systems partnered with N15 Partners, a startup investment and incubation company, to select and collaborate with three domestic militech (military technology) companies. These collaborations focus on areas such as drone-based information collection and flight control technology, wearable cameras and image synthesis, and HMDs. In 2023, Hanwha Systems is continuing its collaboration with startups through Startup Autobahn Korea. The goal is to select and collaborate with five startups, expanding our business areas and providing growth momentum to promising companies.

Creating a Win-Win Partnership Fund

Hanwha Systems has partnered with financial institutions to establish a Shared Growth Fund worth KRW 31 billion. This fund aims to support suppliers by offering loans at lower interest rates than the standard rate.

The primary goal of the Shared Growth Fund is to help suppliers with excellent technology and high growth potential thrive by facilitating stable business operations, improving their employment environment, and creating job opportunities for young people. It serves as a valuable resource that fosters the development of suppliers into successful blue-chip companies.

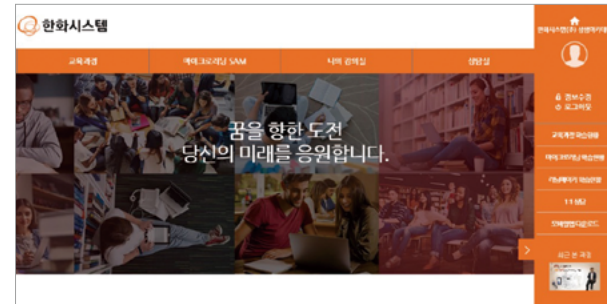
Category		Unit	2020	2021	2022
Financial support (Shared Growth Fund)	Total fund amount	KRW Million	21,000	31,000	31,000
	Amount from financial institutions		14,000	17,500	17,500
	Amount from Hanwha Systems		7,000	13,500	13,500
	Execution amount		11,995	22,737	22,070

Hanwha Systems and the Military Mutual Aid Association have each invested 40 billion won, creating a joint venture fund with a total of 80 billion won. This fund focuses on militech and the Fourth Industrial Revolution. Hanwha Systems and the Military Mutual Aid Association have devised investment strategies to identify exceptional companies that can maximize synergies with Hanwha Systems' defense business. The fund aims to support new business visions such as LEO satellite communication, UAM, and digital platform businesses. Through equity investments and business cooperation, Hanwha Systems is actively partnering with these companies to drive growth and innovation.

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Training Support

Since 2021, **Hanwha Systems** has been offering a range of training programs through the online training platform, Win-Win Academy, exclusively for its suppliers' employees. Around 1,500 employees from 100 major and secondary suppliers have access to e-learning courses covering topics such as accounting basics, financial statements, document creation and reporting techniques, career planning, new technologies, culture, trends, and other relevant subjects to enhance their competitiveness in their respective roles.



Recent 3-Year Performance of Supplier Training Programs

Category		Unit	2020	2021	2022
Quality requirements training	Number of trainees	Persons	197	195	180
	Eligible companies	Companies	87	54	79
Military blueprints (AutoCAD) expert course	Number of trainees	Persons	221	142	187
	Eligible companies	Companies	78	41	34
Designated Supplier Quality Representative (DSQR) training	Number of trainees	Persons	0	13	15
	Eligible companies	Companies	0	6	10
Compliance (anti-corruption, technology protection, etc.)	Number of trainees	Persons	0	227	0
	Eligible companies	Companies	0	50	0
Win-Win Academy (business skills, statutory mandatory training)	Number of trainees	Persons	486	811	2,284
	Eligible companies	Companies	16	94	50
Subtotal	Number of trainees	Persons	904	1,388	2,666
	Eligible companies	Companies	181	245	173

Supplier employee benefits and rewards

Hanwha Systems actively supports the Fill-In Tomorrow Subsidy Program run by the Korea SMEs and Startups Agency (KOSME), which aims to promote the long-term employment of core employees in our supplier network. We express our gratitude for the exceptional efforts of our suppliers by presenting annual awards to excellent suppliers and individual employees. Furthermore, to support sales channels for SMEs, we have opened the Shared Growth Mall, a dedicated distribution center for SMEs utilized by **Hanwha Systems** employees, to employees of our suppliers. Additionally, we provide them with welfare points.

Category	Supported Programs	Type	Support Cycle	Target Beneficiaries	Support Description	2020		2021		2022	
						Unit	Amount (KRW)	Unit	Amount (KRW)	Unit	Amount (KRW)
1	KOSME Fill-In Tomorrow Subsidy Program	Staffing support	Once a year	First-tier suppliers	Support for corporate contribution	-	-	16 companies/16 individuals	38,400,000	22 companies/25 individuals	57,820,000
2	Excellent supplier rewards	Management support	-	First-tier suppliers	Annual rewards for excellent suppliers and employees participating in business cooperation and shared growth activities	-	-	21 companies	25,000,000	20 companies	20,000,000
3	Benefits	Benefits	-	First-tier suppliers	Provision of welfare points in the Shared Growth Mall	-	-	34 companies	9,270,000	32 companies	10,000,000

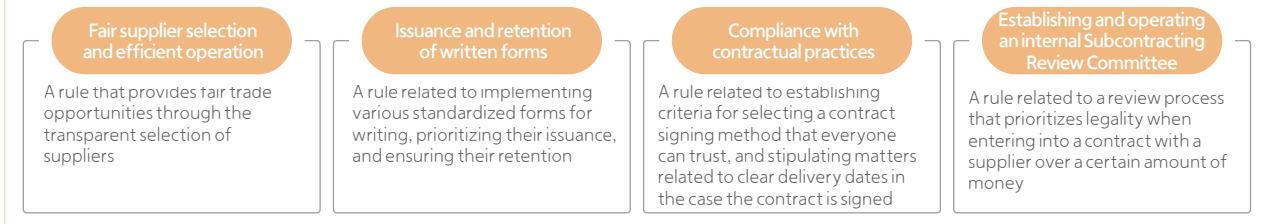
Sustainable Supply Chain Management

Fair Trade Guidelines

Hanwha Systems has established four major guidelines for fair trade to ensure fairness in transactions with suppliers. These guidelines include the fair selection and operation of suppliers; adherence to the Subcontracting Act for document issuance and preservation; the signing of fair contracts; and the establishment and operation of an Internal Review Committee for subcontracting transactions. By following these guidelines, we aim to promote sustainable supply chain management processes and foster an orderly subcontracting system. Furthermore, we have implemented electronic contracts through our purchasing system, which serves as a safeguard to proactively identify and prevent any unfair trade risks while providing protection to our valued suppliers.

Four Major Guidelines for Fair Trade

Hanwha Systems is committed to upholding the four major guidelines for fair trade, ensuring that no unjust situations arise for our suppliers throughout any transaction process. By adhering to Subcontracting Act, we aim to go the extra mile in achieving customer satisfaction.



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Supplier Fair Trade Agreement

In 2022, **Hanwha Systems** entered into subcontracting fair trade agreements with a total of 100 suppliers, demonstrating our commitment to fair trade practices. We actively communicated the objectives of these agreements and our future fair trade-related activities through events like the fair trade agreement briefing session and the win-win partnership hands-on staff meeting. To ensure the implementation of fair trade, **Hanwha Systems** conducts regular and frequent training sessions on relevant regulations and compliance matters, such as the Fair Trade Act and the Subcontracting Act. We also annually improve our training programs based on feedback gathered through our fair trade compliance checks. Furthermore, **Hanwha Systems** promotes the use of fair trade standard contracts between first and second-tier suppliers, monitors payment periods to maintain fairness, and establishes and assesses codes of conduct for suppliers. These initiatives aim to facilitate the establishment of fair trade agreements among suppliers.

Hosting the Shared Growth Partner's Day

In December 2022, **Hanwha Systems** hosted the Shared Growth Partner's Day at our headquarters, inviting representatives from our suppliers and their hands-on staff. During the event, we shared news of our 'Excellent' rating in the first evaluation of the Shared Growth Index and our plans for shared growth activities in 2023. We also conducted an awards ceremony to honor excellent suppliers and employees. Additionally, we acknowledged the growing significance of supply chain ESG management processes as a shared responsibility by pledging to the Declaration on 'Joint Implementation of ESG for Large Corporations and SMEs', which promotes sustainable cooperation and shared growth. This commitment strengthens our dedication to 'Going Far Together' through adherence to the Code of Conduct, energy conservation efforts, and the promotion of a safe and healthy workplace.



Enacting and Evaluating the Supplier Code of Conduct

Hanwha Systems developed and disclosed Code of Conduct Code of Conduct that covers various categories including human rights and labor, safety and health, environment, and ethics. Through this initiative, we encourage our suppliers to actively participate in social responsibility and align with our efforts. During the registration and contracting process with new suppliers, we require their agreement to comply with our Code of Conduct. We monitor compliance and conduct evaluations through the 'Supplier ESG Management Support Project,' which focuses on supply chain ESG practices.

Through a comprehensive evaluation of supply chain ESG, which includes assessing adherence to the Code of Conduct, we assign additional points to companies with excellent ratings when selecting our preferred suppliers. These outstanding suppliers may also qualify for various incentives.



Supplier Code of Conduct

Hanwha Systems has implemented the Supplier Code of Conduct to ensure the protection of employee rights, promote a safe working environment, uphold environmental responsibility, and foster fair and ethical business operations throughout the supply chain. We actively manage our supply chain management system in accordance with the principles outlined in the Code of Conduct.

Operating the Supplier Grievance Resolution Center

Shared Growth VOC
Hanwha Systems values the diverse opinions of its suppliers and actively listens to their grievances (related to subcontracting issues: environment, safety, and health; human rights issues, and complaints), improvement suggestions, and opinions concerning dispute resolution.



Performance in Resolving Supplier Grievances (Unit: Cases)

Category	2020	2021	2022
Number of dispute mediation cases received and resolved	-	0	0
Number of grievances, complaints received	32	11	39
Number of grievances, complaints received	32	11	39

* The Dispute Mediation Committee has been in operation since 2021, but no cases have been received.
 * Grievances and complaints received are transferred to the relevant departments for resolution.

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Supporting Supplier ESG Competency Enhancement

Supply Chain ESG Management Policy

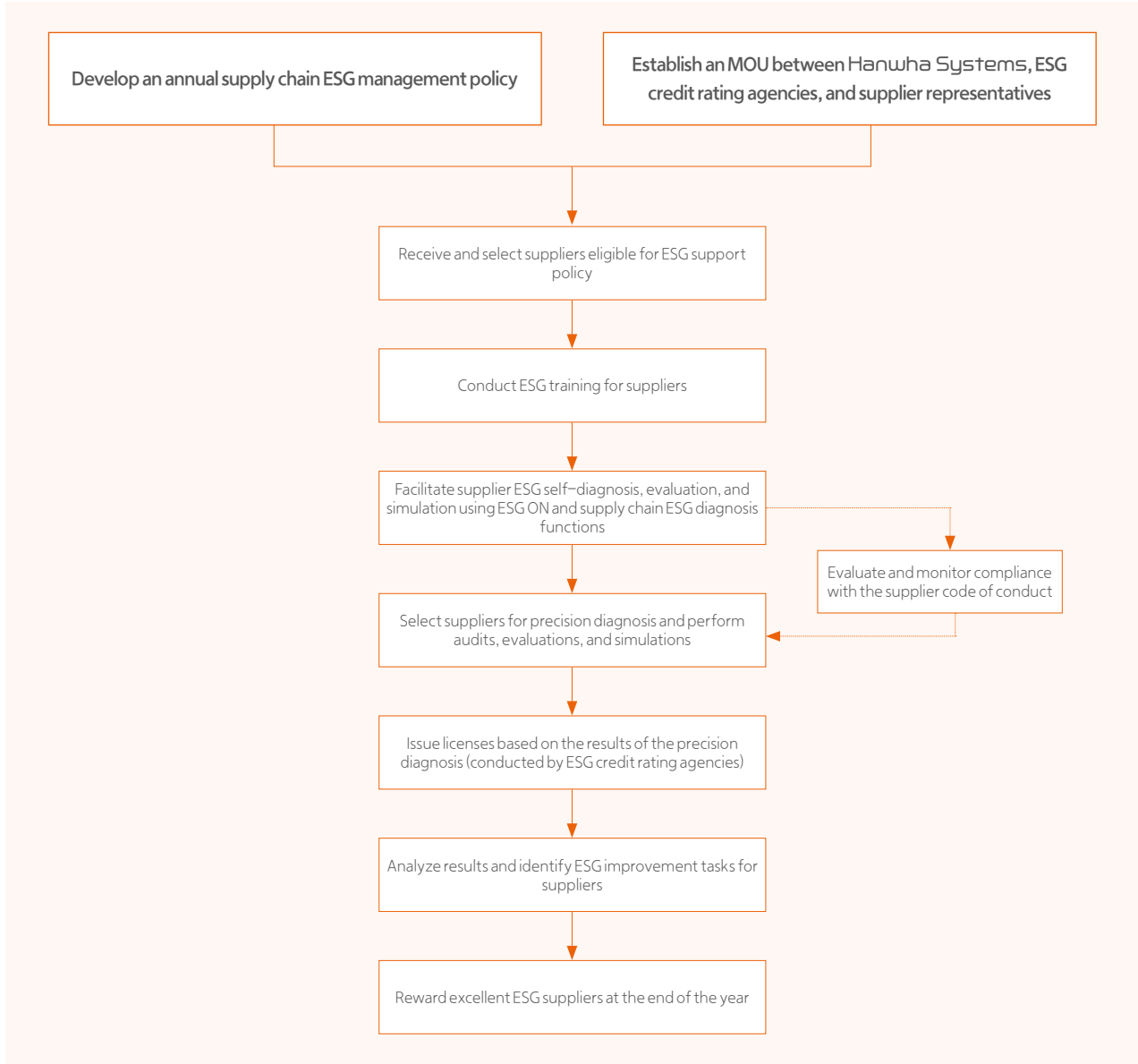
ESG management is becoming increasingly important around the world. From product manufacturing to delivery and services, all connected processes and customers are affected by it, and the competency of suppliers are key to product competitiveness. **Hanwha Systems** is expanding the scope of ESG management activities to include supplier ESG management. To achieve this objective, we have established a system for diagnosing and evaluating the ESG risks of our suppliers. [ESG Management System, ESG ON Established (Sep 2022) and in operation, www.ESGON.com] This system includes ESG training, self-diagnosis, evaluation, and consulting services provided to our suppliers on an annual basis. (One hundred companies received training from July 1 to October 31, 2022, and an additional 100 companies are scheduled for training from September 1 to October 31, 2023.) Furthermore, we have formed third-party representation agreements with e-Credible, an ESG credit rating agency, and Echoit, a supplier representative, to facilitate organic cooperation. ('ESG Management Support for Suppliers' and Agreement, June 21, 2022)

Incentive programs to engage suppliers based on the ESG management performance

To support suppliers in strengthening their ESG competency, **Hanwha Systems** provides free self-diagnosis check-up services for suppliers through ESG ON platform. We also offer suppliers free consulting support for diagnoses requiring due diligence and their improvement. In recognition of suppliers' efforts to enhance their ESG practices, the Sustainable Management Department rewards excellent ESG suppliers through year-end performance evaluations. Put in place since 2022, this program incorporates different reward structures and levels based on the annual performance of ESG implementation. Our objective is to encourage our suppliers to become more engaged and involved in ESG management processes. (On December 20, 2022, **Hanwha Systems** hosted the 2022 Shared Growth Partner's Day, rewarding excellently performing companies. During the event, the Declaration on 'Joint Implementation of ESG Management for Large Corporations and SMEs' was also announced.)



Hanwha Systems X Supplier ESG Management Support Process



Social Contribution

Hanwha Systems practices corporate social responsibility by actively engaging in various social contribution activities as a step toward a joyous future for all humanity. In this regard, we established a social contribution management system based on the Hanwha Group's social contribution management philosophy. Through this system, we actively engage with local communities through a range of activities and systems.

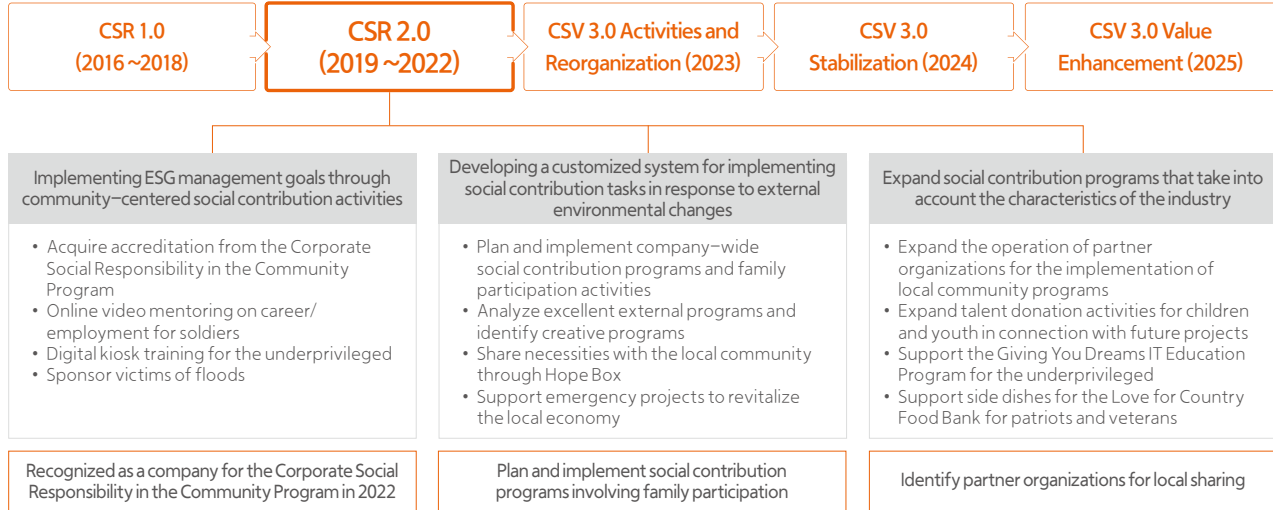
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Social Contribution System

Social Contribution Vision and Strategy

Hanwha Systems is committed to making continuous social contributions and building a vision for a better future in collaboration with local communities. We have been certified as a 'recognized community contribution company' by an external evaluation agency, highlighting our dedication to sustainable business management and fostering cooperative relationships with local communities and customers. In line with our value-oriented vision, Hanwha Systems will continue to actively engage in various social contribution projects, fulfill our social responsibilities, and achieve sustainable management goals through the implementation of our mid-to longterm strategic roadmap CSV 3.0. This roadmap aims to create value not only in economic terms but also in various social aspects, generating positive impacts for both business and society. We will continue to innovate and strive towards creating a better future.

Mid-to longterm Social Contribution Strategy



Social Contribution Objectives



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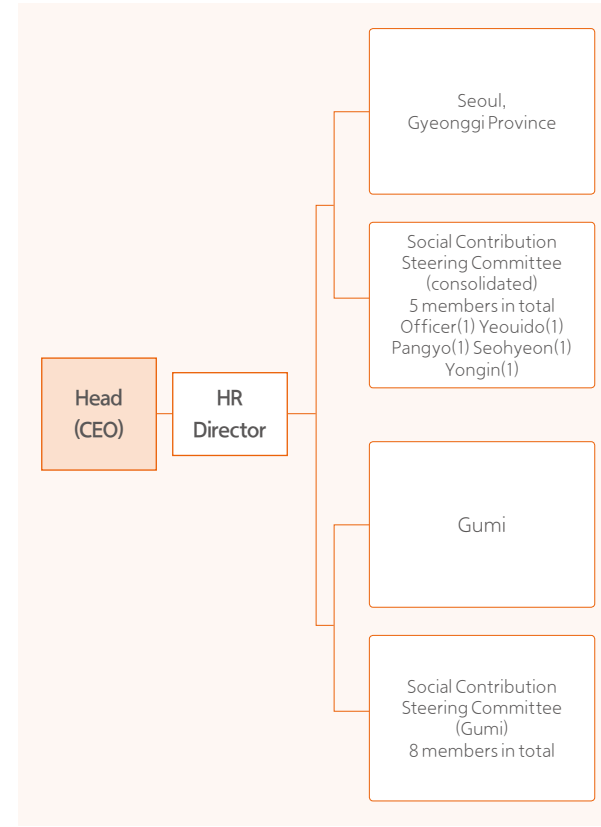
Social Contribution Steering Committee System

Hanwha Systems has implemented a fair and objective decision-making system for social contribution activities through the establishment and operation of the Social Contribution Steering Committee. This committee plays a vital role in enhancing transparency and ensuring the effectiveness of our social contribution initiatives throughout the fundraising and execution process. Moreover, we fulfill our corporate social responsibility by promptly reporting community risks to the ESG Council and the Board of Directors, ensuring a swift decision-making process in addressing these concerns.

Composition and Roles of the Social Contribution Steering Committee

Social Contribution Steering Committee

- ① Confirming the current year's activity results and deliberating/resolving the following year's annual plan
- ② Checking the performance of the previous quarter, approving the activity plan for the current quarter, and holding quarterly meetings
- ③ Holding Steering Committee sessions and voting on emergency community items (as needed)



Love Fund and Matching Grant Program

Hanwha Systems raises funds for its social contribution through the 'Love Fund,' which relies on voluntary contributions from employees. To further encourage fundraising and support more projects, the company is implementing a 'Matching Grant' program, matching the amount donated by employees. **Hanwha Systems'** social contribution funds are utilized for various social contribution activities at each local business site.

Social Contribution Fund Operations

Category	Unit	2020	2021	2022
Total donations	KRW 100 million	4.96	4.43	11.6
Donations		0.43	0.75	8.12
Project expenses		3.02	2.57	1.34
Supplies		1.51	1.11	2.14

Community Discussion Channels

Hanwha Systems values the principle of harmonious coexistence with local communities. We operate online channels, such as our community communication channel, and actively engage with local communities through our Community Growth Support Center. We have established agreements with organizations like the Veterans Administration and the Korean Red Cross at our Seoul business site, and collaborate with local governments at other business sites to enhance communication channels. As a member of the community, we aim to be a true partner by actively listening and addressing the genuine needs of society.






Community discussion channels

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Identify and manage negative impacts on the community

Hanwha Systems takes its role as a corporate citizen seriously and is committed to addressing community issues. We have designated a dedicated person responsible for identifying and managing potential negative impacts on the community. Through regular analysis, we assess any negative impacts and engage in discussions with our internal ESG Council and external local governments to address community concerns. Based on the outcomes of these discussions, we implement improvement measures.

	Social Welfare Council Meeting	Eunpyeong-gu Office Head's Meeting to Support the Disadvantaged	Helping Farmers – Gumi Rice Donation
Host and Participants	Hosted by: Hanwha Systems Participants: Seoul Social Welfare Council	Hosted by: Eunpyeong-gu Office Participants: Head of Eunpyeong-gu Office -, Hanwha Systems	Hosted by: Gumi Participants: Hanwha Systems
Date	Dec 16, 2022	Dec 9, 2022	Sep 2, 2022
Location	Hanwha Building in Seoul	Eunpyeong-gu Office	Gumico Exhibition Center
Activity	<ul style="list-style-type: none"> Held a meeting to identify negative impacts on local communities 	<ul style="list-style-type: none"> Meeting to support the disadvantaged in welfare blind spots in Eunpyeong-gu Providing kimchi to the disadvantaged in welfare blind spots in Eunpyeong-gu 	
			
	Social Welfare Council Meeting	Eunpyeong-gu Office Head's Meeting to Support the Disadvantaged	Helping Farmers – Gumi Rice Donation

Employee Social Contributions

Hanwha Systems promotes a culture of voluntary participation in social contribution activities by actively involving employees. We conduct surveys to understand employees' preferences for major social contribution activities and develop social contribution programs based on the survey results. Additionally, we organize contests where employees can share their innovative ideas for social contribution, encouraging diversified and creative social contribution activities.

To recognize and appreciate employees' volunteer efforts, we select outstanding volunteers annually and award them for their contributions. We also actively support volunteer activities that involve family participation.

Performance for Social Contribution Activities

Category	Unit	2020	2021	2022
Employee participation	Persons	1,245	1,166	1,797
Hours of participation	Hrs.	1,964	2,798	4,313
Total beneficiaries	Persons	4,803	5,853	16,652
Cumulative number of beneficiaries (3 years cumulative)	Persons	17,408	17,622	27,308
Programs	Programs	15	63	74
Social Contribution Steering Committee	-	Quarterly		
Regular community discussion channels	-	Quarterly/Half-yearly		



Social Contribution Idea Contest



CEO Award for outstanding volunteers

Key Social Contribution Programs

Hanwha Systems is committed to supporting veterans and their families to enhance their livelihoods and quality of life. We undertake various initiatives, including projects to improve residential environments, organizing outings for patriots and veterans, and providing food assistance in the form of side dishes.

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Book Donation to Military Forces

Every year since 2016 Hanwha Systems has supported the establishment of libraries and delivered books to barracks reading cafes for soldiers of the Army's 28th and 6th divisions. Hanwha Systems aims to share and spread barracks reading soldiers and will continue to plan various activities to revitalize barracks reading and support cultural activities in the barracks.

Supporting Veterans' Families

Hanwha Systems is committed to supporting the livelihood and improving the quality of life of veterans and their families. We conduct a range of activities, including projects to improve residential environments, organizing outings for patriots and veterans, and providing food assistance in the form of side dishes. As part of our efforts, we have distributed 6,000 Hope Boxes that contain essential daily necessities, including household goods and quarantine supplies to Korean War veterans who are often left behind in welfare blind spots. Deeply grateful and admiring their patriotism and sacrifice, Hanwha Systems remains dedicated to fulfilling our social responsibilities by showing respect and care for patriots and veterans, and national heroes who have made significant sacrifices for our country.

Love for Country Food Bank

Since 2016, Hanwha Systems has been working with the Seoul Regional Veterans Administration to deliver side dishes to patriots and veterans who have served our country. During the pandemic, at the request of patriots and veterans, we coordinated with the Seoul Regional Veterans Administration to distribute boxed lunches. We personally delivered these boxed lunches to designated addresses, making sure they were safely received at the veterans' residences. During the delivery, we also took the opportunity to extend our sympathy and support through a personal phone call. (Number of beneficiaries 2022: 86 households in Seoul)

Cleaning Tombstones at the Seoul National Cemetery

In 2011, Hanwha Systems entered into a sisterhood partnership with the Seoul National Cemetery. Since then, the company has actively participated in various activities, including paying respects to fallen soldiers and cleaning their tombstones on significant occasions, such as New Year's Day, Memorial Day, and Armed Forces Day. Additionally, Hanwha Systems' dedicated Chungcheongbuk-do Province volunteer group, consisting of employees from various business sites including Daejeon, Chungcheong, and Seoul, has been actively engaged in volunteer activities at the National Cemetery of Korea in Daejeon since 2013, with a special emphasis on cleaning and maintaining the grave sites.

Career and Employment Mentoring for Soldiers

Since 2017, Hanwha Systems has partnered with the Ministry of Defense to carry out the 'Career and Employment Mentoring Program for Soldiers,' a program for developing talented young personnel. Through this initiative, our employees actively engage in addressing the employment challenges faced by military personnel serving in the armed forces. The program offers a range of activities including expert lectures, mock interviews, and guidance on writing effective self-introduction letters. (Number of beneficiaries 2022: approximately 400)



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Together with the Community

Making Bread of Love with Citizens

Hanwha Systems employees and their families actively participate in the Bread of Love program, which involves baking bread and distributing this homemade to the underprivileged caught in welfare blind spots. Moving forward, we are committed to expanding our engagement with local communities and extending our assistance to a broader spectrum of vulnerable groups
(Number of beneficiaries 2022: Approximately 1,000 in the Seoul and Gumi region)



Bread of Love Program

Blood Donation of Love

Hanwha Systems organizes the Blood Donation of Love, a voluntary event for our employees, twice a year. Through this initiative, we aim to address the issue of unstable blood supply in the local communities by actively participating in group blood donation events.

Kimchi Sharing of Love

Employees at **Hanwha Systems'** Gumi site have been providing kimchi to the vulnerable, including patriots and veterans as well as elderly persons living alone, for the past 18 years. Through this program, we are striving to help our vulnerable neighbors have a warmer winter.
(Number of beneficiaries 2022: Approximately 1,250 in the Seoul, Yongin, and Gumi region)



Kimchi Sharing of Love

Together with Future Talent

Developing talented individuals in AI

In recognition of the growing presence of AI in our daily lives, **Hanwha Systems** has implemented educational content development and recruitment linkage programs to cultivate AI experts who possess a deep understanding of AI technology. This program is aimed at nurturing talented AI employees with a high degree of understanding of AI technology across the company.

Shoulder-to-Shoulder Mentor-Mentee

For the past eight years, **Hanwha Systems** has been dedicated to supporting the development of low-income and underprivileged children, including those from single-parent families and families in crisis. We believe in the power of art and sports education to help these children discover their unique talents and ignite their passion for learning. Through our programs, we aim to foster their personal growth and development, enabling them to become thriving and productive members of society.
(Number of beneficiaries 2022: 147 in the Gumi region)



Shoulder-to-Shoulder Mentor-Mentee

UAM Coding Class

Hanwha Systems provides year-round software-based drone production training to underprivileged children, combining online and offline classes. Our aim is to foster creativity and instill open-minded values in the generations of the future.

Giving You Dreams

Hanwha Systems supports children from low-income families by providing training on Excel, PowerPoint, Hangul, and ITQ opportunities. Our goal is to empower them to become prepared members of society and make meaningful contributions to its development.
(Number of beneficiaries in 2022: 285 in Seoul)



Giving You Dreams

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with Future Talent ent individuals in AI

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Shoulder Mentor–Mentee

eight years, **Hanwha Systems** has been supporting the development of low-income and single-parented children, including those from single-parented and families in crisis. We believe in the power of education to help these children discover their passion and ignite their passion for learning. Through these initiatives, we aim to foster their personal growth and enable them to become thriving and productive members of society.

(Beneficiaries 2022: 147 in the Gumi region)



Global Social Contribution

Global Volunteer Project

Hanwha Systems has signed a business agreement with Korea National Defense University to promote cultural exchanges and friendly social activities with foreign military students in attendance. Through these initiatives, we aim to foster friendly ties among individuals from different countries.



Global Volunteer Project

Love for Country, World Friends

Hanwha Systems employees actively participate in KOICA's global program 'World Friends.' Through this program, our employees contribute to making and delivering school supplies to children in need across the world.

Ecosystem Conservation Activities

Ecosystem Conservation

Hanwha Systems actively engages in ecosystem conservation activities and environmental cleanup campaigns in collaboration with stakeholders across all its business sites. Since 2013, **Hanwha Systems** has been annually capturing invasive fish species to protect native fish populations and maintain a balanced aquatic ecosystem. Additionally, the company organizes events to eradicate the bur cucumber, a major ecosystem-disrupting plant along the Nakdong River, contributing to the preservation of the local ecosystem.



Environmental Cleanup Activities

Environmental Cleanup Activities

As a green company, **Hanwha Systems** is actively involved in nature cleanup activities to create more pleasant urban environments. At the Gumi site, employees contribute to cleaning up rivers and underwater areas, removing disruptive plants that affect the local ecosystem, promoting river cleanup campaigns, and utilizing EM mud balls to support the restoration of water quality. These initiatives aim to create a cleaner and more sustainable environment for the local community.



Activities and Awards

History and Highlights

2020	Signed an MOU with the Gumi Fire Department to provide support for basic fire protection facilities in community housing Contributed to the Gumi COVID-19 Emergency Fund Provided support for Mobile Negative Pressure wards for selective clinics at the Armed Forces Capital Hospital Maintained regular community discussion channels (Seoul Regional Veterans Administration and Korean Red Cross Eunpyeong-gu Center)
2021	Organized a concert to spread hope during the COVID-19 pandemic Implemented an online career and employment mentoring program for military personnel

Major Awards

2020	Patriots and Veterans Affairs Minister's commendation for 'contributions to the welfare enhancement of veterans' families' Honorary medal from the Korean Red Cross for meritorious service
2021	Selected as an 'excellent company' under the Corporate Social Responsibility in the Community Program organized by the Ministry of Health and Welfare Awarded a certificate of appreciation from the Korean Red Cross Awarded a certificate of appreciation from the Dochon General Welfare Center

Key Performance

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Governance



Sound and transparent corporate management

Public announcement of the Corporate Governance Charter

Detailed disclosure of Board of Directors and committee activities

Board independence and expertise

First large corporation to specify restrictions on 'self-recommendation'

Disclosure of Board Skills Matrix (BSM)

Information Protection and Security



Enhanced Information Security Management System

**Newly-created Information Security Office
Appointment of a CISO**

Enhanced personal data protection management

**Establishment of an incident response process
Appointment of a CPO**

Information security certification
ISO 27001, ISMS, and other certifications

Ethics and Compliance



Healthy corporate culture

Certification of ISO 37301 (compliance) and 37001 (anti-bribery) / Adoption of Compliance Program (CP) and application for rating

Compliance management and fair trade

**Publishing the Fair Trade Compliance Manual
Publication of a Fair Trade Compliance Manual**

Raising employee awareness

**Job-specific/task-specific compliance training
Publication of compliance newsletters**

Company-wide Risk Management



Integrated risk management framework

Risk management by type (financial, potential)

Enhanced internal controls

Implementation of an internal accounting control system and tax management



Governance

Hanwha Systems prioritizes the interests of shareholders and stakeholders by adhering to sound and transparent management practices. To this end, the company has developed and published its Corporate Governance Charter and actively promotes compliance and fair trade awareness.

Given its position as a leading defense/ICT company, Hanwha Systems places utmost importance on information protection and security management, implementing various efforts to safeguard information assets. Moreover, Hanwha Systems is committed to ensuring sustainable and stable business activities through the establishment of a company-wide risk management system.

Corporate Governance

Hanwha Systems is committed to safeguarding the rights of shareholders and investors through the establishment of a robust and transparent corporate governance policy. Additionally, the company strives to enhance its ESG management system to meet the expectations of diverse stakeholders and create sustainable value for the company.

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Corporate Governance Policy

Corporate Governance Charter

On March 24, 2022, **Hanwha Systems** established and promulgated its Corporate Governance Charter, emphasizing its commitment to differentiated value creation through transparent and sound governance and sustainable management practices. The charter outlines the rights and responsibilities of shareholders, the function and composition of the Board of Directors, the duties and responsibilities of inside and outside directors and committees, the role of the audit organizations, the protection of stakeholders' rights, ethical management policies, and transparency in disclosure and change of control.

By enacting the Corporate Governance Charter, **Hanwha Systems** is dedicated to establishing an exceptional ESG management system that fulfills the expectations of both inside and outside stakeholders. Through this commitment, we aim to create distinct value for all stakeholders, fostering more transparent and robust governance while ensuring sustainable management practices.

Category	Key Contents
Text	Chapter 1 Shareholders – Rights, responsibilities, and fair treatment of shareholders Chapter 2 Board of Directors – Operation of the Board, system of outside directors, duties, and responsibilities of directors Chapter 3 Audit Apparatus – Roles and responsibilities of the Audit Committee and external auditors Chapter 4 Stakeholders – Respecting and protecting stakeholder rights, fulfilling social responsibilities, and establishing a fair market order Chapter 5 Disclosure of market-related matters that can materially affect the decision-making of shareholders and stakeholders
Addendum	1. This Corporate Governance Charter was adopted and announced by the Board of Directors or a committee authorized by the Board of Directors on March 24, 2022. 2. Amendments to this Corporate Governance Charter will be made through a resolution by the Board of Directors or a committee authorized by the Board of Directors.

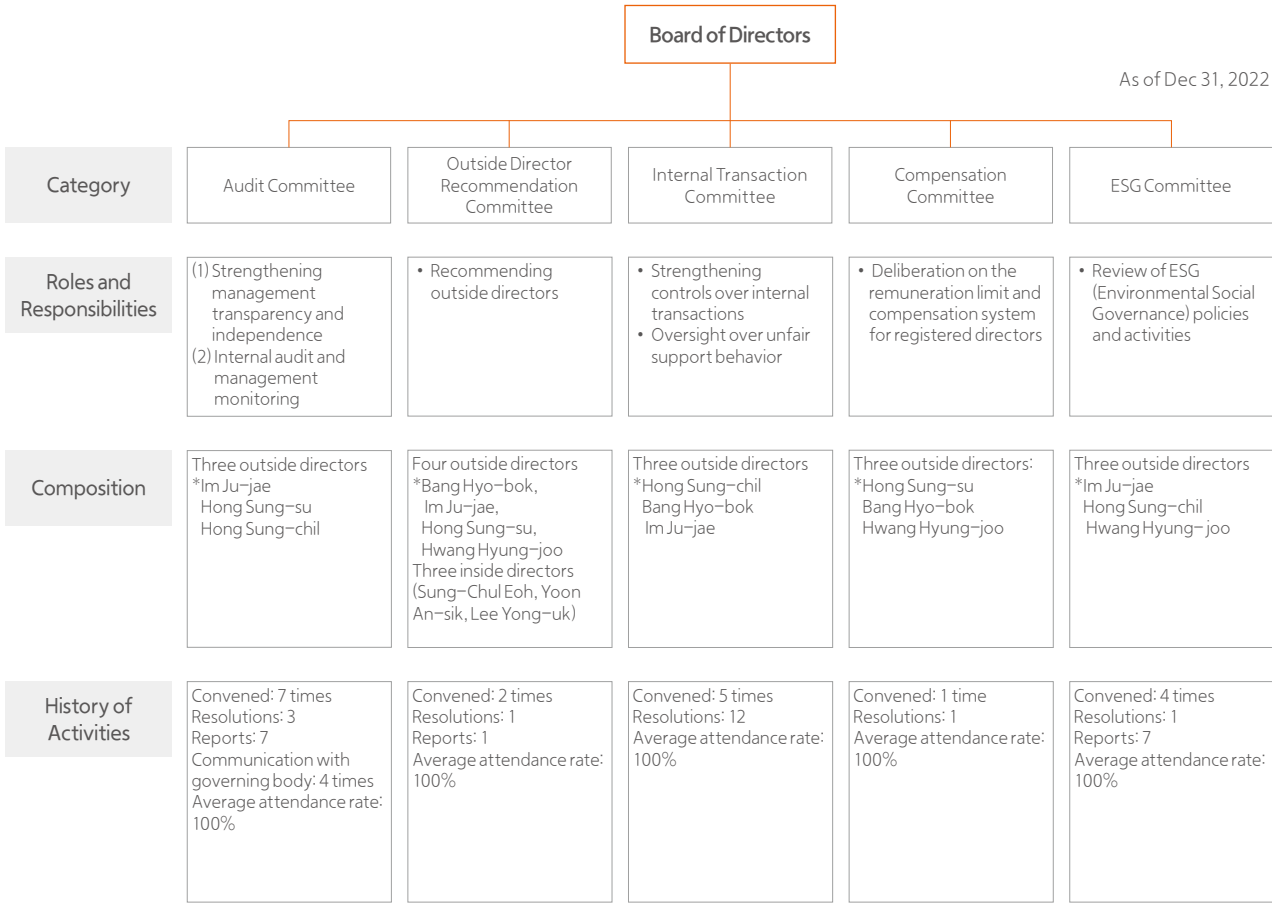
Board Governance

Board and Committee Operations

To ensure efficient operation and professional decision-making, **Hanwha Systems** has established five committees under the Board of Directors. These committees include the Audit Committee, Outside Director Recommendation Committee, Internal Transaction Committee, Compensation Committee, and ESG Committee.

To ensure independent committee operations and decision-making, all committee chairpersons at **Hanwha Systems** are outside directors, and all committee members, except for the Recommendation Committee, are also outside directors. Detailed information regarding the purpose, authority, and responsibilities of each committee is disclosed on the company's website. The ESG Committee, established in June 2021, plays a central role in corporate governance for ESG management. It discusses the ESG policy, deliberates over matters necessary to ESG activities, and reviews and resolves various ESG issues.

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Board Activities

Hanwha Systems conducts regular quarterly Board meetings and additional meetings as required, which are convened by the Chair of the Board of Directors. To promote active participation, the company's regulations state that a notice of the meeting must be sent to the directors and auditors at least three days in advance. These meetings address significant matters pertaining to company management, as well as issues delegated by the shareholders' meeting.

In 2022, the Board was convened 11 times. During these meetings, several important decisions were made, including the approval of the 22nd Financial Statements and Business Report, the appointment of new outside directors, the conclusion of the acquisition of new shares of Daewoo Shipbuilding & Marine Engineering, the agreement on Overair Series B convertible notes, the revision of executive compensation regulations, the appointment of a compliance officer, and the appointment of a fair trade compliance manager.

Board Activities and Attendance Rates

*As of Dec 31, 2022

Resolutions	43
Reports	39
Objection/amendment proposal	0
Board meetings held	11
Average attendance	100%
Attendance of inside directors	100%
Attendance of outside directors	100%

Board Composition and Status

Board Composition

As of late March 2023, the Board of Directors of **Hanwha Systems** consists of one inside director, one other non-executive director (newly appointed on March 27, 2023), and three outside directors (two newly appointed) who were appointed by the general meeting of shareholders in accordance with applicable statutes and articles of incorporation. Among the three outside directors, one is a woman director who was first appointed in March 2022, maintaining a 20% ratio of women directors on the Board.

To ensure effective checks and balances, the board maintains a 60% ratio of outside directors.

As of late March 2023, the composition of the Board of Directors is as follows:

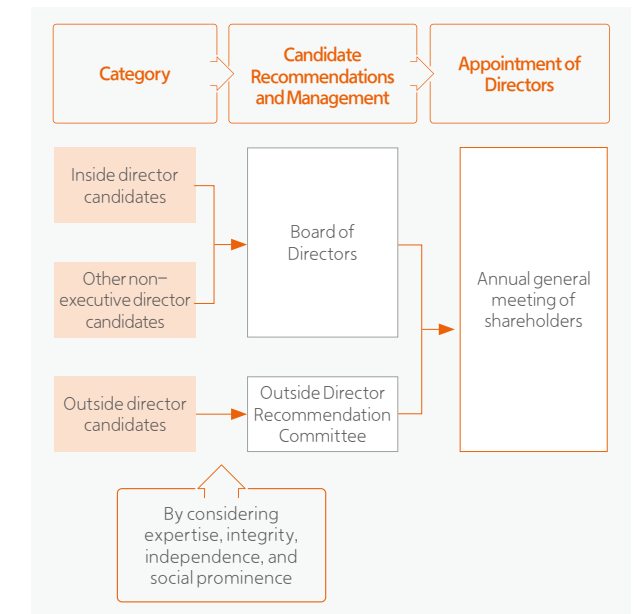
Category	Name	Positions	Gender	Date of Birth	Major Career Experience	Appointment Date	Term
Inside directors	Sung-Chul Eoh	CEO/Chairperson of the Board	Men	1964.05	Korea University, Economics Current CEO, Hanwha Systems	2021.09.01	2 years
Outside directors	Hwang Hyung-joo	Compensation Committee Chair Audit Committee member	Women	1972.02	Duke University, Ph.D. in Mathematics Current Chair Professor, Department of Mathematics, Postech Current Professor, Graduate School of Artificial Intelligence, Postech	2022.03.24	2 years
	Gu Bon-seon	Internal Transaction Committee Chair Audit Committee member	Men	1968.07	Former Deputy Prosecutor, Supreme Prosecutors' Office Former Chief Prosecutor, Gwangju High Prosecutors' Office Current Managing Partner, Attorney-at-Law, Law Office of Gu Bon-seon	2023.03.27	2 years
	Lee Woo-jong	Audit Committee chair ESG Committee chair	Men	1976.11	Former Associate Professor, School of Business, Hong Kong Polytechnic University Current Professor, School of Business, Seoul National University (Accounting) Current Vice President, Korean Accounting Association Author of ESG-related papers: "The Correlation and Causality Between ESG Activities and Corporate Value (2022)" and "The Usefulness of ESG Disclosure (2022)"	2023.03.27	2 years
Other non-executive directors	Ahn Byeong-cheol	Outside Director Recommendation Committee member	Men	1968.01	Former Director, HDI Europe Australia Division Former Director, Overseas Business Division, Hanwha Defense Current Director, Strategy Office, Hanwha Aerospace	2023.03.27	2 years

Principles of Board Composition

Director Appointment Procedures and Criteria

Hanwha Systems appoints its directors through the general meeting of shareholders, following the guidelines set by the Commercial Act and the articles of incorporation. We prioritize selecting talented individuals with expertise and a strong sense of responsibility in various fields who can make significant contributions to corporate management. For outside directors, we carefully evaluate their independence, expertise, and diversity, considering candidates recommended by the Outside Director Recommendation Committee. Furthermore, we provide transparent disclosure of information on director candidates, including their areas of expertise and biographies, in both Korean and English in advance of the date of the annual general meeting. This allows shareholders to thoroughly review the information and make informed decisions regarding the appointment of directors.

Hanwha Systems is the first major listed company to prohibit 'self-recommendation' by outside director candidates, ensuring a fair process for appointing outside directors. This policy prevents candidates from voting for their own re-election, promoting transparency and impartiality in the appointment process.



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Board Independence and Transparency

A majority of **Hanwha Systems'** Board of Directors is composed of outside directors to ensure independent decision-making and supervision, as well as to incorporate diverse stakeholder perspectives. We appoint outside directors with rich expertise and experience in management, economics, law, and key business areas to avoid representing any specific interests. Additionally, our company's articles of incorporation prevent directors with special interests in connection with outside directors from exercising voting rights, further establishing a foundation for the Board's impartiality.

Self-Recommendation Ban

- **Hanwha Systems** is the first major publicly traded company to implement a self-recommendation restriction system
- By stipulating the principle of restricting self-recommendations for directors, we have effectively put an end to the practice of outside directors on the Board's Recommendation Committee recommending themselves for re-election as outside directors

Board Expertise and Diversity

Hanwha Systems promotes a free and objective exchange of opinions and decision-making based on independent judgment by ensuring that a majority of its Board of Directors consists of outside directors. At the annual general meeting held on March 24, 2022, **Hanwha Systems** appointed its first woman outside director (Hwang Hyung-joo, professor of mathematics at Postech) along with two inside directors (Yoon An-sik and Lee Yong-uk). At the annual general meeting held on March 27, 2023, four outside directors (Bang Hyo-bok, Hong Sung-su, Hong Sung-chil, and Lim Ju-jae) and two inside directors (Yoon An-sik and Lee Yong-uk), whose terms had expired, resigned. In their place, two outside directors (Gu Bon-seon and Lee Woo-jong) and one non-executive director (Ahn Byeong-cheol) were newly elected, ensuring a majority of outside directors with expertise in various fields.



60%

Percentage of outside directors as of late March 2023

Securing Directors with Expertise and Diversity

Organizing support for outside directors	Providing in advance materials related to Board agendas and regular information on key company issues to assist outside directors in performing their professional duties
Training to enhance the expertise of outside directors	Training in various fields, including ESG disclosure and oversight, global trends in Board of Directors and Audit committees, accounting oversight bodies, financial misconduct prevention, and risk management

Assessment and remuneration of the Board of Directors and management

Hanwha Systems follows the provision in its articles of incorporation to limit the term of office for outside directors to two years. When re-appointing outside directors, the company conducts an internal evaluation of their expertise and activeness in their respective fields. The evaluation results are taken into account in the decision-making process for reappointment. This practice ensures that outside directors actively perform their duties and contribute to responsible management by the Board of Directors.

Hanwha Systems implements a remuneration structure for registered directors that includes both salary and performance-based pay. The salary component consists of a basic salary determined by the executive remuneration regulations and an adjustment salary based on factors such as organizational contribution, future potential, and substitutability. The remuneration limit and compensation system for registered directors are determined by the Compensation Committee on an annual basis. In February 2022, the Compensation Committee proposed and approved a resolution to set the limit for director's remuneration at 5 billion won.

The performance-based pay is calculated and paid based on the company's performance as evaluated through the achievement of financial and management goals, as well as individual performance assessed by the accomplishment of goals set by executives. Additionally, restricted stock units (RSUs) are provided to key executives as mid-to longterm incentives, with the final payment amount determined by the stock price at the time of payment. Furthermore, **Hanwha Systems** provides welfare benefits such as tuition and medical expenses in accordance with internal regulations. In accordance with executive severance pay regulations, the company differentiates between statutory severance pay, calculated based on the executive severance pay rate applied to average wage and years of service, and retirement benefits, which comprise the DC account contribution from the management performance bonus. In consideration of the transparency and fairness of their roles, outside directors and

auditors do not receive separate performance bonuses. Moreover, non-financial performance indicators, including environmental safety management, security, internal control, and compliance, are mandatorily included in the evaluation process for all executives, including inside directors. The evaluation results are taken into account when determining remuneration, promotions, and appointments/dismissals of executives.

Amount of remuneration paid

Category	Number of persons	Total remuneration	Average remuneration per person
Registered directors (excluding outside directors and Audit Committee members)	3	1,738	579
Outside directors (excluding Audit Committee members)	2	149	74
Audit Committee members	3	252	84
Auditors	-	-	-
All directors and auditors	8	2,139	267

* The number of persons mentioned above reflects the count as of December 31, 2022, while the average remuneration per person is derived by dividing the total amount by the aforementioned number of persons.

* The total remuneration encompasses the remuneration earned by individuals who held director positions from January 1, 2022, to December 31, 2022. It does not include RSUs.

Criteria and Methods of Remuneration-Management

Salary	<ul style="list-style-type: none"> • Executive salaries are determined based on the assigned position's role and importance, consisting of a base salary and an adjustment component. The adjustment component takes into account factors such as organizational contribution, future potential, and replaceability. • Remuneration is paid in accordance with executive remuneration regulations and the aforementioned criteria.
Performance Bonus	<ul style="list-style-type: none"> • The company's performance is evaluated based on financial performance and the achievement of management objectives. Individual performance is assessed according to the targets set by executives. The payment rate, derived from these evaluations, is applied to determine the performance bonus.
Other Employment Income	<ul style="list-style-type: none"> • This category includes employee welfare benefits, such as contributions to personal pension plans made by the company, and other welfare expenses.
Retirement Benefits	<ul style="list-style-type: none"> • In accordance with executive severance payment regulations, retirement benefits include statutory severance pay calculated by multiplying average salary, length of service, and payment rates based on the type, as well as management performance bonuses deposited into a DC account during employment.

Composition of Board Committees

Enhancing Outside Director Expertise

Hanwha Systems offers various training programs for outside directors to enhance their effectiveness in fulfilling their duties within the Board of Directors and its committees.

In April 2022, we conducted training specifically for a newly appointed outside director (Hwang Hyung-joo), focusing on ESG disclosures and important factors to consider in Audit Committee supervision. The objective was to strengthen the roles and responsibilities of outside directors and enhance their ability to oversee ESG management practices.

Furthermore, in November 2022, comprehensive training was provided to all five outside directors. The training covered global trends in Boards of Directors and audit committees, understanding accounting regulatory bodies, preventing and responding to financial misconduct, and risk management practices. These training sessions aimed to support the continuous development of outside directors' expertise.

Date of Training	Organization implementing the training	Outside Directors in Attendance	Key training content
Apr 19, 2022	Audit Committee Forum	Hwang Hyung-joo	Points on ESG disclosure and Audit Committee oversight
Nov 23, 2022	Deloitte Korea Center for Corporate Governance	Bang Hyo-bok Lim Ju-jae Hong Sung-chil Hong Sung-su Hwang Hyung-joo	Global trends in corporate boards and audit committees Understanding current accounting oversight organizations Financial misconduct prevention and response Continuous monitoring based on data Risk management

Adopting a Board Competency Evaluation System

Presently, there is a growing demand and interest in ESG management, both internally and externally. Stakeholders including shareholders and external investors are increasingly seeking greater expertise and diversity within the company's highest decision-making body, the Board of Directors.

In response to this demand, **Hanwha Systems** has implemented a process to review, prepare, and disclose information on the Board Skills Matrix (BSM) of advanced capital markets such as the U.S. and Europe. By preparing and disclosing board skills assessment information, **Hanwha Systems** addresses the demands of shareholders, investors, and the market. This process enhances understanding of key aspects such as the expertise, independence, and transparency of the Board composition. It also provides guidelines on the competencies required by the company for its board members, thereby ensuring the credibility of the director recommendation system and appointment process.

By focusing on optimal board composition and enhanced communication with investors, **Hanwha Systems** aims to enhance corporate value.

Item	Sung-Chul Eoh	Ahn Byeong-cheol	Gu Bon-seon	Lee Woo-jong	Hwang Hyung-joo	Notes
Corporate management & leadership	○	○			○	Expertise in managing large-scale organizations
Strategy / mergers & acquisitions		○		○		Expertise in company investment activities such as M&A
Legal/policy, risk			○	○		Expertise in legal and public policy
Financial accounting	○			○		Financial accounting expertise for company management and oversight
Key business expertise: Defense	○	○				Key business: Defense industry expertise
Key business expertise: IT	○				○	Key Business: IT industry and technology expertise
Independence			○	○	○	Ability to perform duties fairly and rationally, independent of company interests and major shareholders

Shareholder-Friendly Management

Equity and capital structure

On March 24, 2022, Hanwha Systems' general meeting of shareholders approved an amendment to the Articles of Incorporation, revising the total number of issuable shares to 500,000,000 shares. The issue price per share was set at KRW 5,000. As of December 31, 2022, the total number of shares outstanding was 188,919,389 (including 1,926,128 non-voting shares).

Current Shareholders	Number of Shares	Ownership Percentage
Hanwha Aerospace Co., Ltd.	88,289,321	46.73%
Hanwha Energy Co., Ltd.	24,174,187	12.80%
National Pension Service	11,307,857	5.99%
Employee Stock Ownership Association	12,248,940	6.48%
Sung-Chul Eoh	17,506	0.01%
Yoon An-sik	34,054	0.02%
Lee Yong-uk	38,343	0.02%
Treasury stock	1,926,128	1.02%
Minority shareholders	56,301,824	29.81%

* Number of shares held by the National Pension Service as of November 17, 2022, disclosed

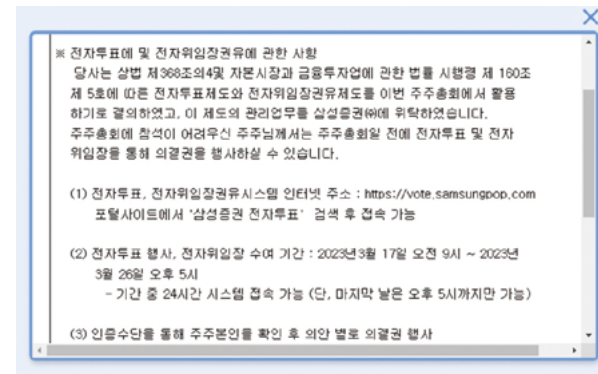
* Number of shares held by others as of December 31, 2022

Enhanced Protection of Shareholder Rights

Shareholder Voting Rights Report

To facilitate the exercise of voting rights by shareholders, Hanwha Systems implemented an electronic voting system and an electronic proxy solicitation system for all shareholders at the 2020 annual general meeting of shareholders. These electronic systems were then utilized in subsequent annual general meetings held from 2021 to 2023. Additionally, Hanwha Systems is committed to providing shareholders with the opportunity to attend the annual general meeting of shareholders through the 'decentralized autonomous compliance program for shareholders' meetings.'

Category	Date of implementation
Concentrated voting system	Not implemented
Paper-based voting system	2000.01.07
Electronic voting system	2020.03.23



Notice of General Meeting of Shareholders (Electronic voting)

Enhanced Communication with Shareholders

Hanwha Systems prioritizes a shareholder-friendly management policy by maintaining various communication channels with shareholders. In 2022, the company actively engaged with individual investors, analysts, and institutional investors through activities such as new business seminars. Hanwha Systems also ensures transparent information dissemination by providing fair disclosure prior to quarterly earnings announcements and publishing earnings information on its website. These efforts aim to create an accessible environment where anyone can easily obtain information about the company's activities and performance.

Date	IR Classification	Notes
2022.04.28	Q1 2022 Investor Day	Conference call and webcasting
2022.04.29 ~ 2022.05.03	Q1 2022 Domestic NDR	Conference call
2022.07.28	Q2 2022 Investor Day	Conference call and webcasting
2022.08.01 ~ 2022.08.03	Q2 2022 Domestic NDR	Domestic and conference call
2022.09.26	Investor Day	Yeouido 63 Building
2022.10.27	Q3 2022 Investor Day	Conference call and webcasting
2022.10.31 ~ 2022.11.02	Q3 2022 Domestic NDR	Domestic
2023.02.23	Q4 2022 Investor Day	Conference call and webcasting
2023.02.24 ~ 2023.02.28	Q4 2022 Domestic NDR	Domestic
2023.04.25	Q1 2023 Investor Day	Conference call and webcasting
2023.04.26 ~ 2023.04.28	Q1 2023 Domestic NDR	Domestic

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Strengthening the Protection of Shareholder Rights

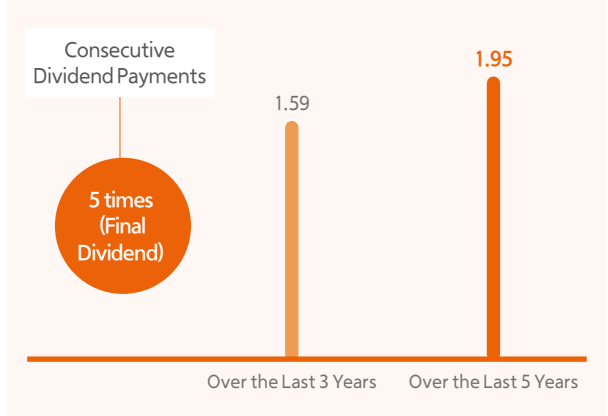
Shareholder Return

As part of its shareholder return policy, **Hanwha Systems** follows a process of paying dividends through resolutions made by the Board of Directors and the general meeting of shareholders. The company emphasizes transparency by disclosing dividend trends for the past three years on its website and in its business reports.

Dividends

Category	Unit	2020	2021	2022
Total Cash Dividend Amount	KRW Million	25,328	29,919	46,748
Cash Dividend Yield	%	1.48	1.02	2.26
Cash Dividend per Share (KRW)		230	160	250

Average Dividend Yield



Dividend Policy

In accordance with the Articles of Incorporation, **Hanwha Systems** determines the payment of dividends through resolutions made by the Board of Directors and the general meeting of shareholders. The company determines an appropriate level of dividend rate within the range of distributable profits, considering factors such as investment for sustainable growth, enhancement of shareholder value, and the business environment.

Dividend Policy in the Articles of Incorporation

Article 44 (Dividend)

- ① The dividend may be paid in cash and by stock or by other property.
- ② In case of paying dividend by stock and when the Company issues class stocks, the same kind of stock may be delivered under the resolution of the general meeting of stockholders.
- ③ The dividend under paragraph 1 shall be paid to the stockholders stated on the stockholders' list or the registered pledgees as of the end of each accounting period.

Article 44-2 (Interim Dividend)

- ① The Company may pay the interim dividend in accordance with the Article 462-3 of Commercial Law to the stockholders only once a business year on the date determined under the resolution of the Board of Directors.
- ② The limit of interim dividend shall be the amount subtracting the following clauses from the net property on the preceding balance sheet:
 1. Capital of the preceding settlement period;
 2. The sum of capital reserve and profit reserve accumulated until the preceding fiscal year;
 3. Unrealized profit specified in the Enforcement Decree of the Commercial Act;
 4. The amount of dividend resolved in the ordinary general meeting of stockholders in the preceding fiscal year;
 5. Voluntary reserve accumulated until the preceding fiscal year for the special purpose in accordance with the Articles of Incorporation or under a resolution of the general meeting of stockholders;
 6. Profit reserve is to be reserved in the relevant fiscal year according to the interim dividend;
- ③ In case of issuing new stocks (including capitalization of reserve, stock dividend, request for conversion of CB, BW warrant exercise) before the basic specified in paragraph (1) after the commencement date of the business year, the relevant new stocks shall be regarded as being issued at the end of the preceding business year.

Ethics and Compliance

Hanwha Systems is committed to being regarded as a trusted and respected company by fostering a culture of sound business ethics and integrity. The company upholds its ethical values and follows its path of integrity in all its business activities and aims to set an example of responsible business operations by sharing these values with its stakeholders.

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Ethics and Compliance System

Ethics and Compliance Management Principles

Hanwha Systems prioritizes ethical and compliance management policies as a fundamental requirement for the company's sustainable growth. We conduct various ethics and compliance activities on an annual basis, recognizing their essential role. In 2022, we reinforced our efforts by obtaining ISO 37301 (compliance) and 37001 (anti-bribery) certifications, internationally recognized standards for ethics and compliance management. Additionally, we upgraded our existing compliance program to meet the standards set by the Fair Trade Commission, thereby enhancing our overall ethics and compliance competency across the organization.

Company-Wide Compliance Goals and Results in 2022

Category	Goals	Results
Number of legal violations	0	2*
Company-wide compliance training (completion rate)	98% or higher	98.4%
Compliance pledge (submission rate)	95% or higher	99.9%
Compliance activities (evaluation score)	A or better	A

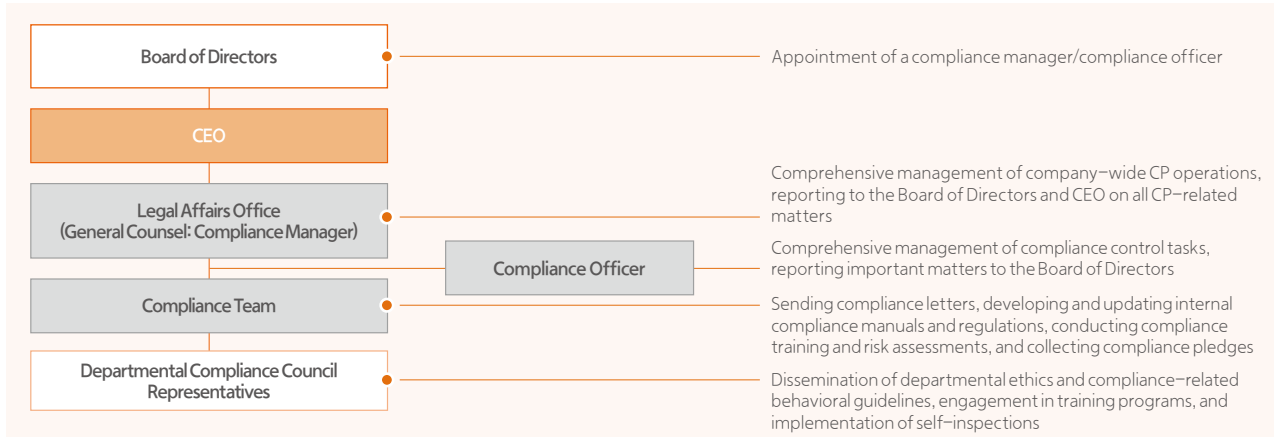
* 2 cases: Small fines for a delay in filing simple registration reports
 * Submission of compliance pledges: Out of 3,844 people, 3,840 submitted their pledges

Ethics and Compliance Governance

To ensure the effective and responsible functioning of our ethics and compliance system, **Hanwha Systems** appointed a general counsel, who reports directly to the CEO, as the company-wide fair trade compliance manager during the 5th Board of Directors meeting in May 2022. Additionally, the head of the legal department, also known as the legal team leader, under the supervision of the Legal Affairs Office, has been reappointed as the compliance officer in accordance with the Commercial Act. As a dedicated compliance management organization, the Compliance Team falls under the Legal Affairs Office and is responsible for overseeing all compliance management practices, including sending compliance letters, developing and updating compliance manuals and regulations, conducting compliance training and risk assessments, and collecting compliance pledges. The team

regularly reports the outcomes of these activities to the Board of Directors. Meanwhile, the Legal Team, which also falls under the Legal Affairs Office, handles all legal affairs of the company and provides support for compliance management activities. The Compliance Team forms an annual companywide Compliance Council, wherein a compliance representative is appointed for each council organization. The purpose of these appointments is to ensure the active participation of each council and representative in company-wide compliance activities, including the dissemination of ethics and compliance-related behavioral guidelines, engagement in training programs, and implementation of self-inspections. Through these council activities, **Hanwha Systems** effectively mitigates company-wide ethics and compliance risks and enhances the ethics and compliance competency of all employees.

Ethics and Compliance Governance



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Compliance Control Activities

Hanwha Systems conducts regular compliance control activities throughout the year to monitor and evaluate the effectiveness of internal compliance operations.

In 2022, the company conducted monthly inspections of company-wide subcontracting transactions (12 times in total) and voluntary inspections such as departmental risk assessments twice a year (2 times in total). In December, an effectiveness evaluation of the risk assessment for the first half of the year was conducted to assess whether risks were improved. Based on this evaluation, goals were set for identifying, evaluating, and improving risks related to fair trade, subcontracting, and corruption for 2023. Additionally, **Hanwha Systems** rewards outstanding employees through annual compliance activity evaluations, fostering employees' dedication to compliance.

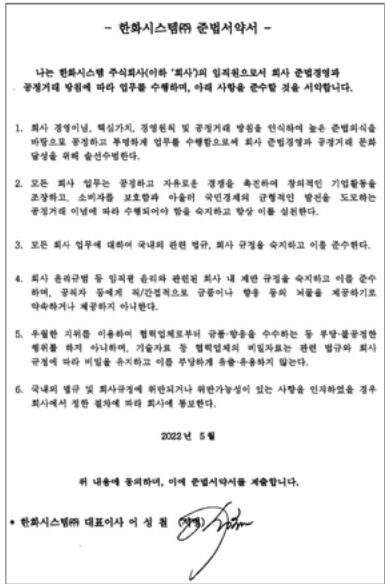
Key compliance control activities in 2022

Key Activities	Cycle	Total
Company-wide subcontracting transaction inspections	Monthly	12
Company-wide voluntary inspections (fair trade, subcontracting risks assessments, checklist distribution and inspections)	Half-yearly	2
Company-wide compliance (fair trade, etc.) and corruption risks Evaluation of improvement effectiveness	Yearly	1
ISO 37301/37001 internal audit	Yearly	1
ISO 37301/37001 certification audit	Yearly	1
Rewarding employees for excellent compliance	Half-yearly	2

Employee Ethics and Compliance Pledge

Every year, **Hanwha Systems** ensures that all employees sign the ethics and compliance pledge, demonstrating their commitment to being well-informed of ethics and compliance regulations and pledging to adhere to these policies and systems.

This pledge serves to strengthen the company's dedication to ethics and compliance management, including compliance with the code of ethics and employee guidelines, as well as adherence to relevant laws and regulations. In 2022, **Hanwha Systems** achieved an impressive pledge submission rate of 99.9% from all employees, including the CEO.



Ethics and Compliance Pledge Submission Rate in 2022 (Based on all employees, including the CEO)

99.9%

Operating a Reporting System

Hanwha Systems provides multiple channels for reporting ethics and compliance violations, both internally and externally. These channels include the company's website, telephone, fax, and email. Employees are also able to report violations through the 'cyber reporting system' on the company's intranet. To ensure the protection of whistleblowers' identities, **Hanwha Systems** has established guidelines within the company Code of Ethics that safeguard the confidentiality and anonymity of those reporting violations.

Protecting the Confidentiality of Whistleblowers (Code of Ethics)

[Protecting the Confidentiality of Whistleblowers]

The Company shall protect the identity of a whistleblower in the event of a complaint, report, or tip-off of an employee's violation of the Code of Ethics or an act equivalent thereto.

To this end, the following measures shall be taken:

- ① Confidential treatment of the whistleblower's identity and disclosed content
- ② Allowing for anonymous reporting
- ③ Preventing any form of disadvantage against the whistleblower due to their disclosures
- ④ Providing legal advice to the whistleblower

Reporting Channel (webpage)

제보운영

01 제보방법

- 한화시스템(영문)의 홈페이지를 방문하여 제보
- 임직원에게 상담가능성 및 제보방법을 사전에 알기, 이를 위한 안내
- 임직원에게 상담 가능
- 임직원에게 상담 가능
- 임직원에게 상담 가능
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02 제보내용

한화시스템(영문)에 제보는 어떤 식으로든 가능하며, 제보 내용은 익명 제보로 접수됩니다. 제보자의 신원, 제보의 내용, 제보의 결과 등은 철저하게 보호되고 있습니다. 다만 제보도 기밀유지 사항이므로 내부의 정보유출을 방지하기 위해 제보자의 신원, 제보의 내용 등을 기밀로 관리합니다.

03 연락처

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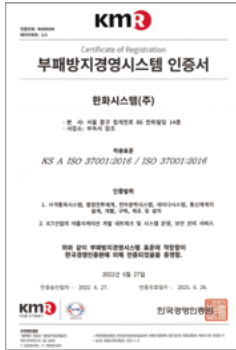
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International Standard Certification for Compliance and Anti-Corruption Management Systems

On June 27, 2022, **Hanwha Systems** successfully obtained the ISO 37301 (compliance management system) certification and ISO 37001 (anti-bribery management system) certification. These certifications mark a significant milestone in our commitment to promoting ethics and compliance management principles in accordance with global standards. With these certifications, we ensure that our policies, systems, risk control activities, and management methods related to compliance and anti-corruption align with global standards and are implemented effectively. Moving forward, we will undergo a one-year follow-up audit and a three-year renewal audit to maintain our compliance with the ISO 37301 and 37001 standards.



ISO 37301 (Compliance Management System Certificate)



ISO 37001 (Anti-Bribery Management System Certificate)

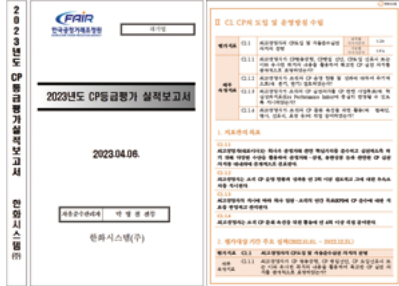
Applying for a CP rating in 2023

In April 2023, **Hanwha Systems** submitted an application for a CP rating to the Korea Fair Trade Mediation Agency. This initiative aims to enhance the credibility and objectivity of our ethics and compliance management system by subjecting our Compliance Program (CP) to evaluation by a reputable external organization. (Target rating: A)

* The 2023 CP rating evaluation will consider the company's overall 2022 CP performance.

The Korea Fair Trade Mediation Agency's CP rating evaluation is a system where the Korea Fair Trade Commission assesses and assigns a rating to a company's CP based on its operational performance in the previous year. The rating is used to determine incentives such as partial reduction of fines and ex officio investigations related to the Fair Trade Act and the Subcontracting Act.

For **Hanwha Systems**, the results of the CP rating evaluation for the year 2023 will be announced in October 2023.



2023 CP Rating Performance Report

Advancing Ethics and Compliance

The CEO personally proclaims a commitment to compliance management, publicly disclosing it both internally and externally.

The CEO of **Hanwha Systems** recognizes the importance of compliance management not as a choice but rather as an essential factor for the sustainable growth of the company. In 2022, the CEO made a strong commitment to practicing compliance management principles and emphasized this intention through frequent internal and external communication.

In January 2022, **Hanwha Systems** initiated efforts to enhance the level of compliance management practices and foster active engagement from all executives and employees. This was done through a company-wide compliance letter, recognizing the growing importance of compliance management in alignment with stricter government and societal standards, particularly in areas such as fair trade. In June 2022, the company further reinforced its commitment to fair trade principles by issuing a statement regarding the upgrading and implementation of the existing CP in accordance with the standards set by the Korea Fair Trade Commission. Additionally, in December 2022, **Hanwha Systems** underscored the significance of voluntary compliance with fair trade regulations by revising the Fair Trade Compliance Manual.

Hanwha Systems has posted these declarations and others on the company's internal bulletin board and website, ensuring that anyone can easily access and verify the company's commitment to compliance management principles, both internally and externally.



CEO's compliance letter in 2022

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Upgrading and operating a corporate Compliance Program in compliance with Fair Trade Commission standards

Hanwha Systems' Compliance Program (CP) is an internal compliance system that encompasses various components, such as training and supervision, implemented and managed by the company. Its primary objective is to ensure voluntary compliance with fair trade laws and essential laws by the company and all employees. The CP establishes a set of norms and a structured system to prevent violations of relevant laws and drive continuous improvements. By providing employees with clear standards of behavior and guidelines for compliance with fair trade laws and essential laws, the CP aims to promote ethical conduct and mitigate legal risks.

In June 2022, **Hanwha Systems** underwent a significant upgrade of its existing CP to align with the standards set by the Korea Fair Trade Commission's regulations and manuals. This upgrade aimed to achieve a more systematic and efficient operation of the CP, reflecting the growing demands from the government and society for companies to comply with fair trade laws and regulations, as well as ESG management requirements. In line with these efforts, **Hanwha Systems** applied for a CP rating evaluation in April 2023 to the Korea Fair Trade Mediation Agency, seeking an evaluation of the company's overall CP performance for the year 2022.



CP Upgrades in 2022

- Setting company-wide compliance goals
- Appointing a fair trade compliance manager through a Board resolution
- Completely revising and upgrading CP operating standards
- Creating the first Fair Trade Compliance Manual
- Implementing an advanced fair trade risk assessment
- Strengthening compliance training, including specialized training for each fair trade risk department
- Holding an internal CP Council with all executives, including the CEO, in attendance (monthly)
- Sending regular fair trade letters to each business site (monthly)
- Regularly revising CP operating standards and the Fair Trade Compliance Manual
- Regular reporting of compliance activity outcomes, including CP, to the CEO and the Board

Publishing, diversifying, and regularly revising the fair trade compliance manual

As part of its CP activities, **Hanwha Systems** published its Fair Trade Compliance Manual in June 2022. This manual serves as a comprehensive guide for employees, providing information on various aspects of fair trade compliance. It includes guidelines for employee behavior related to fair trade, information about the CP system, fair trade-related legal interpretations, FAQs, and examples of fair trade laws and regulations. The manual also features a compliance checklist, as well as a guide specifically tailored to fair trade laws and regulations relevant to **Hanwha Systems'** operations.

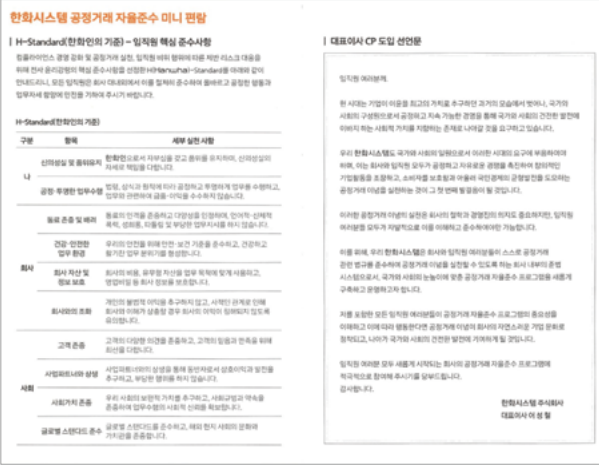
To ensure efficient utilization by employees, **Hanwha Systems** produced the Fair Trade Compliance Manual in various formats, including comprehensive, practical, mini, and video formats. The mini manual, in particular, was specifically included in the company's business notebook and distributed to all employees.

To ensure the compliance manual remains up-to-date with the latest legal requirements, **Hanwha Systems** conducts regular revisions twice a year. In 2022, the manual was first enacted in June and then underwent its regular revision in December.

The compliance manual serves as a valuable CP guideline and textbook for both the company and its employees in adhering to fair trade regulations.



Fair Trade Compliance Manual



Fair Trade Compliance Manual and CEO's Declaration of CP Implementation

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Strengthening employee ethics and compliance awareness

Enhancing compliance training

Hanwha Systems conducts regular ethics and compliance training for all of its employees. In 2022, specialized training based on the fair trade risk assessment of each department was incorporated into the company-wide compliance training. The training sessions for the first and second half of 2022 were conducted online through **Hanwha System's** internal system (Channel H) for a duration of 2-3 weeks. To gather feedback and improve the training, participants were surveyed on various aspects, including their satisfaction with the training, suggestions for improvement, complaints, assessment of the training schedule and volume, test difficulty, and requests for future training. The survey results were analyzed, reviewed, and reported to the compliance manager to enhance future training programs. In addition, throughout the year, **Hanwha Systems** conducted differentiated compliance training based on hierarchy and position to maximize its effectiveness. This included ISO 37301/37001 internal auditor training, compliance training specifically for executives, training for new employees, and training through weekly newsletters.

Key compliance training conducted in 2022

Category	Period	Content	Trainees
Q1	Feb-Mar	ISO 37301/37001 internal auditor training (Sessions 1-2)	All T/F implementing ISO37301/37001 certification
Q2	Apr	(First) Compliance council representative training	All compliance representatives
	Apr	(First) Compliance council dissemination training	All employees in the Council
	May	ISO 37301/37001 internal auditor training (Sessions 3-4)	All T/F implementing ISO37301/37001 certification
Q3	Jul	(First) Company-wide compliance training	All employees
	Jul	(First) Specialized training for fair trade risk departments	All employees [Differentiated training based on departmental risk assessment results (high, medium, low)]
	Aug	(Second) Compliance Council representative training	All compliance representatives
	Aug	(Second) Compliance Council dissemination training	All employees in the Council
Q4	Oct	(Second) Company-wide compliance training	All employees
	Oct	(Second) Specialized training for fair trade risk departments	All employees [Differentiated training based on departmental risk assessment results (high, medium, low)]
	Dec	Legal violation case training	All executives
	Dec	Fair trade training for executives	All executives
At all times	Weekly	Compliance newsletter training	All employees
	At all times	Fair trade training for new employees	All new employees (new/experienced)

Revamped and enhanced compliance newsletter

Hanwha Systems maintains regular publication of a compliance newsletter to keep employees informed about the latest compliance trends, sanctions, and revisions to fair trade and company-related laws and regulations. This newsletter is compiled through continuous monitoring, analysis, and review of the legal environment on a weekly basis. It is distributed to all employees via email and posted on in-house bulletin boards. The goal is to ensure that all employees are well-informed about the latest changes in the legal landscape, thereby promoting compliance awareness and emphasizing the importance of adhering to laws and regulations.

In 2022, **Hanwha Systems** published a total of 49 compliance newsletters. In 2023, the company further enhanced the newsletter by completely revamping it. The new newsletter was designed to strengthen employee compliance awareness at all times by providing CP announcements, fair trade-themed training compliance quizzes, and compliance content in video format.

Holding internal CP councils

Since July 2022, as part of its efforts to enhance its CP, **Hanwha Systems** has been convening monthly internal CP councils with the participation of executives below the CEO level. These CP councils serve as a platform to share, report, and discuss the latest external trends and internal issues related to fair trade and CP. Organized by the compliance manager, these councils were convened five times in 2022.



Information Security

Hanwha Systems prioritizes the safe and efficient management of corporate and customer information to minimize information security risks. By doing so, the company has established itself as a leader in the defense and ICT industries.

Information Security Management System

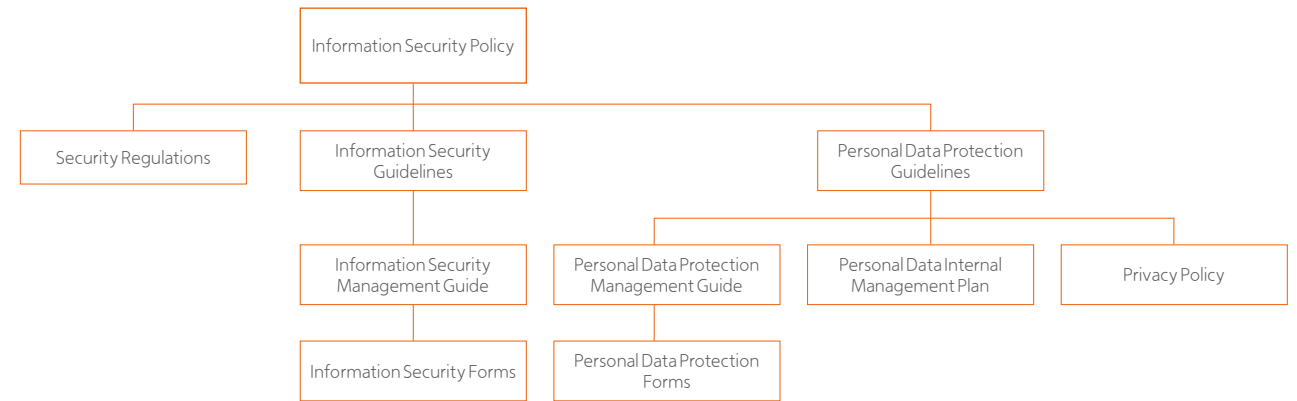
Hanwha Systems has established a strong information protection governance, focusing on three key areas: IT service security, personal data protection, and security service operation. To ensure effective implementation of this governance, the company has appointed a Chief Information Security Officer (CISO). The CISO, working from the Information Security Office, is responsible for overseeing the information security policy, conducting audits, and raising awareness throughout the organization.

In addition, the CISO has also taken on the responsibilities of the Chief Privacy Officer (CPO) since the company's reorganization last year. As such, the CISO is entrusted with the task of ensuring the protection of personal data. In March of this year, we conducted a comprehensive revision of our personal data protection regulations, which were subsequently approved by the CEO and implemented throughout the company.

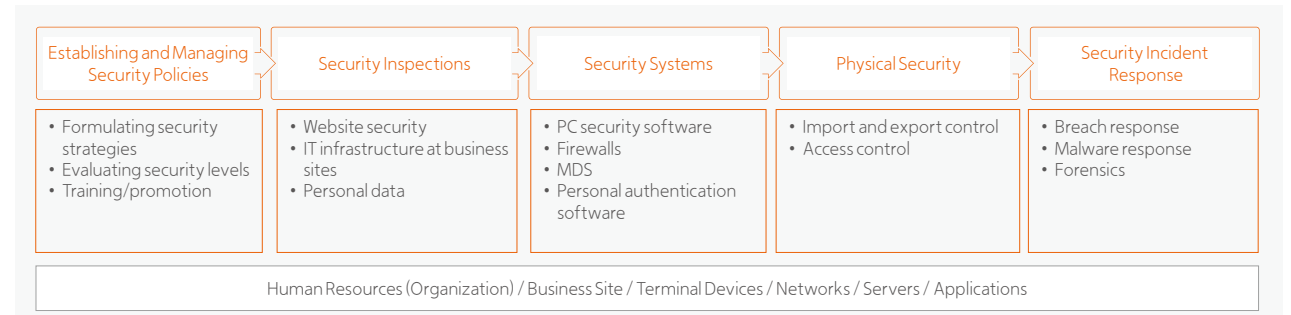
The Information Security Office at Hanwha Systems is responsible for conducting regular and ad hoc inspections on IT services to ensure information security and personal data protection across the company. The Information Security Office plays a vital role as the control tower for personal and information security, supporting collaboration and sharing work throughout the organization. This is achieved through the company-wide Information Security Committee, Information Security Crisis Response Council, and Information Security Working Group.

Furthermore, the Security Operations Team at Hanwha Systems has a critical role in ensuring information security through the establishment, operation, and maintenance of information security systems, as well as security control and response to any security breaches. Moreover, the Security Operations Team is dedicated to protecting defense technology and adheres to the Defense Industry Directive to safeguard national industrial secrets.

* The information security policy defines the company's policy on information security, encompassing both information security and personal data protection. It also consists of guidelines, sub-guidelines, and forms, as shown in the policy system chart below, which specifies the matters stipulated in the policy.

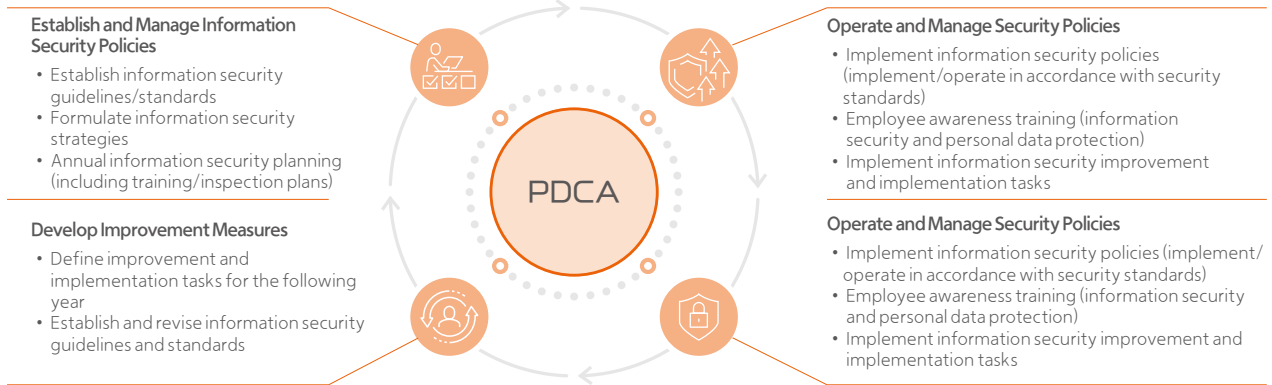


Security Management System



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Information Security Management System (PDCA Model)



Internal Regulations for Technology Protection

The Security Team at **Hanwha Systems**, responsible for safeguarding defense technology, carries out activities focused on the protection of national industrial secrets in accordance with the Defense Industry Directive. To ensure the secure protection of these secrets, the team has implemented 35 specific security management measures tailored to various fields in accordance with the company's 'Internal Regulations for Technology Protection.'

Key Activities and Outcomes		
	Protecting National Industrial Secrets	Hanwha Systems places a strong emphasis on strict confidentiality protection for customer-related information and complies rigorously with special laws and regulations concerning national defense core technologies. Additionally, we fulfill our obligation to report on technology protection annually.
	Implementing an Anomaly Detection Solution	Hanwha Systems' ICT division has successfully developed and implemented an anomaly detection solution designed to proactively detect and prevent security incidents. This solution is specifically designed to identify any activities on endpoints (such as terminals and users) or internal systems that deviate from normal usage patterns.
	Preventing Internal Information Leaks	Hanwha Systems has implemented a range of security measures including robust PC security settings, document encryption, the separation of internal and external networks, and intelligent risk response systems. We strictly control and monitor access to our internal servers and databases, ensuring that only authorized personnel and terminals are granted access.
	Enhanced Personal Data Protection	At Hanwha Systems , we prioritize the protection of personal data and take thorough preventive measures to ensure its security. Led by the Chief Privacy Officer (CPO), we regularly check and manage the storage of personal data to prevent any breach, alteration, theft, loss, or damage.
	Enhanced Information Security Competency	To enhance the level of personal data protection for our employees, Hanwha Systems provides training to new employees and those responsible for handling personal data through on- and offline training. We also conduct periodic training, management, and guidance for external personnel and supplier companies, as well as regular compliance checks for security items.

Technology Personnel

- Encryption of electronic documents
- Encryption of external transfer data
- Wiretap detection
- V3 antivirus software
- PC security measures
- Wireless intrusion prevention
- Employee and entrant backgrounds checks
- Security clearance
- Security management for retirees and job changes
- Security management for foreigners
- Security history management
- Security training (5 types, including security-defense technology protection training)

Facilities Documents

- Designation of key facility security zones
- Separate storage facilities for sensitive data
- Integrated security systems
- Access control
- Security screening for entrants
- Visitor management
- Equipment transportation security systems
- Document security for printing
- Electronic distribution of technical data
- Secure disposal of unnecessary data
- Export management of security documents
- Security review of data provided to external parties
- Management of technical documents with external confidentiality

Information and Communication

- Separation of internal and external networks
- Network access control
- Electronic fax service
- Integrated control systems
- Control of personal communication devices
- Logging of email communications

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Information Security Governance

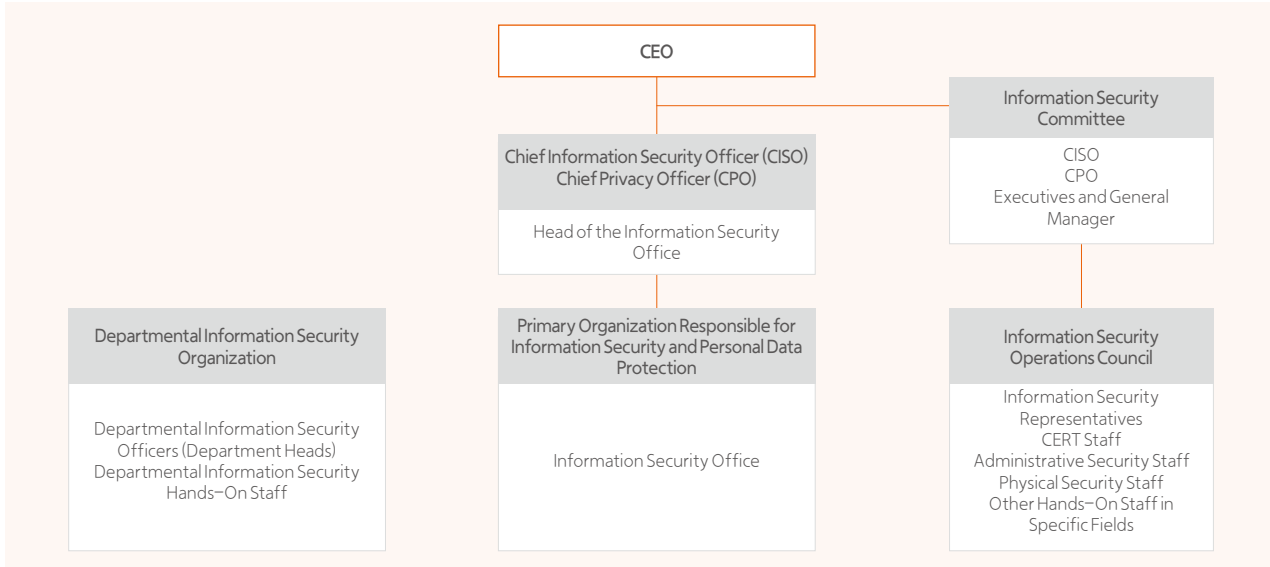
Hanwha Systems has implemented a robust information security governance that encompasses three areas (IT service security, personal data protection, and security service operation), ensuring the protection of the company’s valuable assets.

The information security policy document outlines the structure of the information security organization and sets criteria for appointing the Chief Information Security Officer (CISO). The CISO is designated as the overall leader of information security governance within the company. The Information Protection Office is responsible for overseeing the company’s information security and personal data protection policies, conducting security audits, raising employee awareness, and managing the Internal Information Security Council.

The Security Operations Team is responsible for the construction, operation, and maintenance of security systems within **Hanwha Systems**. Additionally, the Security Team for the defense division is dedicated to protecting defense technology and preventing external leaks of defense-related data. They operate in accordance with the Defense Technology Protection Act and the Directives for Defense Industry Security Operations.

To ensure a comprehensive security environment, **Hanwha Systems** takes various measures beyond technical data related to the defense industry. One of these measures includes designating the work area as a ‘technology protection zone’ to control unauthorized access. In addition, security solutions such as DRM and DLP are implemented to maintain the highest level of security. Furthermore, a secure network environment is established by configuring dedicated networks and implementing systems to block external access to defense-related materials provided to suppliers. These measures contribute to maintaining security reliability.

As a prominent defense contractor, **Hanwha Systems** is dedicated to safeguarding the nation’s well-being and protecting the interests of our company. We have successfully built a complete security system that consistently receives outstanding evaluations from the National Intelligence Service, the Defense Acquisition Program Administration, and Defense Counterintelligence Command.



Organizational Structure for Information Security (by department)

Category	Responsibilities and Authority
Information Security Office	Overall responsibility for information security and personal data protection Establishing policies, guidelines, and standards Formulating information security solution policies and approval of exceptions Conducting internal security audits Performing activities to raise information security awareness Managing and responding to information security certifications Preventing and responding to information security incidents Operating the Information Security Council
Security Operations Team	Security control/CERT Vulnerability assessment Building and operating security solutions (SI/SM) Security consulting (SI)
Security Team	Overall responsibility for defense technology protection Establishing defense technology protection policies, guidelines, and standards Conducting defense industry security audits Responding to defense industry surveys and investigations

Organizational Structure for Information Security (by roles)

Category	Responsibilities and Authority
CISO	Approval of risk assessment criteria and results Instructing the implementation of risk management plans Determining target risk levels
Information security staff	Establishing risk assessment criteria (threats, vulnerabilities, risk levels) Performing vulnerability assessments for each asset and managing results Conducting risk assessments and reporting on risk management plans Creating and managing risk assessment reports Monitoring the implementation and results of risk management plans Managing remaining threats
Information asset staff	Asset Management Identifying assets, performing asset evaluations Maintaining asset status and inventory Implementing information security measures for each asset

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Information Security Disclosures

Hanwha Systems has been conducting information protection disclosures since 2022 to provide stakeholders, including customers, with an objective overview of its information security status. Through these disclosures, we transparently share information about our investments, human resources, and certifications related to information security. We also actively engage in activities to prevent security incidents.

It is worth noting that our information security investment ratio, which accounts for 13% of our total IT investments, exceeds the average information security investment ratio of other major domestic companies (9–10%).

By consistently carrying out these information protection disclosures, we aim to enhance consumer trust in our organization.

Information Security Certifications

To ensure the stability and reliability of our information systems, **Hanwha Systems** has actively sought to obtain various domestic and international certifications in the field of information security. These certifications serve to demonstrate the excellence of our internal information security system to stakeholders, including shareholders and investors. In 2005, we obtained the Information Security Management System (ISO 27001) certification, followed by the Information Security Management System (ISMS) certification in 2013. In 2015, Hanwha Data Center was designated as an information and communication infrastructure. Additionally, in 2016, we achieved the Cloud Service Information Security Certification (ISO 27017), which we diligently maintain through regular renewal audits.



Disclosures < Information Security Disclosures < KISA Information Security Disclosure General Portal

Category		2021	2022
Information security investments	Investment amount in the information technology sector (A)	55,089,039,009	Please note that the disclosure of information security investment is scheduled for June 2023
	Investment amount in the information security sector (B)	7,486,152,203	
	B/A	13.6%	
Information security personnel	Total employees	3,813.1	
	Personnel in the Information Technology Division (C)	500.1	
	Dedicated personnel in the Information Security Division (D) (Internal/External)	26.7	
	D/C	5.3%	

Category	External certifications
IT service management	ISO 20000
Information security management system	ISO 27001
Information security management system	ISMS
Cloud service information security	ISO 27017
Firewalls and IPS	EAL 4
Antivirus (V3)	EAL 3
Integrated internal information leakage prevention audit system (DLP)	EAL 2

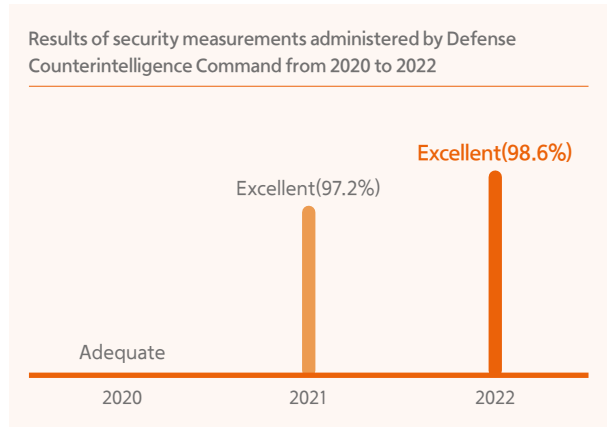
Information Security System and Enhanced Security

Protecting National Industrial Secrets

As a leader in the national defense industry, **Hanwha Systems** handles customer data and core defense technologies during the course of providing major products and services.

Consequently, **Hanwha Systems** is dedicated to building a safer future for our country by diligently adhering to special laws governing national defense core technologies and customer data. We proactively report on the status of our technology protection efforts on an annual basis. In particular, **Hanwha Systems** has implemented a security control system that operates in real-time, 365 days a year. This system is designed to ensure our preparedness for cyberattacks and to maintain a high level of confidentiality across all our operations.

In recognition of our commitment to information protection and security, we received an Adequate rating in 2020, followed by Excellent ratings in 2021 (97.2%) and 2022 (98.6%) in security measurements administered by Defense Counterintelligence Command.



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Implementing an Anomaly Detection Solution

Hanwha Systems' ICT division has successfully developed an innovative solution called the End-point Anomaly Detection System (EADS). This system is designed to proactively prevent hacking attacks, including ransomware, as well as security incidents related to the breach of personal and insider data.

EADS is a critical system that effectively identifies and proactively blocks events that could potentially result in security threats. This solution analyzes and detects activities on End-points (such as terminals and users) and internal information systems that deviate from normal usage patterns.

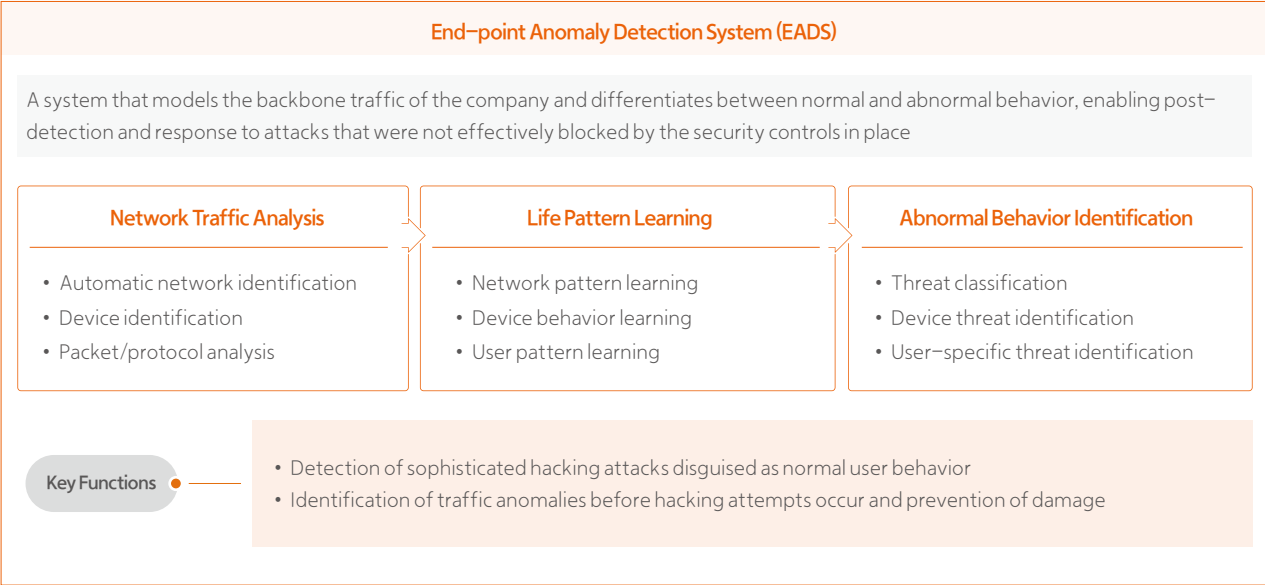
Since implementing EADS, **Hanwha Systems** has defined specific anomaly scenarios for different security incidents such as data breaches, malware infections, and system compromises. The company has also established a robust anomaly detection system that allows for immediate detection and response to any anomalies that occur, ensuring a prompt response to internal and external threats.

Internal information leakage prevention system

To prevent internal information leakage, **Hanwha Systems** has implemented several measures. These include strict control over storage media, document encryption, the segregation of internal and external networks, and the deployment of intelligent threat response systems. Additionally, access to internal servers and databases is carefully managed to ensure that only authorized personnel and terminals have the necessary permissions.

In particular, IDCs that hold client information implement measures including X-ray checkpoints and metal detectors to control the importation of portable storage media and computer devices. Additionally, the company enforces data formatting for information assets like PCs to ensure the prevention of internal information leaks.

Furthermore, **Hanwha Systems** conducts regular security checks on its IT infrastructure system to identify and address any vulnerabilities that could be exploited by external cyberattacks. The company also performs penetration tests using attack techniques similar to those employed by real hackers, aiming to ensure the safety of data.



Special case

On July 19, 2021, **Hanwha Systems** entered into an MOU with GITSN, a cybersecurity company renowned for its expertise in radio wave analysis technology. Similarly, on July 12, 2022, **Hanwha Systems** signed an MOU with KT to foster cooperation in the development of quantum cryptographic communication technology specifically in the aerospace sector. As a leader in advanced defense electronics, **Hanwha Systems** plays a crucial role in the development and

production of weapon systems that demand robust information security and cyber defense measures. In addition to this, **Hanwha Systems** is actively engaged in the development of countermeasures against emerging threats, including wireless hacking through spy chips. The company is committed to establishing a new cyber security system that incorporates radio wave analysis, specifically addressing concerns related to wireless eavesdropping.



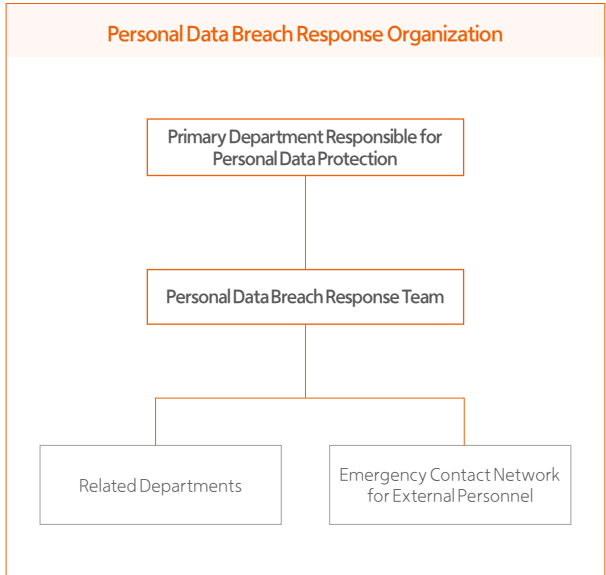
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Enhanced Personal Data Protection

Hanwha Systems conducts regular inspections and improvement activities on personal data under the supervision of the personal data protection officer. We collect only the minimum amount of personal data required by law and have reinforced regulations to encrypt 'card numbers' and 'account numbers' in addition to 'unique identification information,' 'passwords,' and 'biometric information.' We take thorough preventive measures to prevent the leakage, alteration, theft, loss, and damage of personal data by promptly destroying it after its retention period.

Personal Data Breach Response

Hanwha Systems has implemented proactive measures to define and manage various types of personal data breach incidents. The company has established a robust organizational structure and processes to effectively respond to potential data breaches across online and offline channels. This comprehensive approach encompasses proactive strategies to prevent threats and minimize the risk of recurrence.



- Personal Data Protection Measures**
1. Account and access rights management
 2. Access control management
 3. Password management
 4. Storage access logs and prevention of tampering
 5. Security configuration of personal data processing systems
 6. Vulnerability assessment
 7. Encryption of personal data
 8. Encryption during personal data transmission
 9. Security configuration of PCs handling personal data
 10. Mobile device security management
 11. Security management of work PCs and storage media
 12. Protective measures during printing and copying

- Personal Data Breach Response Procedures**
-  Incident Reporting and Receipt ▼
 -  Preparation for Incident Response ▼
 -  Incident Handling and Notification ▼
 -  Establishment of Measures to Prevent Recurrence ▼

Strengthening Technical and Information Security Competency

Employee Training on Technical and Information Security

Hanwha Systems conducts online and offline training programs for both new and experienced employees as well as work assignees to enhance their understanding of private data protection. In 2022, we combined compliance training and subcontracting training with personal data protection training. In 2023, we plan to introduce security training tailored to work assignees, including secure coding. Along with information protection training, we also organize various activities to raise awareness, such as creating security pledges, conducting email simulation training, and organizing information protection quizzes.



Supplier Technical, Information Security Training and Management

Hanwha Systems actively provides training, management, and guidance to external and supplier company personnel to prevent information security breaches. We also conduct regular information security and personal data protection training to over 130 suppliers. We assess their information security management and when registering new companies, we assess their information security environment. Furthermore, in 2022, following the partial revision of the defense technology protection guidelines, we established the Defense Technology Protection Review Committee. This committee is responsible for inspecting and providing consultation on security and technology protection activities to our suppliers.



Integrated Risk Management System

Hanwha Systems has implemented a robust company-wide risk management system and organization to effectively manage and proactively respond to economic, social, and environmental risks that may impact the company. Through this approach, we aim to minimize risks, enhancing the stability of our corporate operations and environment.

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Enhancing an integrated risk management system


In January 2022, Hanwha Systems implemented the 'risk management regulations' as part of our commitment to establishing a systematic company-wide risk management system. This system enables us to effectively respond to the evolving domestic and foreign corporate environment, business characteristics, and the needs of both internal and external stakeholders.

Through the Risk Management Committee, which falls under the Board of Directors, Hanwha Systems establishes risk management principles that integrate company-wide risk management strategies. The committee re-evaluates the risk management ledger collected from each department on a monthly basis through the primary department and updates risk checks and response strategies accordingly. Additionally, the committee receives regular or ad-hoc reports from the primary department on high-priority risks, and if any of these risks are deemed significant to the company, the risk management officer (CFO) submits them to the Board of Directors for review.

Hanwha Systems Risk Management Principles

- ① Policies and organizations for managing potential losses that may occur in connection with the company's business activities shall have procedures and reporting systems.
- ② Risks by type should be integrated and managed on a company-wide basis.
- ③ Risk levels shall be set and managed to ensure that profitable business activities are not curtailed by excessive control of risks and are consistent with management goals and strategies.
- ④ Risk indicators shall be uniform and consistent.


Hanwha Systems Risk Management Process



Establishing a Risk Management Plan

1. Establish a risk management plan annually, prepare procedures and methods, check and report on proper implementation across the company


Responsible: Primary department



Risk Identification

1. Identify important internal and external issues and risks that may arise in connection with the company's business activities according to classification standards and notify the primary departments.

Responsible: All departments




Risk Analysis

1. Conduct quantitative analysis of identified risks based on the evaluation criteria and determine the priority of handling risks according to rating.
* For low-priority risks, report and prepare countermeasures at each headquarters and office level.

2. Determine the level of response by risk rating and report to the committee


Responsible: All departments, primary department, committee



Risk Response

1. Take proactive measures for high-priority risks by establishing single or multiple response strategies to mitigate the likelihood of occurrence and impact.

Responsible: All departments



Monitoring and Reporting

1. Review, provide oversight, and reassess changes in the risks under management at all times, following a consistent standard.
2. Re-evaluate risks and re-establish response strategies on a monthly basis by integrating the ledger.
3. Report to the Board of Directors any risk issue that is deemed necessary to be brought to the attention of the Board as an important matter for the company.

Responsible: All departments, primary department

Risk Management Governance

Risk Management Committee

Hanwha Systems has established a Risk Management Committee to proactively manage risks and ensure effective responses. The committee is comprised of the executive in charge of finance as the Chief Risk Officer (CRO), along with executives responsible for legal and business management. Regular quarterly committee meetings are held to address risk management matters.

The Risk Management Committee plays a vital role in overseeing risk management tasks and setting policies that can greatly influence Hanwha Systems' business activities. Any matters that have a significant impact on the company's operations are thoroughly reviewed by the committee and then reported to and approved by the Board of Directors, following the regulations set by the committee.

In particular, risk management personnel from each department actively participate in conducting risk quantification analysis using qualitative methods and prioritize risks based on evaluation criteria, leveraging their expertise in issue-specific risks and an integrated understanding of each issue. Additionally, primary departments provide monthly reports to the committee regarding the contents and outcomes of company-wide risk-related council activities. Risks are addressed through an organic and close cooperation system, including monthly reassessments of risks identified and managed by each responsible organization and, if necessary, submissions to the committee and the Board.



Category	Frequency	Roles	Details
1 Chief Financial Officer(CRO) Chief Legal Officer Business Management Officer	Quarterly	Oversees the management of risks that may arise in business and establishes policies	1. Approval for establishing and adjusting risk management plans and strategies 2. Approval for establishing and revising management regulations 3. Risk measurement results and management status 4. Significant large-scale investments
2 Business Management Department	Monthly	Establishes a risk management plan, checks and reports on risk management and implementation (monthly), re-evaluates risks and re-establishes response strategies	1. Establishing, changing, and implementing risk management policies and plans 2. Regular or irregular reporting of comprehensive risk management status 3. Checking and reporting on the progress of company-wide risk management matters 4. Other matters deemed necessary by the Board of Directors, management, or committees related to risk management
3 Planning and operations departments of each organization	Monthly	Identifies risks, conducts risk quantification analysis, reports on risks and establishes response plans	1. Designating and operating risk management personnel 2. Discussing issues and risks with primary departments 3. Providing timely information necessary for risk management to the primary department 4. Regular inspections and management of risks for each organization in charge

Risk Assessment Criteria

Each department at Hanwha Systems conducts risk quantification analysis utilizing the risk assessment criteria, which includes evaluating the probability of risk occurrence (ranging from level 1 to 5) and assessing the impact (in terms of strategic importance, management impact, ESG impact, and urgency). Based on the results of the quantification analysis, a score-based rating is assigned to determine response priorities. The primary department responsible for risk management determines the level of response based on the assigned rating and regularly reports the response to high-priority risks to the committee. On the other hand, low-priority risks are reported and addressed by the respective headquarters and office units.

Probability of Risk Occurrence

Category	Weighted Content				
	Level 5	Level 4	Level 3	Level 2	Level 1
Judgment	80%+ Almost Certain to Occur	Less than 80% to more than 60% likely	Less than 60% to more than 40% likely	Less than 40% to more than 20% likely	Less than 20% likely to occur

Risk Impact

Category	Content by weighting				
	Level 5	Level 4	Level 3	Level 2	Level 1
ESG impact	Serious impact on ESG management	Impact on ESG management	Partial impact	Partial impact	Partial impact
Strategic importance	Serious impact on vision and strategy implementation	Impact on vision and strategy implementation	Partial impact	Partial impact	Partial impact
Management impact	KRW 5 billion or more in costs/losses or impact on public image	KRW 1 billion or more in costs	Impact on cost and management likely	Future costs incurred	No cost incurred
Urgency	Immediate action required (company-wide action)	Immediate action required (HQ-level action)	Needs to be addressed (HQ-level needed)	Needs to be addressed (team-level action)	Needs further review (team-level action)

Risk management by type

Financial Risk Management

Among the various risks stemming from the unpredictability of the capital market, Hanwha identifies and manages three main financial risks for the company: liquidity risk, foreign currencies risk, and market risk.

Category	Frequency	Role	Details
Liquidity risk	Macroeconomic (inflation, interest rates) and cash flows, etc.	Risk of loss due to a mismatch between fund management and procurement periods, insolvency due to unexpected outflows and hemorrhaging of funds, borrowing at high-interest rates to resolve funding difficulties, and unfavorable sales of held assets	<ul style="list-style-type: none"> • Maintain adequate liquidity and financial soundness through regular forecasting and adjustment of fund balances
Foreign currencies risk	Exchange rate fluctuations and currency exchange losses	Risk of loss due to unexpected fluctuations in exchange rates, resulting in changes in the value of foreign currency-denominated transactions and foreign currency-denominated financial statement items	<ul style="list-style-type: none"> • Evaluate the presence of measures to mitigate the risk of exchange rate fluctuations (hedging options) • Regularly assess, manage, and report on foreign currency exposure risks of foreign currency-denominated debt obligations (by conducting quarterly currency management committees)
Market risk	Market and policy changes, social unrest, etc.	Risk of loss due to the company's inability to respond appropriately to market fluctuations, including government policies, market conditions, political conditions, and the company's reputation, resulting in a decline in the value of its businesses and holdings	<ul style="list-style-type: none"> • Regularly monitor defense and civilian markets and changes in policy and technology

Potential Risk Management

Hanwha Systems proactively manages both financial and non-financial risks associated with sustainability topics. These risks are identified through a materiality assessment that considers their impact on the business (revenue, cost, reputation, compliance/regulation) as well as their impact on the social and environmental aspects (stakeholder interest, likelihood of occurrence, and severity). By recognizing the changing global business landscape, the company aims to transform potential risks into opportunities. It does so by identifying and responding to risks that are expected to significantly impact corporate management in the medium to long term.

Category	Content	Risk Definition	Hanwha Systems Response
Climate change	<ul style="list-style-type: none"> • Acute and chronic physical risks from rising average global temperatures • Transition risks arising from the transition to a low-carbon society 	<ul style="list-style-type: none"> • Disruptions in logistics and raw material supply, productivity decline, and product quality issues due to abnormal climate phenomena • Diminished competitiveness and reputation risks resulting from failures to secure technology and products for climate change response 	<ul style="list-style-type: none"> • Implementing mid-to longterm GHG emissions reductions • Developing strategies to make product manufacturing processes more environmentally friendly • Diversifying supply channels for product production
Information security	<ul style="list-style-type: none"> • Increased risk of leakage of corporate confidential information and personal data due to changes in working styles, such as remote work • Risks arising from the collection, leakage, and utilization of personal data of customers and employees 	<ul style="list-style-type: none"> • Reputation risks and legal sanctions due to customer information leakage resulting from failure to ensure robust information security • Need for stable security systems to protect against external hacking and unforeseen threats • Need to secure critical information assets and operational stability against cyber attacks and system malfunctions 	<ul style="list-style-type: none"> • Regular information protection training and inspections for employees • Expanding the number of dedicated security personnel and strengthening their competency • Acquiring ISO 27001, ISO 27017, and ISMS certifications and enhancing cybersecurity management systems
Technology and industry transformation	<ul style="list-style-type: none"> • Technology and industrial structure transformation • Risks of failing to proactively respond to the restructuring of the industrial landscape due to digital transformation 	<ul style="list-style-type: none"> • Limited entry into new markets in the absence of technology and systems (expanding new business opportunities through the acquisition of relevant capabilities) • Need to secure core R&D talent for future defense and ICT industries 	<ul style="list-style-type: none"> • Expanding business competency based on new digital technologies such as AI and cloud • Discovering new businesses and diversifying business fields by utilizing ICT competency and defense communication technology

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Enhanced Internal Control System

Operating an Internal Accounting Management System

Hanwha Systems places great importance on the reliability of its financial information and effectively manages risks associated with accounting reporting. This is achieved through the operation of an internal accounting control system. In this system, the CFO assumes the role of internal accounting manager, with a dedicated organization established to oversee the operation of the internal accounting management system. The organization assesses the adequacy of the system's design, enhances operational efficiency, and reports the evaluation outcomes to the Board of Directors to ensure the independence of management's assessment.

Furthermore, the purpose and objectives of the internal accounting management control system are effectively integrated into the work processes of each department within **Hanwha Systems**. Performance evaluation criteria for the internal accounting management system are established and incorporated into the work objectives of employees. This ensures a responsible and practical operation of the system throughout the company.

Hanwha Systems is dedicated to identifying and minimizing changing risks by actively monitoring internal and external factors that can significantly impact our internal accounting control system. We incorporate company-wide risks reported by the Risk Management Committee into the design, enhancement, and evaluation of the system. Management consistently strives to enhance accounting transparency and strengthen financial reliability through ongoing evaluation, effective change management, and continuous improvement of the internal accounting control system.

Internal Accounting Control System Audit and Reporting

Each business year, **Hanwha Systems'** management conducts a comprehensive assessment of the internal accounting control system's effectiveness, adhering to industry best practices for internal control over financial reporting. The results of this evaluation are reported to the Audit Committee, the Board of Directors, and the general meeting of shareholders. The Audit Committee, operating independently, evaluates both the design and operation of the system and reports its findings to the Board of Directors and the general meeting of shareholders. The operation of the internal accounting management system is transparently disclosed to stakeholders through business reports.

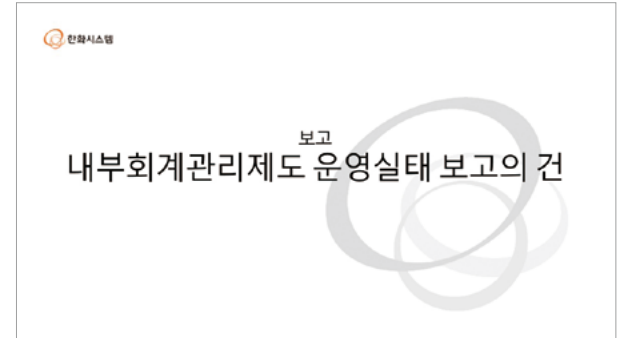
The Internal Audit Department plays a crucial role in ensuring the efficient operation of the Audit Committee. The department is responsible for developing and implementing the company's internal audit plan and reporting the findings to support the work of the Audit Committee. The Audit Committee actively participates in key meetings, including the Board of Directors, and receives necessary reports from relevant executives when required. Furthermore, an independent outside auditor verifies the actual operations of the internal accounting control system to ensure its adequacy.

Tax Management

Compliance with Regulations and Fulfilling Tax Reporting and Payment Obligations

In line with its corporate social responsibility, **Hanwha Systems** is committed to complying with tax laws and regulations and fulfilling its tax obligations. The company's in-house Tax Law Department plays a vital role in evaluating various tax risks stemming from domestic and international tax policies. It ensures that all corporate transactions are conducted in strict adherence to the applicable tax laws of each country.

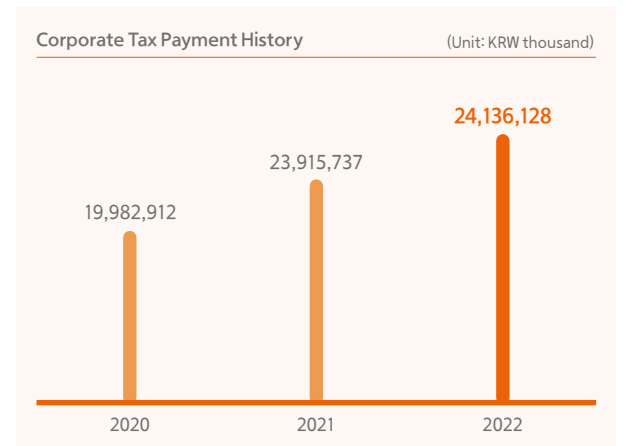
To mitigate tax risks arising from changing tax policies, **Hanwha Systems** maintains ongoing monitoring of domestic and international tax laws and trends in each country. We incorporate these updates into our tax policies and strictly comply with regulations to prevent any tax evasion or avoidance.



보고 | 내부회계관리제도 운영실태 보고의 건

- 관련 근거
 - 주식회사 등의 외부감사에 관한 법률 제8조 및 동법 시행령 제9조 (내부회계관리제도의 운영 등)
- 평가 개요

구분	내용
평가 목적	<ul style="list-style-type: none"> 실제평가: 재무제표 왜곡요소를 조목조목 점검할 수 있는 오류나 부정을 예방하고 적시에 적발할 위해 내부회계관리제도가 적절하게 설계됨을 확인 운영평가: 재무제표의 신뢰성 제고를 위한 내부회계관리제도 운영의 효과성을 평가
대상 기간	'22년 전체 기간 (상/하반기로 나누어서 평가)
실시 기간	상반기 평가: '22년 7월 / 하반기 평가: '22년 11월 (연 2회 실시)
평가 종류	실제평가 및 운영평가 (핵심문제가 대한 효과적 운영 여부 평가)



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Financial Statements

Consolidated Statement of Financial Position

(Unit : KRW 1 million)

Category	2020	2021	2022
Assets			
Current assets	1,683,884	2,676,109	2,326,840
Cash and cash equivalents	539,873	1,636,831	1,228,218
Accounts receivable and other receivables	157,733	181,115	208,561
Other financial assets	12,825	27,567	25,669
Other current assets	609,566	424,551	469,953
Inventory	363,888	406,045	372,963
Assets held for sale	-	-	21,477
Non-current assets	1,011,186	1,218,193	1,618,788
Accounts receivable and other receivables	4,653	742	0
Financial assets at fair value through profit or loss	22,162	105,867	251,149
Financial assets at fair value through other comprehensive income	0	61,517	302,600
Other financial assets	16,022	17,073	23,967
Investments in associates	24,133	28,550	16,433
Property, plants, and equipment	217,505	256,906	274,368
Right-of-use assets	86,546	101,069	100,640
Intangible assets	550,426	562,163	557,834
Other non-current assets	2,527	2,586	4,409
Deferred tax assets	87,212	81,720	87,387
Total assets	2,695,070	3,894,303	3,945,628
Liabilities			
Current liabilities	1,359,778	1,363,163	1,618,536
Accounts payable and other payables	110,389	125,173	160,863
Borrowings and notes payable	39,998	29,986	80,000
Other financial liabilities	54,758	70,856	79,617
Other current liabilities	1,127,236	1,111,361	1,252,876

(Unit : KRW 1 million)

Category	2020	2021	2022
Provisions	13,008	10,475	22,954
Current income tax liabilities	14,389	15,312	14,840
Liabilities held for sale	-	-	7,385
Non-current liabilities	302,610	291,378	308,140
Accounts payable and other payables	-	469	127
Borrowings and notes payable	59,903	29,959	29,976
Other financial liabilities	66,158	80,086	77,868
Net defined benefit pension liabilities	159,188	160,419	180,295
Provisions	17,361	20,445	19,867
Deferred income tax liabilities	-	-	7
Total liabilities	1,662,388	1,654,541	1,926,676
Equity			
Equity attributable to owners of the parent company	1,032,682	2,222,498	2,000,339
Share capital	551,152	944,597	944,597
Capital surplus	328,047	1,084,939	1,085,520
Capital adjustments	(739)	(34,121)	(34,121)
Accumulated other comprehensive income	(2,794)	2,354	(112,582)
Retained earnings (deficit)	157,018	224,730	116,925
Non-controlling interests	-	17,263	18,613
Total equity	1,032,682	2,239,761	2,018,952
Total equity and liabilities	2,695,070	3,894,303	3,945,628

Economic and Business Performance

Stock and Dividend Status

Category		Unit	2020	2021	2022
Total cash dividends		KRW million	25,328	29,919	46,748
Dividend types		-	Cash dividend	Cash dividend	Cash dividend
Cash dividend payout ratio		%	27.07	30.57	-57.89
Cash dividends per share (common stock)		KRW	230	160	250
Dividend yield (%)		%	1.48	1.02	2.26
Introduction of systems	Written voting system	-	예	예	예
	Electronic voting system	-	예	예	예
Shareholder communication	Number of corporate briefings	Cases	8	11	9
	Number of conferences		8	11	9

Distribution of Economic Value

Category		Unit	2020	2021	2022
Shareholders and investors	Dividends	KRW million	25,328	29,919	46,748
	Interest expenses		6,231	4,196	5,848
Employees	Salaries		313,788	349,232	412,867
	Employee benefits		40,501	68,773	78,522
Suppliers	Purchasing costs		10,971	14,206	13,681
Local community	Company donations		329	2,140	2,228
Government	Corporate taxes	-14,505	30,176	23,741	

* We do not extend credit or make short-term loans to internal or external stakeholders.

Stock Ownership

Category		Unit	2020	2021	2022
Total percentage of ownership by the CEO			0.01	0.01	0.01
Shareholders with 5% or more ownership	Hanwha Aerospace Co., Ltd.	%	48.99	46.73	46.73
	Hanwha Energy Co., Ltd.		13.41	12.80	12.80
	National Pension Service		5.97	5.88	5.99
Stocks	Number of issued shares	Shares	110,230,389	188,919,389	188,919,389
	Number of outstanding shares		110,121,845	186,993,261	186,993,261

Research and development investments

Category		Unit	2020	2021	2022
R&D investment expenses		KRW million	283,931	353,949	324,039
R&D investment ratio to revenue		%	17.18	16.94	14.81
Number of patents and trademarks registered (Cumulative domestic)		Cases	1,307	1,653	1,778

Government Assistance

Category		Unit	2020	2021	2022
Government subsidies		KRW million	2,015	2,163	2,456

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Greenhouse Gases

Category	Unit	2020	2021	2022
Total greenhouse gas emissions (Scope 1 + Scope 2)	tCO ₂ -eq	18,077.8	19,642.4	20,921.0
Scope 1 (Direct emissions)	tCO ₂ -eq	575.4	543.9	600.0
Scope 2 (Indirect emissions)	tCO ₂ -eq	17,502.4	19,098.5	20,321.0

Energy

Category	Unit	2020	2021	2022
Total energy consumption		373,249	406,628	432,601
Direct energy consumption	GJ	9,891	9,290	9,748
Indirect energy consumption		363,358	397,338	422,853
Renewable energy consumption	MWh	9.0	10.5	15.5
Renewable energy consumption by procurement method within business sites (Self-generation – Solar power)	MWh	9.0	10.5	15.5

* We have been implementing energy verification checks since 2022.

Water and Wastewater

Category	Usage status	Unit	2020	2021	2022
Water usage			91,061	96,903	92,744
Tap water usage			91,061	96,903	92,744
Industrial water usage	Unused		0	0	0
Groundwater usage	Unused	Ton	0	0	0
Surface water usage	Unused		0	0	0
Storm water usage	Unused		0	0	0
Sewage discharge			91,061	96,903	92,744
Wastewater discharge	Unused		0	0	0

* We do not discharge water pollutants such as COD, BOD, SS, etc.

* We manage sewage and wastewater equally

Chemical Usage

Category	Unit	2020	2021	2022
Gumi Site usage		0.27	0.25	0.27
Yongin Site usage	Ton	0.32	0.38	0.49
Total		0.59	0.63	0.76

Air Pollutant Emissions

Category		Unit	2020	2021	2022
Site	Pollutant				
Gumi Site	Dust	kg	58.68	32.03	15.6
Yongin Site	Dust	kg	–	–	10.6
Jukjeon Data Center	Dust	kg	–	–	–
Total		kg	58.68	32.03	26.2

* We do not emit air pollutants such as NOx or SOx

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Waste

Category		Unit	2020	2021	2022년
Site	Emission Waste				
Gumi Site	General	ton	126.57	134.86	152.64
	Designated		4.15	4.07	4.19
	Recycling		127.45	136.68	153.99
	Other waste		3.18	14.13	12.50
Yongin Site	General		95.6	101.5	95.2
	Designated		0.10	4.00	0.6
	Recycling		95.5	97.5	94.6
	Other waste		9.30	11.20	7.65
Jukjeon Data Center	General		0.41	-	0.3
	Designated		-	-	-
	Recycling		0.41	-	0.3
	Other waste		0	0	5

* Other waste: Electronic waste, plastic waste, scrap metal, paper waste, etc.
 * Waste emissions are calculated by excluding other wastes.

Environmental management system

Category	Unit	2020	2021	2022
Environmental management system (ISO 14001) certification rate	%	100	100	100
Number of certified sites		1	1	1
Number of sites eligible for certification	Programs	1	1	1
Green company certification		1	1	1

Environmental Regulation

Category		Unit	2020	2021	2022
Number of environmental regulation violations	Number of legal regulation violations	-	0	0	0
	Total amount of fines	KRW million	0	0	0
	Number of lawsuits filed	Cases	0	0	0
	Number of non-monetary sanctions	Cases	0	0	0
	Environment-related liabilities	KRW million	0	0	0
Total amount of fines	KRW		0	0	0

Safety and Health Management

Safety and Health Management System

Category	Unit	2020	2021	2022
Safety and health management system (ISO 45001) certification rate	%	100	100	100
Number of certified sites		1	1	1
Number of sites eligible for certification	Programs	1	1	1
Number of sites certified with OHSAS 18001 (or KOSHA 18001)		2	2	2

Industrial Safety Training

Category	Unit	2020	2021	2022
Industrial safety training hours	Hrs.	52,202	49,796	55,648
Number of industrial safety training participants	Persons	6,152	6,761	7,526

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Health Management

Category		Unit	2020	2021	2022
Health examinations conducted	Total		4,642	4,936	5,068
	Employees	Persons	3,699	3,514	3,902
	Spouses and family members		943	1,422	1,166

Industrial Accidents

Category		Unit	2020	2021	2022
Total working hours	Employees	Hrs.	7,641,216	8,080,512	8,726,784
	Suppliers		1,265,960	1,509,240	1,831,495
Number of injured workers	Employees	Persons	0	0	0
	Suppliers		0	0	0
Number of injuries (fatalities + serious injuries + minor injuries)	Employees		0	0	0
	Suppliers		0	0	0
Number of fatalities	Employees		0	0	0
	Suppliers		0	0	0
Number of serious injuries	Employees	Cases	0	0	0
	Suppliers		0	0	0
Number of minor injuries	Employees		0	0	0
	Suppliers		0	0	0
Number of serious accidents	Employees		0	0	0
	Suppliers		0	0	0
Industrial accident rate (Number of injured workers / Number of workers) * 100	Employees	%	0.00	0.00	0.00
	Suppliers		0.00	0.00	0.00
LITR Number of work-related injuries resulting in lost workdays / Total working hours * 1,000,000	Employees		0.00	0.00	0.00
	Suppliers		0.00	0.00	0.00
OFIR Number of occupational illness cases / Total working hours * 1,000,000	Employees	-	0.00	0.00	0.00
	Suppliers		0.00	0.00	0.00
TRIR Number of work-related injuries / Total working hours * 1,000,000	Employees		0.00	0.00	0.00
	Suppliers		0.00	0.00	0.00

Social

Employees

Employee Status

Total Employment

Category		Unit	2020	2021	2022
Total number of employees (domestic)		Persons	3,691	3,931	4,292
By employment type	Regular employees	Persons	3,585	3,742	4,051
	Percentage of regular employees	%	97.13	95.19	94.38
	Non-regular employees	Persons	106	189	241
	Percentage of non-regular employees	%	2.87	4.81	5.62
Classification of non-regular workers	Part-time workers	Persons	8	10	11
	Part-time workers	%	8	5	5%
	Casual workers	Persons	98	179	230
	Casual workers	%	92	95	95
	Contracted workers	Persons	–	–	0
	Contracted workers	%	0	0	0
	Dispatched workers	Persons	–	–	0
	Dispatched workers	%	0	0	0
By gender	Subtotal		3,691	3,931	4,292
	Men		3,170	3,386	3,667
	Women		521	545	625
By age group	Subtotal	Persons	3,691	3,931	4,292
	Under 30		489	511	665
	30s		1,441	1,504	1,574
	40s		1,240	1,312	1,374
	50s and above		521	604	679

Category		Unit	2020	2021	2022
Men by job position	Mensubtotal		3,170	3,386	3,667
	Executives		53	65	66
	Managers (deputy general managers, general managers)		1,243	1,330	1,431
	Middle Managers (assistant managers, managers)		1,452	1,542	1,594
	Non-managerial employees (staff and below)		422	449	576
Women by job position	Womensubtotal	Persons	521	545	625
	Executives		2	1	0
	Managers (deputy general managers, general managers)		64	62	65
	Middle Managers (assistant managers, managers)		247	258	337
	Non-managerial employees (staff and below)		208	224	223
By region	Total		3,691	3,931	4,292
	Head office employees		1,215	2,476	2,594
	Regional office employees		2,477	1,455	1,698

Length of Service

Category		Unit	2020	2021	2022
Average length of service	Average length of service for regular employees		8.4	9.1	8.8
Defense sector	Men	Years	12.9	12.6	11.9
	Women		8.6	9.0	8.9
ICT sector	Men	Years	6.8	8.4	8.3
	Women		5.2	6.3	5.9
Average length of service	Average length of service for non-regular employees		2.9	2.3	2.7
Defense sector	Men	Years	7.9	6.9	6.9
	Women		0.3	0.2	0.5
ICT sector	Men	Years	1.2	1.8	2.4
	Women		2.0	0.3	1.1

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Employee Diversity

Category		Unit	2020	2021	2022
Women managers	Number of women managers (assistant managers and above)	Persons	313	321	402
	Percentage of women managers	%	10.2	9.9	11.5
Employment of socially disadvantaged individuals (regular + non-regular)	Number of employees with disabilities	Persons	49	51	57
	Percentage of employees with disabilities	%	1.33	1.30	1.33
	Number of patriots and veterans employed	Persons	60	59	62
	Percentage of patriots and veterans employed	%	1.63	1.50	1.44
	Number of foreign employees	Persons	2	4	0
	Percentage of foreign employees	%	0.05	0.10	0.00

New Hires

Category		Unit	2020	2021	2022
Total number of new hires			184	454	667
By region	Domestic		184	454	667
	Overseas		0	0	0
By gender	Men		154	372	534
	Women		30	82	133
New hires – Regular employees	Defense sector	Persons	65	202	286
	Defense sector		26	50	114
New hires – Regular employees	ICT sector		71	143	237
	ICT sector		22	59	30

Parental Leave

Category		Unit	2020	2021	2022
Maternity leave users	Number of users	Persons	20	24	14
	Number of returnees		20	24	14
	Return rate	%	100	100	100
Parental leave users	Men		9	6	13
	Women		12	20	15
Those eligible to return after parental leave	Men	Persons	14	17	18
	Women		26	25	29
Those who have returned to work after parental leave	Men		14	17	18
	Women		26	24	29
Rate of return to work after parental leave	Men	%	100	100	100
	Women		100	96	100

Employee Transitions and Departures

Category		Unit	2020	2021	2022
Total number of employee transitions and departures (excluding dispatched employees)			172	257	305
Reasons for employee transitions and departures	Involuntary employee transitions (resignation)	Persons	35	47	46
	Retirement due to age limit		–	7	10
	Disciplinary dismissals		–	–	1
	Voluntary resignations		–	–	–
	Voluntary employee transitions (resignation)		137	210	259
	Voluntary retirement		14	7	4
	Voluntary resignations		123	203	255
Subtotal			4.66	6.54	7.11
Turnover rate	Voluntary transition (resignation) rate	%	3.71	5.34	6.03
	Involuntary transition rate		0.95	1.20	1.07

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Employee Training Results

Category		Unit	2020	2021	2022
Total training costs	Subtotal		578	1,178	3,047
	Defense sector	KRW million	350	966	1,317
	ICT sector		228	212	1,730
Total training hours	Subtotal		67,472	144,628	140,829
	Defense sector	Hrs.	42,886	65,169	73,267
	ICT sector		24,586	79,459	67,562
Total number of employees participating in training	Subtotal		3,706	3,779	4,288
	Defense sector	Persons	2,348	2,559	2,707
	ICT sector		1,358	1,220	1,581
Cost per employee	Subtotal	KRW thousand / person	317	551	1,581
	Defense sector		150	380	487
	ICT sector		429	1,041	1,094
Training hours per employee	Subtotal		36	90	70
	Defense sector	Hrs./ person	18	25	27
	ICT sector		18	65	43
Number of online job training academy courses	Courses		46	89	110
Number of online job training academy course completers	Persons		1,927	3,447	2,934
Number of academic conferences attended (cumulative/current students + graduates)	Persons		132	141	155

Raising Employee Human Rights Awareness

Category		Unit	2020	2021	2022
Human rights training	Total		12,276	10,938	12,525
	Sexual harassment prevention training (Defense)		4,970	3,603	2,621
	Sexual harassment prevention training (ICT)				1,554
	Disability awareness training (Defense)	Hrs.	3,653	3,732	2,621
	Disability awareness training (ICT)				1,554
	Workplace bullying prevention training (Defense)		3,653	3,603	2,621
Workplace bullying prevention training (ICT)				1,554	

Employee Benefits

Category		Unit	2020	2021	2022
Retirement pension support	Enrollment (DC)	Persons	112	142	168
	Funds under management - separate criteria (DC)	KRW million	6,335	10,907	12,888
	Enrollment (DB)	Persons	1,970	1,991	1,980
	Funds under management - consolidated criteria (DB)	KRW million	40,491	59,102	57,430

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Employee Salaries

Category		Unit	2020	2021	2022
Average base salary by gender	Average base salary for women	KRW	55,342,419	59,274,897	63,124,615
	Average base salary for men		66,832,769	71,258,669	75,822,452
	Compensation ratio of women to men	%	82.8	83.2	83.3

Average Base Salary Compensation by Position

Category		Unit	2020	2021	2022	
Salary - Compensation by job position (Base salary)	Executives	Men	KRW ten thousand	18,435	19,313	23,245
	Executives	Women	KRW ten thousand	12,000	12,000	-
	Management (deputy general manager and above, excluding executives)	Men	KRW ten thousand	8,144	8,566	9,086
	Management (deputy general manager and above, excluding executives)	Women	KRW ten thousand	7,832	8,349	8,974
	Middle management (managers, assistant managers)	Men	KRW ten thousand	6,077	6,535	6,924
	Middle management (managers, assistant managers)	Women	KRW ten thousand	5,803	6,317	6,696
	Non-management (staff and below)	Men	KRW ten thousand	4,434	4,617	4,986
	Non-management (staff and below)	Women	KRW ten thousand	4,392	4,589	4,771
Salary - Compensation by job position (Basic salary + performance bonus)	Executives	Men	KRW ten thousand	20,347	21,460	31,229
	Executives	Women	KRW ten thousand	12,000	12,728	-
	Management (deputy general manager and above excluding executives)	Men	KRW ten thousand	9,001	9,175	10,093
	Management (deputy general manager and above excluding executives)	Women	KRW ten thousand	8,688	8,944	10,021
	Middle management (managers, assistant managers)	Men	KRW ten thousand	6,695	6,981	7,618
	Middle management (managers, assistant managers)	Women	KRW ten thousand	6,379	6,737	7,341
	Non-management (staff and below)	Men	KRW ten thousand	4,852	4,928	5,394
	Non-management (staff and below)	Women	KRW ten thousand	4,795	4,904	5,161

Performance Evaluations

Category		Unit	2020	2021	2022
Number of employees subject to performance evaluation	Persons		3,544	3,078	3,512
Number of employees who received regular performance evaluation	Persons		3,544	3,078	3,512
Percentage of employees who received regular performance evaluation	%		100	100	100

Customer Satisfaction

Customer Satisfaction Level

Category		Unit	2020	2021	2022
Quality service satisfaction indicators	%		98.4	98.7	99.2

Customer Communication

Category		Unit	2020	2021	2022
Customer Communication	Number of customer complaints received	Cases	16	20	25
	Number of customer complaints resolved	Cases	10	10	13
	Customer complaint resolution rate	%	62.5	50.0	52.0

Labor-Management Win-Win

Labor-Management Communication

Category		Unit	2020	2021	2022
Number of employee grievances received	Cases		104	170	27
Number of employee grievances resolved	Cases		104	170	27
Employee grievance resolution rate	%		100%	100%	100%

Win-Win Partnership

Suppliers

Category	Unit	2020	2021	2022
Total number of suppliers	Companies	1,147	1,247	1,326
Total procurement amount from suppliers	KRW hundred million	10,971	14,206	13,681

Supplier Monitoring Assessment

Category	Unit	2020	2021	2022
Comprehensive assessment of suppliers	Number of suppliers with excellent ratings	51	21	33

Supplier Support

Category	Unit	2020	2021	2022
Financial Support (Shared Growth Fund)	Funding totals	21,000	31,000	31,000
	Amount raised by financial institutions	14,000	17,500	17,500
	Amount raised by Hanwha Systems	7,000	13,500	13,500
	Amount executed	11,995	22,737	22,070
Holiday high-pay disbursement	Amount executed	13,601	21,500	10,247
Quality requirements training	People trained	197	195	180
	Eligible companies	87	54	79
Military blueprint (AutoCAD) expert course	People trained	221	142	187
	Eligible companies	78	41	34
Quality assurance certification (DSQR) training	People trained	-	13	15
	Eligible companies	-	6	10
Compliance (anti-corruption, technology protection, etc.)	People trained	-	227	0
	Eligible companies	-	50	0
Win-Win Academy (business skills, statutory mandatory training)	People trained	486	811	2,284
	Eligible companies	16	94	50

Social Contribution

Social Contribution Activities

Category	Unit	2020	2021	2022	
Contributions to social welfare by entity	Subtotal	551	730	756	
	Company contributions	249	300	300	
	Employee contributions	302	430	456	
Contributions to social welfare by donation type	Subtotal	KRW million	496	443	1,160
	Cash	43	75	812	
	Business expenses	302	257	134	
	In-kind	151	111	214	
Social contribution activities	Number of programs	Programs	15	63	74
	Total participants	1,245	1,166	1,797	
	Total beneficiaries	Persons	4,803	5,853	16,652
	Accumulated beneficiaries* (cumulative for 3 years)	17,408	17,622	27,308	
Social contribution performance	Total volunteer hours	Hrs.	1,964	2,798	4,313
	Volunteer hours per person	Hrs./Person	2.3	2.4	2.4
	Volunteer participation rate	%	34	37	49
Social Contribution Steering Committee	-	Cycle	Quarterly	Quarterly	Quarterly
Regular community discussion channels	-	Cycle	Quarterly/half-yearly	Quarterly/half-yearly	Quarterly/half-yearly

Social Contribution Funds

Category	Unit	2020	2021	2022
Total donation amount		4.96	4.43	11.6
Sponsorship amount	KRW	0.43	0.75	8.12
Operating expenses	100 million	3.02	2.57	1.34
Material support amount		1.51	1.11	2.14

Quality Management

Product Safety

Category	Unit	2020	2021	2022
Number of detected counterfeit parts	Parts	0	0	0
Avoidance rate of counterfeit parts detected	%	100	100	100
Number of recalls	Cases	3	7	11
Total volume recalled	Units	188	2,050	1,890
Number of cases receiving Airworthiness Directive (AD) for improvement	Cases	0	0	0
Total units affected by Airworthiness Directive (AD)	Units	0	0	0

* Number of recall cases: The count of cases where defects are identified after the product is shipped in the current year, and actions such as retrieval, replacement, or repair (recall) are carried out for all previous deliveries.

* Total volume recalled: The actual number of products subject to recall in the current year.

Governance

Board of Directors

Board Operations

Category		Unit	2020	2021	2022
Board composition	Inside directors	Persons	3	3	4
	Outside directors		4	4	5
	Percentage of outside directors	%	57.1	57.1	55.6
	Percentage of women directors		0.00	14.30	11.10
Number of Board meetings	Number of meetings held	Meetings	11	14	11
	Average attendance rate		100	100	100
Board attendance	Attendance rate of outside directors	%	100	100	100
	Attendance rate of inside directors		100	100	100
	Board agendas		38	38	43
Number of agenda items with a dissenting vote by an outside director		Items		1	0

*Calculated based on the number of directors and auditors as of Dec 31, 2022

Board Remuneration Payments

Category		Unit	2020	2021	2022
CEO compensation	Total CEO remuneration	KRW Million	545	515	633
	Number of individuals	Persons	3	3	3
Registered directors	Total remuneration amount	KRW Million	1,156	1,277	1,738
	Average remuneration per person	KRW Million	385	426	579
	Number of individuals	Persons	1	1	2
Outside directors	Total remuneration amount	KRW Million	67	87	149
	Average remuneration per person	KRW Million	67	87	74
	Number of individuals	Persons	3	3	3
Audit Committee members	Total remuneration amount	KRW Million	200	251	252
	Average remuneration per person	KRW Million	67	84	84

Board Committees

Category		Unit	2020	2021	2022
Audit Committee	Percentage of outside directors	%	100	100	100
	Number of meetings	meetings	9	8	7
	Attendance rate	%	100	100	100
Internal Transactions Committee	Percentage of outside directors	%	100	100	100
	Number of meetings	meetings	4	4	5
	Attendance rate	%	100	100	100
Outside Director Recommendation Committee	Percentage of outside directors	%	60	60	100
	Number of meetings	meetings	-	2	2
	Attendance rate	%	-	100	100
Compensation Committee	Percentage of outside directors	%	-	100	100
	Number of meetings	meetings	-	2	1
	Attendance rate	%	-	100	100
ESG Committee	Percentage of outside directors	%	-	67	100
	Number of meetings	meetings	-	3	4
	Attendance rate	%	-	100	100

Ethics and Compliance

Internal ethical management inspections

Category	Unit	2020	2021	2022
Number of internal ethics and compliance inspections	Cases	15	16	14
Ethics violations	Cases	-	-	-
Litigation due to unethical behavior	Cases	-	-	-

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Compliance Violations

Category		Unit	2020	2021	2022
Compliance-related legal actions	Fines imposed	KRW Million	0	0	0
	Cases filed		2	1	2
	Completed cases	Cases	2	1	2
	Number of non-monetary sanctions		0	0	0
Fair trade violations	Fines imposed	KRW Million	0	0	0
	Number of fair trade violations	Cases	0	1	0

Ethics and Compliance Training

Category		Unit	2020	2021	2022
Ethics, compliance training	Number of programs	Programs	2	4	5
	Number of trainees	Persons	3,774	8,153	8,195

Information Security

Information Security Violations

Category		Unit	2020	2021	2022
Number of information security violations/incidents involving customer personal data		Cases	0	0	0
Number of customers affected by data breaches, theft, or loss incidents		Persons	0	0	0
Total monetary losses, such as fines or penalties, paid as a result of information security violations or cybersecurity incidents		KRW	0	0	0
Number of information security personnel		Persons	52	68	58
Information security training	Hours of information security training per person	Hrs.	1	1	1
	Number of employees participating in training	Persons	3,653	3,732	4,175
	Hours of training	Hrs.	3,653	3,732	4,175

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Materiality Assessment

Dual Materiality Assessment

Hanwha Systems follows the Global Reporting Initiative (GRI) Standards, an internationally recognized set of guidelines for sustainability reporting. We identify and report on material issues that have an impact on the sustainability of our company.

The selection of material issues is based on an assessment that takes into account both the impacts on the environment and people (outward: impact Materiality) And the impacts on businesses (inward: financial materiality).

By understanding the needs of our stakeholders and integrating them into our management strategies, **Hanwha Systems** believes that we can enhance our business performance and generate social and environmental value through all aspects of our corporate activities.

Materiality Assessment Process

Hanwha Systems carefully selected a pool of 30 core reporting topics for our Sustainability Report. This selection was based on an analysis of our business activities and their economic, environmental, and human impacts. By evaluating internal and external stakeholder surveys, internal assessments, and media analyses, and considering sustainability industry standards, we identified 14 material issues that require focused management. These material issues underwent a thorough review process involving the Board of Directors and the ESG Committee before being finalized. Following this process, we transparently disclosed the strategies, plans, activities, and performance related to these material issues in our Sustainability Report.

Meanwhile, the 30 core reporting topics assessed from a materiality perspective are integrated into our company-wide risk management system. This ensures that these sustainability risks are continuously monitored and that appropriate responses are considered and implemented when an issue occurs.

Materiality Assessment Methodology













Dual Materiality Assessment Results

Issue Areas	Issue Name	Issue classification		Business impact				Environmental/ human impact	GRI	Page
		Type	Issue maturity	Profits	Cost	Reputation	Regulatory			
Envi- ron- ment	Climate Change Response	negative	●	●	●	●	●	●	201-2, 305	36~45
	Developing and investing in eco-friendly clean technologies	positive	○	●	●	●	●	●	201-2, 203-2	12~17, 38, 39
Peo- ple	Human rights management	negative	●	●	●	●	●	●	409, 410, 411, 412	47
	Safety and health culture	negative	●	●	●	●	●	●	403	22~25, 96~97
	Responsible product production and quality control	positive	●	●	●	●	●	●	416	53~56, 103
	Women's leadership and diversity	positive	○	●	●	●	●	●	405	48, 72, 99, 101
	Information security systems and customer personal data management	negative	●	●	●	●	●	●	418	82~87
	Supply chain ESG risk management	negative	●	●	●	●	●	●	308, 414	41, 61, 62
	Integrated risk management system	negative	○	●	●	●	●	●	2-13, 201-2, 205-1, 403-2	88~91
	Sound governance	positive	●	●	●	●	●	●	2-9, 2-10, 2-11	9~10, 35, 70~72, 89
	Shareholder-friendly policies	positive	●	●	●	●	●	●	2-16, 201-1	75, 76, 94
	Ethical management and compliance	negative	●	●	●	●	●	●	2-24, 2-27, 205, 206	9~11, 77, 96, 104, 105
Econ- omy	Expanding global markets and creating business performance	positive	●	●	●	●	●	●	201, 203	12~17
	Future growth businesses and technology development	positive	○	●	●	●	●	●	203	12~17

Stakeholder Communication

Issue Areas	Key Interests	GRI
Customers	Hanwha Systems maintains ongoing communication with customers to safeguard their valuable data. We achieve this by delivering high-quality products, providing excellent services and solutions, and continually enhancing customer satisfaction through effective follow-up management.	<ul style="list-style-type: none"> • Customer Center and Call Center • Sustainability Report • Service satisfaction survey • Hanwha Systems newsletter
Government	Hanwha Systems complies with fair trade practices and creates economic value based on the principles of transparent tax payment and corporate information disclosure.	<ul style="list-style-type: none"> • Membership and participation in societies and associations • Policy meetings
Suppliers	Hanwha Systems maintains close communication with its suppliers for mutual benefit, fostering a win-win ecosystem grounded in a relationship of fair trade.	<ul style="list-style-type: none"> • Win-Win Partnership Academy • Purchasing-Quality-Technology exchange • Partner's Day • General meeting of the Suppliers Council (twice)
Shareholders and investors	Hanwha Systems aims to enhance shareholder and investor value by widely sharing information on our economic performance, ESG issues, risk management, and management information.	<ul style="list-style-type: none"> • Business report • Corporate governance report • Sustainability report • Shareholders' meeting
Community	Hanwha Systems contributes to the revitalization of local economies and environmental protection, as well as engages in social contribution activities to support the underprivileged, including military personnel, patriots, and veterans.	<ul style="list-style-type: none"> • Community growth support channels • Regular Council of the Korean Red Cross • Job mentoring for soldiers • 'Hope School,' shoulder-to-shoulder mentor-mentee program • Regular community discussion channels (Seoul Regional Veterans Administration, Eunpyeong-gu Center of the Korean Red Cross)
Employees	Hanwha Systems creates a culture of respect for human rights and operates communication channels for the sustainable growth of our employees based on diversity, inclusion, and equal opportunity.	<ul style="list-style-type: none"> • Regular management meetings • Management status briefings • Mentoring for new employees, onboarding programs • Employee committees (Labor-Management Council/ Occupational Safety and Health Committee) • Labor union (annual wage negotiations, biannual collective agreement) • Technical blogs on internal bulletin boards • IT Academy • ICT employee learning organizations (18 organizations as of 2022) • Leadership Letters • Leadership coaching, job competency enhancement programs

UN SDGs

	UN SDGs	Specific Targets	Report Items in the 2023 Report
Introduction	 Goal 2 End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	2.2 Ensure access by the vulnerable, in particular, the poor and people in vulnerable situations, including infants, to safe, nutritious, and sufficient food all year round.	<ul style="list-style-type: none"> • Donation of 1,000 sacks of rice to vulnerable groups in the community • Bread of Love Program with the community • Love for Country Food Bank • Kimchi Sharing of Love
		3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases 3.4 By 2030, reduce by one-third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being 3.8 Achieve healthcare services, including financial risk protection, access to quality healthcare services and access to quality and affordable essential medicines and vaccines for all 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	<ul style="list-style-type: none"> • Mental health program for employees and their families to support their healthy living • Health check-ups and medical expense support systems • Blood donation of love • Delivering hope boxes to support patriots and veterans' families • Enhanced management and regular monitoring of environmental impacts such as air pollution and waste
ESG Highlights	 Goal 3 Ensure healthy lives and promote well-being for all at all ages	4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship 4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous people and children in vulnerable situations	<ul style="list-style-type: none"> • Career and employment mentoring for military personnel • Supporting the establishment of libraries for military personnel and donating books
		4.7 Ensure that all learners acquire the knowledge and skills needed to promote sustainable development through education 5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure, and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic, and public life	<ul style="list-style-type: none"> • Running Hope Schools to bridge the education gap facing underprivileged children • Providing IT education opportunities to children from low-income families (Giving You Dreams Program) • Support for art and sports education for children from single-parent families and crisis families (Shoulder-to-Shoulder Mentor-Mentee)
Our Approach to Sustainability	 Goal 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value-added and labor-intensive sectors 8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises 8.6 By 2020, substantially reduce the proportion of youth not in employment, education, or training	<ul style="list-style-type: none"> • Regular ethical management training, including sexual harassment prevention and non-discrimination against people with disabilities • Leave system for maternity protection and childcare support • Paternity leave and long service leave for long-term employees
		9.C Significantly increase access to information and communications technology and strive to provide universal and affordable access to the internet in the least developed countries 10.2 Empower and promote the social, economic, and political inclusion of all	<ul style="list-style-type: none"> • Newly implementing a parental leave system for children with disabilities and adopting a family support system for diverse types of families • Appointing women outside directors
ESG Performance	 Goal 5 Achieve gender equality and empower all women and girls	10.2 Empower and promote the social, economic, and political inclusion of all 10.3 Integrate climate change measures into national policies, strategies, and planning 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	<ul style="list-style-type: none"> • Developing technology for eco-friendly UAM • Developing multilayered communication networks/LEO satellite communications • Developing technology to achieve hyperconnected space internet
		16.6 Develop effective, accountable, and transparent institutions at all levels 17.17 Encourage and promote effective public, public-private and civil society partnerships	<ul style="list-style-type: none"> • Increasing the Win-Win Fund and providing training to expand supplier competence • Operating regular communication channels with suppliers (Partner's Day, exchanges, meetings, etc.) • Plans to operate Win-Win Partnership programs with suppliers and the Shared Growth Committee
ESG Data	 Goal 8 Promote sustained inclusive, and sustainable economic growth, full and productive employment and decent work for all	13.2 Integrate climate change measures into national policies, strategies, and planning 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	<ul style="list-style-type: none"> • Increasing the Win-Win Fund and providing training to expand supplier competence • Establishing a future mlitech startup collaboration model to invest and foster startups
		16.6 Develop effective, accountable, and transparent institutions at all levels 17.17 Encourage and promote effective public, public-private and civil society partnerships	<ul style="list-style-type: none"> • Developing multilayered communication networks/LEO satellite communications
Appendix	 Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	16.6 Develop effective, accountable, and transparent institutions at all levels 17.17 Encourage and promote effective public, public-private and civil society partnerships	<ul style="list-style-type: none"> • Expanding the employment of people from socially vulnerable groups (people with disabilities, patriots, and veterans, etc.) • Ensure worker committee activities
		16.6 Develop effective, accountable, and transparent institutions at all levels 17.17 Encourage and promote effective public, public-private and civil society partnerships	<ul style="list-style-type: none"> • Establish mid-to longterm goal of reducing emissions by 30% from the BAU scenario by 2040 • Developing and implementing a carbon emissions management system (Mangrove solution) • Developing the ESG management system 'ESG ON' • Participating in government renewable energy supply projects
	 Goal 10 Reduce inequality within and among countries	16.6 Develop effective, accountable, and transparent institutions at all levels 17.17 Encourage and promote effective public, public-private and civil society partnerships	<ul style="list-style-type: none"> • Compliance with the four major guidelines for fair trade and the use of standard subcontracting contracts • Writing an ethical management pledge and fostering CP management experts
		16.6 Develop effective, accountable, and transparent institutions at all levels 17.17 Encourage and promote effective public, public-private and civil society partnerships	<ul style="list-style-type: none"> • Delivering school supplies to underprivileged children worldwide in partnership with the Korea International Cooperation Agency (KOICA)
	 Goal 13 Take urgent action to combat climate change and its impacts	16.6 Develop effective, accountable, and transparent institutions at all levels 17.17 Encourage and promote effective public, public-private and civil society partnerships	
		16.6 Develop effective, accountable, and transparent institutions at all levels 17.17 Encourage and promote effective public, public-private and civil society partnerships	
	 Goal 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	16.6 Develop effective, accountable, and transparent institutions at all levels 17.17 Encourage and promote effective public, public-private and civil society partnerships	
		16.6 Develop effective, accountable, and transparent institutions at all levels 17.17 Encourage and promote effective public, public-private and civil society partnerships	
	 Goal 17 Revitalize the Global Partnership for Sustainable Development	16.6 Develop effective, accountable, and transparent institutions at all levels 17.17 Encourage and promote effective public, public-private and civil society partnerships	
		16.6 Develop effective, accountable, and transparent institutions at all levels 17.17 Encourage and promote effective public, public-private and civil society partnerships	

GRI Standards

GRI Standards	Category	Disclosure No.	Disclosure Name	Pages	Notes
GRI 2: General Disclosures 2021	Universal Standards	2-1	Organizational details	5, 8, 75	
		2-2	Entities included in the organization's sustainability reporting	3	
		2-3	Reporting period, frequency and contact point	3	
		2-4	Restatements of information	3	
		2-5	External assurance	9~11, 118	
		2-6	Activities, value chain and other business relationships	6, 57~62	
		2-7	Employees	98	
		2-8	Workers who are not employees	98	
		2-9	Governance structure and composition	9, 10, 70, 71	
		2-10	Nomination and selection of the highest governance body	70, 72	
		2-11	Chair of the highest governance body	72	
	2-12	Role of the highest governance body in overseeing the management of impacts	10, 35, 89		
	2-13	Delegation of responsibility for managing impacts	10, 35, 89		
	2-14	Role of the highest governance body in sustainability reporting	10		
	2-15	Conflicts of interest	Business Report		
	2-16	Communication of critical concerns	10, 35, 70		
	2-17	Collective knowledge of the highest governance body	73, 74		
	2-18	Evaluation of the performance of the highest governance body	73, 74		
	2-19	Remuneration policies	73		
	2-20	Process to determine remuneration	73		
	2-21	Annual total compensation ratio	73, 101, 104		
	2-22	Statement on sustainable development strategy	5		
	2-23	Policy commitments	5, 9, 47		
	2-24	Embedding policy commitments	9~11		
	2-25	Processes to remediate negative impacts	47, 61, 89, 107~108		
	2-26	Mechanisms for seeking advice and raising concerns	47, 61, 89, 107~108		
	2-27	Compliance with laws and regulations	77, 96, 104, 105		
	2-28	Membership association (initiatives)	117		
	2-29	Approach to stakeholder engagement	109		

GRI Standards

GRI Standards	Category	Disclosure No.	Disclosure Name	Pages	Notes
Material Topics					
GRI 3: Material Topics 2021	Disclosures on material topics	3-1	Process to determine material topics	107	
		3-2	List of material topics	108	
		3-3	Management of material topics	108	
Economic					
GRI 201: Economic Performance 2016	Economic Performance	201-1	Direct economic value generated and distributed	94	
		201-2	Financial implications and other risks and opportunities due to climate change	36~45	
		201-3	Defined benefit plan obligations and other retirement plans	100	
		201-4	Financial assistance received from the government	94	
GRI 202: Market Presence 2016	Market Presence	202-1	Ratios of standard entry level wages by gender compared to local minimum wages	101	
		202-2	Proportion of senior management hired from the local community	98	
GRI 203: Indirect Economic Impacts 2016	Indirect Economic Impacts	203-1	Infrastructure investments and services supported	13~17, 42, 43, 59	
		203-2	Significant indirect economic impacts	57~62, 102	
GRI 204: Procurement Practices 2016	Procurement Practices	204-1	Proportion of spending on local suppliers	94	
GRI 205: Anti-corruption 2016	Anti-corruption	205-1	Operations assessed for risks related to corruption	78	
		205-2	Communication and training about anti-corruption policies and procedures	77~81, 105	
		205-3	Confirmed incidents of corruption and actions taken	104, 105	
GRI 206: Anti-competitive Behavior 2016	Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	104, 105	
GRI 207: Tax 2019	Tax	207-1	Approach to tax	91	
		207-4	Country-by-country reporting	Business Report	
Environmental					
GRI 301 : Materials	Materials	301-1	Materials used by weight or volume	We do not use raw materials due to the nature of our business.	Defense: Purchase of electronic finished products and semi-finished products ICT: Purchase of services, SW, HW products
		301-2	Recycled input materials used	We do not use recycled materials.	
		301-3	Reclaimed products and their packaging materials	We do not use recycled materials.	

GRI Standards

GRI Standards	Category	Disclosure No.	Disclosure Name	Pages	Notes
GRI 302: Energy 2016	Energy	302-1	Energy consumption within the organization	95	
		302-2	Energy consumption outside of the organization	95	
		302-2	Energy intensity	45	
		302-4	Reduction of energy consumption	28	
		302-5	Reductions in energy requirements of products and services	28	
GRI 303: Water and Effluents 2018	Water and Effluents	303-1	Interactions with water as a shared resource (Information on water-related impacts, water stress, etc. caused by corporate activities, products, services, etc.)	27, 95	
		303-2	Management of water discharge-related impacts	27	
		303-3	Water withdrawal	27, 95	
		303-4	Water discharge	95	
		303-5	Water consumption	95	
GRI 304: Biodiversity 2016	Biodiversity	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	32	
		304-2	Significant impacts of activities, products, and services on biodiversity	32	
		304-3	Habitats protected or restored	32	
		304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	32	
GRI 305: Emissions 2016	Emissions	305-1	Direct (Scope 1) GHG emissions	95	No harmful gases emitted
		305-2	Energy indirect (Scope 2) GHG emissions	95	No harmful gases emitted
		305-3	Other indirect (Scope 3) GHG emissions	33	No scope 3 inventory management system in place for 2030
		305-4	GHG emissions intensity	45	
		305-5	Reduction of GHG emissions	29~30, 45	
		305-6	Emissions of ozone-depleting substances (ODS)	No emissions	
		305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	26, 95	
GRI 306: Waste 2020	Waste	306-1	Waste generation and significant waste-related impacts	26	
		306-2	Management of significant waste-related impacts	26	
		306-3	Waste generated	96	
		306-4	Waste diverted from disposal	96	
		306-5	Waste directed to disposal (incineration, landfilling, etc.)	26, 96	

GRI Standards

	GRI Standards	Category	Disclosure No.	Disclosure Name	Pages	Notes
Introduction						
ESG Highlights	GRI 308: Supplier Environmental Assessment 2016	Supplier Environmental Assessment	308-1	New suppliers that were screened using environmental criteria	41	
Our Approach to Sustainability			308-2	Negative environmental impacts in the supply chain and actions taken	61	
ESG Performance						
ESG Data						
Appendix						
		Social				
	GRI 401: Employment 2016	Employment	401-1	New employee hires and employee turnover	99	
			401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	50~52, 100	
			401-3	Parental leave	99	
	402 Labor/Management Relation	Labor/Management Relations	402-1	Minimum notice periods regarding operational changes	52	
			403-1	Occupational health and safety management system	22	
			403-2	Hazard identification, risk assessment, and incident investigation	22~25	
			403-3	Occupational health services	23, 97	
			403-4	Worker participation, consultation, and communication on occupational health and safety	22	
	GRI 403: Occupational Health and Safety 2018	Occupational Health and Safety	403-5	Worker training on occupational health and safety	96	
			403-6	Promotion of worker health	22~25, 97	
			403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	22~25	
			403-8	Workers covered by an occupational health and safety management system	96	
			403-9	Work-related injuries	97	
			403-10	Work-related ill health	97	
	GRI 404: Training and Education 2016	Training and Education	404-1	Average hours of training per year per employee	100	
			404-2	Programs for upgrading employee skills and transition assistance programs	50, 51	
			404-3	Percentage of employees receiving regular performance and career development reviews	101	
	GRI 405: Diversity and Equal Opportunity 2016	Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	48, 72, 99	
			405-2	Ratio of basic salary and remuneration of women to men	101	
	GRI 406: Non-discrimination 2016	Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	27	
	GRI 407: Freedom of Association and Collective Bargaining 2016	Freedom of Association and Collective Bargaining	407-1	Measures taken to support rights to exercise freedom of association and collective bargaining for operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	No applicable operations and suppliers	

GRI Standards

GRI Standards	Category	Disclosure No.	Disclosure Name	Pages	Notes
GRI 408: Child Labor 2016	Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor	No applicable operations and suppliers	
GRI 409: Forced or Compulsory Labor 2016	Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	No applicable operations and suppliers	
GRI 410: Security Practices	Security Practices	410-1	Security personnel trained in human rights policies or procedures	Implement relevant training	
GRI 411: Rights of Indigenous Peoples 2016	Rights of Indigenous Peoples	411-1	Incidents of violations involving rights of indigenous peoples	65, 66	No infringements
GRI 413: Local Communities 2016	Local Communities	413-1	Operations with local community engagement, impact assessments, and development programs	63~68	
		413-2	Operations with significant actual and potential negative impacts on local communities	No applicable operations	
GRI 414: Supplier Social Assessment 2016	Supplier Social Assessment	414-1	New suppliers that were screened using social criteria	41	
		414-2	Negative social impacts in the supply chain and actions taken	61, 62	
GRI 415 Public Policy	Public Policy	415-1	Political contributions	No political contributions	
		416-1	Assessment of the health and safety impacts of product and service categories	53	
GRI 416: Customer Health and Safety 2016	Customer Health and Safety	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services (disposal results)	103	
		417-1	Requirements for product and service information and labeling	Our main customers include DAPA and ADD, which are national government agencies. There are no specific labeling requirements related to them.	
GRI 417: Marketing and Labeling 2016	Marketing and Labeling	417-2	Incidents of non-compliance concerning product and service information and labeling	Our main customers include DAPA and ADD, which are national government agencies. There are no specific labeling requirements related to them.	
			Incidents of non-compliance concerning marketing communications	No violations	
GRI 418: Customer Privacy 2016	Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	105	

SASB Index

Topic	Code	Accounting Metric	Reference Pages and Response
Energy Management	RT-AE-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	95
Hazardous Waste Management	RT-AE-150a.1	Amount of hazardous waste generated, percentage recycled	96
	RT-AE-150a.2	Number and aggregate quantity of reportable spills, quantity recovered	0 waste spills
Data Security	RT-AE-230a.1	(1) Number of data breaches, (2) percentage involving confidential information	105
	RT-AE-230a.2	Description of approach to identifying and addressing data security risks in (1) company operations and (2) products	82~87
Product Safety	RT-AE-250a.1	Number of recalls issued, total units recalled	103
	RT-AE-250a.2	Number of counterfeit parts detected, percentage avoided	55, 103
	RT-AE-250a.3	Number of Airworthiness Directives received, total units affected	103
	RT-AE-250a.4	Total amount of monetary losses as a result of legal proceedings associated with product safety	103
Fuel Economy & Emissions in Use-phase	RT-AE-410a.1	Revenue from alternative energy-related products	43
	RT-AE-410a.2	Description of approach and discussion of strategy to address fuel economy and GHG emissions of products	42
Materials Sourcing	RT-AE-440a.1	Description of the management of risks associated with the use of critical materials	90
Business Ethics	RT-AE-510a.1	Total amount of monetary losses as a result of legal proceedings associated with incidents of corruption, bribery, and/or illicit international trade	No violations
	RT-AE-510a.2	Revenue from countries ranked in the "E" or "F" Band of Transparency International's Government Defense Anti-Corruption Index	Not applicable
	RT-AE-510a.3	Discussion of processes to manage business ethics risks throughout the value chain	77~81

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TCFD Index

Topic	TCFD Recommended Disclosures	Reference Pages and Response
Governance	a) Describe the Board’s oversight of climate-related risks and opportunities.	34, 35
	b) Describe management’s role in assessing and managing climate-related risks and opportunities.	34, 35
Strategy	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	36~41
	b) Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning.	42~43
	c) Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2° C or lower scenario.	36
Risk Management	a) Describe the organization’s processes for identifying and assessing climate-related risks.	44
	b) Describe the organization’s processes for managing climate-related risks.	44
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management.	44, 90
Metrics and Targets	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	44, 45
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	37, 44, 45, 95
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	36~41, 44, 45

Group Membership

Korea Institute of Military Science and Technology	Korea Industrial Technology Association (KOITA)	Korea Engineering Consultants Association (KENCA)
Korea Aerospace Industries Association (KAIA)	Korean Association of Defense Industry Studies (KADIS)	Korea Institute of Defense Technology (KIDET)
Korea Council of Systems Engineering (KCOSE)	Vertical Flight Society (VFS)	Korean Institute of Electromagnetic Engineering and Science (KIEES)
Korean Society for Aeronautical and Space Sciences (KSAS)	Korea Association for Space Industry Promotion (KASP)	Korean Space Association for National Defense
Optical Society of Korea (OSK)	Korean Society for Satellite and Space Communications Technology (KOSST)	Korean Military Robotics Society (KMRS)
Korea Institute of Information Security and Cryptology (KIISC)	Association of Old Crows (AOC)	SatCom Forum
Acoustical Society of Korea (ASK)	FiRa Consortium	Korean Society of Automotive Engineers (KSAE)
Korea Defense Industry Association (KDIA)	Construction Guarantee Cooperative (CG)	Construction Association of Korea (CAK)
Korea Construction Engineering and Consulting Association (KOCEA)	Specialized Construction Guarantee Cooperative (KSCFC)	Korea Mechanical and Construction Contractors Association (KMCCA)

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Third-Party Verification Statement

To **Hanwha Systems** Management and Stakeholders,

Daishin Economic Research Institute (hereinafter, the "Verifier") has been commissioned by **Hanwha Systems** to conduct a verification of the '2023 Sustainability Report (hereinafter, the "Report")'. The role of the Verifier entails reviewing the data and information compiled by **Hanwha Systems** and presented in the Report. Based on its examination, the Verifier is pleased to provide the following independent verification opinion:

Verification Level and Content

Verification Level

This verification engagement was carried out in compliance with the internationally recognized verification standard AA1000AS v3. In accordance with this standard, the Verifier conducted a moderate level verification engagement to gather and compile evidence from internal sources or relevant parties. The verification was conducted as Type 2, which aims to verify the reliability of the four AA1000AP (2018) principles and performance indicators.

The Verifier reviewed the adherence to the four principles of Inclusivity, Materiality, Responsiveness, and Impact as outlined in AA1000AS. The Verifier assessed the reliability and quality of specific sustainability performance and disclosure information and verified the supporting evidence.

Verification Content

The Verifier has verified that the Core Option of the GRI Standard, aligned with the identified level above, has been implemented. The detailed indicators resulting from the dual materiality assessment are provided below. Additionally, the Verifier has assured compliance with the recommendations outlined by the TCFD and the SASB standards.

- Evaluation of the application of GRI Standard reporting principles
 - Evaluation of compliance with the GRI Standard Core Option
- Universal Standard
- Topic-Specific Standard
 - Economic Performance 201
 - Anti-Corruption 205
 - Emissions 305
 - Occupational Health and Safety 403
 - Forced Labor 409
 - Indigenous Rights 411
 - Customer Health and Safety 416
 - Indirect Economic Impacts 203
 - Anti-Competitive Behavior 206
 - Supplier Environmental Assessment 308
 - Diversity and Equal Opportunity 405
 - Security Practices 410
 - Supplier Social Impact Assessment 414
 - Customer Privacy 418
- TCFD Recommendations
- SASB Sustainability Disclosure Topics & Accounting Metrics

Verification Scope and Limitations

Verification Scope

- Reported content from January 1, 2022, to December 31, 2022 (qualitative and some data extended until April 2023) as included in the report
- Items regarding the claims, commitments, plans, and material issues included in the report
- Alignment with data from other disclosed materials
- Evaluation of management systems and processes

Limitations

- Interviews and data reviews with representatives of each performance area or aggregators
- Validation based on data and publicly available information for the reporting period

Verification Method

The Verifier conducted the verification engagement by

- Reviewing the process of identifying material issues and confirming their relevance
- Conducting on-site inspections to assess the appropriateness of indicators related to materiality issues and core compliance
- Reviewing the data generation, collection, and reporting processes for performance indicators related to different areas and material issues

Accountability and Independence

The verification engagement was conducted under the assumption that the data and information provided by **Hanwha Systems** is complete and sufficient. As an independent verification firm, the Verifier's role is solely to provide third-party verification on the report. The Verifier maintains independence and autonomy throughout the verification process, ensuring that its work is conducted objectively and without any conflict of interest regarding **Hanwha Systems**.

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Third-Party Verification Statement

Verification Findings and Opinion

Based on the verification criteria, scope, and methodology, the Verifier has not identified any material errors or inappropriateness in the content of this report. The Verifier's opinion on the verification principles is as follows:

Inclusivity

Hanwha Systems classifies its stakeholders as customers, governments, suppliers, shareholders and investors, and employees in local communities, and has established a stakeholder engagement process. The Verifier has confirmed that **Hanwha Systems** collects various opinions from stakeholders, provides opportunities for stakeholders to participate in the entire process of management, and strives to reflect the opinions collected in their management activities.

Materiality

Hanwha Systems analyzed the business activities and impacts within the organization from the perspectives of economy, environment, and people, and derived materiality topics from both business and stakeholder perspectives. The Verifier also confirmed that the 14 material issues derived are disclosed without omission.

Responsiveness

In order to respond appropriately to the needs and interests of key stakeholders, **Hanwha Systems** operates various communication channels that meet the characteristics of each stakeholder. The Verifier confirmed that the company responds to stakeholders' needs and manages issues through these communication channels.

Impact

The Verifier confirmed that **Hanwha Systems** considers the impact of its stakeholders and material issues and monitors and analyzes the impact of its business on its stakeholders and reflects it in its reports.

Reliability and quality of performance information

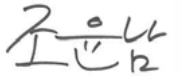
The Verifier verified the reliability of the economic, environmental, and social information based on data sampling, supporting documents, and disclosures related to **Hanwha System's** material issues. The Verifier did not find any intentional errors or misinformation.

Qualification and Independence of the Verification Agency

The verification engagement was entrusted to the Daishin Economic Research Institute, an ESG research and consultancy organization, holding an AA1000 license from the UK firm AccountAbility. The verification was performed by a team of highly qualified professionals with extensive expertise in ESG and verification, following a well-documented procedure and methodology.

May 2023

Cho Yun-nam, CEO of Daishin Economic Research Institute



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GHG Emissions Verification Statement Independent Verification Statement

Hanwha Systems Co., Ltd.

Place of business in Korea : Yongin R&D Center, IDC Center (Data Center)
The Korea Management Registrar Inc. (hereinafter “KMR”) has conducted the verification on the greenhouse gas (hereinafter “GHG”) emission (Scope1,2) of **Hanwha Systems CO.,Ltd**(hereinafter “the Company”) in 2022.

Scope

Verification of all places of business and emission facilities under the control of the Company.

Standards

- ISO 14064-1:2006, ISO 14064-3:2006
- WRI/ WBCSD GHG Protocol
- IPCC Guidelines for National Greenhouse Gas Inventories (2006)
- Guidelines for Reporting and Certification of Emissions in the Greenhouse Gas Emissions Trading Scheme

Limitations

The verification has inherent limitations that may arise in the process of applying standards and methods.

Results

- GHG verification has been performed to meet the limited assurance level according to the verification standards.
- We express that no significant errors were found in the calculation of emissions during the verification process, and that relevant activity data and evidence were appropriately managed and calculated. As a result, we express an “qualified” opinion.

Emissions	Direct Emission (Scope1)	Indirect Emission (Scope2)	Total Emissions (tCO ₂ eq)
2022	317	14,094	14,411

Energy	Fuel	Electricity	Steam	Total (TJ)
2022	6	295	0	300

