

# GREEN SOLUTIONS TOWARD SUSTAINABLE FUTURE

HD Hyundai Marine Solution 2023 Integrated Report

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## About this Report

HD Hyundai Marine Solution is publishing its first Integrated Report, with the aim of sharing information and communicating with stakeholders about its performance and activities in creating economic, environmental, and social value.

In this report, we provide insights into our ESG issues and impacts, and we discuss ways of achieving sustainable growth together with our broader society.

### Reporting scope

The report presents detailed information about the headquarters (CSP), business sites (GRC, GDC, Global Academy), global network (Europe, Middle East, Singapore, Americas Corporation), and the subsidiary (HD Hyundai Marine Solution Tech)

\* Environmental data covers the headquarters, business sites, and global network subsidiaries. Other data is presented based on a separate standard.

### Reporting period

This report covers the period from January 1, 2023 to December 31, 2023. It includes qualitative performance data from the first half of 2024 and three-year data spanning 2021 to 2023 to demonstrate performance and identify trends. Moving forward, we intend to publish this report annually to maintain ongoing communication with our stakeholders.

### Reporting principles

We have adhered to the requirements set by the Global Reporting Initiative (GRI) Standards 2021. Additionally, the financial data is in accordance with the Korean International Financial Reporting Standards.

### Report assurance

This report has been validated by the Korean Standards Association, an independent assurance organization.

### For inquiries

#### HD Hyundai Marine Solution Official website

HD Hyundai Marine Solution ([hd-marinesolution.com](http://hd-marinesolution.com))

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## CEO Message



**HD Hyundai Marine Solution (HD HMS) is leading the maritime industry toward a sustainable future through innovative green solutions.**



### How was 2023 for HD HMS?

The year 2023 was both challenging and rewarding for us. Following our relocation to the new HD Hyundai Global R&D Center, we encountered the significant challenge of adapting to a new space and environment while continuing to meet our business objectives. Despite these difficulties and the distance from our families, the unwavering dedication of our employees throughout the year enabled us to achieve the best performance since the company's inception.

In November 2023, we embarked on a new journey as HD Hyundai Marine Solution, embracing a new vision to lead the maritime industry toward a sustainable future through our green and digital innovation.

### What are our plans for 2024?

Our slogan for 2024, "Embarking on a new journey: Striving for momentum and driving sustainable growth!" reflects our renewed commitment as we move forward. At the end of 2023, we reorganized our business operations to optimize efficiency and are now ready to begin this journey with a renewed perspective. Additionally, we expect our initial public offering (IPO) in 2024 to catalyze for significant advancements. As reflected in our new slogan this year, HD Hyundai Marine Solution aims to welcome new challenges rising across our business and solidify our role as a total marine solution provider, capitalizing on our unique business model and our status as a global leader in shipbuilding.

### What does our ESG vision entail?

We have developed an environment, society, and governance (ESG) vision and strategy to proactively address external environmental changes and lead ESG management in the maritime sector. Our ESG vision, "Green Solutions Toward Sustainable Future," is based on thorough internal and external environmental assessments, underscoring our dedication to sustainability through maritime solutions. To realize this vision, we have set three strategic directions: improving our response to climate change and environmental management, strengthening our safety, health, and supply chain ESG systems, and pioneering green and digital innovations for a sustainable future. Furthermore, we have defined 12 strategic tasks to advance these strategies. Our active and systematic approach ensures our position as a leading provider of comprehensive, sustainable solutions.



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## CEO Message

### How does our business align with ESG goals?

As a total marine solution provider, we are committed to offering our customers a comprehensive range of products and services throughout the vessel life cycle. This includes warranty services, green retrofit solutions, and digital controls. With the growing expectations for carbon neutrality and regulations of greenhouse gas emissions from vessels, there is increasing demand for green solutions and businesses. Consequently, we are capitalizing on these internal and external shifts as opportunities to enhance our competitiveness in the green vessel retrofit market and digital solution sectors, while also supporting our customers' carbon reduction initiatives.

### Climate change is increasingly recognized as a critical issue across all global industries. What are HD HMS's activities and future plans in response to climate change?

We recognize the urgent need to address the climate crisis and are actively enhancing our environmental management systems in response. As global environmental regulations become stricter and the demands for decarbonization and a transition to renewable energy grow, we have obtained certification for our environmental management system and aim to achieve carbon neutrality by 2035. This declaration marks a critical step for HD HMS in its evolution into a truly sustainable enterprise. By aiming for carbon neutrality by 2035, we intend to meet the national 2050 net-zero target ahead of schedule. To ensure success, we will carefully manage our environmental impact, diligently keep track of our progress toward carbon neutrality, and implement a variety of activities to combat the climate crisis.

### Supply chain management is becoming another essential aspect of ESG practices. What strategies are HD HMS developing to address and support our suppliers with ESG matters?

We are committed to upholding our economic and social responsibilities throughout our business activities. In response to growing ESG demands, we have implemented a management system across our supply chain to enhance ESG competitiveness among SMEs in the shipbuilding industry, fostering mutual growth. In 2023, we conducted ESG assessments for 43 key suppliers, supported their improvements, and developed our own ESG diagnostic checklist and guidelines. To streamline the management system and reduce the burden of redundant ESG assessments on our suppliers, we have formed an operational agreement with the Korea SMEs and Startups Agency (KOSME) and HD Hyundai's four shipbuilding affiliates. We will continue to carry out a wide range of activities to support our suppliers in addressing ESG issues.

### What efforts are HD HMS making to establish an ESG-based decision-making system?

We integrate ESG principles throughout our strategy and operations, in alignment with our purpose, activities, and stakeholder communications. We prioritize fulfilling our social responsibility towards the environment and society while promoting transparent governance for sustainable growth. In December 2023, we formed an ESG Committee under the Board of Directors to enhance its role and responsibilities, and we also created an ESG Management Council to strengthen our ESG governance. Additionally, we established an ESG Working Group, enabling employees who manage ESG operations to share strategic ESG directions and regularly monitor their implementation. Through this governance structure, the Board will steer the ESG agenda, while management implements ESG strategies, identifies opportunities and risks, and responds appropriately.



Ki-dong Lee, President & CEO of HD Hyundai Marine Solution

A handwritten signature in black ink, appearing to read 'K. D. Lee'.

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# Company Introduction

HD Hyundai Marine Solution (HD HMS) was established on November 28, 2016. It originated from the shipbuilding, engine & machinery, and electrical systems divisions of HD Hyundai Heavy Industries, which was founded in 1972. The Company was created to focus more specifically on power generation services for both marine and onshore applications. As of 2023, HD HMS operates six international branch offices and four overseas subsidiaries, providing round-the-clock service to customers globally.

We have grown to become the industry's only total service provider, with a portfolio that includes supplying parts and technical services for both vessel and onshore power generation, along with green vessel retrofit, digital controls, bunkering, and warranty services for various vessels. Our efforts to develop into a leading provider of comprehensive engineering services are part of our larger vision of becoming the world's best shipbuilder and marine engine maker.

## History

- 2015**

  - Launched HHI Hyundai Marine Service Center
- 2016**

  - Established Hyundai Global Service Co., Ltd.
  - Unified the Group's shipbuilding service centers
- 2017**

  - Expanded globally with new subsidiaries
  - Established overseas subsidiaries in Europe, the Americas, and Singapore
  - Obtained DNV-GL ISO 9001:2015 certification
  - Advanced into the green retrofit solution business
- 2018**

  - Achieved USD 440 million per year in orders for sustainable business
  - Obtained DNV-GL ISO 14001:2015 certification
  - Launched the Digital Transformation (DT) Division
  - Ventured into bunkering service
- 2019**

  - Constructed the first Digital Innovation Center for smart ships
  - Won the best employment award from Busan Metropolitan City
- 2020**

  - Surpassed KRW 1 trillion in sales
  - Acquired the HHI Group's digital solution system business
  - Established Digital Solution Division
  - Signed the world's first Smart Ship and Satellite Communications (SSSC) package agreement
- 2021**

  - Opened the Global Digital Center (GDC)
  - Developed a remote Engine Power Limitation (EPL) system.
- 2022**

  - Relocated to the HD Hyundai Global R&D Center
  - Awarded the USD 500 million Export Tower
  - Expanded globally by establishing a new subsidiary in the Middle East
  - Obtained DNV-GL ISO 45001:2015 certification
  - Assisted with the fire recovery efforts in Ahopsansup Forest in Busan
- 2023**

  - Renamed to HD Hyundai Marine Solution
  - Received Approval in Principle (AIP) for methanol dual-fuel retrofit designs
  - Contracted for an LNG re-liquefaction plant retrofit
  - Achieved ISO 45001 occupational health and safety certification

## Our Slogan and Management Policy

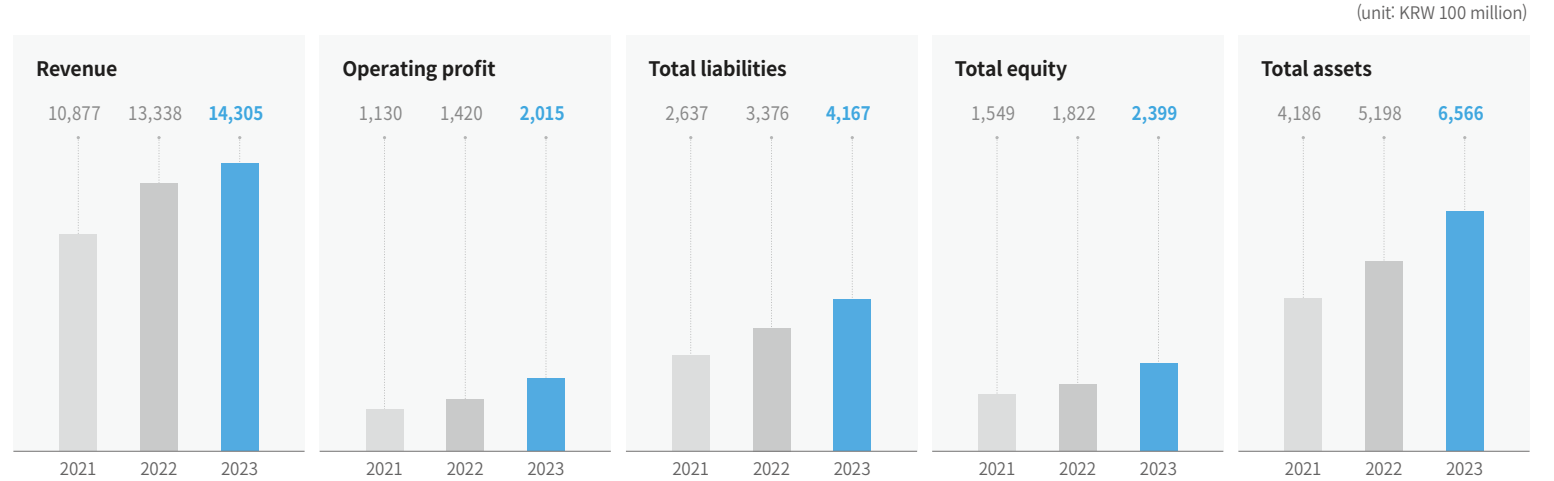
HD Hyundai Marine Solution is committed to pursuing new challenges and innovations to create the highest value through world-class products and engineering-based total services.



# Company Profile

## General Information

<b>Name</b>	HD Hyundai Marine Solution Co., Ltd.
<b>CEO</b>	Ki-dong Lee
<b>Date of Establishment</b>	November 2016
<b>No. of Employees</b>	541 (as of December 2023, excluding overseas subsidiaries)
<b>Main Businesses</b>	Vessel and onshore power generation services Digital solutions Green vessel retrofit
<b>Domestic Business</b>	Headquarters: 79, Centum jungang-ro, Haeundae-gu, Busan GRC: 477, Bundanguseo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do GDC: 50, Sinduwang-ro, Nam-gu, Ulsan



## Core Business and Competencies

### Genuine Parts and Services



We provide competitively priced services with optimal lead times for warranty and non-warranty work on newly built vessels, engines, and equipment. Additionally, we ensure customer satisfaction by supplying essential parts, technical support, and operational management services for diesel and gas engine power plants.

### Green Vessel Retrofit



Since 2017, we have been at the forefront of the maritime industry in providing green retrofit solutions. Our initial focus was on the installation of EGCS<sup>1)</sup> and BWTS<sup>2)</sup> to comply with the International Maritime Organization (IMO) environmental regulations. We have since broadened our services to meet the IMO's greenhouse gas (GHG) regulations, offering vessel GHG solutions, retrofits for LNG and methanol DF<sup>3)</sup> engines, as well as re-liquefaction and FSRU<sup>4)</sup> conversions for LNG carriers. These improvements are all tailored to deliver optimal green solutions.

### Digital Solution



We provide smart solutions for green vessel operations, improve operational efficiency through real-time navigation data, and protect vessels from cybersecurity threats. Our advanced vessel digital control technologies ensure stable navigation and supply shaft generator that comply with GHG regulations.

### Bunkering Service



We collaborate with HD Hyundai Oilbank, utilizing HD Hyundai's extensive network to supply high-quality marine fuel to domestic and international shippers and customers. Additionally, we offer optimized bunkering services that adhere to environmental regulations and are developing alternative fuels for the carbon-neutral era.

1) EGCS: Exhaust Gas Cleaning Systems 2) BWTS: Ballast Water Treatment System 3) DF: Dual Fuel 4) FSRU: Floating Storage Regasification Unit (a floating vessel used to transport, store, and regasify LNG onboard).



# Business Overview

## Genuine Parts/Services







### Genuine Parts

We leverage our global network to deliver competitively priced, genuine parts promptly, ensuring stable vessel operations. As the exclusive supplier of HD Hyundai's HiMSEN engines, we provide high-quality, genuine parts for large engines and shipbuilding equipment. We analyze current shipbuilding data and fleet details to forecast demand and ensure the availability of required quantities through strategically located warehouses in Busan (Korea), Rotterdam (Europe), Houston (USA), Singapore, and Dubai (UAE), as well as through our global partners. For long-lead items, we maintain a 60-day supply through continuous supplier coordination. Our automatic quoting system allows quick and accurate responses to quote inquiries, enabling us to promptly meet customer needs.

### Technical Services

We offer global technical services for all vessels and equipment supplied by HD Hyundai. In response to the growing demand for smart solutions and the industry's shift towards advanced, digitalized vessel products, we established our technical subsidiary, HD Hyundai Marine Solution Tech (HMST), in April 2022. This allows us to provide more specialized services. Based on the expertise of HMST professionals, we can accurately diagnose vessel issues and deliver top-notch technical services to our customers at competitive prices.

[Link to HD Hyundai Marine Solution Tech Introduction \(Page 23\)](#) →

	Valve Spindle	Fuel Valve	Cylinder Liner
2-stroke Engines			
4-stroke Engines			



# Business Overview

## Long-Term Service Agreement (LTSA)

Our LTSA is designed to allow our customers to form strategic agreements in advance, enabling them to make strategic purchasing plans for genuine parts and services tailored to their needs. Thus, customers can benefit from budget stability and increased efficiency in their vessel operations and management. We oversee aftermarket sales and implementation for ships, engines, and green equipment manufactured by HD Hyundai and provide our customers with end-to-end services, from equipment sales and technical support. In response to the rising service demands for newly developed green engines, driven by stricter environmental regulations, we actively engage in both direct and indirect green retrofit projects.



\* EEXI: Energy Efficiency Existing Ship Index

\* SEEMP: Ship Energy Efficiency Management Plan, a management plan that must be submitted and approved for vessels with a low carbon intensity indicator (CII) rating

\* EPL: Engine Power Limitation

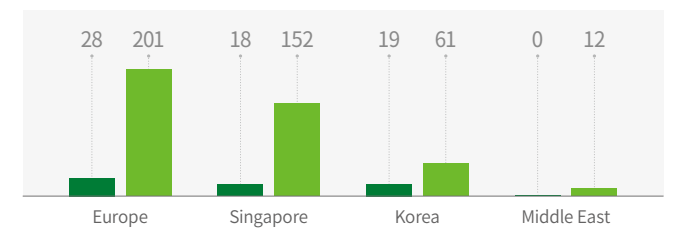
\* ESD: Engine Saving Device

## HD HMS LTSA Clients

43 CLIENTS



**2023 LTSA performance for 2 stroke, 4 stroke engines** (unit: vessels)

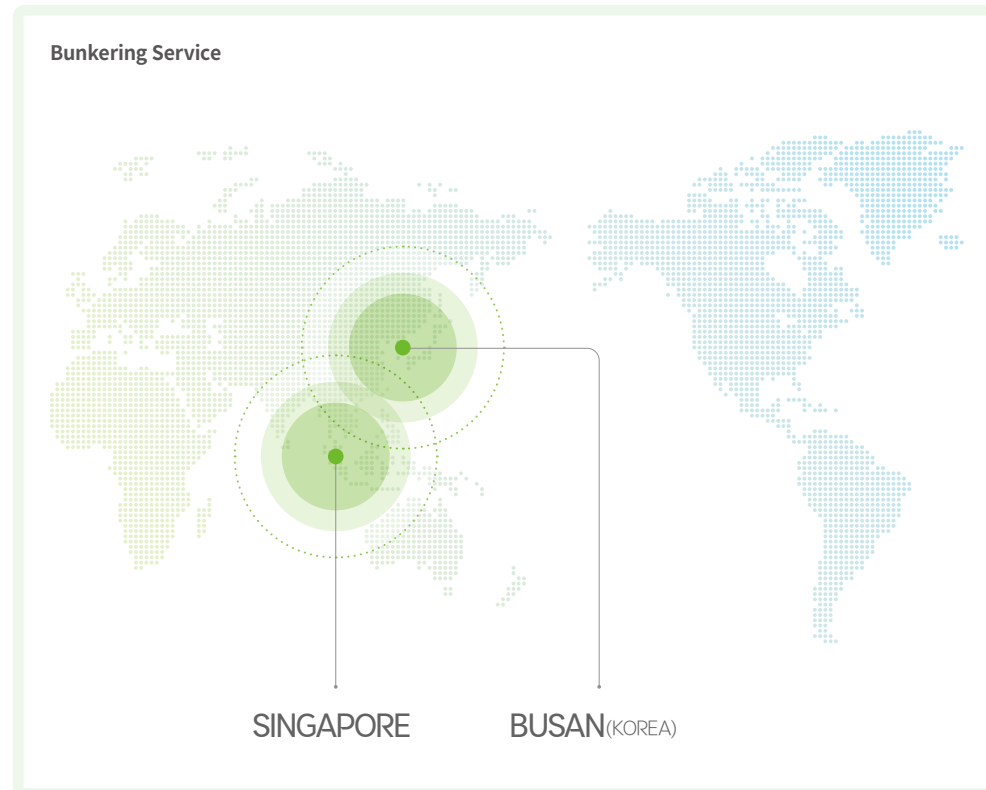


# Business Overview

## Bunkering Service

### Business Overview

Through HD Hyundai's extensive global network, we provide top-tier bunkering services to both Korean and international shippers and customers. Since late 2019, we have been supplying low-sulfur marine fuel oil in adherence to the IMO 2020 sulfur regulations, the international standard ISO 8217:2010, and the IMO's MARPOL Annex VI, which governs air pollution from vessels.



### Overseas Business

As part of our global expansion in bunkering services, we are now actively engaged in bunker trading in Singapore. In partnership with HD Hyundai Oilbank, we supply high-quality marine fuel oil, specifically DMA MGO with a sulfur content of no more than 0.1%. We are committed to offering safe and reliable 24-hour bunkering services at competitive prices.

### 2023 Bunkering Performance

<b>Korea</b>	Revenue	KRW 386.0 billion	Volume	450,000 tons
<b>Singapore</b>	Revenue	KRW 206.3 billion	Volume	190,000 tons

### Alternative Fuels

With the increasing number of green vessels, the market for sustainable bunkering services is set for continued growth. We currently supply bunker C oil and marine gas oil, while actively preparing to meet the rising demand for LNG, methanol, ammonia, hydrogen, and other alternative fuel bunkering solutions. Having secured ISCC EU certification for alternative fuels, we are committed to enhancing the stability and sustainable expansion of our bunkering operations. Since establishing this business in 2009, we have served over 200 clients and completed more than 10,000 supply deliveries. Notably, we have provided bunkering services for over 370 newly built vessels.

### Bunkering clients and supply operations

<b>Clients</b>	200+	<b>Bunker supplies</b>	10,000+	<b>Bunker supplies for newbuilds</b>	370+
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1 ISCC EU certificate

2 HD Hyundai Oilbank biodiesel plant



# Business Overview

## HD SmartCare

HD SmartCare, the service brand of HD Hyundai, is committed to delivering comprehensive warranty services for vessels, engines, machinery, power and automation control equipment, and green products. Our service aims to mitigate risks and eliminate unsafe elements, ensuring the optimal operation of our customers' vessels.

### Solution Orientation

Powered by a 24/7 call center and HD Hyundai's global network, HD SmartCare provides reliable, robust, and prompt solutions. As part of our commitment to top-quality services, HD SmartCare analyzes various cases of claims and utilizes big data analytics to prevent recurrences and improve standards for HD Hyundai-built vessels and products.

### 2023 HD SmartCare Performance

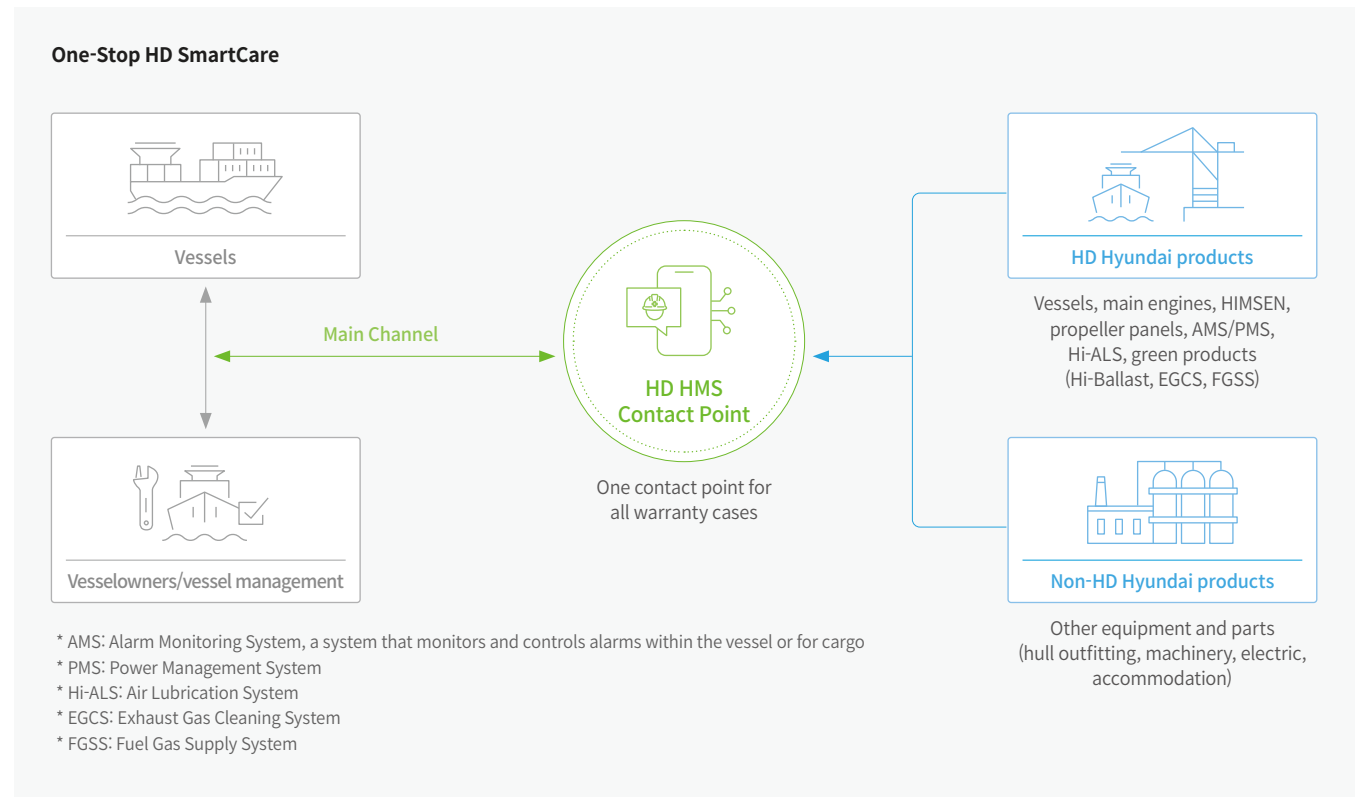
#### Revenue

KRW **66.9** billion



### Life-Time Service (LTS)

We offer lifetime services that go beyond the warranty period with the aim to enhance our customers' asset value, including vessels. Through our Life-Time Service (LTS) program, customers can expect the stability, longevity, efficiency, and peak performance of their vessels. We provide comprehensive technical support for any issues that may arise throughout the vessel's lifespan after delivery. Additionally, we maintain a readily accessible database of all vessels built by HD Hyundai. We are dedicated to meeting our customers' diverse needs, which include green vessels, gas engines, and other innovative products.



# Business Overview

## Green Retrofit Solution

### Green Retrofit

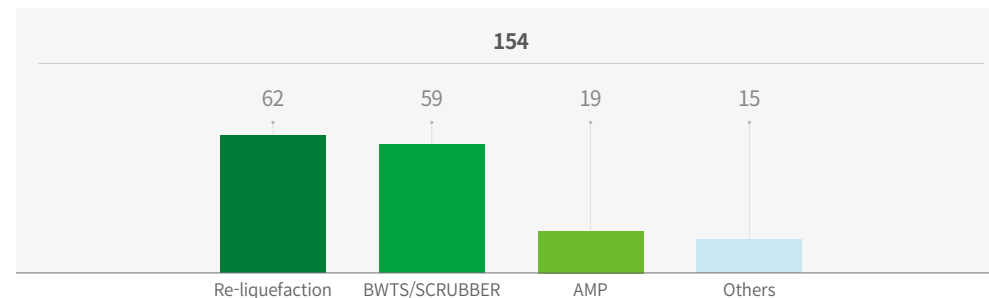
HD HMS has been actively engaging in green retrofit, including the installation of exhaust gas cleaning systems (EGCS) to comply with the IMO 2020 sulfur emission regulations, and ballast water treatment systems (BWTS) to prevent disruptions to marine ecosystems caused by ballast water discharge. As the demand for green retrofits, our efforts are focused on retrofitting vessels to reduce marine pollution, increase energy efficiency, and lower operating expenses (OPEX).

We are expanding our service to include dual-fuel propulsion systems utilizing LNG and methanol for cleaner operations. In response to the increase in demand for LNG carriers, we are developing capabilities for floating storage regasification units (FSRU) to manage the storage, regasification, and discharge of LNG at sea, along with systems to control boil-off gas (BOG) from LNG carriers. Additionally, we are enhancing our retrofit offerings with alternative maritime power (AMP) systems to meet emissions reduction regulations.

### Vessel Repair and Retrofit

We draw upon our extensive experience and global network to quickly repair damage from groundings, fires, or collisions on any type of vessel. Our competitively priced, high-quality construction services are supported by our dedicated management teams with extensive experience in production and design. Furthermore, our partnerships with shipyards from China and Singapore to the UAE and Turkey ensures prompt response to repairs following any incident.

2023 Order Intake (unit: Million USD)



- 1 Secured a contract for the engine part load optimization (EPLO) retrofit of the Neptune Phos vessel with Neptune, Greece.
- 2 Secured a contract for a low-carbon retrofit of Chevron's Asia Class Series vessel.



# Business Overview

## Digital Solution

### Smart Solution

Our smart solutions offer cost-effective and secure data-driven services through real-time monitoring of all vessels using Integrated Smart-ship Solution (ISS) systems such as HiEMS and Hi-GSP. These systems support operations, equipment management, and maintenance. Our Digital Insight Center oversees more than 410 vessels and delivers quarterly analysis reports to our clients based on data collected in collaboration with our specialists.

**1 ISS** The Integrated Smart-ship Solution (ISS) developed by HD Hyundai collects real-time data from key onboard equipment to provide analysis services for vessels, engines and major machinery, as well as optimized operational services.

#### Key features

- Dashboard
- Performance Analysis
- Machinery Monitoring & Analysis
- Energy Management
- LNG Management

**2 DI Report** This report analyzes operational and equipment data to deliver performance insights tailored to each vessel's unique characteristics. Additionally, it provides intuitive information to help assess whether critical machinery, such as engines, is functioning within normal parameters.

#### Key features

- Voyage (Summary, Evaluation)
- Machinery Performance Analysis
- Technical Service (AER Trend, Hull Fouling Analysis)

**3 Hi-GSP** The Hyundai intelligent Greenhouse Gas (GHG) Solution Platform (Hi-GSP) Hi-GSP collects and transmits voyage and machinery data to monitor vessel operational status in compliance with GHG regulations. The system prioritizes efficient data acquisition, seamless transmission, and adherence to GHG regulatory requirements.

#### Key features

- Dashboard
- Data Collection
- Report Management
- CII Monitoring

**4 Hi4S** The Hyundai Intelligent Smart Solution Service System (Hi4S) is a 24/7 smart care service accessible via the web from anywhere, designed to monitor vessel performance. This system allows customers to track the status of their fleet in real time, manage spare parts and maintenance, and receive detailed voyage and machinery analysis data.

#### Key features

- Vessel information (Vessel AIS, Design, Navigation, Weather Conditions)
- Monitoring (Alarm, Main Engine, Generator Engine, Gas Tank)
- Analysis (CII, Hull Fouling, M/E Load Diagram, Engine Performance)
- Report (Vessel Performance, Fuel Management, DI Report)
- Total Care (Fleet Management, Overhaul Support, Lifetime Service)



1 ISS  
2 DI Report  
3 Hi-GSP  
4 Hi4S



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# Business Overview

**5 HiEMS** Hyundai intelligent Engine Monitoring System (HiEMS) monitors the condition and alarms of HD Hyundai's HiMSEN engines in real time, providing diagnostic guidance and analysis reports.

**Key features**

- Dashboard
- Equipment Status & Performance Analysis
- Maintenance & Spare parts Management
- Report

**6 ISCS** The Integrated Smart Communication System (ISCS) interfaces seamlessly with onboard communication and navigation equipment to deliver an optimal user experience. It is compatible with equipment models from all manufacturers worldwide and is controlled via a 10-inch touchscreen.

**Key features**

- Integrated User Interface
- Seamless Communication
- Mobile Support
- Various Purpose Functions

**7 HiSecure** HiSecure is a cybersecurity solution designed to protect vessels from cyber threats. It adheres to the forthcoming IACS UR E26 and E27 regulations, which set the standards for cyber resilience and will take effect in July 2024.

**Key features**

- Network Monitoring System
- Firewall
- Mobile support

**8 Digital Control Solution** This advanced integrated control system, built on ACONIS and HiCONiS, manages all onboard equipment and systems. It is optimized to ensure stable operations for vessels and is versatile enough to provide effective control across a variety of vessel types.

**9 Shaft Generator** This optimal shaft generator solution complies with EEDI and EEXI environmental regulations while also reducing operational expenses (OPEX). Customizable shaft generators are available to meet the specific operational requirements and installation constraints of various vessels.

**Key features**

- Reduce OPEX
- Operation Flexibility (Generator Optimization)
- Turnkey Based Shaft Generator Package Offering

\* EEDI: Energy Efficiency Design Index

\* EEXI: Energy Efficiency Existing Ship Index

**10 HiCONiS** Hyundai intelligent Control & integrated System (HiCONiS) draws upon 30 years of automation expertise to deliver a next-generation integrated automation system (IAS). This system is designed for smart solutions, sustainable operations, and unmanned systems, with a particular focus on LNG carriers.

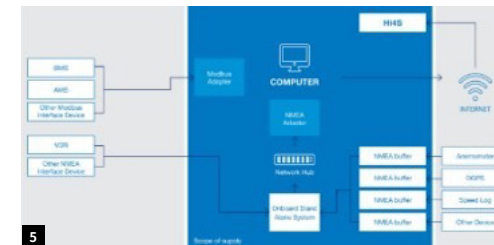
**Key features**

- Vapour Handling System
- Gas Management System
- Cargo Handling System
- Power Management System
- Reliquefaction System
- Ballast/Machinery

**11 ACONIS** ACONIS is a well-established ship monitoring and control system, specifically designed for overseeing machinery and cargo. With more than 30 years of diverse design experience, ACONIS provides exceptional reliability and functionality, making the system an ideal choice for general cargo vessels such as container vessels and bulk carriers.

**Key features**

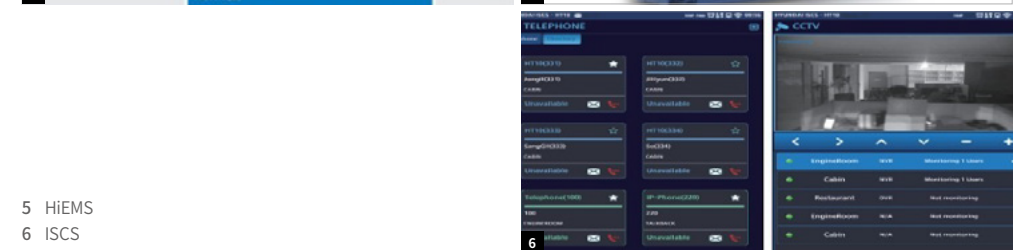
- Alarm Monitoring System
- Major Equipment Control
- Interfaces for engines, ballast & cargo management systems, and PMS



5



5



5 HiEMS

6 ISCS

6



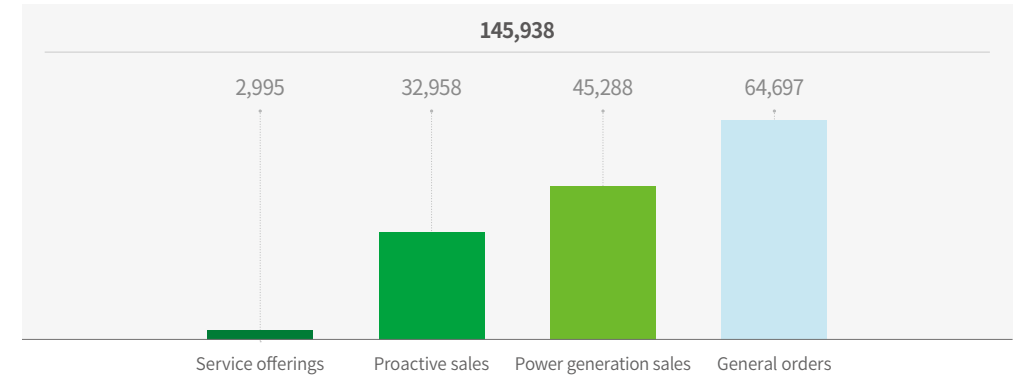
# Business Overview

## Stationary Engine Power Plant Parts and Services

We have extensive experience in the engine power generation market, where we offer essential genuine parts, technical support, and operations and maintenance (O&M) services for diesel and gas engine power plants globally. We deliver solutions for diesel and gas engine power plants worldwide, with a total of 2,000 units across 59 countries and a combined capacity of 5.7GW, achieving high levels of customer satisfaction. Recently, we have contributed to the reduction of greenhouse gas emissions, including carbon dioxide and nitrogen oxides, by providing parts and services to gas engine power plants.

We have also adapted our LTSA, previously used for vessels, to cater to onshore power plants, offering a comprehensive and integrated service package. This package includes parts supply, remote support, GHG response solutions, and various other services. The contracts can be customized to fit customers' existing systems, with provisions for direct delivery, scheduling, and logistics support that align with maintenance schedules, ensuring optimal power plant operations and management. Consequently, we make budget management easier for our customers by offering fixed pricing for their contracted capacity. We also support our customers by offering flexibility with refurbished parts and additional supplies, enhancing overall OPEX efficiency.

2023 order intake (unit: 1,000 USD)



- \* Proactive sales: Orders through our proactive sales efforts, such as LTSA and bulk orders
- \* Power generation sales: Orders received from onshore power plants
- \* General orders: Orders received based on customer requests

- 1 HiMSEN DF engine brochure
- 2 Landscape photos of power plants in South America (Brazil, Ecuador)

### LOWEST CAPEX LOWER EMISSION AND HIGH EFFICIENCY

In order to protect our natural habitat, HYUNDAI is always looking for improved technology for our products and services. Our natural gas and dual fuel solutions with lower emission will help to maintain clean planet for our children and for the future.

**Who is it For?**

- For those who are looking for efficient and economical power plants.
- For those who want to follow environmental regulations.
- Dual fuel is often used for places where there is unstable gas supply and diesel can be used for backup.

**Why Are They Good?**

- 1. LOWER EMISSION**  
Gas engines have lower emission rates and high efficiency in energy production. As emission regulations become stricter, gas operation has advantages such as low NOx / CO2 and no SOx / particulate emissions.
- 2. ECONOMICAL**  
Gas engines are one of the most economical options in the various power sources. The operation and maintenance costs are especially lower than other plant running on different fuels.

**CAPEX For Various Power Sources**

- 3. QUICK START TIME**  
Gas engines have a shorter start time compared with gas turbines. It takes 15 to 30 minutes for turbines to start, whereas gas engine only takes 2 to 7 minutes.
- 4. STABLE POWER OUTPUT**  
Gas engines are able to operate more stable than gas turbine under different ambient temperatures. While turbine power plant shows around 10% droping, gas engine power plant shows only 1% droping. Gas turbine is also more sensitive of part load.

**Ambient Temperature Impact To Gas Turbine & Engine Plant Output**

**EFERENCE**

**ECUADOR  
SANTA ELENA**

Engine Type 9H21/32  
Quantity 53  
Output 90MW  
LTSA Contract from 2020

**BRAZIL  
PROSPERIDADE**

Engine Type 20H35GV  
Quantity 11  
Output 106MW  
LTSA Contract from 2022

# Business Overview

## Global Academy

Our Global Academy provides tailored training programs to equip vessel and power plant operators with specialized knowledge. The curriculum encompasses the theoretical aspects of engine performance, operation, maintenance, engine components, electrical systems, and engine control systems. This training is complemented by hands-on sessions conducted by experienced engineers. Additionally, the academy offers programs focused on the operation and management of major vessel equipment. At Global Academy, seafarers, naval architects, operators, marine engineers, onshore power plant managers, supervisors, and repair technicians can acquire the skills they need for their specific roles.



### Onshore Power Plant Engine Training

We offer trainings to ensure the safe, reliable, and cost-effective operation of HD Hyundai's HiMSEN diesel engines operating in power plants worldwide.

Classification	HiMSEN for power plant	HiMSEN GAS & DF engine for power plant
Objective	Safe maintenance and management of 4-stroke HiMSEN diesel engines	Maintenance and management of 4-stroke HiMSEN diesel engines for optimal performance
Trainees	Power plant engine operators and engineers responsible for plant operations.	
Duration	3 to 15 working days	

### Engine Training

Our Global Academy equips our future engineers with the expertise to maintain and manage these advanced engine systems. Trainees will gain skills in maintaining and repairing key components, as well as optimizing engine performance. The courses are specifically designed for marine engine operators, and engineers responsible for vessel operations and maintenance.

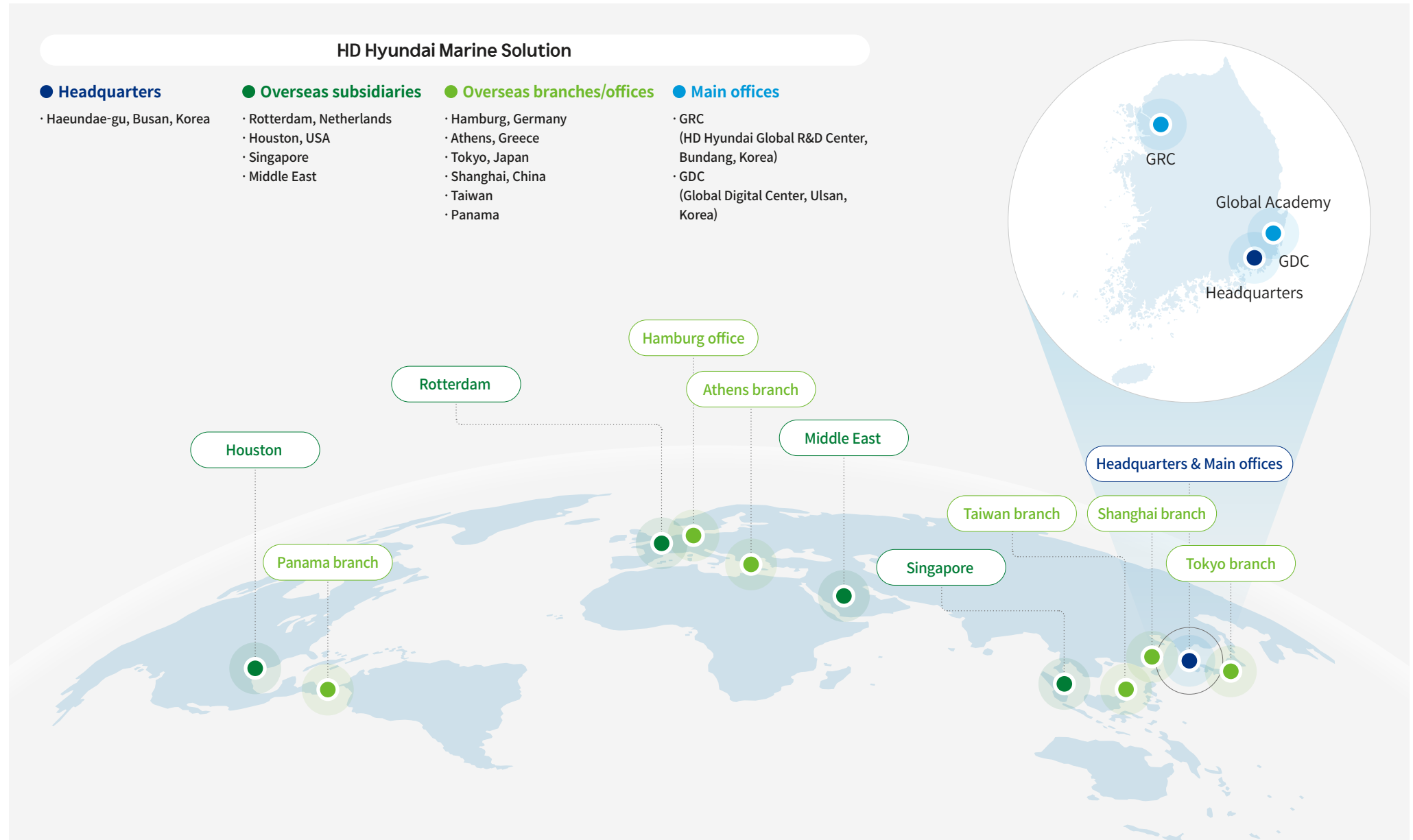
Classification	2-stroke engine	4-stroke HiMSEN diesel engine	4-stroke HiMSEN GAS & DF engine
Objective	Safe and reliable maintenance and management of 2-stroke engine systems	Maintenance and management of 4-stroke HiMSEN diesel engines for optimal offshore performance	Maintenance and management of 4-stroke HiMSEN GAS and DF engines for optimal offshore performance
Trainees	Marine engine operators and engineers responsible for vessel operations		
Duration	3 to 5 working days		

### Marine Machinery Training

We offer training programs for our engineers on the maintenance and management of HD Hyundai's marine equipment and machinery to ensure safe operation.

Classification	Marine equipment
Objective	· HD Hyundai marine machine systems: FGSS, SCR, BWTS, scrubbers, COP & T, thruster, Hi-ell pump, etc. · HD Hyundai marine electric systems: ISS, ACONIS, circuit breakers, VDR, generator, Hi-EMS, etc.
Trainees	Vessel crew and engineers responsible for vessel maintenance
Duration	1 to 2 working days

# Global Network





# Global Network

## Introduction

HD HMS Europe was established in Rotterdam, Netherlands in 2017 to support customers based in Europe. We manage after-market sales and services for vessels and engines manufactured by HD Hyundai, by offering a range of marine equipment and technical services to European customers through a one-stop service approach.

## Main Business

**Genuine parts/ services** We provide genuine parts and qualified engineers for the maintenance and repair of various equipment post vessel delivery, offering an end-to-end solution to ensure stable vessel operations.

**LTSA** We offer long-term service agreements (LTSA) that improve customer convenience in vessel operations and provide optimized services for operating the latest equipment in compliance with environmental regulations.

**Green retrofit** With the increasing demand for parts and services for newly developed engines, we are actively engaged in both direct and indirect green retrofit projects.

## Market and Sales Status

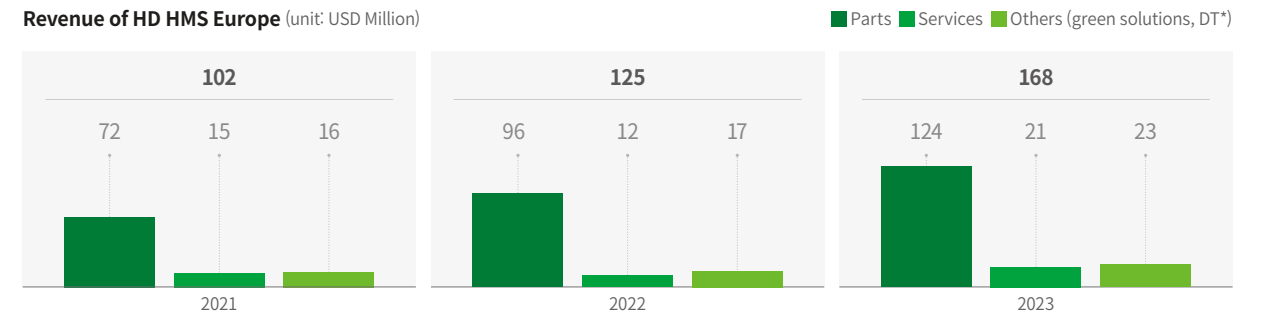
**Container ships** Following the disruptions caused by the COVID-19 pandemic, global shipping companies have reduced their workforce and cut costs after experiencing sharp declines in operating profits in 2023. In response, we will concentrate on bulk purchases and increasing transaction volume at the fleet level to align with the cost-saving objectives for 2024 sales.

**Gas carriers** Orders for LNG carriers have risen since 2022, reflecting the increasing demand for alternative fuels. Consequently, we will maintain our focus on LTSA-based sales to ensure a steady supply and meet the service demands of vessels.

## HD HMS EUROPE



Revenue of HD HMS Europe (unit: USD Million)



\* DT: Digital Transformation

### Message from the Head

Established in 2016, HD HMS Europe has been dedicated to attracting and supporting customers across Europe. We are committed to continuing our growth as a trusted company by providing high-quality marine parts and services through our branches in Athens, Greece, and Hamburg, Germany.



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# Global Network

## Introduction

HD HMS Americas has been serving customers in North and South America since August 2017, specializing in vessel and onshore power plant parts and services, green solutions, and new business ventures. We have achieved significant growth by securing annual contracts and initial and bulk sales. Our commitment to providing customized products and prompt response to customer requests has improved both customer satisfaction and our overall performance. Currently, we are exploring new opportunities in the engineering field.

## Main Business

<b>Drillships</b>	We plan to increase annual fixed contracts by standardizing TBO* maintenance.
<b>General cargo vessels</b>	We are expanding our operations into bulk cargo and dry-docking services (including replacement of distribution boards, bow thrusters, etc.), as well as electrical, electronic, and other vessel equipment businesses.
<b>SEASPAN</b>	We successfully completed the initial order for 25 vessels through close customer engagement and increased bulk sales.
<b>Onshore power generation</b>	We offer customized products for each customer to promote long-term fixed contracts, ranging from TBO maintenance to LTPA, and to broaden our order base.

\* TBO: Time Between Overhaul

\* LTPA: Long-Term Parts Agreement

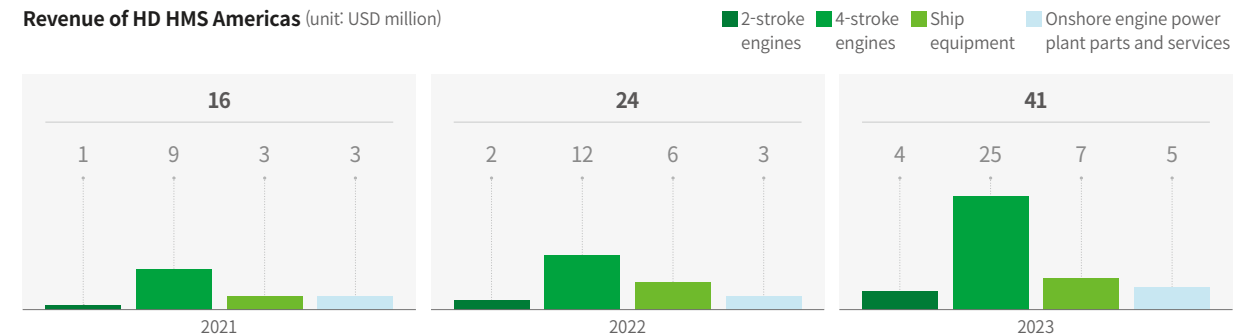
## Market and Sales Status

<b>Drillships</b>	With stable oil prices, the operating hours for drillships are on the rise. Our goal is to secure more long-term contracts with charterers by capitalizing on our extensive range of parts and services, as well as our advantages as a licensed provider.
<b>General cargo vessels</b>	Offering competitive prices to our shipowners is significant given the availability of diverse sourcing channels. Price-competitiveness also opens up more opportunities for initial outfitting, dry-docking services, and bulk orders.
<b>Onshore power generation</b>	In response to emerging business opportunities, such as the relocation of power plants in Latin America, we are pursuing long-term fixed contracts for maintenance, repair, and operations (MRO), as well as new ventures.

## HD HMS AMERICAS



Revenue of HD HMS Americas (unit: USD million)



**Message from the Head**

HD HMS Americas, established in Texas in 2017, oversees sales for customers throughout North and South America. Our operations cater to the entire American continent, covering offshore markets in North America and Canada, as well as onshore power plants in Latin America, while also branching into green businesses.

# Global Network

## Introduction

HD HMS Singapore, established in December 2017, serves customers across Asia. We operate in Singapore, a key maritime transport hub with an annual traffic of 3 billion tons, and in China, where there is a significant demand for dry-dock maintenance. We offer parts, technical solutions, bunkering services, and after-market support to ensure the efficient operation of green vessels.

## Main Business

**Engines/  
genuine parts  
and services** We supply customers across Asia with parts and technical solutions for shipbuilding equipment, engines, electronics, and fluids. Additionally, we provide engine components and equipment to onshore power plants.

**Bunkering** In collaboration with HD Hyundai Oilbank Singapore, we offer customers high-quality marine gas oil (LSMGO<sup>1</sup>). Our bunkering services also encompass other marine fuels, including HSFO<sup>2</sup> and LSFO<sup>3</sup>.

1) Low-sulfur marine gas oil: sulfur content below 0.1%

2) High-sulfur fuel oil

3) Low-sulfur fuel oil

## Market and Sales Status

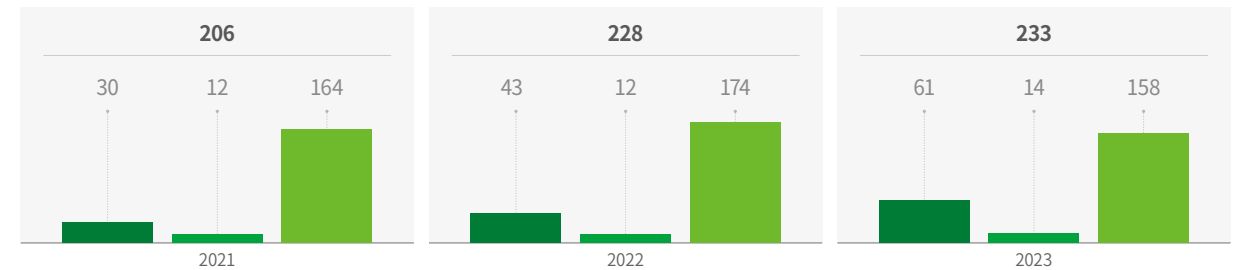
**Engines/  
genuine parts  
and services** With the growing delivery of green vessels that incorporate HD Hyundai's proprietary technology, we expect a sharp increase in demand for sustainable engines, genuine parts, and services. To ensure the seamless operation of our customers' vessels, we are expanding our inventory of green genuine parts and strengthening our service network.

**Bunkering** In 2023, we delivered approximately 220,000 tons of LSMGO and 5,000 tons of L/HSFO to our customers. We aim to secure additional orders by closely collaborating with HD Hyundai Oilbank Singapore and entering the alternative fuel bunkering market.

## HD HMS SINGAPORE



Revenue of HD HMS Singapore (unit: USD million)



### Message from the Head

HD HMS Singapore is expanding the parts inventory and technical service personnel to ensure timely maintenance for the safe operation of vessels owned or managed by our Asian customers. Alongside our existing parts, services, and bunkering businesses, we are diversifying into digital control and green equipment retrofits to comply with increasingly stringent environmental regulations.

# Global Network

## Introduction

HD HMS Middle East was established in September 2022 in the Jebel Ali Free Zone, Dubai. We supply parts and services for vessels and onshore power generation facilities across the Middle East, Turkey, and North Africa. Additionally, we support the entire lifecycle of these facilities while maintaining an inventory of emergency repair materials valued at approximately USD 3 million.

## Main Business

<b>General parts and services</b>	We regularly assess our customers' needs and provide tailored services.
<b>Dry dock services</b>	We work with repair shipyards in the Middle East to provide services for 2 and 4-stroke engines, electrical/electronic systems, and other equipment.
<b>Onshore power generation services</b>	We provide tailored services for power plants in Iraq, Eritrea, Kenya, and Mauritius.

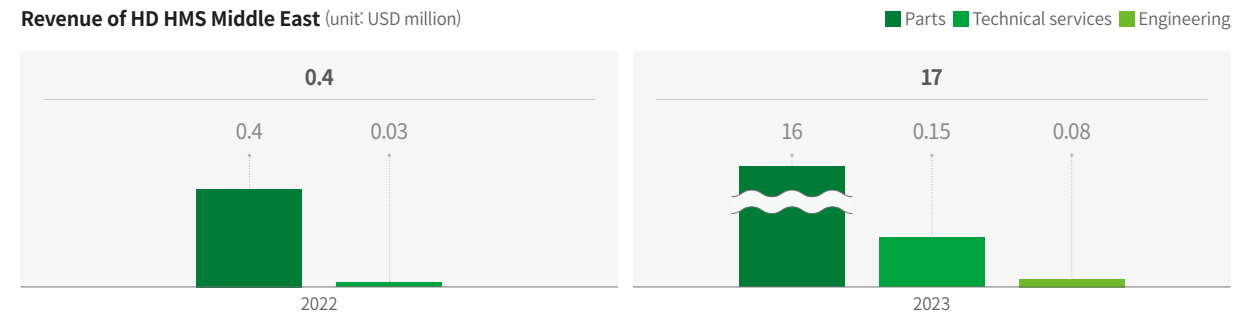
## Market and Sales Status

<b>General parts and services</b>	We expect more growth opportunities with increases in cross-national investments for port and shipping routes and shipping volumes. Moreover, we plan to secure additional contracts for vessel retrofits and lifecycle services, focusing on national shipping lines.
<b>Onshore power generation services</b>	Given the increasing demand for onshore power generation services in the Middle East market, we are committed to expanding our participation in new power plant construction projects.

## HD HMS MIDDLE EAST



Revenue of HD HMS Middle East (unit: USD million)



### Message from the Head

Established in September 2022 in Dubai's Jebel Ali Free Zone, HD HMS Middle East specializes in maintenance and lifecycle management services for vessels and onshore power generation facilities throughout the Middle East, Turkey, and North Africa. Our services encompass tailored parts, dry dock maintenance solutions, and customized power plant services, all designed based on customer needs.

# Global Network

## HD Hyundai Marine Solution Tech

**HD Hyundai Marine Solution Tech (HMST)** guides the marine industry toward a more sustainable future as the world's leading technical solution provider.

### Introduction

HMST, a subsidiary of HD HMS, was established in April 2022 to specialize in providing technical services for HD Hyundai's vessels, engine machinery, and electrical and electronic systems. Our team comprises highly skilled engineers who support technical sales and swiftly deliver the essential technology required for the maintenance and repair of our customers' vessels.

### Main Business

HMST offers a wide array of services within the marine industry, earning customer trust through our expertise in onboard maintenance, dry-dock maintenance services, and propeller and rudder package services, along with workshop reconditioning services.

#### On Board (Site) Service

- Main / HiMSEN Engine Service (Including Gas/DF)
- MSBD / AMS / PMS / VCB / ACB / GENERATOR
- BWTS / Thruster / COP(T) / SCR / Scrubber / Purifier / Oil Separator / Others

#### Dry-Dock Maintenance Service

- Main Engine Overhaul / HiMSEN Engine Overhaul / Thruster Overhaul
- Re-Engine Service / DF Retrofit
- MSBD / AMS / PMS / VCB / ACB / GENERATOR / BWTS / COP(T) / SCR / Scrubber

#### Workshop Recondition Service

- Main Engine Reconditioning
- HiMSEN Engine Reconditioning
- VCB Reconditioning
- HiMAP Reconditioning

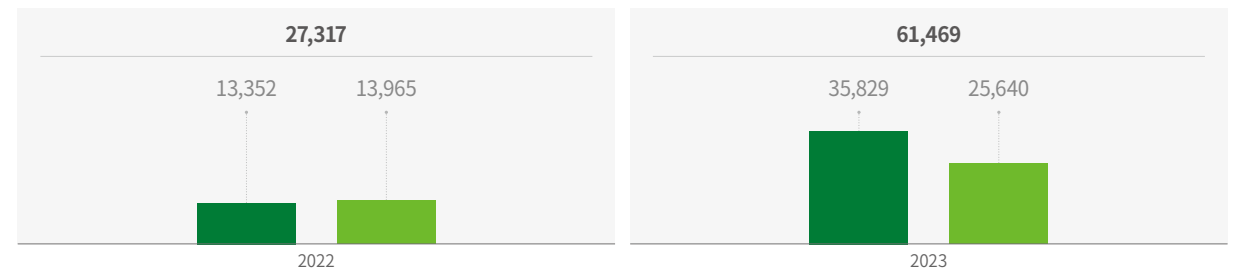
#### Propeller & Rudder Package Service and Others

- Propeller Package / Rudder Package / Refrigerant Gas Retrofit in HVAC Sys.

### History



Revenue of HMST (unit: KRW million)

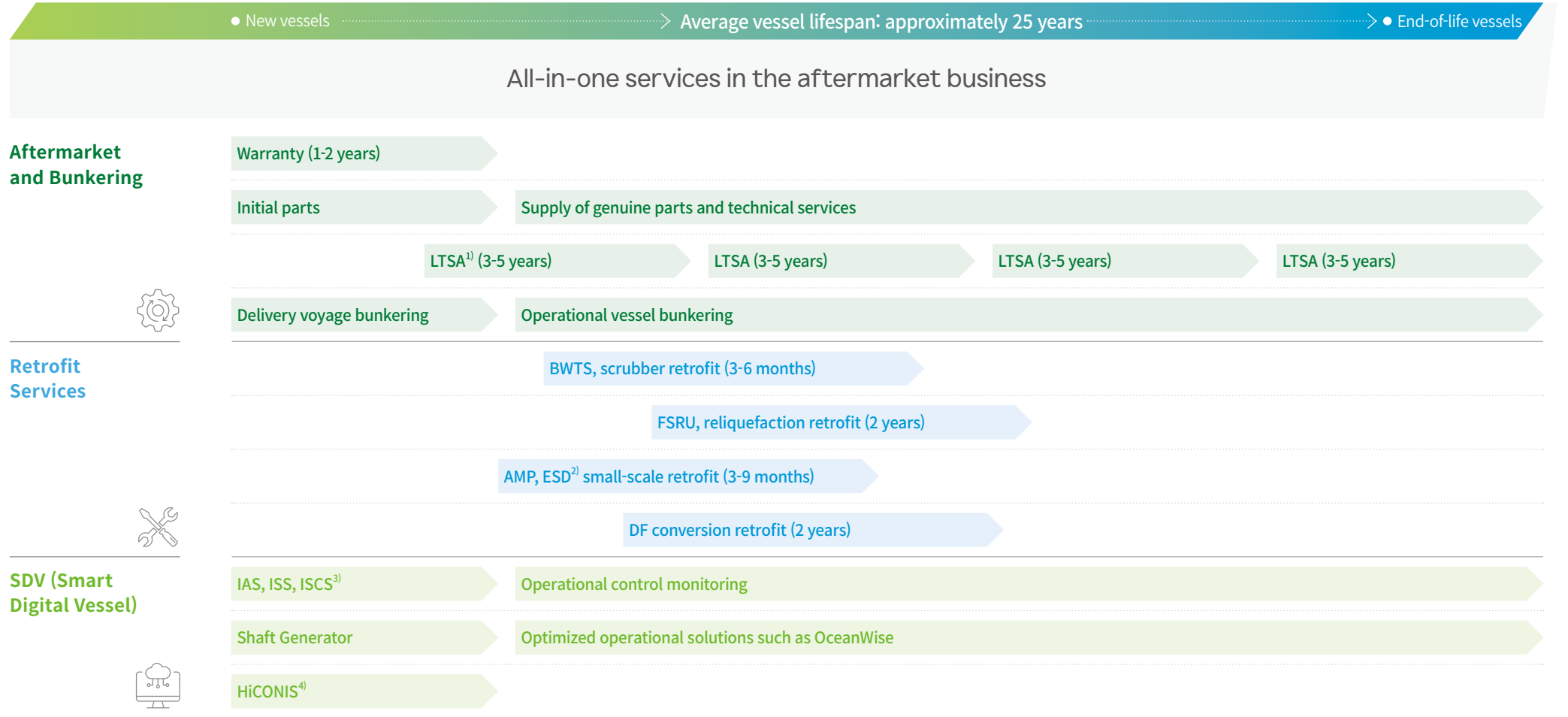




# Business Value Chain

## Vessel Lifecycle

Our vision is to be a total solution provider for the maritime industry. We cover the entire lifecycle of a vessel, offering warranty services, green retrofit, and advanced digital control systems to address our customers' changing needs.



1) LTSA: Long-Term Service Agreement  
2) ESD: Energy-Saving Device  
3) IAS: Integrated Automation System, ISS: Integrated Smart-ship Solution, ISCS: Integrated Smart Communication System  
4) HiCONIS: Hyundai intelligent Control & integrated System



Issue 01

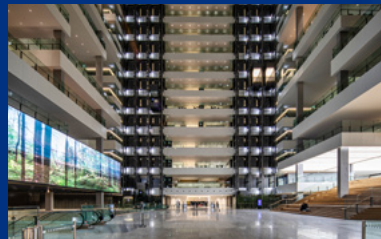
## Relocating to HD Hyundai Global R&D Center (GRC)

In February 2023, HD HMS and 17 other subsidiaries of HD Hyundai relocated to the group's new integrated office building, the GRC, located in Bundang. The GRC functions as a central hub for future business initiatives, particularly focusing on R&D. This move symbolizes HD Hyundai's dedication towards innovation over the next 50 years, aligning with its 50th anniversary in 2023. This relocation is anticipated to strengthen R&D capabilities and foster greater synergy among the operations. Additionally, we are dedicated to improving our corporate culture by offering various employee benefits within the GRC.

Issue 02

## Renaming to HD Hyundai Marine Solution

On November 23, 2023, the Board of Directors and shareholders approved an amendment to the company's articles of incorporation via an extraordinary general meeting. Through this amendment, our company renamed from HD Hyundai Global Service to HD Hyundai Marine Solution. The new name aligns with our commitment to providing green and digital solutions for the marine industry, leading the sector towards a more sustainable future. With this renaming, we intend to broaden our scope of business from engine parts supply and services to green digital solutions.



Interior of HD Hyundai GRC



Celebration of the Renaming





**GREEN SOLUTIONS  
TOWARD  
SUSTAINABLE  
FUTURE**

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# ESG Vision

## ESG Vision

HD HMS is committed to implementing ESG management that aligns with the vision of “Green Solutions Toward Sustainable Future”. To achieve our vision, we have established strategic directions based on the 3P framework: Planet, People, and Profit.

HD Hyundai vision

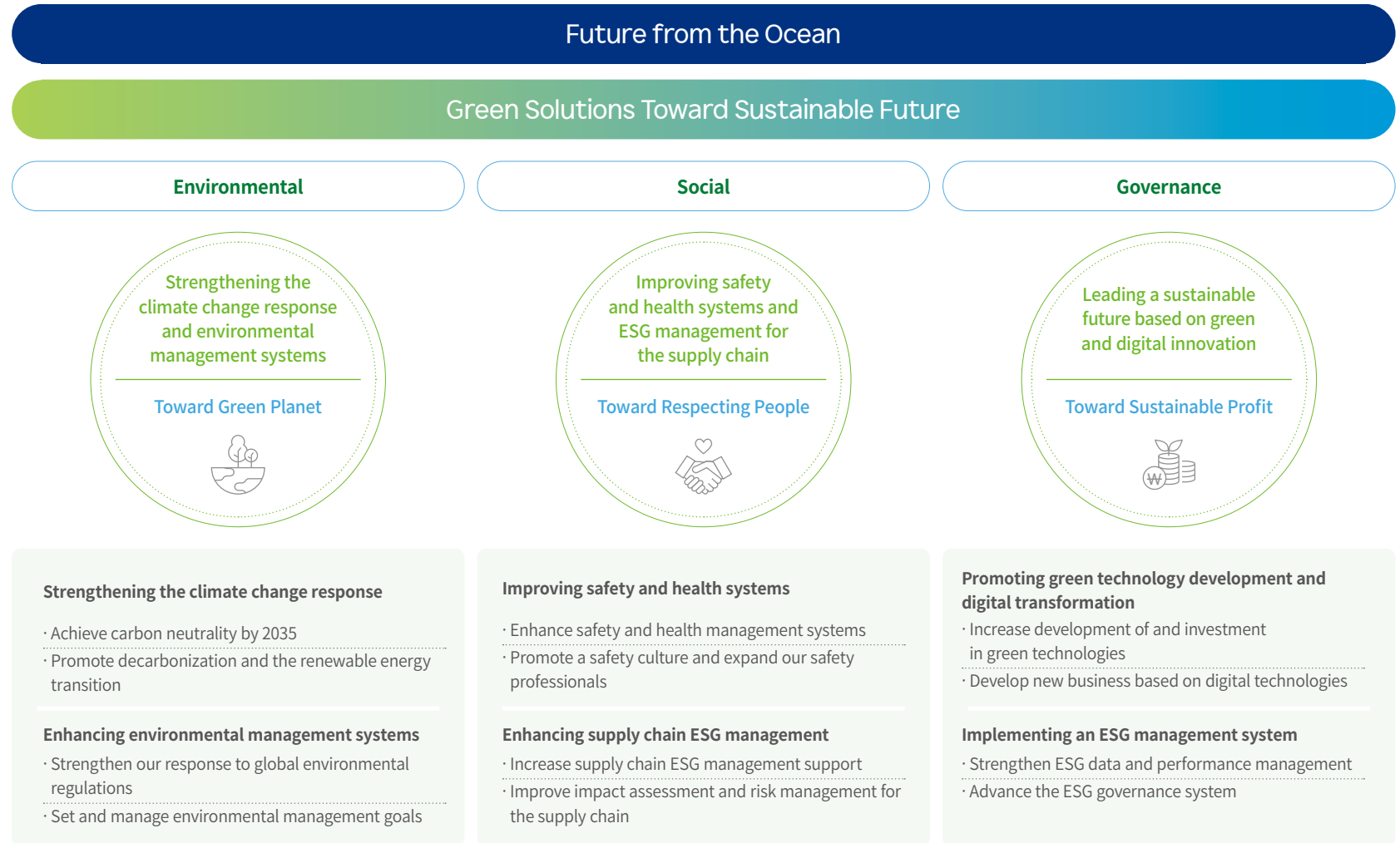
HD HMS vision

ESG areas

Directions

HD HMS approach

Strategies



## ESG Vision

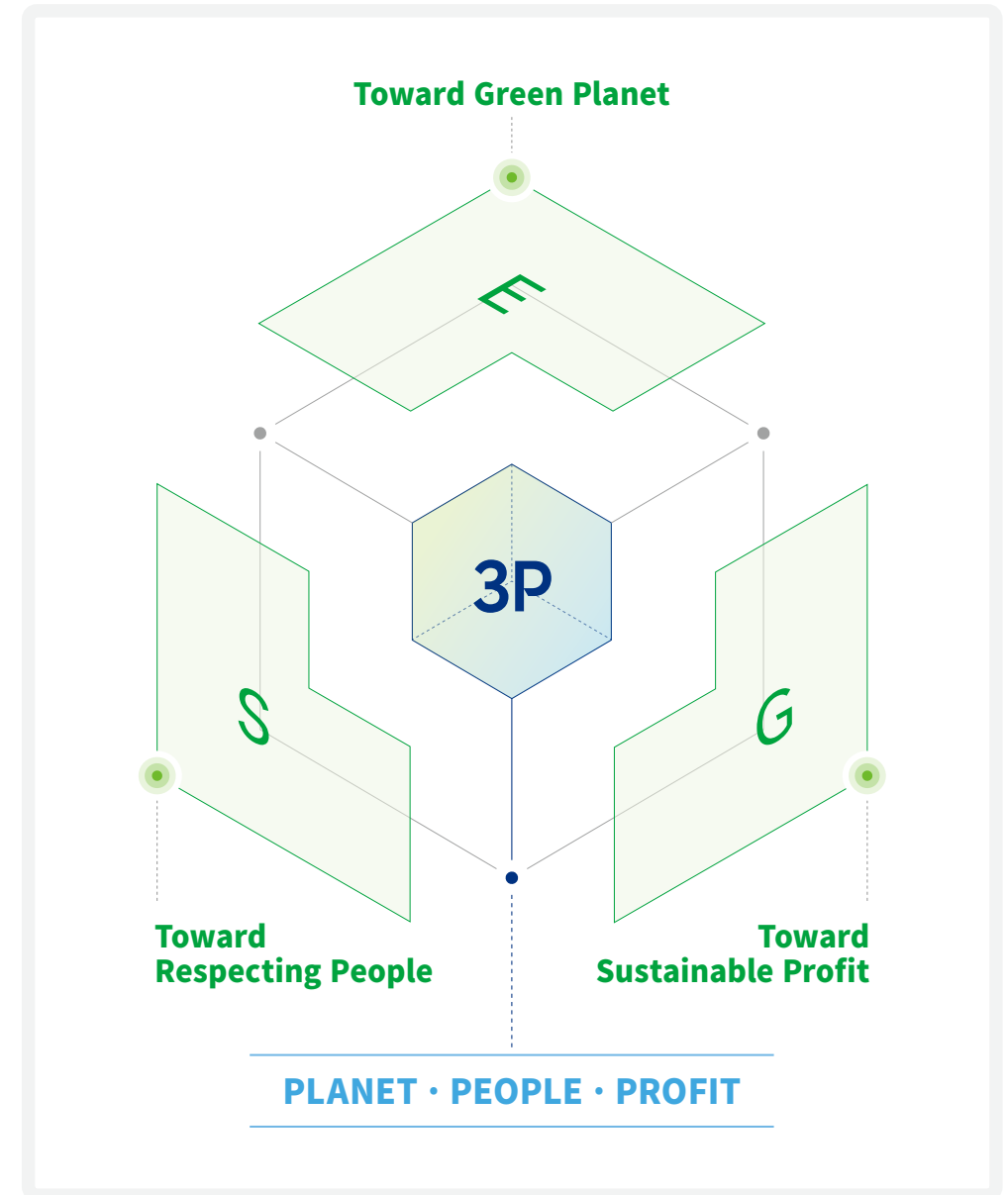
# Green Solutions Toward Sustainable Future

We are committed to pursuing innovation and embracing challenges as we strive to create a sustainable future through our green solutions.

Our vision for a sustainable future is clear. We aim to develop green and smart vessel solutions to strengthen our responses to climate change, improve supply chain collaboration, and enhance our ESG management system to drive value. The core vision is fundamental to our value creation.

As a total marine solution company, we are committed to ocean transformation by offering green smart-ship solutions and implementing robust ESG management practices. We believe this approach paves the way for a sustainable future in the marine industry.

To achieve sustainable growth through transforming the ocean, we have established a 3P-based ESG strategy: Planet, People, Profit.

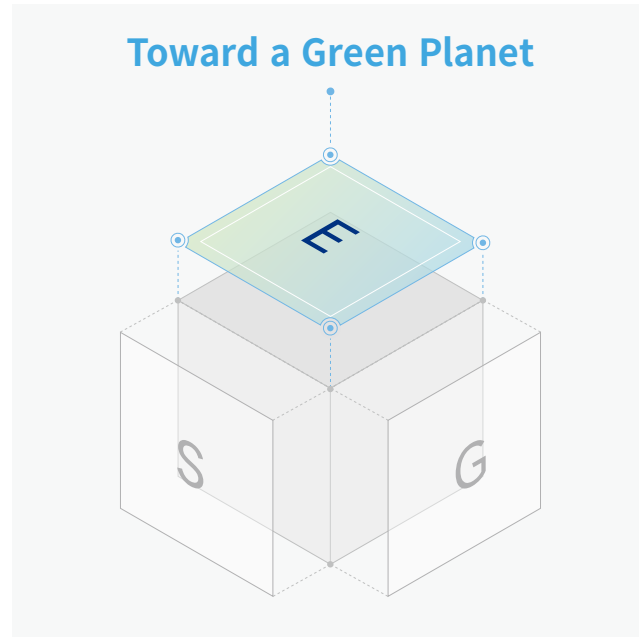




# ESG Vision

## ESG Strategy

We have refined our approach to ESG management by identifying key strategies and tasks in the environmental (E), social (S), and governance (G) areas. This was achieved through both internal and external ESG analyses and materiality assessments.

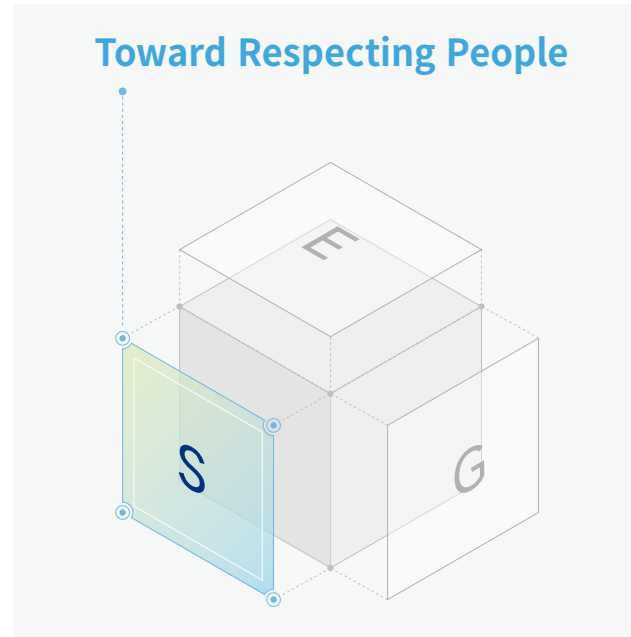


### Strengthening the climate change response and environmental management systems

We aim to achieve carbon neutrality by 2035 via using alternative fuels and expanding our services.

#### Strategic tasks

- 1 Achieve carbon neutrality by 2035
- 2 Promote decarbonization and the renewable energy transition
- 3 Strengthen our response to global environmental regulations
- 4 Set and manage environmental management goals

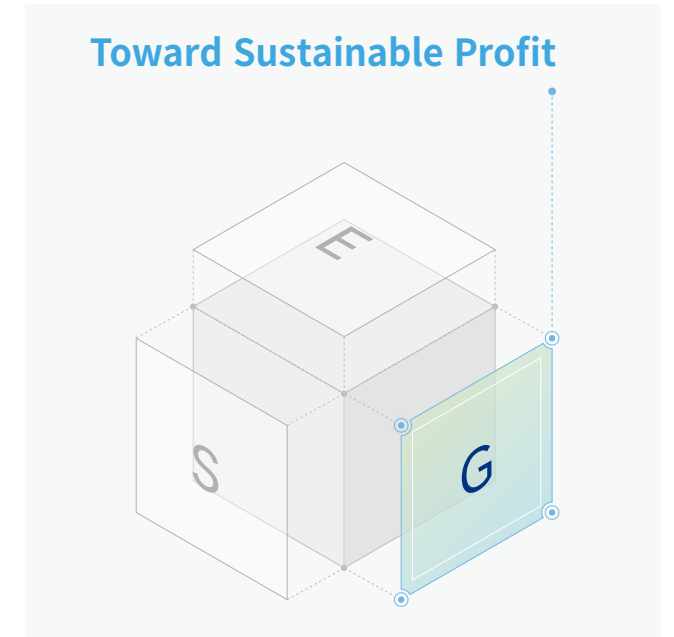


### Improving safety and health systems and ESG management for the supply chain

We intend to enhance our safety and health management system and improve supply chain ESG management to minimize potential risks.

#### Strategic tasks

- 1 Enhance safety and health management systems
- 2 Promote a safety culture and expand our safety professionals
- 3 Increase supply chain ESG management support
- 4 Improve impact assessment and risk management for the supply chain



### Leading a sustainable future based on green and digital innovation

We pursue sustainable development by expanding green initiatives and advancing our ESG governance system.

#### Strategic tasks

- 1 Increase development of and investment in sustainable technologies
- 2 Develop new business based on digital technologies
- 3 Strengthen ESG data and performance management
- 4 Advance the ESG governance system

# ESG Vision

## ESG Strategic Tasks

### Strategic Tasks and Action Items

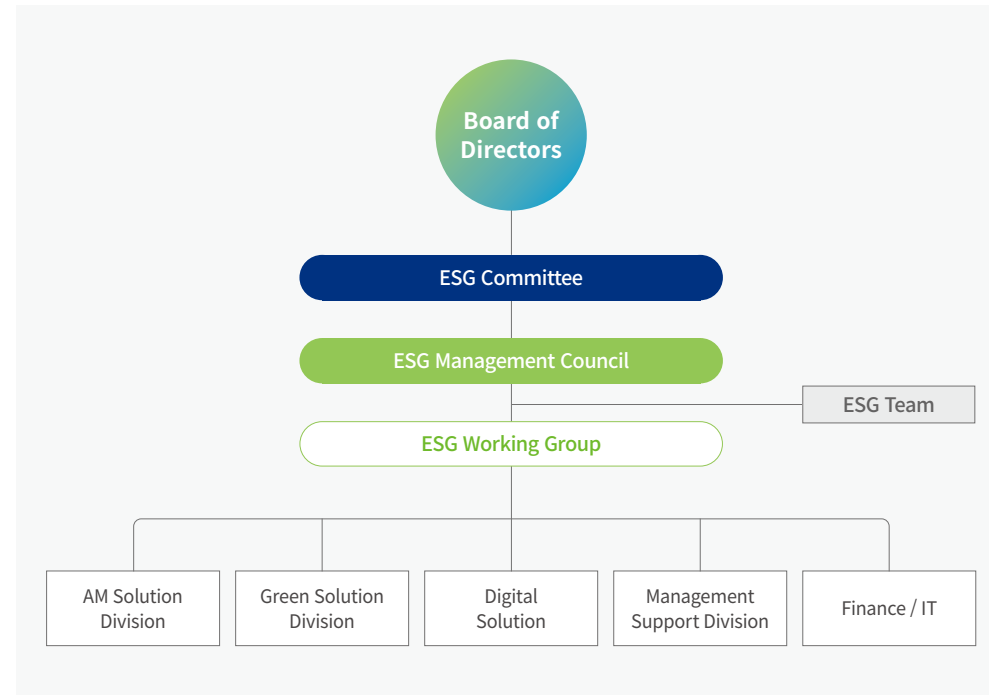
We have selected 12 key tasks across three core ESG strategies to advance our ESG management initiatives. To accomplish these key ESG tasks, we are pursuing 15 short, medium, and long-term action plans. We regularly monitor and review our ESG performance data and major task progress to ensure steady advancement toward achieving our ESG objectives.

Area	Strategic tasks	Action items	2023 performance	Target achievement
<b>Strengthening the climate change response and environmental management systems</b>	Achieve carbon neutrality by 2035	<ul style="list-style-type: none"> <li>Establish energy management standards</li> <li>Manage energy data within the organization</li> </ul>	<ul style="list-style-type: none"> <li>Secured budget for energy management systems (ISO 50001)</li> <li>Collected energy-related data</li> </ul>	
	Promote decarbonization and the renewable energy transition	<ul style="list-style-type: none"> <li>Implement initiatives to reduce energy consumption and measure their effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>Organized a dedicated environmental management team</li> </ul>	
	Strengthen our response to global environmental regulations	<ul style="list-style-type: none"> <li>Establish environmental policies</li> <li>Collect and handle external energy data</li> </ul>	<ul style="list-style-type: none"> <li>Promoted the establishment of net-zero goals and policies</li> <li>Collected and managed energy data of suppliers</li> </ul>	
	Set and manage environmental management goals	<ul style="list-style-type: none"> <li>Maintain ISO 14001 (Environmental Management System) certification through ongoing renewal</li> <li>Establish waste management systems</li> </ul>	<ul style="list-style-type: none"> <li>Renewed ISO 14001 certification</li> <li>Established a waste management system for materials such as obsolete inventory</li> </ul>	
<b>Improving safety and health systems and ESG management for the supply chain</b>	Enhance safety and health management systems	<ul style="list-style-type: none"> <li>Establish a reporting mechanism for violations related to health and safety regulations for products and services</li> </ul>	<ul style="list-style-type: none"> <li>Defined standard procedures for safety and health prevention and corrective actions</li> </ul>	
	Expand safety culture and specialized workforce	<ul style="list-style-type: none"> <li>Conduct health and safety impact assessments for purchases and manage the number and types of certified products</li> </ul>	<ul style="list-style-type: none"> <li>Collected data on certified safety products</li> </ul>	
	Increase supply chain ESG management support	<ul style="list-style-type: none"> <li>Support the enhancement of suppliers' ESG capabilities</li> </ul>	<ul style="list-style-type: none"> <li>Collected ESG data of suppliers</li> <li>Conducted ESG assessments for suppliers</li> </ul>	
	Improve impact assessment and risk management for the supply chain	<ul style="list-style-type: none"> <li>Establish environmental management systems for suppliers</li> <li>Establish social (human rights) management systems for suppliers</li> </ul>	<ul style="list-style-type: none"> <li>Included ESG items in supplier codes of conduct and evaluation criteria</li> </ul>	
<b>Leading a sustainable future based on green and digital innovation</b>	Increase development of and investment in green technologies	<ul style="list-style-type: none"> <li>Incorporate material ESG issues into management strategy</li> </ul>	<ul style="list-style-type: none"> <li>Conducted ESG materiality assessments</li> <li>Established ESG vision and strategic framework</li> </ul>	
	Develop new business based on digital technologies	<ul style="list-style-type: none"> <li>Link environmental and social performance to employee incentives</li> </ul>	<ul style="list-style-type: none"> <li>Linked executive and team KPIs with ESG metrics</li> </ul>	
	Reinforce ESG data and performance	<ul style="list-style-type: none"> <li>Establish ESG policies and define business processes within the Board of Directors</li> </ul>	<ul style="list-style-type: none"> <li>Included elements of independence and diversity in the Board regulations</li> <li>Discussed the Board's business processes</li> </ul>	
	Advance the ESG governance system			

# ESG Management Framework

## ESG Governance

### ESG Governance structure



Category	Composition	Purpose and Role	Schedule
ESG Committee	CEO and relevant outside directors	<ul style="list-style-type: none"> <li>Review and approve ESG strategies and plans</li> <li>Manage key ESG opportunities and risks</li> </ul>	Annual and as needed
ESG Management Council	Executives	<ul style="list-style-type: none"> <li>Oversee ESG strategic tasks</li> </ul>	Semi-annual and as needed
ESG Working Group	Team EA (ESG Ambassadors)	<ul style="list-style-type: none"> <li>Support ESG performance management and decision-making</li> <li>Assist in publishing integrated reports and responding to ESG assessments</li> </ul>	As needed

## ESG Working Group

Our ESG Working Group assists HD HMS in improving its ESG performance and decision-making processes. It convenes on an ad hoc basis to review and discuss ESG-related issues as necessary. Staff members from various departments collaborate to devise implementation plans and oversee improvement tasks. Additionally, the group promotes the publication of integrated reports, addresses ESG initiatives, and simplifies certification and evaluation processes.

## ESG performance evaluation

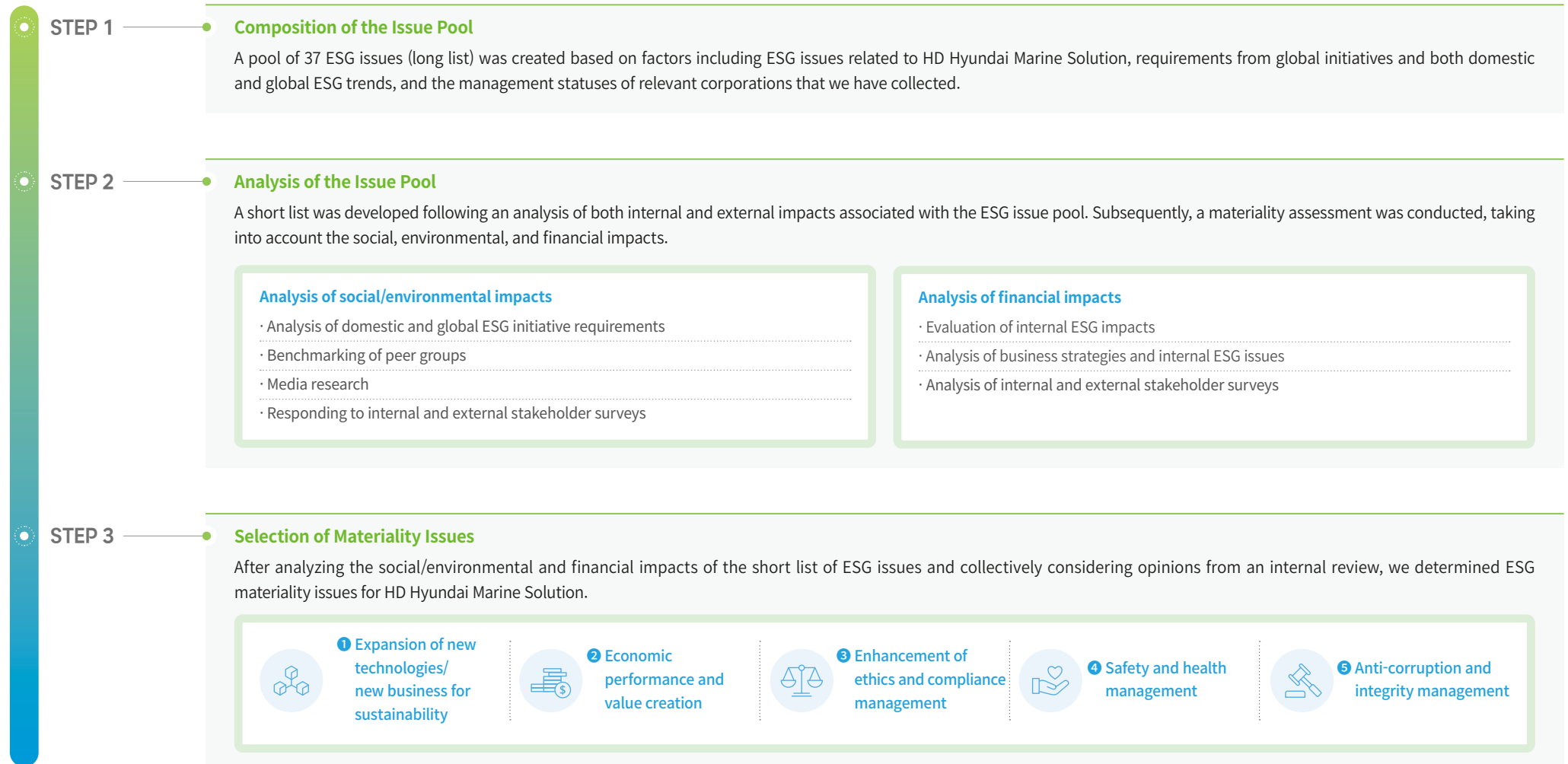
In 2023, we introduced key performance indicators (KPIs) to evaluate and manage our ESG performance. These KPIs were aimed at reducing energy consumption intensity (per unit), establishing supply chain ESG management systems, and developing human resources. The performance and progress of each KPI were closely monitored and reviewed. Additionally, the three main ESG KPIs were incorporated into the CEO's performance evaluation and compensation. In 2024, we plan to expand the use of ESG KPIs to include related departments and responsible executives.

Evaluation Indicator	2023 Target	2023 Performance	Progress
 <b>Reducing energy consumption intensity</b>	<ul style="list-style-type: none"> <li>Reduce energy consumption intensity by 1% compared to the previous year (GDC energy consumption/company-wide sales)</li> </ul>	<ul style="list-style-type: none"> <li>Reduced energy consumption intensity by 8.9% compared to the previous year</li> </ul>	Achieved 8.9% reduction
 <b>Establishing supply chain ESG management systems</b>	<ul style="list-style-type: none"> <li>Policy: Reflect ESG factors in partner registration and evaluation</li> <li>Risk assessment: Define, identify, and manage risks</li> <li>Documentation: Establish and enhance partner checklists</li> <li>Evaluation/improvement: Conduct ESG evaluations of partners</li> </ul>	<ul style="list-style-type: none"> <li>Reflected ESG factors in supplier registration and evaluation</li> <li>Defined, identified, assessed, and managed risks</li> <li>Enhanced codes of conduct, guidelines, and checklists</li> <li>Conducted ESG evaluations and provided improvement support for partners</li> </ul>	Completed
 <b>Developing human resources</b>	<ul style="list-style-type: none"> <li>Establish and implement policies to strengthen leadership capabilities</li> <li>Conduct core leadership capacity-building training</li> </ul>	<ul style="list-style-type: none"> <li>Conducted leadership capacity-building training for team leaders</li> <li>Conducted self-leadership skill-up training for newly promoted personnel</li> <li>Held executive coaching capacity-building workshops</li> </ul>	Completed

# Materiality Assessment

HD Hyundai Marine Solution has conducted a materiality assessment to identify key ESG issues that may impact our business and stakeholders. Additionally, we have assessed the financial, social, and environmental impacts of each ESG issue to prioritize which materiality issues to address.

## Materiality Assessment Process





# Materiality Assessment

## Materiality Assessment Results

Key HD HMS Issues in 2023	Social/ Environmental Impact	Financial Impact	Reported to
1 Expansion of new technologies/new businesses for sustainability	●●●●○	●●●●●	ESG Priorities
2 Economic performance and value creation	●●●●●	●●●●○	ESG Priorities
3 Enhancement of ethics and compliance	●●●●○	●●●●○	Sustainability Management
4 Safety and health management	●●●●○	●●●●○	Sustainability Management
5 Anti-corruption and integrity management	●●●●○	●●●●○	Sustainability Management

General HD HMS Issues in 2023	Social/ Environmental Impact	Financial Impact	Reported to
6 Management of customers' personal information	●●●○	●●●○	Sustainability Management
7 Employment and welfare management	●●●○	●●●○	Sustainability Management
8 Transparent implementation of tax payment obligations	●●●○	●●●○	Sustainability Management
9 Establishment of a robust ESG management framework	●●●○	●●●○	Sustainability at HD HMS
10 Provision of sustainable products and services	●●○○	●●○○	ESG Priorities
11 Evaluation of environmental impacts within the supply chain	●●●○	●●●○	ESG Priorities
12 Greenhouse gas emission reduction activities	●●●○	●●○○	Sustainability Management
13 Disclosure of ESG information and active communication with stakeholders	●●○○	●●○○	ESG Priorities, Sustainability Management
14 Energy consumption reduction activities	●●○○	●●○○	Sustainability Management
15 Evaluation of social impacts within the supply chain	●●○○	●●○○	ESG Priorities
16 Labor-management culture and communication	●●○○	●●○○	Sustainability Management
17 Board of ESG Directors composition and activities	●●○○	●●○○	ESG Priorities
18 Contribution to creating indirect financial effects	●●○○	●●○○	Sustainability Management
19 Development of employee competency	○○○○	●●○○	Sustainability Management
20 Employee diversity and equal opportunity	●●○○	○○○○	Sustainability Management
21 Social contribution to collaboration	●●○○	●●○○	Sustainability Management

## ESG Materiality Assessment Matrix



# Materiality Assessment

## Management of Materiality Issues

Focus Area	Key Materiality Issue	Context	Our Approach	Activities	2023 Progress	Future Targets
<b>Diversification of economic value creation</b> 	<b>1 Expansion of new technologies/new businesses for sustainability</b>  <b>2 Economic performance and value creation</b>	Environmental regulations aimed at achieving carbon neutrality are being strengthened, with the International Maritime Organization (IMO) and the European Union (EU) leading the way. These regulations are directly impacting the shipping industry's operations. In response, the industry is actively adopting measures like energy conversion and transitioning to sustainable practices.	HD Hyundai Marine Solution is committed to leading the green ocean. This commitment is demonstrated through several initiatives: retrofitting ships for dual fuel propulsion, developing carbon emission monitoring solutions using AI and big data, and advancing the green fuel bunkering business. These efforts are in strict compliance with a range of environmental regulations.	<ul style="list-style-type: none"> <li>· Building digital solutions to create smart vessels</li> <li>· Expansion of green retrofit solutions</li> <li>· Participation in a bio marine fuel vessel demonstration project</li> </ul>	<ul style="list-style-type: none"> <li>· Signed a contract for the renovation of re-liquefaction equipment on <b>5</b> LNG vessels</li> <li>· Signed a contract with POSCO to supply <b>OceanWise</b>, a decarbonization solution</li> </ul>	<ul style="list-style-type: none"> <li>· Agreement on renovation for methanol dual fuel propulsion</li> <li>· Expansion of the customer group based on technological reliability</li> <li>· Performance of LCA (life cycle assessment) on two vessels</li> </ul>
	<b>3 Enhancement of ethics and compliance</b>  <b>5 Anti-corruption integrity management</b>	Ethical management is a core value for achieving fair and transparent operations, as well as realizing sustainable values within corporations. Importantly, enhancing awareness of ethical management and fostering a commitment to legal compliance are crucial for any corporation aiming to fulfill its social responsibilities.	HD Hyundai Marine Solution guides its members to adhere to ethical standards, professional ethics, anti-corruption measures, and international economic sanctions agreements through practical guidelines and program operations. Additionally, to improve ethics and compliance management and improve corporate ethics, we have implemented a compliance program (CP).	<ul style="list-style-type: none"> <li>· Operation of a compliance program for sanctions</li> <li>· Implementation of a compliance program (CP)</li> </ul>	<ul style="list-style-type: none"> <li>· Provided compliance risk assessments and training</li> <li>· Early payment to <b>203</b> suppliers for a Korean national holiday</li> <li>· Implemented the anti-corruption campaign</li> <li>· Disclosed the CEO's declaration letter for ethics and compliance management</li> </ul>	<ul style="list-style-type: none"> <li>· Securing transparency in work based on compliance standards</li> <li>· Establishment and dissemination of an ethics and compliance management culture throughout all divisions</li> </ul>
<b>Safety and health management</b> 	<b>4 Safety and health management</b>	Following the enactment of the Serious Accidents Punishment Act in 2022, corporate safety management responsibilities now include board members, underscoring the societal demand for better safety and health measures. Additionally, managing safety and health systems in overseas branches has become increasingly important, reflecting the global trend toward improved ESG management.	In 2022, HD Hyundai Marine Solution established a dedicated safety and health team under the Chief Safety Officer (CSO). The team developed visions, goals, and strategies for safety and health management for 2023, aimed at advancing our safety and health systems. Additionally, we are committed to recruiting safety professionals to maintain and manage safe and healthy environments.	<ul style="list-style-type: none"> <li>· Development of company-wide safety and health management visions, goals, and strategies</li> <li>· Provision of VR group training on safety and health</li> <li>· Attainment of ISO 45001 certification</li> </ul>	<ul style="list-style-type: none"> <li>· Attained of <b>ISO 45001</b> certification</li> <li>· Maintained of LTIR* within <b>0.6</b></li> <li>· Attained Risk Assessment Certificate for Excellent Workplace of Ulsan office (GDC)</li> </ul>	<ul style="list-style-type: none"> <li>· Development of an ad-hoc risk assessment program</li> <li>· Provide on-site safety and health training to our suppliers</li> <li>· Publication of a safety and health risk casebook</li> </ul>

\* LTIR: Lost Time Incidence Rate

# ESG Thoughts of HD HMS

## HD HMS youth's view on ESG management



Our employees at HD HMS shared their perspectives on ESG management at HD Hyundai Marine Solution.



**Ha-rim Shim**

Associate Manager,  
ESG Team



**Seo-hyeong Jeong**

Associate Manager,  
Culture & Life Team



**Ji-seok Ko**

Associate Manager,  
Digital Venture Team



**Bong-seok Baek**

Manager,  
Green Solution Sales Department



## Q1

ESG has become essential for sustainable growth and value creation in corporations. Which ESG issue are you currently most interested in?

As I manage our ESG operations and initiatives, I closely monitor trends in global regulations.

As EU disclosure regulations and global ESG regulations, such as the Supply Chain Due Diligence Act and carbon tax become more concrete, we strive to identify relevant regulations and guidelines, to respond to them in a timely manner.

I am very interested in building a collaborative organizational culture where everyone can express their opinions with equal opportunities.

We strive to listen to a wider range of perspectives through workshops focused on intergenerational respect and Change Ambassador activities, integrating these insights into both our campaigns and systems.

My current interest is in the need to reduce carbon emissions, which are steadily rising, in light of the growing risks associated with global climate change.

We are contemplating new ESG initiatives to offer both shipowners and cargo owners throughout the entire maritime logistics chain.

As a member working closely with ESG issues, I am interested in ways to integrate and internalize the components of ESG in business activities and daily tasks.

Furthermore, I am deeply considering how I can convey the value of ESG at HD HMS to every stakeholder in our supply chain.

## ESG Thoughts of HD HMS

### Q2

What policy or activity stands out from the sustainability perspective at HD Hyundai Marine Solution?

Ha-rim Shim | Associate Manager, ESG Team

**I believe it is employee internalization.**

Sustainable services for vessels are directly linked to ESG, prompting active participation from all members in ESG management. A significant number of members engaged in the 2023 ESG campaign, demonstrating that ESG management is implemented across the entire company.

Seo-hyeong Jeong | Associate Manager, Culture & Life Team

**The fact that ESG is implemented everywhere-from small actions to big areas.**

I feel that HD Hyundai Marine Solution is striving for a sustainable maritime industry and the future of humanity by conducting daily ESG campaigns for employees, carrying out eco-friendly renovations, and pursuing sustainable business models that include fuel.

Ji-seok Ko | Associate Manager, Digital Venture Team

**I feel that active investment and support are being provided for green services for vessels.**

Additionally, I believe we are leveraging the strengths of our shipbuilding domain know-how. We are successfully implementing activities related to sustainable services, such as green retrofits, greenhouse gas emission monitoring, and the publication of CII improvement reports.

Bong-seok Baeck | Manager, Green Solution Sales Department

**I believe it is governance, which serves as the basis of ESG.**

For E and S to be carried out effectively, there must be a solid G (governance) system. Specifically, ESG management is being implemented in various aspects, such as eco-friendly and smart products and services, social contribution activities, and TUM23, with a dedicated ESG organization at the center.

### Q3

What should HD Hyundai Marine Solution work on to further improve ESG management? Please share your thoughts.

**I believe we can take a step further via strengthening ESG governance and education.**

We can move one step forward through ongoing communications between the board and employees on ESG agendas, and trainings for employees at the headquarters, subsidiaries, and overseas branches for ESG internalization.

**I would like to see a green organizational culture.**

I hope everyone in the office has meaningful discussions on environment, society, and governance. To achieve this, it seems necessary to conduct regular training on ESG that aligns with global standards and enables individuals to effectively respond to ESG management environments.

**I believe a vision for the new and distant future is crucial for sustainable growth.**

ESG can be overlooked in our day-to-day tasks. As such, I would recommend my peers to regularly make plans to incorporate ESG practices into their daily life.

**I think collaborations with companies in different industries are necessary to improve ESG management.**

It is vital to participate in global initiatives, RBA, BSI, UNGC, obtain their certifications, and realize ESG values.

### Q4

Tell us about the ESG goals you would like to achieve at HD Hyundai Marine Solution, as well as your future plans.

**My interest is in ESG risk minimization and employee internalization.**

I would like to minimize ESG risks and promote employee internalization. I hope HD HMS' efforts and performance in the sustainable growth of the organization to be recognized both within and outside the company.

**I will make sure no one feels left out.**

As a person in charge of communications, my goal is to create inclusive content. I will ensure no one is excluded in the messages we are delivering and in all aspects of our communication. In addition, I will approach ESG activities with sincerity.

**I hope to contribute to improving collaborations on ESG.**

I aim to contribute to enhancing ESG collaboration between shipbuilding and marine transport by leveraging ship and marine transport data. My goal is to facilitate communication channels between shipowners and cargo owners on carbon trading taxes through predictive analytics and visualizations of carbon emissions. Additionally, I endeavour to safeguard the marine environment by optimizing vessel routes for fuel efficiency.

**I would like to deliver the ESG values we have to our customers.**

I hope that our customers will implement ESG together with our products and services and are satisfied with the results. I aim to provide our customers with products and services exemplifying ESG values, enabling us to achieve continuous growth together.



# ESG Thoughts of HD HMS

## ESG Management for Sustainable Growth in HD HMS EU Market



**Lauren Dickhoff**  
Assistant Manager/HR



### Q1

Please describe your current position and the primary roles and responsibilities you hold within HD Hyundai Marine Solution.

Hello, I'm Lauren Dickhoff, and I work in HR at the EU branch of HD Hyundai Marine Solution.

### Q2

What are your thoughts on 1) the current ESG landscape within businesses operating in the European markets; and 2) which ESG issue do you believe holds the most significance for foreign companies operating in Europe at this moment?

Due to growing concerns about climate change and environmental destruction, it has become increasingly important for businesses to align their policies and practices with the expectations of environmentally aware customers or investors within the European region. Recently, environmental regulations within Europe, such as CBAM, have been on the rise, and there is significant interest in reducing carbon emissions. Many companies in Europe are preparing for investments in the environment, making sustainability the most significant ESG issue.

### Q3

Please provide insights into Europe-specific ESG activities or initiatives that HD HMS Europe has been implementing.

HD Hyundai Marine Solution Europe has completely discontinued the use of disposable items in the office as of 2023. Additionally, we have engaged in community contribution activities utilizing culture and arts. On top of that, we are planning to organize and promote various ESG activities such as local community donations and volunteer work.

### Q4

What should HD Hyundai Marine Solution focus on to further improve its ESG management?

Enhancing employees' understanding and awareness of ESG management should be prioritized, and it is crucial for the employees to be exposed to the necessity of ESG activities across various topics. Given that we are a Korean corporation based in the Netherlands, I hope we can foster a positive image by collaborating with the local community.

### Q5

What are the Company's plans and strategies moving forward in achieving their ESG goals and vision?

Our ultimate vision and goal are to become a company that fulfills social responsibility through sustainable business operations. As a leading Korean company in the Netherlands, we are committed to reducing carbon emissions to address environmental concerns, supporting local community cultures to enhance social aspects, and strengthening clear ethical guidelines to improve governance.

# ESG Thoughts of HD HMS

## Communication with Stakeholders

HD Hyundai Marine Solution actively engages with and listens to our stakeholders. To facilitate effective communication, we have identified five major stakeholders and established communication channels specifically designed to suit the characteristics of each group. This approach has enabled us to recognize their needs and incorporate them into our management activities.

Category	Customers	Employees	Stakeholders/investors	Subsidiaries	Local communities/NGOs
<b>Communication channels</b>	<ul style="list-style-type: none"> <li>· HD Hyundai Marine Solution website</li> <li>· HD Hyundai Marine Solution social network</li> <li>· Operation of overseas branches</li> <li>· Customer satisfaction survey</li> <li>· Conferences, exhibitions, forums</li> </ul>	<ul style="list-style-type: none"> <li>· Intranet</li> <li>· Company newsletters</li> <li>· Company communication messenger and bulletin board</li> <li>· Board of Directors meetings</li> <li>· Labor-management council</li> </ul>	<ul style="list-style-type: none"> <li>· General meetings of shareholders and earnings calls</li> <li>· Investment prospectus</li> <li>· Website, phone, E-mail counseling</li> <li>· Investor meetings and conference calls</li> </ul>	<ul style="list-style-type: none"> <li>· Supplier Alliance Council</li> <li>· Supplier intranet</li> <li>· Supply chain ESG assessment</li> <li>· Supplier on-site meetings</li> </ul>	<ul style="list-style-type: none"> <li>· Community volunteers</li> <li>· Community public institutions</li> <li>· Civic groups</li> </ul>
<b>Communication issues</b>	<ul style="list-style-type: none"> <li>· Improvement of product and service quality</li> <li>· Responding to customer inquiries and suggestions</li> <li>· Customer surveys</li> <li>· Securing new sustainable technologies and expanding new businesses</li> </ul>	<ul style="list-style-type: none"> <li>· Expansion of corporate values</li> <li>· Communication between directors and employees</li> <li>· Maintenance of balance between work and life</li> <li>· Compensation for performance</li> <li>· Human resources training</li> </ul>	<ul style="list-style-type: none"> <li>· Increasing shareholder value</li> <li>· Enhancing transparent management</li> <li>· Managing and responding to internal and external risks</li> <li>· Expansion of communication with stakeholders</li> <li>· Securing new sustainable technologies and expanding new businesses</li> </ul>	<ul style="list-style-type: none"> <li>· Creating shared value through inclusive growth initiatives</li> <li>· Enhancing communications and ESG capabilities</li> <li>· Fair trade</li> <li>· Customer satisfaction and safety</li> </ul>	<ul style="list-style-type: none"> <li>· Communication and mutual growth with the local community</li> <li>· Social contribution activities</li> <li>· Reduction of environmental pollutant emissions</li> <li>· Expansion of communication with stakeholders</li> </ul>

## GREEN SOLUTIONS TOWARD SUSTAINABLE FUTURE

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Issue 01

# 2035 Net Zero

The Copernicus Climate Change Service (C3S), the climate monitoring organization of the European Union, announced that global temperatures reached record highs in 2023.

The temperature is nearing the 1.5°C increase limit set by the international community compared to pre-industrial levels, underscoring the severe climate crisis driven by greenhouse gas emissions and consequent weather anomalies.

Achieving carbon neutrality is essential for overcoming the climate crisis. In alignment with the International Maritime Organization (IMO)'s goal for carbon neutrality by 2050, the global shipping industry is intensifying its efforts to reach full carbon neutrality. This is being accomplished by reducing carbon emissions from vessels and maritime transport.

HD HMS is taking significant steps toward carbon neutrality. In May 2024, we declared our goal of reaching carbon neutrality in 2035. We are committed to achieving carbon neutrality ahead of the global shipping industry's 2050 target by implementing a detailed roadmap to reduce carbon emissions. As the demand for green vessels and fuels increases with the industry's paradigm shift, we aim to demonstrate climate leadership by collaborating with our members and stakeholders to achieve carbon neutrality. Furthermore, we aim to be transparent with our reduction plans, ensuring that our commitment to achieving net zero emissions is not merely symbolic but actively pursued.



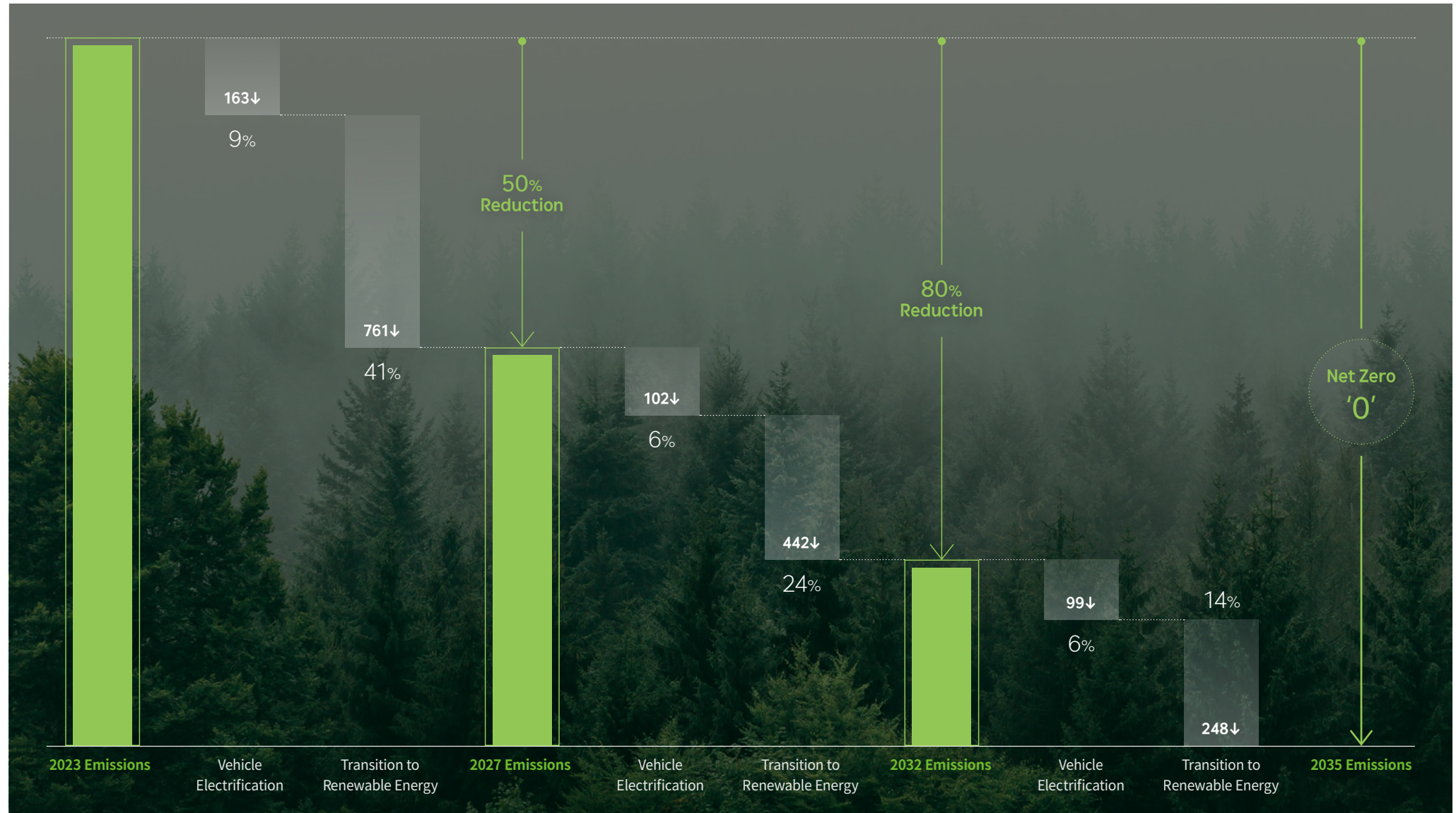
HD HMS is advancing toward the global goal of achieving net-zero emissions by adopting new green technologies and collaborating with both domestic and international customers and partners.



# 2035 Net Zero

## Scope 1 & 2 Net Zero Pathway (2023~2035)

(Emissions unit: tonCO<sub>2</sub>-eq)





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Issue 02

# Expanding New Business



## HD HYUNDAI MARINE SOLUTION

**PERFORMANCE MONITORING**  
[ PREMIUM ] ( HHI3182 / 15300TEU CNTR / CMA CGM HOPE )  
SHIP NAME CMA CGM HOPE BUILDER 15300TEU CNTR IMOMMSI 9897755 / 229326000

LENGTH 365.99m    WIDTH 51m    HIGH 29.85m

**CO2 LEVEL**  
[ PREMIUM / OWNER ] ( HMD2842 / 50K P/C / CLEAROCEAN GINKGO )

SCHEDULE UPDATE

VELOCITY 16 kn  
DURATION 13 days  
RPM 61 rpm

CO<sub>2</sub> 122 t ↓

**SHIP SCHEDULE**  
PORT / DEPARTURE / REPORTING

**CURRENT VOYAGE INFORMATION**

SHIP NAME CMA CGM HOPE  
SHIP TYPE 15300TEU CNTR  
IMO / MMSI 9897755 / 229326000

VOYAGE LOG ON OFF    SERVICE PORT ON OFF  
WITH DATE 2022-12-05 ~ 2022-12-20

## OceanWise

At HD HMS, we have developed OceanWise, a carbon emission monitoring solution that utilizes AI and big data. This tool predicts and monitors vessel performance in a virtual environment and guides the reduction of emissions from vessel operations and fleet management. As the need to manage and reduce Scope 3 Standard greenhouse gas emissions becomes more critical and regulations become stricter, the shipping industry’s demand for accurate carbon emission data has surged. We believe that OceanWise will play a pivotal role in achieving what is known as “Ocean Transformation,” a fundamental change in ocean management.

# Expanding New Business

## OceanWise

Since 2017, HD HMS has offered the integrated smart-ship solution (ISS) system, which advances the digitalization of vessel operations through the analysis of operational and navigation data. Drawing on our extensive experience as a global leader in vessel manufacturing, we have developed proprietary vessel performance estimation models.

With the tightening of environmental regulations and stricter standards for greenhouse gas emissions, various industries now seek our vessel performance estimation models and carbon emission monitoring technology. This shift has opened up numerous opportunities for collaboration, leveraging our distinct competitive advantages. We have consistently enhanced our technologies to address these needs and provide tangible results.

We have successfully commercialized the OceanWise solution, securing our first supply contract with POSCO and officially launching the service. This solution is distinguished by its flexible, data technology-based approach and its integration within customer systems, which enhances accessibility and usability compared to traditional digital vessel solutions. Unlike existing digital solutions that focus solely on ships, our solution provides functionalities that are essential for cargo owners, who are key stakeholders in shipping contracts. This represents a significant shift in digital service provision from shipbuilding to the broader shipping industry.

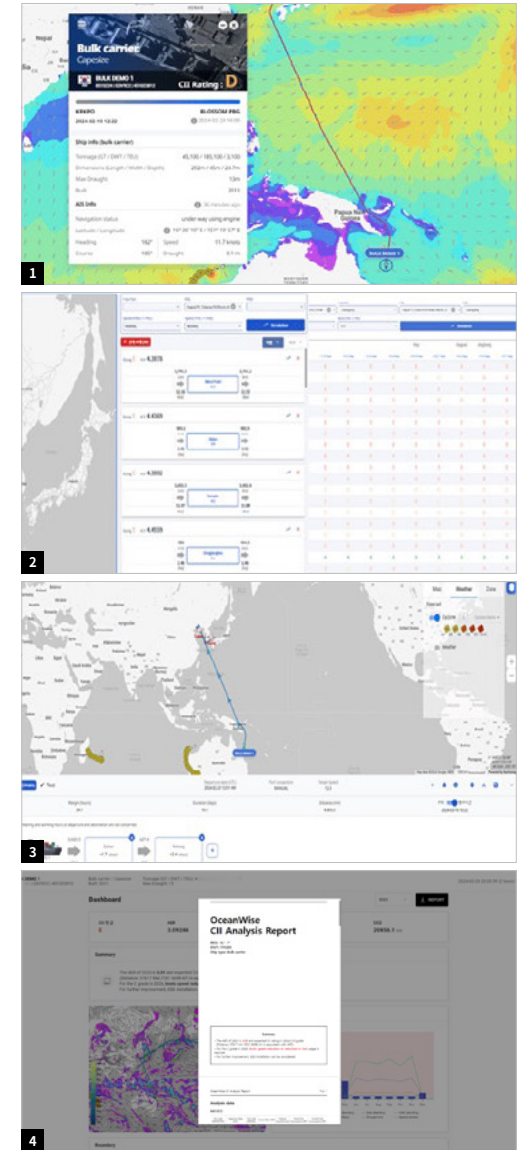
Additionally, our clients have recognized the accuracy of our vessel performance estimation models, leading to successful supply contracts. Currently, the emission estimates generated by our solution achieve an accuracy rate exceeding 95%. We aim to further increase this accuracy by collecting additional operational data. Additionally, we are expanding our collaborations with various clients to develop more accurate and diverse vessel performance models.

## Future Plans

In 2024, we aim to develop customized services by conducting practical demonstrations with various clients. We plan to offer the OceanWise solution on our proprietary platform to a broader customer base. Our objective is to address the diverse needs of our customers, assist stakeholders in adhering to environmental regulations, and deliver consistent outcomes. We will continue advancing our models and technologies to achieve these goals.

Our OceanWise solution merges our extensive ship manufacturing expertise with cutting-edge data technology, aligning with current trends and demands. We are dedicated to ongoing collaboration with various technically proficient organizations within our group to unlock greater potential. We are committed to engaging with a variety of organizations to ensure the delivery of optimal solutions.

To realize the vision of “Ocean Transformation”, HD HMS is expanding its OceanWise customer base and accelerating the digitalization of our services. We will continue to offer concrete guidance for significant reductions in greenhouse gas emissions to a broader range of customers and provide sustainable solutions throughout the entire shipping industry.



- 1 CII Monitoring & Prediction
- 2 CII Voyage Simulation
- 3 Route Optimization
- 4 Decarbonization Assistance

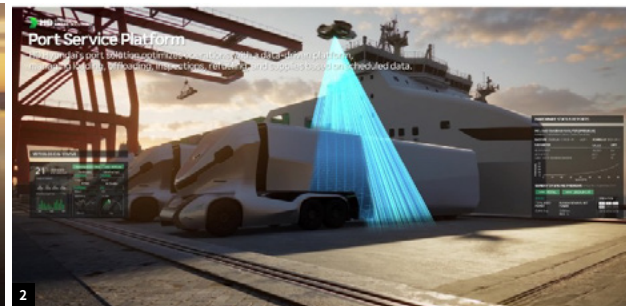
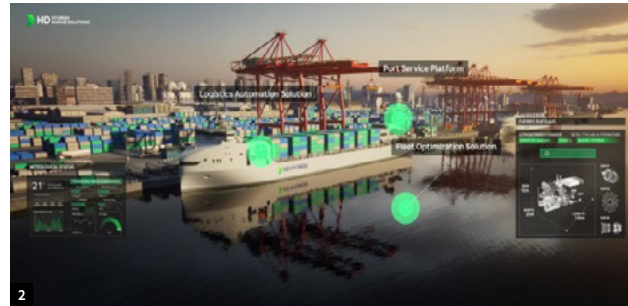


# Expanding New Business

## SPOTLIGHT

### Participation in CES 2023 & 2024

We unveiled OceanWise at the Consumer Electronics Show (CES) 2024, the world's largest IT and consumer electronics exhibition, which took place in January 2024 in Las Vegas, USA. OceanWise, initially introduced as a key vision for realizing the "Ocean Transformation" at CES 2023, now marks the official launch of our AI and big data-based decarbonization solution business with its latest presentation.



1 OceanWise Zone at the HD Hyundai Booth at CES 2023  
2 Screen Display of OceanWise Unveiled at CES 2024

3 Signing of the First Commercial Supply Contract for OceanWise with POSCO

### First Commercial Supply Contract with POSCO for OceanWise

In February 2024, we have secured our first commercial supply contract for OceanWise with the global steel manufacturer POSCO. This agreement allows us to provide POSCO with customized services, such as continuous monitoring of the carbon intensity indicator (CII) rating for vessels, pre-voyage CII rating simulations, and optimal route recommendation services.

Through the OceanWise solution, POSCO can now manage the greenhouse gas emissions of its entire fleet used for transporting raw materials. This system enables the monitoring of greenhouse gas emissions for individual ships as well as the entire fleet without the need to install any physical devices. Furthermore, it assists in selecting the optimal ships and destinations to minimize emissions through pre-voyage simulations. Additionally, detailed operational guides offer safe and efficient routing, including speed recommendations for specific segments before departure.

Moving forward, both HD HMS and POSCO plan to broaden the scope of OceanWise services through collaborative efforts. This expansion will encompass support for designing optimal fuel-efficient routes, providing segment-specific speed plans, and delivering information on the sustainable performance of vessels.

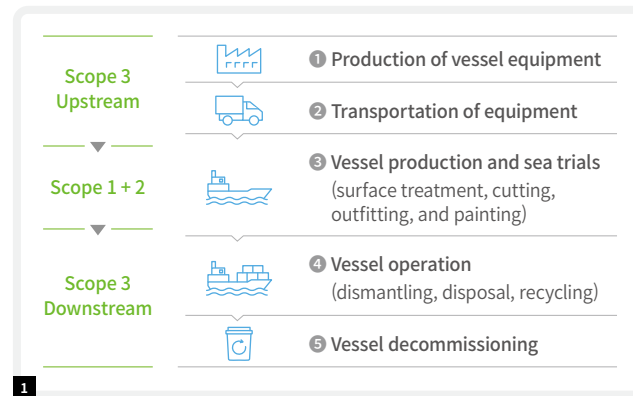




# Expanding New Business

## Vessel Life Cycle Assessment (LCA)

As a total solution provider, we are committed to supporting our customers' efforts to reduce carbon emissions by expanding our Life Cycle Assessment (LCA) services for vessels. This includes evaluating carbon emissions throughout the entire life cycle of a vessel, utilizing the OceanWise carbon management solution. In response to escalating global carbon regulations, we intend to measure carbon emissions from the construction, operation, and disposal phases of two vessels constructed by HD Hyundai. The findings from these assessments will help organizations to determine their future sustainability strategies.



- 1 Ship Life Cycle Assessment (LCA)
- 2 ISCC Certification
- 3 Retrofit Contract with Norwegian Company CoolCo
- 4 HD HMS Obtains Certification for Methanol Dual-Fuel Propulsion Retrofit Design

## Bio Bunkering

We plan to expand our bio/methanol bunkering business to address the increasing demand for alternative fuels driven by stringent carbon emission regulations. In 2021, we collaborated with HMM on a bio marine fuel demonstration project, where we supplied bio marine fuel. We are currently engaged in another bio marine fuel demonstration project alongside the Korea Petroleum Quality & Distribution Authority and various other organizations. Furthermore, in April 2024, we achieved ISCC EU certification for our green fuels. We are actively preparing for the sustainable growth of the biofuel market and are establishing a comprehensive framework for the supply of alternative fuels. This effort includes the development of a robust supply chain and infrastructure to support the expanding biofuel market.



## Gas Solutions

We are positioning the green gas solutions sector as a key future industry in response to IMO greenhouse gas regulations. Leveraging our technological expertise, we offer optimal ship conversions, including LNG dual fuel (DF) retrofitting, LNG carrier re-liquefaction plants, and floating storage regasification units (FSRUs). In June 2023, we secured a contract valued at approximately KRW 65 billion with the Norwegian shipping company Cool Company Ltd. (CoolCo) to retrofit a re-liquefaction plant. Our responsibilities encompass the entire project scope, including design, procurement of equipment and materials, and installation on LNG carriers. Additionally, in December, we received Approval in Principle (AIP) from the Korean Register (KR) for our methanol dual-fuel propulsion retrofit design. This project was undertaken as a Joint Development Project (JDP) in collaboration with HD Korea Shipbuilding & Offshore Engineering and HD Hyundai Engineering & Technology. We are currently in discussions with various domestic and international shipping companies regarding retrofits for methanol dual-fuel propulsion. Our goal is to progressively expand our green retrofit business by broadening the range of methanol dual-fuel propulsion projects, further strengthening our commitment to reducing greenhouse gas emissions in the maritime industry.



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# Evaluating ESG Impact in the Supply Chain

## Supply Chain ESG Management

### Background

In June 2023, the European Commission introduced the Corporate Sustainability Due Diligence Directive (CSDDD). This mandates large and mid-sized companies in high-risk sectors—including textiles, minerals, agriculture, forestry, and fisheries—to conduct due diligence on human rights and environmental practices, both within and outside the EU. Failing to comply with these regulations may result in financial and administrative penalties, prompting many firms to revise their supply chain management to mitigate risks.

### Scope of Response

In 2023, we conducted a pilot study to align with the EU Corporate Sustainability Due Diligence Directive and to evaluate the ESG management practices of our suppliers. As part of this initiative, we conducted risk assessments and carried out on-site audits for 20 major partners in the first half of the year, followed by 23 in the second half. These audits revealed areas where ESG practices needed further improvement. We offered guidance and consultations to enhance ESG understanding among partners with limited awareness of these concepts. Additionally, we provided ESG checklist for our suppliers, which allows them to monitor and track the progress of implementing ESG within business operations.



We have identified areas for enhancement within our current audit system to boost the efficiency of future supplier audits. We have added more detailed audit criteria among the improvements to resolve discrepancies in auditor understanding and to include industry-specific evaluation standards. This tailored evaluation system, categorized by industry and assessment type, is designed to refine and fortify our ESG audit framework. Looking ahead, we aim to implement these improvements to enhance the overall comprehension of ESG management throughout our supply chain and to consistently broaden the scope of ESG audits for our suppliers.

### Future Plans

We plan to further refine our process for evaluating the ESG impact within our supply chain and will audit suppliers identified as having high actual or potential risks. Based on the outcomes of these ESG management assessments, we will support our suppliers in need of improvement by offering recommendations and training on improvement measures. Through these post-assessment management activities, our goal is to enhance our suppliers' ESG maturity and foster sustainable collaboration.

Supply Chain  
ESG Assessment in 2023

Target: **43** Suppliers

- 1 Risk Assessment of Suppliers
- 2 Audit Checklist for Suppliers

## Supply Chain ESG Management Case Study

### HD Hyundai – Korea SMEs and Startups Agency (KOSME) ESG Supply Chain Joint Response MOU

HD Hyundai's shipbuilding affiliates have entered into a Memorandum of Understanding (MOU) with the Korea SMEs and Startups Agency (KOSME) aimed at boosting the ESG competitiveness of their partner companies. The affiliates, which include HD Hyundai Heavy Industries, HD Hyundai Mipo, HD Hyundai Samho, and HD HMS, have focused on overlapping partners for joint ESG evaluations and support for improvements. This strategy not only alleviates the burden on our suppliers but also enhances the efficiency of the group's audits. As part of this initiative, we carried out ESG assessments for 23 companies and offered support to suppliers within the high-risk sectors where improvements were needed.



HD Hyundai – Korea SMEs and Startups Agency (KOSME) ESG Supply Chain Joint Response MOU

# Evaluating ESG Impact in the Supply Chain

## Responding to the EU Carbon Border Adjustment Mechanism (CBAM)

### Background

In May 2023, the EU Carbon Border Adjustment Mechanism (CBAM) was officially approved.

CBAM aims to prevent carbon leakage by applying equivalent carbon costs to imported goods that do not incorporate these expenses, aligning them with products manufactured within the EU under the EU Emissions Trading System (ETS).

This regulation applies directly to EU importers, specifically those who import the six designated items under CBAM: steel, aluminum, cement, electricity, fertilizers, and hydrogen. These importers must purchase CBAM certificates that correspond to the total carbon emissions of the imported goods. The objective is to equalize the carbon costs of products manufactured outside the EU with those of identical products made within the EU.



### Scope of Response

The EU Carbon Border Adjustment Mechanism (CBAM) began its transitional period in October 2023 and is scheduled for full implementation by January 2026. As an importer of products covered by the CBAM, HD HMS Europe is required to report to regulatory authorities, submit declarations, and purchase CBAM certificates. We are tasked with supplying our European subsidiary and its customers with essential information, including carbon emission data from our suppliers, to facilitate these reports. We are actively preparing for compliance with the EU CBAM to minimize regulatory risks and evaluate the financial implications for our company. In January 2024, our European subsidiary successfully submitted its first transitional period report through the EU CBAM Portal.

### Future Plans

Starting from the third quarter of 2024, we will closely work with our suppliers to obtain information on the carbon emissions of for CBAM reporting. By May 2027, during the definitive period, we will need actual embedded emissions data from our suppliers along with verification by an external independent body. Therefore, maintaining close cooperation and communication with our suppliers will be crucial. We are planning to prepare for this report in collaboration with our suppliers. To support this process, we are developing various measures to assist with the measurement of carbon emissions, completion of the EU's official templates, and provision of independent verification support. In the short term, we will provide detailed explanations and guides for each question in the EU's official templates to help our suppliers complete their reports.

\* CBAM: EU Carbon Border Adjustment Mechanism

**CBAM Portal Transitional  
Period Reporting**

**First** Report Completed



**GREEN SOLUTIONS  
TOWARD  
SUSTAINABLE  
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## Sustainability Management

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# Environmental Management

## Environmental Management System

### Environmental Policy

Environmental management is a top priority and a core value for our sustainable growth. Our environmental policy is established and implemented based on our commitment to sustainable development and social responsibility for future generations. In line with our net-zero declaration, we have established a dedicated environmental management team to develop policies and objectives aligned with our environmental management system. We will implement these strategies, evaluate their performance, and monitor both domestic and international environmental regulations. Through this approach, we will effectively manage environmental risks and opportunities.

#### Environmental Policy

HD HMS recognizes the environment as the foremost priority in corporate management. We are dedicated to fostering a company that not only enhances human happiness and prosperity but also embodies the philosophy of human respect. We hereby declare to all stakeholders our ongoing commitment to actively pursue and develop the following ideals:

- 1 Establish a leading environmental management system for the future
- 2 Comply with environmental laws and regulations and embedding ESG management
- 3 Promote green growth through the spread of a green corporate culture

## Environmental Management System

### (ISO 14001) Certification

HD HMS maintains the ISO 14001 certification, an international standard that aims to minimize environmental pollution and both internal and external environmental risks associated with our business activities. We are committed to becoming an environmentally friendly company that leads ESG management through ongoing efforts in environmental protection and regulatory compliance.



# Greenhouse Gas Reduction Plan

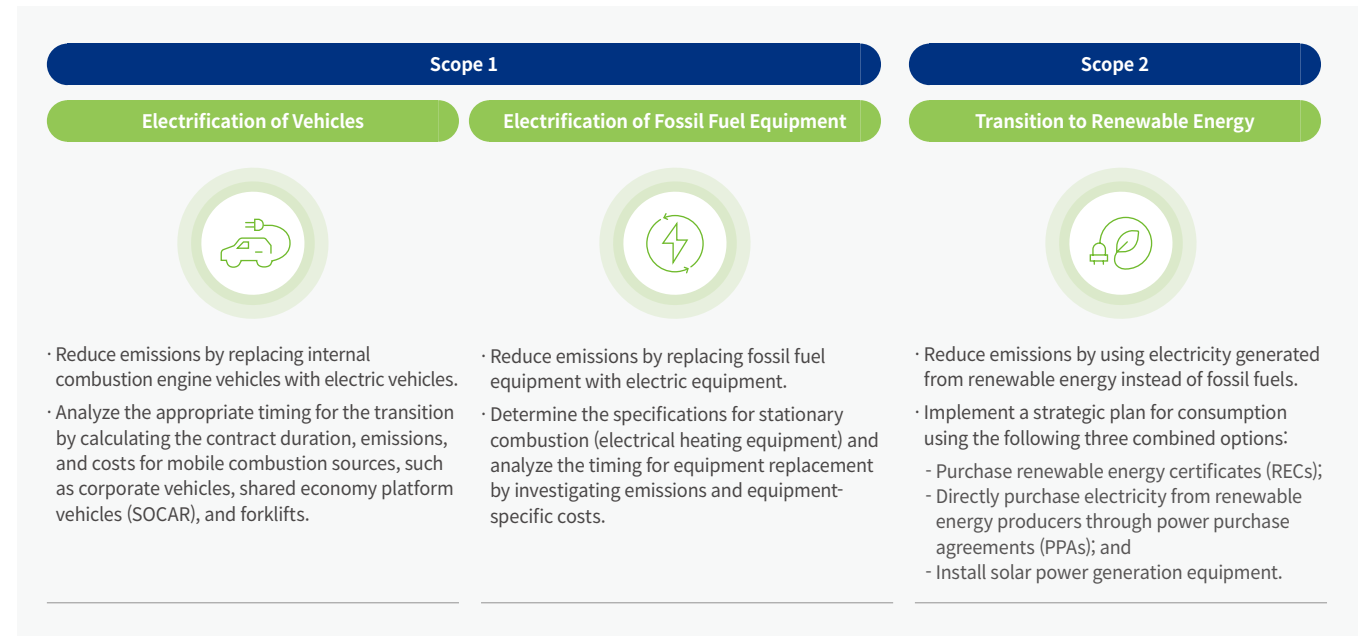
## Climate Change Response Strategy

We have established an ESG Working Group and an ESG Task Force to address climate change issues. To achieve our carbon neutrality goals and proactively respond to climate change, we have integrated these objectives into our ESG KPIs and performance management metrics. We continuously monitor our progress toward reducing greenhouse gas emissions and improving energy efficiency. Moving forward, we will ensure ongoing cooperation between the ESG Working Group and relevant departments to set and review climate-related goals and performance. Additionally, we will actively implement sustainability management plans, including participation in and support of climate initiatives.

## Net-Zero Strategy

We have developed a Carbon Neutrality Pathway for 2035, aiming to achieve carbon neutrality by that year. Our plan includes specific measures to reduce greenhouse gas emissions, such as electrifying vehicles and equipment, and transitioning to renewable energy via solar power generation. In line with our emission source reduction strategy, we will proactively decrease greenhouse gases through the use of Renewable Energy Certificates (RECs) and Power Purchase Agreements (PPAs).

## Carbon Reduction Measures



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# Greenhouse Gas Reduction Plan

## Net-Zero Strategy Implementation Tasks for Each Reduction Measure

### Scope 1 and 2 Reduction Strategies

We have developed a mid- to long-term greenhouse gas reduction roadmap aimed at achieving carbon neutrality by 2035. To promote carbon neutrality, we have devised reduction scenarios for each emission source under Scope 1 and Scope 2, and have established plans to gradually decrease emissions for each scenario. For Scope 1 (greenhouse gas reduction), our strategy includes electrifying vehicles and equipment that currently rely on fossil fuels<sup>1)</sup>, with the goal of eliminating related emissions by 2035.

For Scope 2 (greenhouse gas reduction), we plan to transition to renewable energy sources such as solar power. Our goal is to convert 100% of our electricity usage to renewable energy through the following measures: purchasing renewable energy certificates (RECs), entering into power purchase agreements (PPAs), and utilizing self-generated solar power. We will evaluate the specific risks, feasibility, and economic viability of each reduction measure to identify the most optimal solutions. These measures will be implemented according to our greenhouse gas reduction roadmap to achieve our carbon neutrality goals.

1) Emission Sources: corporate vehicles, shared economy platform vehicles (SOCAR), and forklifts

### HD HMS Carbon Neutrality Implementation Tasks

■ Key Initiatives for 2024

Implementation Task	Established Period for the Efficiency and Transition Plan				Transition Execution and Management Improvement Period			Net-Zero Achievement and Beyond
	Short-term (2024-2026)				Mid-to-long-term (2027 and beyond)			
<b>Management system Establishment</b>	<b>Establishment of a data collection/management system</b>	Management governance and time schedule setting	PDCA execution	Systematization	Data platform establishment			Response to newly established corporates and regulations
<b>Vehicle Electrification</b>	<b>Establishment of a vehicle transition plan</b>	Transition of corporate vehicles	Emission monitoring					Monitoring carbon neutrality maintenance costs
<b>Electrification of Fossil Fuel Equipment</b>	<b>Establishment of an equipment transition plan</b>	<b>Determination of electric equipment specifications</b>	Execution of equipment electrification	Emission monitoring				Monitoring carbon neutrality maintenance costs
<b>Energy Efficiency</b>	<b>Establishment of plans for LED lighting replacement and introduction of reduction equipment</b>	Execution of LED lighting replacement and introduction of reduction equipment	Emission monitoring					Monitoring high-efficiency new technology options
<b>Transition to Renewable Energy</b>	<b>Monitoring REC market prices</b>	REC purchase	Investigation of potential PPA power producers and contract capacities	Solar farm installation plan (site review)	PPA contract	Solar farm installation		Monitoring high-efficiency new technology options
<b>Overseas Subsidiaries</b>	<b>Designation of responsible departments and personnel by region</b>	<b>Establishment of a vehicle transition plan</b>	REC purchase (50%)		Transition to eco-friendly vehicles	REC purchase (100%)	Emission monitoring	Monitoring PPA and self-generation options

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# Greenhouse Gas Reduction Plan

## Solutions for Net-Zero Strategy


### Scope 1 Solution

We aim to achieve zero emissions (Scope 1) by 2035 through the electrification of vehicles and equipment, thereby reducing emissions from both mobile and stationary combustion sources.

### Scope 2 Solution

We are committed to reducing emissions from electricity usage (Scope 2) through the implementation of scenario-based plans. We will take into account the stability of procurement, the simplicity of procedures, and the feasibility of overseas subsidiaries when developing the most efficient renewable energy application plan.

### Electrification of Vehicles and Equipment

Category	Emission Source (Ratio <sup>1)</sup> )	Reduction Plan (Electrification)	Implementation Steps				Reduction Effect
Mobile Combustion 	Corporate vehicles gasoline (31%), diesel (4%)	<b>Transition to electric vehicles</b> · Renew if the current lease of fossil fuel vehicles expire before 2035; or switch to electric vehicles if it expires after 2035	<b>Lease price survey</b> · Monthly lease cost by vehicle type	▶ <b>Lease contract setting</b> · The types and number of vehicles for transition	▶ <b>Application timing setting</b> · Timing of application	▶ <b>Analysis of the transition to electric vehicles</b> · Emissions · Costs	Reduce Scope 1 emissions from fossil fuel vehicles and equipment to zero by 2035
	Shared economy platform vehicles (SOCAR: 4%)		<b>Contract price survey</b> · Monthly contract cost for shared economy platform vehicles (SOCAR)	▶ <b>Lease contract setting</b> · The types and number of vehicles for transition	▶ <b>Application timing setting</b> · Timing of application	▶ <b>Analysis of the transition to electric vehicles</b> · Emissions · Costs	
	Forklifts (18%)	<b>Transition to Electric Forklifts</b> · Switch forklifts to electric at end of the depreciation period	<b>Lease price survey</b> · Monthly lease cost by vehicle type	▶ <b>Lease contract setting</b> · The types and number of vehicles for transition	▶ <b>Application timing setting</b> · Timing of application	▶ <b>Analysis of the transition to electric forklifts</b> · Emissions · Costs	
Stationary Combustion 	Fossil fuel equipment (44%)	<b>Transition to electric equipment</b>	<b>Calculation of equipment specifications</b> · Same specification of electric equipment	▶ <b>Contract price survey</b> · Equipment cost by type	▶ <b>Application timing setting</b> · The types and number of equipments for transition · Timing of application	▶ <b>Equipment replacement analysis</b> · Emissions · Costs	

1) The proportion of each target in the Scope 1 emissions based on 2023 standards.

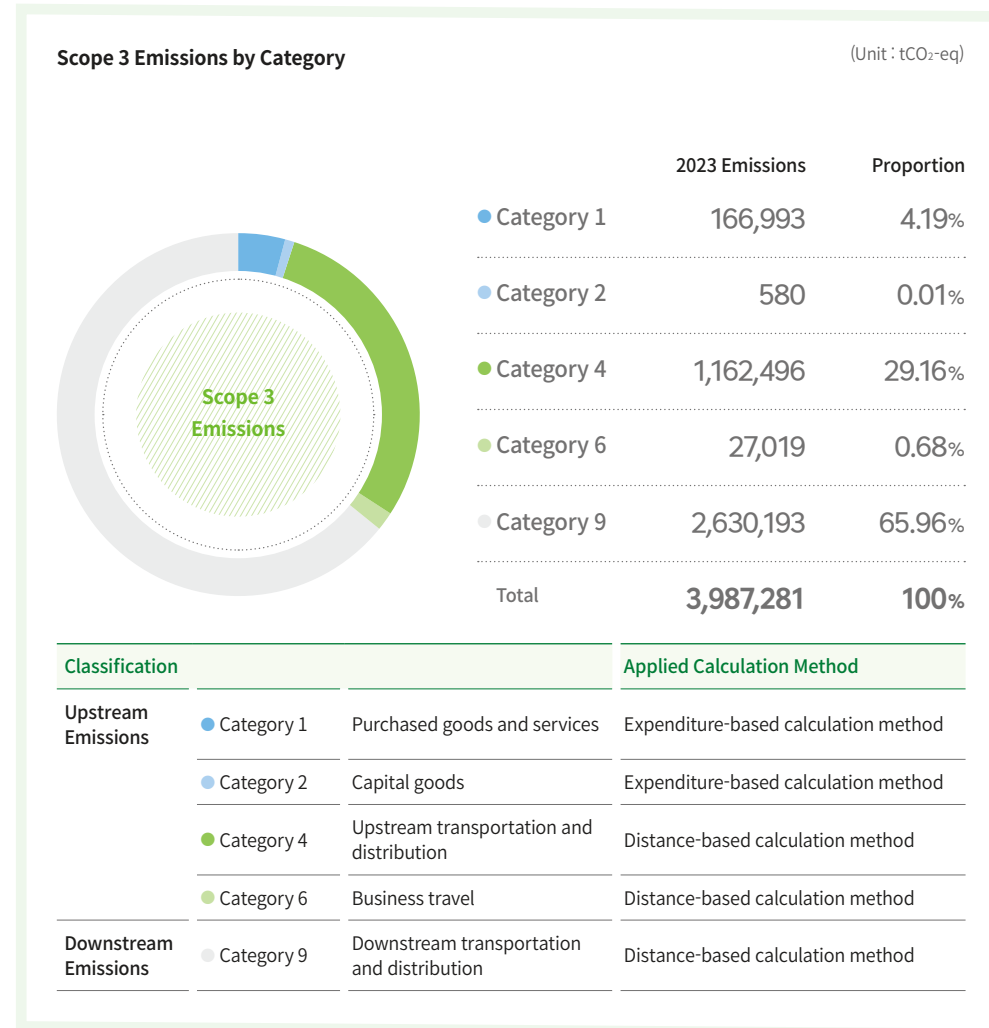


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# Greenhouse Gas Reduction Plan

## Scope 3 Solution

We conducted an assessment of Scope 3 greenhouse gases in the first half of 2024 to evaluate the impact of these emissions throughout the entire business value chain. The assessment revealed that over 95% of emissions originated from upstream and downstream transportation and distribution. In response, we have formulated a three-phase reduction roadmap to decrease Scope 3 greenhouse gas emissions. Furthermore, we intend to categorize supply chain tiers based on their material significance and devise a plan to broaden the assessment to encompass all categories of Scope 3.



## Scope 3 Emission Calculation Advancement Model

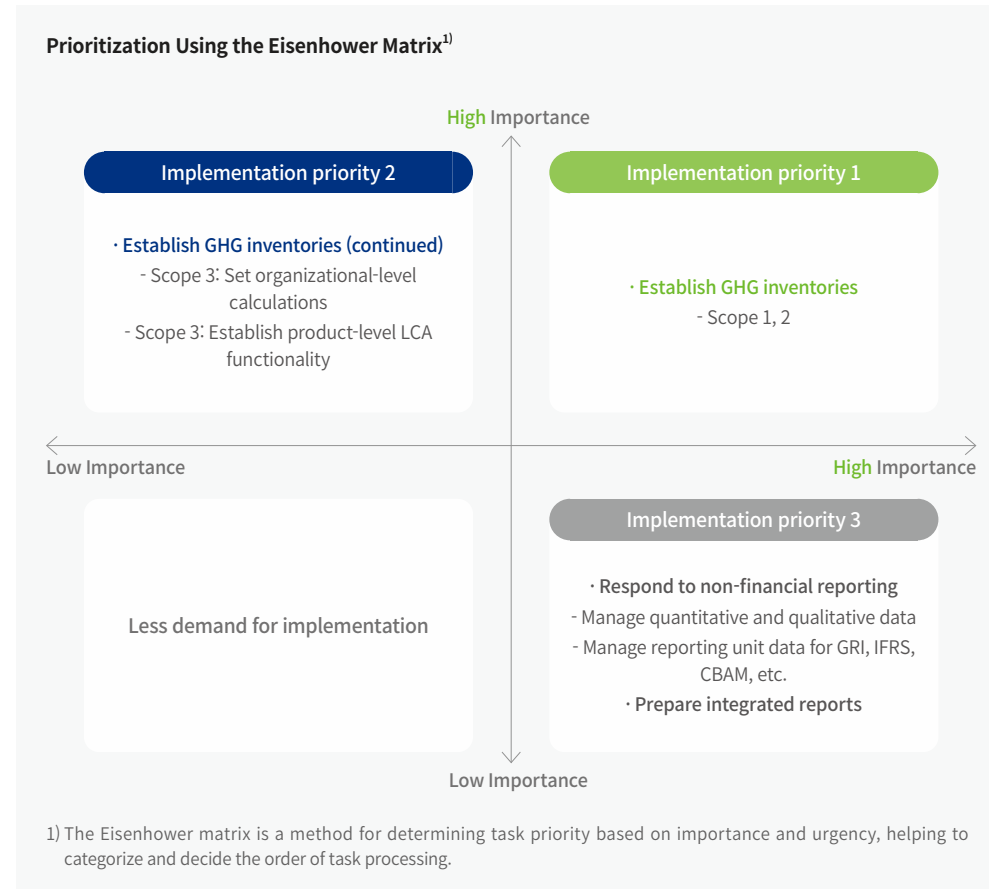
Category	Phase 1	Phase 2	Phase 3
	Analysis of Supply Chain Data Management	Advancement of supply chain data management	Continuous monitoring and PDCA
Supply Chain	<b>Understanding of the current supply chain as-is</b> <ul style="list-style-type: none"> <li>Clearly define organizational boundaries</li> <li>Identify upstream and downstream aspects of the supply chain</li> <li>Analyze the current status of Scope 3 data management in the supply chain</li> </ul>	<b>Supply chain analysis and advancement plan</b> <ul style="list-style-type: none"> <li>Conduct materiality assessment using GHG emissions and business importance as the two main axes</li> <li>Classify supply chain tiers based on materiality assessment and develop tier-specific advancement plans</li> </ul>	<b>Supply chain data</b> <ul style="list-style-type: none"> <li>Establish measures for the effective collection and management of GHG emission data</li> <li>Conduct continuous audits and on-site inspections</li> </ul>
Calculation Method	<b>Limited calculation scope</b> <ul style="list-style-type: none"> <li>Initiate Scope 3 calculations within the range of managed data (categories 1, 2, 4, 6, 9)</li> </ul>	<b>Expansion of the calculation scope</b> <ul style="list-style-type: none"> <li>Expand the range of managed data to include all categories in Scope 3</li> </ul>	<b>Continuous updates</b> <ul style="list-style-type: none"> <li>Continuously monitor and reflect changes in suppliers and emission sources</li> </ul>
Calculation Method	<b>Use of a secondary data calculation method</b> <ul style="list-style-type: none"> <li>Calculate using secondary data (expenditure-based, average calculation methods)</li> </ul>	<b>Use of a high-reliability calculation method</b> <ul style="list-style-type: none"> <li>Switch to more reliable calculation methods using primary data, such as the hybrid calculation method and supplier-specific calculation method</li> </ul>	<b>Use of site-specific emission factors</b> <ul style="list-style-type: none"> <li>Use reliable site-specific emission factors for suppliers with high materiality assessment results</li> </ul>

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# Greenhouse Gas Reduction Plan

## Establishment of a Greenhouse Gas Inventory

HD HMS is committed to establishing a greenhouse gas inventory and systematically managing greenhouse gas data to achieve carbon neutrality. We will prioritize data based on its importance and urgency, implementing a three-phase data management roadmap through an ESG data management platform. Establishing a greenhouse gas inventory will allow us to assess and review the emissions and associated costs required to achieve carbon neutrality across the lifecycle of our products and services. Furthermore, this initiative will accelerate our progress toward carbon neutrality based on a more detailed understanding of our suppliers' greenhouse gas emissions.



## Greenhouse Gas Inventory Structure



1) Life Cycle Assessment (LCA) is a method for quantitative analysis and evaluation of the environmental impacts throughout the entire process of a product or service, from raw material extraction to manufacturing, distribution, use, and disposal.

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## Sustainability Management

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# Safety and Health

## Safety and Health Management System

### Safety and Health Management Vision and Goals



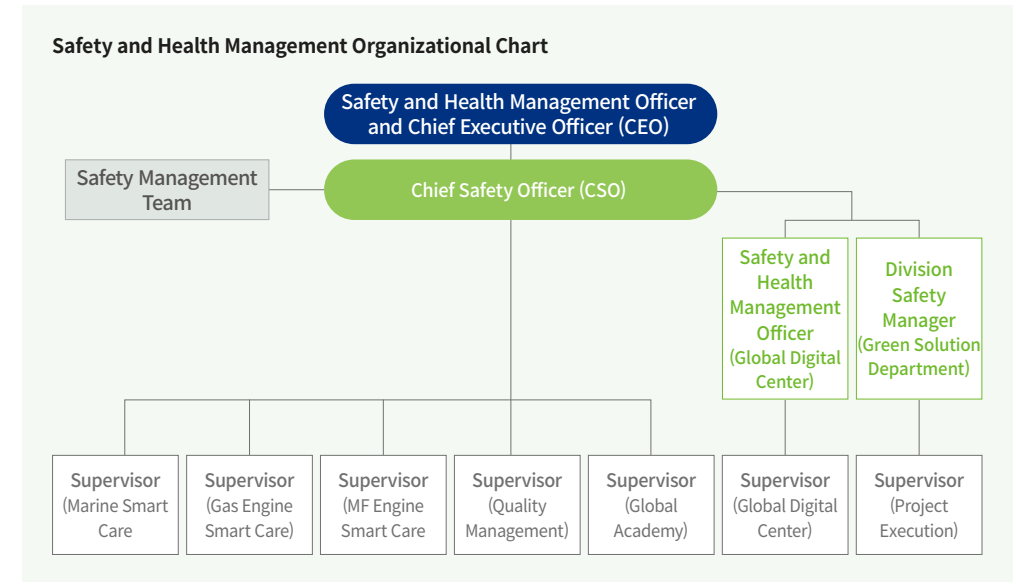
### Safety and Health Management Policies

We prioritize creating a safe and healthy work environment, considering it a core value. We have implemented company-wide safety and health policies to support this commitment for our employees, clients, and suppliers. To operationalize these policies, we have set specific goals and documented the processes of our safety and health management policies to mitigate potential safety and health impacts arising from our business activities.

### Safety Management Division

In 2022, we established the Safety Management Division under the Chief Safety Officer (CSO). In 2023, we defined the vision, goals, and strategies for safety and health management, further advancing our management system.

We conduct regular risk assessments across the company, maintain ISO 45001 certification, and continually update our procedures to foster a strong safety culture. Additionally, to enhance competencies, ensure efficient system operations, and improve compliance with the Serious Accidents Punishment Act, we provide specialized training to our Safety Management Team through institutions such as the Korea Occupational Safety and Health Agency (KOSHA). Furthermore, in response to the evolving safety landscape, we plan to expand our team of safety professionals, aiming for about 10% of our workforce (40 to 50 employees) to attain specialized skills in this field.



### Occupational Safety and Health (OSH) Professionals

(unit: persons)

Year	Total	OSH Professionals			
		Certified safety and health experts <sup>1)</sup>	Safety and health majors <sup>2)</sup>	Experienced safety and health experts <sup>3)</sup>	Other experts <sup>4)</sup>
2023	24*	17	1	3	3

\* Numbers may overlap across categories.

1) Certified safety and health experts: Industrial Engineer Industrial Safety, Industrial Engineer Industrial Hygiene Management, Industrial Engineer Air Pollution Environmental Management

2) Safety and health majors: Individuals with degrees in industrial safety and health from technical colleges or universities.

3) Experienced safety and health experts: Supervisors with 3+ years of experience, or 1+ years of safety and health management

4) Other experts: ISO 45001 auditor certification holders and NEBOSH certificate holders.





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# Safety and Health

## Supply Chain Safety and Health Risk Management

**Safety and Health Code of Conduct** We have established six safety and health code of conduct that all our suppliers must adhere to in order to ensure responsible health and safety management.



1) PPE: Personal Protective Equipment

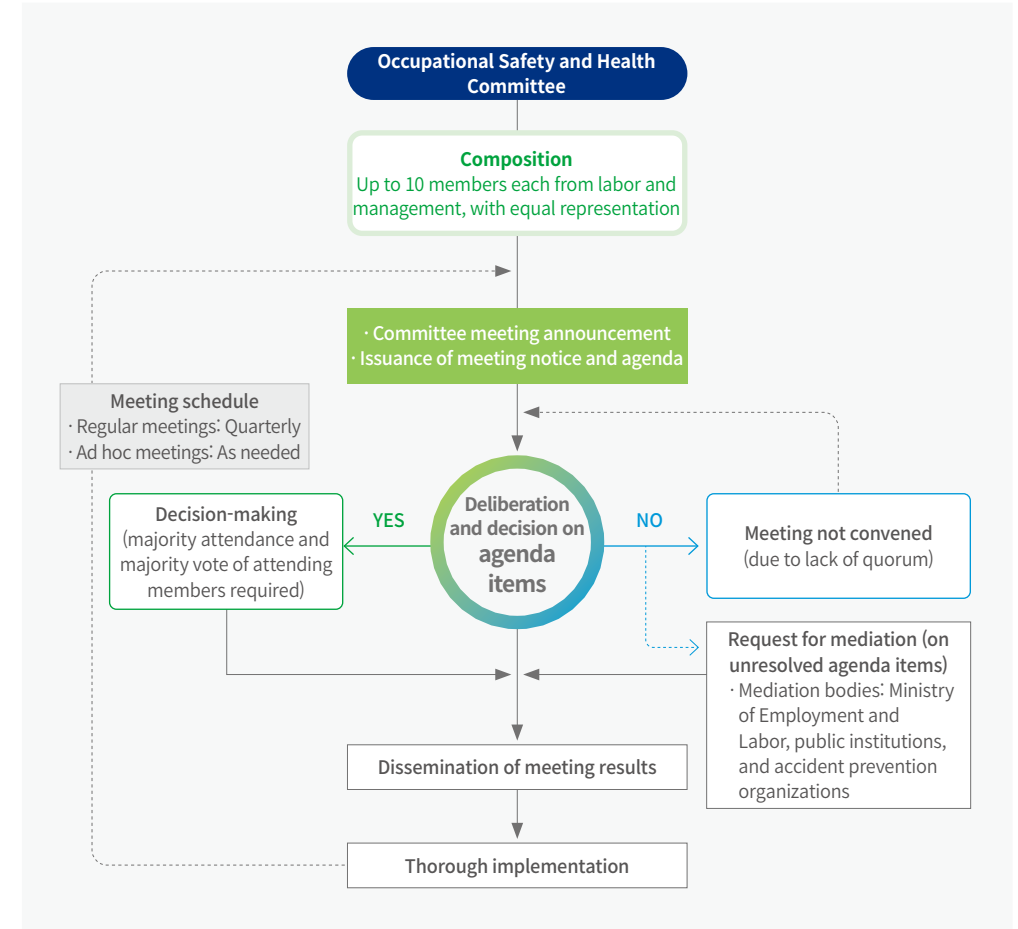
2) TBM: Tool Box Meeting

**Safety and Health Assessments** In accordance with Article 4, Clause 9 of the Enforcement Decree of the Serious Accidents Punishment Act, we have established standards and procedures to ensure that our suppliers meet their obligations to maintain safety and health. We conduct annual evaluations of their safety and health programs. Based on these evaluations, we provide guidance on safety rules for high-risk operations to assist them in improving and maintaining compliance with the Serious Accidents Punishment Act.

## Operation of the Occupational Safety and Health Committee

**Occupational Safety and Health Committee (OSHC)** We operate an OSHC to promptly address critical safety and health issues and mitigate the risks of workplace accidents and serious incidents. Comprising equal representation from management and labor—five members each as mandated by Article 24, Paragraphs 1 and 7 of the Occupational Safety and Health Act, and Article 35 of its Enforcement Decree—the OSHC deliberates and makes decisions on matters such as accident prevention programs, employee safety training, workplace inspections, and environmental improvements. To ensure transparency, the outcomes of the committee’s meetings are communicated company-wide, and the minutes are posted quarterly on the designated OSHC bulletin board for all employees to review.

## OSHC Operation Flowchart



## Safety and Health Programs

We have established implementation plans for our safety and health objectives, designating them as quarterly KPIs for our departments to oversee their execution. Our dedication to promoting a strong safety and health culture was evident as we achieved a 100% task completion rate across the four strategic focus areas.

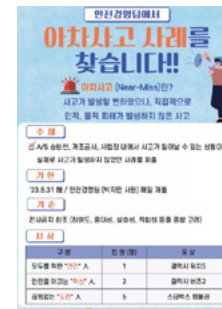
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## Safety and Health

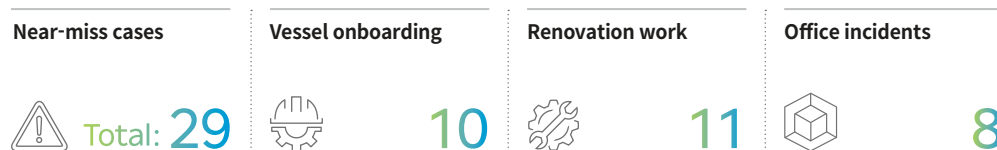
Strategic Focus Areas	KPI	Detailed Tasks	
		Details	Completion
① Establishing a safety and health management system	Implementation rate	<ul style="list-style-type: none"> <li>Develop standards and procedures</li> <li>Conduct risk assessments by department</li> <li>Maintain ISO 45001 certification</li> </ul>	100%
② Promoting safety and health education and health check-ups	Implementation rate	<ul style="list-style-type: none"> <li>Conduct statutory safety training (by internal and external providers)</li> <li>Perform health check-ups for eligible employees</li> </ul>	100%
③ Managing supplier safety	Implementation rate	<ul style="list-style-type: none"> <li>Evaluate safety and health standards of suppliers during on-site inspections (conducted jointly with the Safety Management Division)</li> </ul>	100%
④ Complying with the Serious Accidents Punishment Act and Occupational Safety and Health Act	Implementation rate	<ul style="list-style-type: none"> <li>Establish and monitor compliance with safety and health regulations</li> </ul>	100%

### Contest for Near-Miss Incident Reporting

To prevent near-miss incidents, which could result in major industrial accidents, we held a company-wide contest to gather reports of such events. We received 29 submissions detailing a variety of incidents applicable to both office and field environments, including hazardous activities like vessel onboarding and office-related near-misses. These cases were shared with all employees, and exceptional reports were acknowledged. The near-miss incidents reported in 2023 will be incorporated into the routine risk assessment for 2024, aiming to enhance safety across the workplace consistently.



Near-miss contest poster



### Emergency Response Training

① **CPR Training for 2023 New Employees (Nov 29, 2023)** We conducted a CPR training session in collaboration with the Bundang Fire Station for 80 new employees, comprising both new hires and experienced staff. This one-hour session was a valuable opportunity to enhance our ability to respond swiftly and effectively to cardiac arrest incidents using CPR.



CPR Training

② **Emergency Response Training for All Employees (Feb 21, 2024)** Following the relocation of the Global R&D Center (GRC) from Busan to Bundang, we conducted emergency response training for all employees to enhance evacuation procedures and safety awareness during emergencies. The training addressed safety responses to various incidents, including fires and elevator accidents. More than 300 employees attended the training and gave a high satisfaction rating with an overall score of 4.7 out of 5, reflecting strong employee engagement and positive feedback.

### Employee Health Promotion

① **Strengthening of Health Management Programs** In accordance with Article 5 of the Occupational Safety and Health Act, we implement a variety of health management programs designed to foster a clean and healthy workplace. These programs improve working conditions and promote our employees' physical well-being.

Annual	<b>Smoking cessation clinic</b>	<ul style="list-style-type: none"> <li>We foster a healthy workplace by providing smoking cessation education and support for coping with withdrawal symptoms</li> <li>2023 Achievements: We awarded success bonuses to employees who successfully quit smoking. A total of KRW 2.5 million was raised thanks to voluntary donations (KRW 1.4 million) from successful participants and a grant (KRW 1.1 million) from the HD Hyundai 1% Nanum Foundation. These funds were donated to Asan Medical Center to help infants and young children with lung diseases.</li> </ul>
Year-round	<b>Health screening program (blood pressure, blood sugar, cholesterol)</b>	<ul style="list-style-type: none"> <li>We measure and track changes in these three health indicators for interested employees every Tuesday and Thursday.</li> </ul>
	<b>Health check-up and follow-up management</b>	<ul style="list-style-type: none"> <li>We manage health check-up schedules and results through systematic analysis.</li> <li>We are considering transitioning from manual management to an automated system.</li> </ul>

# Safety and Health

## ② Implementation of Job Stress Prevention Programs

<b>Employee job stress survey and counseling services</b>	<ul style="list-style-type: none"> <li>We assess workplace stress by conducting anonymous surveys for all employees</li> <li>→ The GRC Counseling Room, Mind Garden, and Mind Cafe provide psychological counseling services, linked with health consultations from in-house health managers (nurses)</li> </ul>
<b>Customer service manual development</b>	<ul style="list-style-type: none"> <li>Based on feedback we collected from our customer-facing employees on challenges they face, we develop and train employees on a customer service manual to protect their well-being.</li> </ul>

## Employee Safety and Health Education

We aim to provide practical education for both office and non-office employees through group sessions. Our goal is to increase awareness and engagement with safety and health issues.

① **Employee Training** At the HD Hyundai Safety Experience Center, we offer experiential training for new employees on potential hazards associated with shipboard activities. Additionally, we provide quarterly safety and health training sessions tailored to different employee groups: online training for office workers and in-person training for non-office employees engaged in high-risk tasks such as vessel repair, retrofitting, and maintenance. These training sessions encompass a range of topics, including case studies on accidents in similar industries strategies for hazard identification and mitigation, analysis of near-miss incidents, and health management techniques. At the end of each session, we assess participant satisfaction and collect feedback to refine and improve future training. To further enhance the engagement and effectiveness of our training, we integrate various innovative methods, including the use of VR equipment.



Onboard risk assessment checklist

② **Job-Specific Training** We provide safety and health training for individuals who have responsibilities in these areas, including safety and health managers, CSOs, and supervisors. Safety and health managers and CSOs undergo training conducted by external experts. Supervisors, on the other hand, participate in training programs provided by specialized institutions dedicated to safety and health.

③ **Other Training** We regularly conduct separate curricula for emergency response training, risk assessment training, and training on lifesaving techniques such as cardiopulmonary resuscitation (CPR) and automated external defibrillator (AED) use. These practical sessions are led by external expert experts.

## Development of a System for Onboard Risk Assessment

To ensure the safety of our suppliers' workers and prevent industrial accidents, we utilize an onboard risk assessment checklist for repair and maintenance tasks related to vessel onboarding. Risk assessment is a fundamental component of the government's "Self-Regulatory Prevention System", which requires companies to identify, evaluate, and address hazardous risk factors. To support our suppliers that have limited safety management capabilities, we have distributed this checklist to simplify the risk assessment process for all tasks. This initiative not only helps prevent industrial accidents but also promotes a safer working environment.

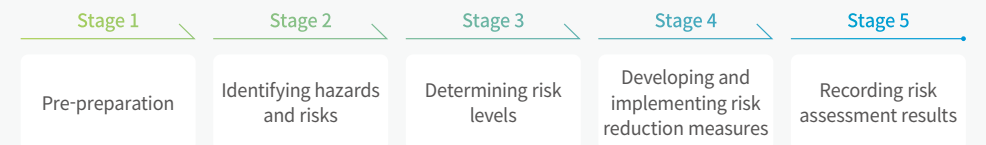


Onboard risk assessment checklist

## Hazard and Risk Assessment Management

We identify potential hazards and risks in our workplace and conduct an annual assessment to prevent accidents and occupational diseases, as mandated by Article 36 of the Occupational Safety and Health Act (Conducting Risk Assessment) and Article 4, Clause 3 of the Serious Accidents Punishment Act. The assessment encompasses all workers at the workplace and anyone who has access to the work areas. Hazards and risks are identified through various means, including monthly safety committee meetings, on-site safety inspections, analysis of accident statistics and reports, workplace inspections, feedback mechanisms such as TBM and the safety hotline, and the analysis of near-miss incidents. Based on the results of our risk assessment, we actively work to mitigate hazards by developing and implementing action plans aimed at reducing their risk levels. Additionally, we provide targeted training to workers on relevant risk management measures. All outcomes of the risk assessments are recorded and reported to both the CEO and the CSO.

### Risk Assessment Stages





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## Safety and Health

### Recognition as an “Excellent Workplace” for Risk Assessment

In June 2023, the Global Digital Center (GDC) of HD HMS, situated in Ulsan, was honored as an “Excellent Workplace” for risk assessment by Korea Occupational Safety & Health Agency (KOSHA). We remain committed to upholding a global-standard work environment that benefits both our company and our employees, continuously aiming to mitigate risks associated with occupational safety, health, and industrial accidents.



Commemorative photo for receiving “Excellent Workplace” certification



Certificate of an excellent workplace for risk assessment

### Acquisition of Safety and Health Management System Certificate

With the growing emphasis on corporate responsibility for worker safety and health, coupled with the strengthening of relevant regulations, the implementation of a safety and health management system has become essential for businesses. In 2023, we secured ISO 45001 certification from the DNV Certification Institute. This achievement came after a rigorous evaluation of our systems and procedures, resulting in the highest level of certification in safety and health. We are dedicated to continuously enhancing our safety and health practices to ensure a safer and healthier working environment for all our employees.

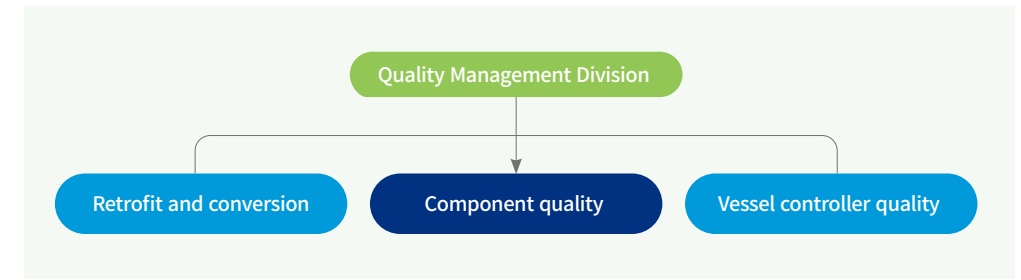


ISO 45001 Certificate

## Quality Management and Customer Satisfaction

### Quality Management Division

Since the quality of products and services is crucial for achieving customer satisfaction, HD HMS diligently maintains a standard of quality that secures our customers’ trust. We have established a team dedicated to quality management that oversees quality assurance for our vessel components, manages quality for vessel retrofit and conversion projects and digital controllers, and handles the establishment and maintenance of quality systems based on ISO certifications. Through these initiatives, we are committed to customer-centric quality management.

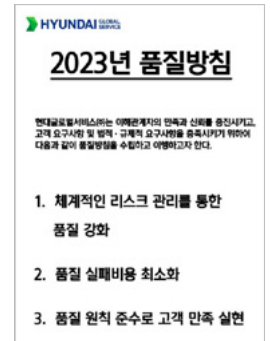


### Quality Management System

#### Quality Management System Operation

To identify and eliminate quality risks throughout the product lifecycle, our dedicated quality management division responds to and manages quality-related risks. We have established quality management policies in both Korean and English to proactively address changing environmental regulations and enhance quality. By standardizing, quantifying, and specifying our products, we strengthen our service system and improve quality through systematic risk management. Furthermore, we aim to prevent recurrences by promptly addressing customer claims and strive to minimize cost of quality failures via a clear and precise understanding of relevant regulations and policies.

In 2024, we plan to concentrate on the quality management of materials, components, and products sourced from overseas vendors. We are dedicated to reducing defect rates in products subjected to witnessed inspections and to fostering quality improvements through on-site supplier visits.



2023 Quality Management Policy



# Quality Management and Customer Satisfaction

## HD HMS 2023 Quality Management Policy

### Quality Management Policy

To increase stakeholder satisfaction and trust, and to meet customer demands along with legal and regulatory requirements, HD HMS has developed and implemented the following quality management policy.

- 1 Improve quality through systematic risk management
- 2 Minimize quality failure costs
- 3 Achieve customer satisfaction by adhering to quality principles

## Quality Management Process

To achieve a high level of quality management, we have implemented a quality policy and established specific quality goals. We have outlined detailed action items for each goal and are committed to enhancing quality management by achieving these targets. Additionally, we develop detailed implementation plans for our quality goals on a monthly basis and conduct evaluations and inspections semi-annually.

## Minimizing Quality Failure Costs

Quality failure costs include all expenses associated with quality issues that occur both before and after the delivery of our products and services to customers. Since establishing the Quality Management Team in 2018, we have been dedicated to reducing these costs by managing the quality of the vessel parts and conversion projects we offer. Specifically, in 2024, we will strive for zero quality failure costs by implementing stringent risk management and thorough preparation, especially given the rise in component sales and green conversion projects.

## Minimizing Quality Defects in Components

To minimize defect rates, we focus on key areas by identifying potential component claims. In 2023, the defect rate reached a mere 0.11%, significantly below our target of 1% or less.

## Minimizing Customer Complaints during FAT\* for Digital Control Products

We carefully review and address the feedback raised by shipping companies and vessel owners, incorporating them into subsequent inspections. We also conduct pre-inspections of supplier components. As a result, we achieved our 2023 target of “Maintaining FAT points below 0.9” with a score of 0.62. Moving forward, we will continue to improve our quality management by fostering stronger mutual trust with our customers, aiming to further reduce customer dissatisfaction.

\* FAT: Factory Acceptance Test

## Supply Chain Quality Management

As part of our pre-quality management system, we conduct on-site quality inspections at major Korean and overseas equipment suppliers. In 2023, we visited 13 suppliers to assess their product quality and implemented improvement tasks based on the evaluation results. Additionally, we are increasing our company’s competitiveness through the quality management of our supplier repair service providers. We completed 100% of the planned on-site quality inspections for 2023, verifying the preparatory requirements and management systems for service work, thereby supporting quality improvement at these companies.

## Quality Management System Certification

We renew our ISO 9001 certification annually with DNV, upholding our commitment to world-class quality management standards. At the start of each year, we establish a quality policy to guarantee effective implementation and performance. Additionally, we conduct internal, overseas, and post-renewal audits every year.



ISO 9001 certificate

## Customer Satisfaction Case Study

### Field Service Experience Seminar

We hosted a Field Service Experience Seminar for major Korean shipowners. Throughout the seminar, we discussed product issues, offered guidance and improvement strategies, and responded to customer inquiries through direct interactions, resulting in high customer satisfaction. After its launch in 2022, the seminar will continue to be held periodically based on the positive feedback received, targeting both Korean and international vessel companies.

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# Employment and Welfare

## Recruitment and Talent Development

We conduct our HR and recruitment processes in alignment with the declaration of human rights management, ensuring fairness and transparency in its personnel system. HD HMS upholds and promotes the values of human rights, labor, and non-discrimination, adhering to international standards and norms, including the UN Universal Declaration of Human Rights and the UN Guiding Principles on Business and Human Rights. In our commitment to these principles, we diligently work to prevent human rights abuses by eliminating discrimination based on education, gender, age, race or religion across all personnel activities, from hiring and placement to training, performance evaluation, and retirement.

### Talent Development System

★ HD HMS Talent Program

Program Position	Basic curriculum		Advanced curriculum		Competency enhancement course	General education	
	Hierarchical training (mandatory)	Statutory mandatory education	General education	Specialized education			
Executives	New executive course	<ul style="list-style-type: none"> <li>Disability awareness education</li> <li>Industrial safety and health education</li> <li>Department manager</li> <li>Personal information protection education</li> <li>Sexual harassment prevention education</li> </ul>	Leadership competency enhancement training ★	Mechanical and electrical cross-training	AMP	<ul style="list-style-type: none"> <li>External special lectures</li> <li>AI education</li> <li>External language learning support ★</li> <li>HD HMS Tech School ★</li> <li>HD HMS Hidden Master* ★</li> </ul>	<ul style="list-style-type: none"> <li>HI Class job training</li> <li>Self-development (Class 101)</li> <li>DX competency (Codelt)</li> <li>Phone English, e-books</li> </ul>
Department Directors	New department head course						
Department Managers	New department manager course		Mentoring, domestic training, hybrid ★				
Senior Managers	Re-orientation for experienced employees ★						
Managers	Re-orientation for experienced employees						
Associate Managers	New graduate employee orientation ★						

\* HD HMS Hidden Master is our in-house instructor system, where employees become instructors to share their expertise and general skills with their colleagues

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# Employment and Welfare

## Talent Development and Training

We prioritize identifying and nurturing talent that will lead the future, with a focus on developing global professionals. To boost employee skills and maintain competitiveness, we offer both leadership and job-specific training.

### 1 Onboarding Training for New/Experienced Employees

To help new hires adapt to their roles, we offer early-stage onboarding programs. These programs are designed to nurture 'growing talent' by balancing competencies, leadership, and a global mindset across various job levels.



New Employee Onboarding Training

### 2 In-House Instructor Program

We operate the 'HD HMS Hidden Master program' to foster a culture of voluntary learning and enhance educational programs. Employees have the opportunity to serve as instructors or students, focusing on areas such as professional skills, general techniques, and personal development.



In-House Instructor Training during Executive Workshops

### 3 Metaverse Value System Training

To improve employees' understanding of HD Hyundai's newly declared value system in 2023, we conducted a training session on this system. By utilizing the metaverse platform, we aimed to minimize time and space constraints and foster participatory learning. The training encompassed our mission, vision, and core values, and included opportunities for open discussion.

### 4 Hybrid Talent Development

We conduct cross-education between natural science/engineering and business/economics, as well as between mechanical and electrical engineering to foster interdisciplinary talent.

### 5 Employee Skill Enhancement Training

We operate affiliated learning and external learning support systems to improve employees' language skills. By offering phone English, partnerships with academies, and both online and offline learning opportunities, along with support for language test fees, we assist employees in strengthening their individual capabilities.

### 6 HD Hyundai Leader Course (HLC)

We offer programs designed to equip employees with the critical skills needed for future leadership roles. Through level-up courses tailored to various job grades and positions, we facilitate employee growth and development.

### 7 Overseas Assignment Candidate Training

We select a pool of candidates for overseas assignments and provide them with intensive language training to develop global competencies. Additionally, for those scheduled for overseas assignments, we offer cross-cultural training to facilitate early adaptation.

### 8 Retirement Planning

HD Hyundai operates a retirement planning support program designed to help employees maintain a balanced and healthy life after retirement. This program provides education on asset and health management, entrepreneurship, reemployment, and more. We also offer personalized employment consulting services for retirees who are looking to re-enter the workforce. If retirees are interested in rural resettlement, we actively assist them by providing information on government support policies, and educational opportunities to ensure they receive practical assistance.

### 9 University Internship

Through our university internship program, we provide opportunities for hands-on experience in areas relevant to our business. Additionally, interns have the chance to share their experiences on our company blog, which contributes to the development of future talent.



HD Hyundai Internship Program for the First Semester of 2024

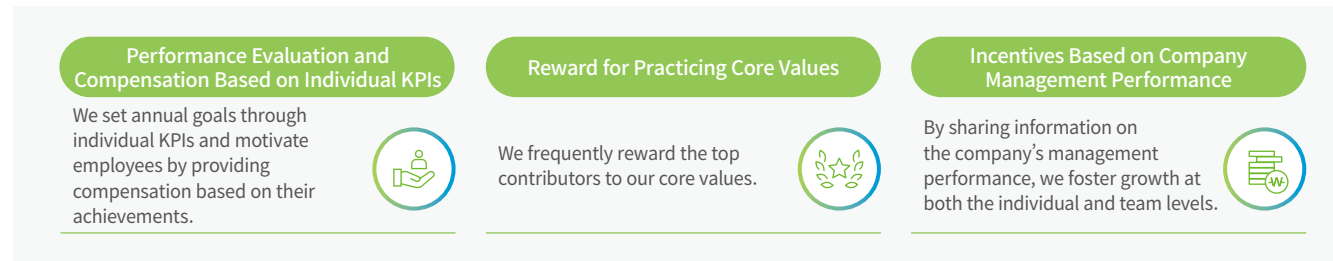
# Employment and Welfare

## Evaluation/Compensation

### Evaluation and Compensation System

We strive to encourage high performance and strengthen organizational vitality by implementing fair and objective evaluations and compensation based on ability and performance. Awards are distributed fairly, following recommendations from departments, a company-wide employee vote, and a review by the review committee. The criteria for these awards are made available to employees through the company platform. We are committed to maintaining fair evaluation and compensation practices to support mutual growth between our company and employees.

### Evaluation/Compensation System



## Employee Rewards

### [Core Value Practitioner Awards]

**HD Hyundai Marine Solution Employee Award & Best Challenge Award** The HD Hyundai Marine Solution Employee Award is presented annually to the top performer or highest achiever. Additionally, the Best Challenge Award is given to encourage employees to take risks without fear of failure, recognizing instances where analyzing failures can contribute to future work. Recipients are selected through online voting and a review committee, which acknowledges both achievements and failures to promote ongoing effort and challenge among employees.

**'Energy-Up! Culture Award'** Since 2023, we have been committed to fostering a culture of encouragement and praise to boost vitality on a company-wide level. The Energy-Up Culture Award and Core Value Practitioner Awards are given to employees who lead a healthy organizational culture and those who exemplify the core values of innovation, challenge, respect, and safety. Recipients are chosen based on recommendations and votes from all employees. The Energy-Up Culture Award is presented quarterly, while the Core Value Practitioner Awards are given on an ad-hoc basis to encourage ongoing work and cultural innovation. In 2024, we plan to introduce the Best Culture Team Award to honor teams that demonstrate outstanding team culture.

### [Collaboration Points Award]

Our company has implemented a collaboration points system online to foster appreciation and teamwork among employees. Each employee receives 10 points every month, and can distribute to colleagues as a token of gratitude. Additionally, quarterly awards are presented based on the accumulation of these collaboration points.

## Employee Welfare

### 1 Family-Friendly Company

We have implemented a flexible working hours system to foster a family-friendly work environment, enabling employees to autonomously choose their working hours. Additionally, we offer employee-friendly policies, including self-development leave, a no-supervisor day once a month, and a workation system. Our proactive approach to family inclusive initiatives has earned us a family-friendly certification, and we are committed to continuing our support for work-life balance.



Family-Friendly Workplace Certification

### 2 Maternity Protection and Childcare Support

We operate dedicated facilities for mothers and offer special maternity leave, telecommuting options for pregnant employees, parking support, and other related policies. Additionally, we manage a childcare/infertility system that includes pregnancy and childbirth bonuses, childcare leave, telecommuting options for fertility treatments, and infertility leave.

### 3 Child Education Support

We support educational expenses for preschool children by providing up to KRW 6 million per year, with a maximum of KRW 18 million over three years, irrespective of the number of children. Additionally, we offer a scholarship program for employees whose children are in high school or college.



# Employment and Welfare

## HD HMS Employee Welfare

### HD HMS Family Day

In celebration of Family Month, we hosted a family invitation event for its employees. Attended by employees and their loved ones, the event offered a variety of programs and attractions that brought joy and happiness to all who participated.

### 4 Housing Stability Support

To ensure housing stability for employees who do not own homes, we offer loans of up to KRW 100 million along with interest support.

### 5 Workshops on Intergenerational Understanding

We have conducted workshops designed to help employees of various generations and positions understand and respect each other's differences. For instance, a workshop entitled "Intergenerational Understanding Session," focused on exploring the characteristics and backgrounds of different generations. Additionally, we have taken steps to foster a culture of respect within the company by establishing "ground rules," which are guidelines that all members of HD HMS are encouraged to follow.



Intergenerational Understanding Workshop Photos

### 6 Organizational Culture

We host a variety of events designed to foster consensus on corporate culture and enhance intergenerational communication. These events are highlighted and introduced in company newsletters and on social media, aiming to promote active communication among employees.



HD HMS YouTube



HD HMS Company Blog

### 7 Improving the Work Environment

With the relocation, we have enhanced support systems to help employees with improved work environment. We have introduced a flexible seating system that includes various options such as focus seats, café-style seating, and 120-degree seats to enhance immersion and productivity. Additionally, we have established employee lounge areas to encourage our employees to take breaks during work hours. The GRC building also houses a fitness center, café, convenience store, bakery, bank, hospital, pharmacy, and library, all aimed at providing a work environment where our employees can thrive.

### 8 Organizational Culture Task Force

Since 2023, we have operated a task force dedicated to improving corporate culture. Known as Change Agents (CA), the members of this task force convene regularly to foster activities aimed at cultural improvement. They organize events, including spring outings, reverse mentoring, OMO day (On My Own Day, a day without leaders), and Energy-Up events during the summer to promote a positive culture within the company.



Spring Outing Participation Photos

## HD HMS Culture

### ZanBeers Event

Since 2022, we have hosted the ZanBeers event (zan = Korean for "glass") for all employees. This event offers a space where employees can come together, communicate, and create enjoyable memories with colleagues. This year, around 300 employees, including executives, participated in various activities at a glamping site, which enhanced communication among staff.



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# Employment and Welfare

## 9 Internal Clubs

To promote the sharing of hobbies and encourage communication among employees, we support internal club activities. We allocate activity support funds based on monthly activity reports and provide incentives for new members and those in executive roles. Currently, a variety of clubs, such as reading, futsal, golf, wine, running, and climbing, are actively engaged.



HD HMS Table Tennis Club



HD HMS Climbing Club



## Labor-Management Collaboration

### Promoting Labor-Management Culture and Communication

HD HMS recognizes that fostering a collaborative labor-management culture is essential for building mutual trust and respect. To cultivate this environment, we participate in a variety of activities. In line with our labor-management council regulations, quarterly labor-management council meetings are conducted to improve communication between executives and employees. Furthermore, an annual management status briefing led by the CEO, along with executive town hall meetings, is held to promote active labor-management dialogue. In 2023, more than 50 agenda items were discussed and communicated to all employees, further advancing the development of a collaborative labor-management culture.

### Key Agenda Items of the 2023 Labor-Management Council

Category	Agenda Items (No.)	Key Agenda Items
Q1	13 items	<ul style="list-style-type: none"> <li>Review of improvements to the system for determining maximum wages</li> <li>Expansion of hub office operations in Busan/Ulsan sites</li> <li>Improvement of travel-related policies, including increased expense reimbursement</li> </ul>
Q2	16 items	<ul style="list-style-type: none"> <li>Expansion of risk allowance for vessel onboarding</li> <li>Formalization of a rotational work system and quarterly progress updates</li> <li>Improvement of working conditions at hub offices</li> </ul>
Q3	16 items	<ul style="list-style-type: none"> <li>Provision of settlement support for solo assignments due to workplace relocation</li> <li>Relaxation of housing loan conditions</li> <li>Establishment of a support system for obtaining professional certifications</li> <li>Provision of opportunities for graduate school and study abroad while working</li> </ul>
Q4	9 items	<ul style="list-style-type: none"> <li>Discussion on expanding the use of recreational facilities in the Seoul/Gyeonggi area</li> <li>Additional meeting rooms at hub offices</li> </ul>

### Executive Town Hall Meetings

Following the company-wide management status briefing in September 2023, executive town hall meetings were held to enhance internal communication and discuss the proliferation of labor-management culture within each department. To facilitate discussions on organizational culture, pre-meeting Q&A surveys were conducted in each department. The meetings also featured ice-breaking sessions and a free talk session with executives, offering a platform for open communication across all levels.



Executive Town Hall Meeting: "Executive↔Employee Talk" Session

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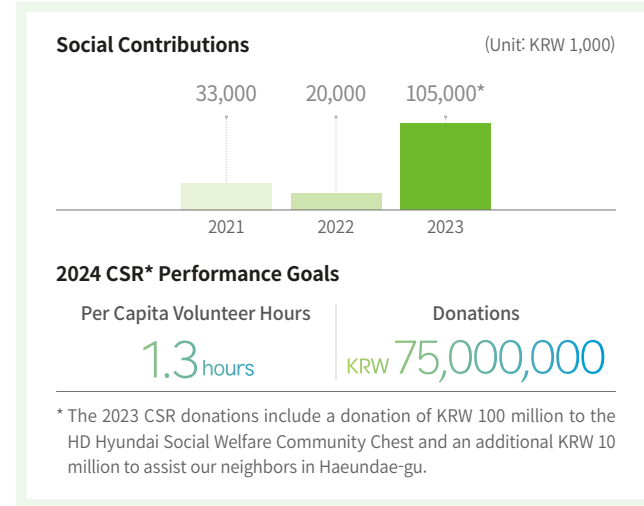
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# Community

## Community Activities



\*Corporate Social Responsibility

### 1 TUM 23 Campaign – ESG Pledge

The TUM23 campaign aims to integrate ESG practices into daily life and improve corporate culture, serving as a catalyst for ESG momentum. The campaign was launched with an ESG pledge to embed the principle of sustainable growth through ESG management. A total of 365 employees, representing 73% of the workforce, voluntarily participated. Participants who committed to the pledge were given a tumbler to help reduce the use of single-use plastics.



TUM23 Award Ceremony

### 2 Participation in the Seongnam Chamber of Commerce’s New Entrepreneurship Round Table (ERT) Joint Challenge

From May to September 2023, we participated in a joint challenge activity organized by the Seongnam Chamber of Commerce’s New Entrepreneurship Round Table (ERT). This event involved 15 companies from Seongnam and focused on sharing the evolving roles that companies must adopt in response to societal expectations and the growing importance of annual ESG evaluations. The challenge aimed to position participating companies as trusted entities among the public. We excelled in this initiative and was honored with the top company award in the ‘Comprehensive Corporate Evaluation’ category.

#### Recognition for Top Company Award in Seongnam Chamber of Commerce’s ERT Joint Challenge



ERT Joint Challenge Award Ceremony and Meeting

### 3 TUM 23 Campaign – Community Volunteer Activities

In August 2023, around 30 employees collaborated with the National Agricultural Cooperative Federation to aid a flood-stricken farm in Seokhang-ri, Mungyeong-si, Gyeongsangbuk-do. They expedited the farm’s recovery by clearing flood debris, leveling the orchard ground, and enhancing the drainage systems. In November, our employees engaged in a meal service volunteer activity at ‘Anna’s House’ in Seongnam. There, they joined Father Kim Ha-jong and local volunteers in serving warm meals to over 800 homeless individuals, creating a meaningful experience for everyone involved.



Volunteer Activities for Flood Recovery

### 4 Donation of KRW 10 Million to Assist our Neighbors in Haeundae-gu

In December 2023, HD HMS (HMST) and the HD HMS Supplier Council collectively donated KRW 10million (with KRW 5 million contributed by each entity) to support the community in Haeundae-gu, Busan. The HD HMS Supplier Council, comprising 46 suppliers, was established to foster mutual growth. Since 2017, they have made annual contributions to aid economically disadvantaged residents in Busan. This year’s donation will be allocated to assist low-income families in Haeundae-gu.



HD HMS Supplier Council



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## 5 ZERO Single-Use Items Challenge

We participated in the ZERO Single-Use Items Challenge, an initiative organized by the Ministry of Environment. This ESG effort is designed to decrease the reliance on single-use items in everyday life and promote the adoption of reusable alternatives. The challenge was accepted following a nomination from Pan Ocean CEO Joong-ho Ahn. We then nominated Sinokor Ship Management CEO Geum-yong Jo to continue the initiative. Additionally, the company has removed single-use cups from its offices, providing mugs and tumblers to employees who committed to the ESG pledge. We have planned various ESG-related activities and initiatives to encourage employee participation in 2024.



CEO-Employee ZERO Single-Use Items Challenge



CEO ZERO Single-Use Items Challenge

## Our Stories Participating in Community Activities

Throughout 2023, our employees actively engaged in a variety of social contributions and volunteer activities, bringing warmth to the community. They participated in flood recovery efforts at a farm in Gyeongbuk, which had been severely affected by summer rains. During an especially cold winter, they visited Anna's House in Seongnam to help serve meals, providing over 800 warm meals to homeless individuals with the help of local volunteers. Our employees also took part in ESG initiatives, including the Seoul Citizens Marathon, which supported children with cancer, and engaged in plogging. Below are some accounts from our employees who took part in these community activities.



**Jinsu Ahn,**  
Senior Manager  
KAM Sales  
Department

### Volunteer Activities for Flood Recovery

I am grateful that our company program gave my colleagues and I an opportunity to help the farm heavily affected by the flood. I vividly remember the farm owner who continued to smile despite the damage. This experience has inspired me to consistently help those in need in our community.



**Yewon Shin,**  
Associate Manager  
Digital Innovation  
Planning Team

### Volunteer Meal Services

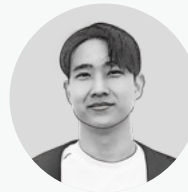
Although serving meals for over two hours was sometimes challenging, it was a rewarding experience to share a warm meal with others alongside my colleagues. I hope our company introduces more diverse volunteer programs in the future.



**Yujin Jo,**  
Manager  
Marine Smart Care  
Department

### Volunteer Meal Services

The TUM23 campaign was a long-term initiative where maintaining consistency was essential. By engaging in small, often overlooked actions such as recycling, walking, and using public transportation, I have already incorporated these practices into my daily routine before I knew.



**Minjae Kim,**  
Manager  
Corp. Partnership  
& Procurement  
Department

### Marathon/Plogging

As part of our running club's activities, I participated in the Seoul Citizens Marathon along with our ESG team and Culture & Life team to support children with cancer and took part in plogging to clean up the area around our office building. Engaging in these activities alongside my colleagues made them especially meaningful.



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# Governance

## Our Board of Directors

### Board of Directors

In 2023, HD Marine Solution introduced an outside director system to increase the board of directors' independence and operational transparency. At the November 2023 general meeting of stockholders, Hyun-cheul Yoon, Jeong-hoon Kwon, Chan-joong Park, and Suk-young Park were appointed as outside directors. As a result, the company's board of directors includes 2 executive directors, 4 outside directors, and 1 non-executive director, composed of 6 men and 1 woman. To streamline board operations, CEO Ki-dong Lee also serves as the chairperson of the board of directors starting in April 2024.

### Independence, Diversity, and Expertise of the Board of Directors

HD HMS focuses on independence, diversity, and expertise in the operation of its board of directors and committees. Since adopting the Community director system in 2023, outside directors now make up 57% of the board as of February 2024. In appointing our directors, we prioritize a well-balanced expertise in critical areas for operational decision-making, including finance, accounting, law, strategy, and digital capacity. Furthermore, to maintain independence, we have established a policy that prohibits outside directors from serving as outside directors, non-executive directors, or non-executive auditors at more than one other stock-listed corporation during their tenure.

### Committees under the Board of Directors

We have established four committees within its board of directors: the Audit Committee, Outside Director Candidate Recommendation Committee, Related-Party Transactions Committee, and ESG Committee.

### Board of Directors' Profiles and Affiliated Committees

Category	Name	Term of Office	Background	Committee Affiliations			
				Audit Committee	Outside Director Candidate Recommendation Committee	Related-Party Transactions Committee	ESG Committee
Executive Directors	Ki-dong Lee (Chairperson of the board of directors)	March 2023 to March 2025	Current CEO of HD Hyundai Marine Solution, Co., Ltd.		●	●	●
	Jeong-hyeok Kim	November 2023 to March 2026	Current-General Manager of HD Hyundai Marine Solution, Co., Ltd.				
	Jeong-hoon Kwon	November 2023 to March 2026	Former – Deputy Chief Prosecutor, Daejeon District Prosecutors' Office Current – Attorney, Kim & Chang Law Firm	●	●	●	
Outside directors	Chan-joong Park	November 2023 to March 2025	Former – CEO (President), SK Discovery Current – Advisor, SK Discovery	●		●	●
	Hyun-cheul Yoon	November 2023 to March 2026	Former – Board member, Samil PwC Accounting Firm Current – Chairman, Yeil Accounting Firm	●	●	●	●
	Suk-young Ryu	November 2023 to March 2025	Former – Director, Institute of AI, KAIST Current – Dean, Department of Computer Science, KAIST	●	●		●
Non-executive Director	Chung-ho Park	March 2024 to March 2025	Current – Partner and co-head of South Korean branch, KKR				

### Compensation Policy for Executives

Compensation for executives at HD HMS consists of management incentives and long-term incentives. Management incentives are disbursed at the start of the subsequent year and are based on quantitative metrics from the previous year, such as sales, orders, and operating profit. These incentives also consider leadership skills and expertise in achieving performance targets. At the end of 2023, a new long-term performance incentive was introduced to prevent short-term decision-making by management and to maximize long-term corporate value. These incentives are calculated and awarded after an executive's term, which lasts three years or more, and are based on a comprehensive evaluation of factors including organizational performance and net income during their tenure. Outside directors and members of the audit committee receive a fixed basic annual salary without performance incentives to maintain their independence.

#### Audit Committee

To monitor executives, ensure sound corporate management, protect shareholders' rights and interests, and improve social reliability, all members of the Audit Committee are outside directors. The chairman of the Audit Committee, appointed for their expertise in finance, is an independent director with significant experience and knowledge in the field, further ensuring the committee's independence and expertise.

#### Outside Director Candidate Recommendation Committee

The Outside Director Candidate Recommendation Committee was established to recommend, manage, and validate candidates for outside directors to be elected at general meetings of stockholders. As of November 2023, 75% of the members of this committee are outside directors, ensuring its independence.

#### Related-Party Transactions Committee

The Related-Party Transactions Committee was established to enhance transparency in internal transactions between subsidiaries and affiliated persons. In accordance with the Fair Trade Act, the committee conducts reviews, approves transactions, and implements corrective measures related to the corporation's internal dealings. Seventy-five percent of the members of the Related-Party Transactions Committee are outside directors.

#### ESG Committee

The ESG Committee is responsible for determining and reviewing the corporation's ESG-related policies and strategies, as well as regularly monitoring the outcomes of ESG activities and initiatives. Additionally, it assesses risks associated with ESG issues, including supply chain ESG, safety and health, and human rights. The committee also examines agendas for discussion by the board of directors and integrates these into the board's decision-making process.

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# Corporate Ethics

## Ethical Management

### Ethical Management System



### Economic Sanctions Act Compliance Guidelines

We have established guidelines to ensure compliance with economic sanction laws. To minimize potential risks in transactions that may involve sanctioned customers or countries, we require an economic sanctions inspection checklist from them. Additionally, we have implemented a sanctions compliance program to underscore the importance of adhering to economic sanctions and to prevent any breaches of related laws. Our department in charge of the sanctions compliance program has developed an internal control program to maintain strict adherence to economic sanction laws. This program utilizes tools such as MAPS SANCTION REQ and REFINITIV to conduct risk-based monitoring and operational testing. Moreover, we provide guidance to all our employees to ensure they understand and comply with the economic sanctions acts relevant to our business activities, thereby preventing any violations.

### Guidelines for Complying with Anti-Corruption Laws

HD HMS implements and manages guidelines to comply with both domestic and international anti-corruption laws, as well as international treaties related to corruption prevention, applicable across all our business sites. Through these compliance guidelines, we establish and provide training on specific implementation protocols. These protocols ensure that all our employees adhere to our ethical standards, work ethics implementation guidelines, the ethical standards of our partner companies, and global anti-corruption laws.

### Business Ethics

#### Reporting Channel for Unethical Acts

We prioritize ethical management as a fundamental aspect of its fair and transparent business practices. On our integrated ethical management website, we offer a 24-hour online reporting channel. This platform allows for the reporting of any breaches in internal regulations pertaining to our ethical standards, ensuring timely intervention. Through this channel, stakeholders can report unethical behaviors such as accepting money or entertainment, gaining unjust profits, abusing authority, or violating laws during transactions. Additionally, reports can be submitted through various methods including phone calls, emails, faxes, postal mail, and in-person visits. We also issue rewards based on predefined criteria. In 2023, we received one report of an ethics violation through this channel. We addressed this incident promptly, adhering to our internal regulations and procedures.

HD Hyundai Ethical Management Website



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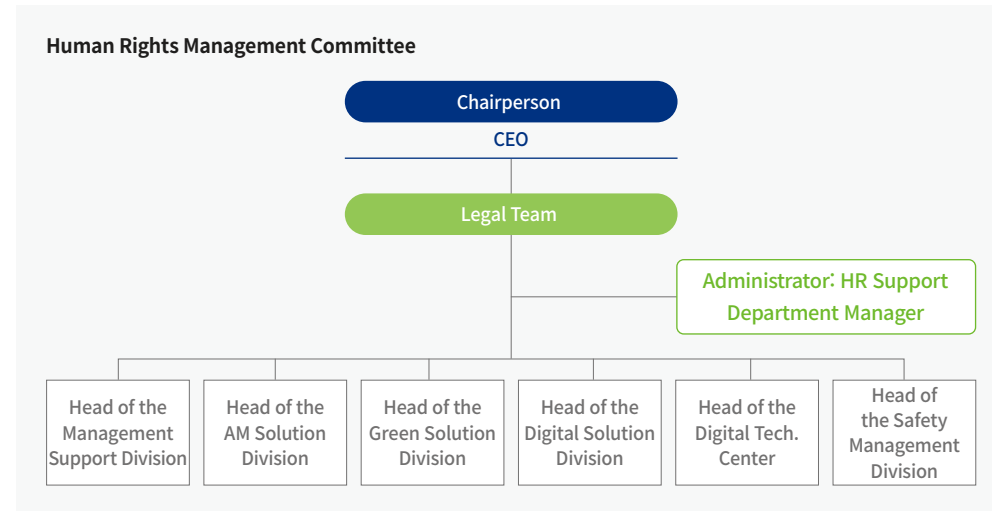
# Corporate Ethics

## Human Rights Management

We embrace the diversity of our employees, regardless of ethnicity, gender, age, or religion. We aspire to create a society where all stakeholders are respected. To this end, we have published a human rights management declaration on our website and are actively developing and implementing policies that focus on the protection of employee human rights, respect for diversity, and the prohibition of discrimination. In addition to safeguarding the human rights of our employees, we are dedicated to protecting the rights of various other stakeholders, including those in our supply chain, our customers, and the local communities we interact with. This commitment is demonstrated through the implementation of supply chain human rights protection policies and environmental management systems.

## ESG Human Rights Impact Assessments

As part of ESG management, we conduct human rights impact assessments across various departments to evaluate and address human rights management issues. These assessments encompass nine distinct areas, pinpointing each department's strengths and areas for improvement, which are then reported to the Human Rights Management Committee. To ensure an objective and fair evaluation of human rights within the organization, we have established a rigorous evaluation procedure. The overall score for the 2023 human rights impact assessment improved from the previous year, rising from 93 to 99 points (an increase of 6 points). Moving forward, we are committed to enhancing our human rights management system by incorporating external consulting resources and refining our evaluation checklist items.



## Human Rights Impact Assessment Results

Area of Assessment	Assessment Results	
	2022	2023
Establishment of the human rights management system	94	96
No discrimination in employment	100	100
Guarantee of freedom of association and collective bargaining	100	100
Guarantee of industrial safety	95	100
Responsible supply chain management	83	100
Protection of the human rights of local residents	100	Not Applicable*
Guarantee of environmental rights	79	100
Prevention and remedy of human rights violations	100	100
Guarantee of labor rights	85	100

\*Not applicable due to the GRC relocation in 2023

## Human Rights Management Declaration

HD Hyundai Marine Solution is committed to fulfilling its social responsibilities by respecting the human rights of employees, customers, stakeholders, and local communities. The company actively implements human rights management practices that emphasize human dignity and values.

HD Hyundai Marine Solution respects and support values such as human rights, labor, the environment, and anti-corruption, as presented by international standards, including the Universal Declaration of Human Rights and the UN Guiding Principles on Business and Human Rights. We will actively strive to fulfill these commitments.

HD Hyundai Marine Solution strives to prevent human rights violations in all business operations that directly or indirectly impact the company. Additionally, we plan to establish a governance system that ensures continuous collaboration between the board of directors, the ESG Chief Sustainability Officer, and relevant teams. We will also develop and enforce comprehensive human rights management regulations. These regulations will include the creation of human rights management policies, the operation of the Human Rights Management Committee, conducting human rights impact assessments, and providing remedies for human rights violations.

In particular, HD Hyundai Marine Solution acknowledges the importance of employee safety and health (including that of suppliers), responsible supply chain management, and the effects on the environment and local communities as fundamental human rights concerns. We are committed to prioritizing the management and monitoring of human rights risks related to these issues.

We are committed to leading efforts to enhance human rights management. This commitment ensures that our human rights policy is adhered to not only by our employees but also by all stakeholders, including customers, shareholders, business partners, local communities, and the government.

Thank you.

Ki-dong Lee, CEO



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- Greenhouse Gas Reduction Plan

**Social**

- Safety and Health
- Quality Management and Customer Satisfaction
- Employment and Welfare
- Community

**Governance**

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- Risk Management

# Corporate Ethics

## Compliance Inspection and Implementation

As a global business, adhering to the laws of various countries and prioritizing the establishment of transparent and fair procurement practices, along with compliance management, as fundamental values in building customer trust. We continuously monitor the subcontract transaction laws enforced by the Fair Trade Commission, promptly inform our field workers of any related incidents, and make concerted company-wide efforts to address these issues promptly. Additionally, we ensure that each department complies with economic sanction laws and anti-corruption prevention laws, and we conduct a thorough screening process for the approval of new transactions.

Moreover, we collaborate with the Compliance Team at HD Korea Shipbuilding & Offshore Engineering to manage transaction risks and support compliance training across HD Hyundai. Our activities include conducting annual compliance risk assessments and training for employees, as well as addressing compliance inspections. Additionally, we work with the Ethical Management Team at HD Korea Shipbuilding & Offshore Engineering to assist with ethical management audit tasks. We also manage pledges related to employee ethics practices and handle reports of conflicts of interest.

## Compliance with External Regulations

HD HMS actively cooperates with the Fair Trade Commission by submitting materials and adhering to regular inspection requirements for subcontract and dealership transactions. Additionally, in relation to economic sanctions, we verify whether any sanctions have been imposed on all ships identified as subjects of sanctions. For new vendor registrations or changes in business partners, we evaluate both direct and indirect transactions involving sanctioned entities and assess the feasibility of these transactions through our compliance manager.

## Adoption of a Compliance Program

We have implemented a Compliance Program (CP) to uphold ethical management that aligns with global standards. The CP serves as an internal compliance system that provides employees with detailed ethical guidelines to ensure adherence to fair trade laws and mitigate associated risks. Through the implementation of the CP, our goal is to strengthen corporate ethics, foster voluntary engagement among employees, and support fair and equitable mutual growth with various stakeholders, ultimately aiming to cultivate a leading corporate culture.

## Personal Information Protection and Information Security

### Policies

In accordance with relevant laws, including the Personal Information Protection Act, the Act on Promotion of Information and Communications Network Utilization and Information Protection, the Protection of Communications Secrets Act, and the Act on Prevention and Protection of Industrial Technology Leakage, we have updated our personal information protection management regulations and security management regulations. This update ensures the safe protection and management of personal information necessary for business operations, preventing loss, theft, leakage, alteration, or damage, while also safeguarding the company's assets effectively. Additionally, we have established and currently operate a company-wide Security Management Committee that oversees tasks related to the protection of personal information.

### Governance

HD HMS strictly complies with laws related to personal information protection and information security. This commitment supports our corporate responsibility to safeguard information and enhances the products and services we offer to our customers. Additionally, we appoint a personal information protection officer in each business division to pinpoint improvement opportunities through regular information security assessments. We have also established a Personal Information Protection and Security Management Committee and operate a Security Incident Response Team. If a security incident occurs, designated personnel are prepared to manage initial responses and address security vulnerabilities in accordance with applicable regulations and procedures, ensuring prompt response and recovery.



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**Risk Management**

# Risk Management

## Integrated Risk Management

### Risk Management

HD HMS addresses various risk factors, including quality control, safety and health, and compliance, by having each department manage specific risks. Each department develops strategies to identify and prevent risks and conduct inspections and monitoring on a daily basis.

### Risk Management by Division

**Environmental Risks** In response to stakeholder interest and regulatory requirements concerning the environment, we are committed to minimizing environmental risks in accordance with ISO 14001 (environmental management system). Furthermore, we have established objectives related to greenhouse gases and have pledged to achieve carbon neutrality by 2035 as part of our climate change strategy. We will consistently work towards reducing our environmental impact by monitoring both domestic and international environmental regulations, managing data, and developing and strengthening specialized organizations.

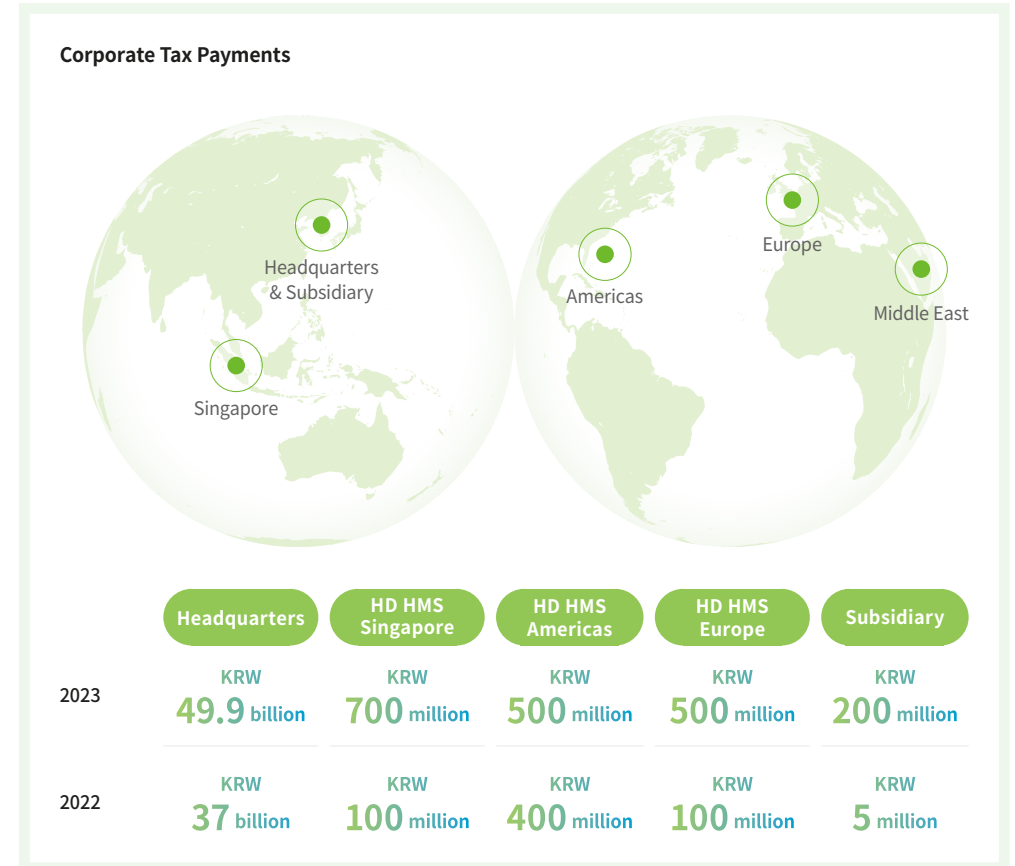
**Quality Risks** To maintain a level of quality trusted by our customers and to minimize quality risks, HD HMS upholds ISO 9001 (Quality Management System) certification and achieves annual quality goals and projects. Additionally, we endeavor to minimize supply chain risks through thorough quality assessments and inspections of our suppliers. We are committed to mitigating risks through a range of activities, including stringent internal quality control and supporting our suppliers in enhancing their quality control capabilities.

**Safety Risks** We have established a dedicated team focused on monitoring and minimizing safety risks, underpinned by a governance system that champions the core value of “Safety for all.” Additionally, we consistently identify and manage risks by maintaining ISO 45001 (Safety Management System) certification and conducting regular risk assessments across various departments. To further promote the company-wide prioritization of safety and mitigate safety risks, we are dedicated to enhancing our safety and health management system. We will also continue to support our suppliers through safety and health assessments and capacity-building efforts.

**Compliance Risks** We manage compliance risks under the supervision of a compliance officer with legal expertise. By publishing and training on compliance regulations, we proactively prevent risks and conduct compliance and fair trade assessments through management diagnostics that encompass not only the headquarters but also corporations and subsidiaries. Additionally, we strive to minimize business risks by managing economic sanction risks, core national technologies and investments, and foreign exchange risks.

### Tax Risks

HD HMS adheres to the laws and regulations of each country in which it operates and makes transparent tax payments. We view the management and mitigation of various tax risks associated with our business activities as a fundamental aspect of our operations. To this end, we have implemented a tax compliance system and conducted regular monitoring to detect any breaches of tax-related regulations. For our overseas operations, we meticulously track tax trends and regulations by consulting with local accounting firms and tax experts, thereby ensuring adherence to both local and federal tax laws.



\*HD HMS Middle East has not made any payment as of April 2024.

**GREEN SOLUTIONS  
TOWARD  
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# Environmental

## Environmental Management

Category	Unit	2021	2022	2023	
<b>Business sites that acquired ISO 14001 certification</b>	Headquarters, GDC, Global Academy	Site	-	-	3

## Greenhouse Gas (GHG) Emission Management<sup>2)</sup>

Category	Unit	2021	2022	2023	
<b>Scope 1 (Direct emissions)</b>	Emissions	tCO <sub>2</sub> -eq	-	198.52	135.14
<b>Scope 2 (Indirect emissions)</b>	Emissions	tCO <sub>2</sub> -eq	-	787.78	1018.13
<b>Total emissions of the reporting organization (Scope 1+2)</b>	Emissions	tCO <sub>2</sub> -eq	-	986.3	1153.27
<b>GHG emissions by country</b>	South Korea	tCO <sub>2</sub> -eq	-	768.79	937.71
	Europe	tCO <sub>2</sub> -eq	-	82.61	62.93
	Singapore	tCO <sub>2</sub> -eq	-	36.41	43.68
	Americas	tCO <sub>2</sub> -eq	-	69.95	70.83
	Middle East	tCO <sub>2</sub> -eq	-	28.55	38.12
	<b>Total</b>	<b>tCO<sub>2</sub>-eq</b>	<b>-</b>	<b>986.3</b>	<b>1153.27</b>
<b>Scope 3</b>	Category 1. Raw materials	tCO <sub>2</sub> -eq	-	-	166,993
	Category 2. Capital goods	tCO <sub>2</sub> -eq	-	-	580
	Category 4. Upstream logistics	tCO <sub>2</sub> -eq	-	-	1,162,496
	Category 6. Business trips	tCO <sub>2</sub> -eq	-	-	27,019
	Category 9. Downstream logistics	tCO <sub>2</sub> -eq	-	-	2,630,193
	<b>Total</b>	<b>tCO<sub>2</sub>-eq</b>	<b>-</b>	<b>-</b>	<b>3,987,281</b>
<b>Emission intensity<sup>1)</sup></b>	Scope 1 + 2	tCO <sub>2</sub> -eq/ KRW 100 million	-	0.07	0.08

1) Emission intensity = Scope 1 + 2 emissions / consolidated sales (2022, 2023)  
 \* Organizational boundaries: Headquarters (GRC, CSP, GDC), logistics warehouses, overseas subsidiaries (Europe, Singapore, Americas, Middle East), subsidiary (HMST)  
 2) GHG data were aggregated since 2022.

## Total Energy Consumption<sup>3)</sup>

Category	Unit	2021	2022	2023	
<b>Energy consumption</b>	Electricity <sup>1)</sup>	KWh	-	1,700,626	2,057,567
		GJ	-	6,122	7,407
	City gas (LNG/CNG)	GJ	-	1,990	658
	District heating	GJ	-	93	1,214
	<b>Total<sup>2)</sup></b>	<b>GJ</b>	<b>-</b>	<b>8,205</b>	<b>9,279</b>
<b>Energy consumption by source</b>	Electricity	KWh/ KRW billion	-	1,275	1,439
		GJ/ KRW 100 million	-	4.59	5.18
	City gas (LNG/CNG)	GJ/ KRW 100 million	-	1.49	0.46
	District heating	GJ/ KRW 100 million	-	0.07	0.85
	<b>Total</b>	<b>GJ/ KRW 100 million</b>	<b>-</b>	<b>6.15</b>	<b>6.49</b>

1) A conversion of 1kWh = 0.0036GJ is applied in accordance with the Enforcement Rules of the Energy Act in Korea.  
 2) No renewable energy was used in energy consumption. No energy was sold.  
 \* Organizational boundaries: Headquarters (GRC, CSP, GDC), logistics warehouses, overseas subsidiaries (Europe, Singapore, Americas, Middle East), subsidiary (HMST)  
 3) Energy consumption data were aggregated since 2022.



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### Employees<sup>1)</sup>

Category		Unit	2021	2022	2023	
<b>Total employees</b>		Persons	456	485	541	
<b>Employees</b>	Male	Persons	384	396	430	
	Female	Persons	82	100	111	
<b>Full-time</b>	Number	Male	368	375	425	
		Female	58	78	102	
	<b>Total</b>		<b>Persons</b>	<b>426</b>	<b>453</b>	<b>527</b>
	Percentage	Male	%	86	83	81
Female		%	14	17	19	
<b>Total</b>		<b>%</b>	<b>100</b>	<b>100</b>	<b>100</b>	
<b>Contract-based</b>	Number	Male	6	10	5	
		Female	24	22	9	
	<b>Total</b>		<b>Persons</b>	<b>30</b>	<b>32</b>	<b>14</b>
	Percentage	Male	%	20	31	36
Female		%	80	69	64	
<b>Total</b>		<b>%</b>	<b>100</b>	<b>100</b>	<b>100</b>	
<b>Age</b>	≤30	Male	30	33	60	
		Female	47	48	61	
	<b>Total</b>		<b>Persons</b>	<b>77</b>	<b>81</b>	<b>121</b>
	31-50	Male	299	302	306	
		Female	35	50	48	
	<b>Total</b>		<b>Persons</b>	<b>334</b>	<b>352</b>	<b>354</b>
	>50	Male	55	61	64	
		Female	0	2	2	
<b>Sub-total</b>		<b>Persons</b>	<b>55</b>	<b>64</b>	<b>66</b>	
<b>Total</b>		<b>Persons</b>	<b>482</b>	<b>496</b>	<b>541</b>	

1) Based on headquarters employees (including expatriates, but not local hires)

Category		Unit	2021	2022	2023	
	Gender	Male	Persons	14	17	17
		Female	Persons	0	0	0
			Executives	Persons	0	2
<b>Expatriates</b>	Position	Senior managers	Persons	13	14	16
		Associate level	Persons	1	0	0
	Age	31-50	Persons	14	16	17
		<b>Total</b>		<b>Persons</b>	<b>14</b>	<b>16</b>
<b>Workers who are not employees</b>		Persons	3	1	0	

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### Employment Contracts

Category			Unit	2021	2022	2023	
Employment contracts by country	South Korea	Full-time	Persons	426	453	527	
		Contract-based	Persons	30	32	14	
		<b>Total</b>	<b>Persons</b>	<b>456</b>	<b>485</b>	<b>541</b>	
	Europe	Full-time	Persons	28	31	40	
		Contract-based	Persons	34	42	53	
		<b>Total</b>	<b>Persons</b>	<b>62</b>	<b>73</b>	<b>93</b>	
	Singapore	Full-time	Persons	35	37	41	
		<b>Total</b>	<b>Persons</b>	<b>35</b>	<b>37</b>	<b>41</b>	
		Americas	Full-time	Persons	9	11	18
	Contract-based		Persons	1	1	2	
	<b>Total</b>		<b>Persons</b>	<b>10</b>	<b>12</b>	<b>20</b>	
	Middle East	Full-time	Persons	-	3	3	
Contract-based		Persons	-	6	11		
<b>Total</b>		<b>Persons</b>	<b>-</b>	<b>9</b>	<b>14</b>		
Employee diversity <sup>1)</sup>	Gender	Female employee percentage	%	18	20	21	
		Manager level	Female (persons)		1	1	1
			Male (persons)		59	68	78
	<b>Total</b>	<b>Persons</b>	<b>60</b>	<b>69</b>	<b>79</b>		
	Executives	%		13	14	15	
		Male (persons)		9	11	12	
		%		2	2	2	
	Disabilities	Employee number	Persons	1	1	1	
		Employment percentage	%	0.21	0.20	0.18	
	New employees <sup>2)</sup>	Male	Full-time	Persons	16	59	56
Contract-based			Persons	2	6	1	
<b>Total</b>			<b>Persons</b>	<b>18</b>	<b>65</b>	<b>57</b>	
Female		Full-time	Persons	7	21	21	
		Contract-based	Persons	17	14	3	
		<b>Total</b>	<b>Persons</b>	<b>24</b>	<b>35</b>	<b>24</b>	

1) 2) 3) 4) Based on headquarters employees

Category			Unit	2021	2022	2023	
New employees <sup>2)</sup>	Age	Full-time	<30	Persons	15	40	40
			30-49	Persons	8	40	37
			≥50	Persons	-	0	0
	<b>Total</b>	<b>Persons</b>	<b>23</b>	<b>80</b>	<b>87</b>		
	Contract-based	<30	Persons	15	17	3	
		30-49	Persons	4	3	1	
		≥50	Persons	-	0	0	
	<b>Total</b>	<b>Persons</b>	<b>19</b>	<b>20</b>	<b>4</b>		
	Total	Full-time	Persons	23	80	77	
		Contract-based	Persons	19	20	4	
		<b>Total</b>	<b>Persons</b>	<b>42</b>	<b>100</b>	<b>81</b>	
	Gender	Male	Persons	20	39	40	
Female		Persons	18	20	15		
<b>Total</b>		<b>Persons</b>	<b>38</b>	<b>59</b>	<b>55</b>		
Retirees <sup>3)</sup>	Age	<30	Persons	21	25	21	
		30-49	Persons	13	32	34	
		≥50	Persons	4	2	0	
<b>Total</b>	<b>Persons</b>	<b>38</b>	<b>59</b>	<b>55</b>			
Local hires	Region	Europe	Persons	62	73	93	
		Singapore	Persons	29	31	35	
		Americas	Persons	8	10	17	
		Middle East	Persons	-	6	11	
		<b>Total</b>	<b>Persons</b>	<b>99</b>	<b>120</b>	<b>156</b>	
		<b>Starting salary to minimum wage ratio for new hires<sup>4)</sup></b>	Ratio	1.65	1.66	1.68	



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### Parental Leave<sup>1)</sup>

Category	Unit	2021	2022	2023
<b>Eligible employees<sup>2)</sup></b>	Persons	56	210	187
<b>Employees on parental leave</b>	Male	5	7	5
	Female	3	7	6
	<b>Total</b>	<b>Persons</b>	<b>8</b>	<b>14</b>
<b>Returned employees after parental leave</b>	Male	4	6	6
	Female	3	3	3
	<b>Total</b>	<b>Persons</b>	<b>7</b>	<b>9</b>
<b>Employees who worked at least 12 months after returning from parental leave</b>	Male	4	6	2
	Female	3	3	0
	<b>Total</b>	<b>Persons</b>	<b>7</b>	<b>9</b>
<b>Percentage of employees who returned from parental leave (returned employees/ employees who planned to return after parental leave)</b>	%	88	64	82
<b>Percentage of employees who worked at least 12 months after returning from parental leave (employees who worked at least 12 months after returning to work/employees who returned to work)</b>	%	88	64	18

1) Based on headquarters employees

2) Employees who are pregnant or have a child 7 years or younger

### Percentage of Annual Total Compensation for the Highest-Paid Individual and Employees in 2023

Category	Unit	2022	2023	Year on year (%)
<b>Total compensation of the highest-paid workers</b>	KRW 1,000,000	829	921	11.10
<b>Employee compensation (median value)</b>	KRW 1,000,000	82	97	18.29
<b>Coverage ratio of employee compensation*</b>	<b>Ratio</b>	<b>9.89</b>	<b>9.49</b>	<b>-4.04</b>

\*The salary gap, expressed as a ratio, between the highest-paid workers and the median-paid workers

### Evaluation, Compensation, and Collective Bargaining Agreements

Category	Unit	2021	2022	2023		
<b>Employee salary<sup>3)</sup></b>	New employee salary	Male	KRW 1,000,000	42	44	48
		Female	KRW 1,000,000	41	44	46
	<b>Percentage</b>	<b>%</b>	<b>98</b>	<b>100</b>	<b>96</b>	
	Total employee salary	Male average	KRW 1,000,000	63	69	72
		Female average	KRW 1,000,000	39	41	44
	<b>Percentage</b>	<b>%</b>	<b>62</b>	<b>59</b>	<b>61</b>	
<b>Retirement pension<sup>4)</sup></b>	DB	Number of participants	Persons	463	465	513
		Contributions	KRW 100 million	124	198	237
	DC	Number of participants	Persons	21	16	17
		Male	Persons	364	354	389
	Female	Persons	55	71	93	
	<b>Total</b>	<b>Persons</b>	<b>419</b>	<b>425</b>	<b>482</b>	
<b>Workers who received periodical performance evaluations<sup>5)</sup></b>	Gender	Male percentage	%	95	89	90
		Female percentage	%	67	71	84
	<b>Total percentage</b>	<b>%</b>	<b>90</b>	<b>86</b>	<b>89</b>	
	Employment type	Full-time	Persons	416	425	482
Contract-based		Persons	3	0	0	
<b>Total</b>		<b>Persons</b>	<b>419</b>	<b>425</b>	<b>482</b>	
Full-time ratio		%	89	86	89	
Contract-based ratio	%	1	0	0		
<b>Total ratio</b>	<b>%</b>	<b>90</b>	<b>86</b>	<b>89</b>		
<b>Labor-management council</b>	Number of meetings	Sessions	4	4	4	
<b>Workers covered by collective bargaining agreements</b>	Percentage	%	100	100	100	

\* Excludes new employees with less than 1 year of employment, contract positions, and executives

3) 4) 5) Based on headquarters employees

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### Talent Development<sup>1)</sup>

Category		Unit	2021	2022	2023	Note
Trainees	Male	Persons	423	476	465	
	Female	Persons	87	121	122	
	<b>Total</b>	Persons	<b>510</b>	<b>597</b>	<b>587</b>	
Time	Male	Hours	3210.5	13391.5	7125	
	Female	Hours	358.5	2960	1708	
<b>Total training</b>		<b>Hours</b>	<b>3,569</b>	<b>16,352</b>	<b>8,833</b>	
Training per capita (average)	Male	Hours	7.6	31.7	16.9	
	Female	Hours	4.1	24.5	14	
	Executives	Persons	-	13	11	
Position	Senior managers	Persons	-	383	358	Includes senior managers and lawyers
	Managers	Persons	-	45	46	
	Associate level	Persons	-	156	172	
Time	Executives	Hours	-	210	137	
	Senior managers	Hours	-	10,827	5,784	
	Managers	Hours	-	1,436	612	
	Associate level	Hours	-	3,879	2,300	
Training per capita (average)	Executives	Hours	-	16.2	12.5	
	Senior managers	Hours	-	28.3	16.2	
	Managers	Hours	-	31.9	13.3	
	Associate level	Hours	-	24.9	31.9	

1) Based on headquarters employees

### Social Contributions

Category	Unit	2021	2022	2023	
<b>Social contributions</b>	Total volunteer hours (per capita)	Hours	540(1.16)	544(1.10)	544(1.10)

### Safety Management

Category	Unit	2021	2022	2023	
<b>Safety and Health Council Meetings</b>	One session for GDC/month	Sessions	12	12	12
<b>ISO 45001 certified business sites</b>	Headquarters, GDC, Global Academy	Sites	-	3	3
<b>Total business sites</b>		Sites	-	7	7
<b>Lost time injury frequency rate (LTIFR)<sup>2)</sup></b>	Cases/200,000 hours	%	0.33	0.00	0.59
<b>Lost time injuries<sup>3)</sup></b>	Excluding injuries during commute	Cases	1	0	3
<b>Work-related diseases</b>		Cases	0	0	0
<b>Safety and health training</b>	Hours	Hours	-	-	9010
	Trainees	Persons	-	-	2215
	Training hours per capita	Hour/person	-	-	4
<b>Risk identification, risk assessment, and incident investigation</b>		Cases	-	-	85
<b>Occupational health programs</b>		Cases	-	-	5
<b>Health measurement program participants</b>		Persons	-	-	17
<b>Follow-up examinees<sup>4)</sup></b>		Persons	-	-	112
<b>Total</b>		Persons	-	-	<b>127*</b>
<b>Business operator's industrial safety prevention activities</b>		Cases	-	-	10
<b>External safety and health awards</b>		Cases	-	-	1

2) Lost time injury frequency rate (LTIFR) = (Number of lost time injuries/total working hours)\*200,000 hours

Total working hours = 250 days (annual working days)\*8 hours (daily working hours)\*number of industrial accident compensation insurance members

3) Work-related injuries: fracture, rupture

4) Follow-up examinees: Examinees who had abnormal findings or needed observation after health screenings

\* Excludes duplicates of health measurement participants and follow-up interviewees





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## Social

### Ethics and Human Rights Management

Category		Unit	2021	2022	2023	
Ethical management	Percentage of anti-corruption policy disclosures	%	100	100	100	
	Sexual harassment prevention education	Time	Hours	481	508	524
		Trainees	Persons	481	508	524
		Training hours per capita	Hours/person	1	1	1
	Disability awareness education	Time	Hours	481	508	524
		Trainees	Persons	481	508	524
		Training hours per capita	Hours/person	1	1	1
	Workplace bullying prevention education	Time	Hours	-	508	524
		Trainees	Persons	-	508	524
		Training hours per capita	Hours/person	-	1	1
Human Rights management education	Time	Hours	-	508	524	
	Trainees	Persons	-	508	524	
	Training hours per capita	Hours/person	-	1	1	
Personal information protection education	Time	Hours	963	74	1	
	Trainees	Persons	482	74	39	
	Training hours per capita	Hours/person	2	1	39	
Fair Trade <sup>1)</sup>	Trainees	Persons	608	574	375	
Economic sanctions <sup>2)</sup>	Trainees	Persons	557	546	407	
Anti-corruption <sup>3)</sup>	Trainees	Persons	645	483	440	
Illegal dispatch <sup>4)</sup>	Trainees	Persons	196	262	177	
Subcontract <sup>5)</sup>	Trainees	Persons	492	514	357	
Collusion <sup>6)</sup>	Trainees	Persons	-	-	4	

1) 2) 3) 4) 5) 6) Cumulative numbers of trainees

\* Anti-corruption training for board members is planned for 2024.

### Sanctions

Category	Unit	2021	2022	2023
Fair trade breaches	Cases	0	0	0
Subcontract Act breaches	Cases	0	0	0
Ethics violation report (number of reports)	Cases	2	2	1
Ethics violation report (number of actions)	Cases	2	2	1
Ethics violation report (percentage of cases where actions were taken)	%	100	100	100

\* The sanctions of administrative agencies in the investment prospectus are related to unpaid taxes (main and additional taxes), and actions were taken to correct and prevent recurrence (details can be found on p.630 of the investment prospectus).

### Corporate Partnership & Procurement

Category		Unit	2021	2022	2023
Procurement amount	Suppliers (Domestic)	KRW 1,000,000	253,081	317,585	314,316
		%	0	0	6
Percentage of suppliers with a ESG assessment	Total suppliers		689	671	682
	Suppliers that received the assessment		0	0	43

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## Governance

### Board of Directors

Category	Unit	2021	2022	2023
Board of Directors meetings	Sessions	7	7	10
Agendas	Items	14	19	31
Participation rate	%	93	81	100

### Board Members

Category	Unit	2021	2022	2023	
Position	Executive directors	Persons	1	1	2
	Outside directors	Persons	0	0	4
	Non-executive directors	Persons	1	1	1
	Total	Persons	2	2	7
Age	<30	Persons	-	-	0
	30-49	Persons	2	1	1
	≥50	Persons	1	2	6
Gender	Male	Persons	3	3	6
	Female	Persons	-	-	1

### Board Training

Category	Unit	2021	2022	2023
Director duties and governance training	Sessions	0	0	0
Board ESG training	Sessions	0	0	0

### ESG Committee

Category	Unit	2021	2022	2023
ESG Committee meetings	Sessions	-	1	2
ESG-related agenda items	Items	-	4	11

### Board Compensation

Category	Number	Unit	Shareholder approved amount	Total compensation	Average compensation per capita
Registered directors	7	KRW 1,000,000	5,000	297	42

\* The compensation of the Board is a fixed base annual salary without performance-based compensation. In accordance with Article 388 and Article 542-12 of the Commercial Act and the articles of incorporation, the company determines the compensation limit for directors by resolution at the general meetings of shareholders. Compensation is provided based on each director's performance within the approved limit.

## General

### Investment and R&D Expenses

Category	Unit	2021	2022	2023	
Technology investment	R&D expenses for accounting purposes (manufacturing expenses) <sup>1)</sup>	KRW 1,000,000	800	4,629	4,637
	Percentage of expenses relative to sales (technology investment expenses/current sales*100)	%	1	0	1
Cost of managing risks and opportunities due to climate change	ISO 14001 audit cost	KRW 1,000,000	-	5	8
	Total	KRW 1,000,000	-	5	8

1) Based on the consolidated audit report

### Economic Performance Allocation

Category	Unit	2021	2022	2023
Total government taxes paid (corporate tax) <sup>1)</sup>	KRW 1,000,000	27,103	36,972	49,892
Partner company purchase <sup>2)</sup>	KRW 1,000,000	253,081	317,585	314,316

1) Based on the consolidated audit report

2) Based on domestic suppliers (excluding overseas subsidiaries and overseas purchasing entities)



## GREEN SOLUTIONS TOWARD SUSTAINABLE FUTURE

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## GRI Index

GRI Standard	Note	
<b>GRI 1: Foundation 2021</b>	Description	HD Hyundai Marine Solution reported in accordance with the GRI standards for the period from January 1, 2023 to December 31, 2023.
	GRI used	GRI 1: Foundation 2021
	Applicable GRI sector standards	N/A

### Universal Standard

Topic	No	Disclosure	Page	Note
<b>GRI 2: General Disclosures 2021</b>				
	2-1	Organizational details	7, 8	
<b>The organization and its reporting practices</b>	2-2	Entities included in the organization's sustainability reporting	2	Hyundai Global Service Columbia S.A.S excluded from the reporting due to the liquidation of its interest as of the end of the current period.
	2-3	Reporting period, frequency and contact point	2	
	2-4	Restatements of information	-	First publication of the report
	2-5	External assurance	2, 87, 88	
	<b>Activities and workers</b>	2-6	Activities, value chain and other business relationships	18, 19, 20, 21, 22, 23, 24
2-7		Employees	8, 77	
2-8		Workers who are not employees	77	
<b>Governance</b>	2-9	Governance structure and composition	70	
	2-10	Nomination and selection of the highest governance body	70	
	2-11	Chair of the highest governance body	70	
	2-12	Role of the highest governance body in overseeing the management impacts	31, 70	
	2-13	Delegation of responsibility for managing impacts	31, 70	
	2-14	Role of the highest governance body in sustainability reporting	31, 70	

Topic	No	Disclosure	Page	Note
<b>Governance</b>	2-15	Conflicts of interest	70	
	2-16	Communication of critical concerns	70	
	2-17	Collective knowledge of the highest governance body	82	
	2-18	Evaluation of the performance of the highest governance body	31	No performance evaluation process
	2-19	Remuneration policies	82	
	2-20	Process to determine remuneration	82	Details on p.616 of the investment prospectus
	2-21	Annual total compensation ratio	79	
	2-22	Statement on sustainable development strategy	4, 5	
	2-23	Policy commitments	50, 56, 57, 60, 61, 71, 72, 73, 74	
	2-24	Embedding policy commitments	40, 50, 56, 57, 60, 61, 71, 72, 73, 74	
<b>Strategy, policies and practices</b>	2-25	Processes to remediate negative impacts	71, 73	
	2-26	Mechanisms for seeking advice and raising concerns	71	
	2-27	Compliance with laws and regulations	81	
	2-28	Membership associations	-	Omitted due to insufficient relevant information
<b>Stakeholder engagement</b>	2-29	Approach to stakeholder engagement	38	
	2-30	Collective bargaining agreements	79	The employment rules determine working conditions and employment terms, and apply to 100% of employees

### Material Topic & Topic Standards

#### GRI 3: Material Topics 2021

Disclosures on material topics	No	Disclosure	Page
	3-1	Process to determine material topics	32
	3-2	List of material topics	32, 33



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# GRI Index

## Material Topic & Topic Standards

Topic	No	Disclosure	Page	Note
<b>Non-GRI: New Technologies/New Businesses</b>				
<b>Expansion of new technologies/new businesses for sustainability</b>				
<b>Material issue 1</b>	3-3	Management of material topics	34	
		Organization-specific index	42, 43, 44, 45	
<b>GRI 200: Economic Performance</b>				
<b>Economic performance and value creation</b>				
<b>Material issue 2</b>	3-3	Management of material topics	34	
	201-1	Direct economic value generated and distributed	8, 82, 86	
	201-3	Defined benefit plan obligations and other retirement plans	-	Details on p.51 of the consolidated audit report
<b>Enhancement of ethics and compliance management, anti-corruption and integrity management</b>				
<b>Material issues 3 and 5</b>	3-3	Management of material topics	34	
	205-2	Communication and training about anti-corruption policies and procedures	81	
	205-3	Confirmed incidents of corruption and actions taken	-	No cases related to anti-corruption from 2021 to 2023
<b>GRI 207: Tax</b>				
<b>Tax</b>	207-1	Approach to tax	74	
<b>GRI 300: Environmental Performances</b>				
<b>Energy</b>	302-1	Energy consumption within the organization	76	
	302-3	Energy intensity	76	
	302-5	Reductions in energy requirements of products and services	76	
<b>Emissions</b>	305-1	Direct (Scope 1) GHG emissions	76	
	305-2	Energy indirect (Scope 2) GHG emissions	76	
	305-3	Other indirect (Scope 3) GHG emissions	76	
	305-4	GHG emissions intensity	76	

Topic	No	Disclosure	Page	Note	
<b>GRI 400: Social Performances</b>					
<b>Employment</b>	401-1	New employee hires and employee turnover	78		
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	64		
	401-3	Parental leave	79		
<b>Material issue 4</b>	<b>Safety and health management</b>				
	3-3	Management of material topics	34		
	403-1	Occupational health and safety management system	60, 80	Includes GDC as well as partner companies' workers within GDC	
	403-2	Hazard identification, risk assessment, and incident investigation	59		
	403-3	Occupational health services	58, 59		
	403-4	Worker participation, consultation, and communication on occupational health and safety	57		
	403-5	Worker training on occupational health and safety	58, 59		
	403-6	Promotion of worker health	58, 59, 80		
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	57, 59		
	403-9	Work-related injuries	80		
<b>Occupational health</b>	403-10	Work-related ill health	80		
	404-1	Average hours of training per year per employee	80		
	<b>Training and education</b>	404-2	Programs for upgrading employee skills and transition assistance programs	62, 63	
		404-3	Percentage of employees receiving regular performance and career development reviews	79	
<b>Diversity and equal opportunity</b>	405-1	Diversity of governance bodies and employees	70, 82		
	405-2	Ratio of basic salary and remuneration of women to men	79		
<b>Supplier social assessment</b>	414-2	Negative social impacts in the supply chain and actions taken	46		

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# Summary of Financial Statements

## Abstract of Consolidated Financial Information

Items	6th Reporting Period	7th Reporting Period	8th Reporting Period
	As of late Dec. 2021	As of late Dec. 2022	As of late Dec. 2023
<b>Current assets</b>	384,826,277,297	453,230,897,268	597,262,316,831
Cash and cash equivalent	85,988,675,064	63,551,476,113	95,712,021,395
Trade receivables and other receivables	151,146,572,328	179,692,945,504	210,583,350,180
Inventories	125,525,831,192	159,914,305,807	237,628,471,757
Other current assets	22,165,198,713	50,072,169,844	53,338,473,499
<b>Non-current assets</b>	33,721,544,730	66,584,860,923	59,355,829,665
Long-term trade receivables and other receivables	1,744,386,292	4,988,840,557	4,855,764,006
Tangible assets	12,069,328,122	12,988,660,072	11,181,576,523
Right of use assets	4,680,340,030	19,580,325,922	17,552,747,376
Intangible assets	4,136,666,510	4,136,666,510	4,136,666,510
Other non-current assets	11,090,823,776	24,890,367,862	21,629,075,250
<b>Total assets</b>	<b>418,547,822,027</b>	<b>519,815,758,191</b>	<b>656,618,146,496</b>
<b>Current liabilities</b>	221,843,980,529	313,608,125,164	387,790,345,478
<b>Non-current liabilities</b>	41,832,687,686	23,990,752,119	28,860,949,538
<b>Total liabilities</b>	<b>263,676,668,215</b>	<b>337,598,877,283</b>	<b>416,651,295,016</b>
<b>Interests attributable to owners of the controlling company</b>	154,871,153,812	182,216,880,908	239,966,851,480
<b>Capital stock</b>	20,000,000,000	20,000,000,000	20,000,000,000
<b>Capital surplus</b>	20,000,000,000	20,000,000,000	20,000,000,000
<b>Capital adjustment</b>	-	-	510,842,984
<b>Accumulated other comprehensive income</b>	1,585,404,833	2,600,348,972	1,097,564,332
<b>Retained earnings</b>	113,285,748,979	139,616,531,936	198,358,444,164
<b>Non-controlling interests</b>	-	-	-
<b>Total equity</b>	<b>154,871,153,812</b>	<b>182,216,880,908</b>	<b>239,966,851,480</b>

(Unit: KRW)

Items	6th Reporting Period	7th Reporting Period	8th Reporting Period
	Jan. 1, 2021 – Dec. 31, 2021	Jan. 1, 2022 – Dec. 31, 2022	Jan. 1, 2023 – Dec. 31, 2023
<b>Revenue</b>	1,087,745,797,212	1,333,798,581,178	1,430,463,166,385
<b>Operating profit</b>	112,981,186,495	141,950,407,376	201,472,478,355
<b>Net income for the year</b>	89,563,977,662	104,926,507,806	151,116,175,331
<b>Interests attributable to owners of the controlling company</b>	89,563,977,662	104,926,507,806	151,116,175,331
<b>Non-controlling interests</b>	-	-	-
<b>Basic earnings per share</b>	2,239	2,623	3,778
<b>Diluted earnings per share</b>	2,239	2,623	3,776
<b>Number of companies included in the consolidation</b>	4	6	5

1) On July 29, 2022, the company conducted a stock split to change the denomination from KRW 5,000 to KRW 500.

2) Basic and diluted earnings per share are presented retroactively based on the 1:10 stock split on July 29, 2022.

# Independent Assurance Statement

Dear Management and Stakeholders of HD Hyundai Marine Solution

## Introduction

The Korean Standards Association (“KSA”) was commissioned by HD Hyundai Marine Solution to perform a third-party Assurance Engagement of ‘HD Hyundai Marine Solution 2023 Integrated Report’ (the “Report”). KSA presents independent opinions as follows as a result of feasibility of the data contained in this Report. HD Hyundai Marine Solution has sole responsibility for content and performance contained in this Report.

## Independence

As an independent assurance agency, KSA does not have any kinds of commercial interest in businesses of HD Hyundai Marine Solution apart from undertaking a third-party assurance on the Report. We have no other contract with HD Hyundai Marine Solution that may undermine credibility and integrity as an independent assurance agency.

## Assurance Standards: AA1000AS v3

### Assurance Level and Type: Moderate, Type 2

Note: Moderate assurance has a lower level of confidence than high assurance because it is based on limited evidence.

## Assurance Scope

The assurance scope includes systems and activities such as sustainability management policies and goals, businesses, standards and achievements of HD Hyundai Marine Solution. While the company’s environmental and social data as well as financial data in a broad sense was verified, the scope of review concerning stakeholder engagement was limited to the materiality assessment process.

- in adherence with the four principles of AA1000AP(AccountAbility Principles) 2018
- in accordance with GRI Standards 2021

## Topic-specific Standards

<b>Economic</b>	201-1, 201-3, 205-2, 205-3
<b>Environmental</b>	302-1, 302-3, 305-1, 305-2, 305-3, 305-4
<b>Social</b>	401-1, 401-2, 401-3, 403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10, 404-1, 404-2, 404-3, 405-1, 405-2, 414-2

## Assurance Methodology

We used the following methods to gather information, documents and evidence with respect to the assurance scope.

- Confirmation of HD Hyundai Marine Solution’s stakeholder participation and materiality assessment process by sustainability expert
- Analyses of articles related to HD Hyundai Marine Solution’s sustainability management published by domestic media outlets
- Review of the consistency between the financial performance data and the company’s audit report/ publicly announced data by Certified Public Accountant
- Verification of consistency between environmental information disclosure data and information provided by the environmental expert
- Examination of internal documents and basic materials

## Assurance Limitations

We assumed that the data and evidence provided by the company were complete and sufficient. We provided limited assurance through data inquiry and analysis as well as limited sampling methods.

## Assurance Results and Opinions

KSA reviewed the draft version of this Report within the scope of this assurance and presented our opinions as an assurance provider. Modifications were made of the Report content if deemed necessary. We were not aware of any suspicions of significant errors or inappropriate descriptions in this Report as a result of our Assurance Engagement. As such, we present our opinions of the ‘HD Hyundai Marine Solution 2023 Integrated Report’ as follows.

# Independent Assurance Statement

## Four principles of AA1000AP(AccountAbility Principles) 2018

### Inclusivity

- **Has HD Hyundai Marine Solution engaged its stakeholders in strategically responding to sustainability?**

KSA believe HD Hyundai Marine Solution is aware of the importance of stakeholder participation and is making an all-out effort to establish a process that will increase their participation. HD Hyundai Marine Solution has selected stakeholders including customers, employee, shareholders and investors, partner companies, local communities and local environment, government and related organization to receive diverse feedbacks and opinions.

### Materiality

- **Has HD Hyundai Marine Solution included material information in the Report to help stakeholders make informed decisions?**

We are not aware of any significant omissions or exclusions of data that is material to stakeholders. We verified that HD Hyundai Marine Solution conducted materiality assessment with issues identified from analyses of internal and external environments and reported according to the result.

### Responsiveness

- **Has HD Hyundai Marine Solution appropriately responded to stakeholder requirements and interest in this Report?**

We verified that HD Hyundai Marine Solution responded stakeholders' needs and interests through reflecting stakeholders' opinions in the Report. We are not aware of any evidence that HD Hyundai Marine Solution's response to significant issues of stakeholders was reported inappropriately.

### Impact

- **Has HD Hyundai Marine Solution appropriately monitored its impact on the stakeholders?**

We verified that the Company is monitoring and assessing its impact on the stakeholders by conducting an enhanced verification of its standard business activities. Furthermore, it has been verified that the Company appropriately publishes its findings in the Report.

## Reliability and quality of specified performance

- **Has HD Hyundai Marine Solution appropriately collected and disclosed specified performance information based on reliable process?**

The assurance provider performed a reliability assurance of the sustainability performance information on the subject of Type 2 assurance. To assure this information, interviews were conducted with relevant personnel, and it was determined that the performance information disclosed in the Report was collected and disclosed based on a reliable process and evidence. Additionally, no evidence was found indicating that specific sustainability information was inaccurately reported.



April 2024  
KSA Chairman & CEO  
**Myung Soo Kang**



