

# 2021 DAEWOO E&C SUSTAINABILITY REPORT



# ABOUT THIS REPORT

This report, which is the tenth in this series, is used as a channel to communicate our major sustainability policies, activities, and achievements to our stakeholders. This report is available to download from our website at [www.daewooenc.com](http://www.daewooenc.com).

## **Reporting Standards**

This report has been prepared in accordance with the Core Options of the Global Reporting Initiative (GRI) Standards for Sustainability Management, an international sustainable management report guideline, reflecting ISO 26000 and UN SDGs.

## **Reporting Boundaries**

The information provided in this report covers all sites and buildings undergoing actual business operation. Quantitative performance data for the environmental aspects are limited to, consolidated and disclosed on 273 work sites and 7 buildings in Korea. The financial performance is prepared based on K-IFRS Consolidation Standards.

## **Reporting Period**

This report covers key sustainability activities and achievements from January to December 2020. Some important qualitative performance data covers up to the first quarter in 2021. In terms of quantitative performance, data for the past three years is presented for time series analysis. If there is any change in the data released in previous report, the reason is specified on the page.

## **Reporting Cycle**

Since 2012, Daewoo E&C has published a yearly sustainability report to disclose the financial, social, and environmental progress the company made over the year. The latest report was published in June 2020.

## **Report Verification**

This report has been verified by an external independent agency, KMR. The result can be found in p.96~97

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# CONTENTS

## About Our Company

CEO Message	06
Company Overview	08
Vision	10
2020 Highlight	11

## Our Business & Value Creation

Civil Project	14
Housing	20
Plants	26
New Frontier Business	32

## Build Together

Sustainability Management System	40
Stakeholder Engagement and Materiality Assessment	42
Future Growth	
Improvement of Internal and External Competitiveness	46
Development of Smart R&D Capabilities	48
Safe & Green Growth	
Eco-friendly Construction	52
Safer Construction Site	54
Shared Growth	
Nurturing Talents Who Pursue Core Values	58
Leading the Supply Chain Focusing on Fairness and Win-Win Growth	60

## ESG

Environmental	64
Social	66
Governance	74

## Appendix

Facts & Figures	81
Value of Sustainable Management	89
Corporate Governance Charter	90
GRI Content Index	91
UN SDGs	94
Greenhouse Gas Verification	95
Third-Party Verification	96
Awards	98
Membership	99

# ABOUT OUR COMPANY



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Eulji Twin Tower, HQ of Daewoo E&C



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Daewoo E&C is leading the Korean construction industry with the best technology and quality since its foundation in 1973.

Daewoo E&C has diversified its business in areas of civil work, housing & building, plant and new frontier business based on infinite spirit of challenge and advanced technology based on its core value of being a company that realizes the best value together with customers.

Daewoo E&C will continue its efforts to be a global top 20 company in 2025 based on its accumulated technology, creative talent and challenge spirit.

CEO Message	06
Company Overview	08
Vision	10
2020 Highlight	11

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## CEO MESSAGE



**“Daewoo E&C, as a leading construction company in a position to take the lead in social responsibility, will strive to contribute to the sustainable growth of our society.”**

President & CEO of Daewoo E&C (Business) Kim Hyeong

A handwritten signature in black ink that reads "Hyeong Kim".



**“Daewoo E&C will continue its management journey as a sustainable company that realizes the value of transparency by integrating it into its business strategy.”**

President & CEO of Daewoo E&C (Management) Jeong Hang-ki

A handwritten signature in black ink that reads "H.K. Chang".

**Greetings to all stakeholders who have shown unwavering interest and support for Daewoo E&C.**

2020 has been a year in which everything is represented by one keyword, COVID-19. In addition, in the construction industry, volatility, uncertainty, complexity, and ambiguity emerged due to domestic real estate regulations along with global demand risks due to the pandemic.

However, the year 2020 of Daewoo E&C was a year in which we achieved remarkable goals together with an indomitable attitude. In the LNG liquefaction plant construction EPC market, which has been monopolized by some global advanced companies, the company secured its position as the original contractor by signing the Nigerian LNG Train7 EPC contract with a stake of about 2 trillion won. In Iraq, we also won five additional private contracts worth about KRW 3 trillion based on the trust relationship with the client through excellent performance. In addition, in 2020, we supplied 33,000 households in one year alone, ranking first in domestic housing supply performance. However, pursuing only economic value does not guarantee sustainable growth, and Daewoo E&C intends to continue taking an active step toward realizing bold and influential social values.

**We will create a safe construction site by breaking away from customs and inertia.**

Daewoo E&C has taken measures to ensure that not only our employees, but also employees of partner companies, and everyone who works at our site can share their voices on safety throughout the company in order to create a safe construction site for everyone in line with the changing social perception of safety at construction sites. When it is judged to be an important issue, it must be improved and reported to the chief executive officer.

**We will create a culture of shared growth with our partners.**

Daewoo E&C is striving to contribute to the sustainable growth of our society as the best construction company in Korea that must take the lead in fulfilling its social responsibilities. We are working hard to find local companies and funds for win-win growth with our suppliers, and we have established a system for sustainable supply chain management to prevent third-party compliance risks.

**We will be reborn as a construction company that leads the creation of eco-friendly values.**

Furthermore, as the Paris Agreement on Climate Change, signed in 2015, came into effect in January 2021, and the world is making efforts to create various environmental values such as the circular economy and biodiversity as well as climate change, the company is actively managing and conducting R&D and investment. Through technology development ('Optimal design of solar structure' and 'Independent floating platform design', etc.), contract (Yeongwol Ecowind 46.2MW wind power generation complex construction project), MOU (Chungbuk hydrogen fuel cell convergence type 200MW power generation project), we are strengthening our business capabilities in line with the changing environment.

**We will become a global transparent company based on compliance management.**

Daewoo E&C's efforts to play an important role as a member of civil society do not stop there. Starting with the introduction of the compliance system in 2015, we have established roles for each organization and position to implement compliance management from the CEO to unit organizations. In addition, in October 2018, it acquired the Anti-Bribery Management System certification for the first time in the construction industry and its effectiveness is being verified by a third party every year.

In addition, due to accounting fraud by global companies such as Enron and WorldCom and accounting fraud by domestic companies, the demand to reliably provide internal information related to the company's business status to external stakeholders has increased. In line with the revision of the law, we introduced an internal accounting management system to transparently disclose company information to external stakeholders for efficient business management and enhancement of shareholder value.

**We would like to ask for your continued interest and generous suggestions so that Daewoo E&C can lead a sustainable future with an unchanging attitude.**

**Thank you.**

# ABOUT DAEWOO E&C

Daewoo E&C is making strides today to become a life partner that provides customers with an affluent life and realizes the best value together. What started in 1973 with the spirit of challenge and passion, autonomy and responsibility has now become a step that moves the world, establishing itself as a company loved by the people and recognized by customers. In order to become the Global Top 20 by 2025, we will lay the foundation for sustainable growth.

## Overview

(As of the first quarter of 2021)

Company Name	Foundation	Head Office	CEO
Daewoo Engineering & Construction Co., Ltd.	November 1, 1973	170, Eulji-ro, Jung-gu, Seoul, 04548, Republic of Korea	Hyung Kim, Hangki Chung
Branches & Subsidiaries	Major Shareholder	Website	Number of Employees
2 domestic branches, 4 overseas branches, 6 overseas subsidiaries, 7 domestic subsidiaries	KDB Investment No. 1 Limited	www.daewoocom (Korean) www.daewoocom/eng (English)	5,452

## Major Financial Performance in 2020

(As of Dec. 31, 2020)



\*As this figure is the sum of amount in progress and amount delivered, it may be different from figures in the business report.

## Major Businesses



### Civil Works

Roads, bridges, railways, subways, ports, water resources, environment, renewable energy



### Housing

Apartment housing, urban residential complex, redevelopment/reconstruction, non-residential facility, overseas projects

## Daewoo E&C's History

Acquired overseas construction license and became the first company in Korea to enter the market in Ecuador, South America

1976

Established R&D Center for the first time in the industry

1993

Acquired ISO 9001 Quality Certification for the first time in the industry

Launched PRUGIO, a new brand of Daewoo Apartment

2003

1973  
Daewoo E&C founded

1982  
Daewoo Corporation established (Construction & Trade Division)

1984  
Awarded the prize of USD 4 billion for overseas construction

2000  
Daewoo E&C established as an independent entity

## Global Network



## Organization Chart



### Plants

Refinery, petrochemistry, combined cycle power, nuclear power, LNG, renewable energy



### New Frontier Business

Real estate investment & development / management, overseas investment & development, new market / new business discovery, subsidiary management



# VISION

Daewoo E&C is realizing its vision and laying the groundwork for growth through four major strategies and eight strategic tasks. We are responding to the changing business environment and strengthening our competitiveness in the global market by focusing on innovation of management infrastructure, advancement of performance capabilities, strengthening of marketing capabilities, and securing new growth engines.

Vision statement

## BUILD TOGETHER

Realizing the best value together with the customer

Core values

Challenge & Passion

Autonomy & Accountability

Strategic goal

## GLOBAL TOP 20

Sales of KRW **17** trillion, Operating Profit of KRW **1.5** trillion in 2025

Core strategy

Innovation of  
management  
infrastructure

Maximize Performance Capacity

Secure New Growth Engine

Amplify Marketing Strength

Strategic tasks

Optimize risk management

Reinforce outsourcing/  
procurement capacity

Enhance project  
management

Diversify first-class  
products

Broaden market  
portfolio

Seek innovative  
business models

Extend value-chain

Pursue opportunities  
in North Korean market

## 2020 HIGHLIGHT



### Won the 'Al Faw New Port Project' in Iraq

Daewoo E&C won 5 projects related to ultra-large scale Al Faw New Port project in Iraq worth KRW 2.9 trillion. Iraq is a representative overseas strategic hub connecting Nigeria and Daewoo E&C could secure the profitability by winning quality overseas projects amid external environment aggravated by COVID-19. This contract was a follow-up contract to the existing Al Faw New Port project and was possible as the project owner highly evaluated our company's technology and on-site management capabilities demonstrated in the previous construction work. As a result, Daewoo E&C recorded a total of 10 construction projects worth KRW 4.1 trillion. Daewoo E&C plans to participate in the development of new port hinterland complex in the future. Daewoo E&C will move forward to become a trusted global construction company based on qualitative growth through sound management and exploration of highly profitable overseas business sites



### Completion of 'PRUGIO SUMMIT', Gwacheon

In July 2020, Daewoo E&C consortium conducted pre-sales of 'PRUGIO Bellarte, Gwacheon' in Gwacheon Knowledge Information Town. 'PRUGIO Bellarte, Gwacheon' is the first private apartment subject to pre-sales within the Gwacheon Knowledge Information Town and has the advantage of excellent future value as opening of the subway line 4 and site for kindergartens and an elementary school are planned. 'PRUGIO Bellarte, Gwacheon' has been designed with flat-plate structure to make it easy for residents to change the interior structure according to their needs. Daewoo E&C consortium plans to supply 2202 households to a total of 4 land lots in Gwacheon Knowledge information Center with the start of supplying apartments in Block S6. Daewoo E&C will do its best to make it a landmark of Gwacheon Knowledge Information Town based on its differentiated technology and experience



### Signed a contract for 'LNG Train 7 project' in Nigeria as an EPC prime contractor

LNG Train 7 in Nigeria is a project to build LNG production plants and auxiliary facilities. Daewoo E&C will perform work related to design, purchase and construction by forming a joint venture with Saipem and Chiyoda. This project is meaningful in that Daewoo E&C has secured the position of a prime contractor in the LNG plant construction market which is dominated by global construction companies. The demand for LNG from Europe and advanced countries has continued as LNG is evaluated as an eco-friendly energy and signing the contract for LNG Train 7 in Nigeria is expected to lead the improvement of performance in plant area. Daewoo E&C will not be complacent with the current performance and continue innovation and attempt to be a global construction company.



### Implementation of investment development project for 'Starlake City' in Vietnam

'Starlake City' project, which is underway in Vietnam is a super-large new city development project that was made possible with Daewoo E&C's commitment to global management. The project covers a total area of 186.6ha and is a super-large investment development project that will accommodate government agencies, cultural complexes, residential complexes, commercial complexes, and skyscrapers. THT, a Vietnamese subsidiary of Daewoo E&C, will lead the entire process from planning for new city development to financing, construction, and pre-sales. Daewoo E&C will establish its capabilities as a developer through Starlake City project in Hanoi and develop new frontier business into sustainable source of revenue.

# OUR BUSINESS & VALUE CREATION



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Pyeongtaek Sosabul PRUGIO site



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Daewoo E&C has four business divisions:  
Civil Work Business Division, Housing & Building  
Division, Plant Division and New Frontier  
Business division. It is pursuing sustainable  
development by diversifying domestic and  
overseas project portfolio.

Daewoo E&C is improving its business  
competitiveness by accumulating experience of  
plant design and construction in various fields  
such as new and renewable energy, nuclear  
power plants and hydro power plants to create  
not only economic value but also social and  
environmental value.

Civil	14
Housing & Building	20
Plant	26
New Frontier	32

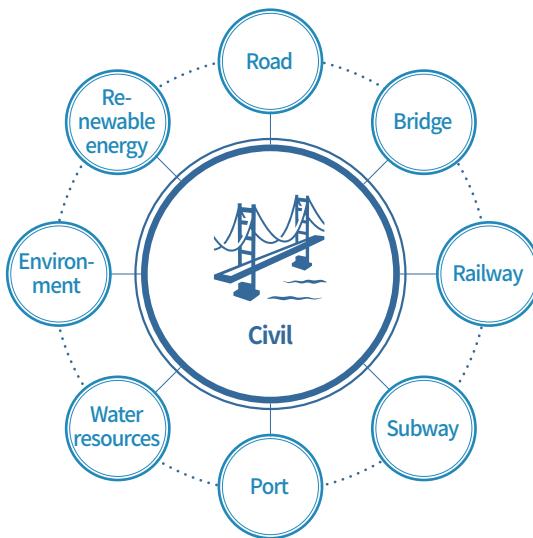
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OUR BUSINESS &  
VALUE CREATION

# CIVIL

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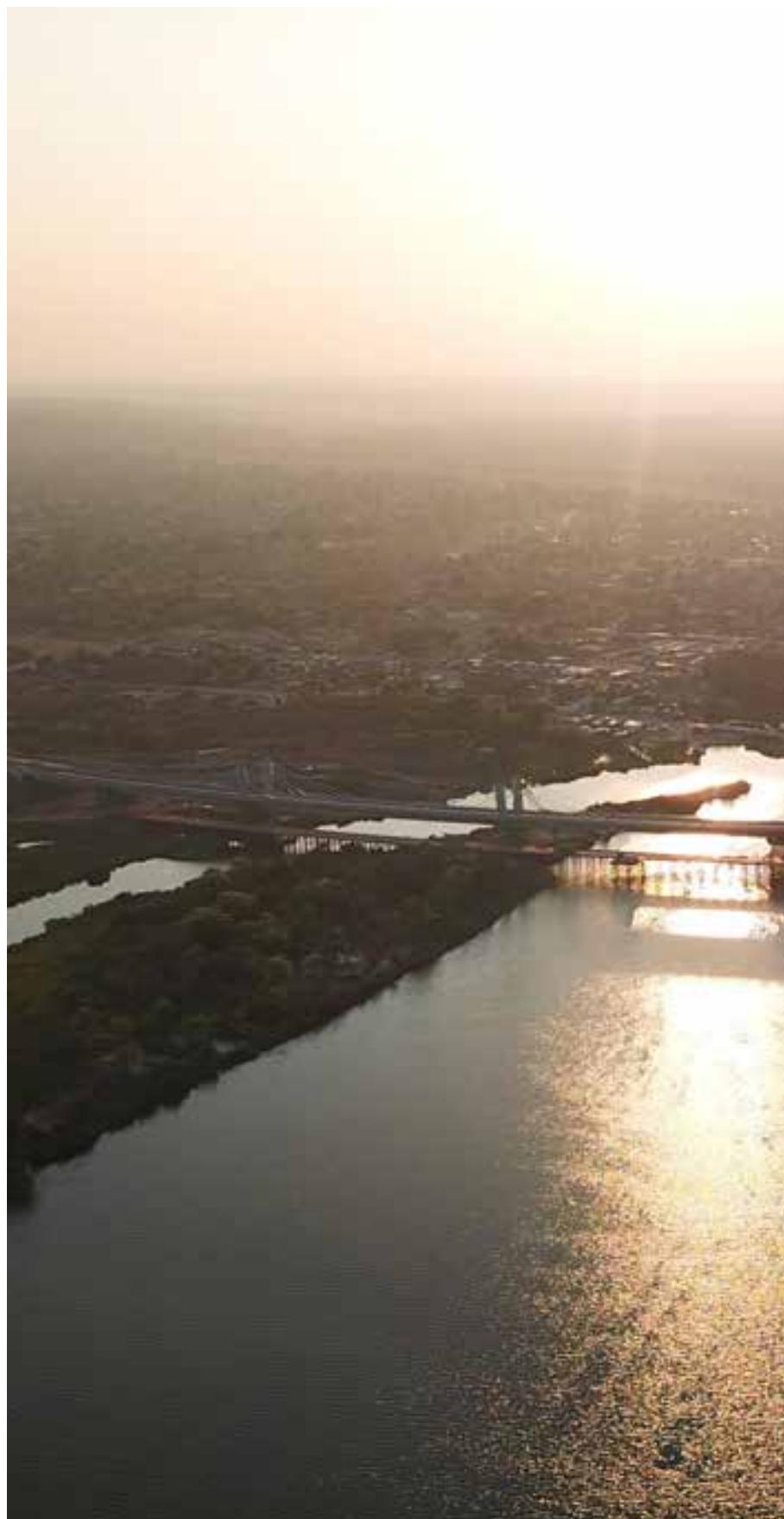
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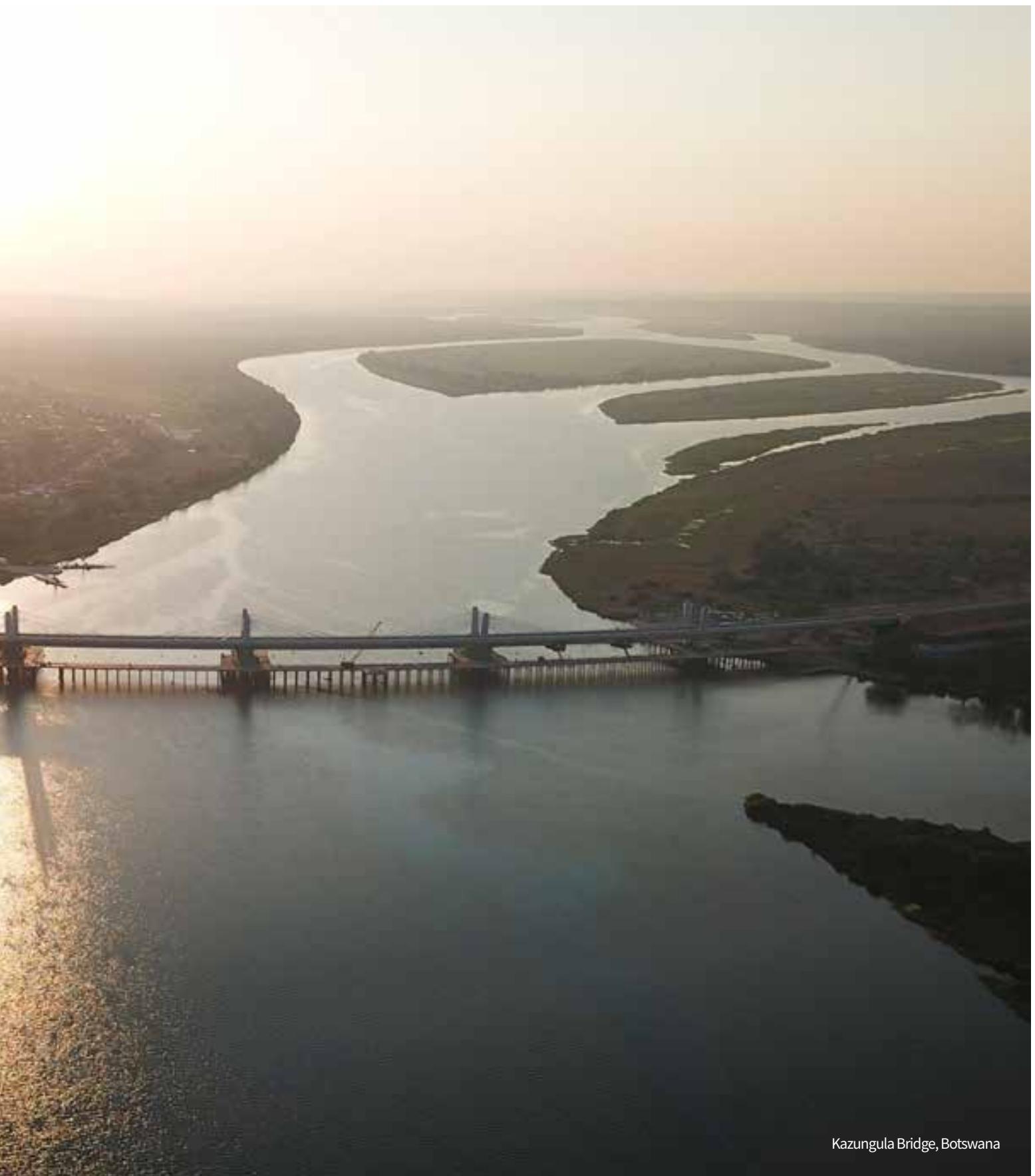
Daewoo E&C establishes main infrastructure of a country to make sure that various functions of a city work well. It has contributed to a balanced national development by constructing roads, bridges and railways that connect economy, culture and life between regions. Port facilities opened the sea route, laying the foundation for global trade.

Daewoo E&C's advanced civil engineering technology and construction capabilities continue to evolve, leaving a big footprint in the domestic and overseas construction history and serving as the foundation for abundant life and industry.

The business territory of Daewoo E&C is expanding to Asia, the Middle East, South America and Africa.

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Kazungula Bridge, Botswana

# Civil

## Our Business Vision

For domestic market in 2021, SOC budget and public orders are expected to increase as part of economic stimulus packages to overcome the difficulties caused by COVID-19 and new and renewable energy market is expected to expand on the back of the government's Green New Deal policy. For overseas markets, new orders are expected to be reduced or delayed overall except for some areas such as India and Southwest Asia as uncertainties such as COVID-19, oil price, interest rates and exchange rates continue. In order to respond to this market environment, we will keep the way of doing business not focusing on physical growth but focusing on generating actual profit. We have established management strategies and project management system and processes for the past 2 years and this year, we will make it take root firmly at the site level. To execute projects in Iraq worth KRW 3.2 trillion in terms of order backlog successfully, we will provide practical support for each organization and lay the foundation for winning follow-up projects related to Al Faw port. In addition, we will secure technological competitiveness and maximize synergy for successful entry into the new and renewable energy market.

### CIVIL Project

- ① Immersed tunnel in Iraq
- ② Dongbu Arterial Road Tunnel Project
- ③ J109 in Singapore

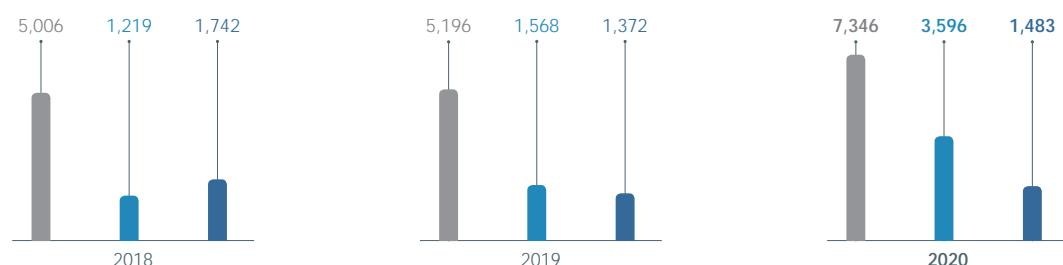


## Our Economic Performance in 2020

In 2020, Daewoo E&C achieved outstanding performance to be the top in winning orders in the same industry for 2 consecutive years and laid the foundation for sustainable sales increase despite deteriorating internal and external business environment such as outbreak of COVID-19 and falling oil prices. Daewoo E&C signed 5 negotiation-based contracts worth a total of KRW 2.9 trillion with Iraq including dredging and immersed tunnel work for Al Faw Ports from which significant profit is expected thanks to trust it has built based on Daewoo E&C's technology and on-site management capabilities with project owner in Iraq. Daewoo E&C also won the Dongbu Arterial Road undergrounding project, the first privately funded project in 10 years after 2010. As a result, Daewoo E&C could win orders worth KRW 3.6311 trillion, which is exceeding 200% of the planned amount. It recorded sales of KRW 1.4827 trillion, an increase of KRW 110.6 billion from sales in 2019.



(Unit: KRW 1 billion)



## Our Environmental Performance in 2020

### Core technologies for offshore wind power generation

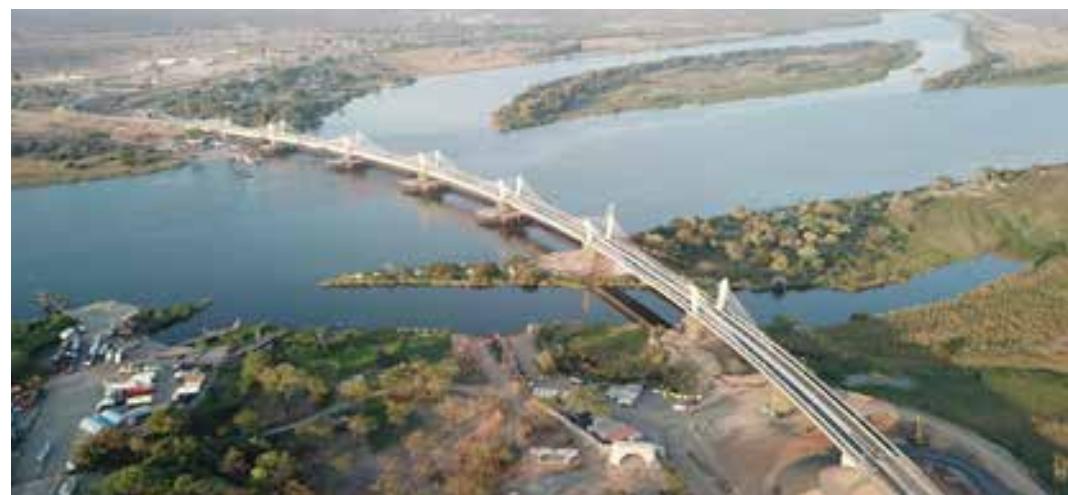
The rate of participation in RE 100, an international initiative promoting the use of renewable energy, by companies and institutions around the world has increased by about 473% (as of March, 2021) compared to 2015, indicating that the movement of the international community for sustainable energy use is accelerating. However, there are limitations in productivity and efficiency to generate sufficient electricity by obtaining onshore wind power generation given the topographical characteristics of the Korean Peninsula. Accordingly, offshore wind power generation, which can utilize abundant wind power in the location away from the land, is expected to be a way to raise the efficiency of new and renewable energy power generation further. Daewoo E&C has installing technology of substructures and excellent construction infrastructure to make sure that wind turbine is operated stably.



## Our Social Performance in 2020

### Social value creation by establishing SOC infrastructure

The Zambezi River, the border between Zambia in south-central Africa, and Botswana, caused logistics difficulties in South African countries. Daewoo E&C carried out the construction of the Kazungula Bridge from September 2014 to March 2020. Before the opening of the bridge, it took a week to cross Zambezi River by a truck, but now it takes only 2 hours. Kazungula Bridge is a 40-year long-awaited project of South African countries, and the use of the bridge is evaluated to improve the logistics speed between neighboring countries and increase the export of resources from South African countries with abundant underground resources, thereby promoting economic growth.



Kazungula Bridge that connects Botswana to Zambia

## Civil Masterpiece

### ① Geoga Bridge

Including the world's longest 3.7km immersed tunnel Possessing the world's 5 new records

### ② Sihwa Marine Leisure Cultural Park

Asia's first, world's largest artificial surfing park Korea's largest artificial beach

### ③ Multi-purpose dam, Bohyunsan Mountain

Height 58.5m x length 250m Arch-shape concrete gravity dam 1,391MW of annual power generation

### ④ Completion of E-RING Road, Qatar (Dec. 2021)

Completed the extension of existing road by 4.5km from the south of Doha and construction of road with 8~14 lanes along 4km



**5 Cheonsa Bridge**

The world's largest high-low pylon (195m, 135m)  
Cable-stayed bridge (1,004m)  
Won the 2020 Civil Structure of the Year

**6 Al Faw breakwater structure, Iraq**

The longest breakwater in the world with extended total length of 15.82km

**7 Sihwa Lake tidal power station**

Korea's first, world's largest tidal power plant Power generation of 550,000 MW a year

**8 Kazungula Bridge, Botswana**

Bridge that connects Botswana to Zambia Reducing the travel time from a week by a truck to 2 hours with the construction of the bridge.



OUR BUSINESS &  
VALUE CREATION

# HOUSING BUILDING



Housing & Building business is to build a wide range of buildings that are the basis of people's life and various business activities such as residence, business, sales, education & research, medical care and factories.

Daewoo E&C's endless efforts to provide a better urban space and residential environment have borne fruit to establish the company as a powerful player in the domestic and overseas skyscrapers and intelligent buildings. It is leading Korea's residential culture with 'PRUGIO', representative brand of the company.

Recently, the company is securing growth engines for sustainable growth by diversifying business portfolio such as exploring new Residential and commercial complex project sites and application of smart construction while solidifying its stance in existing business.





Reconstruction of Heukseok District 11

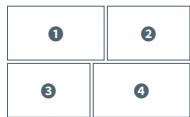
# Housing & Building

## Our Business Vision

The housing construction business is sensitive to economic fluctuations and the investment of clients and influenced significantly by real estate and macroeconomic policies. Therefore, 2021 is expected to be a challenging year given the economic forecast on low-growth trend and strengthening real estate regulations. In response to such uncertainties, Daewoo E&C wants to pursue sustainable growth and solidify its internal strength based on changes and innovation. To respond to changes in real estate market and participants, we will diversify our order portfolio that covers proposal-type complex development projects, remodeling projects and urban development projects based on competition. We will also make an effort to improve the brand value of PRUGIO with housing culture center renewal, development of specialized products and improvement of PR activities. In addition, we will strengthen our marketing capabilities by diversifying sales promotion methods such as upgrading our internal market analysis system (DW-RIS) and digital marketing. We will achieve technological innovation by strengthening our construction technologies such as BIM, VR smart construction and PC method, which are essential elements for the 4th industrial era and strengthen our fundamentals by running our organization based on basics such as quality management, providing customer satisfaction service and strengthening environment/safety management. In 2021, Housing & Building Business Division of Daewoo E&C will begin a full-fledged turnaround based on changes and innovation to become a top-tier company in the industry.

## Housing & Building Project

- ① Launching 'Arcloud', a brand for large commercial facility
- ② Gasan Urban Walk perspective drawing
- ③ Sihwa MTV
- ④ Sangnam Zone 1



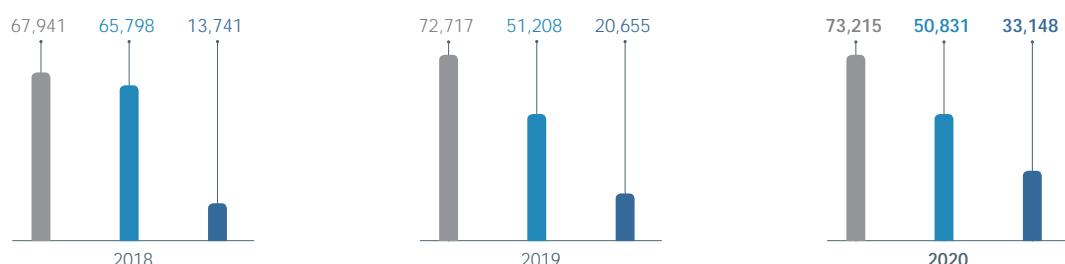
## Our Economic Performance in 2020

No. **1** in terms of housing supply for 2 consecutive years

- Winning orders
- Order backlog
- Pre-sales

(Unit: KRW 100 million won)

Despite the continued real estate regulation policy and intensifying industry competition in 2020, a total of 33,148 households were supplied, being the number 1 in terms of supplying households for 2 consecutive years. Daewoo E&C has demonstrated its capabilities in development projects in various fields, including offices, shopping centers, and knowledge industry centers, as well as residential facilities, which are its flagship products, focusing on domestic private projects. It won new orders worth KRW 7.3216 trillion and recorded sales of KRW 5.0831 trillion in sales in 2020 through stable on-site management despite the uncertainties caused by COVID-19.



## Our Environmental Performance in 2020

### Five Zones Clean-air System, SMART air quality management system

As environmental issues related to air pollutants such as fine dust coming from China and ozone emerged as a social issue, Daewoo E&C developed Five Zones Clean-air System (hereinafter referred to as '5ZCS'), a technology that can manage air quality within apartment complex effectively for the first time in the industry in 2017. 5ZCS divides the apartment complex into five points (APT complex, underground parking lot, east entrance, elevator, unit household) and is designed to apply environmental characteristics of each point. It minimizes its impact on the whole process of coming in and out of the complex and returning to one's house. Daewoo E&C is doing its best to support the comfortable lives of residents by applying and upgrading cutting-edge clean technology to the housing construction sector.



#### 1<sup>st</sup> Zone

#### Within complex (air quality measurement program)

Install instruments that monitor air quality within the complex for 24 hours to provide air quality information in real time to residents for 365 days.

#### 2<sup>nd</sup> Zone

#### Underground parking lot (clean air system)

Install sensors to detect fine dust and CO (carbon monoxide) at the underground parking lot and release smoke and fine dust by operating fans in the parking lot depending on air quality.

#### 3<sup>rd</sup> Zone

#### Main entrance (clean air system)

Clean air system is applied by installing fine dust sensors and air purifiers at the main entrance and elevator halls to provide pleasant environment.

#### 4<sup>th</sup> Zone

#### Within an elevator (air conditioner with air purification function)

Install an air conditioner with air purification function within an elevator to improve air quality.

#### 5<sup>th</sup> Zone

#### Within each household (smart air quality management system)

Install fine dust sensors in each household and operate ventilation system to which HEPA filter is applied automatically.

## Our Social Performance in 2020

### Social value creation through Digital Transformation

Daewoo E&C intends to combine various social values through digital transformation technology by participating in the Guri A.I. Platform City development project. From a national perspective, this project is expected to improve the quality of life of local residents along with innovation of the local economy, and from the perspective of the local community (Guri City), it is expected to boost industries related to bed town. In the meantime, job creation is also expected with the creation of a good infrastructure for new digital industries in line with the 4th industrial revolution.

### Social value creation through CSR activities

Housing & Building Business Division recognizes the impact of its business activities on local communities and implements CSR activities voluntarily. We continued our efforts to minimize the impact on residents and offer a better residential environment by conducting environmental clean-up activities in nearby parks and residential area in the Ansan PRUGIO Bripark site.



Guri A.I. Platform City



Ansan PRUGIO Bripark site

## Housing & Building Masterpiece

### 1 Seocho PRUGIO SUMMIT

Presidential Award (Grand Prize) at the Most Livable Apartment Contest in 2017

### 2 Jungdong Central PRUGIO

6 buildings with 4 stories underground and 49 above ground, 999 apartment houses and 52 studio apartments

### 3 Eulji Twin Tower

8 stories below the ground, 20 above the ground, business facilities and cultural gathering facilities

### 4 Gyeongbuk Provincial Government building

Eco-friendly building with the new and renewable energy use rate of 30%



**5**  
**Dragon City Hotel,  
Yongsan, Seoul**

The largest 6-star hotel in South Korea with 1,700 rooms  
4 famous brand hotels are operating

**6**  
**Scott Tower,  
Singapore**

2016 Overseas Construction Award  
Won the architectural award

**7**  
**Samsung Lions Park  
(Baseball Stadium), Daegu**

24,300 seats in total  
29,000 persons to be admitted  
Development baseball field with octagonal structure

**8**  
**Keimyung University's  
Dongsan Medical Center**

Newly constructed hospital in Korea with 1,041 hospital beds  
The first eco-friendly hospital building  
Certified as a green building from LEED, selected as Excellent Building in 2019

**9**  
**MARTRADE  
Convention  
Center, Malaysia**

Malaysia's largest convention center with a total floor area of 145,246m<sup>2</sup>

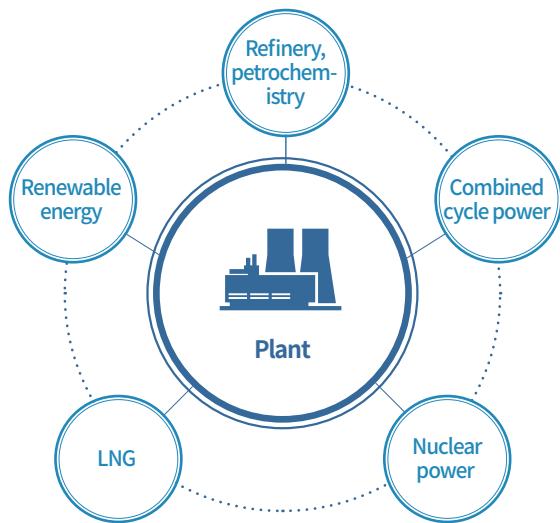


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OUR BUSINESS &  
VALUE CREATION

# PLANT

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The plant industry is a high value-added, knowledge-intensive industry, which includes feasibility studies of business, engineering to systemize and provide highly accumulated technologies, procurement of equipment and machineries necessary for production, construction of structures and buildings, and test operation of mechanically integrated facilities.

Daewoo E&C has been leading in the construction of thermal/nuclear power generation, oil refinery/petrochemical, and LNG sector projects based on its excellent technology and passion, contributing to national economic development.

We are also making progress in the construction of value-added plants, standing shoulder to shoulder with global companies in the overseas plant market. Recently, we have been making a leap towards joining the ranks of the 'Global Top 20' by pursuing entry into the new and renewable energy sector.

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Ulsan S-OIL RUC

# Plant

## Our Business Vision

For plant business, Daewoo E&C is expanding its business area by implementing projects in Nigeria, existing base market for petrochemical area, and MENA and in particular, executing a number of LNG projects. For the nuclear power sector, Daewoo E&C is solidifying its position by winning orders continuously including design. For power generation sector, it is strengthening its capability as a comprehensive developer for power generation business through various methods such as winning EPC projects, equity investment in independent power project (IPP), entering plant operation sector and new and renewable energy project development in Southeast Asia including Vietnam and Indonesia in the mid to long-term.



Al-Zour Refinery Project, Kuwait

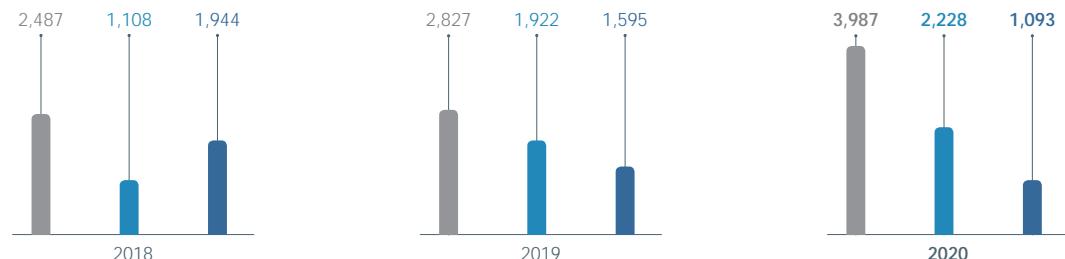
## Our Economic Performance in 2020

### Overcoming economic uncertainties caused by COVID-19 pandemic

In 2020, we faced unfavorable business environment such as delay in contract and delay in domestic and overseas projects with declining investment sentiment due to increased economic uncertainties caused by unexpected outbreak of COVID-19 pandemic. Despite these unfavorable situation, Daewoo E&C recorded a remarkable performance of winning orders worth KRW 2.5881 trillion and recording KRW 1.0928 trillion in sales. We won projects including Tangguh Expansion Ph.2 PJ in Indonesia, Bundang heat transport network performance improvement work (Phase 2), purchase of main equipment for Shin-Sejong combined cycle power plant, Indorama FCU2 PJ in Nigeria, design service for landfill disposal facility for phase 3 radioactive waste disposal facility, and disassembling of containment filtered venting system (CFVS) of Wolsong Unit 1. In addition, we expanded the domestic business portfolio by winning Ulsan North Port energy terminal LNG and OIL package project. NLNG Train 7 Project in Nigeria, in particular, was the LNG liquefaction plant project where only a few global companies can participate as a prime contractor. But Daewoo E&C won the project as a prime contractor for the first time among Korean construction companies. We could secure overseas LNG business continuity by competing LNG Area 1 PJ in Mozambique at the end of the year, laying the foundation for entering Mozambique, a new market for Daewoo E&C.



(Unit: KRW 1 billion)



## Our Environmental Performance in 2020

### Hydrogen new business

A hydrogen fuel cell is a power generation system that generates power and heat through a chemical reaction between hydrogen and oxygen. Since there is no driving part in the facility itself, noise and vibration rarely occur, and air pollutants generation can be minimized unlike general thermal power plants. Therefore, it is attracting attention as a next-generation eco-friendly energy source. Daewoo E&C is pushing ahead with the expansion of its eco-friendly business portfolio to discover a hydrogen business model that can be connected with the hydrogen fuel cell power generation business. Recently, Daewoo E&C signed an MOU on 200MW-scale Chungbuk hydrogen (fuel cell) convergence power generation project with Eumseong-gun, Chungbuk province and Korea Asset Investment Management. Based on this, the company is promoting entry into eco-friendly business areas including hydrogen projects continuously.



Eumseong hydrogen fuel cell convergence power generation project investment agreement



Hydrogen energy complex business model

## Our Social Performance in 2020

### Accident free record of major overseas projects

Daewoo E&C puts the value of respecting human life as a top priority and strives to continuously enhance the safety value. In order to provide adequate treatment and compensation for the injuries and deaths of the third party nationals, who are foreign workers in the country where a project is implemented, it makes it mandatory to hold insurance for injury for those third country nationals. In addition, we are implementing a CLEAR program to promote on-site safety culture, and through regular monitoring, we are closely identifying and improving safety hazards. As a result of these disaster-free efforts, we recorded accident-free period of approximately 43 million hours in major overseas projects in 2020.

#### Accident free record of major overseas projects

1. Duqm Refinery Project, Oman  
27,582,292 hours  
(2018. 06. 03 ~ 2020. 12. 31)
2. Al-Zour Refinery Project, Kuwait  
11,681,244 hours  
(2020. 08. 18 ~ 2020. 12. 31)
3. Gbaran Infill Project, Nigeria  
1,168,840 hours  
(2019. 04. 09 ~ 2020. 12. 31)
4. Indorama Fertilizer II Project, Nigeria  
14,384,439 hours  
(2018. 05. 03 ~ 2020. 12. 31)



Duqm Refinery Project, Oman

## Plant Masterpiece

### 1 Indorama Fertilizer II Project, Nigeria

Urea fertilizer plant facility with daily production of 2,300 tons of ammonia and 4,000 tons of urea.

### 2 LNG Area 1 Project, Mozambique

2 units of LNG Train with annual production capacity of 6.5 million tons and auxiliary facilities

### 3 Shin-Wolsong nuclear power plant Main equipment for units

#### 1 and 2

1000MW pressurized water reactor x 2 units

### 4 Jazan Refinery Project, Saudi Arabia

Naphtha Processing and Gasoline, Benzene, Para-Xylene production facility



**5****Ulsan North Port Project(LNG, OIL PKG)**

Liquefied gas/petroleum product terminal construction including LNG tank 2 units of 215,000kl LNG tanks, 12 units of CPP Tanks (A total of 270,000 kl), and auxiliary facilities

**6****NLNG Train7 Project, Nigeria**

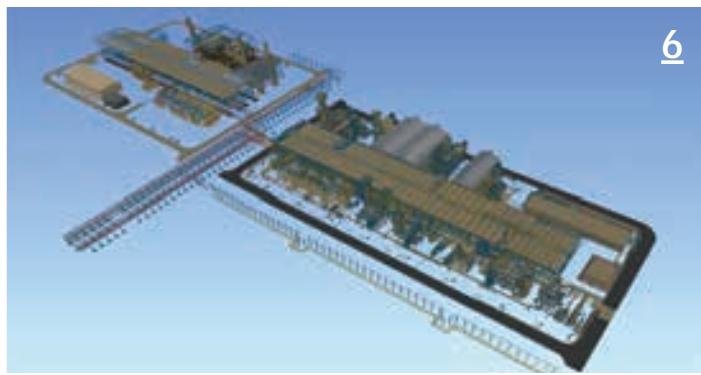
LNG liquefaction plant and auxiliary facilities with an annual production capacity of 8 million tons

**7****Phase 1 and 2 of the radioactive waste disposal facility construction**

Phase 1 and 2 construction of low and medium radioactive waste disposal site with scale of 225,000 drums

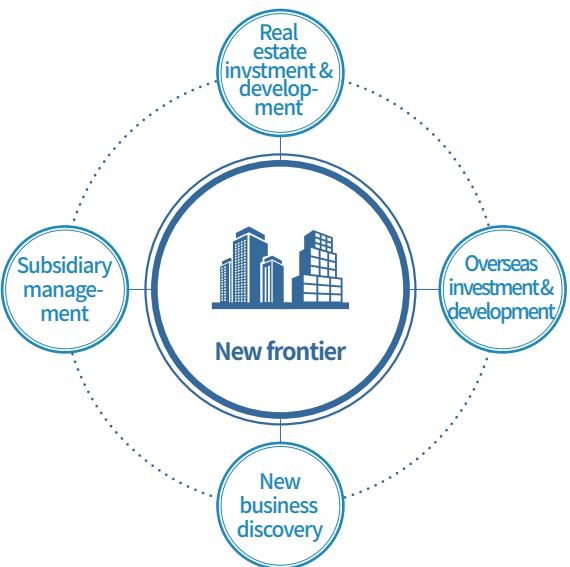
**8****Oman Sur power plant**

2,000MW  
Combined cycle power plant

**5****6****7****8**

OUR BUSINESS &  
VALUE CREATION

# NEW FRONTIER



Daewoo E&C runs a New Frontier Business Division to lead change and innovation in response to the paradigm shift in the construction market and to secure a new growth momentum.

We are expanding the spectrum of existing real estate development projects and actively promoting overseas investment and development projects such as THT in Vietnam, seeking to strengthen the growth base and expand the value chain as a general developer of real estate and infrastructure.

In addition, we are exploring future-oriented and profitable new businesses and new markets and securing new growth engines to diversify our revenue streams. We are also improving the value of subsidiaries and assets by optimizing efficiently the current operation and getting into the new business areas.





THT Star Lake City in Vietnam

# New frontier

## Our Business Vision

The maximization of profit from THT business in Vietnam and improvement of values of subsidiaries in 2020 lead to sales of KRW 581.8 billion, contributing to the achievement of corporate business performance. In response to paradigm shift in the construction market, the company completed equity investment in KT Cheongryang Branch urban residential housing and Gaepo urban residential housing as a strategic investor. It also expanded its business to asset purchase and management through comprehensive transfer of rights agreement for the rental apartments in Suwon Paldal 6 re-development.

To enter new frontier business, Daewoo E&C introduced Build Together Start-up program based on open innovation and explored the investment opportunities such as SG Safety, Astro X(drone) and HUMAX EV(electric vehicle charging business) to generate the investment profit and synergy with corporate existing business.

Based on such achievements and internal capabilities, the new frontier division will contribute to generating financial outcome by expanding its domestic and overseas development projects and new frontier business in 2021. To this end, we will actively utilize financial leverage that maximizes profits with minimal investment, manpower leverage that maximizes profit with minimum workforce and financial flexibility that adjusts investment and equity ratio depending on corporate financial situation and needs. Daewoo E&C will expand the direct investment and development projects in addition to land sales to maximize sales and profit from THT business in Vietnam and actively explore new city development opportunities by making platform for new city development project based on experience and capabilities of THT. For domestic real estate development projects, we will implement high added value Core+, Value Add investment/operation projects where undervalued high-quality real estate are purchased to maximize asset value and profitability in addition to its efforts to implement large-scale complex development project. We will also expand our future construction value chain by securing new business and technologies preemptively in areas with high growth potential such as Prop-Tech that links the future construction market and the 4th industrial technology and eco-friendly sector with Green New Deal policy based on BTS and offshore subsidiaries.

## New Frontier Business Project

- ① Star Lake City, Vietnam
- ② Electric vehicle charging facility project (HUMAX) Equity investment
- ③ Drone control system  
(Naver Cloud) cooperation



<sup>\*</sup>The figure incorporates the internal transaction amount, which is different from economic performance in ESG Data.

## Our Economic Performance in 2020



### Overseas new city development project

'Starlake City' project, which is underway in Vietnam is a super-large new city development project that was made possible with Daewoo E&C's commitment to global management. The project covers a total area of 186.6ha in place located 5km from Hanoi City Hall in the northwest direction and various projects such as pre-sales of housing such as apartment and villa, sales of commercial land and new investment development projects are underway. In September 2020, Daewoo E&C signed an MOU with LH to improve its capability to identify and implement overseas urban development projects to share capabilities and knowhow. It is expected that Daewoo E&C can expand the competitiveness of Korean-style new city to the world with synergy generated from cooperation with LH.



### Implementation of real estate development project and entry into asset purchase and management sector

The New Frontier Business Division is implementing real estate development projects to expand value chain of front and rear spectrum of the construction industry to respond to paradigm change in the construction market. Daewoo E&C made equity investment in 'Gaepodong urban residential housing' to secure profit from investment and development with higher added value than simple construction and entered 'Suwon Paldal 6 redevelopment rental housing project' to generate stable rental and sales profit. In addition, a comprehensive MOU was signed with Together Asset Management Company, established by New Frontier Business Division in 2020 to explore synergy effect such as obtaining project information early and joint participation. Through this cooperation, the New Frontier Business Division will contribute actively to expanding the company real estate development business portfolio and improving profitability in the future.



### Securing 1 billion-dollar priority business rights for Meghna Bridge, Bangladesh

The New Frontier Business Division is also paying attention to infrastructure investment projects in developing countries. Based on its rich experience of constructing bridges including Geoga Bridge, it has implemented Meghna Bridge project that connects Dhaka, a capital city of Bangladesh to nearby areas. As it has changed from open tender ppp project to G2G project and priority business rights are given to Daewoo E&C. Currently feasibility study is underway. This project is expected to reduce traffic congestion and boosting economic growth in Bangladesh.

## Our Environmental Performance in 2020



### Business cooperation between DAEWOO ST and HUMAX EV for electronic vehicle charging infrastructure

Daewoo E&C launched a new integrated corporation by merging PRUGIO Service and Daewoo ST to improve the competitiveness of its subsidiaries and promote new frontier business. Daewoo ST promoted cooperation with an aim of establishing a charging infrastructure ecosystem utilizing 'HI Parking', a parking lot operator of HUMAX Group. HUMAX EV will be in charge of manufacturing charger, charging service and after sales service and Daewoo ST will be in charge of infrastructure installation. HUMAX EV was selected as the second item under BTS program to maximize synergy in smart energy business and investment was made for the company.



### Entry into biomass power generation

Daewoo E&C is striving to secure new growth engines by entering into biomass power generation sector. It intends to lead the supply of clean energy and realization of ESG management by entering biomass sector, which is eco-friendly energy source, based on its knowhow on power plant construction. Feasibility study for 50MW scale project of Japan, one of the most developed countries in terms of biomass industry, was conducted with the support of KIND under the Ministry of Land, Infrastructure and Transport and based on the experience and knowledge secured in this process, we will enter domestic and overseas biomass market, becoming more eco-friendly company.

## Our Social Performance in 2020



### Build Together Start-up

Daewoo E&C is creating the value of shared growth by making preemptive and strategic investment in industries with a bright future. In 2020, the company made an investment in ITRO, a platform development and big data service company and expects that ITRO's experience in various platform development will generate synergy effect in Daewoo E&C's platform-based smart city development. In addition, ITRO is conducting R&D on safety management platform for construction sites. CCTVs are installed in the construction sites, making it possible to monitor situation in the construction site via mobile device, check labor and equipment input and notify workers the emergency situation, if it occurs, immediately. The cooperation area will be expanded to process and quality control, presenting the direction for digital construction.

## New Frontier Masterpiece

**1**  
**Overseas Equity Investment  
(Office/Hotel)**

THT B3CC1 joint development project in Vietnam

**2**  
**Overseas Equity Investment  
(Office)**

THT D1CC4 in Vietnam

**3**  
**Overseas Equity Investment  
(Office)**

THT H1HH1 joint development project in Vietnam

**4**  
**Overseas new city development**

Nhon Trach new city development project in Vietnam



**5**  
**Housing Purchase and Rental  
Business using REITS**

Redevelopment of Sanseong  
section 6, Seongnam

**6**  
**New business(BTS)**

Investment in HUMAX EV  
(electronic vehicle)  
Investment in ITRO  
(platform)

**7**  
**Songdo Sheraton Hotel**

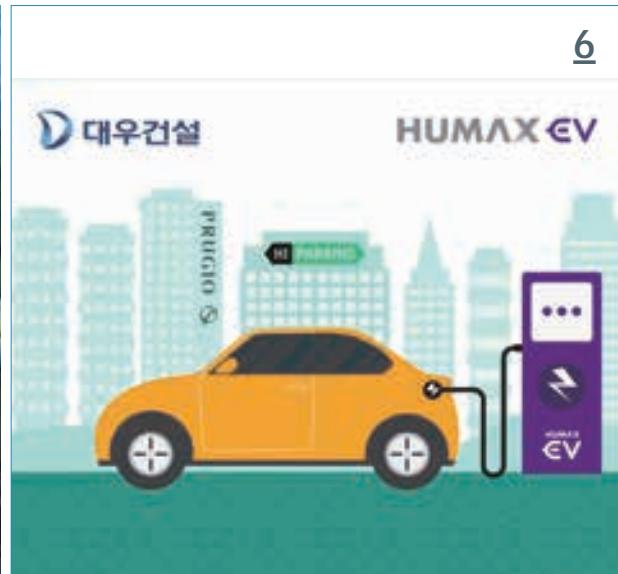
3 storeis of underground and  
23 storeis above the ground,  
5 star hotel with 321 rooms  
in total

**8**  
**Expanding the value chains of development projects**

As a general real estate developer, we will expand our value  
chain into other areas including construction, asset manage-  
ment and operation from existing simple contraction-oriented  
business.



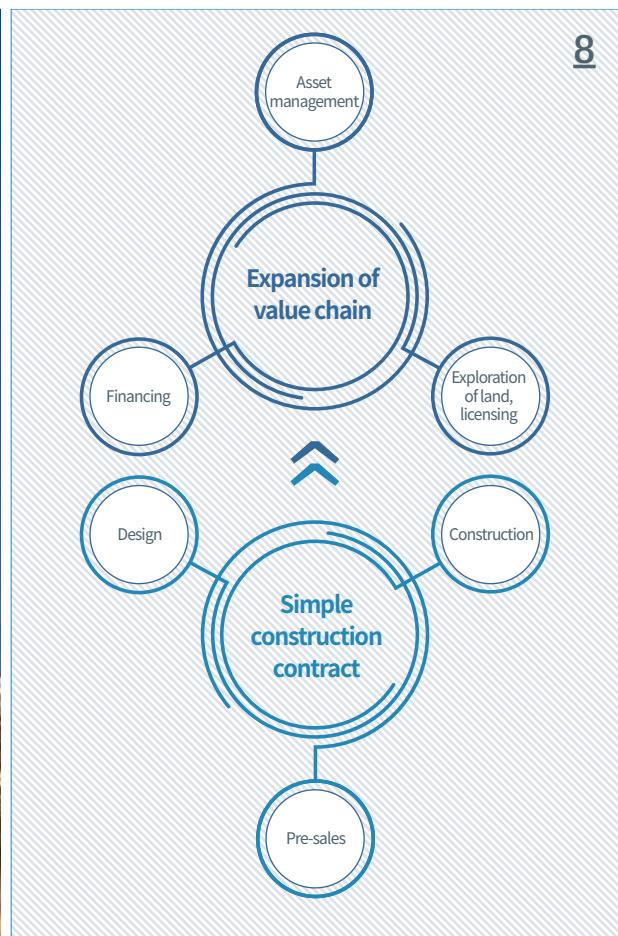
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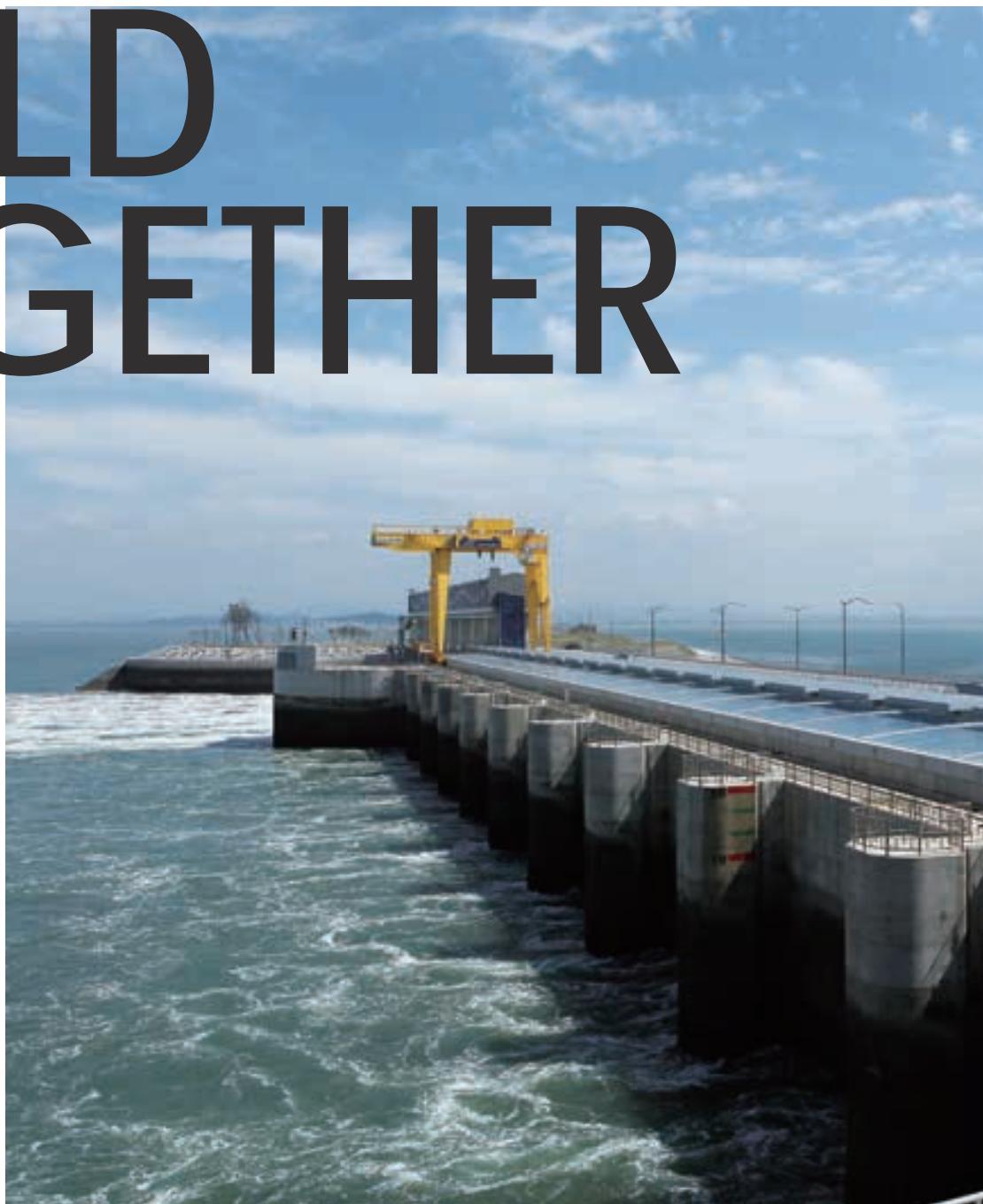


7



8

# BUILD TOGETHER



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Sihwa Lake Tidal Power Station



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Daewoo E&C made a remarkable achievements in 2020 together with employees based on indomitable will.

Daewoo E&C secured its position as a prime contractor by signing an EPC contract for LNG Train7 in Nigeria where Daewoo E&C's share is KRW 2 trillion won in the LNG liquefaction plant EPC market where global leading companies have been dominant so far. Daewoo E&C also won 5 negotiated contracts that worth about KRW 3 trillion won based on trust with the project sponsor established thanks to excellent project performance in Iraq.

However, pursuing only economic value does not guarantee sustainable growth and Daewoo E&C intends to take an active step to realize bold and influential social values.

Sustainability Management System	40
Stakeholder Engagement and Materiality Assessment	42
Future Growth	44
Safe & Green Growth	50
Shared Growth	56

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## BUILD TOGETHER

# Sustainability Management System

Daewoo E&C is establishing a sustainable management system at the company level to promote corporate sustainability. We identified strategic tasks based on major issues selected by stakeholders by expanding areas that focus on three pillars: Future Growth, Safe & Green Growth and Shared Growth. Daewoo E&C intends to contribute to the achievement of UN Sustainable Development Goals(SDGs), which are the common goals presented by UN and sustainable goals of Daewoo E&C by managing achievements of tasks every year.



**UN SDGs****(UN Sustainable Development Goals)**

UN SDGs are an initiative that presents 17 goals to be achieved by all members 2030 for sustainable development that encompasses environmental, economic and social integration. Currently, 193 countries are participating and Daewoo E&C is making an effort to support and implement SDGs.

**Achievements in 2020**

- Secured modular construction base technology, completed the base for smart home and scaling up and sophistication are underway.
- Developed and applied non-face-to-face, smart work platform(Sam/COCO)

**7. Affordable and clean energy**

- Obtained 93.7 points in 2020 welcome meal service customer satisfaction evaluation (the highest satisfaction level ever)
- 96.5% of handling voices of customers (VOC), 1.8%p increase from the previous year
- The period of handling customer complaints on average decreased by 10 days from 2019.
- Completed status survey within business division for the purpose of protecting personal information 100%

**9. Industry, innovation and infrastructure****11. Sustainable cities and communities****16. Peace, justice and strong institutions**

- The number of accidents at home and abroad decreased by 10.4%p from the previous year
- Conducted safety inspection led by CEO two times (2020)

**8. Decent work and economic growth****11. Sustainable cities and communities**

- Completed photovoltaic facility project in Jeju (46.4MW)
- Construction site waste recycling rate of 99.3%\*
- Developed 'Green Premium', energy saving housing product

\* 99.3% is the ratio of waste handled by waste handling agency for recycling

**11. Sustainable cities and communities****13. Climate action****15. Life on land**

- Secured continuity of employee training program (securing non-face-to-face training infrastructure and system)
- Established new talent nurturing strategies and action plan for the purpose of establishing a horizontal organizational culture
- Expanding diversity of employees (ratio of female employees 2019: 10.45 % 2020: 11.15%)
- Opened the channel to hire workers with disabilities as necessary (Jan. 1, 2021)

**4. Quality education****8. Decent work and economic growth**

- Conducted fair transaction training for employees (4,917 employees completed the training in 2020)
- Supported training for suppliers (providing benefits of essential training in the construction industry for 179 employees at suppliers in 2020).
- Making an effort to improve system voluntarily to protect local companies (identifying excellent local suppliers, finding communication channels, etc.)

**3. Good health and well-being****7. Affordable and clean energy**

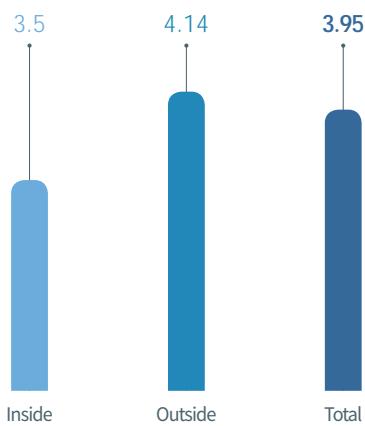
## BUILD TOGETHER

# Stakeholder Engagement and Materiality Assessment

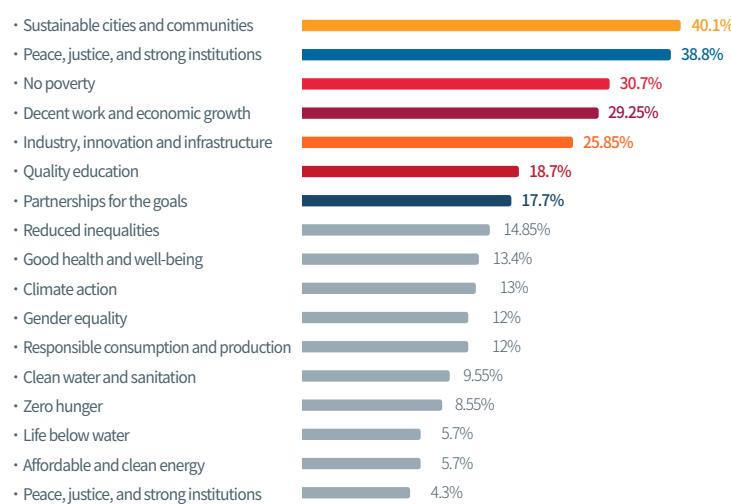
Daewoo E&C defines government agencies, shareholders and investors, customers, academia, employees, and local communities as its major stakeholders. Stakeholder opinions are collected through various communication channels, and we strive to reflect them in our management activities. We surveyed the awareness of internal and external stakeholders on sustainability management and identified the UN Sustainable Development Goals that Daewoo E&C is expected to reach most effectively.

**"Do you think Daewoo E&C is a sustainable organization that fulfills its responsibilities in the environment and society as well as business growth?"**

Unit: points (out of 5)



### UN SDGs selected by internal and external stakeholders

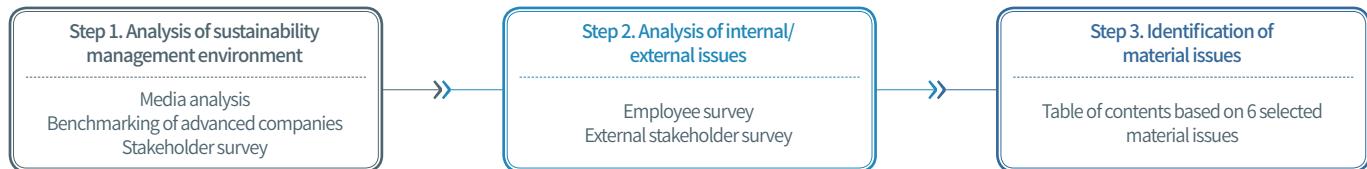


### Communication channels with major stakeholders

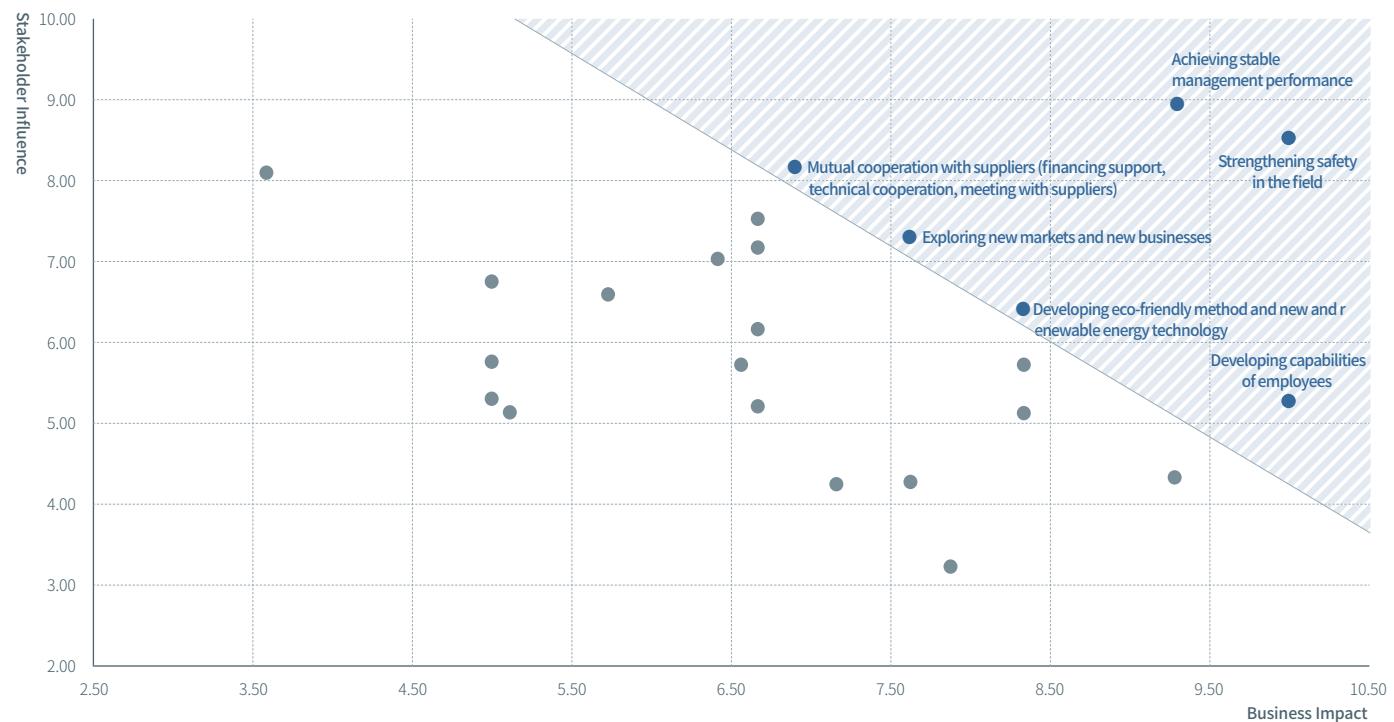
Major stakeholders	Definition	Value created	Communication channels
Government and related organizations	Power source to lay the foundation for corporate growth on institutional and social bases	Fulfillment of corporate obligations, such as job creation, tax obligations, compliance with laws and regulations, and contribution to the country's sustainable development.	<ul style="list-style-type: none"> <li>Activities in government committees</li> <li>Participation in policy research</li> <li>Cooperation programs, etc.</li> </ul>
Shareholder / Investor	Daewoo E&C's investors who provide economic capital	Providing accurate and prompt information to shareholders and investors through transparent management activities	<ul style="list-style-type: none"> <li>Regular shareholders' meeting</li> <li>Annual report</li> <li>Analyst meeting</li> <li>IR Conference, etc.</li> <li>Overseas NDR (Non-Deal Roadshow)</li> </ul>
Customer	A valuable family as well as a foundation for corporate existence that creates the future together with Daewoo E&C	Realizing customer satisfaction by providing the best residential environment and construction products and services	<ul style="list-style-type: none"> <li>Integrated Call Center</li> <li>Prugio website</li> <li>Model house</li> <li>SNS, etc.</li> </ul>
Society, association, institution	Organizations with expertise in the construction market, and targets for continuous cooperation	Building a collaboration system for R&D innovation through industry-academia cooperation and membership activities in various associations and institutions	<ul style="list-style-type: none"> <li>Conference</li> <li>Seminar</li> <li>Association activities, etc.</li> </ul>
Employees	Human resources that make up Daewoo E&C, a partner for sustainable management	Enhancing employee satisfaction and retaining talents by strengthening competencies and improving quality of life.	<ul style="list-style-type: none"> <li>Baronet (intranet)</li> <li>Labor union</li> <li>Labor-Management Committee</li> <li>Compliance system</li> <li>Ethics Help-line</li> </ul>
Community	Local communities and members affected by Daewoo E&C's business operations	Contribution to the development of local communities through active social contribution activities	<ul style="list-style-type: none"> <li>Social Service Corps</li> <li>Cyber Audit Office</li> <li>Monthly volunteer activities</li> <li>White Paper on social contribution activities, etc.</li> </ul>
Suppliers	Partners who provide energy and resources to help businesses	Support for win-win growth and building a transparent and fair partnership	<ul style="list-style-type: none"> <li>E-COS website</li> <li>Supplier meetings</li> <li>Shared-growth workshops, etc.</li> </ul>
Future society	Talents who will lead the future and all subjects that should not be overlooked from a long-term perspective	Support and investment for economic growth, social stability, and integrated implementation	<ul style="list-style-type: none"> <li>Job fair</li> <li>Recruitment website</li> <li>Student ambassador</li> <li>SNS, etc.</li> </ul>

Daewoo E&C selected major issues considering business impact and interest of stakeholders by conducting significance evaluation according to GRI (Global Reporting Initiative) process. In the sustainable management awareness survey conducted in March 2021, 81 internal and external stakeholders participated. Through the survey, we identified 6 major issues that require focus management and activities have been conducted focusing on these issues. Accordingly, results of activities were reported.

### Materiality Assessment Process



### Materiality Assessment Results



### Reporting boundary

No.	Material Issues	Reporting parts	GRI Standards	Internal		External				
				Employees	Supplier	Customers	Govt.& Local govt.	Shareholders /Investors	Community	
1	Strengthening safety in the field	Safe & Green Growth	403	○			○	○		
2	Achieving stable management performance	Future Growth	201-1	○	○			○		
3	Developing capabilities of employees	Shared Growth	404-2	○	○				○	
4	Mutual cooperation with suppliers	Shared Growth	414-1	○				○		
5	Exploring new markets and new businesses	Future Growth	203-2	○		○		○		
6	Developing eco-friendly method and new and renewable energy technology	Safe & Green Growth	302-5	○		○				

BUILD TOGETHER

# Future Growth





In 2020, the construction industry faced difficulties externally due to the global economic recession caused by the COVID-19 outbreak and resulting uncertainties.

Nonetheless, Daewoo E&C achieved an outstanding results of increase in net income by KRW 8 billion compared with 2019. Daewoo E&C will continue to respond to future uncertainties and actively concentrate on finding future growth engines, laying the foundation for sustainable growth in the future.

## Link to UN SDGs



8. Economic growth

SDG **8.1**

SDG 8.2 aims to achieve higher levels of productivity of economies through diversification, technological upgrading and innovation.



9. Innovation and infrastructure.

SDG **9.5**

SDG 9.5 aims to enhance scientific research, upgrade the technological capabilities of industrial sectors.

## 2020 Performance

<p>Operating profit of KRW <b>558.3</b> billion Management performance (consolidated criteria)</p>	<p>Secured the <b>base technology for modular construction</b></p>
<p>Securing the foundation for <b>IoT based smart home</b> Expansion and upgrading are underway</p>	<p>Welcome meal service 2020 customer satisfaction evaluation <b>93.7</b> score (the highest ever satisfaction level)</p>

# Improvement of Internal and External Competitiveness

## Our Approach

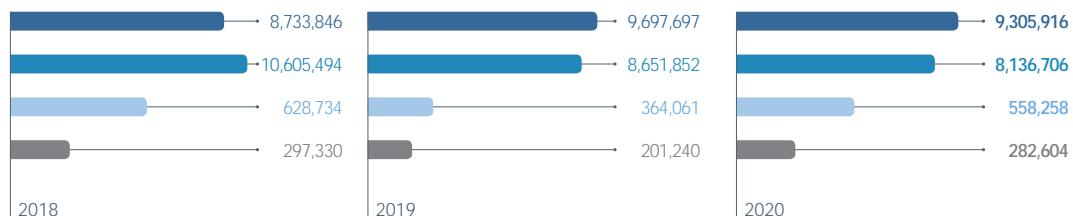
In 2020, the construction industry faced extreme difficulties externally due to the global economic recession caused by the COVID-19 outbreak and resulting uncertainties.

Nonetheless, with continuously created profits in the private housing construction market and, through risk management in the overseas businesses, the company has led to an outstanding business achievements of 13.9126 trillion won in consolidated orders, 8.1367 trillion won in sales, and 558.3 billion won in operating profit. Particularly, in Nigeria, the company became the first Korean company to be the LNG liquefaction facility EPC company by signing NLNG Train7 PJ and in Iraq, it won the project for the phase 1 of Al Faw New Port. As such the company responded to sluggish domestic construction market. Based on these good examples, the company made its utmost efforts to establish a firm foundation for successful implementation of future overseas projects. The objective for 2021 is to achieve 11.2 trillion won in consolidated orders and 9.8 trillion won in sales. An arduous business environment is expected to continue this year, but we will do our utmost to create stable profits through risk management and improve corporate values to pursue long-term growth.

**Summary of business performance and financial status for the past 3 years (consolidated)**  
(Unit: KRW 1 million)

Classification	2018	2019	2020
Total assets	8,733,846	9,697,697	9,305,916
Sales	10,605,494	8,651,852	8,136,706
Operating profit	628,734	364,061	558,258
Net income	297,330	201,240	282,604

- Total assets
- Sales
- Operating profit
- Net income



## Competitiveness in Overseas Business

The need for a systematic risk and management at the corporate level is increasing due to the complexity and diversification of overseas business. Accordingly, Daewoo E&C has adopted the Enterprise Risk Management (ERM) and developed and applied an appropriate framework. It has set up processes to identify, evaluate, respond to and monitor the risk. Moreover, it is making an effort to improve the profitability of overseas business by advancing risk sensing and establishing an optimal decision-making system based on best practice and lessons learned of projects implemented. The company has tried to minimize risk and maximize opportunities by monitoring and analyzing volatility based on risk and opportunity management based on procedures and sharing information and responding with relevant organizations across the company. The company is seeking the improvement of profitability by identifying opportunities continuously to offset the impact of potential risk. In addition, Daewoo E&C manages Focused Management Committee for major overseas projects to manage risk continuously as part of an effort to verify R&O management and strengthen responses. In 2020, Global Marketing Group was established as Daewoo E&C recognized the need for companywide marketing control tower, with an aim to expand base markets and explore new markets continuously and consistently, thereby securing future competitiveness. The company has contributed to the establishment of national social infrastructure and a balanced development by completing 529 construction projects in 48 countries since it acquired overseas construction business license in 1976. It has developed the Customer Relationship Management (CRM) to share insights in overseas market at the enterprise level, expanding information on focus countries, new markets, customers and partners and providing the foundation for winning new orders with a certain level of profitability. For domestic market, the company has analyzed business environment and established measures to respond to improve marketing capabilities. By forming a strategic partnership for public sector projects, it is expanding its competitiveness in winning orders.

## Response to Future Uncertainties

The domestic economic growth rate in 2020 was -1.0%, which was counted as a negative growth in 20 years after the financial crisis in the late 1990s. While the global economic growth rate is expected to remain at -4% with the continuation of COVID-19 situation, Korea shows a modest recovery trend on the back of the increase in export. However, COVID-19 is spreading again rapidly even after the commercialization of vaccines, which will lead to high volatility of the financial market in 2021.

The ‘paradox of regulation’ appears as the real estate price increases continuously due to a surge in liquidity despite the impact of COVID-19 and continuous real estate regulation of the government. The implementation of the Housing Lease Protection Act amid decreasing quantity of new supply led to unprecedented shortage of housing for lump-sum housing lease, triggering so called panic-buying of houses among those in their 30s and 40s. Such phenomenon can serve as a factor that drives the real estate market price in the short term, but if it continues, it could be a threat factor such as excessive increase in household debts. Daewoo E&C is making every effort to respond to future uncertainties by monitoring the rapidly changing financial and real estate markets thoroughly.

## Financial Risk Management

Daewoo E&C is striving to manage liquidity based on close cooperation with domestic and foreign financial institutions to respond to financial volatility. The company has started discussion on refinancing with existing large lenders and has secured buffer from unexpected shock on the market by

utilizing various fund sources such as credit line expansion by identifying new financing sources. In addition, the company plans to increase the share of long-term borrowing by issuing corporate bonds to strengthen the stability of the borrowing structure.

## Response to Real Estate Uncertainty

Daewoo E&C will strengthen market monitoring focusing on strategic business sites and select and focus on good performing businesses to respond to real estate uncertainties. We will respond to potential risk preemptively through its own market analysis system (DW-Real estate Information System, RIS) and pre-sell/occupancy management system. In addition, we will promote projects with good potential for selling real estate such as landmark project at the city center and housing district project to maximize the profitability and minimize market uncertainty. As a market developer we will se-

cure new growth engine. The identification of future growth engine by expanding development project and value chain is required amid fierce competition in the industry. We cannot guarantee the growth of the company only with quantitative growth based on winning orders so we will diversify our portfolio with new businesses. We will strengthen the our capabilities as a developer and expanding our investment into new businesses such as drone and electric vehicle technology by participating in joint development project and overseas PPP/IPP projects selectively.

## Diversification of Business Portfolio

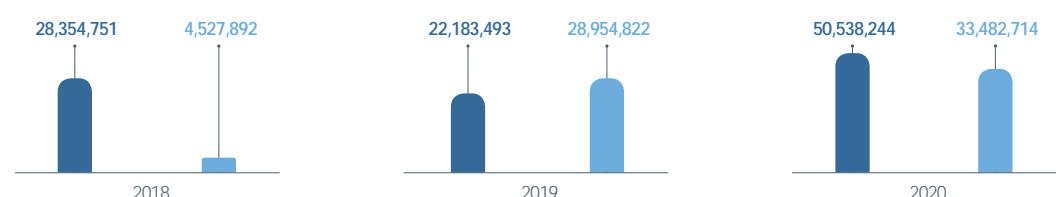
In addition to civil work, plant and housing construction businesses, Daewoo E&C is expanding its business portfolio to new businesses with sufficient potential for future growth led by New Business Headquarters established in the second half of 2019. Daewoo E&C introduce open innovation based Build Together Start-up (BTS) program to invest in three companies: SG Safety Corporation, AstroX(drone) and HumaxEV (electronic vehicle charging business). By doing so, It could generate return on investment and explored the opportunity to generate synergy with the company’s existing business. In 2020, it achieved KRW 463.6 billion in sales from activities such as maximization of profit from THT project in Vietnam and improving value of subsidiaries, contributing to the achievement of corporate management performance.

Share of sales by business area, major product and service



Orders won for the past 3 years (domestic/overseas)  
(Unit: KRW 1 million)

■ Domestic  
■ Overseas



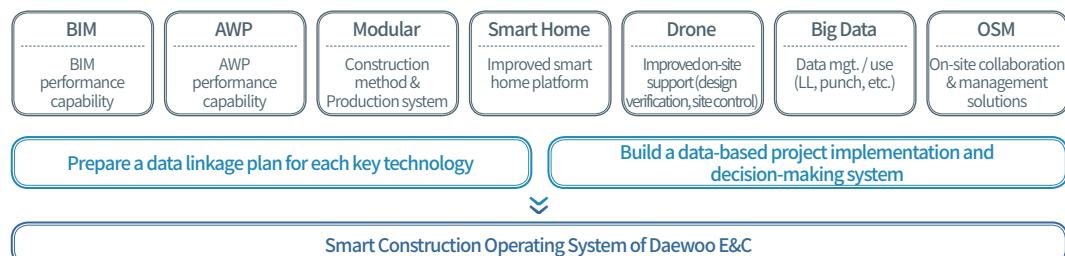
# Development of Smart R&D Capabilities

## Our Approach

With the arrival of the 4th Industrial Revolution, the convergence of cutting-edge technologies and existing technologies can contribute to the creation of various values such as reduction of accident rate, work efficiency improvement and energy efficiency improvement. Daewoo E&C has been active in developing smart R&D capabilities applicable to various business areas of the company by investing in the development of smart R&D capabilities.

## Implementation of DSC(Daewoo Smart Construction)

By introducing digital transition, and digital technologies to the construction industry, we can improve our production efficiency and strengthen our competitiveness in the construction market. For smart construction, we have selected seven major technologies (BIM, AWP, Modular, Smart home, Drone, Big Data, and Onsite Monitoring (OSM)), and have established step-by-step strategies. We are also expanding our applications by discovering highly important technologies for each major field, and plan to build data-driven decision making and management systems in all areas of the construction industry by linking and utilizing data from each field in the future.



## Modular building technology

The aging construction craft workers and environmental changes increase non-working days, consequently extending construction time and increasing construction costs. To cope with such changes in the construction environment, Daewoo E&C developed a modular system that is a technology-intensive factory production method. As a result, we could pre-fabricate

boxed modules for 60% to 90% of the entire process in a factory and stack the modules on site to complete the building, shortening the construction time. We are developing technologies to diversify our modular system for each field of the construction business. We plan to apply our modular system to 10% of the entire site from 2024.



## Smart home

In line with the 4th industrial revolution movement, the demands for the convenience of residents, indoor environment, security functions, and energy efficiency improvement are increasing in houses as well. Smart Home is a smart housing operating system focusing on residents by operating various devices that were used to be manipulated by users automatically depending on user pattern and surrounding environment utilizing sensors and devices connected to internet and network. Daewoo E&C is continuously developing residential products to improve the quality of life. Dual smart home

technology is also included in the products. Using the Smart Home Platform Application, it is possible to monitor the situation in the house and apartment complex, and remote control functions for lighting, heating, home appliances, gas, etc. can be used. In order to secure advanced smart home residential products, we are developing IoT sensors, devices, and gateway application technologies. In the future, we will develop and apply more comfortable, safe and eco-friendly housing services by using information on residents' patterns of IoT devices and AI technology.

## Smart home platform

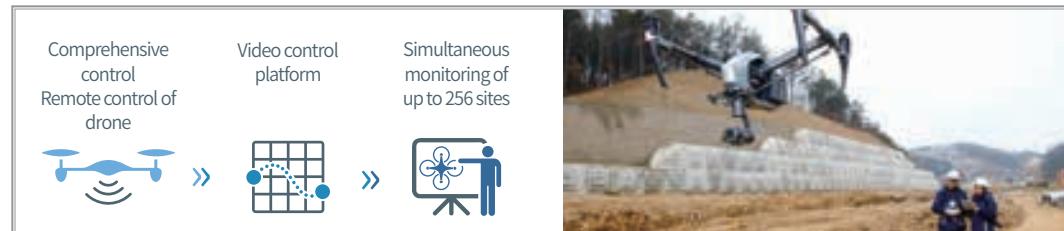


## Improved Surveying Using Drones

Using advanced technology-based surveying rather than human surveying at construction sites allows us to accurately calculate the earthwork quantities required during the construction phase and to save time and money required for work. Daewoo E&C conducts surveying efficiently by using drones at large industrial complex sites where surveying is difficult. Furthermore, it has built its own remote drone control system

for the construction industry for the first time in Korea, and the system is able to monitor the construction progress and safety risk factors at the construction sites and identify the causes of an accident from the control center. Daewoo E&C is further developing an image analysis program and will expand the use of drones to analyze changes in equipment, materials, and facilities.

**DW-CDS**  
(Daewoo Construction Drone Surveillance)



## Using Big Data for smart work

### Sam, Location-based Field Support Solution

Sometimes, we need to take some time to handle things even though they are not productive and efficient. Daewoo E&C has improved such inefficient and time-consuming work in the field with ICT technology. Sam, which is field information sharing platform based on drawing location, makes it possible to check all drawings in the field regardless of place and provides easy, rapid and simple drawing viewer function. In addition, it can improve work efficiency by link various information related to location on the drawings, allowing people involved in the project to cooperate easily. In addition, the platform provides a customized service by project including housing, civil work and plant and improves the work efficiency of employees.

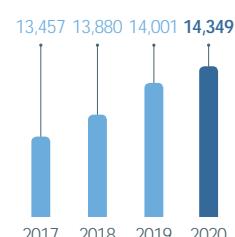
- Linking the GPS location-based photos with drawings in the field.  
⇒ Possible for team members in the field or the field and headquarters to share information in real time and integrated management
- Rapid response to the problems in the field by sharing them with expert groups in our company.

### Mobile non-face-to-face collaboration solution (COCO)

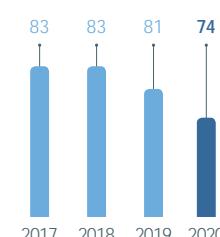
Daewoo E&C has developed new collaboration solution in line with changes in the era of 'New Normal' and 'Untact(non-face-to-face)'. COCO, an abbreviation of Co-work of Construction, is a non-face-to-face mobile collaboration platform that allows the tracking of collaboration process in the construction field based on photos and prevents the problem not related to business among employees by providing messenger function for business. In particular, it provides a function to block the information leakage, contributing to resolving security issues. COCO has been used in 20 construction sites for housing and civil work on a pilot basis since the second half of 2020 and it will be used in various construction sites.

- Increased utilization with permanent data storage
- Limiting the personal social media during work, blocking information from being released, preventing compliance risk
- Clear business instruction, checking promptness and accuracy of handling work, real-time tracking

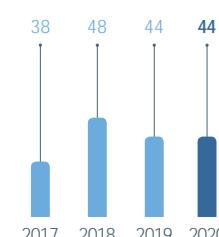
**R&D investment**  
(Unit: KRW 1 million)



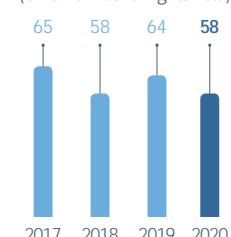
**R&D personnel**  
(Unit: Number of people)



**R&D outcome (R&D tasks)**  
(Unit: Number of tasks)



**R&D outcome (Industrial property rights)**  
(Unit: Number of rights held)



BUILD TOGETHER

# Safe & Green Growth





Daewoo E&C aims to further solidify its commitment to implementation of eco-friendly business and the advancement of safety management that respects the value of human life through the core value of "Safe & Green Growth". Daewoo E&C is actively implementing development and investment strategies to enhance eco-friendly value in various business areas operated by the company, such as creating a residential environment for high-efficiency energy based on hydrogen and renewable energy and ICT. It is continuing its efforts to advance safety management led by the CEO, such as safety inspection and safety communication by CEO.

## Link to UN SDGs



8. Economic growth

SDG **8.8**

SDG 8.8 aims to protect labor rights and promote safe and secure working environments for all workers including migrant workers, particularly women migrants.



9. Innovation and infrastructure

SDG **9.4**

SDG 9.4 aims to improve the sustainability of infrastructure by improving efficiency of resource utilization and introducing clean technologies

## 2020 Performance

<p><b>107</b> places to which CLEAR, a safety culture program, is applied, increased by <b>93</b> places from previous year</p>	<p><b>Safety Check by Management</b> 2 times by CEO 4 times by the head of the business division</p>
<p>Completed the <b>Jeju photovoltaic power generation</b> project (46.4MW)</p>	<p>Developing <b>'Green Premium'</b>, an energy saving residential product</p>

# Eco-friendly Construction

## Our Approach

While the government declared the government-led carbon neutrality in Korea in January 2021, other countries around the world are implementing and discussing ways to adopt carbon tax and vitalize multilateral carbon trade market. Against this backdrop, Daewoo E&C is making a corporate-wide effort to turn environmental risks into opportunities. We are implementing proactive development and investment strategies to improve the value of eco-friendliness in various business areas of the company. Daewoo E&C is committed to becoming a global leading E&C company based on sustainable growth by incorporating the value of environment into our management value.

## Eco-friendly energy

Daewoo E&C is making an effort to make the earth a cleaner and safer place to live with hydrogen and renewable energy technologies and eco-friendly plant technologies. On the wake of the Paris Agreement in 2015, the world is striving to move toward the era of eco-friendliness rapidly, putting the hydrogen economy and new and renewable energy at the center of the 4th Industrial Revolution.

## Hydrogen· New and Renewable Energy

Global companies are expanding eco-friendly businesses as issues of environmental crisis have emerged around the world such as global warming caused by increased carbon emissions, climate change and fine dust. Daewoo E&C is also promoting various new and renewable energy businesses such as solar power, wind power, tidal power, biogas and hydrogen energy to support the government's 2020 Renewable Energy Policy, 2050 Long-term Low-Carbon Development Strategy and the advent of a hydrogen economy.

### Solar power

Daewoo E&C played a key role in Carbon-Free Island 2030 plan of Jeju by completing 'Jeju Citrus Waste Land Solar Power Project(46.4MW)' in the first half of 2020 and is responding actively to the onshore and floating solar power business through technology development such as 'optimal design for solar power structure' and 'floating platform design independence'.

### Wind power

Daewoo E&C laid the foundation for being a wind power project developer by winning 'Yeongwol Ecwind Power Complex Construction Project (46.2MW)'. In addition, it developed 'Offshore wind power substructure system for shallow water (within 40m)

and 'suction-type concrete base structure' through government funded task to expand its business area to offshore wind power sector. In the meantime, it developed 'biogas production technology using organic waste' that can generate energy from waste sludge or food waste and applied the technology to 8 projects including Daegu DBS (3MW, constructed by Daewoo E&C) and Icheon DBS (2.1MW, constructed by other company).

### Hydrogen energy

Daewoo E&C has secured a patented technology to implement fuel-cell based convergence hydrogen power project and signed an MOU with Chuncheongbukdo province, Eumseong-gun and Chungbuk Development Corporation for 'Chungbuk Hydrogen Fuel Cell Convergence Power Generation Project (200MW)'. Based on this, Daewoo E&C is striving to identify specialized technologies such as green hydrogen production and hydrogen fuel cell power generation.

As such, Daewoo E&C is reinforcing its new and renewable energy business capabilities by developing differentiated technologies for each field of new and renewable energy according to its mid- to long-term strategy and applying it to construction sites.

## Water Resource Reprocessing and Purification Technology

Due to rapid climate change, it is expected that more than half of the global population will suffer from water shortages by 2050. Therefore, sewage treatment technology that treats used water resources is a high value-added technology for future generations to come. Daewoo E&C developed the sewage treatment method and DNR method using the principle of removing nitrogen and phosphorus and applied the method to OO sites

across the nation as of 20XX. It can treat and make the sewage water to the reusable level with its sophisticated sewage water treatment method (DMBR). In addition, it has developed and spread membrane separation sophisticated water treatment method (DIMS) with growing social demand for eco-friendly water purification technology. The technology has been in use in major sophisticated water purification facilities.

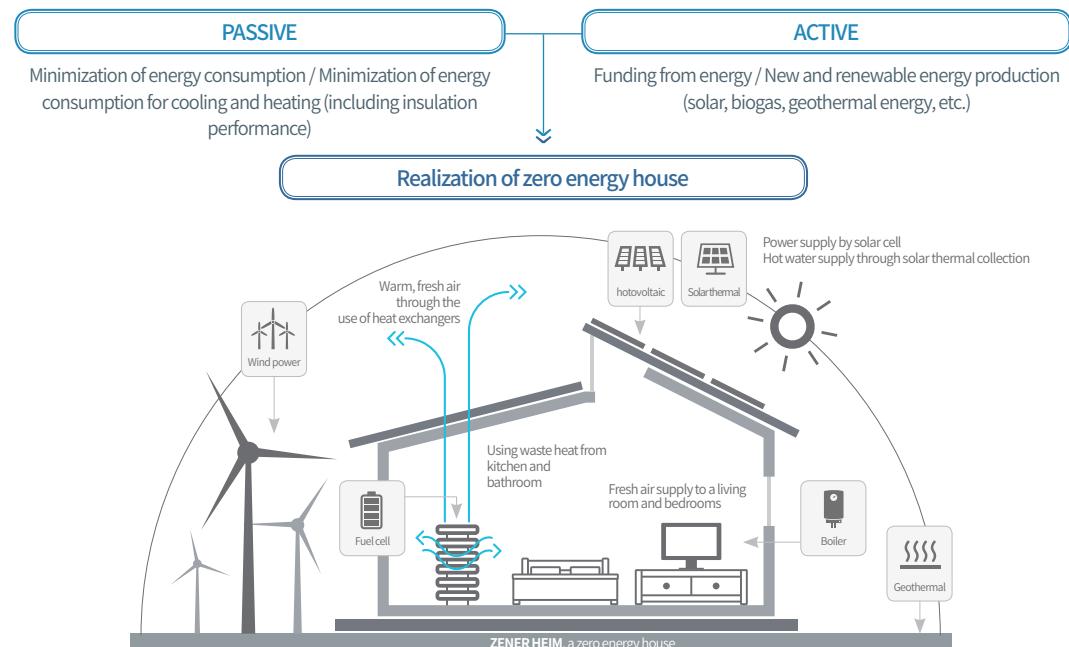
## Highly Efficient Energy Housing Environment

The most efficient way to save energy in buildings is to maximize insulation and airtightness to reduce energy loss from the exterior of the building, improve the efficiency of energy use by equipment, supply energy produced from new and renewable energy sources to buildings for self-sufficiency. In addition, Daewoo E&C is promoting data-based energy use efficiency technology in residential areas by incorporating ICT technology. We will continue to lead the development of eco-friendly, high-efficiency, energy-saving residential environments.

### Zero energy house

The world is striving to develop technologies to reduce energy consumption and greenhouse gas emissions in order to reduce environmental damage caused by global warming. Daewoo E&C has developed "Green Premium," an energy-saving residential product, and is participating in responding to climate change with its various energy-saving systems. Green Premium apartments allow residents to set up energy-using devices all at once and use remote telemetering systems to analyze the electricity and heating they used, eventually encouraging them

to participate in saving energy. In addition, thanks to a smart home/complex energy integrated management system, it is also possible to utilize IoT technology and big data to analyze the lifestyle of residents and enable an efficient use of energy. Apart from the above technologies, we are developing an optimal external sunshade application to maximize energy saving performance, and based on this, we will implement a zero-energy house with an energy self-sufficiency rate of 100%.



### Condensation Prevention Solution

Daewoo E&C analyzes the causes of condensation that occur in outer walls and windows in winter and condensation in the basement floor in summer and suggests optimal condensation prevention measures according to condensation conditions. Through an artificial climate laboratory, experiments

are conducted to analyze condensation conditions, insulation and window performance. In addition, CFD and simulation are conducted to analyze the current distribution of indoor temperature for the purpose of predicting condensation occurrence.

Condensation prevention analysis solution

#### Artificial climate laboratory

Analysis and experiment on conditions for condensation / Analysis and experiment on insulation materials and window performance

#### CFD simulation

Analysis and experiment of indoor thermal environment

Improving energy efficiency

# Safer Construction Site

## Our Approach



[http://www.daewooenc.re.kr/  
skill/skill02\\_2.asp](http://www.daewooenc.re.kr/skill/skill02_2.asp)

With the promulgation of the Severe Accident Act on January 26, 2021, domestic companies and institutions are responsible for accidents involving employees of the company itself as well as employees of contractors, which may lead to penalties for business owners and managers. In particular, the construction industry is exposed to higher risk of accident than other industries, requiring a special attention. Accordingly, Daewoo E&C implements safe management actively at the CEO level by conducting field safety inspection and communication led by CEO to listen to the voices on safety risk from people working in construction sites.

## Upgrading Field HSE Inspection and Monitoring Method

### HSE System Monitoring

Daewoo E&C encourages its members to change their safety awareness and behavior and at the same time, it is making various efforts to prevent serious accidents at construction sites. However, safety accident could happen even with a moment of inattention so careful and strict monitoring is required to make sure that efforts to

prevent safety accidents continue in the field. Daewoo E&C checks the implementation of domestic and overseas safety and health system through HSE system monitoring and in 2020, HSE system review function was migrated from Business Support Division to Civil work, Plant and Housing & Building Business Division.

Daewoo E&C has been operating safety patrol system since 2019 based on its judgement that fundamental improvement was necessary for fatal accidents and types of accidents that are repeated in construction sites. Safe patrol is conducted to check whether basic safety rules to prevent fatal accidents are well implemented in all sites. It is conducted without notice targeting unspecified sites. Safety patrol has an authority to stop work and take immediate actions if he/she identifies high risk matters on a construction site. In 2020, a total of 66 inspections were conducted. Out of 66 inspections, 13 cases of suspension of work and 250 cases of immediate actions were identified. In addition to monitoring on

safety rules, it is conducting a thorough inspection on the risk of infrastructure such as equipment, facility or temporary facilities. A theme-based inspection is conducted to check whether applicable laws on safety management, equipment and facilities are complied with in the field and a total of 20 inspections were conducted in 2020. In the meantime, special inspection is conducted to diagnose the safety of temporary facilities such as working scaffolding and temporary stairs. Such a special inspection was conducted on 117 construction sites in total in 2020 and 280 safe nonconformity cases were identified and actions were taken.

### Safety Rules and Infrastructure Monitoring

Safety inspection, review and support

#### Inspection by the management

Inspection by CEO (2 times)  
Inspection by head of business division (4 times)

#### Field inspection

Review (87 times)  
Support (63 times)

#### Construction machine and technology safety support

Technical safety support (673 times)  
Inspection on construction equipment before goods receipt (1,140 times)

#### Other field inspection

Safety patrol (66 times)

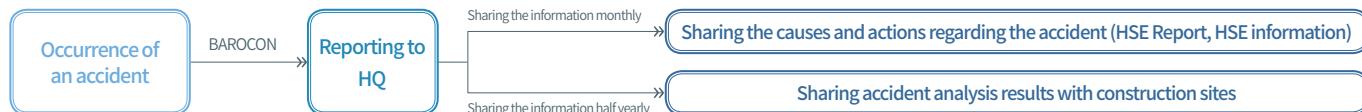
## Reinforcing Safety Communication

Daewoo E&C promotes the improvement of safety management system and level by listening to opinion from members of each business division and members working in the field regularly and sharing it and identifying new improvements or ideas. Quality and Safety Office conducts regular safety meeting every month with the participation of quality safety manager of each business division. The meeting is intended to minimize the gap in view and opinion on safety between HQ and each business division and make a harmonized decision-making. In addition, Voices of Safety system is run to listen to the opinion of safety managers working in 8 zones across the nation. Upon comment is registered, inspection is conducted by an external organization and the inspection results are shared with safety managers. As such measures are taken to improve the situation immediately as soon as safety hazards are identified.

### Sharing Accident Cases Companywide

Daewoo E&C prevents the recurrence of similar accidents by sharing accident cases across the company every time when large and small accidents occur in construction sites. Accidents that occur in a construction site is supposed to be reported to HQ through BAROCON system and the causes and measures taken

for the events are shared through HSE Report every month. In addition, the analysis results of the accidents that occurred in the field are shared with the field every 6 months to make sure that the field establishes measures to prevent the recurrence of the same events and promote the level of safety management.



## Safety Innovation Committee

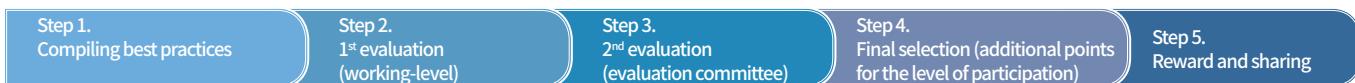
In order to preemptively respond to the company's responsibility for safety and, strengthened regulations such as the Punishment of Serious Accidents Act, the Safety Innovation Committee was established to serve as a company-wide control tower for safety innovation. In addition, the Safety Innovation Task Force, a working organization headed by the head of the Quality and Safety Office, selected detailed innovation tasks for each business headquarters and support organization and established specific plans. In the first report of the Safety Innovation Committee conducted in June 2021, 5 issues were developed; reforming the safety organization, strengthening safety manpower and improving conditions, expanding investment in manpower and facilities with additional safety budget, and excluding unqualified suppliers by improving the supplier bidding system and evaluation.

## Accident prevention program in the field

### Prevention of Near Miss Events

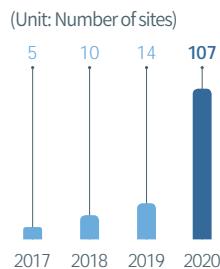
Near miss events refer to precursors of an accident that could have occurred during construction work but without direct personal or property damage. As near miss events could lead to large-scale accidents, Daewoo E&C promotes the identification of near miss events. As part of these efforts, it runs a reward system to prevent an accident preemptively. Reward is given to 10 sites

based on 2 evaluations that are conducted 6 month-interval throughout the year. In 2020, a total of KRW 8.1 million reward was provided utilizing the budget under the category of field welfare expenses. The near miss events identified are supposed to be registered in BAROCON and mobile application and shared across the company.



### Operation of CLEAR, a Safety Culture Promotion Program

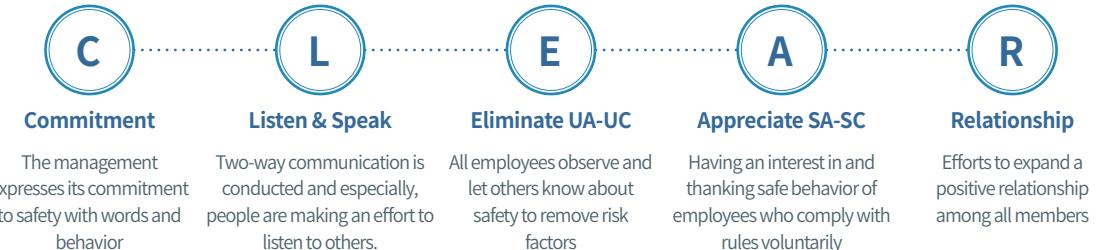
#### Sites with pilot operation of clear (Unit: Number of sites)



CLEAR was introduced in order to change unsafe behavior that accounts for the most part of causes of industrial accidents. The purpose of the program is to establish a culture where people protect each other by improving the safety awareness based on the relationship with those working in the field. In 2020, adoption

of CLEAR program was expanded to 107 sites. Daewoo E&C is nurturing experts such as consultants and instructors for construction sites to disseminate the CLEAR culture and the program to diagnose the level of safety culture in the field is under development.

#### What is CLEAR culture?



## Safety and Health of Global Workforce

Daewoo E&C is endeavoring to prevent the outbreak and spread of COVID-19 in overseas construction sites. In particular, the company made it mandatory for the workforce from the third country to receive COVID-19 test before sending them as part of preemptive measures to block the entry of those with COVID-19 into overseas construction sites. COVID-19 testing cost is fully covered by the company so global workforce can take COVID-19 test without feeling burden of the test.

### SPECIAL CASE



#### Daewoo E&C's Response to COVID-19

Daewoo E&C has provided various services and quarantine supplies to protect employees from the spread of COVID-19. The company purchased and supplied health masks that worth KRW 190 million not only to domestic sites but also to overseas sites. In addition, it purchased diagnostic kits worth KRW 850 million and distributed them to 18 sites and 2 branches. Moreover, it supports the full cost of test billed when diagnosing COVID-19 at home and abroad. In the meantime, Daewoo E&C made it possible for employees to conduct their work safely by providing COCO, a non-face-to-face mobile collaboration solution.

BUILD TOGETHER

# Shared Growth





Daewoo E&C is incorporating its management commitment of identifying potential of its members and shared growth with suppliers into the core value of “Shared Growth”. In 2020, Daewoo E&C is making an effort to establish a horizontal job system by establishing and implementing new HRD strategies and action plans for employees and spread the value of sustainability in the value chain by evaluating sustainability of suppliers.

## Link to UN SDGs



8. Economic growth

SDG **8.8**

SDG 8.8 aims to protect labor rights and promote safe and secure working environments for all workers including migrant workers, particularly women migrants.



9. Innovation and infrastructure

SDG **9.4**

SDG 9.4 aims to improve the sustainability of infrastructure by improving efficiency of resource utilization and introducing clean technologies.

## 2020 Performance

### Expanding diversity of employees

Share of female employees and executives  
2019: 10.45%  
2020: 11.15%

### Opening recruitment screening process

to hire workers with disability

Jan. 1, 2021

### Support for supplier training

(Providing essential training for construction industry to 179 employees at suppliers in 2020)

### Voluntary efforts to improve system

to protect local companies  
(Identifying excellent local suppliers, exploring communication channels, etc.)

# Nurturing Talents Who Pursue Core Values

## Our Approach

Nurturing new employees into talents that fit the core values of the company and providing them with appropriate career path by recognizing their potential has a great impact not only on individual growth but also on corporate growth. Daewoo E&C recognize the importance of human resources so it has established and implemented new HRD strategies and action plans in 2020.

## Talent Development Strategy

Daewoo E&C aims to realize the best corporate value based on a systematic talent development strategy to become a company that realizes the best value together with customers. In 2020, talent development strategy and an action plan were established to establish a horizontal job system and the strategic direction focusing on four pillars such as nurturing talent focusing on job, support for job shift and manpower efficiency, development of organizational culture and response to post COVID-19 era.

Vision

**BUILD TOGETHER | Realizing the best value together with the customer**

Strategic goal

**Global Top 20**

Talent

**Those who challenge everything with faith and passion and fulfill their responsibilities according to their beliefs**

Talent development strategy for 2021

**Nurturing talent focusing on job**

- HR system focusing on jobs, strengthening the capabilities to perform projects.
- Development of job courses based on the analysis of jobs

**Support for job shift and manpower efficiency**

- Development of job courses to secure talent pool
- Support for outplacement training

**Development of organizational culture**

- Creating synergy effect with organizational culture council
- Conducting education based on the results of organizational culture diagnosis and leadership evaluation

**Response to post COVID-19 era**

- Establishing a learning environment to respond to the era of post COVID-19 and New Normal

## Nurturing Daewoo E&C Type Core Talent

The fastest way to achieve the ultimate goal of a company is to make its members understand the views and visions of an organization. Daewoo E&C identifies practice of core values and

makes sure that it is used for training programs targeting new employees and existing employees and as the basis of employee evaluation.

Daewoo Core Values & Practical Actions

- 
- Don't be afraid of change and failure.
  - Ask questions and find answers.
  - Be passionate.
  - Think and practice first.

- 
- Be the master of your work.
  - Actively accept powers and responsibilities.
  - Follow the basics and principles
  - Finish what you have started.

## Customized capacity building education

### Job training

Daewoo E&C offers job training to make sure that employees from junior level to senior level in all business divisions regardless of whether they are working for supporting department or field can strengthen their expertise. In particular, Daewoo E&C made

an effort to develop job-focused training course, moving away from training course focusing on position. The company is planning to provide capacity building roadmap at the job competency level so that members can be provided with right career path.

#### Total number of people who completed training

(unit: number of people)

2019		30,445
2020		31,061
2020 plan		31,491

#### Total training hours

(unit: Number of trainees x hours)

2019		291,277
2020		222,822
2020 plan		264,355

## Securing training continuity in a non-face-to-face manner

Policy of providing training courses for each social distancing level

Daewoo E&C pursues paradigm change in the operation of training courses to prepare for the era of COVID-19 and New Normal. With the impact of COVID-19 in 2020, Daewoo E&C established and operated different training operation policy for each social distancing stage to comply with quarantine measures strictly for offline classroom training. In addition, we offered real-time online class, and online and offline hybrid training depending on the characteristics of training programs and made an effort to provide content and training optimized for online platform.

Level	1	1.5	2	2.5	3
Quarantine	Daewoo E&C pursues paradigm change in the operation of training courses to prepare for the era of COVID-19 AND New Normal. With the impact of COVID-19 in 2020, Daewoo E&C established and operated different training operation policy for each social distancing stage to comply with quarantine measures strictly for offline classroom training. In addition, we offered real-time online class, and online and offline hybrid training depending on the characteristics of training programs and made an effort to provide content and training optimized for online platform.				
Internal and external training	Conducting training as normal		Making transition to online training, pending attendance, time adjustment		

## Leadership Training

Daewoo E&C conducts leadership training for both internal and on-site managers to cultivate communication skills to recognize the gap between generations and appropriate leadership required for each organization. In order to cultivate the leadership required for each position, from new employees to executives, the company has established a leadership pipeline to provide unified and continuous training.

## Enhancement of global competencies of employees

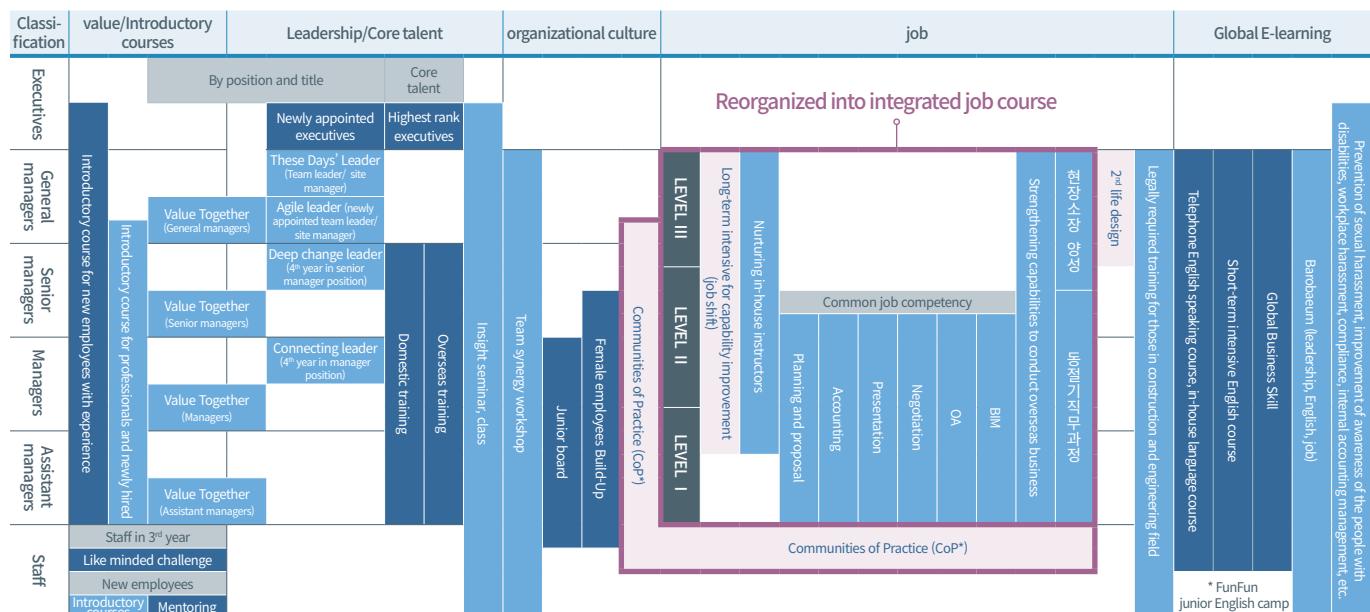
Daewoo E&C is paying attention to improving the language skills of its employees in operating overseas projects that are the basis of the national economy. Basically, telephone English and in-house language courses are provided to most of its members, and for those who require language skills development, the company runs an intensive course to improve language skills including global business skills in the short term.

## Enhancement of overseas project execution capabilities

In order to grow as a global construction leader with employees, Daewoo E&C has reorganized its position-based job training system into function-based system and improved its ability to perform work in global sites. For overseas workers and prospective employees, we have further developed practical courses based on field needs, such as overseas business process, risk factors and opportunity factors, training courses such as lessons learned, and cost management, process management, and contract management training. In 2021, training course will be upgraded to offer customized training based on the experience, capabilities and performance of trainees.

### Daewoo E&C's Training System

■ Newly established in 2021 ■ Cyber training



# Leading the Supply Chain Focusing on Fairness and Win-Win Growth

## Our Approach

There cannot be a company that can create the best value on its own. In particular, the construction industry is an industry that shares interests with numerous business partners, and construction companies should consider to increase the value of fairness and win-win growth. Daewoo E&C is inducing the value chain-led sustainability value enhancement by conducting a sustainability assessment for the supply chain. In addition, the company review applicable laws to prevent the risks from the Fair Transaction in Subcontracting Act, and continues to take active steps to prepare practical measures for safety and financial support for suppliers.

## Supply Chain Sustainability Assessment

Upon selecting and evaluating suppliers, Daewoo E&C diagnoses economic, environmental, safety and social risks to enhance the overall competitiveness of the supply chain and encourages suppliers to participate in sustainability management. In economic terms, if the credit rating standard is not met or the debt ratio standard is exceeded, and in environmental terms, if it is judged that a serious problem has been caused due to insufficient environmental management or, serious accidents (one or more deaths, etc.) or safety accidents are covered up, in safety terms, and if a serious accident or death of three or more people occurs at least three times a year in social terms or if a problem such as a long-term overdue payment occurs to a worker, Daewoo E&C terminates the transaction with the supplier. We provide a one-year contract performance guarantee insurance partial reduction and exemption for excellent suppliers selected through comprehensive evaluation of economic, environmental, safety, and social risk.



## Strengthening compliance with Fair Transactions in Subcontracting Act

Daewoo E&C ensures that the four fair trade practices enacted and revised by the Fair Trade Commission can be faithfully reflected in our fair trade guidelines and internal procedures related to contract signing to block unfair trade practices fundamentally. In 2020, we are reinforcing the compliance with the prevention of risk related to subcontracting violations through inspection and supplementation of standard on-site manuals and contract procedures.

### Major activities to prevent risk of Violating the Fair Transaction

- |  |  |   |
|--|--|---|
| <p><b>Standardization of field description</b></p> <ul style="list-style-type: none"> <li>A number of unfair special conditions are included in general quotation condition, specifications and field special conditions and duplicated information making the field description extensive.</li> <li>Minimizing the risk of violating the Fair Transaction in Subcontracting Act while improving work efficiency with the use of revised standard field description</li> </ul> | <p><b>Changes in procedures for signing contract</b></p> <ul style="list-style-type: none"> <li>The risk of violating the Fair Transaction in Subcontracting Act exists with business process under which contract is signed after receiving contract performance guarantee</li> <li>Complying with Fair Transaction in Subcontracting Act by changing work process where guarantee is registered after signing a contract.</li> </ul> | <p><b>Making companywide announcement on obligation to issue written documents</b></p> <ul style="list-style-type: none"> <li>Making announcement on obligations to issue written documents under the Fair Transaction in Subcontracting Act to minimize the risk of violating Fair Transaction in Subcontracting Act.</li> <li>Reinforcing the compliance with the Fair Transaction in Subcontracting Act by organizing written document forms that can be used in the field together with examples of how to fill out the forms.</li> </ul> |
|--|--|---|

## Fair trade training for employees

Daewoo E&C conducts training for employees to establish proper relationships with suppliers. In 2020, online compliance training was provided due to COVID-19 to prevent bossing suppliers around in the Code of Ethics. (March 24-April 13, 2020, 4,917 trainees completed the training). In addition, we operate a cyber audit office on the Daewoo E&C's website so that anyone can report unethical incidents anonymously.

## Enhanced safety management of suppliers

Daewoo E&C has declared company-wide safety innovation to strengthen support for the safety management of suppliers. In the construction industry where the risk of safety accidents is high, safety management is one of the top priorities for shared growth, so we increased the proportion of safety evaluation from 4% to 20% when evaluating suppliers. We also added safety evaluation to the quarterly evaluation to improve the evaluation system to assess not only the construction competency but also safety risks of suppliers, and exclude the evaluation of the site managers to secure the independence and objectivity of the evaluation. Through this, we expect our suppliers to raise safety awareness, minimize accidents, and prevent enormous damage from accidents.

### Supplier evaluation process

Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
Field evaluation		Field evaluation - Person in charge of field - Field manager - Head of relevant team					
Safety evaluation	Request evaluation	Safety evaluation -Safety manager -Construction manager	Field evaluation Safety evaluation HQ evaluation Result compilation (3 years)	Incorporation into comprehensive evaluation	Application for bidding grade	Final reporting	Notification of evaluation results
Headquarter evaluation		HQ evaluation -Relevant team at HQ					

## Support for Cash Flow of Suppliers

Daewoo E&C operates the Shared Growth Fund to create a smooth cash flow for suppliers with relatively weak financial foundations. This fund was created by signing an agreement with Korea Development Bank in 2012, and as of 2020, a fund worth KRW14 billion is being managed. When a partner company of Daewoo E&C is approved for a shared growth fund loan, they can automatically receive a 0.64% interest rate cut, and KRW 13.3 billion out of the KRW 14 billion of the fund is currently being used as a fund for suppliers. In 2021, we are considering expanding the size of the Shared Growth Fund, and we are planning to develop and introduce programs to expand cash flow for suppliers in addition to the fund.

## Training Support for Suppliers

Daewoo E&C supports training for the purpose of improving job competency for employees of suppliers. This training consists of essential training programs for the nature of the construction industry, such as labor management at construction sites, construction humanities, information security, basic construction industry law practice, and subcontracting law practice. In 2020, KRW 12.6 million won was invested in this training program, and a total of 179 employees of suppliers completed the training. In addition, a separate quality education is provided for new equipment and materials suppliers that have partnered with Daewoo E&C for the past 1 year to enhance understanding of the quality and company evaluation process and procedures, and to enable continuous contract signing through improvement of quality.

## Voluntary Protection of Local Partners

Due to complex reasons such as a prolonged domestic construction economic downturn and a decrease in local construction orders, the local construction industry has shrunk rapidly and local companies are in difficulties. In addition, Daewoo E&C has fully implemented the automatic selection system for bidding participants from 2019 in order to ensure transparent procurement operation, so there was an institutional limitation in selecting a local company as a bidder. In order to revitalize the local construction industry, we are improving various systems to improve the subcontracting rate of local companies and increase the use rate of local materials/equipment/manpower. Initially, the strict procedure required for manual selection of local suppliers was applied but the procedure has improved so that the person in charge of bidding can select some of the partner companies participate in manual selection bidding for each first. In addition, in order to discover and utilize excellent local suppliers, we regularly visit sites to listen to opinions, and attend various local government meetings and events to consider ways to improve the subcontracting rate of local companies, and to find improvements for mutual cooperation.

# ESG



Oman Sur power plant



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Daewoo E&C is doing its best to create corporate value and make a better future for mankind by putting sustainable management into practice.

It is conducting sustainable construction business by responding to climate change actively focusing on the value of environmental preservation and making an effort to continue shared growth management activities through customer satisfaction, social contribution and securing key talents.

In addition, Daewoo E&C has a governance structure based on the principle of checks and balances for a reasonable decision-making and transparent management.

Daewoo E&C will put social responsibilities into practice and move forward together with all employees.

Environmental	64
Social	66
Governance	74

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# Environmental

## Environmental management system

Since 1997, Daewoo E&C has been managing the entire business process including design, material purchase, construction, and R&D by applying ISO 14001 standard to operate an environmental management system that meets international standards. Focusing on the observation of international standards and the value of environmental preservation, we actively promote sustainable construction projects in response to climate change, including global warming.

## Environmental Governance

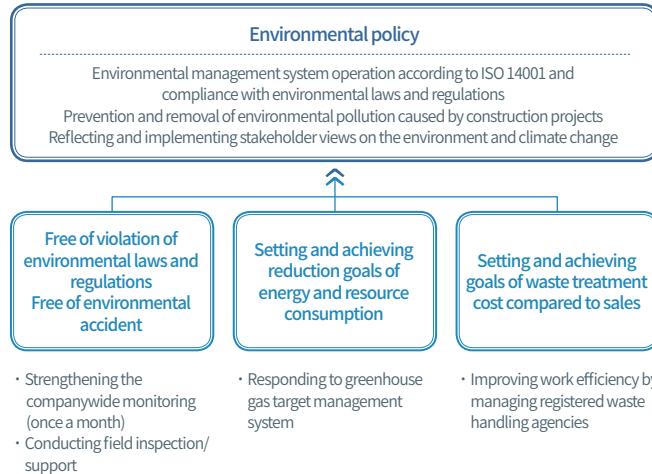
For the systematic implementation of environmental goals, the HSE Planning and Operation Team under the Quality and Safety Office which reports directly to CEO is in charge of environmental management. To ensure that there is no gap in the company's environmental management, there are teams in charge of environment under each business division (Civil work Quality and Safety Team, Housing and Building Quality and Safety Team, Plant Project Support Team 2). The head of the Quality and Safety Office checks and supervises the effectiveness of the company-wide environmental management system on behalf of the CEO, and the HSE Planning and Operation team checks the implementation of the environmental system by managing implementation and maintenance of the company-wide environmental management system. In particular, the company-wide management review committee is held once a year under the CEO, and the management representative (the head of the Quality and Safety Office) acts on behalf of the CEO to check and supervise the effectiveness of the company-wide environmental management system and give instructions on environmental management initiatives in the following year.

## Environmental Monitoring

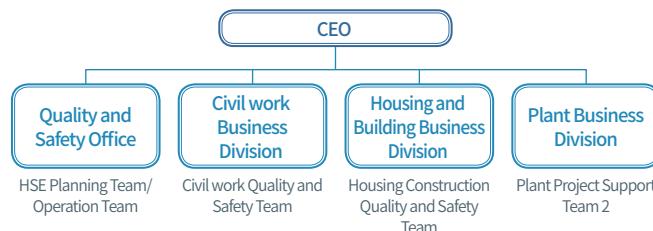
Daewoo E&C provides on-site support via teams in charge of environment under each business division within 3 months from the time when a new site is opened and the construction begins, so that the site's environmental management system can be smoothly operated. In addition, it is raising awareness on environmental regulations and management through education. In addition, the HSE Operation Team at the Quality and Safety Office conducts HSE system monitoring twice a year for the environment management teams at the business division, and the teams audits the HSE system to check whether environmental management system is implemented and environmental regulations are complied with. The results of the HSE system audit are reflected in the on-site environmental evaluation, and annual awards are given for sites with excellent evaluation results including the suppliers on site. Plaques and awards were awarded to 9 sites in 2020.

## Green Purchase Process

Eco-friendly design	Material purchase	Construction and performance monitoring	Reporting to stakeholders
<ul style="list-style-type: none"> <li>Applying Hazardous Chemical Substances Control Act, Waste Control Act and eco-friendly design guidelines such as green certification criteria</li> <li>Inducing eco-friendly design according to other corporate internal criteria</li> </ul>	<ul style="list-style-type: none"> <li>Purchasing eco-friendly materials to reduce energy use and waste according to design details</li> <li>Managing details of purchase through Daewoo E&amp;C procurement system (e-COS)</li> </ul>	<ul style="list-style-type: none"> <li>Applying eco-friendly materials to construction site according to design and purchase details.</li> <li>Possible to check purchase history through procurement system</li> </ul>	<ul style="list-style-type: none"> <li>Reporting green purchase performance every year through sustainable management report</li> <li>Improving external awareness via communication with domestic and overseas sustainable management evaluation agencies.</li> </ul>



Organizational chart for environmental management



## Reduction of impact of business places on environment

### Eco-friendly Design and Purchase

Daewoo E&C has a green purchasing process to purchase materials considering the environment from the design stage. We use water-saving sensors and toilets, hybrid security lights, and elevator power regeneration systems to save water and energy, and apply eco-friendly technologies such as carbon dioxide capture, advanced water purification and sewage treatment, and organic waste-to-energy. We developed the world's first cement-free eco-friendly mortar and applied it to Prugio at Bucheon Sosa Station, and were recognized for our eco-friendly civil engineering technology by winning the main prize in the environment category at the IRF GRAA Global Road Achievement Awards for the construction of the Inje-Yangyang Tunnel.

## Environmental education for employees

For environmental management, it is important for Daewoo E&C employees to share their environmental awareness and practice it by themselves in the field, as well as reorganization or system improvement at the company level. Due to the outbreak of COVID-19, the job competency training for the field environmental manager was provided online in 2020. In addition, we have been conducting emergency response simulation in response to environmental accidents such as waste oil spills and tire washer failures that may occur in the field. A total of companywide environmental education was conducted 401 times and 10,554 trainees completed the training in 2020.

## Integrated waste management system

Daewoo E&C strictly manages the waste from construction sites from generation to disposal stage in order to minimize adverse impacts on the environment. In 2019, we created a waste management menu in the BAROCON system for safe and systematic waste disposal. This was to complement the problems of the previous system, which was operated for real-time management and monitoring of waste, and environmental work and IT infrastructure were integrated to streamline the work. We also tried to minimize the environmental impact during the construction process by developing an application (One-Touch HSEQ) to upload photos when the waste is discharged and to establish a real-time monitoring system.

Furthermore, Daewoo E&C is continuing its efforts to improve by taking the environmental work system improvement as a task to enhance company-wide corporate value. In particular, it is equipped with practical guides for environmental management and on-site environmental management in case of violation of environmental laws by supplementing the guidelines related to construction waste. The effectiveness of management measures has been improved. In addition, education on construction waste at domestic sites was expanded and eight types of teaching plans were prepared and distributed. In addition, actions were taken to make sure that on-site construction waste training is conducted quarterly.

## Conservation of Biodiversity

Daewoo E&C strives to minimize habitat destruction of wild animals that may occur during the construction process. During the construction of the Gwacheon Knowledge Information Town, which is scheduled to be completed in 2023, it was confirmed that the endangered and protected species of narrow-mouthed toad were inhabited at the construction site, and in accordance with the laws on the protection and management of wild animals, the migration activities for the narrow-mouthed toads were carried out. Daewoo E&C will continue to monitor the process until 2023, contributing to the habitat and breeding of narrow-mouthed toads, and will strive to preserve biodiversity near our business sites and construction sites.

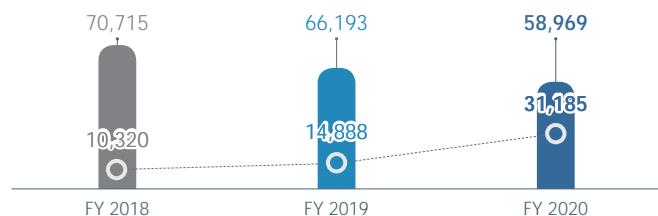
## Respond to Climate Change

### 2030 GHG Reduction Plan

Daewoo E&C is responding to climate change by faithfully implementing the 2030 National GHG Reduction Basic Plan and Basic Roadmap. Since 2012, we have been monitoring the amount of GHGs emitted in domestic business activities and their emission sources by introducing a greenhouse gas inventory system, and have been transparently disclosing them to respond responsibly to the demands of stakeholders.

Performance of GHG emissions & reduction(Scope 1, 2) (Unit: tCO<sub>2</sub>eq)

■ Emissions ● Reduction



\* The amount of GHG reduction means the value of the government's permitted amount minus the emission performance

### Participation in Climate Disclosure Project

Climate Disclosure Project (CDP) is a global non-profit organization that collects carbon emission information of major listed companies around the world. CDP publishes a report that analyzes carbon information and provides the report to financial institutions around the world to make an appropriate ESG investment decision every year. Daewoo E&C has provided its carbon information to CDP and its graded was up by one step to grade B in 2020.



## Energy saving activities

Daewoo E&C monitors the amount of energy consumed in the head office building and construction sites in real time, and practices efficient energy use by installing LEDs for more than 90% of the head office lighting. We are also conducting a monthly office diet campaign to reduce standby power consumption by encouraging employees to turn off electronic devices that are not in use. Office space lighting is turned off for 1 hour during lunch time on working days and the entire building is turned off at 9 pm to minimize unnecessary energy consumption. Introduction of intensive working hours minimizes the movement of employees and implementing working from home reduces the number of residents in the building. As such we are carrying out activities to save energy in a variety of ways.

## Daewoo E&C Signing a

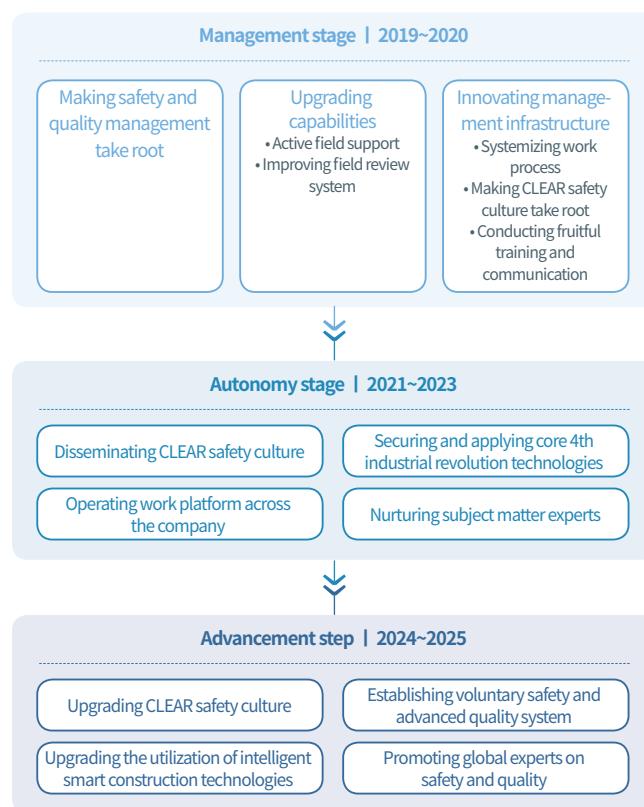
### 'Greenhouse Gas Emissions Reduction Agreement'

Currently, as global attention is paid to protecting the environment due to extreme climate change, Daewoo E&C joins the green management movement. The greenhouse gas and energy target management system is a system that sets greenhouse gas reduction and energy saving goals and manages emissions and consumption in accordance with the 'Low Carbon and Green Growth Basic Act'. Accordingly, Daewoo E&C has recently signed a '2021 Greenhouse Gas and Energy Reduction Target Agreement' with the Korea Appraisal Board to secure competitiveness in eco-friendly projects and actively reduce greenhouse gas emissions. Daewoo E&C has set a plan to reduce a total of 4,197tCO<sub>2</sub>-eq of carbon by 2021.

# Social

## Mid-to-Long-Term Health and Safety Strategic System

Inattention at a construction site even for a short moment may directly lead to a safety accident. Therefore, Daewoo E&C proposes a mid- to long-term safety and health strategy for the advancement of safety and health capabilities and culture as a three-step roadmap, and aims to reach the strategic goals of each stage. In 2020, the three strategic goals were successfully achieved and we plan to apply state-of-the-art new technologies to safety infrastructure and develop safety experts in each field to promote autonomy in safety and health from 2021. Daewoo E&C will never allow exceptions in terms of safety so that not only our members but all workers working at our construction sites can work safely.



## Strengthening Safety and Health System

Daewoo E&C puts the life and safety of our people as a top priority, and has a safety and health system in preparation for disasters and industrial accidents that may occur at construction sites. The Quality and Safety Office, which is in charge of company-wide safety and health, is an organization that reports directly to CEO for safety and health matters, and establishes safety and health strategies and systems. In the meantime, the functions of implementing and reviewing companywide safety and health system under the Quality and Safety Office were migrated to each business division from 2020, strengthening the roles and sense of responsibilities of each business division for safety and health.

## HSE-Q Safety Training

Daewoo E&C operates a training course so that employees at HQ and on-site can complete safety training and apply it immediately in practice. HSE job training enables trainees to acquire essential safety competencies that are essential for each job, and foreign workers are provided with learning materials translated into their native languages. In 2020, in a situation where classroom education was difficult to be implemented due to COVID-19, we were able to maintain continuity of education through the transition to non-face-to-face training. In addition, the safety education, which was conducted by an external instructor, will be provided by an in-house instructor, and in the future, we intend to further enhance the quality of safety education by promoting training and securing of in-house instructors specialized in safety training.

### HSE-Q safety training provided in 2020

Field manager (number of people)	148
Supervisor (number of people)	497
Health manager (number of people)	79
Total (number of people)	724

HSE-Q safety instructor	2019	2020
In-house instructor (number of people)	26	43
External instructor (number of people)	10	-
Total (number of people)	36	43

## Safety and Health Management System Certification



KOSHA18001 certification was obtained as of Dec. 31, 2020



OSHAS18001 Certification was obtained as of Dec. 31, 2020

## Establishment and announcement of essential implementing guidelines for safety

As the fundamental improvement for repeated fatal accidents and safety hazards that are frequently pointed out is demand, we have established and announced mandatory field implementation guidelines for five work areas. In order to implement this guideline, it was released in March 2020, and we plan to produce and distribute this guideline in a video format to improve understanding of people on construction sites.

High place work	Construction equipment
Installation of work scaffolding and safety rail in a place with falling hazards	Workers performing work in high places above 2m or higher from the ground are required to wear full safety belt and tighten safety hook
Lifting	Access control in the work area of construction equipment
Establishing worker's access control area during lifting work Controlling the access to the area under the lifted object	Work in a confined space Measuring concentration of oxygen and hazardous gases before starting work

## Safety and Health of Suppliers

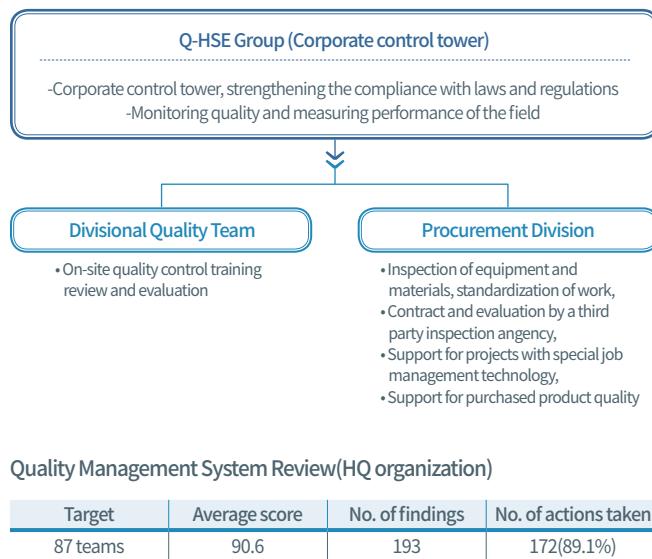
Daewoo E&C is carrying out construction together with suppliers companies at a number of sites. In order to fulfill our responsibilities as a prime contractor and realize win-win safety, Daewoo E&C supports the improvement of the safety level of our suppliers. We prefer suppliers which pursue safety as we verify the qualification of suppliers through safety review (accident rate, management training, system certification, etc.) for newly registered suppliers and the share of safety in supplier evaluation increased from 4% to 20%.

## Quality Management

To become a global representative construction company trusted by customers, Daewoo E&C operates a quality management system that accompanies three core commitments: 'customer satisfaction', 'maximization of corporate value', and 'continuous process innovation'!

## Sophisticating Quality Management System

As Daewoo E&C established an organization in charge of quality within the business division, the responsibilities and authority of quality matters between the companywide organizations and HQ organizations were clearly separated. Through this, the company's quality management system is streamlined, and issues are shared and countermeasures are established through regular communication among organizations. Q-HSE Group is a company-wide quality control tower that closely monitors the quality activities of the business division and quality management of the HQ organizations.



## Preemptive Quality Risk Prevention System

Daewoo E&C identifies and manages on-site inspection information of external institutions on the site quickly to prevent major quality risk in advance and preemptively apply the information to on-site operation. In November 2020, the 'External Institution Inspection Information System' was opened in BAROCON (Daewoo E&C's Integrated Construction Management System), and the situation and information are periodically monitored and collected at each stage from the pre-examination stage to the outcome. This is being used for preemptive preventive quality activities and voluntary inspections.

## Daewoo E&C Quality Certifications



ISO 9001:2015  
Quality  
management  
system



KEPIC nuclear  
construction  
(MN, SN, EN, MH)/  
design (MS/SN)



ASME Nuclear  
(NA, NPT)/  
Non-nuclear  
(S,U,U2,PP)



Non-nuclear: R

## Communication with site Quality Manager called Key Person

In order to secure excellent quality, smooth communication between the site and the HQ is required, and an intermediate person is required to facilitate this. Daewoo E&C minimizes the difference in quality between the site and the HQ by designating a site quality manager called Key Person. The Voice of Quality system has been continuously operated since 2007 to collect the opinions of key people on site, and in 2020, 105 sites out of 135 sites participated in the system.

## Quality Monitoring without Prior Notice

From late 2019, the Ministry of Land, Infrastructure and Transport began special inspections and inspections without prior notice on the sites operated by 'constructors with fatal accidents' and continued to strengthen them in 2020. If penalty is imposed according to the results of the inspection, there is a risk of decrease in the company's order competitiveness and external credit, and corporate-wide intensive management of the field operation is required. In 2020, the company-wide quality management team conducted the 'Quality Theme-based Check to Prevent Penalties' activity. From the second half of 2020, the activities have been handed over to the quality team at each business division to strengthen execution power considering the characteristics of each business division.

## Customized Enhancement of Housing Quality in the New Normal Era

Recently, a new social problem of interfloor noise has emerged as working from home increases and people spend more time at home due to COVID-19 situation. In addition, social demand for ventilation is increasing due to fine dust and COVID-19 infection, which are becoming serious as time passes. Accordingly, Daewoo E&C provides solutions suitable for our society by improving the quality of customized housing.

## Reduction of Inter-floor Noise

Daewoo E&C completed the development of a smart triple floor structure in February 2021 to reduce inter-floor noise. In order to reduce the heavy impact sound, which is the main cause of inter-floor noise, the strength of concrete and slab has been increased, and the thickness of sound insulation and mortar has been increased. With wall pad alarm in case of inter-floor noise, noise can be reduced. Patent has been registered for this technology and patent application for two technologies has been made. It is expected that quality of life will improve for our customers.

## Improvement of Indoor Air Quality

To improve indoor air quality, Daewoo E&C possesses indoor air quality measurement, analysis, and improvement technologies to actively respond to residents' demands for creating a pleasant indoor air environment.

In 2020, we developed a ventilation filter with enhanced antibacterial function in response to air quality issues and the spread of COVID-19. Ultraviolet light-emitting diode photocatalyst filter that can remove harmful viruses is applied and the process for commercialization is underway.

# Social

## Customer Satisfaction

### Resident First Service

Daewoo E&C is implementing 'Life Premium', a residential service that can satisfy the residents in Prugio first. With the intention that Prugio prepares a warm meal in consideration of busy residents who are difficult to prepare meals on the day of moving in, we delivered welcome meals mainly to areas with insufficient commercial stores and small and medium-sized complexes with less than 1,000 households. The welcome meal service, which was newly introduced in 2019, recorded the highest level of satisfaction with an overall score of 93.7 in the customer satisfaction evaluation in 2020. Furthermore, February 2021, a new life premium service, 'Wise Well-Organized Life Organized Storage,' is provided as a pilot service and service items will be supplemented in the future and strategically expanded according to changes in customer preferences, needs, and trends of each complex.

### Vitalizing Customer Community

Daewoo E&C is providing the early opening service of Greenery Lounge to relieve the inconvenience of Prugio residents in the early stages of moving in. In addition, we have established community facility operation and management system in complex which opened early to support reservation and use of community service Prugio smart home application. In 2020, pilot facilities are being operated in Incheon Nonhyeon Prugio, Siheung Central Prugio, and Daishin Prugio 2 and the service will be expanded to improve the satisfaction level of residents and image of apartment complex.

### Attracting Customer Inclusive Services

With the recent revision of the Infant and Child Care Act, apartment complexes of more than 500 households are obliged to have public daycare centers. Daewoo E&C has been trying to attract public daycare centers for the convenience of residents before it became mandatory, and has installed 17 public daycare centers, which is the highest among domestic construction companies. For the early opening of daycare centers, we developed a consent management system for the Prugio mobile consultation application, so the consent process was shortened by more than 3 months compared to written consent, which sped up the installation of daycare centers.

#### The number of counseling provided on monthly average via VOC (Unit: Cases)



#### VOC handling rate (Unit: %)



### Strengthening communication with customers using SNS

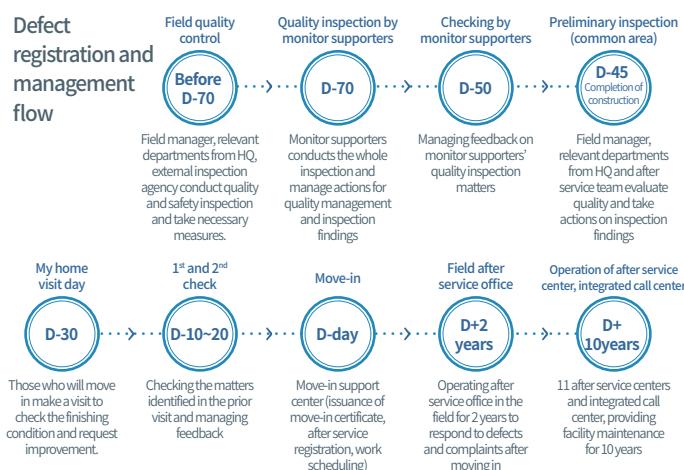
Daewoo E&C provides various information such as information on apartment, pre-sales and basic real-estate information using SNS for an active communication with customers. In addition to existing Facebook, Daewoo E&C publishes video content on YouTube channel regularly twice a week for the first time in the construction industry since 2019. Daewoo E&C uploads the photo of PRUGIO and daily life of residents on Instagram to make sure that anyone can have information on PRUGIO easily. In addition, Daewoo E&C is strengthening communication with customers by providing answers to questions on housing products and real-estate with high interest via expert of each field in the form of magazine.

### Providing Smart Customer Service

Recently, consumers are showing a trend in favor of convenient products or services that can save time and effort beyond cost-effectiveness such as price and quality. In line with these social trends, Daewoo E&C is supporting residents to conveniently use residential services through the Prugio Smart Home App in partnerships with excellent residential service companies. In 2020, Gwacheon Central Park Prugio Summit and Incheon Guwon GwellCity Prugio provided childcare, home cleaning, and car wash services, and plans to further expand housing services that meet customer needs in 2021.

### Improvement of Customer Satisfaction with Active Communication

Daewoo E&C operates a customer counseling office and strives to listen to customers' voices. The Prugio Customer Center uses a variety of media such as application via telephone, Prugio website, and Prugio Mobile Consultation Center to increase the convenience of reception and responds quickly to this response. It provides prompt feedback by advancing the complaint processing day to an average of 10 days, which is 2 days shorter than the previous year. In order to prevent complaints from defects occurring after moving in, we conduct quality checks, housewife checks, and pre-visit checks from 70 days before moving in to collect customer complaints and reflect their opinions. We achieved 3rd place in the 2020 customer satisfaction survey through Happy Call and visit inspection before moving in.



## Security Management System

As non-face-to-face business activities become more common in 2020, corporate information protection activities are on the rise. Accordingly, Daewoo E&C appoints the Chief Information Security Officer (CISO\*) in 2020 and establishes an information protection management system with the Information Protection Team, an organization dedicated to information protection, and is striving to reinforce activities to prevent and respond to security infringement incidents. In addition, the company has established and is operating an international standard information security management system based on ISO 27001. We transparently disclose our policies on personal information protection handling, such as the purpose of collecting personal information, retention period, destruction procedure, and measures to protect personal information through the company's official website.

\*CISO: Chief Information Security Officer



ISO 27001 : 2013  
Information Security  
Management System

## Information Protection Governance

The importance of protecting company-wide information has become at the core of the business as a whole. Accordingly, Daewoo E&C established business rules to establish a company-wide information protection management system, and converted information protection procedures into corporate regulations, emphasizing the importance of information protection and reinforcing its status within the organization.

Furthermore, we are reinforcing our information security capabilities by operating a company-wide information protection council consisting of the Information Protection Committee, a major decision-making body, and the Information Protection Working-level Council, a working-level consultation body. With strengthened responsibility of a company for information protection, Daewoo E&C established IT Office and a separate task force dedicated to information protection. By operating Information Protection Committee and the Information Protection Working-level Council, it assigns authorities and responsibilities appropriately. In 2020, Information Protection Committee meeting and working-level Council meeting were held two times respectively and major items discussed include information protection activity planning, budget establishment and improvement of document security policy.

### Information Protection Committee

- Planning information protection activities
- Establishing budget

### Information Protection Working-level Council

- Improving document security policy (draft)
- Discussing information protection policy

### Information Protection Team

## Information security solution

To respond to Advanced Persistent Threat (APT) targeting specific targets, a new malicious program blocking system has been introduced. The system has the ability to defend against attacks equal to four times that of existing traffic, protecting the company's information assets from ransomware infection through email attachments and preventing security breaches.

In 2021, we plan to introduce DDoS defense equipment to prepare for the recently diversified DDoS\* attacks to strengthen our defense capabilities against attacks, and to build our own coordination system for DDoS attackers and types.

\*DDoS: Distributed Denial of Service

## Sophisticating Information Protection System

Daewoo E&C has upgraded the information protection system to respond to information security incidents quickly. We have replaced obsolete security equipment, such as improving the performance of the firewall that blocks external intrusion and the web firewall system that protects against webpage hacking, and eliminated other points of failure. In addition, we introduced a personal information double authentication system, and faithfully responded to the revision of the Personal Information Protection Act by reinforcing the management of personal information access records in order to broadly apply the personal information protection reinforcement system. In the future, we plan to acquire the personal information security management system (ISMS) certification. Furthermore, in terms of information asset management, we are implementing a document rating system, and all documents written on a PC are automatically encrypted (DRM) to prevent unauthorized information leakage to the outside. In the future, we will continue to support the system so that information protection inspection and improvement points can be discovered for each site.

## Customer's personal information protection

In the event of leakage or infringement of customer's personal information held by a company, there is a great concern about secondary damage such as information theft, so careful management by the company is required. Daewoo E&C maintains a personal information processing policy in accordance with the standards for compliance with the Personal Information Protection Act, and discloses the purpose of collecting personal information, retention period, disposal procedures, and measures to protect personal information transparently through Daewoo E&C's official website. We strictly manage the collected customer information in accordance with the personal information processing policy, and when providing information to a third party for service provision, notify the use and details of the information to be provided in advance in writing, by phone, or by e-mail to protect the rights of information owners. When receiving a report of suspected leakage of customer information, the staff in charge will grasp the situation and promptly report the results to the relevant customer, and the team or staff in charge of leakage will be penalized and intensively managed. In particular, Daewoo E&C has been carefully inspecting the matters regarding whether or not measures to ensure safety are implemented when managing customer information pursuant to Article 30 of the Enforcement Decree of the Personal Information Protection Act. In 2020, the inspection of the customer's personal information protection management status was switched to online inspection for employees of the Housing & Building business division, and inspection was completed 100% for a total of 2,232 employees.

## Reinforcement of Activities to Raise Awareness on Information Protection

Daewoo E&C has carried out various activities to raise the awareness on information protection among its members and to achieve complete company-wide information protection. First, information protection pledges were obtained from all employees, and online information protection training was conducted semi-annually. In the first half of the year, lectures were taken on the subject of personal information protection, and in the second half, 92% of the employees completed the training on document security grading system and revised document security policy. In addition, the attack success rate was reduced to 49% by conducting mock training to respond to hacking mail twice a quarterly. In 2021, we plan to expand mock training for hacking emails to 8 times and implement it for all employees. Furthermore, we plan to further encourage employees to participate in information protection activities by holding an Information Protection Day event.

# Social

## Attracting and Managing Core Talent

### Securing Core Talent

Daewoo E&C is continuously attracting talents to achieve the Global Top 20 strategic goals in 2025. We are hiring from a variety of perspectives focusing on those who challenge everything with faith and passion and fulfill their responsibilities according to their beliefs. In 2020, in order to overcome the external environment of COVID-19, we tried to maintain the continuity of employment by converting the written and interview screening to a non-face-to-face method.

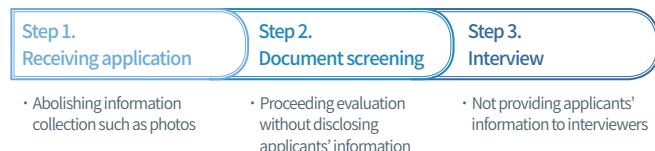
Vision



### Fair Hiring Process

Daewoo E&C does not request information that may affect the fairness of recruitment by removing restrictions on application such as education and age. Through the operation of the blind recruitment process, the number of recruits by school and region has diversified, and the resignation rate of new employees in the year of joining has decreased by 40% compared to the previous year.

#### Blind recruitment process



### Job Café to Attract Local Talent

Daewoo E&C recruits local talents actively by holding Job Café, an open recruitment event, every year at local universities. 'Job Café' is divided into job counseling and general counseling, and aims to provide job-seekers with high-quality employment information. In the case of job counseling, senior employees in the field to which the job seeker applies provide 1:1 counseling on tasks performed, qualifications for application, and majors. Job seekers can ask questions on overall recruitment process including selection procedure, corporate culture and welfare policy. In 2021, it will be operated in a non-face-to-face manner due to COVID-19 situation.

### Non-discriminatory performance evaluation

#### (elimination of gender discrimination)

Although the construction industry has traditionally been recognized as a male-oriented industry, Daewoo E&C is implementing an HR policy based on the performance-based evaluation, moving away from the fixed perception between men and women. As a result of these efforts, in 2021, Daewoo E&C witnessed the first female managing director and field manager. Daewoo E&C will contribute to enhancing social equity in our society by implementing fair human resource management free from the general perception in gender competency differences.

#### State of female managers in key positions (as of Jan. 1, 2021)

Executive level	1 managing director (head of New Business Development Team)
Team leader level	2 team leaders (Communication Team, International Taxation Response TFT)
Field manager level	1 field manager (Gwacheon Prugio Eoulim Labienhaut)

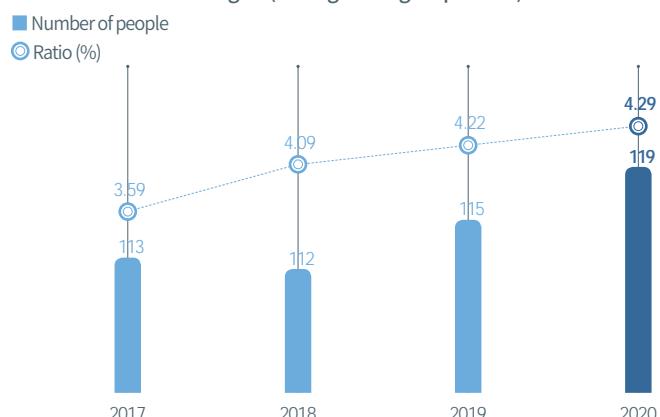
#### Trend of gender ratio in executive position



#### Trend of gender ratio in new employees



#### Number of female managers (manager or higher position)



### Employment of People with Disabilities

Daewoo E&C provides high-quality job opportunities by developing and discovering suitable jobs as well as creating an environment where people with disabilities can work safely. From January 1, 2021, the company has opened the 'Permanent Recruitment Screening for Disabled/Veterinary Persons for the Employment of People with Disabilities'. Daewoo E&C will strive to enhance social equity in our society by continuing such CSR activities.



### Compliance with Local Labor Laws

Daewoo E&C is making various efforts to comply with local labor laws in preparation for the input of the manpower from the third country for overseas projects. We analyze the labor laws of the countries where the project is being conducted, and use standard labor contracts for each country that reflects them. In the future, we plan to continuously conduct field investigations so that labor laws and regulations of each country of destination can be identified and applied in advance.

### Establishment of Flexible Corporate Culture

#### Corporate Culture Campaign

Daewoo E&C is conducting an in-house campaign to enhance corporate value and improve employee awareness from the perspective that innovation in corporate culture is the growth engine of the company. We continue to carry out campaigns, but induce employee participation by changing the way they are displayed every year in order to enhance their communication skills and persuasive power.

In 2020, communication, work life balance, and smart work that employees are most interested in were used as a specific topic. With a friendly and intuitive message, we were able to draw consensus among members of the MZ generation, and video production was added to make it easier for members to approach the subject of corporate culture. The campaign is spread through various in-house channels such as the main banner of the company intranet, Baronet, the electronic bulletin board for each floor of HQ, elevator monitors, and in-house broadcasting.



### Work Space for Agile Communication

A well-communicated organization allows you to do business efficiently, while further accelerating the pace of change and innovation in your organization. Therefore, building a work space in a suitable environment where smooth communication can take place is an essential task in the present era where rapid innovation is required. Daewoo E&C is creating synergy between departments and headquarters by expanding the physical space for collaboration. The 12th floor of the headquarters is designed for meetings of various sizes, from conferences to small meetings, and is equipped with video conferencing equipment and state-of-the-art equipment to communicate with personnel participating in overseas projects.

# Social

## Social Volunteering Structure

Daewoo E&C is committed to social contribution activities in various fields to change the world through love and practice with neighbors. Since the establishment of the 'Daewoo E&C Social Volunteer Group' in 2007, which includes the head office organization, domestic and overseas field organizations, and in-house social service teams, we have been encouraging our employees to voluntarily participate in social contribution activities every year through various social contribution programs. With the 'Daewoo E&C Social Volunteer Group' as the center, various employee participation programs are conducted every year to improve the local environment, donate the employees' talents, and share with the underprivileged of the society. From 2016, family relay volunteer activities through the participation of employees' families are also being implemented.



## CSR Activities Suitable for Characteristics of DMBR method

### Habitat House Repair for Hope

'House Building for Hope', a representative CSR activity of Daewoo E&C since 2018, is a residential environment improvement activity that utilizes our specialty in construction industry to paint old houses, replace floorboards and sinks, and perform insulation work. The House Building for Hope in 2020 focused on repairing old window frames in families struggling after losing their jobs due to coronavirus, and improving the environment exposed to mold contamination and pests. Furthermore, we regularly visit old homes six times a year to make every effort to deal with them afterwards. In particular, a monthly fund of 14.5 million won by collecting coins less than 1,000 won from employees is used for Habitat activities to share the warmth of the construction industry



Nov. 24, 2010 House Repair for Hope, a social volunteer activities

## Inclusion of Marginalized Group

### Going through Summer in Shanty Town

Daewoo E&C held the 'Cool Clothing Sharing Campaign' to prepare for the heat wave for marginalized neighbors to spend a cool summer. About 500 employees participated in this campaign, and about 2,400 clothes, 100 portable fans, 1,000 sports towels, and shoes donated by each employee were delivered to the residents and homeless people in shanty towns. We have spared no effort to share warmth with the underprivileged neighbors who lost their shelter in the middle of the summer due to COVID-19



Conducting 'Cool Clothing Sharing Campaign' for Shanty Town

### Blood Donation

Daewoo E&C conducted the '2020 Daewoo Family Blood Donation Campaign' for local residents who cannot receive treatment due to lack of blood. The blood donation campaign was held for 10 days from October 6 to 16, and 106 employees participated in blood donation. Employees who participated in the blood donation campaign wore masks, hand sanitized, and measured body temperature to prevent COVID-19 and to ensure the safety of blood donor. Their eligibility was thoroughly confirmed via interview. By doing so, Daewoo E&C has personally practiced life-sharing by contributing more to the supply and demand of blood that is insufficient due to COVID-19.



2020 Blood Donation Campaign

## Mind Bridge Campaign

### (Daewoo E&C college student ambassador)

Daewoo E&C conducted a new concept online CSR ‘Mind Bridge Campaign’ with the university student ambassador (Dae Daehong) to convey sympathy and consolation to our society exhausted from COVID-19. It is an activity to heal through the sympathy received in society by leaving an anonymous story on the Mind Bridge webpage, delivering a message of empathy and support through comments, or sharing another case. The 60 people who were selected as the best story were provided with a gift box planned and produced by Dae Daehong. Daewoo E&C has tried to share hope through sympathy and comfort in our society with the Mind Bridge Campaign, although it is time when everyone is exhausted from COVID-19.



Dae Daehong Mind Bridge Website Main



Dae Daehong Mind Bridge gift box notice

## Global CSR Activities

Daewoo E&C strives to resolve inequality among countries by actively conducting social contribution activities at overseas business sites. We are carrying out various sharing activities for local coexistence. To commemorate the Oman Environment Day, we participated in planting about 440 trees to maintain a strong bond with the local community. We are continuing our activities that make use of the characteristics together. In particular, in 2020, Daewoo E&C is actively participating in preventing the spread of COVID-19 in local communities. We donated about 20,400 COVID-19 diagnostic kits to Iraq, where our main overseas business sites are located, and donated medical supplies to Basrah Medical College in Iraq. In addition, we are fighting together to prevent the spread of Corona 19 in the poor local area by renovating and repairing thermal sensing system facilities and intensive care units for COVID-19 body temperature monitoring at the Oman plant. In the future, Daewoo E&C will share corporate social responsibilities through improvement of difficult local conditions with underprivileged countries, and endeavor to maintain a strong bond with local communities as well as local site management.



North Africa Branch

## SPECIAL CASE

### Special Case. Corona Best Practice “Eastern Social Welfare Society”

Daewoo E&C delivered a cotton mask and donations to the Eastern Social Welfare Society to help protect families who are directly hit by COVID-19 with prolonged COVID-19 situation. 250 employees and their families participated in this voluntary activity and hand-made 500 cotton masks for children. Considering social distancing, mask production kits were distributed and produced at home. In addition, a donation of 5 million won was provided through Daewoo E&C’s ;‘Employees Collecting Coins for Sharing; ± Fund. This donation will be used for children waiting for adoption who are being protected by the Eastern Social Welfare Society. Daewoo E&C will be reborn as a company that accompanies the local community by continuously carrying out activities to deliver warmth to neighbors and realize the value of sharing in a safe way despite the difficult situation of COVID-19.



June 2, Daewoo E&C, Eastern Social Welfare Society

# Governance

## Governance

Daewoo E&C operates an independent and professional board of directors (BOD) based on the principle of checks and balances to ensure rational decision making and transparent management. In order to create shareholder value and gain stakeholder trust based on the advanced governance structure, we enacted the Corporate Governance Charter in 2020 and published it on the Daewoo E&C's website.

 <http://www.daewoocir.co.kr/management/rank.asp>

## BOD Functions and Roles

The BOD is a major decision-making body that decides on matters prescribed by laws and articles of incorporation and decides on major issues related to business operation, while overseeing the execution of the duties of directors and management. Through transparent operation of the BOD, Daewoo E&C seeks to maximize corporate value and strengthen the trust of stakeholders.

## BOD Organization

BOD of Daewoo E&C is composed of 2 internal directors, 1 other managing director, and 4 external directors as of December, 2020. The CEO, who has a thorough understanding of the company's internal situation, serves as the chairperson of the BOD, and all board members are committed to their role as a major decision-making group based on their expertise and practical experience and on the principles of mutual check and balance.

### Board of directors

Classification	Name	Position	Main responsibilities
Executive director	Kim Hyeong	Internal director	CEO
	Jeong Hyang-gi	Internal director	CFO
Non-executive directors	Lee Dae-hyeon	Other managing director	Present, CEO of KD Investment
	Lee Hyeon-seok	External director	Present, Director of Real Estate City Research Center, Konkuk University
	Jang Se-jin	External director (Chairman of Audit Committee)	Present, honorary professor of Inha University
	Moon Ran-gon	External director (auditor)	Former Non-full-time advisor to Korean aviation and space industry
	Yang Myeong-seok	External director (auditor)	Former Head of Legal Office, Samsung Securities

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Committees within the board of directors

### External director candidate recommendation committee

- Recommend external director candidates at the shareholders' meeting
- Composed of 2 internal director sand 4 external directors

### Audit Committee

- In charge of audit for accounting and business
- Composed of 3 external directors

### BOD Independence and Expertise

Outside directors of Daewoo E&C are appointed through a resolution at the general shareholders' meeting after the board of directors and the Outside Director Candidate Recommendation Committee select candidates, and the Outside Director Candidate Recommendation Committee consists of 6 members including 4 outside directors. Independent directors are independent from executives in accordance with Commercial Act and other applicable laws, and are responsible for monitoring management activities and mediating opinions between directors. In order to secure the expertise of the board of directors, an outside director with professional knowledge and practical experience in various fields has been appointed, and is contributing to the check and monitoring functions of each specialized field and the safety of corporate management.

### Evaluation and Remuneration of BOD Members

At Daewoo E&C, directors' remuneration is determined based on the company's economic, social, and environmental management performance and on the assessment of personal performance, such as annual committee operation and activities. Remuneration is paid within the director's remuneration limit approved by a general shareholders' meeting each year, and overall compensation status of directors and auditors is made public in the business report and on the website. In 2020, average remuneration of registered directors is KRW 397 million (including directors without remuneration) and that of independent directors is KRW 60 million and Audit Committee members is KRW 32 million.

(As of Dec. 31, 2020)

Classification	Number of people <sup>1)</sup>	Total remuneration <sup>2)</sup> (KRW 1 million)	Per capital average remuneration (KRW 1 million)
Registered director <sup>3)</sup>	3 <sup>5)</sup>	1,190	397
External director <sup>4)</sup>	1	60	60
Member of the Audit Committee	6	193	32

1) Including resigned director

2) Including remuneration of registered directors who are appointed or resigned during the period

3) Excluding external directors, members of Audit Committee

4) Excluding members of Audit Committee

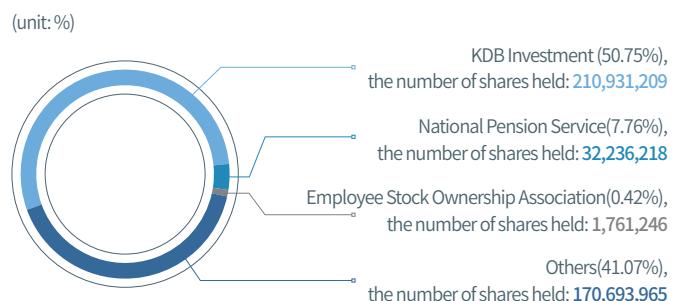
5) Including non-paid directors

### Shareholders

Daewoo E&C issued a total of 415,622,638 shares as of December 2020, and the largest shareholder is KDB Investment No. 1 Limited, which holds 50.75% of the company's shares. Daewoo E&C is transparently disclosing its business information, including business reports, to shareholders and stakeholders through the Financial Supervisory Service and the Korea Exchange in accordance with legal disclosure requirements.

#### Shareholders of Daewoo E&C

(As of Dec. 31, 2020)



### BOD Operations and Activities

The BOD meetings are divided into regular board meetings and temporary board meetings, and both operate based on BOD regulations. The important resolutions made each time are disclosed in the business reports, and the proposed agenda is decided by the majority attendance of directors and the majority vote of the directors present.

In 2020, the BOD held 17 meetings to make resolutions on 47 agendas, and the resolution rate is 95.7%.

Classification	2018	2019	2020
Number of BOD meetings held	16	13	17
Number of agenda decided	55	47	47
Directors' participation rate (%)	95.5	93.6	100

# Governance

## Integrated Risk Management

Daewoo E&C has selected risk management as one of the eight strategic tasks to achieve the vision Build Together, and is reinforcing capabilities to identify and prevent potential risk factors. With the reinforcement of the risk detection function, the percentage of risks that completed measures in 2020 rose 40% compared to the previous year, which led to improved project stability.

### Enhanced risk sensing

Daewoo E&C proactively responds to possible risk factors through the risk sensing function, which means the ability to sense and respond to key risk factors. In 2020, the number of risks detected per project for which Daewoo E&C decided to participate in bidding was on average 83, which is a significant increase from the average of 63 projects in 2019. Risk factors that took appropriate action also increased by 438 from 250 in the previous year, confirming the enhanced proactive identification capability. In 2021, we plan to focus on new overseas large projects by improving the process of risk management.

Classification	2018	2019	2020
Average risk factors per project (number of factors)	19	63	83
Risk factors for which actions are taken (number)	54	250	438
Action rate against risk (%)	47	57	97

### Risk management organization

The Future Strategy Division derived eight strategic tasks, established a road map to achieve our medium and long-term strategy, and strengthened the functions of project life cycle risk management. Accordingly, the Division is divided into an Order Review Group that identifies risks before winning a project, a Construction Management Group that manages risks during a project, and a Legal Support Group that handles legal issues and disputes throughout a project. In 2019, we successfully built Baro Legal Service that closely analyzes the root cause of project failures to prevent recurrence of risks, and comprehensively supports domestic and foreign contract review and legal advice. In 2020, we established Change Log System, which is a corporate standard platform to make sure that history of contract can be managed efficiently by working-level personnel in charge of contract management to respond to claims and prevent the recurrence of the same event. Due to the nature of risk management, there are various variables that are difficult to predict, so Daewoo E&C is trying to uncover risks from multiple angles by sharing cases of "Saerobaeum Seminar" and "Lessons Learned" within the organization.

### 8 strategic tasks for risk management



### Organization in charge of risk management



### Management of poisonous clauses in contracts

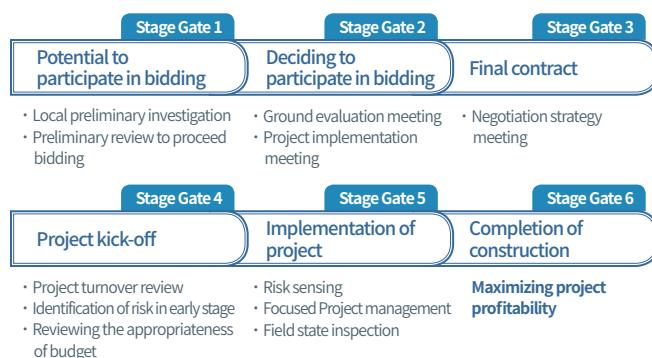
Daewoo E&C is accumulating data in its integrated project management system by organizing cases of poisonous clauses and countermeasures in order to share know-how to prevent and respond to risks arising from construction contracts. The poisonous clauses in contracts will be organized to be used in various ways depending on country, industry, and ordering organization, and be used in overseas projects. As we expand into international markets, we have built a basic information management system for over 70 items of about 50 countries, including finance, tax, politics, and culture, and share the database with employees so that they can effectively identify and respond to country-specific risks.

## Upgrading Project Risk Management

Project life cycle risk management refers to a management system that filters multi-faceted risks at all stages from order information acquisition to completion. We aimed to enhance the filtering in the order winning stage and early stage of project and to maximize the profitability of project by upgrading the stage gate analysis system that was carried out through Review - Decision - Contract - Start - Implementation in 2020.

Upon bidding for overseas projects, there is a risk not identified due to the limitation of a short review period. Daewoo E&C has developed a bidding document analysis program using AI (Artificial Intelligence) to prevent such risks. With this program, 4,000 pages of technical bidding documents can be analyzed in just 10 minutes, thereby minimizing manpower efficiency and technical risk. In the future, we plan to increase the level of artificial intelligence to 80-90% compared to the level of experts and apply it to preliminary review of projects in all business areas in the future.

### Risk filtering stages



## Non-financial risk Management

Daewoo E&C is not directly related to detailed projects, but it manages company-wide risks that affect the company's management goals and strategic direction. These include national risks in a broad sense and social, cultural, and

### SPECIAL CASE

#### 'DAIA', Ontology-based AI technology document risk analysis program

DAIA is an ontology-based overseas bidding document analysis system that detects and responds to risk items included in the bidding guide provided by the project owner in advance. The bidding guide contains the client's requirements such as contract, design, construction, performance, etc. that should be considered when bidding for PJ, and it contains contract conditions and overspecs. If those information is not identified in the bidding process, it will be a risk after winning a contract. We reviewed the applicability through PoC (Proof of Concept) in 2020, and we are developing advanced analysis algorithms and user UI/UX with the aim of commercialization in 2021.

DAIA can be used as a quantitative index to judge management's participation in PJ bidding, and it will be developed as a system that can enhance itself by acquiring the technical know-how possessed by in-house experts through the learning function of the system.



environmental risks. Besides, we are turning a crisis into a business opportunity by analyzing future trends such as climate change and the 4th industrial revolution and proactively responding to the risks to come.

### Definition and response to non-financial risks

Core Risks	Definition of Risks	Daewoo Management
Depletion of water resources	Excessive demand for water resources due to sudden decrease in precipitation and precipitation days due to abnormal climate and increase in population	<ul style="list-style-type: none"> <li>Entering the seawater desalination business</li> <li>Applying rainwater recycling technology</li> </ul>
Lack of energy	Increased necessity to develop next-generation energy sources due to exhaustion of fossil fuels and their negative impact on the environment	<ul style="list-style-type: none"> <li>Building zero-energy buildings</li> <li>Constructing new and renewable energy power plants (solar power, wind power, tidal power generation)</li> <li>Promoting biomass power generation business</li> </ul>
Aging population	Changes in demographic structure and decrease in working age population due to low fertility and increased life expectancy	<ul style="list-style-type: none"> <li>Improving workability to shorten construction period</li> <li>Building a BIM<sup>Building Information Modeling</sup> specification system</li> <li>Employee's focusing on core business to shorten working hours</li> <li>Adoption of RPA<sup>Robotic Process Automation</sup></li> </ul>
4 <sup>th</sup> Industrial Revolution	Changes in existing business models and demands for seeking future growth engines due to cutting-edge technologies such as ICT technology	<ul style="list-style-type: none"> <li>Developing Smart PRUGIO platform for mobile app system control</li> <li>Adoption of AW<sup>Advanced Work Package</sup></li> <li>Operation of Big Data</li> </ul>

# Governance

## Business ethics system

Founded in 2014, our Compliance Team is dedicated to ethics and compliance practices at Daewoo E&C. The system consists of a Compliance Committee that discusses key issues related to compliance, and Compliance Council that discusses specific activities, and each has an officer, a leader, and a manager to organize its activities.



## Code of Ethics

Daewoo E&C has established the Code of Ethics that presents the correct behavior and criteria for judgement and expected all management activities across the company to be reviewed based on the Code of Ethics

## Attitude toward major interested parties



## Charter of Ethics

Daewoo E&C has enacted the Charter of Ethics as a standard for correct behavior and value judgment that all employees must follow. The Charter of Ethics specifies the responsibilities and obligations of each of the major stakeholders, such as countries, communities, customers, competitors, suppliers and employees, and provides detailed standards for realizing ethical regulations through the code of ethics and action guidelines.

## Employee Charter of Ethics

1. We conduct all our business fairly and transparently to create an ethical corporate culture.
2. We respect customers and do our best to practice customer satisfaction management.
3. We respect individual personality and take the lead in protecting the rights of the socially underprivileged and realizing equality.
4. We comply with international conventions and national legislation on human rights, environment, culture and economy.
5. We do not use our superior status to cheat on our stakeholders.
6. We fulfill our social responsibilities, as a member of society, to contribute to community development.
7. We continue to practice the core values of challenge and passion, autonomy and accountability.

## Code of Conduct

In order to clarify details and standards necessary for the realization of the code of ethics for employees, we have established a code of conduct as a standard of conduct for employees.

## Daewoo E&C Integrity Management

<http://www.daewoocompany.com/management/moral-ethics>

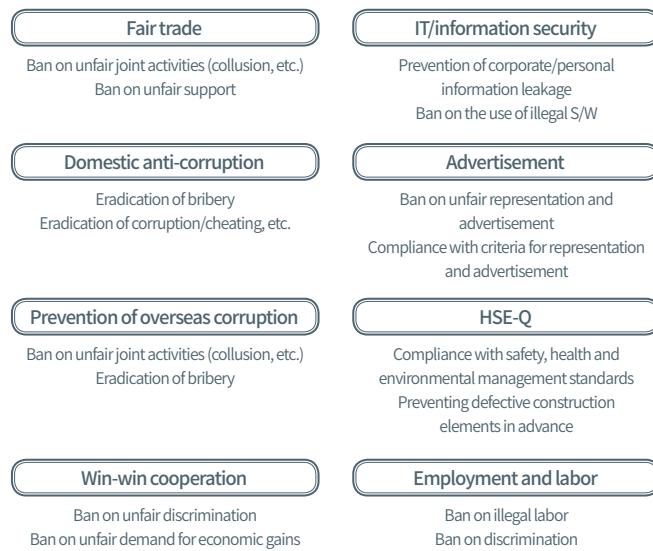
## Compliance System

Daewoo E&C does not spare any support for compliance management so that all executives and employees do not commit illegal activities. Eight areas with compliance risks have been selected, and items to be observed, such as unfair acts or bribery, are set and systematically managed for each area. Furthermore, we are implementing risk management to prevent corruption that may occur not only at Daewoo E&C's employees, but also at overseas business sites, and we are promoting win-win cooperation based on mutual trust by expanding the scope of compliance management to the supply chain.

## Compliance Organization



## System of preventing non-compliance



## **Education and promotion**

In 2020, a total of 4 online training sessions were conducted. 38 offline training sessions were conducted for 470 employees, and job workshops were held to enhance the efficiency and effectiveness of training. Starting in 2020, a new site visit training program was established, and a total of 20 sites were visited to provide training for early settlement of the site compliance system and improvement of employee awareness. In addition, we are raising employees' awareness of compliance through various compliance newsletters such as weekly and daily trends, and prevention activities are carried out by notifying internal and external violation cases.

## **Monitoring and Evaluation**

In 2020, compliance inspection were conducted for a total of 20 teams/sites, and consulting on the compliance activities of unit organizations was carried out beyond simple checks. In addition, commendations were awarded to excellent employees and organizations to motivate employees to practice compliance. In 2021, we plan to implement compliance activities by integrating with the anti-corruption management system to prevent the occurrence of compliance violations.

## **Anti-bribery Management System**

Daewoo E&C obtained Anti-bribery Management System certification for the first time in the construction industry in 2018 and its anti-bribery activities that meet international standards were verified with review to maintain the certification for 2019-2020. In 2021, the company will improve the efficiency by integrating the compliance system and anti-bribery management system and focus on preventing bribery cases.

## **Supply chain compliance risk management**

Daewoo E&C expanded compliance activities for its subsidiaries and suppliers. Subsidiaries are required to conduct their own compliance assessment once a month, and the results of the assessment are reflected in the management performance. We send compliance letters to suppliers in the name of Daewoo E&C's CEO, and distribute anti-corruption guidelines to overseas sites. If a supplier violates compliance, it will be disqualified for partnership as well as for bidding. In this way we encourage our suppliers to conduct ethical management.

## **Unethical behavior reporting**

Daewoo E&C has a reporting system to foster a clean corporate culture and eradicate unethical behavior. Anyone who is aware of the unethical behavior of employees regarding Daewoo E&C's business activities can report it on the website or on the smartphone application, and if the reporter wants, his or her personal information is kept confidential in accordance with the reporter protection regulation. If a external stakeholder witnesses or receives an unfair request from Daewoo E&C's employees, he or she can report it to the cyber audit office or through K-Whistle. Daewoo E&C employees can consult the Ethics Counseling Office about ethical dilemma or report unethical and discriminatory behaviors to the Ethics Help Line.

## **Protection of human rights**

Daewoo E&C has a human rights policy and respects the human rights of those who work in subsidiaries, joint ventures, and all suppliers and partners which are in business with us, including all employees at home and abroad. This is our promise that the subjects will be guaranteed international standards such as ILO Declaration and OECD Guidelines and national Labor Standards Act in fulfilling their duties and will be provided with fair opportunities and assessments regardless of race, religion, regionalism, school relations, kinship and disability. The full text of our human rights policy is available on the website.

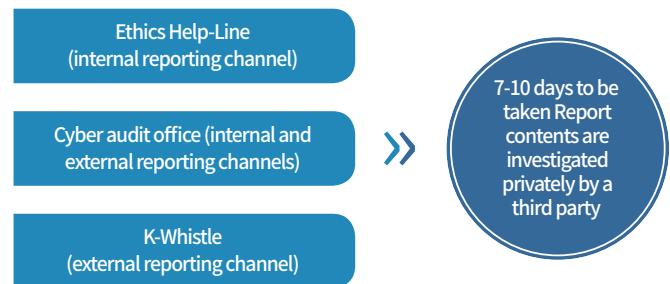
### **Daewoo E&C Human rights policy**

 <http://www.daewooenc.com/company/management/moralethics>

## **Prevention of Workplace Harassment**

Daewoo E&C is operating a process to eradicate workplace harassment that causes physical and mental pain to all employees or worsens the working environment. If a case is reported to the Audit Office or Ethics Help Line on an anonymous basis, their details of the case can be seen only by the head of the Audit Office or Head of the Job Diagnosis Team and members of the team suitable for investigation are assigned for investigation. If it is deemed necessary, the person who reported the case or relevant department may be asked to submit documents or attend a meeting. In addition, they may be requested to take corrective actions on unreasonable business procedures. In particular, matters related to sexual harassment and gender discrimination are immediately reported to HR Team so that Compliance Team can lead the consultation and investigation activities.

### **Unethical behavior reporting channel**



# APPENDIX

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Facts & Figures	81
Value of Sustainable Management	89
Corporate Governance Charter	90
GRI Content Index	91
UN SDGs	94
Greenhouse Gas Verification	95
Third-Party Verification	96
Awards	98
Membership	99



## Facts & Figures

### Economic Performance

#### Economic Value Creation (consolidated criteria)

Category	Sector	Unit	2018	2019	2020
Total sales		KRW million	10,605,494	8,651,852	8,136,706
Sales by division	Civil	KRW billion	1,742	1,372	1,483
	Housing & Building		6,580	5,121	5,083
	Plant		1,944	1,595	1,092
	New Frontier		-	547	464
	Others		339	17	15
	Total		8,852	10,249	12,893
Construction contract Change	Civil	KRW billion	1,219	1,557	3,596
	Housing & Building		6,525	6,730	7,035
	Plant		1,108	1,922	2,228
	New Frontier		-	40	34
	Total		29,377	31,698	37,016
Construction contract Balance	Civil	KRW billion	5,006	5,196	7,346
	Housing & Building		21,843	23,641	25,663
	Plant		2,487	2,827	3,987
	New Frontier		41	34	20
	Total		10,605,494	8,651,852	8,136,706
By region Sales	Korea	KRW million	8,251,919	6,306,247	6,332,032
	Middle East		1,585,783	1,275,002	901,132
	Asia		321,421	603,108	510,014
	Africa		445,961	467,285	393,390
	Others		410	210	138

#### R&D and Industrial Property Performance (consolidated criteria)

Category	Item	Unit	2018	2019	2020
R&D Status	R&D amount	KRW million	13,880	14,001	14,349
	R&D personnel	Persons	83	81	74
	R&D performance	Cases	48	44	44
			58	64	58
			13	22	11
			6	7	6
Industrial property rights Performance	Patent	Cases	308	331	332
			20	21	25
			23	28	15
			331	332	334
	New technology	Cases	11	14	14
			4	1	3
			3	2	-
			14	14	9
	Others	Cases	164	170	170
			2	4	9
			6	8	6
			170	170	171
	Total	Cases	483	515	519
			26	26	37
			32	38	21
			515	519	514

## Facts & Figures

### Economic Performance

#### Remuneration for Directors and Auditors

Category	Directors/Auditors	Unit	2018	2019	2020
No. of persons	Internal directors (excluding independent directors and audit committee members)	Audit committee members	3	3	3
	Independent directors (excluding audit committee members)		1	1	1
	Audit committee members		3	4	6
Total amount of remuneration	Internal directors (excluding independent directors and audit committee members)	KRW 1 million	828	1,057	1,190
	Independent directors (excluding audit committee members)		61	16	60
	Audit committee members		192	214	193
Average remuneration per person	Internal directors (excluding independent directors and audit committee members)		276	352	397
	Independent directors (excluding audit committee members)		61	16	60
	Audit committee members		64	54	32

#### Major Shareholders and Credit Ratings

Category	Shareholders	Unit	2018	2019	2020
Major shareholders	KDB Investment No.1 Limited company	Ratio	%	50.75	50.75
		Number of shares	Shares	210,931,209	210,931,209
	National Pension Service	Ratio	%	6.53	6.51
		Number of shares	Shares	27,126,251	27,057,003
	Employees' Stock Ownership Association	Ratio	%	0.58	0.51
		Number of shares	Shares	2,391,470	2,126,396
Credit ratings	Others	Ratio	%	40.64	42.23
		Number of shares	Shares	168,909,822	175,508,030
	Korea Ratings	Corporate bill		A2-	A2-
		Corporate credit rating		A-	A-
	NICE Information Service	Corporate bill		A2-	A2-
		Corporate credit rating		A-	A-

#### Operations of Board of Director

Category	Item	Unit	2018	2019	2020
Operations of Board of Directors	No. of meetings	Number	16	13	17
	No. of agenda items resolved	Cases	55	47	47
	Directors' attendance rate	%	95.5	93.6	95.7

#### Number of meetings held by subcommittee

Category	Item	Unit	2018	2019	2020
Subcommittee Number of meetings held	Audit Committee meetings	Number	9	6	7
	Independent Director Nomination Committee Meetings		0	1	1

## Environmental Performance

### Environmental Governance

Classification	Category	Unit	2018	2019	2020
Violation of environmental regulations	Total fines	KRW	1,000,000	1,000,000	-
	Number of litigations filed	Cases	1	1	0
	Number of non-monetary sanctions		0	0	0
Environmental audit	On-site environmental instruction and inspection	Cases	-	37	25
	Support for on-site environment		-	15	16
Environmental training	Environmental manager job competency training (integrated)	Persons	-	167	202
	Environmental training for new environmental managers by division	Persons	-	4	6
	On-site environmental training	Persons	-	14,160	10,346

### Environmental Management Performance

Classification	Category	Unit	2018	2019	2020	
Greenhouse gas	Total emissions	tCO <sub>2</sub> eq	70,715	66,193	58,969	
	Direct emission (Scope 1)		8,582	7,149	6,865	
	Fixed combustion		5,176	3,085	3,324	
	Mobile combustion		3,406	4,064	3,541	
	Indirect emission (Scope 2)		62,133	59,053	51,920	
	Total		62,133	55,140	46,560	
	External electricity		Not Known	3,913	5,360	
	External steam					
	Emissions in KRW		0.667	1.050	0.963	
	Total emissions (Scope 1+2)		70,715	66,193	58,969	
Energy	Total on-site emissions (Scope 1+2)	tCO <sub>2</sub> eq	64,221	57,231	50,849	
	Total building emissions (Scope 1+2)		6,494	8,968	8,120	
	Total energy consumption		1,421	1,323	1,174	
	Total on-site consumption		1,295	1,142	1,005	
Significant hazardous(chemical) substance spills	Total building consumption	TJ/KRW100 million	126	181	169	
	Consumption per unit KRW		0.013	0.021	0.019	
Waste discharge	Number of spills	Cases	0	0	0	
	Spilled amount	Ton	0	0	0	
	Disposal cost	KRW100 million	199	136	125	
	Waste generation (throughput, domestic standard)	Ton	677,207	597,214	532,830	
	General waste		669,837	594,939	529,132	
	Waste to be buried		4,949	808	1,877	
	Waste to be incinerated		2,421	1,467	1,821	

## Facts & Figures

### Environmental Performance

#### Investment in environment

구분	Category	Unit	2018	2019	2020
Total amount of environmental protection expenditure and investment	Environmental investment	KRW 1 million	190	106	419
	Environmental expenditure		179	175	67
Eco-friendly purchase	Eco-friendly purchase	KRW 1 billion	255	205	172

#### Ecofriendly building certification (FY 2020)

Project	Eco-friendly certification
Yeoju Station Prugio Claterre	Energy efficiency rating preliminary certification 'Level 1' Green building preliminary certification 'Good (Green Level 3)'
Gwacheon Knowledge Information Town S1BL (Gwacheon Prugio Ortus)	Energy efficiency rating preliminary certification 'Level 1' Green building preliminary certification 'General (Green Level 4)'
Gwacheon Knowledge Information Town S6BL (Gwacheon Prugio Bellarte)	Energy efficiency rating preliminary certification 'Level 1' Green building preliminary certification 'General (Green Level 4)'
Isu Prugio The Premium	Energy efficiency rating preliminary certification 'Level 1' Green building preliminary certification 'Excellent (Green Level 2)'
Yeongjong Central Prugio Xi	Energy efficiency rating main certification 'Level 1' Green building main certification 'Excellent (Green Level 2)'
Maegyo Station Prugio SK VIEW	Energy efficiency rating preliminary certification 'Level 1' Green building preliminary certification 'General (Green Level 4)'
Dasan New Town Nature & Prugio	Energy efficiency rating preliminary certification 'Level 1+' Green building preliminary certification 'Excellent (Green Level 2)'
Namyangju Dasan Jingeon A1BL Public Housing Si	Energy efficiency rating preliminary certification 'Level 1+' Green building preliminary certification 'Good (Green Level 3)'
Mapo-ro District 3 Section 3 Urban Redevelopment Project	Energy efficiency rating preliminary certification 'Level 1' Green building preliminary certification 'Good (Green Level 3)'
Gwangmyeong Centver Prugio	Energy efficiency rating preliminary certification 'Level 1' Green building preliminary certification 'General (Green Level 4)'
Sinjudong Station Landmark Prugio City	Energy efficiency rating preliminary certification 'Level 1++' Green building preliminary certification 'Best'
Hillstate Prugio Juan	Energy efficiency rating preliminary certification 'Level 1' Green building preliminary certification 'Excellent'
Jichuk Station Central Prugio	Energy efficiency rating main certification 'Level 1' Green building main certification 'General (Green Level 4)'

## Social Performance

### Employment

Classification	Category	Unit	2018	2019	2020
<b>Number of employees</b>	Total number of employees	Persons	5,359	5,385	5,452
<b>Employees by employment type</b>	Executives	Total	32	32	34
		Female	0	0	0
		Male	32	32	34
	Permanent employees	Total	3,811	3,782	3,783
		Female	305	312	327
		Male	3,506	3,470	3,456
	Contract employees	Total	343	371	489
		Female	6	10	13
		Male	337	361	476
	Others	Total	1,173	1,200	1,146
		Female	245	241	268
		Male	928	959	878
<b>Employees by region</b>	Companywide (domestic +overseas)	Sum	5,359	5,385	5,452
		Total	4,672	4,603	4,845
		Female	545	548	596
		Male	4,127	4,055	4,249
	Domestic	Total	687	782	607
		Female	11	15	12
		Male	676	767	595
		Overseas			
<b>Managerial positions status</b>	Total number of female managerial positions (manager or higher)		112	115	119
	Number of female executives		0	0	0
	Total number of managerial positions(manager or higher)		2,736	2,725	2,773
	Total number of executives		121	107	100
<b>New recruitment, Turnover and Retirement</b>	New employment	Female	6	19	22
		Male	46	101	113
	Turnover/ Resignation	Female	22	10	6
		Male	208	142	106

### Diversity

Classification	Category	Unit	2018	2019	2020	
<b>Diversity of employees</b>	Employees	Share of female employees	%	10.38	10.45	
		Total	Persons	5,359	5,385	
		Female	Persons	556	563	
		Male		4,803	4,822	
	Basic salary for women compared to men and compensation percentage		%	100	100	
	Elderly (aged 55 or over)		Persons	400	469	
	Foreigners		Persons	14	20	
	Disabled			44	47	
	High school graduates*			318	349	
	Patriots-Veterans*			46	63	

## Facts & Figures

### Social Performance

#### Retirement Pension

Classification	Category	Unit	2018	2019	2020
Status of retirement pension management	Operating amount	KRW 1 million	241,556	242,264	252,806
	Number of subscribers	Persons	5	10	26
	DC DB		3,881	3,704	3,908

#### Maternity leave and parental leave

Classification	Category	Unit	2018	2019	2020
Maternity leave	Total	Persons	182	168	167
	Female		17	16	18
	Male		165	152	149
	Return rate after maternity leave	%	98	100	99
	Total number of employees that were entitled to parental leave, by gender. (a)	Persons	2,515	2,375	2,224
	Total number of employees that took parental leave, by gender. (b)		39	39	46
	female		16	22	20
	male		23	17	26
	Total number of employees that returned to work in the reporting period after parental leave ended, by gender. (c)		26	26	30
	female		14	11	13
	male		12	15	17
	Total number of employees that returned to work after parental leave ended that were still employed 12 months after their return to work, by gender. (d)		20	23	28
	female		11	11	13
	male		9	12	15
Parental leave	Return to work and retention rates of employees that took parental leave, by gender. (c/b)	% Rates(%)	67	67	65
	female		88	50	65
	male		52	88	65
	Rates of employees that returned to work in the reporting period after parental leave ended, by gender. (d/b)		51	59	61
	female		69	50	65
	male		39	71	58

#### Education and training

Classification	Category	Unit	2018	2019	2020
Completion of education and training	Education expenses per person	KRW	643,135	673,937	517,262
	Training hours per person*	Hours	49	63	64
Performance evaluation	Those subject to evaluation	Persons	5,025	5,348	4,879
	Ratio of those who were evaluated	%	100	100	100
Information security training	Number of people who completed information security online training	Persons	5,104	5,385	4,823
	Information security online training completion rate Total training hours	%	100	100	92
Sexual harassment prevention and human rights education	Training hours	Hours	5,487	5,200	5,415
	Training hours (ratio)	Hours	100	100	100
	Training hours per person	Hour / Persons	1	1	1

### Labor Union and Labor-Management Committee

Classification	Category	Unit	2018	2019	2020
Labor union	Labor union subscription rate	%	34	40	46
Number of meetings held	Number of meetings held	Number	4	4	4
	Number of items resolved	Number	19	22	22

### Shared Growth

Classification	Category	Unit	2018	2019	2020
Suppliers (domestic outsourcing)	Total number of suppliers	No. of companies	1,410	1,844	1,843
	Purchase from suppliers	KRW 100 million	31,240	29,579	38,740
Major suppliers (Domestic outsourcing)	Number of major suppliers	No. of companies	101	107	113
	Purchase from major suppliers out of total purchase cost	KRW 100 million	12,460	10,230	10,358
	Share of purchase from major suppliers out of total purchase cost in total outsourcing amount	%	40	35	27
	Shared growth fund and loans	KRW 100 million	280	280	140
No. of fair-trade violation cases	Number of violations	Cases	0	0	0
	Penalties	KRW 1 million	-	-	-

### Ethical Management

Classification	Category	Unit	2018	2019	2020
Online compliance education	Education completion rate	%	100	100	100
Offline compliance education	Attendants	Persons	2,416	1,511	470
Autonomous compliance activities	Talk (once/month)	%	100	100	100
	Message (once/quarter)	%	99	99	98
	Independent education (once/half-year)	%	100	100	92

### Quality & Customer Satisfaction

Classification	Category	Unit	2018	2019	2020
Company-wide quality monitoring	Equipment suppliers quality evaluation	New	25	48	42
		Reevaluation	59	37	9
	Plant visiting inspection	Cases	1,877	2,049	524
	Plant resident inspection		6	44	1
	Annual unit price contract for third-party inspection		10	17	10
Protection of customer's personal information	Number of data theft, leakage, and loss	Cases	0	0	0
Customer compliant counseling	Average number of consultations per month of integrated call center	Cases	24,030	23,213	21,385
	Response rate of integrated call center	%	96	96	92
	Instant response rate of integrated call center	%	88	97	85
	Average number of consultations per month through the voice of the customer (VOC)	Cases	1,837	590	1,155
	VOC processing rate	%	98	97	97
	Average processing days	Days	14	12	10
	Results of National Customer Satisfaction Index (NCSI) Survey	Ranking	4	3	3
본사 및 현장 품질 관리	Head office quality evaluation	Average score	90	90	91
	On-site quality evaluation	Average score	90	90	82

## Facts & Figures

### Social Performance

#### Health and safety

Classification	Category	Unit	2018	2019	2020
Industrial accident	Accident rate	Mortality per 10,000 workers	% Persons	0.56	1.71
		Converted accident rate		0.57	0.51
		LTIR* (Overseas)		0.05	0.00
	Number of casualties	Total		288	269
		Number of domestic casualties		264	259
		Number of overseas casualties		24	10
Safety training	Domestic HSE training	Sites for pilot operation of CLEAR program	Number of places	10	14
		Operation of supplier win-win safety program	Number	48	52
	Overseas HSE training	NEBOSH ICC (Construction safety engineer in the U.K.)	Persons	3	0
		OSHA 30 (Introductory education for construction safety in the U.S.)		4	19
		ISO 45001 (Safety and Health Management System Senior Auditor Course)		4	11
	In-house HSE-Q training	HSE-Q training order	Order	48	46
		Number of those who completed HSE-Q training	Persons	1,373	1,535
	Outside HSE-Q training	HSE-Q training order	Order	1	1
		Number of those who completed HSE-Q training	Persons	116	58
Safety inspection, audit and support	Management inspection (including CEO inspection)	Cases	10	11	6
	Site Audit		94	81	150
	Construction Machinery and Technology Safety Support		1,032	1,777	1,813
	Other Site Inspections(safety patrol, special inspection on site to be completed)		-	213	66

#### Social Contribution

Classification	Category	Unit	2018	2019	2020
Performance of social contribution activities	Annual number of participants	Persons	1,309	1,270	1,311
	Total expenditure	KRW 1 million	214	236	749*
	Operation cost		107	112	379
	Donation (culture, arts, etc.)		107	124	390
Relay Volunteer Work	Average hours of activities per cap	Hours	5	5	4.54
	Number of times	Cases	6	8	5
	Number of participants	Persons	255	305	402

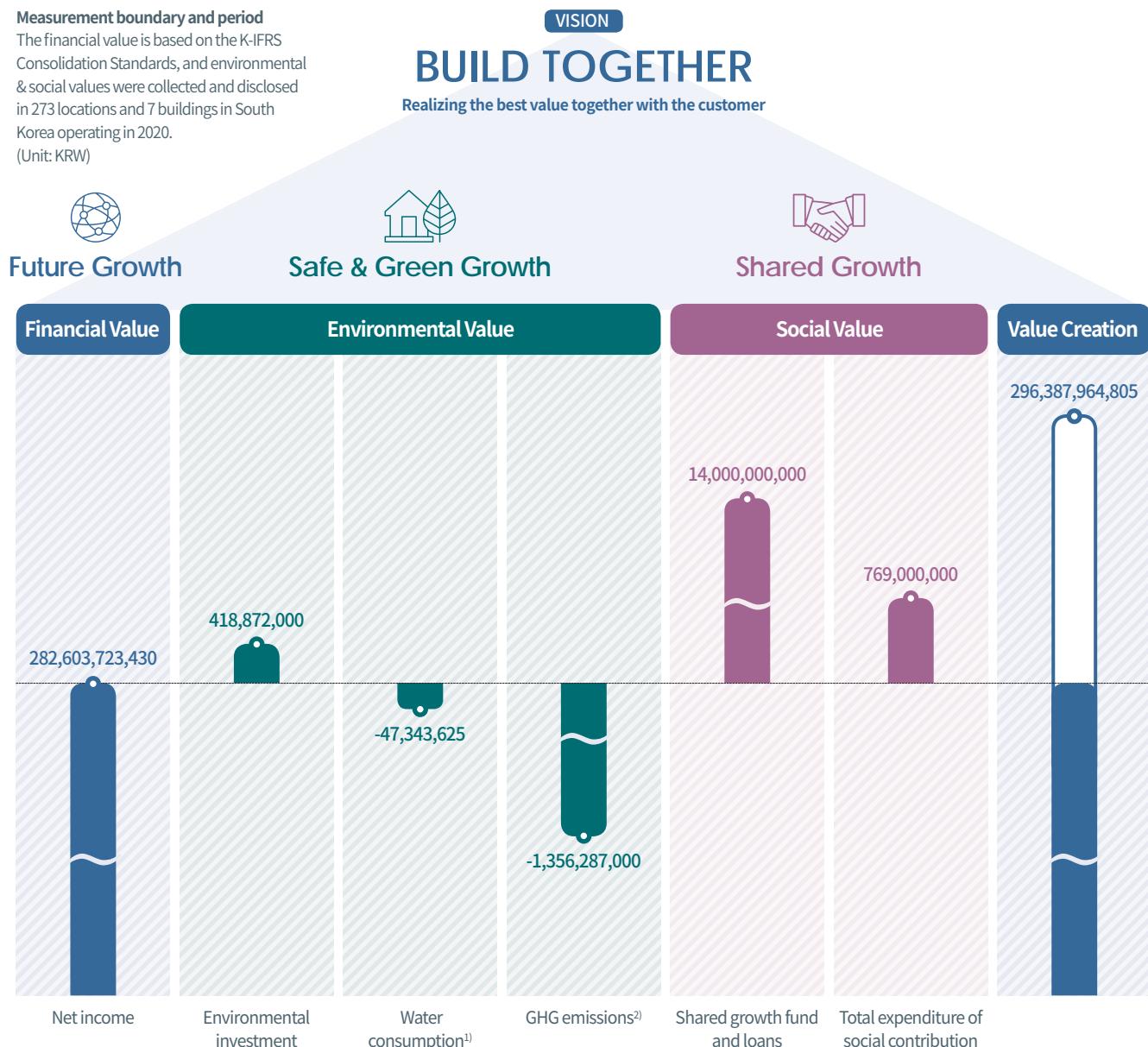
\*It includes donation made in coin, which is different from sum of operating expenses and sum of donation

## Value of Sustainable Management

Daewoo E&C objectively grasps the external impact of overall management activities on economic, social and environmental values, and measures the value and impact of sustainable development management to improve the intuitiveness of performance. In accordance with K-IFRS consolidated accounting standards, Daewoo E&C's net income in 2020 was approximately 282,604 million won, reflecting the estimated value of sustainable development management activities of 296,400 million won. In the future, Daewoo E&C plans to analyze the value and impact of sustainable management from various perspectives to continuously motivate internal members and reflect them in sustainable management strategies and goals.

### Measurement boundary and period

The financial value is based on the K-IFRS Consolidation Standards, and environmental & social values were collected and disclosed in 273 locations and 7 buildings in South Korea operating in 2020.  
(Unit: KRW)



1) Water consumption: 898,361 ton (Annual water consumption) \* 52.7KRW (Dam water price, source: Korea Water Resources Corporation)

2) GHG emissions: 58,969 tCO<sub>2</sub>eq (Annual GHG emissions) \* 23,000KRW (Emission trading based on December 30, 2020 market price, source: Emission trading information platform KRX)

# Corporate Governance Charter

## Preamble

To become the company that realizes best value together with the customer, Daewoo E&C enhances its value so that the shareholders' value can be created continuously, and fulfills social responsibilities to internal and external stakeholders to achieve sustainable growth. Accordingly, Daewoo E&C enacts the charter of corporate governance as follows to increase management transparency and efficiency as a trusted company.

### I. Shareholders

1. Shareholders' Rights
2. Equitable treatment of shareholders
3. Shareholder responsibility

### II. Board of Directors

1. Function of the BOD
2. Composition of BOD and Appointment
3. Nonexecutive director
4. Operation of the BOD
5. Committees within the BOD
6. Director's Obligations
7. Director's Responsibilities

### III. Audit organization

1. Internal Audit Organization
2. External Auditors

### IV. Stakeholders

1. Protection of stakeholders' rights
2. Stakeholder participation in management monitoring

### V. Management monitoring by market

1. Public Disclosure
2. Corporate management right market

## GRI Content Index

### Universal Standards

TOPIC	Disclosure	Title	Page	Note
<b>GRI 102: General Disclosure</b>				
Organizational Profile	102-1	Name of the organization	8	
	102-2	Activities, brands, products, and services	8-9, 12-37	
	102-3	Location of headquarters	8	
	102-4	Location of operations	9	
	102-5	Ownership and legal form	9, 74, 75, 83	
	102-6	Markets served	8-9, 82	
	102-7	Scale of the organization	8-9	
	102-8	Information on employees and other workers	86	
	102-9	Supply chain	9	
	102-10	Significant changes to the organization and its supply chain	-	no significant change
	102-11	Precautionary Principle or approach	78-79	
	102-12	External initiatives	76-77	
	102-13	Membership of associations	99	
Strategy	102-14	Statement from senior decision-maker	6-7	
Ethics and Integrity	102-16	Values, principles, standards, and norms of behavior	78-79	
Governance	102-18	a) Governance structure of the organization, including committees of the highest governance body.	74-75	
		b) Committees responsible for decision-making on economic, environmental, and social topics.	-	Compliance Committee
Stakeholder Engagement	102-40	List of stakeholder groups	42	
	102-41	Collective bargaining agreements	87	
	102-42	Identifying and selecting stakeholders	42	
	102-43	Approach to stakeholder engagement	42-43	
	102-44	Key topics and concerns raised	42	
Reporting Practice	102-45	Entities included in the consolidated financial statements	9, 82	
	102-46	Defining report content and topic Boundaries	2, 43	
	102-47	List of material topics	43	
	102-48	Restatements of information	89	
	102-49	Changes in reporting	-	no significant change
	102-50	Reporting period	2	
	102-51	Date of most recent report	2	
	102-52	Reporting cycle	2	
	102-53	Contact point for questions regarding the report	2	
	102-54	Claims of reporting in accordance with the GRI Standards	2	
	102-55	GRI content index	92-94	
	102-56	External assurance	96-99	

## GRI Content Index

### Topic-specific Standards

TOPIC	Disclosure	Title	Page	Note
<b>GRI Standards 200 : Economic</b>				
<b>GRI 201 : Economic Performance</b>	201-1	Direct economic value generated and distributed	8-9, 82	
	201-2	Financial implications and other risks and opportunities due to climate change	65	
	201-3	Defined benefit plan obligations and other retirement plans	87	
	201-4	Financial assistance received from government	None	
<b>GRI 203 : Indirect Economic Impacts</b>	203-1	Infrastructure investments and services supported	61	Voluntary protection of local business partners
	203-2	Significant indirect economic impacts	90	
<b>GRI 205 : Anti-corruption</b>	205-1	Operations assessed for risks related to corruption	78-79	
	205-2	Communication and training about anti-corruption policies and procedures	88	
	205-3	Confirmed incidents of corruption and actions taken	88	
<b>GRI 206 : Anti-competitive Behavior</b>	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	88	No violations
<b>GRI Standards 200 : Economic</b>				
<b>GRI 302 : Materials</b>	302-1	Energy consumption within the organization	83	
	302-2	Energy consumption outside of the organization	83	
	302-3	Energy intensity	83	
	302-4	Reduction of energy consumption	83	
	302-5	Reductions in energy requirements of products and services	52-53, 83	
<b>GRI 303 : Water and Effluents</b>	303-3	Water withdrawal	83	
	303-5	Water consumption	83	
<b>GRI 304 : Biodiversity</b>	304-3	Habitats protected or restored	65	
<b>GRI 305 : Emissions</b>	305-1	Direct (Scope 1) GHG emissions	83	
	305-2	Energy indirect (Scope 2) GHG emissions	83	
	305-4	GHG emissions intensity	83	
	305-5	Reduction of GHG emissions	65	
<b>GRI 306 : Effluents and Waste</b>	306-2	Management of significant waste-related impacts	65	
	306-5	Waste directed to disposal	83	
<b>GRI 307 : Environmental Compliance</b>	307-1	Non-compliance with environmental laws and regulations	83	
<b>GRI 308 : Supplier Environmental Assessment</b>	308-2	Negative environmental impacts in the supply chain and actions taken	60	
<b>GRI Standards 200 : Economic</b>				
<b>GRI 401 : Employment</b>	401-1	New employee hires and employee turnover	85	
	401-3	Parental leave	86	
<b>GRI 402 : Labor/ Management Relations</b>	402-1	Minimum notice periods regarding operational changes	87	
<b>GRI 403 : Occupational Health and Safety</b>	403-1	Occupational health and safety management system	54-55, 66	
	403-2	Hazard identification, risk assessment, and incident investigation	54-55	
	403-3	Occupational health services	54-55	
	403-4	Worker participation, consultation, and communication on occupational health and safety	54-55	

## Topic-specific Standards

TOPIC	Disclosure	Title	Page	Note
<b>GRI Standards 200 : Economic</b>				
<b>GRI 403 : Occupational Health and Safety</b>	403-5	Worker training on occupational health and safety	54-55, 66	
	403-6	Promotion of worker health	54-55	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	54-55	
	403-9	Work-related injuries	54-55, 88	
<b>GRI 404 : Training and Education</b>	404-1	Average hours of training per year per employee	86	
	404-2	Programs for upgrading employee skills and transition assistance programs	58-59	
	404-3	Percentage of employees receiving regular performance and career development reviews	87	
<b>GRI 405 : Diversity and Equal Opportunity</b>	405-1	Diversity of governance bodies and employees	85	
<b>GRI 412 : Human Rights Assessment</b>	412-2	Employee training on human rights policies or procedures	87	
	412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	60	
<b>GRI 413 : Local Communities</b>	413-1	Operations with local community engagement, impact assessments, and development programs	89	
<b>GRI 414 : Supplier Social Assessment</b>	414-1	New suppliers that were screened using social criteria	60-61	
<b>GRI 415 : Public Policy</b>	415-1	Political contributions	-	Not applicable according to the domestic political fund law
<b>GRI 416 : Customer Health and Safety</b>	416-1	Assessment of the health and safety impacts of product and service categories	67	
<b>GRI 418 : Customer Privacy</b>	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	87	0

## Materiality Issues

TOPIC	Disclosure	Title	Page	Note
<b>Future Growth</b>				
<b>Our Approach</b>	301	Management Approach	45	
<b>Economic Performance</b>	201-1	Direct economic value generated and distributed	46-47	
<b>Indirect Economic Impacts</b>	203-2	Significant indirect economic impacts	48-49	
<b>Safe &amp; Green Growth</b>				
<b>Our Approach</b>	301	Management Approach	51	
<b>Occupational Health and Safety</b>	403-1	Occupational health and safety management system	54-55, 66	
	403-2	Hazard identification, risk assessment, and incident investigation	54-55	
	403-3	Occupational health services	54-55	
	403-4	Worker participation, consultation, and communication on occupational health and safety	54-55	
	403-5	Worker training on occupational health and safety	54-55, 66	
	403-6	Promotion of worker health	54-55	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	54-55	
	403-9	Work-related injuries	54-55, 88	
<b>Energy</b>	302-5	Reductions in energy requirements of products and services	52-53	
<b>Shared Growth</b>				
<b>Our Approach</b>	301	Management Approach	57	
<b>Training and Education</b>	404-2	Programs for upgrading employee skills and transition assistance programs	58-59	
<b>Supplier Social Assessment</b>	414-1	New suppliers that were screened using social criteria	60-61	

## UN SDGs

The United Nations General Assembly adopted the Sustainable Development Goals (SDGs) to promote sustainable growth in the world. The goals, which are to be fulfilled by the international community, including both advanced countries and developing countries, comprise 17 goals and 169 targets to achieve by 2030. Daewoo E&C contributes to the achievement of its goals based on the Vision 2025 and the Sustainability Management Strategy consisting of Future Growth, Safe & Green Growth, and Shared Growth.

SDGs	Contents	Activities	Pages
	Good Health & Well-Being	Social contribution activities to improve the living environment for the vulnerable	72
	Quality Education	Training for employee competency development	70-71
	Affordable & Clean Energy	Development of eco-friendly construction technology Highly efficient energy housing environment	52 53
	Decent Work & Economic Growth	Internalization of safety culture at construction sites Productive employment, and provision of quality jobs for all	54-55 70-71
	Innovation & Infrastructure	Strengthening of quality management Development of smart construction technology Differentiated customer service	67 48-49 68
	Sustainable Cities & Communities	Advancement of health and safety management system Construction of environmental management system Emissions management at construction sites	54-55 64 65
	Climate Action	Responding to climate change by reducing GHG emissions	65
	Life on Land	Minimization of environmental impact	64
	Peace, Justice and Strong Institutions	Customer satisfaction survey Enhanced customer privacy protection	68 69

## Greenhouse Gas Verification



### Verification Opinion

**Daewoo Engineering & Construction Co., Ltd.**

**Scope:**

The annual GHG emission for the 2020 calendar year inclusive.

The physical scope is limited within the boundary of Domestic Area for **Daewoo Engineering & Construction Co., Ltd.**.  
GHG emissions for Scope 1(Direct-emissions) and Scope 2(Indirect-energy related) as defined in WBCSD/WRI GHG protocol Chapter 4 "Setting Operational Boundaries" and Korea GHG Energy Target Management Operating Guideline.

**Data Verified:**

GHG Emissions for the Scope 1 and Scope 2 for 2020 calendar year as follows.

Year	Direct Emissions (Scope1) (tCO <sub>2</sub> e/yr)	In-direct Emissions (Scope2) (tCO <sub>2</sub> e/yr)	Sub Total (tCO <sub>2</sub> e/yr)
2020	6,944	52,145	59,085

\* The total Emissions can differ to a cut-off decimal point.

**GHG Criteria & Protocols used for Verification:**

The verification was performed at the request of **Daewoo Engineering & Construction Co., Ltd.** using the following:

- GHG-Energy Target Management Operating Guideline (2020-3)
- IPCC Guideline for National Greenhouse Gas Inventories - Revised 2006
- BSI GHGEV Manual (XH007-K14) – Revised September, 2020

The standard confidentiality principle of BSI Group Korea is applied to the all verification activities.

**Verification Opinion:**

As a result of the Verification in accordance with the protocols and the best practice listed above, it is the opinion of BSI that:

- The verification was conducted to provide reasonable verification in accordance with GHG Energy Target Management Scheme (2020-3)
- No material misstatement in the GHG emission calculations was detected, related records were maintained appropriately
- The data quality was considered corresponding to the international key principles for GHG emissions verification

For and on behalf of BSI:

Managing Director Korea, K. S. Song

Issue: 08/06/2021

...making excellence a habit™

## Third-Party Verification

To readers of 2021 DAEWOO E&C SUSTAINABILITY REPORT

### Introduction

Korea Management Registrar (KMR) was commissioned by DAEWOO E&C to conduct an independent assurance of its 2021 DAEWOO E&C SUSTAINABILITY REPORT (the “Report”). The data and its presentation in the Report is the sole responsibility of the management of DAEWOO E&C. KMR’s responsibility is to perform an assurance engagement as agreed upon in our agreement with DAEWOO E&C and issue an assurance statement.

### Scope and Standards

DAEWOO E&C described its sustainability performance and activities in the Report. Our Assurance Team carried out an assurance engagement in accordance with the AA1000AS v3 and KMR’s assurance standard SRV1000. We are providing a Type 2, moderate level assurance. We evaluated the adherence to the AA1000AP (2018) principles of inclusivity, materiality, responsiveness and impact, and the reliability of the information and data provided using the Global Reporting Initiative (GRI) Index provided below. The opinion expressed in the Assurance Statement has been formed at the materiality of the professional judgment of our Assurance Team.

Confirmation that the Report was prepared in accordance with the Core Options of the GRI standards was included in the scope of the assurance. We have reviewed the topic-specific disclosures of standards which were identified in the materiality assessment process;

- GRI Sustainability Reporting Standards
- Universal standards
- Topic specific standards
  - Management approach
  - GRI 201: Economic Performance
  - GRI 403: Occupational Health and Safety
  - GRI 404: Training and Education
  - GRI 414: Supplier Social Assessment

As for the reporting boundary, the engagement excludes the data and information of DAEWOO E&C’s partners, suppliers and any third parties.

### KMR's Approach

To perform an assurance engagement within an agreed scope of assessment using the standards outlined above, our Assurance Team undertook the following activities as part of the engagement:

- reviewed the overall Report;
- reviewed materiality assessment methodology and the assessment report;
- evaluated sustainability strategies, performance data management system, and processes;
- interviewed people in charge of preparing the Report;
- reviewed the reliability of the Report’s performance data and conducted data sampling;
- assessed the reliability of information using independent external sources such as Financial Supervisory Service’s DART and public databases.

### Limitations and Recommendations

KMR’s assurance engagement is based on the assumption that the data and information provided by DAEWOO E&C to us as part of our review are provided in good faith. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. To address this, we referred to independent external sources such as DART and National Greenhouse Gas Management System (NGMS) and public databases to challenge the quality and reliability of the information provided.

## Conclusion and Opinion

Based on the document reviews and interviews, we had several discussions with DAEWOO E&C on the revision of the Report. We reviewed the Report's final version in order to make sure that our recommendations for improvement and revision have been reflected. Based on the work performed, it is our opinion that the Report applied the Core Option of the GRI Standards. Nothing comes to our attention to suggest that the Report was not prepared in accordance with the AA1000AP (2018) principles.

### Inclusivity

DAEWOO E&C has developed and maintained different stakeholder communication channels at all levels to announce and fulfill its responsibilities to the stakeholders. Nothing comes to our attention to suggest that there is a key stakeholder group left out in the process. The organization makes efforts to properly reflect opinions and expectations into its strategies.

### Materiality

DAEWOO E&C has a unique materiality assessment process to decide the impact of issues identified on its sustainability performance. We have not found any material topics left out in the process.

### Responsiveness

DAEWOO E&C prioritized material issues to provide a comprehensive, balanced report of performance, responses, and future plans regarding them. We did not find anything to suggest that data and information disclosed in the Report do not give a fair representation of DAEWOO E&C's actions.

### Impact

DAEWOO E&C identifies and monitors the direct and indirect impacts of material topics found through the materiality assessment, and quantifies such impacts as much as possible.

### Reliability of Specific Sustainability Performance Information

In addition to the adherence to AA1000AP (2018) principles, we have assessed the reliability of economic, environmental, and social performance data related to sustainability performance. We interviewed the in-charge persons and reviewed information on a sampling basis and supporting documents as well as external sources and public databases to confirm that the disclosed data is reliable. Any intentional error or misstatement is not noted from the data and information disclosed in the Report.

### Competence and Independence

KMR maintains a comprehensive system of quality control including documented policies and procedures in accordance with ISO/IEC 17021-2015 - Requirements for bodies providing audit and certification of management systems. This engagement was carried out by an independent team of sustainability assurance professionals. KMR has no other contract with DAEWOO E&C and did not provide any services to DAEWOO E&C that could compromise the independence of our work.

June 2021 Seoul, Korea



CEO *E. J. Hwang*

## Awards

### 2020 Performance

Divisions	2020 Performances
Civil Division	WAVE PARK (Korean Society of Civil Engineers, Best Prize for "Living SCO/Leisure sector")
	Smart Construction Challenge BIM LIVE Management Sector Award, 2020 Smart Construction Technology/Safety Competition (by Minister of Land, Infrastructure and Transport)
	Won industrial awards 2020 Day of International Construction/Plant (Managing Director Kim Min-geun)
	ABHAEAMTAE 1ST SITE Cheonsa Bridge (2020 Civil Structure of the Year, by Korean Society of Civil Engineers)
	Won citation on the "Day of Road 2020" (on the occasion of the ceremony for the Day of Road 2020 by Korea Expressway Corporation)
	SIHWA MARINE LEISURE PARK SITE, winning citation from the Minister of Land, Infrastructure and Transport on the Day of Construction 2020
Housing & Building Division	Ethiopia EXPRESSWAY CONSTRUCTION SITE, citation by President of Korea Expressway Corporation
	SAEMANGEUM 6-1 SITE, citation by President of Korea Rural Community Corporation
	PRUGIO TV-CF (Best award in construction sector, 2020 Broadcasting and Advertising Festival)
	PRUGIO(Grand award in construction/apartment brand sector, the 13th Korea Internet Communication Award)
	Winner in communication sector at IF Design Award 2020
	Gyeryong PRUGIO THE FIRST: Newsway housing brand award in safety sector
	Gyeryong PRUGIO THE FIRST- the best award in living infrastructure sector, Money Today Housing Culture Award)
	Gyeryong PRUGIO THE FIRST- the grand award in complex housing sector, Asia Economic Daily Brand Award
	Hwaseo Station PRUGIO Bricel: WOW-TV Korea Economy TV President's Award in representative apartment future value sector
	SEWOON PRUGIO HERICITY- Hangyeong Business wellbeing apartment grand award in customer satisfaction sector
	Grand award, Korea Service Award 2020
	Hwaseo Station PRUGIO Bricel:Korea Economy, First Half of the Year Residential Cultural Award, in eco-friendliness secto
	INDEOKWON PRUGIO EL CENTRO- Maeil Economic Daily, High-rise apartment for good living
	GIMHAE PRUGIO HIGHEND- Best award in Money Today Premium Housing Award
Plant Division	SEOSAN PRUGIO THE CENTRAL- Joong Ang Daily, Eco-friendly Construction Industrial Award, in housing sector
	CHEONGNA PRUGIO RAPIANO- Hankook Daily Green Housing Award, in customer satisfaction sector
	SUSEONG PRUGIO RIVERCENT- Seoul Newpaper Green Construction Award in smart sector
	CHEONGNA INTERNATIONAL CITY STATION PRUGIO CITY- Herald Economy Daily Housing Culture Award
	WANJU PRUGIO THE FIRST- Korea Economy, Second Half of the Year Residential Cultural Award, in eco-friendliness sector
	SEOSAN PRUGIO THE CENTRAL- Dong A Daily Korea Construction Award, in apartment residential welfare sector
	E Today smart construction award, in brand sector
	ORYONG EDU FORE PRUGIO- Aju Economic Daily Grand Prize in housing innovation
	SEOSAN PRUGIO CENTRAL (Grand Prize in landscape at Asia Today Green Construction Award) (by president of Asia Today)
	Korea Atomic Energy Industry Association "the Nuclear Annual Conference", by the Minister of Science and ICT
Institute of Construction Technology	Korea Atomic Energy Industry Association "the Nuclear Safety and Promotion Day", by the Minister of Science and ICT
	Korea Atomic Energy Industry Association "the Nuclear Safety and Promotion Day", by the Minister of Trade, Industry and Energy
	International Contractors Association of Korea "International Construction and Plant Day", by Minister of Land, Infrastructure and Transport
	The Federation of Construction Associations "the Construction Day 2019", by the Minister of Land, Infrastructure, and Transport
	Engineer of Korea Award
	Award for people in recognition of their contribution to construction (by Minister of Land, Infrastructure and Transport)
	Best practice of 13th Construction Excellence in Korea (by Chairman of the National Transport Committee, National Assembly)
	Best practice of 13th Construction Excellence in Korea (by President of Korea Institute of Construction Technology)
	2020 Smart Construction Technology Safety Fair, National Safety Contest Facility Sector (by President of the association)
	KSCE 2020 Convention social infrastructure drone shooting competition (best award)

# Membership

## 2020 Status

Divisions	Association and Institutes	Divisions	Association and Institutes	Divisions	Association and Institutes
Civil	AWC (Asia Water Council)	Housing & Building	Korea Artificial Foundation Greening Association	Strategic Planning	Korea Chamber of Commerce & Industry
	Korean Society of Transportation		Korean Institute of Electrical and Electronic Material Engineers		Federation of Korean Industries
	Korea Planning Association		Korean Institute of Traditional Landscape Architecture		Korea Federation of Construction Contractors
	Korean Society of Engineering Geology		Korea Institute of Information & Telecommunication Facilities Engineering		- Construction Strategy Research Group
	Korean Society of Civil Engineers		Korean Institute of Landscape Architecture		Construction Association of Korea
	Korean Society of Steel Construction		Korean Institute of Illuminating and Electrical Installation Engineers		Korea Mechanical Construction Contractors Association
	Korean National Committee on Large Dams		Korea Housing Association		Korea Facilities Maintenance Association
	Korean Society of Road Engineers		Korea Society of Environmental Restoration Technology		Korea Professional Construction Association
	Korea Road Association		Korea Electric Association		CM Association of Korea
	Korean Society for Disaster Prevention		Korea Coating Experts Society		Korea Federation of Construction Contractors
	Korea Water Resources Association		Korea Plant Industries Association		Korea Institute of Construction Industry
	Korean Society of Coastal Disaster Prevention		Korea Institute of Plant Engineering & Construction		Korea Electrical Contractors Association
	Korean Geotechnical Society		Korea Gas Union		Korea Information & Communication Contractors Association
	Korean Geosynthetics Society		Korean Radioactive Waste Society		International Contractors Association of Korea
	Korean Railway Construction Engineering Association		Korea Engineering & Consulting Association		Korea Electric Power Industry Code (KEPIC)
	Korean Society for Railway		Korea Atomic Industrial Forum		- KEPIC WEEK
	Korea Railway Association		Korea Nuclear Society		Construction Safety Manager Committee
Housing & Building	Korea Railway Association (International Cooperation Committee)		Korea Nuclear Association for International Cooperation		- Construction Safety Practitioners Councils
	Korea Concrete Institute		Korea Electric Engineers Association		- Construction Safety Executive Councils
	Korean Tunneling and Underground Space Association	Plant	Korea Proptech Forum	Quality Safety	- Construction Healthcare Practitioners Council
	Korea Association of Waste to Energy Technology		Korea Listed Companies Association		MaeKyung Safety & Environment Institute
	Korea Ports & Harbors Association		- Listed Companies CFO Forum		Korea Construction Quality Association
	Korean Society of Coastal and Ocean Engineers		Korea Emergency Planning Officer Association		Korea Construction Quality Association
	Korea Environmental Industry Association		Construction Industry Human Resource Manager Council		Korea Environment Construction Association
	Construction & Residence Study Forum		National Reserve Forces Association		KOSHA 18001 Conference
	Korea Intelligent Smart Building Association		Seoul Jung-gu Integrated Defense Council		International Federation for Structure Concrete (FIB)
	Architectural Institute of Korea		National Association of Workplace Reservist Battalion Commander		American Institute of Steel Construction (AISC)
	Society of Air-conditioning and Refrigerating Engineers of Korea		Korean Human Resource Development Association		American Concrete Institute (ACI)
	Korean Institute of Electrical Engineers		Korea Construction Engineers Association		Council on Tall Buildings and Urban Habitat (CTBUH)
	Smart Modular Forum		Korea Enterprises Federation		Korea Construction Transport New-Technology Association
	Korea Institute of Construction Engineering & Management		Korea International Trade Association		Korea Industrial Technology Association
	Korea Institute of Building Construction		Korea Fire Facility Association		
	Korea Military Supplies Cooperative		Korea Personnel Improvement Association		
	Korea Developer Association		National Intelligent Service Company Safety Council		
	Korean Society of Living Environment System		Korea Information Technology Research Institute		
	Korean Association of Air Conditioning Refrigerating and Sanitary Engineers		Korea Software Industry Association		
Institute of Construction Technology					

# BUILD TOGETHER

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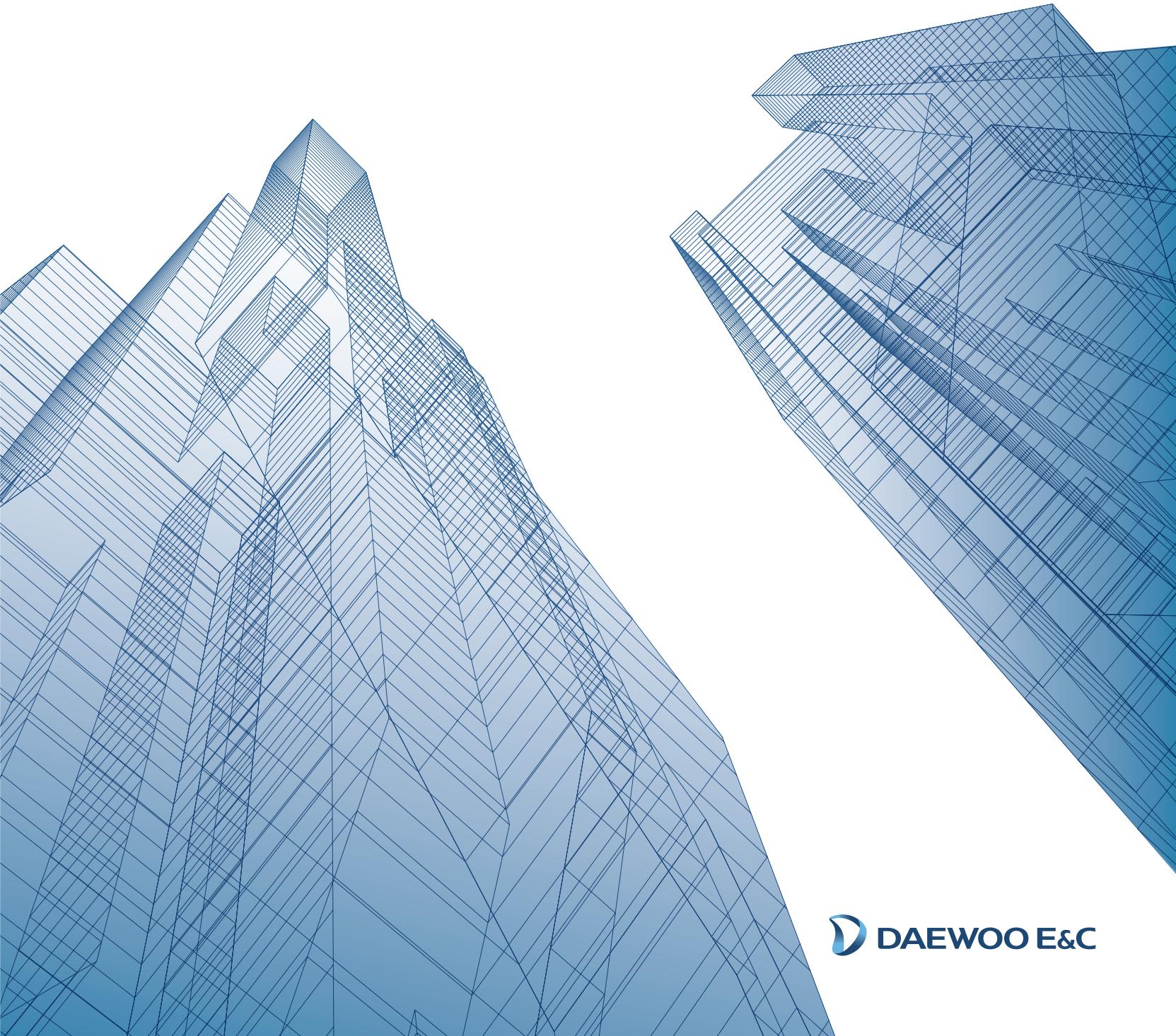
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# BUILD TOGETHER

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# 2021 DAEWOO E&C SUSTAINABILITY REPORT



# ABOUT THIS REPORT

This report, which is the tenth in this series, is used as a channel to communicate our major sustainability policies, activities, and achievements to our stakeholders. This report is available to download from our website at [www.daewooenc.com](http://www.daewooenc.com).

## **Reporting Standards**

This report has been prepared in accordance with the Core Options of the Global Reporting Initiative (GRI) Standards for Sustainability Management, an international sustainable management report guideline, reflecting ISO 26000 and UN SDGs.

## **Reporting Boundaries**

The information provided in this report covers all sites and buildings undergoing actual business operation. Quantitative performance data for the environmental aspects are limited to, consolidated and disclosed on 273 work sites and 7 buildings in Korea. The financial performance is prepared based on K-IFRS Consolidation Standards.

## **Reporting Period**

This report covers key sustainability activities and achievements from January to December 2020. Some important qualitative performance data covers up to the first quarter in 2021. In terms of quantitative performance, data for the past three years is presented for time series analysis. If there is any change in the data released in previous report, the reason is specified on the page.

## **Reporting Cycle**

Since 2012, Daewoo E&C has published a yearly sustainability report to disclose the financial, social, and environmental progress the company made over the year. The latest report was published in June 2020.

## **Report Verification**

This report has been verified by an external independent agency, KMR. The result can be found in p.96~97

## **Contacts**

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# Membership

## 2020 Status

Divisions	Association and Institutes	Divisions	Association and Institutes	Divisions	Association and Institutes
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	Korean Geotechnical Society		Korea Gas Union		Korea Information & Communication Contractors Association
	Korean Geosynthetics Society		Korean Radioactive Waste Society		International Contractors Association of Korea
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	Korean Society for Railway		Korea Atomic Industrial Forum		- KEPIC WEEK
	Korea Railway Association		Korea Nuclear Society		Construction Safety Manager Committee
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	Korea Concrete Institute		Korea Electric Engineers Association		- Construction Safety Executive Councils
	Korean Tunneling and Underground Space Association	New Frontier	Korea Proptech Forum	Quality Safety	- Construction Healthcare Practitioners Council
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	Korean Society of Coastal and Ocean Engineers		Korea Emergency Planning Officer Association		Korea Construction Quality Association
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	Korean Institute of Electrical Engineers		Korea Construction Engineers Association		Council on Tall Buildings and Urban Habitat (CTBUH)
	Smart Modular Forum		Korea Enterprises Federation		Korea Construction Transport New-Technology Association
	Korea Institute of Construction Engineering & Management		Korea International Trade Association		Korea Industrial Technology Association
	Korea Institute of Building Construction		Korea Fire Facility Association		
	Korea Military Supplies Cooperative		Korea Personnel Improvement Association		
	Korea Developer Association		National Intelligent Service Company Safety Council		
	Korean Society of Living Environment System		Korea Information Technology Research Institute		
	Korean Association of Air Conditioning Refrigerating and Sanitary Engineers		Korea Software Industry Association		
Institute of Construction Technology					