



2020
DAEWOO E&C
SUSTAINABILITY
REPORT

ABOUT THIS REPORT

This report, which is the ninth 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.

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 2019. Some important qualitative performance data covers up to March 2020. 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 2019.

Report Verification

This report has been verified by an external independent agency, DNV GL. The result can be found in pp.108-109.

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OVERVIEW



CEO Message

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About Us

08



Vision

10



CEO MESSAGE



Daewoo E&C recognizes the impact of our business activities may have on society and the environment and economic performance. Therefore we carry out more responsible management activities.

Dear stakeholders, I sincerely appreciate your continued encouragement and support for Daewoo E&C.

Last year, Daewoo E&C laid the foundations to achieve its strategic goal Global Top 20 based on the vision “Build Together” despite the difficult environment at home and abroad. In Korea, we have supplied more than 20,000 homes based on the renewed Prugio brand, and overseas, we have won an LNG liquefaction plant construction as a member of prime contractors for the first time as a Korean company. In new frontier business sector, we recorded a steady increase in sales and operating profit based on the Vietnamese market, showing our real ability to achieve management indicators even in difficult conditions.

However, we are no longer satisfied with our economic performance, but are trying to pursue more responsible management activities by recognizing our social and environmental impacts. In order to share these achievements and efforts with stakeholders including customers, shareholders, investors, employees, partner companies, and local communities, we publish our ninth sustainability report this year. With pride as a member of our community, we will make the following efforts to continuously grow and achieve the vision of Global Top 20 early.

First, we will increase corporate value with stable management performance.

The business circumstances in 2020, locally and abroad, is expected to be unfavorable due to prolonged COVID-19 pandemic and strengthened real estate regulations, but Daewoo E&C will preoccupy growth opportunities by obtaining high-quality orders and improving its marketing capabilities. Based on accumulated experience and know-how, we will upgrade our performance capabilities to sharpen the competitive edge. We will further diversify our business to develop future growth engines, and focus our capabilities on making new business items lead to real profits.

Second, we will implement safe and eco-friendly construction management.

Under our leading brand Prugio, Daewoo E&C has already delivered eco-friendly premium value to customers, and has helped to create environmentally friendly living conditions. Following its relocation in 2019, Daewoo E&C's new office building was awarded the top grade in Green Building certification for its use of technologies such as solar and geothermal energy, wall greening, and enhanced insulation. We are continuing our research into eco-friendly and smart construction methods to expand our eco-friendly construction capabilities to respond to environmental issues. In addition, we will ensure the mandatory adoption of Daewoo E&C's unique safety program “CLEAR” at all sites where we operate, and make sure the program is extensively adopted by suppliers by 2021 in order to create a construction environment in which employees' lives come first.

Third, we will fulfill our corporate social responsibility by sharing growth with our communities and suppliers.

In addition to enforcing ethical business practices within the organization, we will build organic relationships to help resolve problems facing the communities in which we are located. By working with Daewoo E&C's Social Service Corps, which have been active for over 10 years, we reach out to every part of our society to help those in need. We have also strengthened our sustainable partnerships with our suppliers by revising the Four Fair Trade Guidelines and the standard site manuals, and by making issuing work orders mandatory. At Daewoo E&C, we will continuously interact with our stakeholders to share growth with our communities and expand cooperation and support to build a better future.

Dear respected stakeholders,

Daewoo E&C always fulfills its social responsibilities, and all employees stay united and work together to move forward. We look forward to your continued support, encouragement, and love.

Thank you.

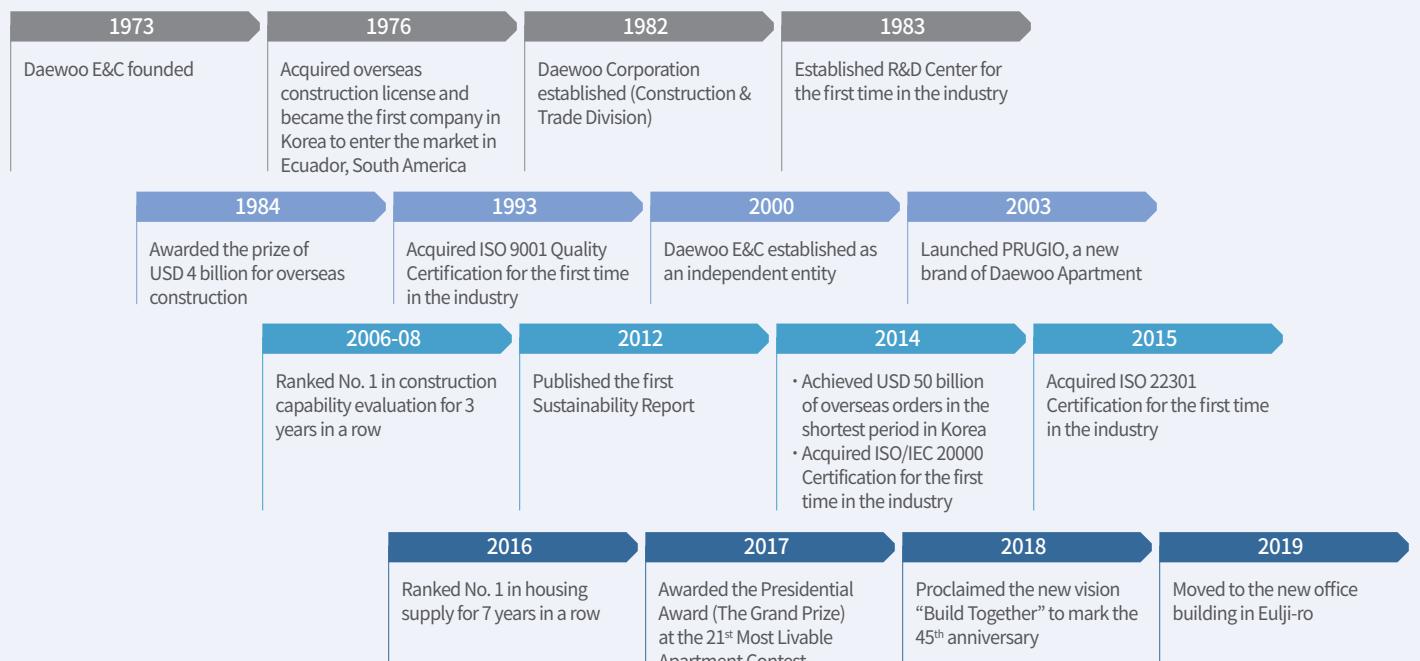
June 2020 Daewoo E&C Co., Ltd. **Kim Hyung**, President and
CEO

Hyung ICm

ABOUT US

Daewoo E&C was established in 1973 with only 12 employees. We developed into South America, Africa and the Middle East, and has become a leader in exploring overseas construction markets. We have built social infrastructure for people's lives such as Geoga Bridge, Dongjak Bridge and Seoul Metro Line 2, strived to provide people with a comfortable home, and introduced environmental-friendly residential culture in Korea. Now, Daewoo E&C will challenge to become the Global top 20 construction companies by 2025.

Daewoo E&C's History



Overview (As of March 2020)

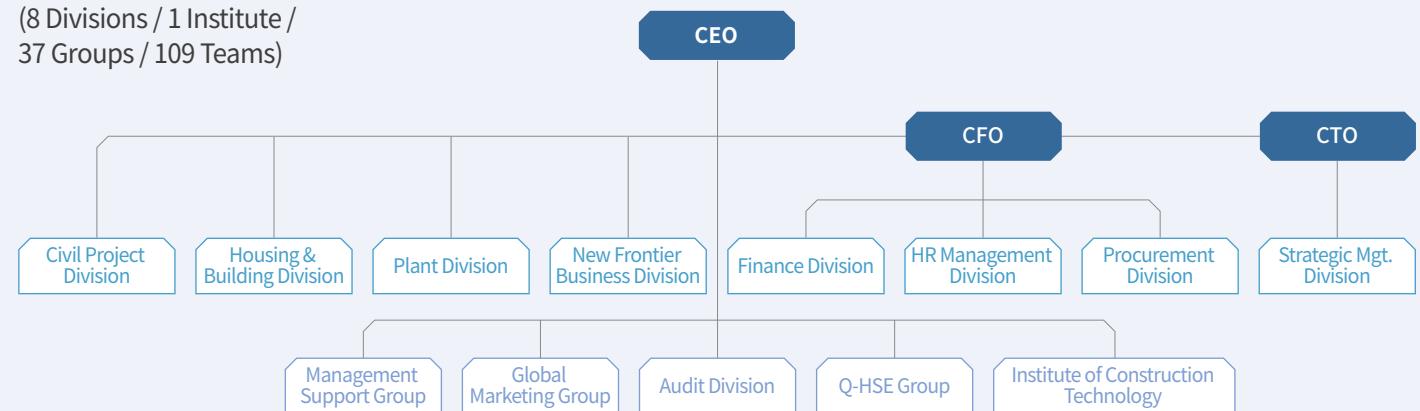
Company Name	Foundation	Head Office	CEO
Daewoo Engineering & Construction Co., Ltd.	November 1, 1973	November 1, 1973	Kim Hyung
Branches & Subsidiaries	Major Shareholder	Number of Employees	Website
2 domestic branches, 4 overseas branches, 6 overseas subsidiaries, 7 domestic subsidiaries	KDB Investment No. 1 Limited	5,385	www.daewoocom.com (Korean) www.daewoocom/eng (English)

Global Network



Organization Chart

(8 Divisions / 1 Institute / 37 Groups / 109 Teams)



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

Plants: Refinery, petrochemistry, thermal power, nuclear power, LNG, renewable energy

New Frontier Business: Real estate investment & development / management, overseas investment & development, new market / new business discovery, subsidiary management



*Korea Ratings, NICE Credit Rating

VISION

Daewoo E&C aims to become a company that realizes the best value with its customers based on its core values, which are challenge, passion, autonomy, and accountability. We will establish a foundation for sustainable growth based on partnerships with stakeholders in order to become the Global Top 20 through four major strategies and eight strategic tasks.

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

Amplify Marketing Strength

Secure New Growth Engine

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

2019 HIGHLIGHTS

Opening the "Eulji-ro Era" in a new office building

In June 2019, Daewoo E&C started working in a new office building after 10 years of life in Gwanghwamun. With the goal of sustainable growth and development defined in the new vision "Build Together" in 2018, Daewoo E&C went through reorganization this year to strengthen synergy and innovation among organizations while moving into the new office building. In order to achieve medium and long-term strategic goals early, we will focus on our core competencies, and practice responsible management to become a socially respected company.



Korea's first drone control system

In December 2019, Daewoo E&C built the first remote construction drone control system (DW-CDS) in Korea. This system can be used to remotely check safety risk factors as well as the progress of construction at the construction site, and will be used to check the safety of facilities that are difficult to access and to check construction materials. Moreover, our R&D performance is expected to contribute to society as it can be applied to various fields such as disasters, firefighting, search and rescue, and traffic control in addition to the construction industry.



Starlake investment & development project in Vietnam

We are conducting a new town development project of about two-thirds the area of Yeouido for the Starlake City project in Hanoi, the first Korean new town export project. For a complex development project in Starlake City, Daewoo E&C has signed an investment and development agreement worth about KRW 460 billion with six financial institutions in Korea, showing its capability as a real estate developer to oversee new town development projects. We plan to expand our value chain by continuously discovering new overseas businesses.



2020 IF Design Award

In January 2020, Prugio, our flagship brand, won the main prize in the communication section of the IF Design Awards, one of the world's top three design awards. We re-established our brand philosophy with the concept of 'Natural Nobility' at the brand renewal last year, and added luxury to the existing eco-friendly image. As a result, we are evaluated for innovation not only in the landscape and exterior of the building, but also in community facilities. We are recognized for our competence on the international stage and will do our best to lead the Korean residential culture.

OUR BUSINESS





CIVIL WORKS

Business Area | Roads, bridges, railways, subways, ports, water resources, environment, renewable energy

Daewoo E&C has been building major national infrastructures so that various functions of the city can work in harmony. We have built roads, bridges and railroads to link the economy, culture, and life between regions, contributing to the even development of the land, and built harbor facilities to open sea routes, laying the foundation for global trade. Our advanced civil engineering and building capabilities are evolving, leaving traces in the history of construction at home and abroad, and now form the foundations of luxury lifestyles and industries all over the world. Our business territories are now expanding into Asia, the Middle East, South America, and Africa.

PERFORMANCE

New Orders
2019 KRW **1,767.6** billion 2020 KRW **1,810.0** billion (planned)

Sales
2019 KRW **1,362.3** billion 2020 KRW **1,625.0** billion (planned)

MASTERWORKS

①		⑤	⑥
②	③		⑦
④		⑧	

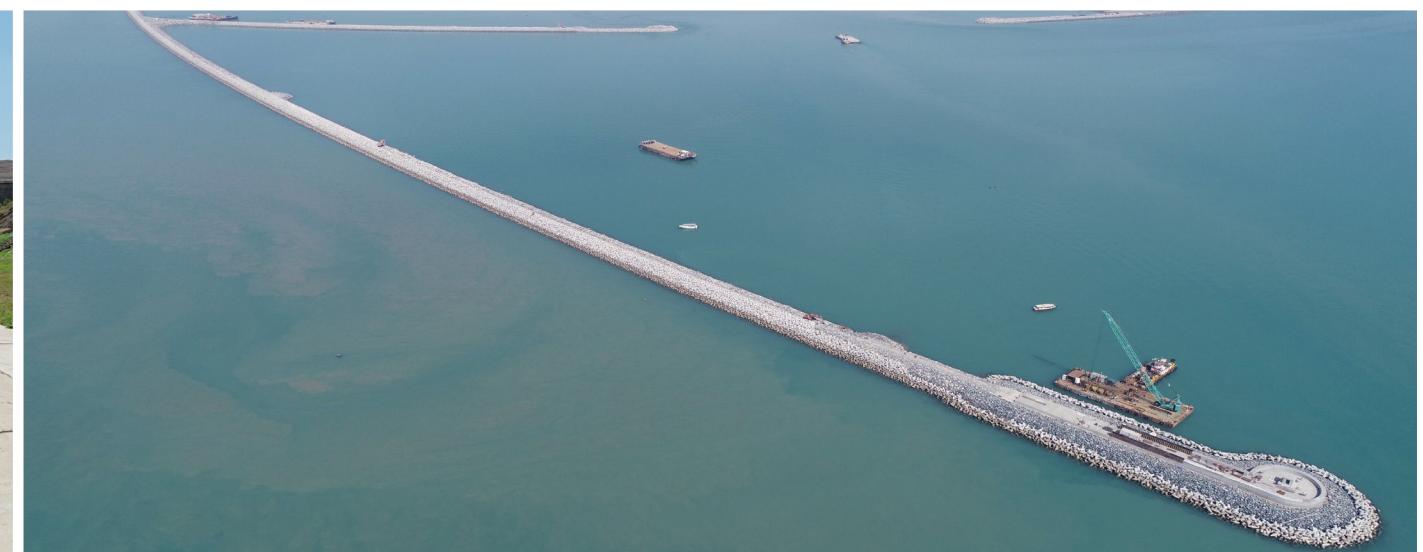
Geoga Bridge, Korea 1
World's longest immersed tunnel (3.7km) included world's top 5 records



Donghongcheon-Yangyang Highway, Korea 2
Inje Tunnel, the longest in Korea(10.96km) including total 71.7km with four lanes



Constantine River Maintenance, Algeria 3
Maintenance of the 12km section of reservoir, Waterfront Park and walkway construction



Bohyeon Mountain Multipurpose dam, Korea 4
58.5m high x 250m length of gravity arch concrete dam
Power generation capacity of 1,391MW



Sihwa Lake Tidal Power Plant, Korea 5
Korea's first and the world's largest tidal power plant Power generation capacity: 550,000 MW/year



Sihwa Marine Leisure Cultural Park, Korea 6
Asia's first artificial surfing park
Korea's largest artificial beach

Al Faw Breakwater, Iraq 7
Total 15.82km
World's longest breakwater

Cheonsa Bridge, Korea 8
World's highest high and low towers (195m, 135m)
Cable-stayed bridge (1,004m)
'20 Civil engineering structure of the year

2019 MILESTONES



Four contracts awarded for Al Faw Project in Iraq

In 2019, our Civil Project Division signed four successive private contracts - container terminal pkg 1, access road, immersed tunnel workshop, additional works for Al Faw shore protection - for the new port project in Al Faw, Basra Province, southern Iraq. The Al Faw contracts worth KRW 550 billion were concluded on the basis of a trust relationship with GCPI(General Company for Ports of Iraq), the ordering organization. In 2020, Daewoo E&C is preparing for private contracts worth more than KRW 1 trillion, including the construction of container terminal pkg 2 and immersed tunnel.



Cheonsa Bridge connecting the islands

In Sinan-gun, consisting of 1,004 islands, a huge project was conducted to build roads and bridges connecting the islands. Our Civil Project Division succeeded in linking Aphae Island and Amtae Island in April 2019 by constructing the Cheonsa Bridge, a 4-lane bridge with a total length of 10.8 km. The islands, which were only accessible by boat, can be reached in 10 minutes by car, greatly improving the life quality of local residents and increasing the accessibility of tourists.



Orbital Highway in Qatar

Daewoo E&C successfully carried out civil works, including bridge and pavement works, on a section of 42 km of the 14-lane orbital highway (Al Majd Road) in Qatar, totaling 195 km. In February 2019, the opening ceremony was held with Qatar's Prime Minister, the Director of the Public Works Authority, and related persons attended, and the entire section that had been completed by Daewoo E&C was officially opened.



Sihwa Marine Leisure Culture Park

Daewoo E&C is in the process of constructing a culture park for the Sihwa MTV Turtle Island marine leisure complex development project No. 88. In Sihwa MTV Turtle Island, located in Siheung-si, Gyeonggi-do, the infrastructure and site construction, including a surfing park and water leisure facilities, will be completed in September 2020. This will be the first artificial surfing park in Asia and the largest in the world, and the largest artificial beach and family water sports park in South Korea.

Economic value increased by business activities ●
Environmental value increased by eco-friendly business and efforts to minimize environmental impact ●
Social value increased by contributing to social development for workers, customers, local communities, etc. ●



Jeju solar power plant

As part of the 'Carbon Free Island 2030' project, Jeju Island has established an energy conversion plan from fossil energy such as coal and oil to renewable energy including solar and wind power. Our Civil Project Division is constructing a solar power plant in Jeju Island to implement a clean energy-independent island and plans to build a total of 88 power plants by the end of 2020.



Support for local residents at the site in Ethiopia

Our Civil Project Division puts out a helping hand to residents near overseas construction sites to exercise its responsibilities as a global construction company. In 2019, we provided basic foodstuffs such as oil and flour every month for patients suffering from AIDS at Zeway, a highway construction site in Ethiopia, and provided 40,000 liters of bottled water every Sunday, contributing to relieve water shortage.

Cheonsa Bridge opened for better traffic access



Any residents of Sinan-gun visiting Seoul had to travel 40 minutes by boat at dawn, take a bus for more than 1 hour and 30 minutes to Mokpo Station, and then take a KTX to Seoul. When returning, they often had to stay overnight in order to meet the ship's sailing times. Many residents said that it took maximum 3 days to go to Seoul for a hospital visit.

The Civil Project Division successfully completed the design and construction of Cheonsa bridge that connects Aphae Island and Amtae Island, contributing greatly to the quality of life of residents, including improving access to transportation and reducing travel time in emergencies. In addition, Cheonsa bridge was recognized for its engineering creativity, artistry and friendliness, and became an annual civil engineering excellence in 2020.

Socioeconomic Impact of Cheonsa Bridge

VALUE	Before	After
Tourists increased (Sinan-gun)	290 thousand per year	6.3 million per year (22 times the last year)
Regional income increased (Sales of agricultural and marine products)	Transport by sea, Freshness deteriorated, Sales price ↓	Delivery by car, Freight costs reduced, Freshness improved, Sales price ↑
Amtae Island - Aphae Island	1 hour (by boat)	10 min. (by car)
Amtae Island - Seoul	1 day (by boat)	4 h 30 min. (by car)





HOUSING

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

The housing construction is an industry to build a wide range of buildings that form the basis of human life and various business activities, such as housing, business, sales, education and research, medical care, and factories. With continuous efforts to provide better urban space and residential environment, Daewoo E&C has established itself as a leader in high-rise buildings and intelligent buildings at home and abroad, and is leading the Korean residential culture with its flagship product "Prugio." Recently, while strengthening the position of the existing business, we are diversifying our business portfolio by actively discovering new overseas business sites and applying Smart Construction to provide growth engines for sustainable development.

PERFORMANCE

New Orders
2019 KRW **7,271.7** billion
2020 KRW **7,000.0** billion (planned)

Sales
2019 KRW **5,192.7** billion
2020 KRW **5,398.1** billion (planned)

MASTERWORKS

①		⑤	
②	③	⑦	⑥
④			⑧

Seocho SUMMIT, Seoul, Korea 1

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



Yongsan Prugio Summit 2

1 business building with 9 stories underground and 39 stories above the ground, 1 residential building with 38 stories above the ground (a total of 650 apartment houses)

Jungdong Central Prugio 3

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

Provincial Government Building, Gyeongsangbuk-do 4

30% renewable energy and environmental protection building
First-class architecture leading green building

Dragon City Hotel, Yongsan, Seoul 5

The largest 6-star hotels in South Korea with 1,700 rooms
Entered 4 famous hotel brands

Scott Tower, Singapore 6

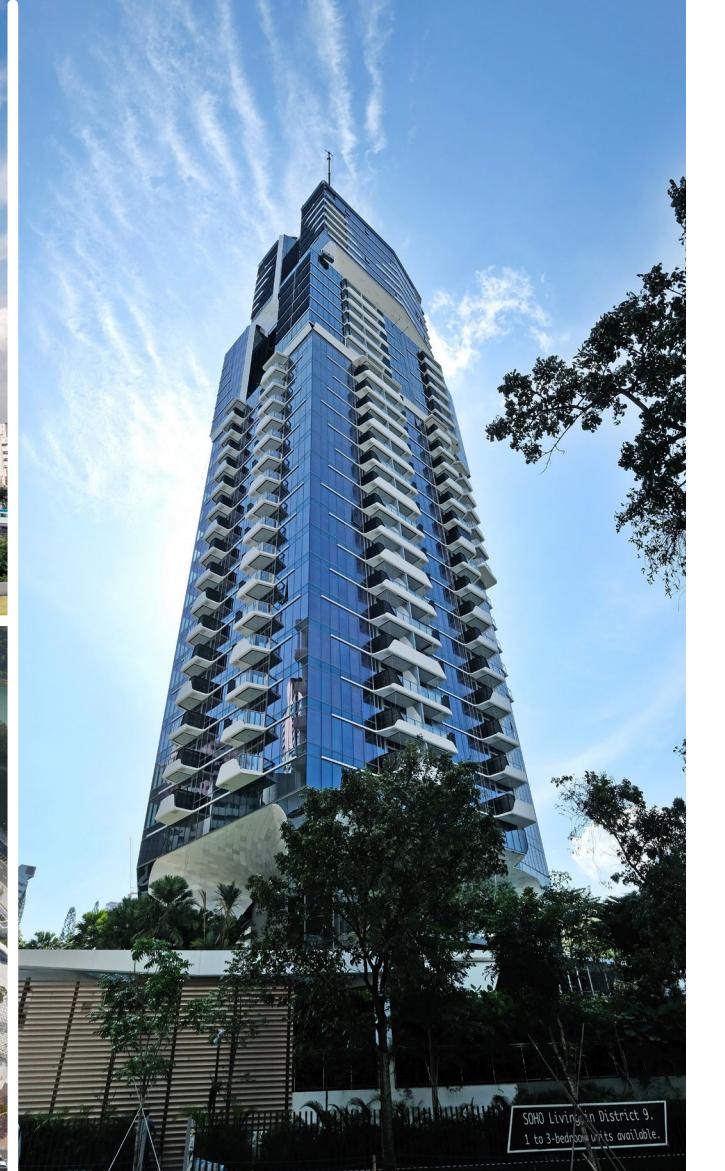
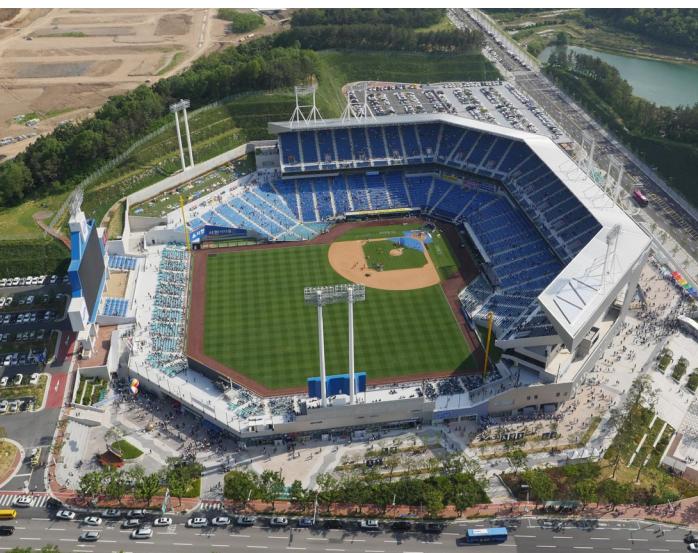
2016 Overseas Construction Award
Won the architectural award

Samsung Lions Park (Baseball Stadium), Daegu 7

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

IB Tower, Malaysia 8

Malaysia's largest convention center



2019 MILESTONES



Indeokwon Prugio Elcentro completed

Our Housing & Building Division is leading the premium residential culture trend by introducing the renewed Prugio to the market in 2019. Indeokwon Prugio Elcentro, which was completed in 2019, applied the renewed Prugio's BI and exterior color finish to impress customers with a new and luxurious image of Prugio.



Eulji Twin Tower completed

Recognized for intelligent office buildings, Daewoo E&C completed and moved into the Eulji Twin Tower in 2019. Green walls have been created on the outer wall of the podium that supports the two upper office towers, and green premium special designs such as geothermal power generation and solar power generation systems have been applied to provide differentiated spaces.



Jangwi District 6 housing redevelopment maintenance project awarded

As old buildings increase and new buildings become more and more preferred, various city maintenance projects such as reconstruction, redevelopment, and remodeling are expected to be active in the future. In April 2019, Daewoo E&C was selected as the contractor for the redevelopment project of Jangwi District 6 in Seongbuk-gu, Seoul. This is a large-scale project that redevelops a total of 1,637 apartments and is highly anticipated.



Keimyung University's Dongsan Medical Center opened

Our Housing & Building Division is constructing state-of-the-art medical facilities where medical personnel can provide their best services. Opened in 2019, Keimyung University's Dongsan Medical Center in Daegu applied eco-friendly elements to all stages of design, including architectural design, materials and resource use, indoor environment, and air quality in hospitals. It is the first hospital in Korea to have been certified as a green building from LEED Leadership in Energy and Environmental Design, the US green building certification system.

Economic value increased by business activities ●
Environmental value increased by eco-friendly business and efforts to minimize environmental impact ●
Social value increased by contributing to social development for workers, customers, local communities, etc. ●



Prugio 5ZCS fine dust blocking technology applied

Daewoo E&C recently developed 5ZCS (Five Zone Clean Air System) and applied it to Prugio apartments to address customer concerns about fine dust. Focusing on five areas where fine dust is frequently generated, we provide a service to notify the pollution level in each area and install mist spraying facilities and HEPA filters to reduce problems. We take the lead in improving the residential environment in such a way.



Donations in kind to a refugee school in Malaysia

Our Housing & Building Division is aware of how its business activities affect nearby communities and conducts voluntary CSR activities at home and abroad. At the end of 2019, at the Damansara City site in Malaysia, the on-site employees raised money to repair damaged PCs and delivered them to three local schools including a refugee school.

Sustainable cities and communities based on eco-friendly architecture



Daewoo E&C is contributing to the creation of sustainable cities by providing residential and cultural spaces where people and nature live together. We introduced the green concept of "Green Home, Clean Apartment" in 1994 for the first time in the industry and launched the Prugio brand in 2003 by integrating our eco-friendly residential philosophy. Our Housing & Building Division, which values the balance between nature and cities, brings its accumulated experience to the office space, and is building a reputation in the eco-friendly office building market.

Eulji Twin Tower

renewable energy supply rate of **15%**

Hanam Techno Valley

creation of
'Little Forest'
for green space





PLANTS

Business Area | Refinery, petrochemistry, thermal power, nuclear power, LNG, renewable energy

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.

PERFORMANCE

New Orders

2019 KRW **1,328.8** billion 2020 KRW **3,570.0** billion (planned)

Sales

2019 KRW **1,592.1** billion 2020 KRW **1,766.0** billion (planned)

MASTERWORKS

①		⑤
②	③	⑥
④	⑦	⑧

Ulsan S-Oil RUC*, Korea 1
the largest as a single plant
110,000 tons of rebar used
the first modular process in Korea
*RUC(Residue Upgrading Complex)



LNG plant,
Papua New Guinea 2
6.3 million ton/year of
LNG production



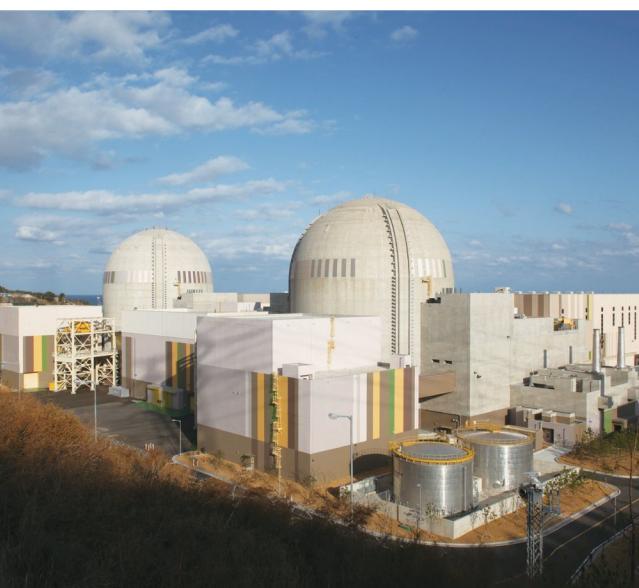
**Otumara Gas Treatment
Facility, Nigeria** 3
30MMscf/day of gas purification
and delivery



**Shin-Wolseong Nuclear
Power Plant Unit #1 & #2, Korea** 4
pressurized water reactor
1000MW X2 units



**Jorf Lasfar Power Plant
Unit #5 & #6, Morocco** 5
700MW class (350MW X2)
coal-fired power plant



Q-Chem II, Qatar 6
polyethylene production facility
(350,000 tons/year)
olefin production facility
(350,000 tons/year)



**Wolseong Low &
Intermediate-Level
Radioactive Waste Disposal
Facility, Phase 1, Korea** 7
Asia's first facility for disposing
radioactive waste in the underground
rock cavern located at
80 -130m below sea level



Sur Power Plant, Oman 8
2,000MW class combined cycle
power plant



2019 MILESTONES



LNG liquefaction plants in Mozambique and Nigeria

Since entering the global plant market, Daewoo E&C has built approximately 10% of LNG liquefaction facilities worldwide. We have overcome topographical limitations like soft ground conditions, even in unfavorable natural environment with hot and rainy weather, by applying modular technology to move and install pre-assembled modules on the ground. Daewoo E&C has been carrying out construction projects worth about KRW 21 trillion in the African continent.

Our Plant Division has been operating an LNG TFT for full-scale entry into the LNG business since 2018 in response to global demand for natural gas and was able to secure orders for LNG liquefaction plants from Mozambique in 2019. In addition, this year, we won an order for NLNG Train 7, a project to build a plant that produces 8 million tons of LNG annually in Bonny Island, Nigeria. This project is the first instance where a Korean company goes beyond the role of a mere contractor to perform all tasks such as design, purchase, construction, and commissioning as a prime contractor. For this EPC project, Daewoo E&C, Saipem (Italy) and Chiyoda (Japan) have established a joint venture that will act as a prime contractor. This is significant as Daewoo E&C is taking the first step in the field of LNG liquefaction plant EPC, which previously has only been allowed to a handful of foreign advanced construction companies.



Multiple cave drainage construction (Phase 1) for radioactive waste site

As earthquakes occurred in Gyeongju, our Plant Division won a contract for the multiple cave drainage construction phase 1 at the radioactive waste site with a view to increase operational stability and maintain performance of the disposal facility against earthquakes. Thanks to this, we have secured a favorable position to win orders for fuel storage facilities, low and intermediate-level waste disposal facilities, high-level waste disposal facilities, and nuclear power plant decommissioning projects.



LEED standards applied to plant buildings

In the Clean Fuel project in Kuwait, Daewoo E&C has designed and constructed a Technical Office Building with 1 floor underground, 5 floors aboveground, and an area of 24,980 m² in accordance with the criteria of LEED Leadership in Energy and Environmental Design, the US green building certification system. Our Plant Division will take the lead in eco-friendly construction by designing and constructing in consideration of the environment in future projects.

Economic value increased by business activities ●
Environmental value increased by eco-friendly business and efforts to minimize environmental impact ●
Social value increased by contributing to social development for workers, customers, local communities, etc. ●



Efforts for zero disaster

In accordance with OHSAS 18001, an international safety and health standard, our Plant Division is spreading our commitment to safety to the site, based on the principle of respect for life. As a result of these efforts, our Plant Division achieved a total of 52.21 million hours with zero accidents as of the end of 2019 in its overseas projects. In addition, the AZRP project in Kuwait, which is being carried out in collaboration with Fluor, was awarded the Gold Awards in the HSE Excellence and Environmental Excellence categories of the Gulf Cooperation Council HSE Excellence Award presented by ASSP American Society of Safety Professionals, demonstrating the superiority of Daewoo E&C in safety management.

Project Name	Accident Free Record
Philippines Atimonan PJ	1,032,205 hours (11/14/2018-12/31/2019)
Nigeria Indorama Fertilizer II PJ	7,387,753 hours (05/03/2018-12/31/2019)
Oman Duqm Refinery PJ	8,810,000 hours (06/03/2018-12/31/2019)
Algeria RDPP PJ	25,106,765 hours (10/24/2012-12/31/2019)
Morocco SAFI Independent Power PJ	9,313,915 hours (08/26/2017-12/31/2019)
Nigeria Gbaran Infill	496,920 hours (04/09/2019-12/31/2019)

Contributing to universal energy access by entry into energy-poor countries



Daewoo E&C has been building energy plants in energy-poor countries in Africa and Southeast Asia beyond regional limitations. We focus on energy efficiency to overcome limited resources and meet energy demands, thereby helping more people have access modern energy services.

The first Korean construction company to enter Africa

currently conducting business in **12** countries



NEW FRONTIER BUSINESS



NEW FRONTIER BUSINESS

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

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 operation of subsidiaries and assets and the profitability of existing businesses with focus on strengthening internal capabilities and stability.

PERFORMANCE

New Orders

2019 KRW **421.9** billion

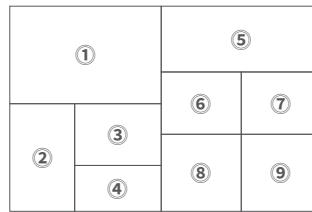
2020 KRW **520.0** billion (planned)

Sales

2019 KRW **683.6** billion

2020 KRW **453.0** billion (planned)

MASTERWORKS



Overseas Equity Investment (Office / Hotel) 1

THT B3CC1 joint development project in Vietnam



Overseas Equity Investment (Apartment / Office) 2

THT B1CC4 in Vietnam



Overseas Complex Development (Office) 3

THT H1HH1 joint development project in Vietnam



New Business (BTS Build Together Start-Up) 4

Investment in drone business (drone control system)



Housing Purchase and Rental Business using REITs 5

Songdo Sheraton Hotel 6

3 stories of underground, 23 stories of above ground, 5 star hotel with 321 rooms in total



Saipan LaoLaobay 7

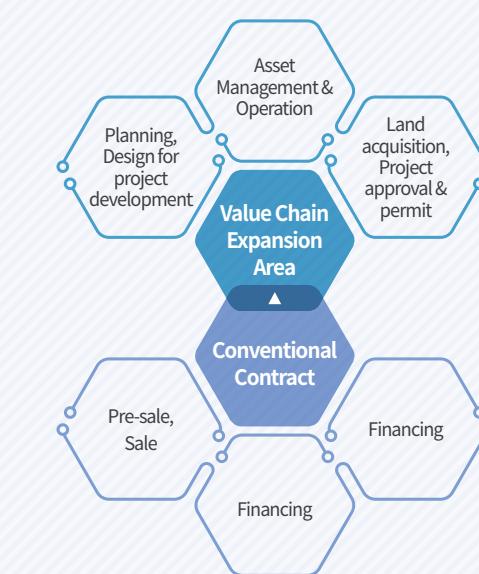
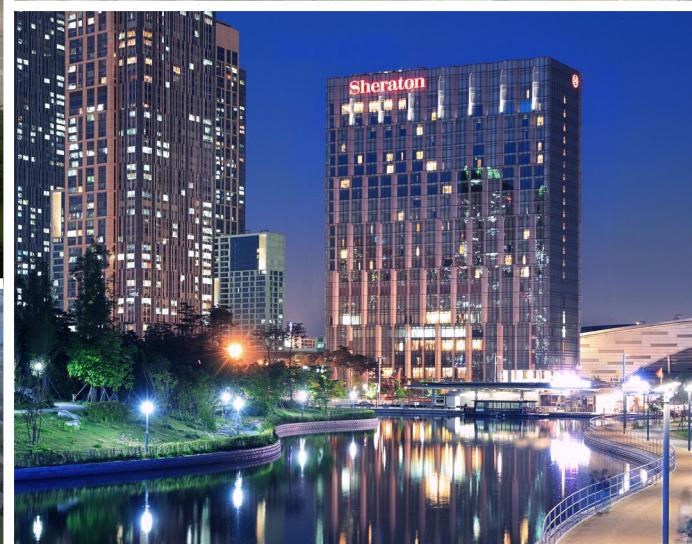
54 guest rooms, 36 whole of golf course, swimming pool and restaurant, the dinning place for barbecue

Expanding the value chain of development projects 8

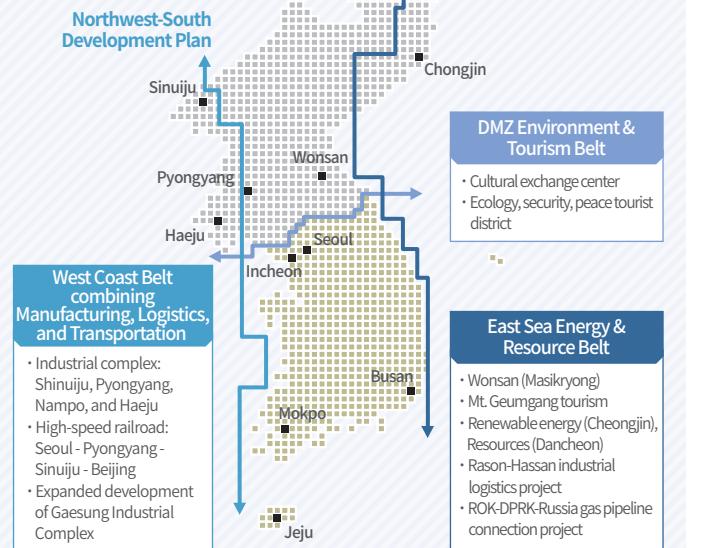
As a general real estate developer, we will expand our value chain into other areas including construction, asset management and operation from existing simple contraction-oriented business.

Inter-Korean economic cooperation 9

Public enterprises and private companies work together to review and develop new joint projects.



New Economic Map of the Korean Peninsula

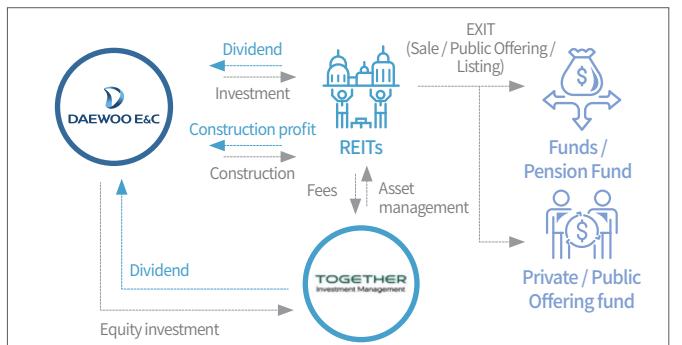


2019 MILESTONES



THT Phase 1 development project in Vietnam

The “Starlake City” project underway in Vietnam is a large-scale new town development project that Daewoo E&C has won. THT, a Vietnamese subsidiary of Daewoo E&C, is successfully carrying out the project in two phases. In the first phase, it has completed the construction of infrastructure and the supply of villas, and in the second phase, it is carrying out various projects such as sale of residual housing, sale of commercial land, and new investment development projects. The project aims to create a state-of-the-art complex new town with high-end residential facilities, commercial and business facilities, and government buildings by 2028.



Real estate asset management company

Daewoo E&C launched the TOGETHER Investment Management, a REITs asset management company (AMC) as the first step to realize its Vision 2025. We have a vision to become a general developer that covers the entire process from land acquisition to asset management & sales by utilizing REITs, an indirect investment instrument for real estate. Building a new business model in which construction and finance are converged will become a new competitive edge for Daewoo E&C.



Strategic partnership with SG Safety Corporation

Our New Frontier Business Division has established a strategic alliance with SG Safety Corporation, specialized in the field of life safety, in order to establish an operational plan for innovative program (BTS) and discover competitive businesses. Daewoo E&C and SG Safety Corporation will jointly develop technologies for air purification systems, seismic reinforcement solutions, and disaster evacuation systems in public institutions. In this way, we expect to grow together with innovative companies, strengthen our technological capabilities, and create stable profits.

Economic value increased by business activities ●
Environmental value increased by eco-friendly business and efforts to minimize environmental impact ●
Social value increased by contributing to social development for workers, customers, local communities, etc. ●



Joint development agreement for Tripa-2 hydropower project in Indonesia

Our New Frontier Business Division is focusing on the development of hydropower projects in line with the reduction of greenhouse gases, which are a global issue. Based on the experience of developing, constructing and operating hydropower plants in Houay Ho, Laos and in Patrind, Pakistan, we are working on the Tripa-2 hydropower project with local developers in Aceh, Indonesia. Through this project, we plan to supply electricity to approximately 120,000 households in the region and contribute to the development of the local economy and ultimately to the improvement of living standards for residents.



Integration of three subsidiaries of Daewoo E&C

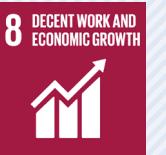
Daewoo E&C has signed contracts to merge three subsidiaries: Daewoo ST, Prugio Service, and Daewoo Power. Under the vision of “Total Care Service Provider in Real Estate,” the new integrated corporation will enter into small and medium-sized real estate development projects that are difficult for the parent company to enter, and will promote small-scale maintenance and remodeling projects. With the merger of three out of six subsidiaries in Korea, it is possible to increase management efficiency and expect integrated synergy to promote new businesses.



Air quality measuring devices donated to Hanoi, Vietnam

Our New Frontier Business Division is building close relationships with the communities in which our business is conducted. While leading the new town development for ‘Starlake City’ in Vietnam, we decided to install 24 large air monitoring stations by 2020 to improve the environmental problems of Hanoi, the world’s No. 1 air polluted city. Then it will be possible to observe in real time the atmospheric condition of Hanoi. We expect that the introduction of an environmental monitoring system in Vietnam will contribute to the systematic control of air quality.

Contributing to solving social problems by investing in creativity and innovation



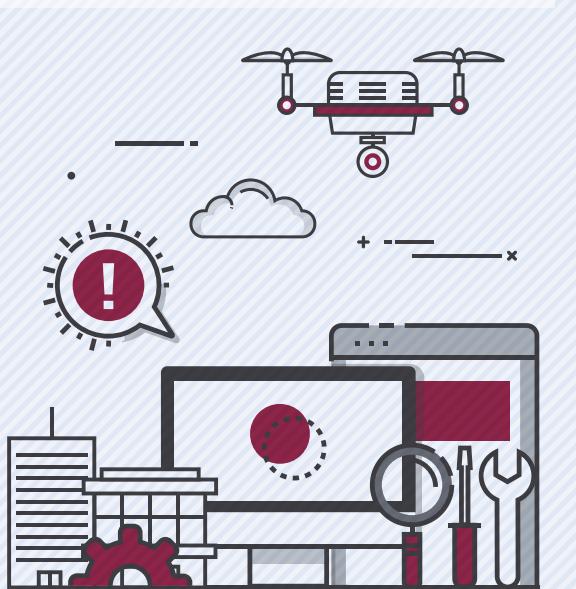
Our New Frontier Business Division is discovering and investing in startups that possess or develop innovative technologies to alleviate social and environmental problems in our society. Meanwhile, Daewoo E&C shares the concerns of the communities in which the company is located, contributes to solving social problems, and assists talented people in the challenge of starting a business.

Investment for startups and innovative companies

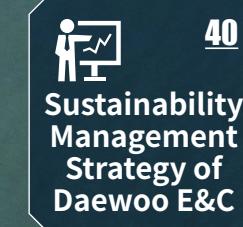
• Key items related to future industries

• Business models to generate new revenue

• Businesses that utilizes technology patents and 4th industrial technologies, contributing to strengthening internal capabilities



BUILD TOGETHER



Sustainability Management Strategy of Daewoo E&C

Daewoo E&C is establishing a company-wide sustainability management system to ensure corporate sustainability. We expanded strategic areas in three directions: Future Growth, Safe & Green Growth, and Shared Growth, and derived strategic tasks

in each direction based on material issues selected by stakeholders. By managing the performance of each task every year, we will achieve our sustainable management goals and contribute to the achievement of UN Sustainable Development Goals.

VISION

Build Together

Realizing the best value together with the customer

UN SDGs

17 international commitments for sustainable development worldwide



Future Growth

Sustainability Management Goal

Strategic Tasks

Seeking Future Growth Engines

- Smart construction technology
- Eco-friendly construction technology

Providing Customer-Focused Services

- Differentiated customer service
- Proactive quality management
- Enhanced information security management system
- Enhanced marketing capability

Material Issues

- Improving R&D capability
- Developing new markets and new business areas
- Developing eco-friendly construction methods and new and renewable energy technologies

- Improving brand values and corporate image
- Improving customer satisfaction by quality management
- Achieving financial target

Achievements in 2019

Smart construction focused on **7** fields

Customer Satisfaction (NCSI) Ranked No. **3**

Modular building technology **40%** reduction of construction time

On-site quality assessment **90** points

Simultaneous Monitoring with Drones **256** sites

Average processing period of Customer complaint **12** days

New renewable energy project generation capacity of **51.5 MW**

Customer information leaked, stolen, or lost **0** cases

Relevant SDGs

7. Affordable and clean energy

9. Industry, innovation and infrastructure

9. Industry, innovation and infrastructure

11. Sustainable cities and communities

16. Peace, justice and strong institutions



Safe & Green Growth

Creating a Safe Environment for Construction

- Advanced safety and health management system
- Internalize safety culture at construction sites

Improving occupational safety

- Reducing energy consumption and GHG gas emissions to respond to climate change
- Reducing the environmental impact

Delivering Eco-friendly Construction

- Construction of environmental management system
- Reduce greenhouse gas emissions in response to climate change
- Minimize environmental impact
- Emissions management at construction sites

Systems certified
OHSAS 18001
KOSHA 18001

New office building in Eulji-ro
G-SEED First-Class

Safety education **2,166** persons participated

On-site waste recycling rate **99.3%**

Safety budget **KRW 18.9 billion**

Voluntary agreement
to reduce fine dust under the Ministry of Environment

On-site spot check **190** times

At the 15th Construction Environment Management Best Practice Contest
Awarded by the Minister of Land, Infrastructure and Transport

8. Decent work and economic growth

11. Sustainable cities and communities

11. Sustainable cities and communities

13. Climate action

15. Life on land



Shared Growth

Happy Workplace for Employees

- Corporate culture campaign
- Flexible organizational culture and support for employee's individual lives

- Respect for human rights and diversity of employees
- Developing employee competency

A Company Growing with its Community

- Enhanced shared growth
- Sustainable supply chain management

- Sustainable supply chain management (evaluating supplier's sustainability)

HRD action plan built
to reflect new vision

Employees participating in social contribution activities in 2019
1,270 persons

Internalization of execution act
for core value

Spending on social contribution activities in 2019
KRW 236 million

Corporate culture campaign
sympathized by employees

Lighting Children Campaign
80 households in Malawi, Solar lanterns provided

Prugio Daycare Center expended opening
accommodate **70** children

On the Ethiopian site
HIV prevention Program conducted
40,000L of bottled water supplied
45,000 trees planted

4. Quality education

3. Good health and well-being

8. Decent work and economic growth

7. Affordable and clean energy



Seeking Future Growth Engines

Link to UN SDGs



SDG
7.2

By 2030, substantially increase the portion of renewable energy.



SDG
9.4

By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.

Management Approach

In order to build a sustainable society based on more efficient, eco-friendly and safe technologies, we are studying smart construction technologies that can transform the construction industry and developing eco-friendly technologies. We have improved construction productivity with our DSC* technology that integrated the entire construction process with ICT / IoT technologies and are strengthening our capacity to produce new and renewable energies to respond to climate change.

*DSC(Daweo Smart Construction)

2019 Performance

Smart construction

focused on **7** fields

Modular building technology

40 % reduction of construction time

Simultaneous Monitoring with Drones

256 sites

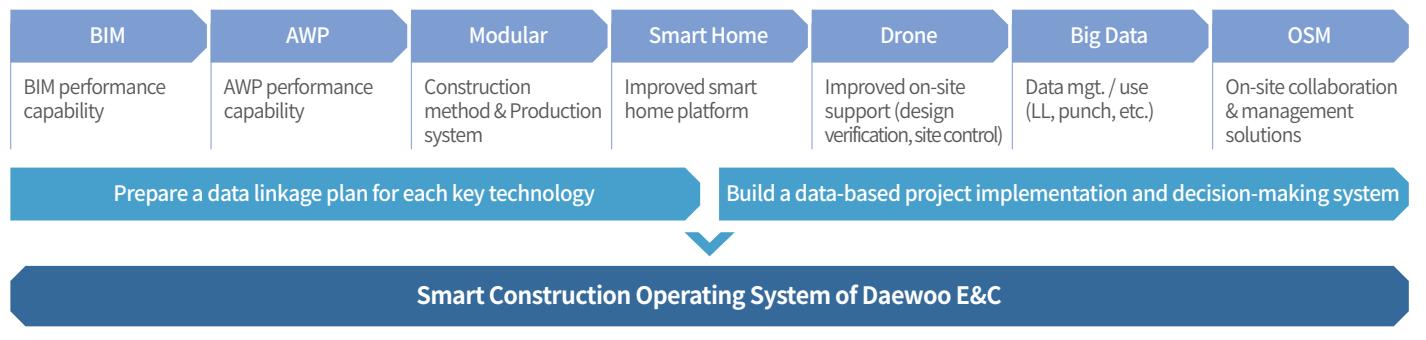
New renewable energy project

generation capacity of **51.5 MW**

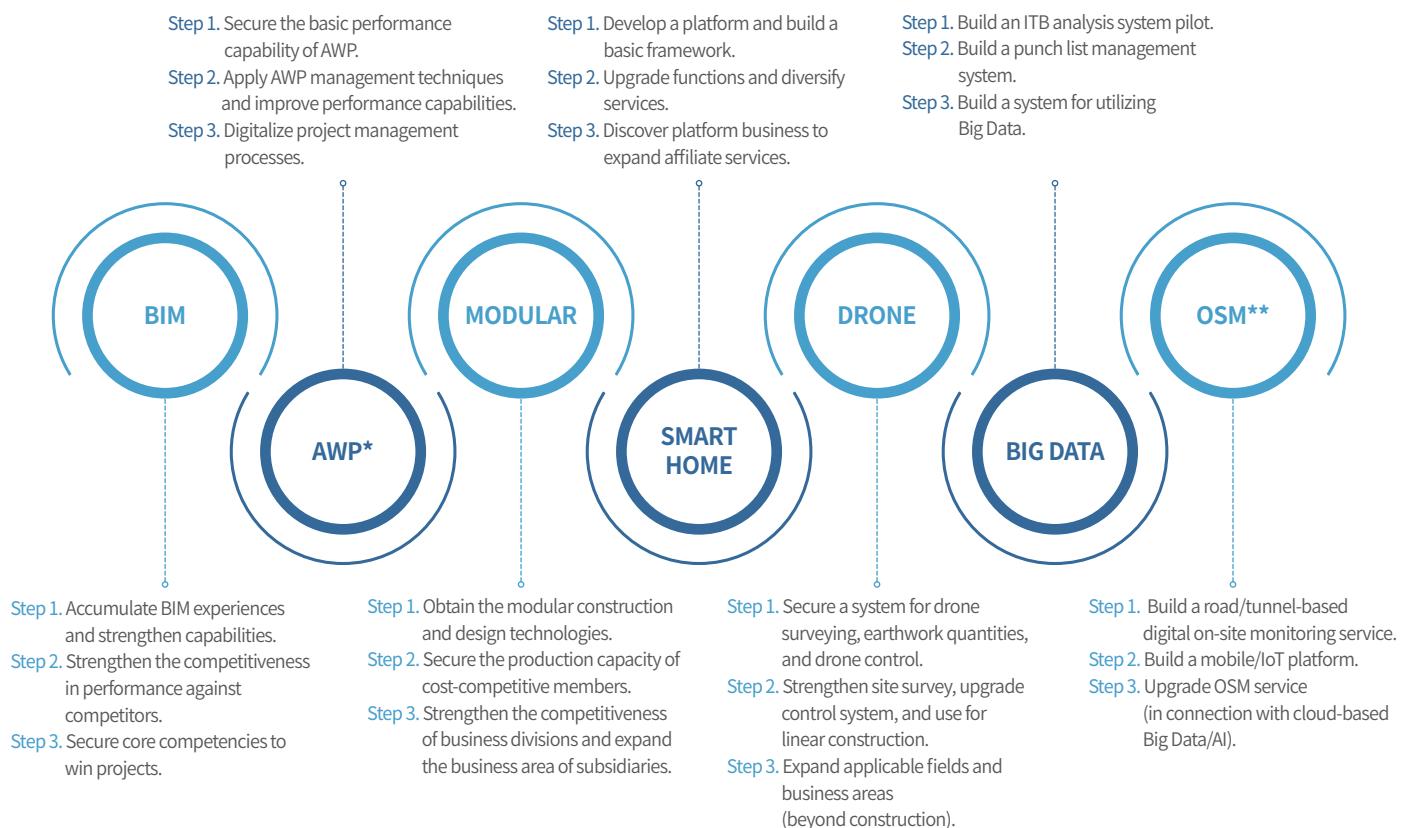
Smart Construction Technology

Daewoo Smart Construction (DSC)

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 On-site 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.



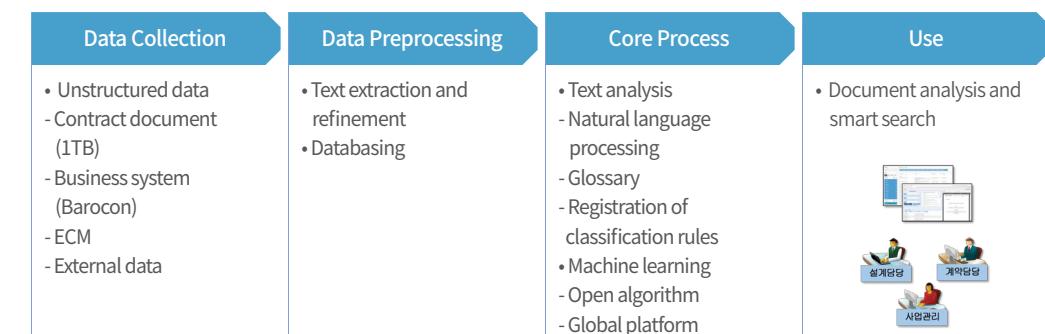
Daewoo Smart Construction Strategies for 7 Major Fields



Unstructured data management of overseas EPC

Overseas projects are difficult to deal with because they are based on English contract documents, of which more than 80% are composed of unstructured data such as text and drawings. Daewoo E&C has improved work efficiency by utilizing an unstructured data management system for overseas EPC projects built to understand human languages based on the experience and knowledge of experts. Collected contract documents are quickly and accurately analyzed in the system, and detailed information is delivered to experts in each field. Afterwards, experts carefully analyze the comprehensive information, which cannot be done by the system, to review risks and business performance requirements. The data management system will be applied to the major design fields of overseas projects from the second half of 2020, strengthening our competitiveness in overseas projects.

Unstructured data management system



Modular building technology

Modular Building Technology reduced the construction time by **40%**

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.

Step-by-Step Development of Modular Technology



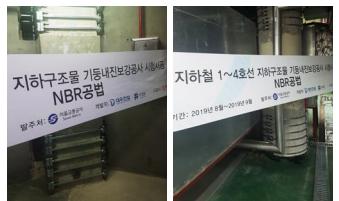
Automated design of offshore structures



SMP Unit 2 Crude oil unloading facility

Recently, the construction industry has been expanding beyond land and into the ocean, and offshore facilities for oil/gas energy mining and transportation are attracting attention as a new opportunity for the construction industry. Daewoo Institute of Construction Technology has developed a design automation software that produces optimal design and reduces the design time of offshore structures. We have successfully completed the Ulsan SPM Unit 1 by using the submarine pipeline design technology for the first time in Korea and are currently building Unit 2. Based on our successful offshore design experience in Korea, we plan to enter overseas markets in the future.

Commercialization of seismic retrofit technology for structures



NBR method used for seismic reinforcement (Seoul Subway Lines 1 to 4)

Due to ageing buildings and the occurrence of earthquakes, there is an increasing need for safety management of structures and buildings. Daewoo E&C has developed the NBR method*, a seismic retrofit technology for reinforced concrete structures, to strengthen the seismic reinforcement effect on structures. Recognized for its simple and excellent construction method for fastening steel to existing structures, the NRB method was selected for the Seismic Reinforcement Work of Seoul Subway Lines 1 to 4 in 2018 and will proceed with the construction for about 3 years from 2020. We will take responsibility for the safety of citizens by applying our NBR method to the sections that are not seismically designed in the Seoul Subway Lines 1 to 8 as well as in the subways in Busan and Daegu.

*NBR (New Bar Reinforcement) method: A seismic reinforcement method to improve the strength to resist earthquakes by placing reinforcements at regular intervals on the outer circumferential surface of the pillar

Improved Surveying Using Drones

Using advanced technology-based surveying rather than human surveying at construction sites allows us to accurately calculate the earth-work 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.

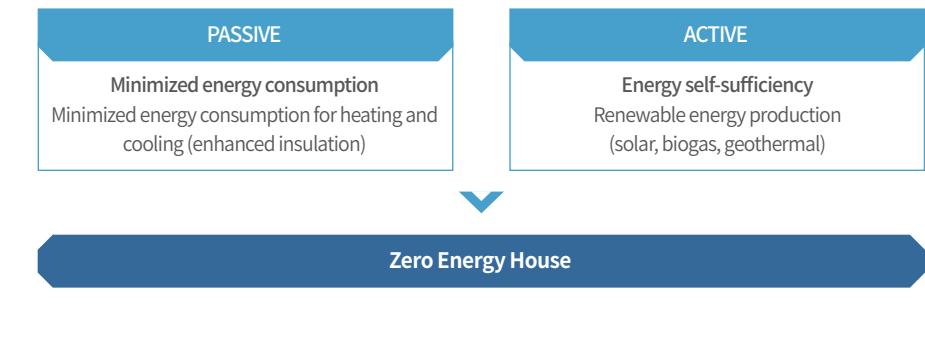
DW-CDS (Daewoo Construction Drone Surveillance)

Comprehensive control
Remote control of droneVideo control
platformSimultaneous monitoring of
up to 256 sitesDrone used in
construction site

Expansion of new renewable energy

New renewable energy business
with generation capacity of
51.5 MW

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%.

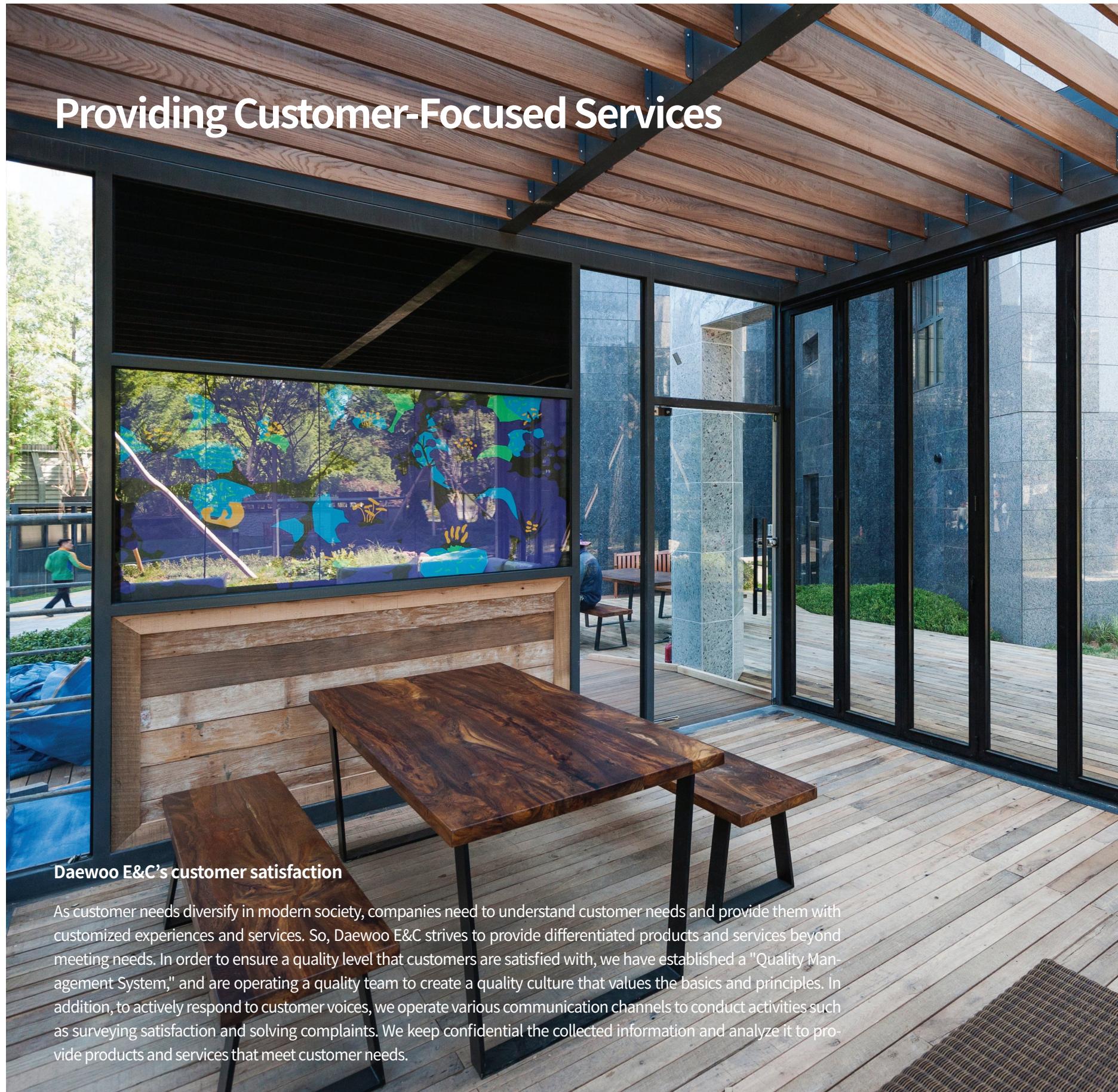


Amid the emergence of global environmental issues centered on climate change, global companies are expanding into eco-friendly businesses, in particular, as the fine dust generated by coal-fired power generation becomes a hot issue. Daewoo E&C is also pursuing various new and renewable energy projects such as solar power, offshore wind power, and biogas in response to the government's Renewable Energy Plan 2030 and Nuclear-free Power Generation policy. In particular, our 'Jeju Solar Power Plant Project' is scheduled to be completed in the first half of 2020 with a generation capacity of 46.4MW, and is expected to play a major role in replacing energy in Jeju Island with new and renewable energy. In the field of solar power, we plan to develop the "Optimal Solar Structure Design Technology" to respond to the expansion and installation of solar facilities according to the government's zero-energy policy.

In the field of wind power, we developed the "Suction-type Foundation Technology," which is a unique Korean model, and will apply it to offshore wind farm projects in the future. In addition, in the field of biogas, we applied the technology of producing biogas from organic waste to our eight projects including Daegu DBS (3MW, constructed by us) and Incheon DBS* (2.1MW, technology provided by others) to produce new and renewable energy using wastes, such as sewage sludge or food waste. As such, Daewoo E&C is strengthening its capacity to produce new and renewable energy by developing and applying differentiated technologies for each field.

*DBS(Daewoo Bio-Gas System): Daewoo E&C's patented environmental technology that produces energy using organic waste such as food waste

Eco-friendly Construction Technology



Link to UN SDGs



SDG
9.1

Develop quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.



SDG
11.3

By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.



SDG
16.6

Develop effective, accountable, and transparent institutions at all levels.

Management Approach

Daewoo E&C has improved construction quality and scored 90 points in terms of on-site quality performance indicator by using its quality inspection that focuses on vulnerable factors on-site, including materials and machinery used in construction sites. We manage defects and collect customer complaints by providing communication services throughout the entire process of moving in, and measure customer satisfaction with Prugio through a reputable external evaluation agency every year. In 2019, there was no leakage of confidential information, including personal information obtained from customers.

2019 Performance

Customer Satisfaction (NCSI)

Ranked No.**3**

On-site quality assessment

90 points

Average processing period of Customer complaint

12 days

Customer information leaked, stolen, or lost

0 cases

Differentiated Customer Service

Warm welcome for customers, Welcome Meal Service

Welcome Meal Service

Lunch box provided to

1,538 households*

Satisfaction **91.7%**

*2019 test operation: Hanam Hills Park, Pyeongtaek Sosabul, Jichuk Station Central Prugio

New community, Greenery Lounge & Studio

Daewoo E&C provides lunch boxes to customers on a busy move-in day, hoping that customers get off to a good start. We deliver Welcome Meal mainly in areas with insufficient commercial and small and in medium-sized complexes with less than 1,000 households, which recorded the highest satisfaction of 91.7 out of 10 premium services newly introduced in 2019. Based on customer feedback, we plan to complement the menu of Welcome Meal service in 2020 and strategically expand it according to customer preferences, needs, and trend changes in each complex.



Welcome Meal Service

Daewoo E&C operates complex community facilities to support Prugio residents to lead a cultural life. We have introduced a new 'Greenery Lounge' to create a fresh environment where nature and complexes are in harmony with a view to maximizing the value of the existing Uz Center, and we also provide residents with free access to cafes and libraries in the "Greenery Studio," a unique space in Prugio. In addition, by providing various exercise and cultural facilities such as fitness and golf, we strive to keep our customers satisfied for a long time so that they can have a happy life.



Attracting public daycare centers in apartment complexes

17 public daycare centers in operation

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.



Prugio Public Daycare Center Installation Agreement in Nonhyeon, Incheon



Information on how to consent to the early opening of the national public daycare center

Prugio on social media

Communication via social media



You Tube YouTube

- Providing information about real estate with authorized brokers, tax agents, and financial experts
- A variety of brand-related videos including Prugio's new pre-sale information, interviews with construction site managers, and introduction of complexes to move in



f Facebook

- Pre-sale and move-in events for new complexes



Instagram

- Sharing photos of the Prugio complexes taken by photographers and interior news
- Sharing the residents' daily lives

Active communication to improve customer satisfaction

Daewoo E&C runs a customer team to improve customer satisfaction, and actively responds to customer voices by handling complaints, conducting satisfaction surveys, and improving feedback. We added Happy Call to the satisfaction survey, which was conducted only via the existing 'Allim Talk' and provide quick feedback by reducing the time to process complaints to an average of 11 days, down 3 days from the previous year. In addition, in order to prevent defect complaints that may occur after moving in, we conduct quality inspections, housewives' inspections, and pre-visit inspections 70 days before moving in to collect customer complaints and reflect their opinions. As a result, we improved our position from the previous 4th place in the customer satisfaction survey to the 3rd place in 2019, thanks to Happy Call and visit inspection before moving in. We also provide professional defect repair services for 10 years after moving in through Prugio Service, a subsidiary of Daewoo E&C.

Defect reception/management flow



Proactive Quality Management

Enhanced quality system

Customer satisfaction for a company's products and services is realized not only by removing defective products, but also by satisfying various needs of customers and forming trust based on differentiated experiences. Daewoo E&C established "Quality Management System Setup" as its management policy and organized a new quality team by each division in order to operate an autonomous quality management system that is part of the 2025 medium and long-term strategy. We will expand the responsibilities and powers of quality management organizations and create a quality culture that complies with the basics and principles.

Quality management organizations

Quality Management Team	Quality Technology Team	Divisional Quality Team (Newly established)
<ul style="list-style-type: none"> Enhanced compliance with laws and regulations as an enterprise-wise control tower On-site quality monitoring and performance measurement 	<ul style="list-style-type: none"> Inspection of equipment and materials, standardization of work, Contract and evaluation by a third party inspection agency, Support for projects with special job management technology, Support for purchased product quality 	<ul style="list-style-type: none"> On-site quality control training, review and evaluation to be conducted by each division

Quality inspection of materials and machinery

On-site quality assessment*

90/100 points

*Evaluation criteria: quality management system(70%)+Construction quality/site inspection(30%)

Quality inspection of equipment and materials used in construction sites is indispensable for the safety of field workers and the public, while at the same time increasing customer satisfaction by achieving perfect quality. Daewoo E&C conducts quality inspections for each material and equipment as a preventive measure for quality risks. We inspected 55 sites, focusing on 3 themes: temporary equipment and materials, instrumentation, and concrete, and continuously monitored the findings from the inspection to proactively respond to quality risks. In addition, we are operating an integrated inspection management system to inspect materials and equipment in the fields of civil engineering, building, and housing. In 2019, we have completed a system for effective quality management and efficient workforce management through a four-step upgrade.

Quality inspection activities

Quality theme inspection	Integrated inspection management system
<ul style="list-style-type: none"> Concrete inspection (compressive strength, air volume, chloride content, etc.) Measuring equipment inspection Adequacy inspection of temporary equipment and material 	<ul style="list-style-type: none"> Construction machinery inspection (Tower Lane, Lift, Gondola, etc.) General and outsourced material inspection <p>Barocon system, project collaboration site</p> <p>Barocon system, project collaboration site, mobile web</p>

Quality Certifications



ISO 9001
Quality Management
System



KEPIC
Nuclear Power Construction and Design Certification (Domestic)



ASME
Nuclear / Non-nuclear Power Construction, Design and Production Certification (International)



NBBI
Boiler, Pressure Vessel,
Pressure Pipe Repair Qualification (international)

New organization dedicated to information security

Information Security Team established in 2020

Information security solution

Customer's personal information protection

Customer Information
Leaked, stolen, or lost **0** cases



ISO 27001 Certification

Completed overseas projects

442 cumulative

Enhanced Information Security Management System

The importance of information security is increasing along with the demand for national laws and response systems. In response, the Information and Communications Network Act was revised in 2019, and Chief Information Security Officer(CISO*) was prohibited from holding an additional position. As the corporate responsibility for information protection has been strengthened, Daewoo E&C newly established an organization dedicated to information security apart from its IT group, and operates a company-wide information security council consisting of the Information Protection Committee, a major decision-making body, and the Information Security Working Group, a consultative body for practitioners, thereby strengthening its information security capabilities.

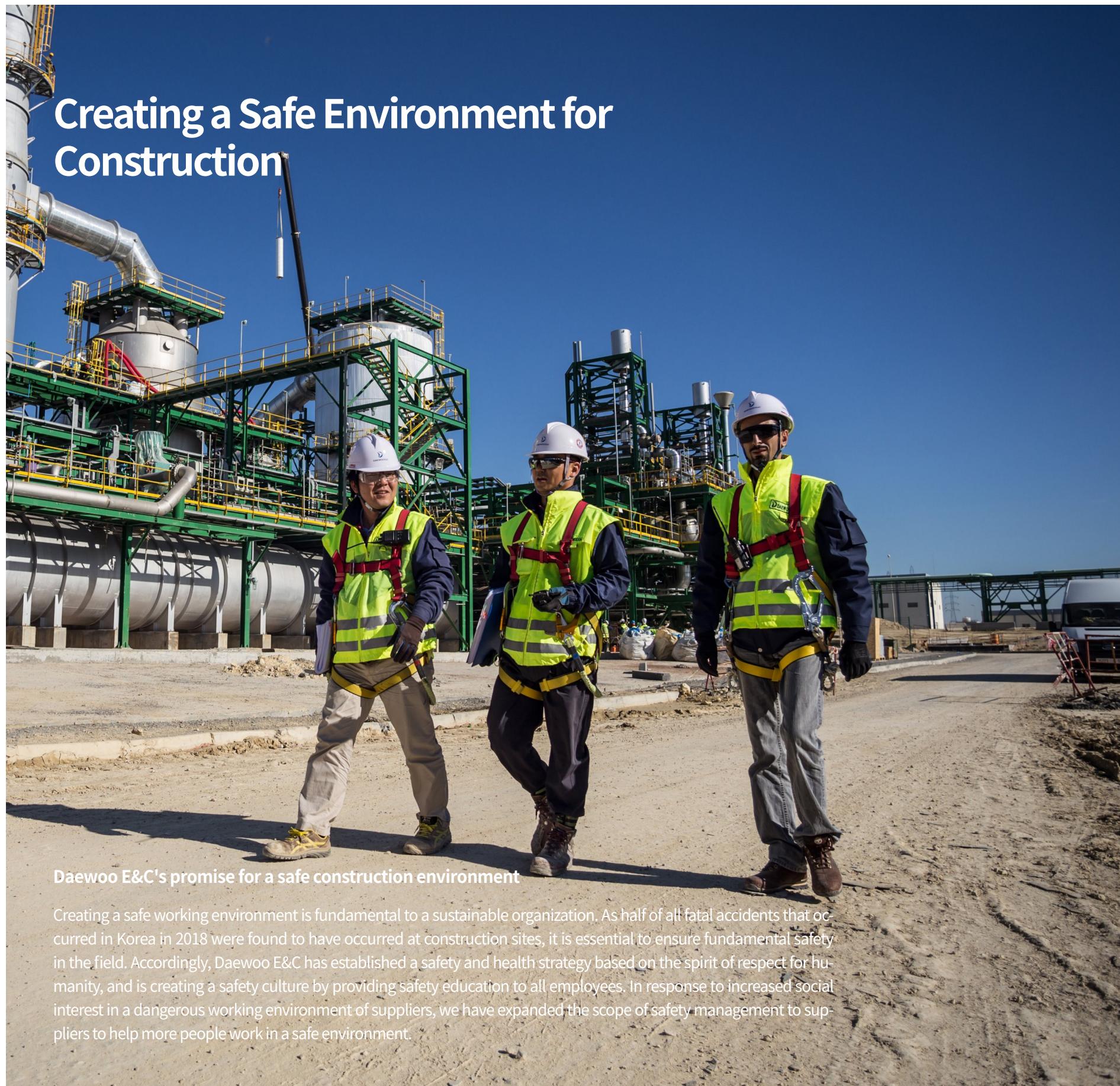
*CISO: Chief Information Security Officer

Daewoo E&C introduced a new PC security management program to safely protect important information such as business-related confidentiality and patent rights. While using the program for PC security checks, we also taught the vulnerabilities and how to deal with them and improved the level of PC security. We prevent security incidents that may come from PC vulnerabilities by selecting an enterprise-wide PC security inspection day every two months to perform self-inspection. We will expand our PC security management program to overseas sites in the future.

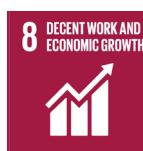
The leakage of customer information from a company leads to great damage. In 2019, Daewoo E&C provided personal information protection training to 2,300 employees and 5,000 supplier employees to raise their awareness of information protection. We conducted spot inspections, facility inspections, and employee inspections twice a year on the moving-in centers, pre-sale offices, and branch offices, and averaged 89/100 points based on our own checklist. We operate a personal information processing policy in accordance with ISO 27001, and transparently discloses the purpose of collecting personal information, retention period, destruction procedures, and measures to protect personal information on the official website of Daewoo E&C. 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.

Enhanced Marketing Capability

Recognizing the necessity to establish a corporate-level marketing control tower, Daewoo E&C has established Global Marketing Group in 2020. Through this dedicated body and consistent policy to expand globally, Daewoo E&C intends to pioneer and develop new markets and enhance our competitiveness in the coming years. Traditionally being a forefront runner in overseas business, since the acquisition of overseas construction business license in 1976, Daewoo E&C has successfully executed 442 projects in 48 countries around the world, contributing to the establishment of social infrastructure and balanced development in the local market. Furthermore, Daewoo E&C has created CRM (Customer Relationship Management) System in 2019, which is an overseas marketing knowledge portal, in order to share the know-how and accumulate the data on a corporate level. We strongly believe that through implementation of this system, which will enable the thorough analysis of global markets and our partners/customers, the company will lay a foundation for development of highly profitable business. In addition, in order to enhance marketing capabilities in the domestic market, we have conducted business environment analysis and response strategies, and enhanced our competitiveness through establishment of strategic cooperation with various partners in Korean public procurement market.



Link to UN SDGs



SDG
8.8

Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.



SDG
11.b

By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels.

Management Approach

Daewoo E&C prioritizes workers' life and safety over profitability and has a safety and health system to respond to disasters and industrial accidents that may occur at construction sites. We strictly repair and maintain the construction machinery and strengthen the autonomous safety system where workers protect each other with internalized safety culture.

2019 Performance

Systems certified

**OHSAS 18001
KOSHA 18001**

Safety education

2,166 persons participated

Safety budget

KRW 18.9 billion

On-site spot check

190 times

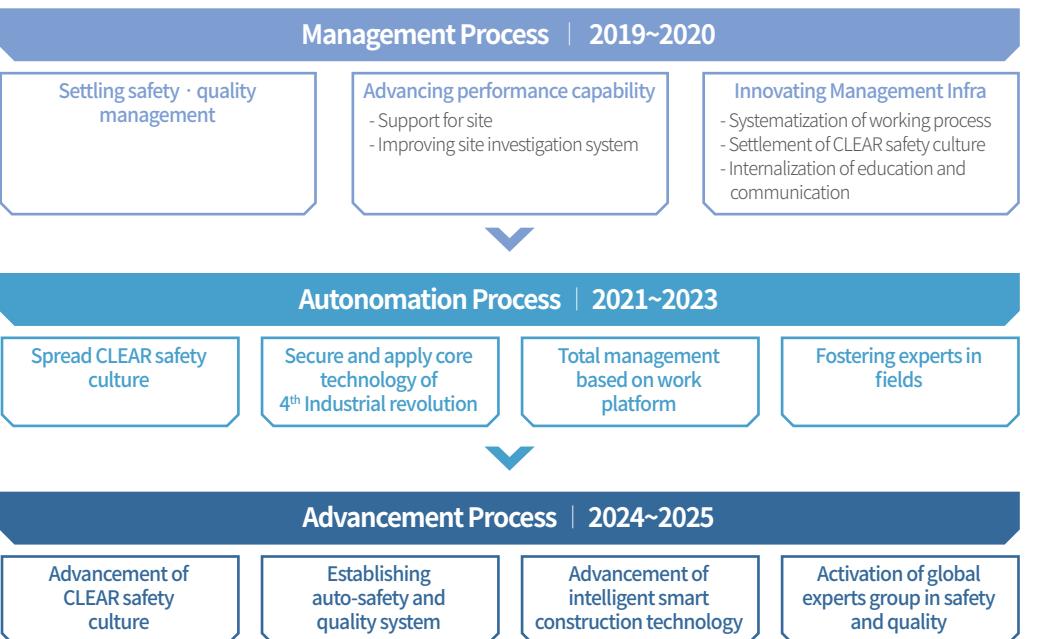
Safety and Health Strategy System



KOSHA 18001 certification



OHSAS 18001 certification



Improvement of on-site HSE inspection and monitoring methods

Monitoring the HSE system

Daewoo E&C has improved Mind and Action of on-site workers and HSE system inspection and monitoring methods to prevent serious safety accidents. We selected the core activities such as weekly risk assessment, daily safety meeting, TBM^{Tool Box Meeting}, work plan, PTW^{Permit To Work}, etc. On the basis of such selection, on-site safety activities were carried out, and we evaluated whether the PDCA^{Plan-Do-Check-Action} circulation structure was implemented and improved. As a result, the activities to identify and execute each member's safety tasks are improving.

Strengthening preliminary activities

The security patrol is a system to check whether basic security rules for preventing serious disasters are being followed at all sites, and being implemented for unspecified sites at any time. In 2019, we conducted 190 inspections on 90 sites in Korea and, in the case of a serious nonconformity, stopped the work and guided improvements, or replaced site managers when the nonconformity continued to occur, reestablishing Daewoo E&C's commitment to safety without compromising safety.

Safety patrol (times)

*Sites to be completed: 23 times of special inspection

Round	Civil Project	Housing/Building	Plant
1st	33	55	2
2nd	24	49	-
3rd	3	24	-

Active Support for Construction Sites

Simplification of on-site safety tasks

Daewoo E&C has reduced and improved the burden of preparing similar or excessive document of on-site workers, so they can focus on safety-related tasks to prevent accidents. To simplify the work process, 9 types of guideline and 8 types of guideline were deleted and reformed, 25 document form were eliminated, in addition, 35 simple in-house report tasks were also ceased. Consequentially, this caused positive effect of focusing on safety work to prevent accidents.

Support for suppliers

Safety diagnosis consulting for suppliers

52 companies

Health management of third country nationals

Daewoo E&C is carrying out construction works in cooperation with suppliers at a number of sites. To fulfill our responsibilities as a prime contractor and practice mutual safety, we support our suppliers to improve their safety level. We conduct safety audits (accident rate, executive training, system certification, etc.) for newly registered suppliers to verify eligibility, and increased safety evaluation rate from 4% to 20% to prioritize suppliers that seek safety. In 2019, we supported 52 suppliers at sites to build a safety management system and will consistently provide supports our suppliers by managing safety enhancing program.

Daewoo E&C makes it mandatory for all third country nationals to join and manage accident insurances for an appropriate treatment and compensation for their injury or death. In 2019, the level of compensation has been improved, such as raising the compensation level of accident insurance for Bangladeshi workers to the level of workers of other nationalities. In addition, we have conducted a total survey of personal illness of workers who are third country nationals in order to prepare medical check-up standards for employment. We are also paying attention to health care issues, such as strictly identifying unqualified personnel and classifying high-risk workers separately.

Activation of NearMiss Discovering

Daewoo E&C preliminarily controls risk factors by promoting the excavation of NearMiss, which is a sign of the accident. After collecting and evaluating the discovered NearMiss, we promoted the prize every six months. And we distributed an excellent casebook that includes about 80 cases. The distributed best practices are being used to improve the level of autonomous safety in each field and to prevent safety accidents.

Life-time management for construction machinery

Construction equipment inspection

Tower crane 1,217 times

Lift/pile driver/ gondola 472 times

Daewoo E&C has secured the safety of using large construction machinery by making it compulsory to carry out an inspection in each step - carrying in, installation, lifting, operation, and dismantling - for tower cranes, lifts, gondolas, pile drivers and pile drawers. In the case of tower cranes, In order to ensure that the partner company has a group of professional work teams, we are implementing installation / promotion / disassembly work teams and worker registration systems. Before approving the review of the work plan and starting work, we use a computer program to check the actual input and authorized personnel to control the construction site more safely.

Life-cycle equipment inspection

Before use

Non-destructive and visual inspection

During use

Supervision of lifting work, master non-destructive inspection

After use

Mandatory supervision of dismantling work

Establishment of Safety Culture

CLEAR, enhancing operational capability

In 2019, because of safety accidents occurred at the construction sites of Daewoo E&C, we feel so regretful and responsible for this to the employees. In order to prevent the recurrence of unfortunate industrial accidents, through CLEAR, a safety culture program, we endeavor to enhance on-site safety management capability and settle safety culture. CLEAR is a unique safety culture developed by Daewoo E&C's based on IIF (Incident & Injury-Free, JMJ Associates) introduced through overseas projects in order to reflect the specificity of domestic construction sites. In 2019, we applied CLEAR consulting to new construction sites as a compulsory, and newly established a regular training system for all construction sites, and through our own training plan, CLEAR consultants are currently generated in all sites. In addition, from the CEO to the employees in headquarters, they completed CLEAR education, and cooperated in CLEAR promotion and systematization, "new security awareness" and "creating a security atmosphere in which all employees participate." We will continue to improve awareness among workers and enhancing relationships by strengthening safety training and their expertise, thereby establishing a mutual protection culture that protects each other.

What is CLEAR Culture?

C	L	E	A	R
Commitment	Listen & Speak	Eliminate UA-UC	Appreciate SA-SC	Relationship
Management's commitment to safety expressed in words and actions	Two-way communication, especially trying to listen to each other	All employees look out for each other to eliminate risk factors	Appreciating and encouraging safe behavior to comply with regulations voluntarily	Efforts to expand positive relationships among all members

CLEAR Operation Improvement

Category	As-is	To-be
Purposes	<ul style="list-style-type: none"> Consultants in Head Office - Operation and support of CLEAR consulting - Quality Safety Group manager 	<ul style="list-style-type: none"> Fostering field consultants - Introduction and operation of CLEAR - Field operator
Number of persons	• 10-20 persons/year (1 st round) - 111 persons in total	• 40 persons/quarter (2 nd round) - 120 persons in total
Education type	• Commissioned education	• In-house education
CLEAR consulting sites	• 14	• 36



Campaign for safety culture internalization

Negligence of personal safety regulations can cause accidents. Daewoo E&C is conducting "Let's Just Keep This" campaign to increase workers' understanding and awareness of the importance of complying with basic safety rules. By analyzing accident cases by person, facility, and equipment, providing training on campaign topics based on accident types and causes, and monitoring the progress, we endeavor that internalized safety regulation compliance culture will be the foundation of safety in Daewoo E&C.

"Let's Just Keep This" campaign

Actor	Activities
Sites	<ul style="list-style-type: none"> Resolution conference (in parallel with the Safety Day event) Select a campaign theme suitable for site conditions and establish a management plan Provide training on campaign theme during regular training for newcomers Select the campaign theme by work type and team during TBM^{Tool Box Meeting} and announce notices Identify and edify workers who violate the campaign during on-site inspection (in conjunction with safety traffic lights 365) Install and utilize promotional campaign materials (posters, banners, etc.)
Head Office	<ul style="list-style-type: none"> Check the campaign progress during on-site monitoring Produce and distribute promotional and educational materials of the campaign.

Internalization of Education and Enhanced Communication

Professional safety training

HSE Training (persons)	Category	2018	2019
Site managers	Site managers	159	317
By course	By course	1,233	1,276
Suppliers	Suppliers	488	573
Total	Total	1,880	2,166

Enhanced communication for safety

Daewoo E&C has improved the training course so that all employees can complete the safety training and immediately practice it. In the HSE (health, safety, environment) vocational training for each position, new topics such as safety culture and safety experience have been established. For vocational training of safety managers, we carried out an education for strengthening specialty such as construction machinery safety management and template/copper safety management. As for safety education materials, we improved the efficiency and effectiveness of education by reclassifying and integrating education materials, strengthened education contents and provided services for immigrant workers by textbook development, translation and distribution. Through specialized safety education and its contents, Daewoo E&C will internalize the educations and continue to improve safety awareness of our employees.

In order to create a safe construction site, Daewoo E&C strengthened the communication between the sites and the head office by improving systems to reflect the opinions of employees. As a result, we discuss about system improvement and support methods for sites at the weekly meetings consisting of a quality safety group and safety managers of business division. We held Council of Safety and Healthcare Managers, which is a group of safety and health manager by regions, dividing by 8 regions every quarter and listen their voices to have more amicable communication between the head office and the sites.



Link to UN SDGs



**SDG
11.6**

By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.



**SDG
13.1**

Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.



**SDG
15.4**

By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development.

Management Approach

Daewoo E&C recognizes the social damage caused by fine dust and its impact on people's health and suppresses the occurrence of fine dust in accordance with the government's guidelines. 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 doing reduction efforts in order to respond to the climate crisis. In addition, during a highway project, we identified habitats for narrow-mouth frogs, which were designated as endangered species class 2, and carried out rapid migration activities, contributing to the protection of the ecosystem.

2019 Performance

New office building in Eulji-ro

**G-SEED
First-Class**

On-site waste recycling rate

99.3%

**Voluntary
agreement
to reduce fine dust under the
Ministry of Environment**

At the 15th Construction Environment
Management Best Practice Contest

**Awarded by the
Minister of Land,
Infrastructure and Transport**

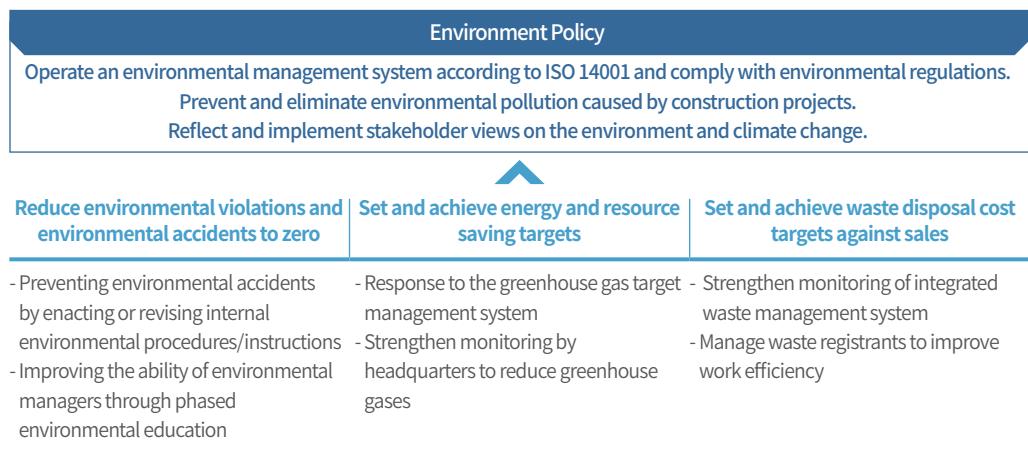
Construction of Environmental Management System

Environmental management system



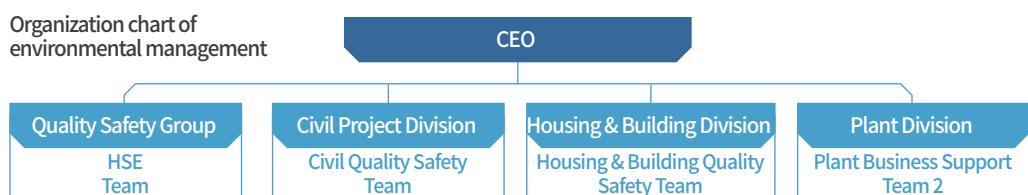
ISO 14001 certification

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 management organization

In order to systematically fulfill environmental goals, Daewoo E&C had the HSE Team of the Quality Safety Group under direct control of the CEO dedicated to environmental management. From 2020, Daewoo E&C newly established on-site environmental management departments in each division to prepare a system for performing environmental management tasks with HSE team. Accordingly, HSE team will be charge of establishing company-wide environmental policy/instruction, and external environmental policy, while each division will be in charge of supporting new construction sites, checking the possibility of environmental accidents, and managing greenhouse gas data in close proximity to the sites.



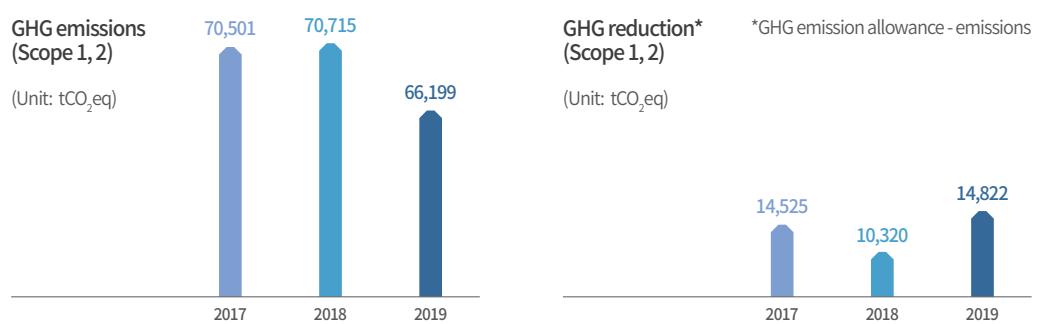
On-site monitoring

When a new construction site opens and main construction starts, Daewoo E&C supports on-site environmental management with on-site support by HSE team and each division within 3 months. In addition, we inspire the awareness of compliance with environmental regulations and management through environmental education to on-site employees. Daewoo E&C conducts HSE audits or special dust checks at domestic sites every year to check the status of environmental management and compliance with environmental regulations. The results of on-site HSE audits are reflected in safety/health/environment and quality evaluations, and the on-sites that have good evaluation results will get appropriate rewards. In 2019, we conducted environmental management system audits and 37 special inspections on scattering dust at all domestic sites, and selected one site for the Quality Safety Award and ten other sites for best practices, and delivered a plaque and a reward for each.

2030 GHG Reduction Plan

Reduce GHG Emissions to Respond to Climate Change

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. Since 2018, we are making more efforts to reduce GHG by setting GHG reduction target, which is more stringent than the government allowance, as the KPI of the Quality Safety Group.



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.

Eco-friendly Design of New Building in Eulji-ro

In 2019, Daewoo E&C relocated its head office to Eulji-ro after finishing the period of Gwanghwamun. The new space, Eulji Twin Tower, was designed with environmental considerations in mind under the slogan of Green Premium, which stands for nature-friendly office space, to help Daewoo E&C employees contribute to responding to climate change in their daily lives. We created green walls covered with plants and used low-E glass to prevent heat island effect in the city center, and focus on energy efficiency. Moreover, we were able to increase the building's renewable energy supply rate to 15% with building-integrated photovoltaic system applied to the entire south glass and geothermal power facilities. As a result of this eco-friendly design, Eulji Twin Tower earned a total score of 95 points in the Energy Performance Index, and received the "Building Energy Efficiency Level 1" and the "Best Certification for Green Building" to prove its value as a sustainable building. As part of urban regeneration, Daewoo E&C has been making various efforts to create a space for all of the city, nature, and people by partially preserving the old roads in the surrounding areas, making use of the history and characteristics of Eulji-ro and providing an open resting place for citizens.



Minimize Environmental Impact

Eco-friendly purchasing

Green purchasing(KRW million)

2017	296,408
2018	255,000
2019	204,790

Green purchasing process

Eco-friendly design
• Apply eco-friendly design guidelines such as Toxic Chemicals Control Act, Waste Management Act, and Green Certification Standard
• Induce eco-friendly designs according to other in-house standards

Environmental education for employees

Employees participating in environmental education

14,327 persons

Protection of endangered wildlife



Inhabitation of narrow-mouth frogs

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.

Material purchase

- Purchase eco-friendly materials for energy saving and waste reduction according to design details
- Manage the purchase details through the Daewoo E&C's procurement system (e-COS)

Construction and performance monitoring

- Apply eco-friendly materials to site construction according to design and purchase details
- Check the purchase history in the procurement system

Report to stakeholders

- Report annual eco-friendly purchasing performance in the Sustainability Report
- Enhance external recognition through communication with sustainability management evaluation agencies at home and abroad

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. In 2019, we provided essential monthly environmental educations for all field workers, and provided step-by-step educations 'environment manager job training(new/refresher)' for internally designated on-site environment manager. 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.

2019 Environmental education performance

Category	Courses	Period	Attendance(persons)
On-site environmental manager	Environmental manager job training (new)	1st: 09.23 / 2nd: 09.24	48
	Environmental manager job training (refresher)	1st: 10.01 / 2nd: 10.08 / 3rd: 10.11	119
Employees			657(Civil Project Division)
	Essential monthly environmental education	1.1~12.31	13,311(Housing & Building Division)
			192(Plant Division)

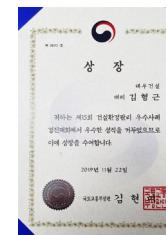
Daewoo E&C strives to minimize the destruction of wildlife habitats that may occur during construction. During the project of the 2nd metropolitan orbital, which is scheduled to be completed in 2023, a habitat of narrow-mouth frogs, which is an endangered species, was first found in 2019 near our construction site. We conducted narrow-mouth frog migration activities in accordance with the Wildlife Protection and Management Act. Considering the characteristics of narrow-mouth frogs, which are at very high risk of extinction if habitat changes, we installed 66 protective fences and 66 pitfall traps in the vicinity of the construction area, and captured the narrow-mouth frogs in traps and released them into existing habitats. The migration was carried out in a way that minimizes the stress to the frogs by adding soil and moisture to the trap. We plan to conduct follow-up monitoring twice a week until 2022 to check whether the narrow-mouth frogs settle and reproduce well in their new habitats.



Voluntary agreement to reduce fine dust



Demonstration of fine dust concentration measurement



Awarded by the Minister of Land, Infrastructure and Transport at the 15th Construction Environment Management Best Practice Competition

**Daewoo E&C supported
24 out of 70 air monitoring stations planned in Hanoi.**

Cost of disposing compared to sales in 2019

Achieved Goal*

*Goal for 2019 0.22%, result 0.22%

Emissions Management at Construction Sites

Ministry of environment - Voluntary agreement to reduce fine dust

Recently, concerns about social damage and public health caused by fine dust have increased. In 2019, Daewoo E&C signed two agreements: Voluntary Agreement to Respond to High-Concentration Fine Dust and Voluntary Agreement to Reduce High-Density Seasonal Fine Dust for the health and safety of the people. When an emergency reduction warning is issued, according to the agreements, the use of old construction equipment is restricted, and the construction time is adjusted at the construction sites where a large amount of scattering dust occurs. We also designate environmental personnel and make a trial disclosure fine dust concentration transparently in line with government action.

Fine dust regulations and field response guidelines

Daewoo E&C publishes its field guidelines to respond to fine dust regulations so that each site can respond appropriately to government guidelines according to the fine dust forecast. We shorten the time of construction where scattering dust occurs, or strengthen the prevention activities and report the results to the local government.

Awarded by the Minister at the Construction Environment Management Best Practice Contest

Daewoo E&C expects employees to actively participate in environmental conservation. In 2019, we were awarded by the Minister of Land, Infrastructure and Transport for the development of a fine dust and thermal management system using complex sensors at the 15th Construction Environment Management Best Practice Contest that was hosted by the Ministry of Land, Infrastructure and Transport and organized by the Korea Environment Construction Association. It has been recognized that various sensors and IoT wireless technologies are utilized to cope with fine dust and heat-related illness, and that automatic control of the micro-spray sprinkler system contributes to reducing fine dust emissions and improving air quality.

Support for installing air monitoring stations throughout Hanoi, Vietnam

Daewoo E&C, which is expanding to the world, is also striving to manage air at home and abroad. We are conducting a new town development project of Starlake City in Vietnam, and plan to establish 24 air monitoring stations in Hanoi by the end of 2020 under the initiative of our local corporation, THT Development. Hanoi, the world's No. 1 in the air pollution index, is expected to be able to systematically manage air quality with the full support of Daewoo E&C.

Integrated waste management system (Barocon, One Touch HSEQ)

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.

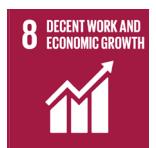


Link to UN SDGs



SDG
4.4

By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.



SDG
8.5

By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

Management Approach

Daewoo E&C pursues fairness in all personnel-related systems, including employment, compensation and evaluation, and employee training. We provide open recruitment sessions to increase access to employment information, and are continuously developing an HRD system that reflect current trends to help employees selected through fair procedures demonstrate their diverse capabilities. In addition, we are increasing in-house daycare centers to help employees reduce the difficulties associated with work and parenting, and guarantee the same maternity and childcare leave system to all employees.

2019 Performance



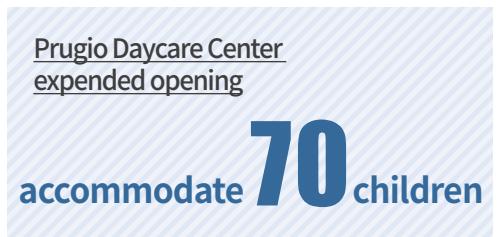
**HRD action
plan built
to reflect new vision**



**Internalization of
execution act
for core value**



**Corporate culture
campaign
sympathized by employees**



**Prugio Daycare Center
expended opening
accommodate **70** children**

Talent Acquisition and Training

Talent acquisition

Construction talent recruitment session (August)

156 participants

On-campus job consultation (September)

692 students
from 20 schools in 6 regions

Job Café (September)
Summit Gallery and Head office

310 participants

Job Café, a recruitment session

Daewoo E&C expressed its preference for "Talents who challenge everything with faith and passion and fulfill their responsibilities according to their beliefs." We provide job-related information of good quality to young people who want to join Daewoo E&C through the Job Café, an open recruitment session consisting of job counseling and general counseling. In job counseling, a senior employee in the relevant field provides one-on-one counseling on the job, eligibility, and professional knowledge, and during general counseling, which was established in 2019, applicants can inquire about the overall recruitment process, including selection process, corporate culture, and welfare benefits. In 2020, we will use various channels including YouTube account to improve access to job and recruitment sessions and offer the same job information to more applicants.



Talent training

Derivation of core values and practical actions

A quick way to achieve ultimate goal of an organization is share the values and vision of the organization with its members. In 2019, Daewoo E&C focused on deriving core values and practical actions that are commonly sought from employees to lead the employees in one direction. Our practical actions for core values will be used as the basis for training programs, recruitment and evaluation for the employees including newcomers.

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.

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 2020, we will organize customized training by classifying levels by experience, competency, and performance of trainees, and we will raise the efficiency of training by improving the credit system.

HRD action plan according to new vision

Vision

Human Resource Development (HRD) is at the heart of corporate competitiveness and sustainability. Daewoo E&C helps its employees develop competencies required for overseas work, such as language skills, by reflecting global HRD trends.

Build Together

Realizing the best value together with the customer

Strategic goal

Global Top 20

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

Talent

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

HRD Action Plan

New Vision & Core Strategy Support

Act as an organizational change consultant

Strategic Tasks

Job Specialist & Global Talent Development

Establishing a job training system for early integration and strategic development of junior positions

Building of a field-oriented learning support system

Acting as a control tower by operating the system in connection with personnel system

Sharing of core values / vision and enhancement of executive ability

Internalization of core values and diffusion of communication-oriented corporate culture

Fostering of performance-oriented leaders

Building of a leadership pipeline by improving the leadership education system

Sub-Track

Global / Job Track

- Common job competency training
- Winter job
- PM competency improvement (every two years)
- Real estate developer
- Process management
- Contract/claim management
- Legal training for technicians
- Basic job training by work type
- * Professional job training → by the relevant division/group

Learning supporting and system operation

- Barobaeum (cyber training institute)
- HRD group workshop
- Support for external education (E-HR)
- Second life design

Value / Introduction Track

- Introduction to new employees
- Mentoring new employees
- Challenge with one mind
- Introduction to career, professional, and recruitment positions
- Team synergy workshop
- Employee awareness survey
- Strengthening core values practice ability

Leadership / Key Talent Track

- Top executives
- New executives
- New team leader / site manager leadership
- Team leader / site manager leadership F/U
- Manager / senior manager leadership
- Training at home and abroad
- Promotion course by position
- Insight seminar / class

Flexible Organizational Culture and Support for Employees' Individual Lives

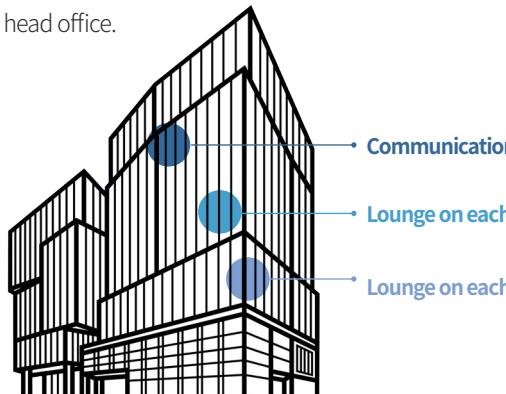
Labor-management culture of trust



New Year handshake meeting with CEO

Enhancement of communication function in the workplace

Daewoo E&C's management has prepared a place of communication and harmony to express gratitude for the hard work of employees and to create a labor-management culture of trust. Cultural events, such as Beer Day, held in commemoration of the relocation of the company building in 2019, were an opportunity for employees to relax and encourage each other. On the first day of the New Year 2020, executives greeted employees in the lobby, shook hands one by one, and handed out lucky bags with rice cakes, instead of conventional kick-off meetings. We also publish the Daewoo E&C Magazine every other month to share our vision and corporate culture with our employees.



compared to Gwanghwamun office building
2.25 times larger
communication/collaboration space, and increased meeting rooms from 31 to **70**

Corporate culture innovation campaign

From the perspective that innovative corporate culture is the growth engine of the company, Daewoo E&C delivered a friendly and intuitive message through an in-house campaign in 2019 to encourage its employees to participate in the change. Reflecting McKinsey's corporate culture improvement tasks, we selected a total of nine practical tasks that encompass work efficiency and organizational culture with the theme of changing the way we work and changing our mindset. We shared the importance of communication with all employees and broadened our understanding of each other by using witty phrases that arouse empathy and posters that show different ideas.

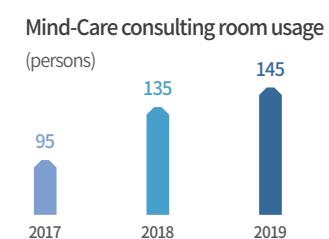


Campaign to change the way we work



Campaign to change mindset

Employee health management



To manage the health and stress levels of employees, Daewoo E&C is carrying out three major health campaigns: smoking cessation, metabolic syndrome prevention, and blood donation. In 2019, 358 employees participated in the smoking cessation clinics and the metabolic syndrome prevention program, and 153 certificates of blood donation were donated in the blood donation campaign. In addition, we run Mind-Care counseling offices so that employees can easily manage stress caused by work and personal relationships through face-to-face counseling with psychological experts of the mental health research center, and in the past three years, more and more people have been using the counseling offices. In 2020, we plan to expand and develop our physical and psychological health programs for employees, such as encouraging walking exercise and running a "visiting psychological counseling room" for field employees outside the head office.

Support for Work-Family Balance

In-house Prugio BC Daycare Center



Raising children is both a joy and a challenge. Daewoo E&C has been operating in-house daycare centers since 2016 in order to support employees who are working and raising children at the same time and to provide an environment where they can focus on their work. In particular, the Prugio BC Daycare Center, which moved to the new office building in 2019 with an expanded capacity of 70 children, is open to all Daewoo E&C employees with children under the age of five. The daycare center has adopted moss tiles* to provide environmentally friendly control of temperature and humidity, and has installed the "Smart Nuritor," an indoor playground with advanced technology, to provide education that stimulates the five senses. Our daycare centers ensure educational expertise in collaboration with the Prugio Childcare Foundation and operate from 7:30 am to 7:30 pm so that employees can commute with their children.

*Eco-friendly tiles with North European moss

Fun-Fun Junior English Camp



Due to the nature of the construction industry where field work is frequent, employees at home and abroad have a lot of difficulties in sharing their daily life with their families. With this in mind, Daewoo E&C has been providing various family-friendly programs since 2004 so that employees can combine their family life and work life in harmony. In 2019, Fun-Fun Junior English Camp was held to provide education to 30 children of employees, who had a summer vacation, such as speaking English and learning global etiquette with native speakers. We will continue to plan beneficial events and programs to provide special experiences to our children.



Prugio BC Daycare Center



Fun-Fun Junior English Camp



Link to UN SDGs



**SDG
3.8**

Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality, and affordable essential medicines and vaccines for all.



**SDG
7.1**

By 2030, ensure universal access to affordable, reliable, and modern energy services.



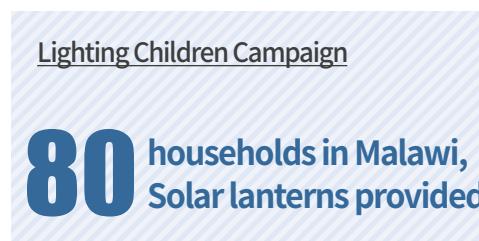
**SDG
7.2**

By 2030, increase substantially the share of renewable energy in the global energy mix.

Management Approach

Daewoo E&C, which is expanding the proportion of overseas projects, conducts practical social contribution activities to reduce social and environmental burden faced by local communities near business sites both at home and abroad. We participate in the Building Hope for Habitats campaign to contribute to the creation of a safe and sanitary living environment for the vulnerable in Korea, and deliver solar lanterns to children in countries with poor energy supply to light up the dark night.

2019 Performance



Enhanced Shared Growth

Desirable contract for win-win cooperation

Daewoo E&C has been supporting a fair-trade culture with suppliers since it established the Procurement Planning Team (former Win-Win Planning Team) dedicated to shared growth in 2000 for the first time in the construction industry. We are blocking the occurrence of unfair trade practices by introducing the “Four Fair Trade Guidelines” proposed by the Fair-Trade Commission. In 2019, we revised our guidelines to use standardized field instructions to exclude unreasonable special arrangements with suppliers, and to issue work orders for changes or additional work in advance. This allows us to expect the effect of preventing potential losses of our suppliers and maintaining transactions in equal positions.

Fair trade training for employees

Daewoo E&C provides fair trade-related training for employees of suppliers trading to improve their understanding and awareness of fair trade. In 2019, a total of 4,762 employees completed training to comply with fair trade and prevent power trips. In addition, we operate a cyber audit office on the Daewoo E&C's website so that anyone can report unethical incidents anonymously.

2019 Fair Trade Training

Training courses	Number of participants
Offline fair-trade training for suppliers	305
Online training for preventing power trip	4,457
Total	4,762

Shared Growth Fund

Daewoo-KDB Shared Growth Fund

7 suppliers supported in 2019

Support for supplier training

Daewoo E&C is promoting financial support to provide practical assistance to small and medium-sized suppliers with a relatively weak financial base. For funding our suppliers, we signed a Mutual Growth Financial Support Agreement with KDB in 2018 to create a special fund worth KRW 28 billion. As a result, over 400 suppliers of Daewoo E&C became eligible for interest rate cuts when borrowing from KDB. Besides, to solve the financial difficulty of our suppliers, we have gradually increased the cash settlement ratio to 99.5% and reduced the settlement period to 20 days.

Daewoo E&C provides a practical training program to help managers in charge of suppliers strengthen their practical skills and properly reflect the company's interests in signing subcontracts. Our cooperation training program consists of various courses such as site safety and environment management, Framework Act on the Construction Industry, and Subcontracting Act. In 2019, a total of KRW 14 million was invested in the co-operation training, and a total of 177 employees of suppliers completed the course of Framework Act on the Construction Industry over three training sessions. In addition, we have provided quality-related trainings to 57 equipment and material suppliers that have newly partnered with Daewoo E&C in the past year in order to improve their understanding of quality and supplier evaluation processes and procedures, and to help them improve quality competencies to make continuous contracts.

Sustainable Supply Chain Management

Sustainability assessment of supply chain



When selecting and evaluating suppliers, Daewoo E&C diagnoses environmental, safety, and social risks to enhance competitiveness across the supply chain, and encourages suppliers to participate in the promotion of sustainable management. To manage our supply chain, we end transactions with suppliers if they, in economic terms, fail to meet the credit rating criteria or exceed the debt-to-equity ratio criteria, if they, in environmental terms, have caused serious problems due to lack of environmental management, or if they, in social terms, had serious accidents more than 3 times a year, or more than 3 deaths, or have not paid their workers for a long time. Excellent suppliers selected from global evaluation of economic, social and environmental risks are provided with a partial reduction of the contract performance guarantee insurance for one year.

*Environmental aspect is all included in supplier evaluation (Environmental Impact Assessment Ratio: 100%), there is no company has terminated its contract yet due to negative environmental impact

Enhanced safety management of suppliers

Supplier evaluation process

Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
On-site evaluation							
-Site personnel -Site manager -Related team leader	Evaluation request						
		Collection of on-site evaluation, safety evaluation, and head office evaluation results (3 years)		Reflection on comprehensive evaluation		Calculation of the bidding grade	
						Final report	Notification of evaluation results
Head office evaluation							
-Team in charge of head office							

Social contribution activities with suppliers



Social Contribution Activities of Daewoo E&C Win-Win Council

To provide a place of communication for shared growth and strengthening partnerships, Daewoo E&C changed the existing excellent suppliers meeting into Win-Win Council, a new consultative body with 22 excellent suppliers, in 2019. The Win-Win Council co-donated KRW 11 million worth of goods, such as diapers and viscosity agents, to Holt Ilsan Welfare Town, a facility for children with disabilities located in Gyeonggi-do, in July, as the first outside activity since its inception.

Social Contribution Activities at Home and Abroad

Building Hope for Habitats



Volunteering "Building Hope"

Building House of Hope, a representative social contribution activity of Daewoo E&C that has been going on for 12 years, is a residential environment improvement activity to repair old houses. We put into practice our love for the underprivileged by replacing wallpaper, floorboards, and sinks, and conducting insulation work. Building House of Hope, which had been carried out 4 times, was more actively pursued in 2019, and all six activities were successfully completed. In particular, a fund named "Coin Donation with Love" was raised by collecting coins less than 1,000 won from employees' monthly salaries, and KRW 31.19 million of which was used for Habitat activities, adding the meaning and value of social contribution activities.

Global energy sharing

Lighting Children Campaign

Solar lanterns donated to **80** families in Malawi

Environmental and social effects of solar lanterns*

* Results of surveys and interviews on 800 Malawian households that received solar lanterns in 2017-18
(Source: MIRAL Welfare Foundation)

Kerosene Lamp

- Risk of fire and lung disease
- CO₂ generation
- Expensive fuel costs

Solar Lantern

- Reduced fire risk and increased respiratory health
- Environmental protection due to no generation of carbon dioxide
- Savings on fuel costs of about \$2.7 per month
- Purchase of daily necessities with saved money (99.5% of response), Purchase of educational items for children (89.8% of response)
- Income increased by about 30% or more due to works at dark night
- Prevention of crime at night

Improved medical and environmental conditions at overseas sites



Ethiopia HIV Reduction Program

Daewoo E&C, which first entered Africa in the late 1970s, has established itself as a leader in the construction market of the African continent. Daewoo E&C, which first entered Africa in the late 1970s, has established itself as a leader in the construction market of the African continent. In order to repay the trust of the local community, since 2016, we have been conducting medical and environmental recycling activities for residents in the vicinity of the Ethiopian highway site. For example, we provide HIV prevention products every month through a HIV relief program and deliver 40,000L of bottled water every week for local residents who have difficulty obtaining drinking water. In addition, we are protecting natural ecosystems by planting 45,000 native trees in nearby areas with our field employees. All employees at the Ethiopian site will continue to conduct social contribution activities until March 2021, when the highway is scheduled to be completed, to improve life quality for residents and raise awareness about Daewoo E&C.

Health Hope Box



Health Hope Box Sharing

Daewoo E&C is delivering Health Hope Boxes to enable the underprivileged in the community to eat healthily. In 2019, 150 employees and their family members attended and delivered Health Hope Boxes containing 6 six types of grains to 360 underprivileged families. This was also an opportunity for employees and family members to form bonds and practice sharing with others.

Blood donation

Daewoo E&C conducts blood donation with overseas field employees for local residents who are unable to receive treatment due to blood shortages. In 2019, at the E-RING highway construction site in Qatar, a total of 91 persons participated in the blood donation activities, including field staff, supervisors, and employees of the client, along with the nearby Qatar HAMAD National Hospital. By practicing sharing for the vulnerable people in the local community, we were able to take a step closer to the community.

Fostering Construction Talents

Fostering talented people who dream of working in the construction industry is essential for both the future and growth of Daewoo E&C and the competitiveness of the Korean construction industry. Daewoo E&C invites teenagers and related college students to Daewoo Institute of Construction Technology in Suwon to enhance interest in the construction industry and provide opportunities to explore careers. In 2019, a total of 324 students visited the institute to learn more about its roles and technology development and toured six specialized labs. Our Student Ambassador program is the first promotional activity in the industry that involves university students and provides them with a variety of experiences and opportunities for growth through a different program every year. Thirty student ambassadors selected in 2019 visited a variety of sites, including Daewoo Institute of Construction Technology, Wolseong Radioactive Waste Facility Phase 2, and Sanggye Station Central Prugio, and were able to experience field sense and dream of becoming a construction leaders in the future. In addition, as part of the social contribution, we improved the interior of the common room in the post office so that delivery staff can rest comfortably, taking advantage of our expertise in the construction industry.

Environmental improvement of postman common room



Improvement of postman common room in 5 post offices





SUSTAINABILITY FOUNDATION



GOVERNANCE



[http://www.daewoocir.co.kr/
management/rank.asp](http://www.daewoocir.co.kr/management/rank.asp)

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.

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

As of December 2019, the BOD is composed of two executive directors and four independent directors. 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

Director	Name	Gender	Major career	Current position
Executive Directors	Kim Hyung	Male	- Former Vice President, POSCO E&C Global Infra	CEO
	Jung Hanggi	Male	- Former CEO, SUNJIN Control & Access	CFO
Independent Directors	Yoon Gwangrim	Male	- Former President, Jeju Bank	Financial Advisor
	Lee Hyeok	Male	- Representative Lawyer, Law Firm Lee & Lee	Legal Advisor
	Choi Gyuyun	Male	- Former Director, Disclosure Supervision Bureau, Financial Supervisory Service	Financial Advisor
Lee Hyeonseok	Male		- President, Research Institute of Real Estate and Urban Studies, Konkuk University	Investment Advisor

BOD Committees

Daewoo E&C has an Independent Director Nomination Committee and an Audit Committee under the BOD for the purpose of efficient decision-making, professional functions, and reinforcement of sustainability management. The Independent Director Nomination Committee was established to ensure transparency, reliability, and independence in recommending candidates for independent directors, and includes four independent directors to maximize these functions. The Audit Committee consists only of independent directors and conducts pre- and post-audits from decision-making to business execution to prevent corruption or other conflicts of interest.

Committees	Duties	Members
Independent Director Nomination Committee	Recommend candidates for independent directors	2 executive directors, 4 independent directors
Audit Committee	Audit company accounting and business	3 independent directors

BOD Independence and Expertise

Daewoo E&C directors are elected by the resolution of the General Meeting of Shareholders after candidates are selected by the BOD and the Independent Director Nomination Committee consisting of six members, including all four independent 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. Daewoo E&C has strived to appoint independent directors with expertise and practical experience in various fields to ensure the expertise of the BOD. Currently, independent directors include two financial experts, one legal expert, and one investment specialist, contributing to the check and monitoring of specialized fields and to the safety of corporate management.

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 2019, the BOD held 13 meetings to resolve 47 agenda items, and the resolution rate was 97.9%.

BOD Operations

Category	2017	2018	2019
Meetings held	15	16	13
Agenda items resolved	49	55	47
Attendance rate (%)	98.3	95.5	93.6

Evaluation and Remuneration of BOD Members

- 1) Retired directors included
- 2) Remuneration for registered directors elected or retired during the current period included
- 3) Independent directors and Audit Committee members excluded
- 4) Audit Committee members excluded

Shareholders

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, including severance pay, 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.

Remuneration for Directors and Auditors

Category	Number ¹	Total amount of remuneration ²	Average remuneration per person
Registered directors ³	3	1,057	352
Independent directors ⁴	1	16	16
Audit Committee members	4	214	54

(As of December 2019 / Unit: Persons, KRW million)

Daewoo E&C issued a total of 415,622,638 shares as of December 2019, 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	Number of shares held	Ratio (%)
KDB Investment No. 1 Limited	210,931,209	50.75
National Pension Service	27,057,003	6.51
Employee Stock Ownership Association	2,126,396	0.51
Others	175,508,030	42.23

(As of December 2019)

RISK MANAGEMENT

Daewoo E&C selected “Risk Management” as one of eight strategic tasks to achieve the vision of Build Together, and is strengthening its ability to identify and prevent potential risk factors. As the risk sensing ability has been strengthened, risks addressed in 2019 increased by 10% in 2019 compared to the previous year, which led to improved stability of the project.

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 2019, from the projects we decided to participate in, we found an average of 63 risks per project, which was a significant increase from the average of 19 per project in 2018. The risk factors on which we took appropriate measures also increased to 250 from 54 of the previous year, confirming our enhanced proactive identification capabilities. In 2020, we plan to focus on preventing financial losses, especially in overseas projects, with the goal of improving the quality of risk management.

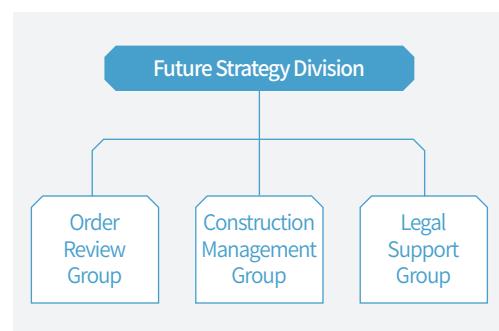
Risk sensing and action

Year	Average risk factors per project	Risks addressed in 2019	Risk action rate
2018	19	54	47%
2019	63	250	57%

Risk management organization

Daewoo E&C reorganized its existing Risk Management Division into the Future Strategy Division. 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. 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.

Risk Management Organization



8 Strategic Tasks for Risk Management

- Advance task management evaluation.
- Enhance corporate culture.
- Internalize innovative project implementation.
- Integrate support for key projects.
- Reduce R&O-based cost volatility.
- Enhance order review.
- Establish and apply the project rating system.
- Advance early warning system.

Project risk management

Risk filtering stages



Management of poisonous clauses in contracts

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 2019.

Non-financial risk management

Definition of non-financial risks and responses

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"> · Entering the seawater desalination business · Applying rainwater recycling technology
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"> · Building zero-energy buildings · Constructing new and renewable energy power plants (solar power, wind power, tidal power generation) · Promoting biomass power generation business
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"> Improving workability to shorten construction period · Developing a BIM^{Building Information Modeling} specification system · Developing a 4D smart modeling system Employees' focusing on core business to shorten working hours · Adoption of RPA^{Robotic Process Automation} system
4 th 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"> · Developing Smart Prugio platform for mobile app system control · Adoption of AWP^{Advanced Work Package} · Operation of Big Data

BUSINESS ETHICS

Protection of human rights of employees



[http://www.daewoenc.com/
company/management/moral-ethics](http://www.daewoenc.com/company/management/moral-ethics)

Business ethics system

Compliance organization

Compliance team

Charter of Ethics

Daewoo E&C believes that sustainable growth is based on a corporate culture that values corporate social responsibility and strict compliance. In 2019, while maintaining the certification of the anti-corruption management system ISO 37001, we focused on establishing an ethical culture so that all employees pledge to practice compliance and accept ethics as a standard for value judgment. In 2020, we will strengthen the inspection function to prevent ethical risks and promote unethical behavior reporting channels.

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.

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.



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.

Education and promotion

Daewoo E&C provides ethical education and training to its employees to develop ethical awareness. In 2019, we conducted 6 online compliance trainings and 78 offline trainings for 1,511 employees, and held job workshops for compliance staff on a semi-annual basis to strengthen their professional competency and leadership skills. We also publish the "Compliance Together" monthly and the "Compliance Violations" weekly and share daily situations to maintain alertness. In addition, we conduct Business ethics campaigns throughout the year, such as healthy drinking culture, clean holidays, and sound family events, to prevent unethical practices that may occur inside or outside the company.

Inspection and evaluation

In 2019, a total of 60 teams were diagnosed for ethics and compliance risks and conducted activities to enhance the ethical awareness of employees. The number of unit organizations that had been evaluated for compliance increased by 25 compared to 2018, and the results were reflected in the organizational evaluation and awards were given to excellent employees to motivate employees to adhere to ethics. In 2020, we plan to focus on preventing unethical behavior by continuously improving the compliance awareness of employees and strengthening preventive inspection functions.

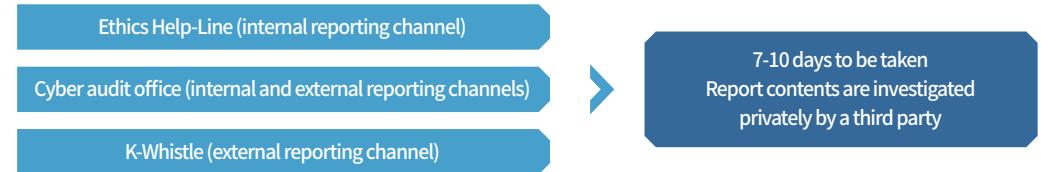
Supply chain compliance risk management

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

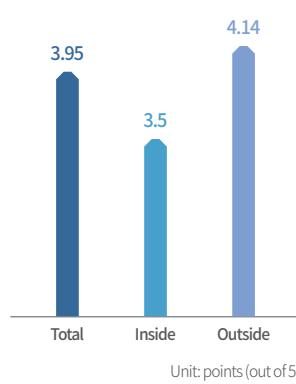
Daewoo E&C has a reporting system to foster a clean corporate culture and eradicate unethical behavior. Anyone who is aware of the unethical behavior of employees regarding Daewoo E&C's business activities can report it on the website or on the smartphone application, and if the reporter wants, his or her personal information is kept confidential in accordance with the reporter protection regulation. If an 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. In 2019, five cases of workplace harassment and sexual harassment were reported through the Ethics Help-Line, and in 2020, we plan to further strengthen our in-house promotion of grievance reporting channels to actively respond to ethical issues arising among employees.

Unethical behavior reporting channel



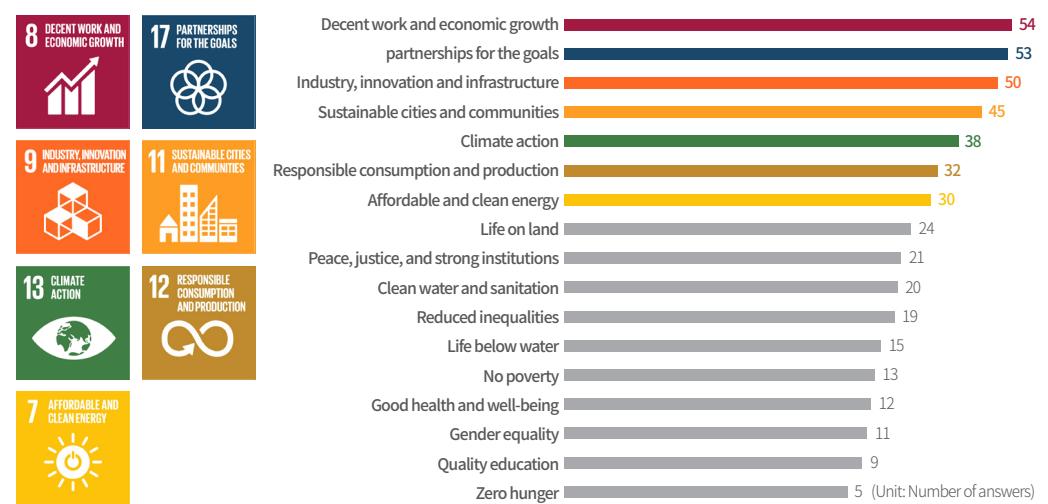
STAKEHOLDER ENGAGEMENT AND MATERIALITY ASSESSMENT

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



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.

UN SDGs selected by internal and external stakeholders

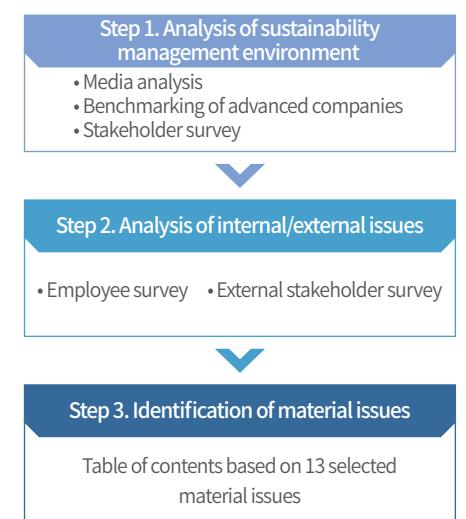


Communication channels with major stakeholders

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"> Activities in government committees Participation in policy research Cooperation programs, etc.
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"> Regular shareholders' meeting Annual report Analyst meeting IR Conference, etc. Overseas NDR (Non-Del Roadshow)
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"> Integrated Call Center Prugio website Model house SNS, etc.
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"> Conference Seminar Association activities, etc.
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"> Baronet (intranet) Labor union Labor-Management Committee Compliance system Ethics Help-line
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"> Social Service Corps Cyber Audit Office Monthly volunteer activities White Paper on social contribution activities, etc.
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"> E-Cos website Supplier meetings Shared-growth workshops, etc.
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"> Job fair Recruitment website Student ambassador SNS, etc.

Daewoo E&C conducted a materiality assessment in accordance with the Global Reporting Initiative (GRI) process to select important issues considering business impact and stakeholder interest. A total of 81 internal and external stakeholders participated in the survey on awareness of sustainability management conducted in March 2020, where a total of 13 major issues that Daewoo E&C had to focus on were selected, and activities and performances were reported with focus on those issues.

Materiality Assessment Process



Materiality Assessment Results



Reporting boundary

No.	Material Issues	Report parts	GRI Standards	Inside		Outside			
				Employees	Suppliers	Customers	Govt. & local govts.	Shareholders / Investors	Community
1	Achieving financial target	Seeking Future Growth Engines	201-1	✓			✓	✓	
2	Developing new markets and new business areas	Seeking Future Growth Engines	-	✓	✓				✓
3	Improving occupational safety	Creating a Safe Environment for Construction	403-2	✓	✓				✓
4	Strengthening awareness of business ethics and prevent corruption	Sustainability Foundation	205-2	✓					✓
5	Improving brand values and corporate image	Providing Customer-Focused Services	-	✓		✓			✓
6	Improving customer satisfaction by quality management	Providing Customer-Focused Services	416-1	✓		✓			
7	Improving R&D capability	Seeking Future Growth Engines	-	✓				✓	✓
8	Respect for human rights and diversity of employees	Happy Workplace for Employees	401-1, 405-1, 412-2	✓	✓				
9	Reducing energy consumption and GHG gas emissions to respond to climate change	Delivering Eco-friendly Construction	305-1, 305-2, 305-4, 305-5				✓		✓
10	Developing employee competency	Happy Workplace for Employees	404-1, 404-3	✓	✓				
11	Sustainable supply chain management	A Company Growing with its Community	308-2			✓			✓
12	Developing eco-friendly construction methods and new and renewable energy technologies	Seeking Future Growth Engines	-				✓	✓	✓
13	Reducing the environmental impact	Delivering Eco-friendly Construction	307-1				✓		✓

* Efforts to strengthen awareness of business ethics and prevent corruption: Included in the Sustainability Foundation part

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FACTS & FIGURES

Economic Performance

Category	Unit	Sector	2017	2018	2019
Total Sales	KRW million		11,766,840	10,605,494	8,651,852
Sales by division	KRW billion	Civil Project	1,882	1,742	1,387
		Housing & Building	6,863	6,580	5,153
		Plant	2,620	1,944	1,582
		Others	402	339	530
Construction contract variation	KRW billion	Civil Project	1,180	1,219	1,568
		Housing & Building	6,534	6,525	6,759
		Plant	(758)	1,108	1,922
Construction contract balance	KRW billion	Civil Project	5,752	5,006	5,204
		Housing & Building	21,414	21,843	23,666
		Plant	3,273	2,487	2,827
Sales by region	KRW billion	Korea	9,110,477	8,251,919	6,306,247
		Middle East	1,417,585	1,585,783	1,275,002
		Asia	480,331	321,411	603,108
		Africa	757,793	445,961	467,285
		Others	654	410	210
		Total	11,766,840	10,605,494	8,651,852
R&D Status	KRW million	R&D amount	Investment amount	13,457	13,880
	Persons	R&D personnel	Number of developers	83	83
	Cases	R&D performance	Research project	38	48
			Industrial property rights	65	58
			Paper	44	13
			External award	5	6
Industrial Property Performance	Cases	Patent	Existing patents	285	308
			Application	22	20
			Registration	23	23
			Total effective registration	308	331
	New technology	New technology	Existing patents	9	11
			Application	2	4
			Registration	2	3
			Total effective registration	11	14
	Others	Others	Existing patents	153	164
			Application	5	2
			Registration	11	6
			Total effective registration	164	170
Total	Total	Existing patents	447	483	515
		Application	29	26	26
		Registration	36	32	38
		Total effective registration	483	515	519

Major Shareholders

(As of December 2019)

Shareholders	Ratio	Number of shares
KDB Investment No. 1 Limited	50.75%	210,931,209
National Pension Service	6.51%	27,057,003
Employees' Stock Ownership Association	0.51%	2,126,396
Others	42.23%	175,508,030

Credit ratings

Evaluating Agency	Effective rating		Evaluation category
	Corporate bill	Corporate credit rating	
Korea Ratings	A2-	A-	Regular evaluation
NICE Information Service	A2-	A-	Regular evaluation

Remuneration for Directors and Auditors

Category	Unit	Directors / Auditors	2017	2018	2019
No. of Persons	Persons	Internal director (excluding independent directors and audit committee members)	2	3	3
		Independent director (excluding audit committee members)	1	1	1
		Audit committee members	3	3	4
Total amount of remuneration	KRW	Internal director (excluding independent directors and audit committee members)	826	828	1,057
		Independent director (excluding audit committee members)	59	61	16
		Audit committee members or auditors	180	192	214
Average remuneration		Internal director (excluding independent directors and audit committee members)	413	276	352
		Independent director (excluding audit committee members)	59	61	16
		Audit committee members or auditors	60	64	54

Operations of Board of Director

Category	Unit	2017	2018	2019
No. of meetings	Number	15	16	13
No. of agenda items resolved	Number	49	55	47
Directors' attendance rate	%	98.3	95.5	93.6

Number of meetings held by subcommittee

Category	Unit	2017	2018	2019
Audit Committee meetings	Number	10	9	6
Independent Director Nomination Committee meetings	Number	1	0	1

Environmental Performance

Eco-friendly building certification

Projects	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 Site	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)'

Category	Unit	2017	2018	2019
Violation of environmental regulations	Total fines	KRW	0	1,000,000
	Number of litigations filed	Cases	0	1
	Number of non-monetary sanctions	Cases	0	0
Greenhouse gas	Total emissions	tCO ₂ eq	70,501	70,715
	Direct emission	Fixed combustion	tCO ₂ eq	4,119
		Mobile combustion	tCO ₂ eq	5,027
	Indirect emission	External electricity	tCO ₂ eq	61,357
		External Steam	tCO ₂ eq	0
	Emissions per unit KRW*	tCO ₂ eq/mill KRW	0.770	0.667
Energy	Total on-site emissions (Scope 1+2)**	tCO ₂ eq	62,958	64,221
	Total building emissions (Scope 1+2)**	tCO ₂ eq	7,544	6,494
	Total energy consumption	TJ	1,369	1,421
	Total on-site consumption	TJ	1,258	1,295
Water consumption	Total building consumption	TJ	111	126
	Consumption per unit KRW	TJ/mill KRW	0.015	0.013
Annual water consumption	Ton	2,088,275	1,614,303	1,318,024

*(Scope 1+2)/2019 domestic sales

**Calculated by the guidelines on the implementation of the GHG and Energy Target Management System

Category	Unit	2017	2018	2019
Significant hazardous (chemical) substance spills	Number of spills	Cases	0	0
	Spilled amount	Ton	0	0
Waste discharge	Waste generation (throughput, domestic standard)	Ton	592,790	570,845
	Processing cost	KRW 100 million	169	199
Total amount of environmental protection expenditure and investment	Expenditure and investment	Environmental investment	194	190
		KRW million	176	179
		Environmental expenditure		175

Environmental audit _ HSE audit performance

Category	Civil Project	Housing & Building	Plant	Total
On-site environmental instruction and inspection	14	20	3	37
Support for on-site environment	2	13	0	15
Total	16	33	3	52

Eco-friendly purchasing

Category	Unit	2017	2018	2019
Eco-friendly purchasing	KRW billion	296	255	205

Environmental training

Category	Participants(persons)
Environmental manager job competency training (Level 1)	48
Environmental manager job competency training (Level 2)	119
Environmental training for new environmental managers by division	4
On-site environmental training (Civil Project Division)	657
On-site environmental training (Housing& Building Division)	13,311
On-site environmental training (Plant Division)	192

Social Performance

Category	Unit	Details	2017	2018	2019
Total number of employees	Persons		5,842	5,359	5,385
Employees by employment type	Persons	Executives	Female	0	0
			Male	38	32
	Permanent employees	Total		3,943	3,811
		Female		315	305
		Male		3,628	3,506
	Contract employees	Total		448	343
		Female		6	10
		Male		442	337
	Others	Total		1,413	1,173
		Female		238	245
		Male		1,175	928
Employees by region	Persons	Domestic	Female	549	545
			Male	4,499	4,127
	Overseas	Female		10	11
		Male		784	676
Diversity of employees	Persons	Employees	Female	559	556
			Male	5,052	4,903
	Elderly			323	400
	Foreigners			17	14
	Disabled			60	44
	High school graduates*			-	318
	Patriots-Veterans*			-	349
	%	Basic salary for women compared to men, and compensation percentage		100	100
Managerial positions Status	Persons	Total number of female managerial positions (manager or higher)		113	112
		Number of female executives		0	0
		Total number of managerial positions (manager or higher)		3,148	2,736
		Total number of executives		160	121
New recruitment, Turnover and Retirement	Persons	New employment	Female	8	6
			Male	73	46
	Turnover/ Resignation	Female		11	22
		Male		130	208
					142

*The number of high school graduates and patriots-veterans has been collected since 2018

Category	Unit	Details	2017	2018	2019
Retirement pension	KRW million	Operating amount	243,796	241,556	242,264
	Persons	Subscribers	5	5	10
		DC			
		DB	4,271	3,881	3,704
Maternity leave	Persons	Total	229	182	168
		Female	26	17	16
		Male	203	165	152
	%	Return rate after maternity leave	98.1	98.1	100
Parental leave	Persons	Total	20	26	39
		Female	13	12	22
		Male	7	14	17
	%	Return rate after childcare leave	95.0	84.6	66.7
	Day	Average days of childcare leave	250	272	275
	Persons	Number of employees working over than 12 months after childcare leave	8	20	21
Education/training performance	KRW	Training cost per person	687,766	643,135	673,937
	Hour	Training hours per person*	66	49	63
Information security training	%	Information security online education completion rate	5,204(95.7)	5,104(100)	5,385(100)
Sexual harassment prevention and human rights education	Hour	Training hours	5,898(100)	5,487(100)	5,200(100)
	Hour / Persons	Training hours per person	1	1	1
Performance evaluation	Persons	Evaluation targets	5,225	5,025	5,348
	%	Percentage of evaluated persons	100	100	100
Labor union	%	Labor union subscription rate	29.3	34.1	40.2
Labor-Management Committee	Number	Number of meetings held	4	4	4
	Number	Number of items resolved	5	19	22

*Not managed by gender/employee categories

Social Performance

HSE Training

Category	Unit	Subcategory	2017	2018	2019
Domestic HSE training	Number	Sites for pilot operation of CLEAR program	5	10	14
	Number	Operation of supplier win-win safety program	30	48	52
Overseas HSE training	Persons	NEBOSH ICC (Construction safety engineer in the U.K.)	7	3	0
		OSHA 30 (Introductory education for construction safety in the U.S.)	0	4	19
		ISO 45001 (Safety and Health Management System Senior Auditor Course)	0	4	11
<hr/>					
Category		Training target	Order	Persons	
In-house HSE-Q training		Site manager (Supplement)	6	158	
		Site manager (Special_1st half)	2	159	
		Supervisor (Supplement)	8	405	
		Safety manager (Function)	8	344	
		Safety manager (New employee)	1	5	
		Health manager (Supplement)	2	87	
		Health manager (New)	3	6	
		Quality manager (New)	7	169	
		Quality manager (Intermediate / Advanced)	1	43	
		Quality manager (Special)	4	126	
		Persons appointed to overseas sites (Quality)	4	33	
Outside HSE-Q training (Specialized Training)		Safety/Health manager	-	58	
Supplier HSE training		Supplier's site manager	17	526	
		Equipment & material supplier	1	47	

Safety inspection, audit and support

Category	Persons
CEO Inspection	11
Site Audit	196
Domestic Audit	115
Domestic Monitoring Audit	61
Overseas Audit	17
Overseas Support	3
Construction Machinery and Technology Safety Support	1,777
Technology Safety Support	88
Construction Machinery(T/C)	1,217
Construction Machinery(Lift/Pile Driver/Gondola)	472
Other Site Inspections	213
Safety Patrol	190
Special Inspection on Site to be Completed	23

Industrial accident

Category	Unit	Items	2017	2018	2019
Accident rate	%oo	Mortality per 10,000 workers	0.42	0.56	1.71
	%	Converted accident rate	0.33	0.57	0.51
		LTIR* (Overseas)	0.07	0.05	0
Number of casualties	Persons	Number of domestic casualties	175	264	181**
		Number of overseas casualties	35	24	10***

*LTIR: Lost-time Injury Rate

**Male: 174 Persons, Female: 7 Persons

***Male: 10 Persons, Female: 0 person

Social Performance

Shared growth

Category	Unit	Items	2017	2018	2019
Suppliers (Domestic outsourcing)	Company	Total number of suppliers	989	1,059	1,071
	KRW 100 million	Purchase from suppliers	34,545	31,240	29,579
Major suppliers (Domestic outsourcing)	Company	Number of major suppliers	101	101	107
	KRW 100 million	Purchase from major suppliers	16,904	12,460	10,230
	%	Out of total purchase cost	48.9	39.9	34.6
	KRW 100 million	Shared growth fund and loans	280	280	280
	Persons	Training to improve job ability of suppliers	173	179	177
	Persons	Number of employees participating in supplier meetings	100	101	101
No. of fair-trade violation cases	Cases	Number of violations	0	0	0
	KRW million	Penalties	0	0	0

Ethical Management*

Category	Unit	Subcategory	2017	2018	2019
Online compliance education	%	Education completion rate	96.9	100	99.9
Offline compliance education	Persons	Attendants	1,745	2,416	1,511
Autonomous compliance activities	%	Talk (once/month)	99	100	100
	%	Message (once/quarter)	99	99	99
	%	Independent education (once/half-year)	100	100	100

*Compliance education and activities are implemented to entire employees including executives.
Online education is for both domestic and international employees, offline education is for domestic only.
Number of employees who completed education is not managed by domestic/international categories. Will be collected in near future.
For the case of suppliers, anticorruption related subjects are delivered through Win-win corporation portal.

Quality & Customer satisfaction

Category	Unit	Subcategory	2017	2018	2019
Company-wide quality monitoring	Number	Quality evaluation for equipment suppliers	57	25	48
		New	75	59	37
		Re-evaluation			
		Plant visiting inspection	4,025	1,877	2,049
		Plant resident inspection	19	6	44
Customer compliant counseling		Annual unit price contract for third-party inspection	10	10	17
	Cases	Average number of consultations per month of integrated call center	24,114	24,030	23,213
	%	Response rate of integrated call center	93.1	96.3	96.3
	%	Instant response rate of integrated call center*	96	87.6	97
	Cases	Average number of consultations per month through the voice of the customer (VOC)	677	1,837	590
	%	VOC processing rate	90.9	97.7	96.5
	Day	Average processing days	5	14	12
Protection of customer's personal information	Ranking	Results of National Customer Satisfaction Index (NCSI) Survey	4	4	3
	Cases	Number of data theft, leakage, and loss	0	0	0
Quality control at head office and sites	Participation rate (%)	On-site Quality Performance Index (S-QPI)	86	87	93.7
	Average score	Head office quality evaluation	86	90	90
	Average score	On-site quality evaluation	86	90	90

*Instant response rate of integrated call center: Operator's response within 15 seconds after call signal

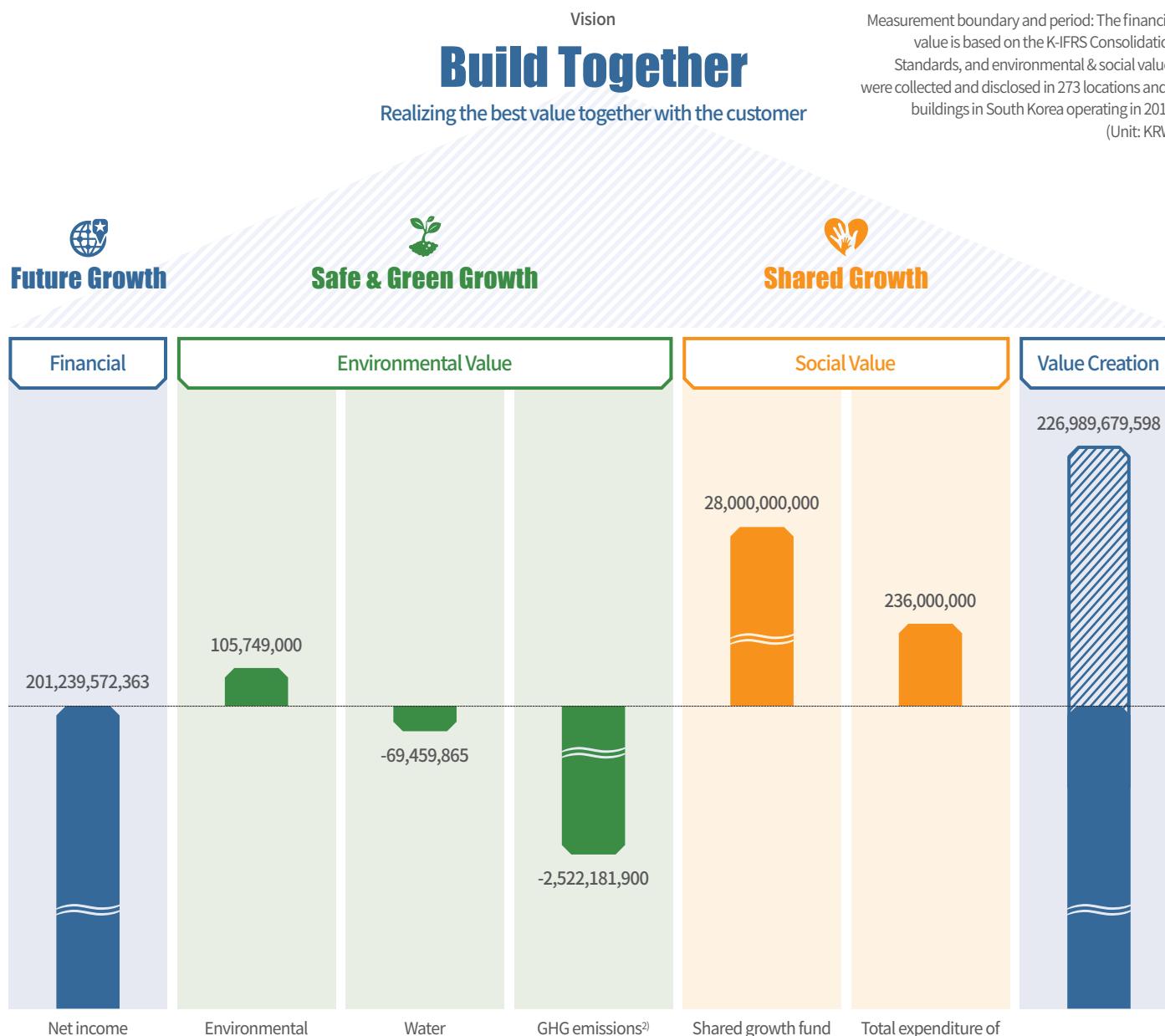
Social contribution activities

Category	Unit	Details	2017	2018	2019
Performance of social contribution activities	Persons	Annual number of participants	1,722	1,309	1,270
	KRW million	Total expenditure	419	214	236
		Operation cost	58	107	112
		Donation (culture, arts, etc.)	361	107	124
	Hour	Average hours of activities per capita	7.3	4.6*	4.9
Relay Volunteer Work	Number	Number of times	7	6	8
	Persons	Number of participants	406	255	305

*Corrected volunteer activities participation performance per capita in 2018 by formula change

Value of Sustainable Management

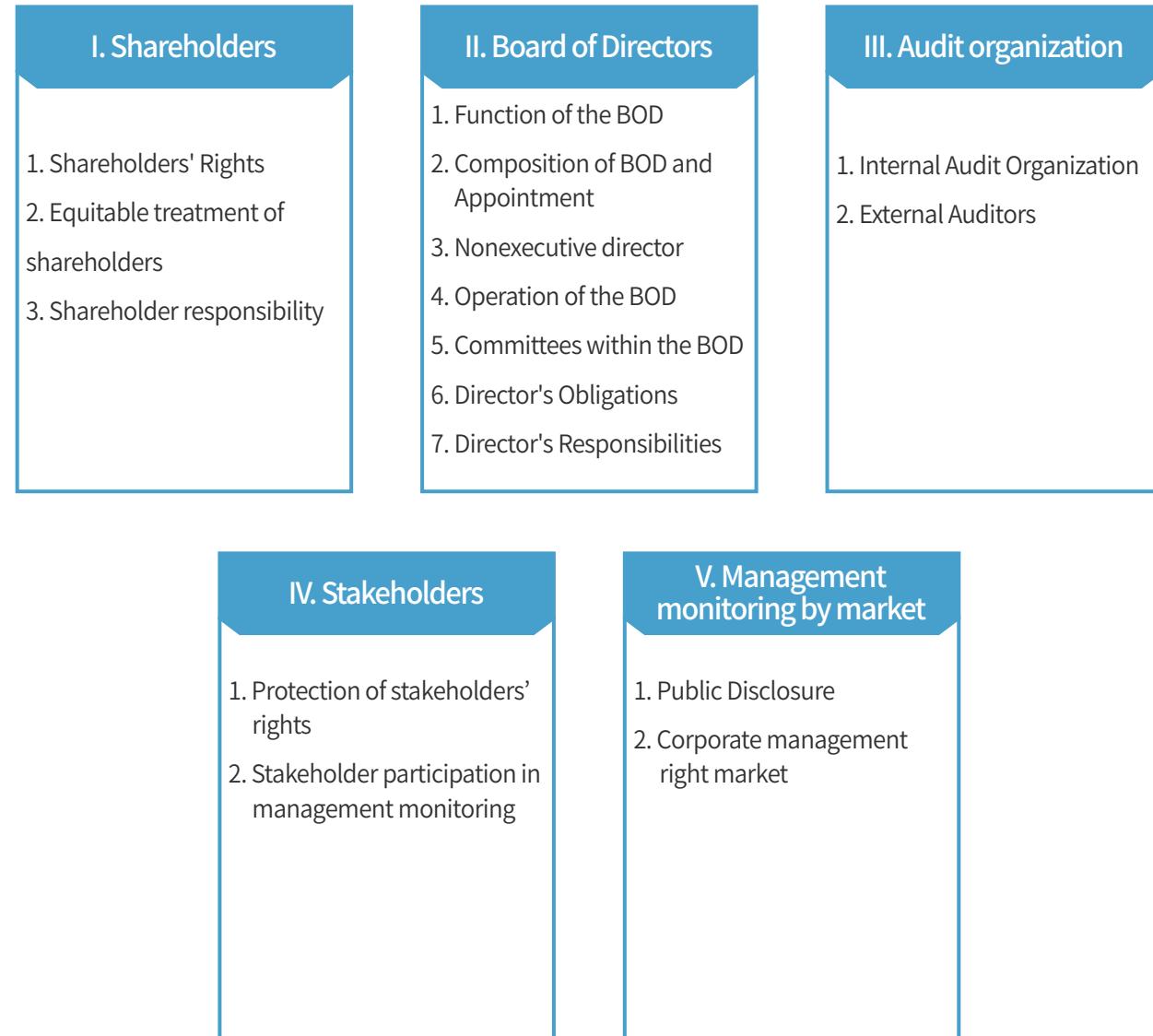
Daewoo E&C objectively grasps the external impact of overall management activities on economic, social and environmental values, and measures the value and impact of sustainable development management to improve the intuitiveness of performance. In accordance with K-IFRS consolidated accounting standards, Daewoo E&C's net income in 2019 was approximately 201,240 million won, reflecting the estimated value of sustainable development management activities of 226,990 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.



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.



GRI Content Index

Universal Standards

GRI 102: General Disclosure

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* Compliance Committee

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Topic-specific Standards

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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.

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ISO 26000

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	Responsible political involvement	Joining and participating in the relevant associations or societies by division (group)	111
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	Social responsibility within the sphere of influence	Assessment of supplier's sustainability, restriction on inappropriate suppliers, fair trade training for suppliers, social contribution activities with suppliers	74-75
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Consumer issues	Fair marketing	Fair marketing through market analysis and competitiveness improvement	53
	Consumers health and safety	Acquisition of international quality certification (ISO 9001), and improvement of quality system	52
	Sustainable consumption	Eco-friendly purchasing, eco-friendly technology development, green building certification	64, 47, 92
	Consumer service and resolution of complaints	Operation of a customer-dedicated team, strengthening of customer satisfaction survey channels	51
	Protection of consumer data and privacy	Establishment of an organization dedicated to privacy protection, strengthening of customer information security inspection system, and conduct of information security training	53
	Access to essential services	Operation of integrated call center	51
	Education and awareness	Operation of integrated call center	51
Community engagement & Development	Community engagement	Habitat's Building Hope, company-wide relay volunteer work, and social contribution in overseas sites	76-77
	Education and culture	Social contribution through employee's talent donation, environmental improvement, and sharing activities	76-77
	Job creation and support for capability development	Development of construction talent through career experience and field trip to the Institute of Construction Technology	77
	Technology development and access	Improvement of smart construction technology, eco-friendly technology, and drone surveying technology	42-47
	Health	Blood donation activities in Korea, and operation of HIV reduction program and provision of bottled water in Ethiopia	71, 76-77
	Social investment	Construction of national infrastructure such as roads and bridges	12-37

Greenhouse Gas Verification

KSA-20-GHG-218

GHG Verification Summary

Daewoo Engineering & Construction Co., Ltd.

Verification Scope

Korean Standards Association has conducted reasonable GHG emissions verification based on GHG report provided by Hyundai Glovis Co.,Ltd which includes Scope1 and Scope2.

Verification Standards and Guidelines

To conduct verification activities, verification team applied verification standards and guidelines. The standards and guidelines are as follows.

- GHG&Energy Target Scheme guideline(2020-3) provided by Ministry of Environment, Republic of Korea
- Verification guideline for Management of Targets for GHG & Energy scheme(2016-104) provided by Ministry of Environment, Republic of Korea
- KS Q ISO 14064-1,2,3 : 2006
- IPCC Guideline.

Verification Conclusion

As a result of verification activities, verification team has found no significant errors. Therefore, Korean Standards Association confirms that following emissions data are adequately quantified.

(unit : tonCO₂eq)

GHG Emissions			
Year	Scope 1	Scope 2	Total
2019	7,150	59,054	66,199

※ There is a difference between the total quantity of GHG emission and the sum of each workplace's emission.
(Decimal place is not considered when calculating the emission of each workplace.)

April 02, 2020

KOREAN STANDARDS ASSOCIATION

Third-Party Verification

Introduction

DAEWOO Engineering & Construction Co., Ltd. (“DAEWOO E&C”) commissioned DNV GL Business Assurance Korea, Ltd. (“DNV GL”), part of DNV GL Group, to undertake independent assurance of 2020 DAEWOO E&C Sustainability Report (the “Report”). The directors of DAEWOO E&C have sole responsibility for the preparation of the Report. The responsibility of DNV GL in performing the assurance work is to the management of DAEWOO E&C in accordance with the terms of reference. DNV GL’s assurance engagements are based on the assumption that the data and information provided by the client to us as part of our review have been provided in good faith.

Scope and Basis of assurance

Based on non-financial data and sustainability performance data generated in 2019 from 273 project sites in Korea and 7 buildings owned by DAEWOO E&C, we have assessed the adherence to Reporting Principles for defining report content and Reporting Principles for defining report quality set forth in GRI Standards 2016. We have reviewed that the material topics which are identified in the materiality determination process and relevant Topic-specific disclosures of GRI Standards 2016;

No.	Material topic	GRI Disclosure	No.	Material topic	GRI Disclosure
1	Achieving financial target	201-1	7	Improving R&D capability	-
2	Developing new markets and new business areas	-	8	Respect for human rights and diversity of employees	401-1, 405-1, 412-2
3	Improving occupational safety	403-2	9	Reducing energy consumption and GHG gas emissions to respond to climate change	305-1, 305-2, 305-4, 305-5
4	Strengthening awareness of business ethics and preventing corruption	205-2	10	Developing employee competency	404-1, 404-3
5	Improving brand values and corporate image	-	11	Sustainable supply chain management	308-2
6	Improving customer satisfaction by quality management	416-1	12	Developing eco-friendly construction methods and new and renewable energy technologies	-
			13	Reducing the environmental impact	307-1

DNV GL’s assurance methodology, VeriSustain™ which is based on our professional experience, international assurance best practice including International Standard on Assurance Engagements 3000 (ISAE 3000) is applied for the assurance AS-PRJN-185819-2020-AST-KOR Page 2 of 3 engagement with the limited level of assurance. The assurance was carried out from April and till June 2020. The site visit was made to DAEWOO E&C’s Headquarters in Seoul, Korea. We undertook the following activities as part of the assurance process:

- challenged the sustainability-related statements and claims made in the Report and assessed the robustness of the underlying data management system, information flow and controls;
- interviewed representatives from the various departments;
- conducted document reviews, data sampling and interrogation of supporting databases and associated reporting system as they relate to selected content and performance data;
- reviewed the materiality assessment report.

Limitations

The engagement excludes the sustainability management, performance and reporting practices of DAEWOO E&C’ subsidiaries, associated companies, suppliers, contractors and any third-parties mentioned in the Report. DNV GL did not interview external stakeholders as part of this Assurance Engagement. Economic performance based on the financial data is cross-checked with internal documents, the audited consolidated financial statements and the announcement disclosed at the website of Korea Financial Supervisory Service (<http://dart.fss.or.kr>) as well as DAEWOO E&C’s website (www.daewooenc.com). These documents, financial statements and the announcements are not included in this Assurance Engagement. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. The baseline data for Environmental and Social performance are not verified, while the aggregated data at the corporate level are used for the verification. DNV GL expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

Conclusion

On the basis of the work undertaken, nothing comes to our attention to suggest that the Report does not properly address the adherence to the Principles for defining report content in GRI Standards. Further opinions with regards to the adherence to the Principles are made below;

1) The VeriSustain protocol is available upon request at DNV GL Website (www.dnvg.com)

Stakeholder Inclusiveness

DAEWOO E&C has identified internal and external stakeholder groups such as Government agencies, Shareholders and investors, Customers, Academia, Employees, Local communities, Suppliers and Future society. DAEWOO E&C engages with the stakeholders at the company and business unit levels through various channels. How DAEWOO engages with Stakeholders and what is the expectations of stakeholders are described in the Report. DAEWOO E&C conducted a survey to find out the most relevant UN SDGs (Sustainable Development Goals) with it on the internal and external stakeholders. In addition, DAEWOO E&C presented its contribution to achieve the UN SDGs in connection with the sustainability management strategy.

Sustainability Context

In 2018, DAEWOO E&C announced the new vision of ‘Build Together’, A company that realizes the best value with customers. In 2019, DAEWOO E&C established a company-wide sustainability management system with three sustainability management goals: “Future Growth”, “Safe & Green Growth”, and “Shared Growth”. DAEWOO E&C derives strategic subjects based on 13 material topics and reports various 2019 performances from the respective subjects. In addition, the Report helps the readers understand DAEWOO E&C’s sustainability management by presenting material topics in connection with the UN SDGs. In 2019, as ‘Enter new markets and new business areas’ are newly presented as a material topic and new business division is established to manage international business, DAEWOO E&C could report on the sustainability performance of overseas business in the future.

Materiality

DAEWOO E&C has conducted the materiality assessment to prepare the Report. The pool of 20 sustainability management issues was derived through media analysis, benchmarking of advanced companies, and survey results of internal and external stakeholders. In addition, 13 material topics were selected through internal and external issue analysis and priority evaluation. The assurance team confirmed that material topics selected through the materiality assessment were reflected in the report.

Completeness

The Report covers the impacts of material topics on the stakeholders for the reporting period and key performance in 2019. The reporting boundary includes the operations of 273 project sites and 7 buildings over which DAEWOO E&C implements management control in 2019.

Balance, Comparability, Accuracy, Timeliness, Clarity and Reliability

DNV GL tested and verified the data and information in the report on a sampling basis. No significant errors in terms of accuracy were found in the data and information verified through assurance engagement. DAEWOO E&C operates reliable procedures for collecting, recording, processing, analyzing and reporting information. DAEWOO E&C reported the sustainable management performance in a balanced view and enabled the readers to compare the performance of the last three years. In addition, DAEWOO E&C could benchmark its performance related to material topics against appropriate external criteria, especially in setting goals in the future. Errors or ambiguous expressions found during the assurance process were corrected before the final report was published. The Report is prepared yearly, and the reporting period is specified in the report.

Competence and Independence

DNV GL applies its own management standards and compliance policies for quality control, in accordance with ISO/IEC 17021:2015 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We have complied with the DNV GL Code of Conduct² during the assurance engagement and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of sustainability assurance professionals. DNV GL was not involved in the preparation of statements or data included in the Report except for this Assurance Statement. DNV GL maintains complete impartiality toward stakeholders interviewed during the assurance process. DNV GL have no other contract with DAEWOO E&C and did not provide any services to DAEWOO E&C in 2020 that could compromise the independence or impartiality of our work.



June 2020
Seoul, Korea

Jang Sup Lee
Country Representative
DNV GL Business Assurance Korea, Ltd.


2) DNV GL Code of Conduct is available from DNV GL website (www.dnvg.com)

Awards

Divisions	Performances
Civil Project Division	<ul style="list-style-type: none"> BUSAN OUTSIDE 8TH EXPRESS ROAD(Korean Society of Civil Engineers, the Civil Engineering Day 2019, Silver Prize for Civil Engineering Structures of the Year(Nakdonggang River)) ASAN-CHEONAN HIGHWAY 3RD SITE(Ministry of Land, Infrastructure and Transport and Korea Road Association, the Day of Road 2019, by the Minister of Land, Infrastructure and Transport) DAEGU RING ROAD 2TH SITE(Ministry of Land, Infrastructure and Transport and Korea Road Association, the Day of Road 2019, by the President of Korea Expressway Corporation) DREDGING OF INCHEON NEW PORT ACCESS SEAWAY PROJECT(Contributing to the development of maritime affairs, fisheries and port, by the Minister of Oceans and Fisheries) ABHAEAMTAE 1ST SITE(Contributing to the development of transportation, by the Minister of Land, Infrastructure and Transport, and by the President of Iksan Regional Construction Management Office) GWANGYANG INDUSTRIAL WATERWORKS SITE(Contributing to the successful completion of Gwangyang 2nd Stage Industrial Water Double Track Project, by the Minister of Environment)
Housing & Building Division	<ul style="list-style-type: none"> 2019 Good Design Awards(Korea Institute of Design Promotion, Korea Institute of Design Promotion Award) URBAN IMPROVEMENT BUSINESS TEAM 2(Contributing to the improvement of residential welfare for the common people through implementation of residential welfare policies, Awarded by the Minister of Land, Infrastructure and Transport) DESIGN ENGINEERING GROUP(Contributing to the national industry by improving residential welfare, Awarded by the Prime Minister) WESTERN MECHANICAL ENGINEERING TEAM(The 15th Construction Environment Management Best Practice Contest, Awarded by the Minister of Land, Infrastructure and Transport) DAESIN 2nd PRUGIO SITE(Awarded as excellent organization and person for maintenance project by Busan Metropolitan City) GEOMDAN CENTRAL PRUGIO(Money Today Grand Prize in Life Infrastructure category, Newsway Grand Prize in Brand category, Asia Business Daily Grand Prize in Housing Complex category, and Korea Economy TV President's Award in Life Infrastructure category) UNJEONG NEW TOWN PARK PRUGIO(Hankyung Business Grand Prize in Brand category, JoongAng Daily Grand Prize in Well-being Apartment category, Money Today Grand Prize in Luxury Housing category, and Herald Economy Daily Grand Prize in Advanced New Technology category at Residential Culture Prize) CHOJI STATION MAJOR TOWN PRUGIO(Korea Economy TV Grand Prize) CHEONGJU TECHNOPOLIS PRUGIO(Maeil Economy Daily Excellence Prize for Large Apartment for Good Living) DAEGU BEOMEON CENTRAL PRUGIO(e-Today Daily Grand Prize in Smart Construction category from the Minister of Land, Infrastructure and Transport) GYEONGJU CENTRAL PRUGIO(Aju Economic Daily Grand Prize from the Minister of Land, Infrastructure and Transport, Dong-A Daily News Grand Prize for Quality Apartment from Korea Construction Award) YEONJU STATION PRUGIO CLATERRE(Asia Today Grand Prize for Green Construction from the Minister of Land, Infrastructure and Transport, Seoul Newspaper Grand Prize for Green Construction from the Minister of Land, Infrastructure and Transport) GWANGYANG PRUGIO THE FIRST(E-Daily Grand Prize in Housing Innovation category at Construction Industry Prize, Korea Economic Daily Grand Prize in Apartment category at Second-Half Residential Culture Prize) BUSAN OCEAN CITY PRUGIO(Hankook Ilbo Grand Prize in Green Smart category at Green Housing Award, Best Award from Good Company Certification Evaluation by Busan Metropolitan City) SEOSAN YECHEON PRUGIO(Grand Prize in Construction/Apartment Brand category at the 12th Korea Internet Communication Awards) Singapore PASIR CONDO SITE(BCA Building and Construction Authority Awards for Construction Excellence) DONGSAN HOSPITAL at Keimyung University(Excellence Prize in General Field at the 28th Daegu Metropolitan City Architecture Award)
Plant Division	<ul style="list-style-type: none"> Korea Trade Association "the Day of Trade" Bronze Tower Order of Industrial Service Merit Award Korea Atomic Energy Industry Plant "the Nuclear Safety and Promotion Day" Industrial Service Medal by the President Korea Plant Industries Association awarded for expanding plant exports, by the Minister of Industry 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 Annual Conference", by the Minister of Science and ICT
Institute of Construction Technology	<ul style="list-style-type: none"> Korea Construction Engineers Association "the Day of Construction Engineers 2019", by the Minister of Land, Infrastructure, and Transport (2 persons) The Federation of Construction Associations "the Construction Day 2019", by the Minister of Land, Infrastructure, and Transport Korean Recycled Construction Resources Institute, Academic Award Best practice of Construction Excellence in Korea, by the President of Korea Institute of Construction Technology (2 persons) Excellent Academic Award of The Korea Institute of Building Construction, Autumn Conference of The Korea Institute of Building Construction

Membership

Divisions	Associations and Institutes	Divisions	Associations and Institutes	Divisions	Associations and Institutes
Civil Project	<ul style="list-style-type: none"> AWC (Asia Water Council) Korean Society of Transportation Korea Planning Association Korean Society of Engineering Geology Korean Society of Civil Engineers Korean Society of Steel Construction Korean National Committee on Large Dams Korean Society of Road Engineers Korea Road Association Korean Society for Disaster Prevention Korea Water Resources Association Korean Society of Coastal Disaster Prevention Korean Geotechnical Society Korean Geosynthetics Society Korean Railway Construction Engineering Association Korean Society for Railway Korea Railway Association Korea Railway Association (International Cooperation Committee) Korea Concrete Institute Korean Tunneling and Underground Space Association Korea Association of Waste to Energy Technology Korea Ports & Harbors Association Korean Society of Coastal and Ocean Engineers Korea Environmental Industry Association 	Housing & Building	<ul style="list-style-type: none"> Korean Society of Living Environment System Korean Association of Air Conditioning Refrigerating and Sanitary Engineers Korea Artificial Foundation Greening Association Korean Institute of Electrical and Electronic Material Engineers Korean Institute of Traditional Landscape Architecture Korea Institute of Information & Telecommunication Facilities Engineering Korean Institute of Landscape Architecture Korean Institute of Illuminating and Electrical Installation Engineers Korea Housing Association Korea Facility Management Association Korea Society of Environmental Restoration Technology 	HR & Management Service	<ul style="list-style-type: none"> Korea Construction Engineers Association Korea Enterprises Federation Korea International Trade Association Korea Fire Facility Association Korea Personnel Improvement Association
		Plant	<ul style="list-style-type: none"> Korea Electric Association Korea Coating Experts Society Korea Plant Industries Association Korea Gas Union Korean Radioactive Waste Society Korea Engineering & Consulting Association Korea Atomic Industrial Forum Korea Nuclear Society Korea Nuclear Association for International Cooperation Korea Electric Engineers Association Korea Institute of Plant Engineering & Construction 	Global Marketing	<ul style="list-style-type: none"> Construction Association of Korea Korea Mechanical Construction Contractors Association Korea Facilities Maintenance Association Korea Professional Construction Association CM Association of Korea Korea Federation of Construction Contractors Korea Institute of Construction Industry Korea Electrical Contractors Association Korea Information & Communication Contractors Association International Contractors Association of Korea
		New Frontier Business	<ul style="list-style-type: none"> Korea Proptech Forum 	Quality Safety	<ul style="list-style-type: none"> Korea Electric Power Industry Code - KEPIC WEEK Construction Safety Manager Committee - Construction Safety Practitioners Councils - Construction Safety Executive Councils - Construction Healthcare Practitioners Council MaeKyung Safety & Environment Institute Korea Construction Quality Association Korea Construction Quality Association Korea Environment Construction Association KOSHA 18001 Conference
		Finance	<ul style="list-style-type: none"> Korea Association for CFO Korea Listed Companies Association - Listed Companies CFO Forum 	HR & Management Service	<ul style="list-style-type: none"> Korea Emergency Planning Officer Association Construction Industry Human Resource Manager Council National Reserve Forces Association Seoul Jung-gu Integrated Defense Council National Association of Workplace Reservist Battalion Commander Korean Human Resource Development Association
				Institute of Construction Technology	<ul style="list-style-type: none"> International Federation for Structure Concrete (FIB) American Institute of Steel Construction (AISC) American Concrete Institute (ACI) Council on Tall Buildings and Urban Habitat (CTBUH) Korea Construction Transport New-Technology Association Korea Industrial Technology Association

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