



2022 DAEWOO E&C SUSTAINABILITY REPORT

ABOUT THIS REPORT

Overview

DAEWOO E&C has been publishing the company's SUSTAINABILITY REPORT every year since 2012 to share details regarding its sustainability management activities and performance with stakeholders. This year's report is the eleventh one. This report discloses ESG-related performance, a major element of sustainable management, in a transparent manner, and focuses on our activities on key issues derived based on business impact and social interest.

Reporting Period and Scope

This report covers our activities and achievements from January 1, 2021 to December 31, 2021. However, it provides data for the period up to the first half of 2022 for some major activities and performances. In terms of quantitative performance, we have presented data for the past three years from 2019 to 2021 so that the trends can be identified. All business places at home and abroad are included in the report scope. Matters for which periods and scopes vary from the aforementioned range are marked with annotations.

Reporting Standards

This report complies with the Core Options of the GRI Standards, the global reporting standard, and was prepared based on the agenda related to the 10 principles of the UN Global Compact (UNGC). Financial information was prepared on the basis of consolidated financial statements in accordance with the Korean International Financial Reporting Standards (K-IFRS).

Report Credibility

This report has been verified by the Korea Management Registrar, a professional verification organization, to ensure the internal and external credibility of the report. The results of verification can be found in the Appendix.

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Since its foundation in 1973, DAEWOO E&C has been leading the construction industry in Korea powered by the best technology and quality.

We will lead the era of the 4th Industrial Revolution and realize the best value for our customers with our advanced technologies and indomitable spirit.

OVERVIEW



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Ulji Twin Tower, Daewoo E&C Headquarters

CEO Message



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

We sincerely thank you for your keen interest and warm encouragement for the company's development and growth.

The past few years have been challenging for the entire world with increased market uncertainty, prolonged COVID-19 pandemic, which has continued for years, and stronger regulations regarding social responsibility.

Nevertheless, last year in 2021, Daewoo E&C recorded the highest record ever in operating profits which was unprecedented since its foundation, dispelling market concerns. Based on the technological prowess and best quality that have led the history of construction in Korea, we have overcome numerous crises and challenges together with stakeholders and Korean citizens as a whole. It is all the more significant in that our continuous efforts came to fruition amid the COVID-19 pandemic. The Kazungula Bridge in Botswana won the grand prize for civil engineering facilities. We have supplied about 28,000 households per annum, ranking no. 1 in housing supply for three consecutive years since 2019.

In Iraq, we won five contracts worth about KRW 3 trillion in recognition of our excellence in civil engineering works, and we are about to win another mega-offshore wind power project worth about KRW 2 trillion, the biggest wind power project in Korea. However, rather than remaining content with these achievements, we will work with steadfast resolve to go further and expand our borders. Standing at a new starting point with the JUNGHEUNG Group, we are here to continue our journey of realizing social values in order to make another leap forward. To this end, Daewoo E&C has set 2022 as the first year to newly promote ESG management and established the ESG management policy of "promoting ESG management that fulfills its social and environmental responsibilities". Based on this policy, we will fulfill our responsibilities as a global leader. To carry out our goals, we make the following promises to our stakeholders.

We will consider safety first.

In order to fulfill our corporate social responsibility, we have recently reorganized our organization putting the highest priority on protecting life and the environment. We introduced the CSO system to strengthen our health and safety management efforts and concentrate our organizational capabilities on the system. We hope that these efforts will deliver our strong will to ensure safety externally, and prevent safety accidents by strengthening the role of the Control Tower for health and safety within the company.

We will promote mutual prosperity with our partners.

As a leading construction company in Korea, Daewoo E&C takes responsibility to realize sustainable growth of society. Sharing our interests with myriad suppliers, we are committed to ensuring fairness and mutual prosperity among all stakeholders. In support of this, we have been establishing practical measures for annual sustainability evaluation, identification of risks, and solidarity for suppliers' safety and finance.

We will actively lay the foundations for next-generation growth engine through change and innovation.

The 4th Industrial Revolution and Net Zero have brought about a lot of changes, and past practices can no longer deliver the solutions for the aforesaid shift. Daewoo E&C will continue to actively respond to the turbulent trends by expanding the target market and value chain, investing and participating in new businesses and technologies such as hydrogen and renewable energy technologies as well as eco-friendly plant technologies, which are tailored to the paradigm shift.

We will make continuous progress in the management system to establish fair and transparent governance.

Daewoo E&C has been working hard to practice compliance management. We have been building an ethical corporate culture ensuring that all tasks are carried out under a fair and transparent process. We have introduced a compliance system and established roles for each organization and position from the CEO to the team and worksites. We acquired the Anti-Bribery Management System certification for the first time in the construction industry. In 2021, we implemented a compliance officer system to reinforce compliance management. Daewoo E&C will remain committed to pursuing integrity and growing into a global leader in construction.

Dear Stakeholders,

We are looking forward to your continuous support and sincere affection so that Daewoo E&C can lead a sustainable future and make bold strides to pursue development as a major player in the Korean construction industry.

Thank you.

July, 2022

President & CEO of Daewoo E&C Jeong-wan Baek

J. W. BAEK

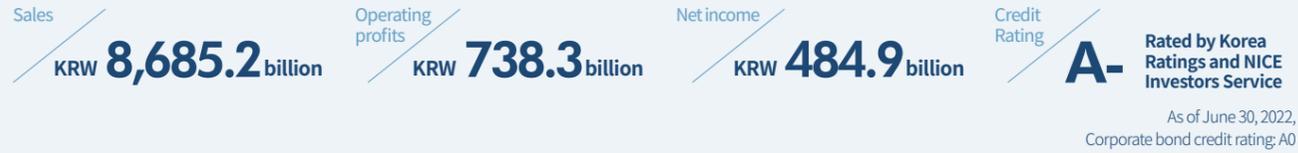
Company Overview

Daewoo E&C has traveled with the momentum of economic growth in Korea over the past half century by realizing the best value with its customers. We have contributed to the stabilization of housing in the country by supplying an overwhelming amount of housing units, and have been working hard to build infrastructure for people to live comfortably. In 2022, the unstable governance structure has been reinforced, allowing Daewoo E&C to prepare for taking a further leap forward. Daewoo E&C will spare no effort to establish our position as a company among the Global Top 20.

Overview

Company Name Daewoo Engineering & Construction Co., Ltd.	Foundation November 1, 1973	Head Office 170, Eulji-ro, Jung-gu, Seoul, 04548, Republic of Korea	CEO Baek Jeong-wan
Branches & Subsidiaries 2 domestic branches, 6 overseas branches, 4 domestic subsidiaries, 6 overseas subsidiaries	Major Shareholder Jungheung Engineering & Construction Co., Ltd. JungHeung Construction Co., Ltd.	Website www.daewooenc.com	Number of Employees 5,433

Major Financial Performance in 2021



Major Businesses



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



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



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



New Frontiers
Real estate investment & development/management, overseas investment & development, new markets and identification of new business opportunities

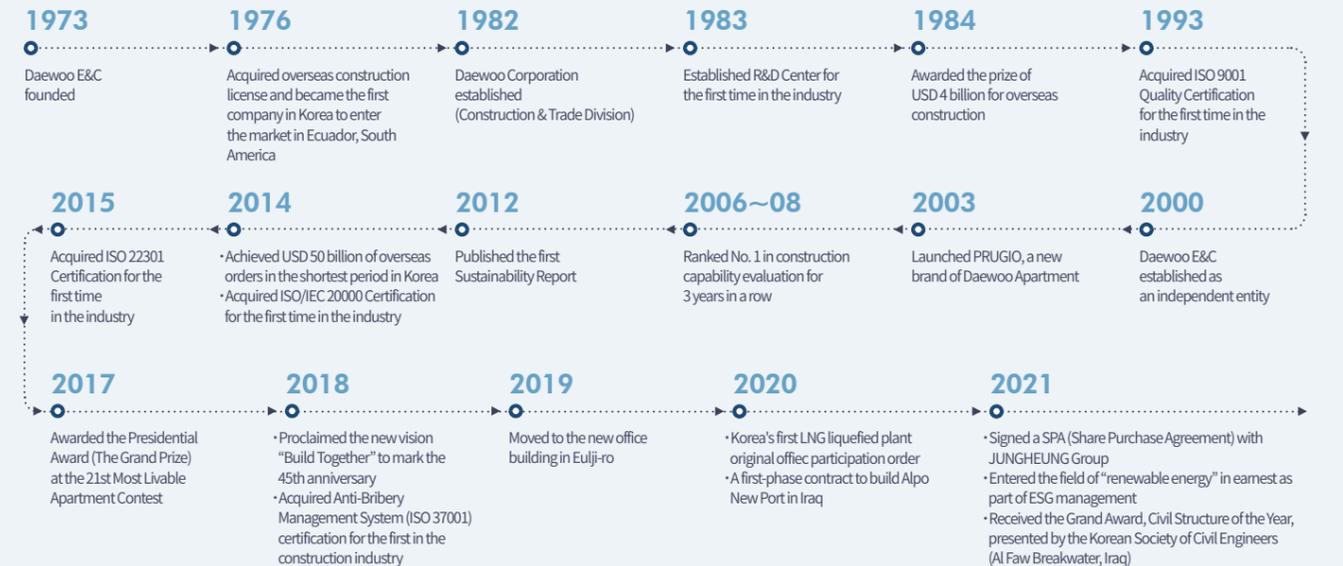
Global Network



Organization Chart



History



VISION

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

Vision statement

BUILD TOGETHER

Realizing the best value together with the customer

Core values

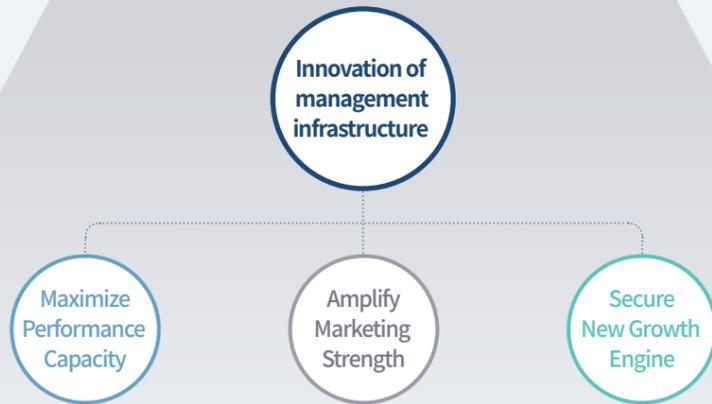


Strategic goal

GLOBAL TOP 20

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

Core strategy



Strategic tasks

Optimize risk management	Reinforce 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

2021 HIGHLIGHT

Daewoo E&C continued to advance even in 2021, when the situation became even more difficult due to the challenges created by prolonged COVID-19. We ranked No. 1 in housing supply for three consecutive years, won the Korea Civil Engineering & Construction Technology Award, bagged large-scale construction orders, and continued to grow while prioritizing quality and safety.



Laying the foundation to become a world-class construction group, M&A agreement with JUNGHEUNG Group

Daewoo E&C completed a merger and acquisition agreement with the JUNGHEUNG Group in 2022, becoming a new member of the JUNGHEUNG Group. Daewoo E&C has been able to lay a solid foundation for growth through the merger and acquisition with JUNGHEUNG Group, a specialized construction company with strong capabilities in real estate development and abundant operating cash flow.

Daewoo E&C has pioneered a new period of change, and will remain committed to laying the foundation for future growth based on synergy with the JUNGHEUNG Group.

2021 HIGHLIGHT



Won the grand award for Kazungula Bridge, Botswana Won the grand award in the civil engineering facility category at the 17th Korea Civil Engineering & Building Technology Awards

On December 14, 2021, Daewoo E&C received the grand award in the civil engineering facility category for the Kazungula Bridge, Botswana, built by the company, at the 17th Korea Civil Engineering & Building Technology Awards, the most prestigious civil engineering awards in Korea. The Kazungula Project is the largest project in southern Africa to construct i) a bridge connecting Botswana and Zambia in Africa with a length of 923m and a width of 18.5m, ii) a 687m long connecting road, and iii) a single-track railway with a length of 2,170m. Daewoo E&C received high praise for successfully completing the construction despite the harsh climate conditions and poor infrastructure. The project was known as the "Miracle of Kazungula" in South Africa and served as an opportunity to introduce Daewoo E&C to the world.



No. 1 in housing supply for three consecutive years Highest number of housing supply in the industry for 10 years

Daewoo E&C has been supplying 28,344 housing units per year despite adverse conditions such as price regulations and the uncertainties caused by the COVID-19 pandemic, ranking No. 1 in housing supply for three consecutive years since 2019. These achievements are thanks to the "strategic project site system" that selects promising project sites from about 245 cities, counties, and districts across the country based on big data accumulated over the years. Daewoo E&C plans to use the system to target the nationwide pre-sale market and supply 16,497 housing units to the metropolitan area including Seoul and 13,503 housing units to rural areas.



The world's largest fertilizer plant based on a single unit, Indorama Fertilizer II PJ in Nigeria

In July 2021, Daewoo E&C received a Provisional Acceptance Certificate (PAC) from the project owner (IEFCL). Based on single unit, the production plant for Indorama urea fertilizer at the Eleme petrochemical complex in Nigeria is the world's largest fertilizer plant with a daily capacity of 2,300 tons of ammonia and 4,000 tons of urea. Despite the COVID-19 situation, we achieved Mechanical Completion (MC) earlier than scheduled, thanks to the enthusiasm of our employees and the trust shown by the project owner, and the PAC was issued four months earlier than expected. The project owner highly appreciated Daewoo E&C's project management capacity, which helped shorten the construction period and complete the construction without any problems even in difficult circumstances. The project owner requested Daewoo E&C to participate in subsequent construction.



Daewoo E&C has four business divisions:

Civil, Housing & Building, Plants, and New Frontiers.

We are pursuing continuous development through diversification of our domestic and overseas business portfolios to create not just economic values but social and environmental values.

BUSINESS

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Civil

BUILD INFRASTRUCTURE

We take the lead in building national infrastructure at home and abroad

The civil engineering projects carried out by Daewoo E&C in 2021 contributed to the development of domestic and foreign national infrastructure such as roads, railroads, and ports, indirectly supporting production activities in other industries, and facilitating sustainable economic growth.

We also accelerated the process for signing of large-scale contracts. Internally, we are doing our best to win orders for large-scale projects such as the Yeonggwang-Nakwol Offshore Wind Power Generation Project and the GTX-B Project based on our advanced technology capabilities.

Externally, we have consolidated our position as a leading global construction company in the civil engineering industry by winning the “Civil Structure of the Year” award given by the Korean Society of Civil Engineers for projects including Qatar E-Ring and Iraq Al Faw Breakwater.



Al Faw breakwater, Iraq

2021 BUSINESS PERFORMANCE



Al Faw New Port, Iraq

A contract for a total of
5 projects,
worth KRW **2,900** billion

Yeonggwang-Nakwol Offshore Wind Power Generation Project

Order worth
KRW **1,700** billion
to be received

E-RING Road, Qatar

Total construction cost of
KRW **740** billion

Civil

Our Business Vision

Civil engineering projects support economic growth by indirectly supporting the production activities in other industries through land development projects such as roads and railroads. Civil engineering projects such as these have great effects on production, employment, and added value. The Civil Division is leading the markets at home and abroad with its cutting-edge technology. It is nurturing new renewable energy projects and new growth projects, laying the foundation for sustainable growth, and is promoting growth based on new technologies such as drones and BIM. We will overcome difficulties in the domestic construction market by winning mega-scale projects such as the Yeonggwang-Nakwol Offshore Wind Power Project and the GTX-B Project. We are working to win the 3rd contract in Iraq, and have established ourselves as a global construction company by winning large-scale construction orders in Singapore and other countries.



The immersed tunnel under construction by Daewoo E&C, Iraq

Achieving the Highest Level of Performance in the Industry

Despite the difficulties at home and abroad such as the drop in oil prices and the prolonged COVID-19 crisis, we have laid the foundations for continuous sales by achieving the largest orders in the industry (No. 1 from 2019 to 2020, No. 2 in 2021). In Iraq, we built trust with the project owner based on our technological prowess and worksite management capabilities. Thanks to this, we won five contracts worth KRW 2.9 trillion, including dredging and reclamation, and immersed tunnel in Al Faw. We are also working hard to win orders for the follow-up construction in the Al Faw Port.



Reinforcement of Capacities for Winning Orders and Implementing New Renewable Energy PJ

As of Mar. 2021, an increasing number of companies and institutions have joined RE100, an international initiative promoting the use of renewable energy. The participation rate has increased by about 473% compared to 2015. The international community is increasingly using sustainable energy. In line with the trend, Daewoo E&C has been focusing on the offshore wind power market for several years, having developed its business capabilities by participating in the Yeongwol Onshore Wind Power Generation Project. Thanks to such efforts, we are about to win an order for the Yeonggwang-Nakwol Offshore Wind Power Project worth KRW 1.7 trillion this year. We will do our best to successfully implement the project and make the offshore wind power business a new growth engine for the company.



Creation of Social Value through the Establishment of Social Overhead Capital Infrastructure

The Qatar E-RING Road project is a mega project with a total construction cost of KRW 740 billion. The project aims to extend the length of an existing 4.5km road and build a new 4.0km road located in the southern part of Doha, the capital of Qatar. Qatar E-RING Road is the hub of the main arterial roads connecting the eastern, western, northern and southern parts of Doha, and is expected to play a key role in connecting major stadiums during the 2022 Qatar World Cup.



E-Ring Road, Qatar

MASTERPIECES of Civil



1 Qatar E-RING Road, recipient of the Silver award for Civil Structure of the Year 2022 (Korean Society of Civil Engineers) extension of the existing 4.5km-long road and construction of 4.0km new road / construction cost of KRW 740 billion Preparation for Qatar World Cup (Hub of major arterial roads)

2 Kazungula Bridge, Botswana – recipient of the grand award in the 17th Korea Civil Engineering/Architecture Awards (Maeil Economic Daily) A bridge with a length of 923m and a width of 18.5m connecting Botswana and Zambia, a connecting road of 687m, and a single-track railway track measuring 2,170m. (South Africa's largest project)

3 Pyeongtaek-Osong Double Track Construction Project (Section 1) A total length of 10km, 4 bridges, earthwork for a stretch of 5.4km The bridge was constructed at least 3.3km away from the existing high-speed train line (resolving the bottleneck in the merging section on the Suseo-Pyeongtaek High-speed Line)

4 Won an order for Seoul Metro Line 9 Phase 4, Section 1 Extended total length of 1.35km, 1 station, 2 ventilation holes

5 Al Faw Breakwater, Iraq – recipient of the grand award in the 2021 Civil Structure of the Year (Korean Society of Civil Engineers) The longest breakwater in the world with an extended total length of 15.5km, the 1st phase of the world's 12th largest port development master plan

6 Opening ceremony for the Ethiopian Highway worksite Part of highway construction project from Cairo, Egypt to Cape Town, South Africa, main line section, 4 lanes of round trip, over a distance of 37km

7 Won an order for the Singapore Subway Cross Island Line CR108

8 Won an order for Yeongwol Ecowind Wind Farm Wind Power Generation Project with an estimated output of 46.2MW upon completion (4.2MW X 11 units)

9 Won an order for Al Faw New Port, Iraq Construction of the quay wall - container terminal with 5 berths Al Faw Connecting Road - extended total length of 57.9km (4 lanes of round trip, W=25.5m), 2 bridges, 3 roundabouts, 1 IC Main line of the immersion tunnel - total extended length of 1,260m - Dredging and reclamation - dredging 48 million m³, landfill 11 million m³ - Route dredging - dredging 56 million m³, L=23km, W=200m)

Housing & Building

INCREASE BRAND VALUE

We strive to enhance our brand value

Daewoo E&C's Housing & Building division ranked No. 1 in housing supply for three consecutive years up to 2021 despite difficulties such as economic and social uncertainties caused by the pandemic, real estate regulations, and intensifying competition in the industry.

In addition, we took the lead in enhancing customer value by building a realistic virtual model house based on three-dimensional BIM modeling, and by developing a smart triple-floor structure to improve the living environment and reduce noise between floors.

We will continue to enhance the brand value of Daewoo E&C through the zero-energy apartment houses designed to enhance energy efficiency, and through digital transformation that eliminates inefficiencies such as waste of resources.



Gwacheon Jugong Complex 5: Reconstruction and Maintenance Project

2021 BUSINESS PERFORMANCE



No. 1 in housing supply for **three consecutive years**

New orders worth **KRW 8,762 billion**

Developed meta-gallery based on **3D BIM** model for the first time in the industry

Reduced noise between floors with smart **triple** floor structure

Housing & Building

Our Business Vision

The Housing & Building sector is greatly affected by economic situations, demand for investment from project owners, and economic and political variables. 2022 is expected to be a difficult year as there are many variables such as rising interest rates, regime change, and fluctuations in raw material prices.

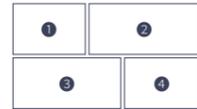
Daewoo E&C intends to establish a sustainable business plan as follows to respond to these uncertainties.

First, on the environmental front, we will build zero-energy apartment houses to enhance energy efficiency.

In addition, we will minimize inefficiencies such as waste of resources through digital transformation in various business areas.

Second, we will promote a win-win culture with stakeholders based on trust and cooperation, and do our best to establish a safety culture. We will provide customers with quality construction and help in creating a sustainable residential culture.

Daewoo E&C will strive to build a more sustainable future by establishing a foundation for practical management in 2022.



- 1 B3CC1 Shilla Hotel
- 2 Gwacheon Jugong Complex 5 Reconstruction and Maintenance Project
- 3 Suji Hyundai Remodeling Project
- 4 Gasan Ask Tower



No. 1 in Housing Supply for Three Consecutive Years

Daewoo E&C supplied a total of 28,344 housing units despite a series of real estate regulations and intensifying competition in the industry in 2021, ranking No. 1 in housing supply for three consecutive years.

Focusing on domestic private projects and urban redevelopment projects, we have demonstrated our capabilities in development projects in various fields, including offices, shopping centers, and knowledge industry centers, as well as residential facilities, which are our main products. We won new orders worth KRW 8,762 billion and recorded KRW 5,880.8 billion in sales in 2021 through stable worksite management despite the uncertainties caused by COVID-19.



The Industry's first BIM Model Meta-gallery

As a part of the recent conversations on metaverse, there has been increasing interest in the metaverse model house service. However, this model is different from the actual model house in that an avatar moves around the virtual space from a third-person perspective. Daewoo E&C has developed the Meta-gallery using the Unity Engine for game development and the 3D Building Information Modeling (BIM) model to address the problems associated with existing services and provide the same experience as if users were to visit the model house.

Meta-gallery implements a realistic virtual space and users can change positions and perspectives, open and close doors, as if they were playing a game from the first-person perspective. Users can move around and check the products offered by various sale options, and see if the products are available for display with a single click. The application of the 3D BIM model to the meta-gallery has allowed customers to easily experience realistic virtual space for the first time in the industry. This is expected to facilitate the efforts to provide high quality services to customers.



Eco-friendly Rooftop PC Construction



- 1 Daewoo E&C's residential building construction site where the "Hybrid-PC construction" is applied, combining the advantages of the traditional RC (Reinforced Concrete) method and the innovative PC (Prefabricated Concrete) method.
- 2 Rooftop structure installation being built by hybrid-PC method. Since there are no forms or supporting structures, the work site is cleaner than other worksites.

Daewoo E&C applied the 'Hybrid-PC construction', which combines the advantages of the existing RC (Reinforced Concrete) and the pre-fabricated PC (Precast Concrete) construction, to the new construction site of Gwangmyeong PRUGIO Center for the first time in Korea. The Hybrid-PC construction is innovative: it shortens the period of construction by eliminating follow-up work and ensures safety by minimizing construction work on site. The construction period is shorter than the existing RC method, while the cost of construction is lower than that of the existing PC construction. In addition, the PC materials used in this method are custom-made at the factory and later assembled at the worksite. Hence, compared to conventional methods, they come with lower carbon emissions throughout the entire life cycle, from production, distribution, and operation to disposal and recycling. They also help reduce noise and dust at the work site. All combined, this eco-friendly method is in line with the social trend of ESG management. Daewoo E&C intends to improve the working environment for construction workers, ensure safety, and reduce construction waste by extensively applying this Off-Site Construction (OSC) technology.



Improving the Living Environment: "Smart Three Layers Floor Structure"

In relation to the social issues of noise between floors, we have developed and registered a patent (No. 10-2210028) for a "smart three layers floor structure" that can improve the living environment of residents by dramatically reducing floor impact sounds. After many years of testing and research, we have obtained a performance certificate for the floor impact sound insulation structure, the smart three layers floor structure, that can reduce noise between floors and improve construct ability. Starting in 2022, this structure has been reflected in the design of the worksites for which the project approval application is being prepared. Daewoo E&C is doing its best to ensure that residents of PRUGIO live a comfortable life while being considerate of their neighbors.



MASTERPIECE of Housing & Building



- 1** Gwacheon PRUGIO Summit
Best Apartments to Live in 2021
Received the Best Apartment
Award from the Ministry of
Land, Infrastructure and
Transport
- 2** Chuncheon Central Tower
(Own project)
7 stories below the ground,
49 above the ground,
6 buildings
1175 apartments & stores
- 3** Dragon City Hotel,
Yongsan, Seoul
The largest 6-star hotel in
South Korea with
1,700 rooms 4 famous
brand hotels are operating
- 4** Eulji Twin Tower
8 stories below the ground,
20 above the ground,
business facilities and
cultural gathering facilities
- 5** Wirye Songpa Prugio
(Own business)
Selected for the first time
as an Excellent Design
Apartment House in Seoul



- 6** Samsung Lions Park
(Baseball Stadium), Daegu
24,300 seats in total
29,000 persons to be admitted
Development baseball field with
octagonal structure
- 7** Scott Tower, Singapore
2016 Overseas
Construction Award
Won the architectural award
- 8** Keimyung University's
Dongsan Medical Center
Newly constructed hospital in Korea
with 1,041 hospital beds
The first eco-friendly hospital building
Certified as a green building from LEED,
selected as Excellent Building in 2019
- 9** MARTRADE Convention
Center, Malaysia
Malaysia's largest
convention center
with a total floor area
of 145,246㎡

Plants

EXPAND ECO BUSINESS AREA

We will expand our business areas with eco-friendly energy

Plant projects have been delayed due to the uncertainties caused by the prolonged COVID-19. Despite such difficulties, Daewoo E&C's plant business proved its competitiveness in winning orders for the Yeosu Huchems 6NA/2MNB Construction Project and the new research reactor construction for export.

In addition, we have significantly strengthened our safety activities to achieve zero accidents at major projects, demonstrating our unique project management capabilities.

Based on our differentiated competitiveness, we will further expand our market dominance in core business areas such as petrochemicals, nuclear power, and power generation. In addition, we will make strategic changes in our business structure in line with global trends such as the EU Green Taxonomy and global carbon neutrality policies.



S-OIL RUC, Ulsan

2021 BUSINESS PERFORMANCE



Sales of

KRW **867** billion

Development and promotion of a hydrogen energy complex business model

Expansion of the value chain

through active promotion of eco-friendly business

Achieved zero accidents in major overseas projects

Approx. **84** million hours

Plants

Our Business Vision

Our Plant Division carries out projects in the MENA region, including Nigeria, which is a key market in the petrochemical sector. In particular, we are expanding our business area through a number of LNG projects including NLNG T7, the first LNG EPC project in Korea. In the nuclear power sector, Daewoo E&C's competitiveness in commercial nuclear power plants and research reactors is gaining market attention as nuclear power is included in the EU's Green Taxonomy. Daewoo E&C has unrivaled technological competitiveness in the nuclear power market: it is the first Korean construction company that acquired qualifications for operational nuclear power plant design technology. In particular, as a member of "Team Korea" that is being jointly promoted with a Korean public enterprise, we are establishing ourselves as one of Korea's leading construction companies with the goal of exporting nuclear power plants to Eastern Europe and the Middle East. In the power generation sector, we are strengthening our market dominance through various ways. We have won domestic public EP projects as well as EPC projects in Southeast Asian countries such as Vietnam and Indonesia, as well as in Middle Eastern countries such as Libya that requires post-war reconstruction. We also made equity investment in an Independent Power Project (IPP) and are engaged in plant operation. In line with the global carbon-neutral policy, we are promoting various new renewable energy projects such as offshore wind power generation, hydrogen fuel cell power generation, and Waste to Energy.



1 Al-Zour Refinery PJ, Kuwait

Overcoming Economic Uncertainties Caused by the Prolonged Pandemic

Uncertainties in the global economy have continued due to the prolonged COVID-19 pandemic. As a result, major oil producing countries and major oil companies, who are major customers of the plant industry, have withdrawn investments and stalled projects, causing delays in most new projects in the process of bidding. Nevertheless, by the first half of 2022, we won projects including design service for the 2021 2nd Operational Nuclear Power Plant (machine), S-OIL PO Reactor installation work, dismantling work and process design service for Wolsong Unit 1, construction of the process facility for 3rd nuclear fuel plant, and extension of existing process for Yeosu Huchems. In particular, we once again proved our competitiveness in the nuclear field by winning a construction project for advanced research reactor for export. We are expanding friendly relationships with clients and partners at home and abroad in order to win additional orders for LNG liquefaction facilities and LNG regasification & storage. In addition, we have laid the foundations for new business expansion by signing business agreements with leading companies in France, the US, Germany, and Canada for the dismantling of nuclear power plants.



Development of Carbon-neutral Technology and Strengthening of Investment

- 1 Hydrogen Energy Complex Business Model
- 2 The MOU signing ceremony for Andong green business

Daewoo E&C has been working on hydrogen/CCUS and holds a number of patents. We are striving to secure our own technology and develop business models to achieve carbon neutrality and advance into the hydrogen economy. In May, 2022, Daewoo E&C signed an MOU with Andong City, MDM Asset Management, and KT for investment in the "Hydrogen Fuel Cell Power Generation + Smart Farm" business. In doing so, we are expanding our business network in the energy sector, establishing cooperative relationships and promoting market entry. Daewoo E&C will continue to expand its value chain by developing and investing in the new renewable and clean energy business including hydrogen energy.



Achieved Zero Accidents in Major Overseas Projects

Daewoo E&C puts respect for human life as a top priority and strives to enhance safety. In order to provide adequate treatment and compensation for injuries and deaths occurring to third party nationals, who are foreign workers in the country where a project is being implemented, our company makes it mandatory to procure insurance for injury for those third country nationals. In addition, we are implementing a CLEAR program to promote on-site safety culture, and we are closely identifying and improving safety hazards through regular monitoring. We achieved Zero Accident at domestic worksites and Zero Lost Time Injury Rate (LTIR) at overseas worksites, proving our project management capabilities. We won the Gold Award at ASSP GCC HSE Excellence Award 2021 for Al-Zour Refinery PJ in Kuwait. In addition, we have obtained the 2021 KOSHA 18001/ISO45001 Health And Safety Management System Certification. As a result of these efforts, we achieved Zero Accidents for a work duration of about 84 million hours in major overseas projects in 2021.

Records of Zero Accidents

1. Duqm Refinery, Oman
58,872,578 hours
2018.06.03~2021.12.31
2. Gbaran Infill, Nigeria
2,290,950 hours
2019.04.09~2021.12.31
3. Indorama Fertilizer II, Nigeria
19,242,554 hours
2018.05.03~2021.12.31
4. Tangguh Expansion Ph.2, Indonesia
3,107,230 hours
2019.12.12~2021.12.31

MASTERPIECE of Plants



- 1** / Inorama Fertilizer II Project, Nigeria
 Urea fertilizer plant facility with daily production of 2,300 tons of ammonia and 4,000 tons of urea
- 2** / LNG Area 1 Project, Mozambique
 2 units of LNG Train with annual production capacity of 6.5 million tons and auxiliary facilities
- 3** / Shin-Wolsong nuclear power plant Main equipment for units 1 and 2
 1000MW pressurized water reactor x 2 units
- 4** / Oman DUQM Refinery PJ
 Construction of a refinery with a daily production capacity of 230,000 barrels



- 5** / Nigeria LNG (1-3, 5-7 units)
 New Train 7 (LNG liquefaction plant with an annual capacity of 8 million tons and auxiliary facilities) is under construction
- 6** / Ulsan North Port Terminal PJ (LNG, OIL PKG)
 Liquefied gas/petroleum product terminal construction including LNG tank 2 units of 215,000kl, 12 units of CPP Tanks (A total of 270,000 kl), and auxiliary facilities
- 7** / Phases 1 and 2 of the radioactive waste disposal facility construction
 Phases 1 and 2 construction of low and medium radioactive waste disposal site with a scale of 225,000 drums
- 8** / Namjeju Combined Cycle Power Plant
 Purchase of main equipment and auxiliary equipment for a 173MW combined cycle power plant

New Frontiers

PREPARE FOR CHANGE

We are preparing systematically for a paradigm shift in the construction market

Daewoo E&C is working to perform a key function for investment development including frontier businesses and thereby secure new growth engines.

For the “Star Lake City” project, Daewoo E&C’s mega new city development project in Vietnam, the sites have been divided into villa, apartment, complex, commercial, and school sites, and 32 blocks out of a total of 54 blocks have been developed.

Daewoo E&C’s New Frontiers division will continue to respond actively to paradigm shifts in the construction market by innovating its main business and expanding its business spectrum.



Star Lake City, Vietnam

2021 BUSINESS PERFORMANCE



A super-large new city development project, “Star Lake City”

Completed development for a total of **116.9** ha
(Remaining site (68.4ha) is under development)

Accumulated investment in new businesses

Total investment of **KRW 285.7** billion

Investment in the eco-friendly and renewable energy sectors

A total of **KRW 44.2** billion for 4PJs

New Frontiers

Our Business Vision

Daewoo E&C placed the New Frontiers Business Division under the Strategic Planning Division to establish a prompt and efficient decision-making system for the New Frontiers Business Division. We are pursuing new businesses in line with the paradigm shift in the industry by expanding businesses at home and abroad, and by building a new business portfolio to create high added value. We are responding to the sea change in the construction market by expanding the value chain and by creating future core businesses. For the domestic real estate development sector, we are engaged in implementation and investment management, and participated in projects for the Yongin Logistics Center (Value-Added), Gimcheon Apartment Building, and apartment development in major areas in Seoul such as Banpo, Gaepo, and Cheongnyang-ri in 2021. In addition, through the comprehensive succession project for rental housing in the regions subject to redevelopment in the metropolitan area (Suwon, Seongnam, Gwangmyeong), the method of project participation, scope, and scale were expanded. We are working with "Together Investment Management", an asset management company, and have established a financial leverage model by forming a "Real Estate Development Blind Fund" with institutional investors, thereby expanding our business. For the Vietnam THT development project, a representative overseas development project carried out by Daewoo E&C, we are establishing a strategy to develop the remaining project site. In addition, we are developing overseas infrastructure to develop new towns in Vietnam and secure long-term revenue sources based on our urban development capabilities and networks accumulated through the Vietnam THT Development Project. We are also promoting entry into new overseas markets. For investment in new initiatives for future core businesses, we aim to discover new business models and expand new portfolios based on our existing Build Together Start-up (BTS) investment capabilities and networks. We are promoting entry into the Vietnamese logistics business, strengthening ESG capabilities, expanding investment in new renewable energy to identify new business opportunities, and promoting M&A with promising companies to respond to the rapidly changing market environment.



- 1 Star Lake City, Hanoi, Vietnam
- 2 Offshore Wind Power Generation, Gureopdo
- 3 THT H1HH1 Complex Development Project, Vietnam

Sales of

KRW 297.5 billion

*This figure is based on internal standards and is different from the economic performance data in ESG data.

Real Estate Development Project in Vietnam, "Star Lake City"



Daewoo E&C is actively promoting overseas real estate development projects, mainly in Vietnam. The "Star Lake City" project in Vietnam is a mega new city development project carried out by Daewoo E&C. It is a project to develop a new town with a total area of 186.6ha located 5km northwest of the City Hall in Hanoi. The development capabilities and know-how accumulated through the "Star Lake City" project will serve as a great foundation for new projects. Daewoo E&C is working on a Korean-style new town development project near Hanoi and Ho Chi Minh City. In addition to urban development, we are expanding our business area by promoting various new businesses such as residential and commercial development and construction of industrial complexes. With Vietnam as our base, we intend to advance into the global market, including ASEAN countries and developed markets. Profitability is expected to improve significantly with the diversification of the business portfolio, which has been focused so far on domestic businesses.

Implementation of New Development Projects and Expansion of Entry Areas for Asset Management

Daewoo E&C is pioneering new areas in the real estate development business to expand the value chain in the construction industry according to the paradigm shift in the industry. We have been identifying low-risk and high-value implementation projects as part of efforts in this direction. We implemented residential development in the downtown area in 2020, and implemented "Gimcheon Bugok-dong Apartment Housing Development Project" and "Yongin Baekam Logistics Center Value-Added Project" in 2021. As such, we are establishing ourselves in the role of an "implementer as a contractor" by diversifying product groups and investment types. In the area of asset management, we generally succeeded rental houses in redevelopment areas such as "Suwon Paldal 6 District", "Seongnam Sanseong District", and "Gwangmyeong 15R&14R District". In doing so, we secured private rental housing in excellent locations, addressing shortages of rental space in the metropolitan area, and laid the foundation for stable rental income. "Together Investment Management", an asset management company established by Daewoo E&C, is all set to obtain "Fund Management Qualification" and will continue to work with Daewoo E&C to promote more diverse development projects. In addition, we recently created a "Real Estate Development Blind Fund" worth KRW 60 billion to expand the business area and create a leverage effect. We plan to improve profitability by inviting Daewoo E&C to participate in additional implementation and construction in projects supported through the fund.

Securing 1 billion-dollar Priority Business Rights for Meghna Bridge, Bangladesh

Daewoo E&C focuses on infrastructure investment projects in developing countries. Based on our experiences in investing in a public-private joint project for Patrind Dam PPP Project (Pakistan) and in implementing EPC for Bihar Bridge Project (India), we promoted the Meghna Bridge project linking Dhaka, the capital of Bangladesh, to neighboring areas. We registered this as an official G2G project carried out through a joint consultative body (PPP Platform) between the two governments, secured priority business rights, and completed a feasibility study in March 2022. This project is expected to address traffic congestion and promote economic growth in Bangladesh.

Offshore Wind Power Generation Project in Gureopdo

In December 2021, Daewoo E&C signed a joint business agreement with C&I Leisure Industry and SK D&D for an offshore wind power generation project in Gureopdo to participate in new renewable energy business such as solar power and wind power. The Gureopdo Offshore Wind Power Generation Project is to build a 240MW wind power farm in the sea near Gureopdo Island, Ongjin-gun, Incheon. The total project cost is estimated to be about KRW 1.3 trillion. Daewoo E&C, C&I Leisure Industry, and SK D&D are jointly promoting various business tasks such as investment, financing, and licensing and permission for the project. SPC will construct offshore the wind power generation facilities and grid-connected facilities and operate them for 20 years. Construction is scheduled to start in 2025 and commercial operation is scheduled to begin in 2028.

Full-scale Entry into the Energy Market with the First Profit from Carbon Credits

"Pakistan Patrind Hydroelectric Power Plant" is a public-private project jointly promoted by Daewoo E&C and K-Water. Daewoo E&C invested a 20% stake in the construction and completed the construction in November 2017. The power plant currently produces 630 GWh of electricity per year. Based on this project, in 2021 Daewoo E&C made profits from the sale of carbon credits for the first time since its foundation. This served as an opportunity for Daewoo E&C to enter the eco-friendly energy market in earnest. The "Patrind Hydroelectric Power Plant" project earned a total of KRW 12.6 billion by selling carbon credits issued for two years (for 2018 and 2019) after its completion in 2021. Daewoo E&C earned KRW 2.52 billion won in profits applying 20% of its stake. Considering the amount of power generated by the Patrind Hydroelectric Power Plant, it is expected that about 270,000 tons of carbon will be reduced annually. This is expected to greatly contribute to the strengthening of Daewoo E&C's ESG management.

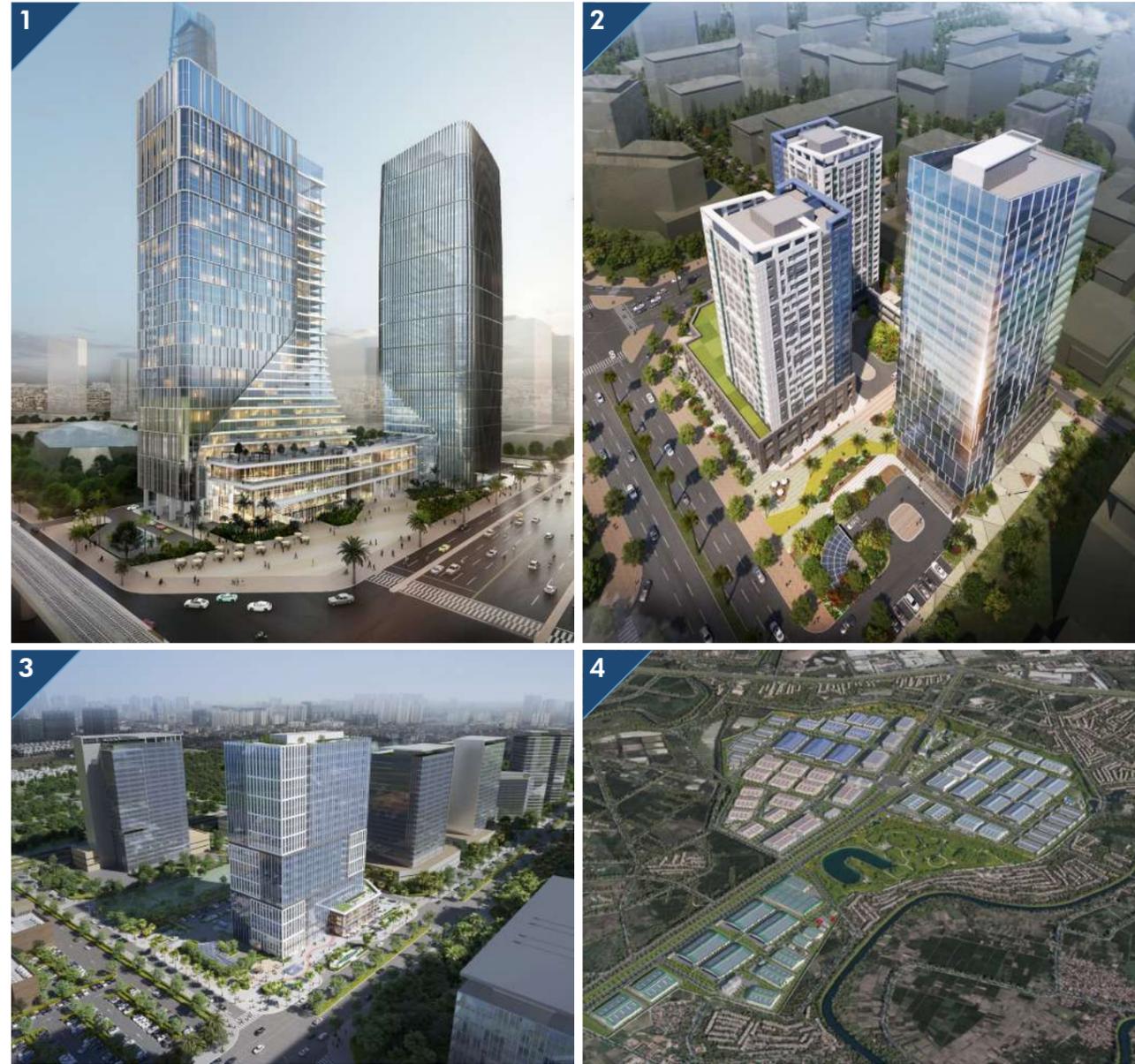
Formation of the Corporation Partnership Fund (COPA Fund)

The COPA Fund is a fund in which pension funds, etc. participate as financial investors to support overseas mergers and acquisitions of domestic companies. Daewoo E&C and IMM Investment plan to raise \$400 million in investment funds (\$200 million each) to jointly invest in promising international companies in the sectors of logistics and ESG (Environmental, Social, Governance) infrastructure. Daewoo E&C plans to expand its business by building capabilities for site development, construction, and operation through its logistics business in Vietnam.

Advanced Air Mobility (AAM) Business

Daewoo E&C is continuously expanding smart construction capabilities using drones to its worksites. We invested in AstroX, a drone manufacturing and software developer, through our in-house Build Together Start-up (BTS) investment program in 2020. Kencoa Aerospace joined as an additional investor in April 2022. Kencoa Aerospace, a supplier and manufacturer of aerospace solutions, signed a partnership with leading companies related to Urban Air Mobility (UAM) in 2021. As co-investors and business partners of AstroX, Daewoo E&C and Kencoa Aerospace have entered into a strategic alliance to advance into the Advanced Air Mobility (AAM) business, an expansion concept of UAM, to promote the AAM business and to lead the development of the AAM industry.

MASTERPIECE of New Frontiers



- 1** Overseas Equity Investment (Office/Hotel) THT B3CC1 Joint Development Project in Vietnam
- 2** Overseas Equity Investment (Office) THT H1HH1 Joint Development Project in Vietnam
- 3** Overseas Real Estate Development (Office) THT B1CC4 Pkg. in Vietnam Deal (site sale + construction)
- 4** Overseas Equity Investment (Industrial Complex) NBX Industrial Complex Development Project in Vietnam



- 5** Domestic Development Project in which Daewoo E&C Participated in Implementation Banpo Urban Living Homes
- 6** Domestic Development Project in which Daewoo E&C Participated in Implementation Yongin Baekam Logistics Center
- 7** Domestic Development Project in which Daewoo E&C Participated in Implementation Gimcheon Bugok-dong Apartment Houses
- 8** New Frontier Business at Home Advanced Air Mobility (AAM) Business

DAEWOO E&C achieved the feat of recording the largest operating profits in 2021 despite the unfavorable conditions caused by the prolonged COVID-19.

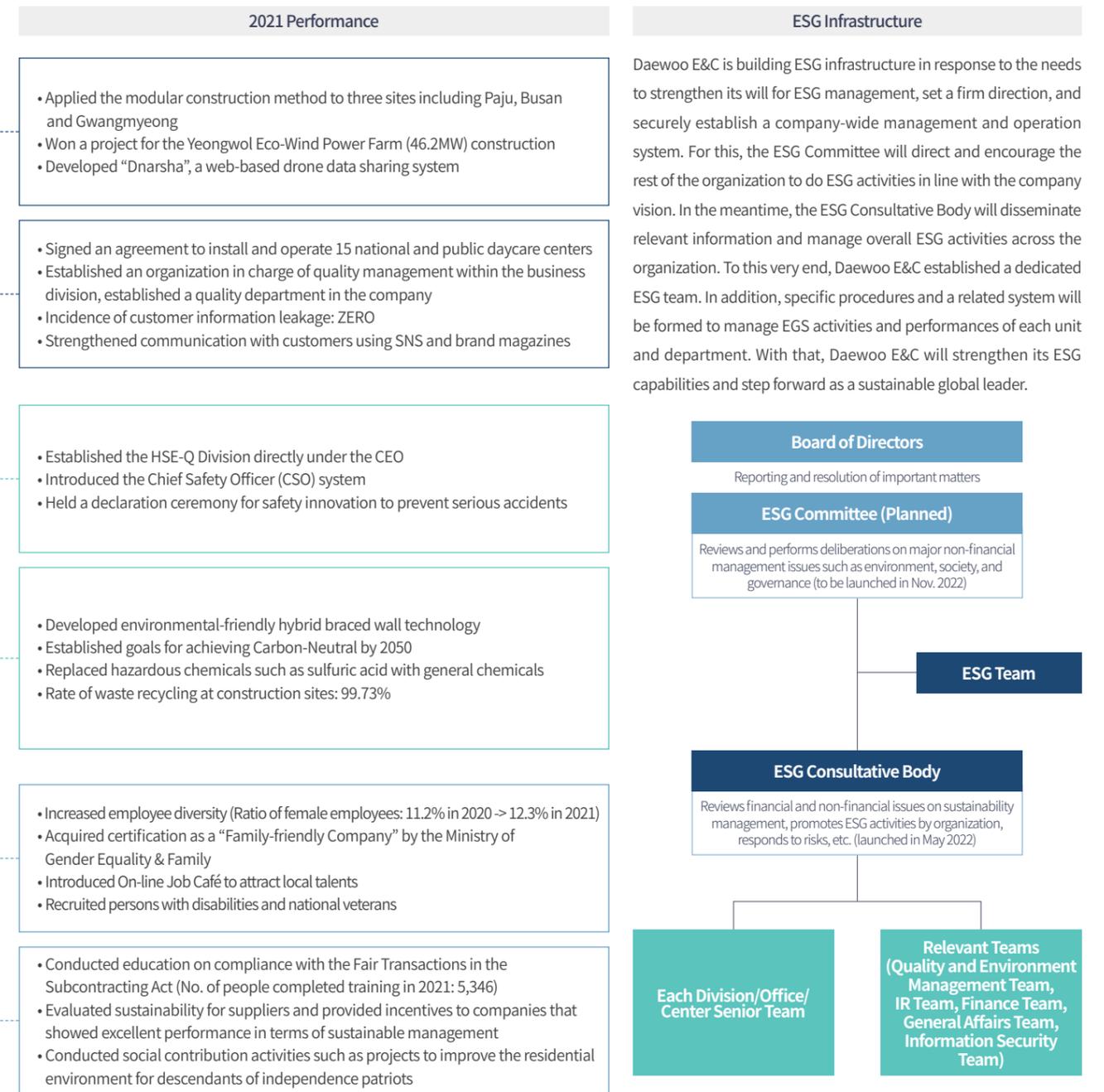
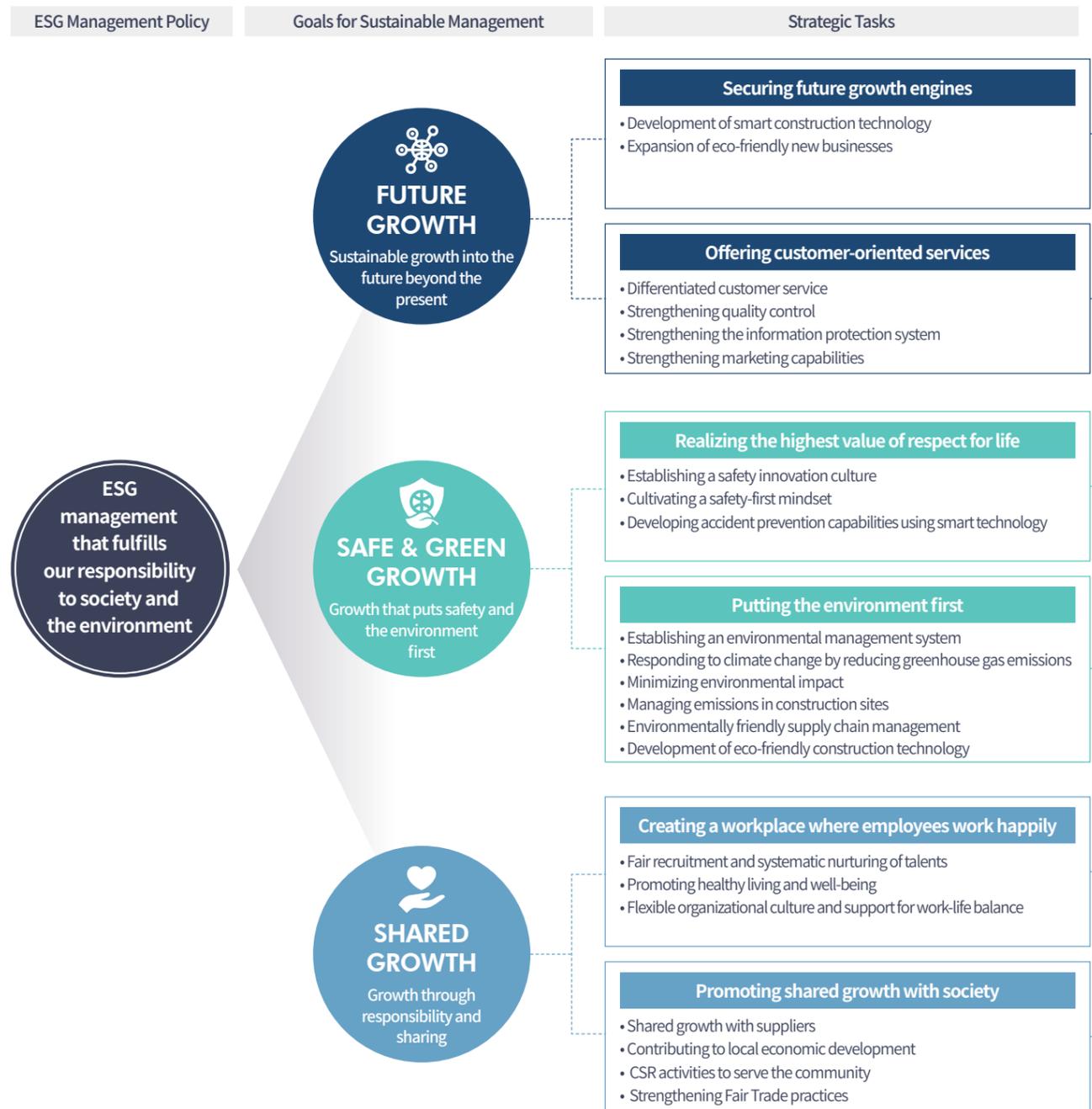
DAEWOO E&C will achieve bold and influential social values in terms of not only economic performance but the sustainable growth of society.

MANAGEMENT SUSTAINABILITY

Strategy and Implementation System	42
Stakeholder Engagement and Materiality Assessment	44

Strategy and Implementation System

Daewoo E&C implemented a company-wide sustainability management system to pursue corporate sustainability. We established three sustainability management goals (Future Growth, Safe & Green Growth, and Shared Growth), and six strategic tasks (securing future growth engines, providing customer-oriented services, prioritizing and realizing the value of respect for life, putting the environment first, creating a workplace where employees work happily, and promoting shared growth with society). We have since disclosed data on our performance in these areas every year and continue to manage tasks systematically. Other than such endeavors, Daewoo E&C has set 2022 as the year to make yet another take-off to a global ESG leader, having newly established a dedicated department(ESG team) and working on formation of an ESG committee.



Stakeholder Engagement and Materiality Assessment

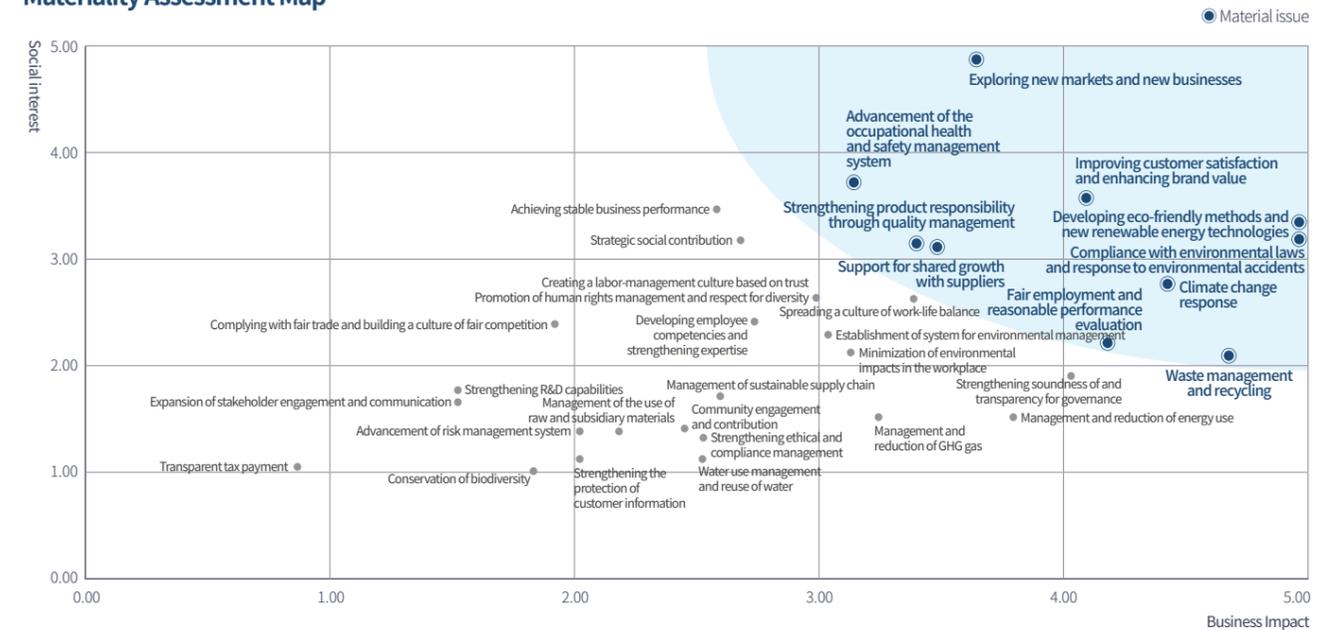
Daewoo E&C gathers various opinions from external and internal stakeholders such as shareholders, customers, employees, and local communities, and reflects them in the company's sustainability management. To this end, Daewoo E&C identifies various stakeholders that have direct or indirect economic, environmental and social influences on its business activities, services and relationships. In addition, Daewoo E&C is distributing some of the economic value generated by its business activities to stakeholders in order to enhance stakeholder value. Daewoo E&C will actively practice the ESG management by communicating with its stakeholders in a transparent way.

Stakeholder Communication Channels

Stakeholder	Definition	Communication channel	Major interests
Employees	Human resources that make up Daewoo E&C; a partner for sustainable management	Baronet (Internal intranet), labor union, employee management council, compliance system, ethics help-line	Improving employee satisfaction and attracting talent through capacity building and enhancement of employees' quality of life
Government and relevant organizations	Institutional and social foundation; a driving force that lays the foundation for corporate growth	Government committee activities, participation in policy research, joint cooperation programs, etc.	Fulfilling corporate obligations and contributing to the country's sustainable development through job creation, tax payment, and legal compliance
Investors	Investors of Daewoo E&C providing economic capital	Shareholders' meeting, annual report, sustainability report, analyst meeting, overseas communications, IR conferences, NonDeal Roadshow (NDR)	Providing accurate and prompt information to shareholders and investors through transparent management
Customers	A valuable part of the family as well as the foundation for corporate existence that creates the future together with Daewoo E&C	PRUGIO Customer Center, PRUGIO website, model houses, SNS, etc.	Realization of customer satisfaction by providing the best residential environment and construction products and services
Society/Associations/Institutions	Organizations with expertise in the construction market and sustainable management; subject to continuous cooperation	Conferences, seminars, associations, etc.	Establish a cooperative system for R&D innovation through industry-university cooperation and member activities of various associations and institutions
Community	Local communities and members affected by Daewoo E&C's business	Social volunteer group, cyber audit office, monthly regular volunteer activities, white papers on social contribution activity, etc.	Contributing to the development of the local community through active social contribution activities
Suppliers	Partners who help the company by providing energy and resources	Collaboration system (E-COS), website, supplier meeting, Workshops for win-win growth, etc.	Support and management to strengthen coexistence, and establishment of a transparent and fair cooperative relationship

Daewoo E&C conducted a materiality test to select key issues that should be managed in order to promote sustainable management. An issue pool for 2022 was derived by analyzing issues related to sustainability management over the past 10 years, and by reviewing the issues to be prioritized through media research, benchmarking, and stakeholder surveys. The key issues identified through the materiality test are reflected in this report. We intend to report our activities and performance in these areas to stakeholders in a transparent manner.

Materiality Assessment Map



List of Key Issues

NO	Key Issue	GRI Standards	Relevant Reporting Topic	Page
1	Exploring new markets and new businesses	-	New growth management	48~53
2	Developing eco-friendly methods and new renewable energy technologies	302-4 ~ 302-5, 305-5 ~ 305-7	Environmental management	54~65
3	Compliance with environmental laws and response to environmental accidents	307-1	Environmental management	54~65
4	Improving customer satisfaction and enhancing brand value	417-1	Customer-oriented management	70~75
5	Climate change response	305-1 ~ 305-7	Environmental management	54~65
6	Advancement of the occupational health and safety management system	403-1 ~ 403-10	Safety management	66~69
7	Support for shared growth with suppliers	414-1, 414-2	Win-win management	84~87
8	Strengthening product responsibility through quality management	416-1, 417-1	Customer-oriented management	70~75
9	Waste management and recycling	306-1 ~ 306-5	Environmental management	54~65
10	Fair employment and reasonable performance evaluation	401-1, 405-2	Talent Management	76~83

DAEWOO E&C is making various efforts to strengthen its competitiveness: we are pioneering new markets, taking the lead in protecting the environment, and strengthening our health and safety system to ensure the safety of construction work sites.

DAEWOO E&C will nurture talents that are in tune with the company's core values, always think from the customer's point of view, and strive to pursue coexistence with the local community.

MATERIAL ISSUES

New Growth Management	48
Environmental Management	54
Safety Management	66
Customer-oriented Management	70
Talent Management	76
Win-win Management	84

DIVERSIFICATION & SYSTEMATIZATION

Drone Control System

DAEWOO E&C's New Growth Management in 2021 can be summarized with two keywords: 'Diversification' and 'Systematization'.

Despite various risks, such as intensifying uncertainty in the global economy and real estate market due to the prolonged COVID-19, DAEWOO E&C was able to strengthen its smart R&D capabilities and diversify its business portfolio by investing in new businesses with sufficient future growth potential.

We will continue to take the lead in creating future growth engines and realizing sustainable growth through the introduction of advanced systems and construction technologies, and promote change and innovation based on ESG management.

2021 Business Performance

KRW **8,685.2** billion in sales

DIVERSIFICATION

- Introduction of the BTS (Build Together Start-up) program: investment in SG Life Safety, Astro X, HUMAX EV
- Conversion to a portfolio centered on eco-friendly businesses based on ESG management

SYSTEMATIZATION

- Establishment of a management system based on DSC (Daewoo Smart Construction)
- Promotion of digital transformation to strengthen competitiveness in bidding
- Continuous improvement of the CRM system for effective marketing
- Advanced and expanded application of modular building technologies

Aligning with UN SDGs



Improving Market Competitiveness

In 2021, DAEWOO E&C achieved the highest operating profits since its foundation, despite difficulties such as the delay in the start of construction at some worksites in Korea and abroad due to price regulation and COVID-19. This was attributable to the stabilization of profits from domestic and overseas worksites such as Nigeria and Iraq based on the solid growth of the housing business. DAEWOO E&C will respond proactively to changes in the rapidly changing environment of the construction industry at home and abroad, strengthen its core competencies to raise its competitiveness in the new market environment, and dedicate all its capabilities to expanding new growth engines in preparation for the post-corona era.

Management Performance Analysis

In 2021, DAEWOO E&C achieved cumulative performance of KRW 8685.2 billion in sales, KRW 738.3 billion in operating profits, and KRW 484.9 billion in net income. Operating profits surged by 32.2% from KRW 558.3 billion a year earlier. Net income also increased by 71.6% compared to 2020 to KRW 484.9 billion, showing remarkable growth. In 2022, DAEWOO E&C expects to achieve KRW 10 trillion won in sales and 12.2 trillion won in new orders. It is analyzed that the steady increase in pre-sale and move-in volumes over the past several years will drive sales in a stable manner. In the overseas market, sales at worksites in Iraq and Nigeria are expected to increase. With the rise in oil and LNG prices, the order market conditions are expected to improve centered on base countries and the strategic construction type with a competitive edge. We expect to achieve this year's goals without difficulty.

Summary of business performance and financial status for the past 3 years (Consolidated)

(Unit: KRW 1 million)

Category	2019	2020	2021
Total assets	9,697,697	9,305,916	10,457,977
Sales	8,651,852	8,136,706	8,685,208
Operating profit	364,061	558,258	738,313
Net income	201,240	282,604	484,927

Strengthening Global Competitiveness

The need to diversify the market is increasing due to the uncertainties in the global business environment caused by geopolitical risks and pandemics. DAEWOO E&C is committed to diversifying its preoccupied markets centered on Africa, the Middle East and Asia, and laying a foundation for advancing into new markets. In particular, we are working hard to expand into new markets, from our preoccupied markets such as Nigeria, Iraq, and Vietnam.

In order to strengthen bidding competitiveness in preoccupied and new markets, we aim to conduct efficient marketing activities by DX (Digital Transformation) of the accumulated information. To this end, the CRM (Customer Relationship Management) system was introduced in 2019 and has been improved continuously. And utilizing the system, we have gathered and analyzed overall information on base and new markets as well as customers and partners in order to secure a foothold for new orders of profitable projects.

To strength domestic market capabilities, we continually analyze the domestic business environment and establish strategies. We have also set up the strategic partnerships by construction type and region in the public market to raise our competitiveness. In addition, in order to secure new growth engines, we are seeking continuous expansion by engaging in development-type projects centered on public-private joint partnerships along with new clean energy-based projects such as hydrogen, wind power, and solar power.

With this, DAEWOO E&C is responding proactively to climate change with its new and renewable energy projects, and establishing itself as a key global player with its own competitive edge.

**Responding to
Uncertainties of
the Future**

Management of Financial Risk

DAEWOO E&C is making every effort to address financial volatility and manage liquidity by strengthening its relationships with domestic and foreign financial institutions. We are currently in discussions regarding refinancing with existing lenders, and are strengthening immunity against unexpected market shocks by utilizing various sources of funding, such as expanding credit lines through new sources of procurement.

In addition, we plan to increase the proportion of long-term borrowings, such as issuance of corporate bonds, in order to strengthen the stability of the borrowing structure.

Response to Real Estate Uncertainties

Uncertainties in the domestic real estate market are expected to increase further in 2022 due to economic situations such as inflation and the re-spread of COVID-19, and political situations such as the impending presidential and local elections. Accordingly, DAEWOO E&C will strengthen market monitoring by utilizing the real estate market research platform (DW-RIS) that it has developed to respond agilely to short-term changes in the construction market and strengthen its internal capabilities to respond to environmental changes. In addition, we will continue to make the following efforts to comply with the principles of ESG management, which have been gaining importance both at home and abroad.

First, we will actively switch to a portfolio focusing on eco-friendly businesses in line with the trend of eco-friendly green energy and carbon neutrality. We will secure new growth engines by promoting eco-friendly Zero Energy apartment houses and accelerating digital transformation. At the same time, we will develop new business models by strengthening smart construction technologies such as drones, safety control, and BIM.

Second, we will build a culture that puts safety first, raising safety awareness among all employees. We will actively develop the necessary manpower and budget to improve or innovate safety issues, and will strive for our goal of achieving zero serious accidents by practical measures such as the establishment of a dedicated organization and expansion of workers' right to stop work.

Third, we will innovate our management infrastructure to build a stable organization and strengthen synergies between organizations. We will comply with relevant regulations and improve various systems and processes developed through our experiences, and lay the foundation for sustainable growth by utilizing the vast amount of data accumulated over the years.

In 2021, DAEWOO E&C achieved sales of KRW 5,902 billion in the Housing and Building Business Division, KRW 1,424 billion in the Civil Project Division, and KRW 867 billion in the Plant Business Division.

In 2021, we supplied 28,344 housing units, ranking No. 1 in domestic housing supply for three consecutive years (2019-2021). In particular, the company recorded the highest performance last year since its foundation in urban redevelopment, winning orders worth KRW 3,899.2 billion, covering a total of 15 projects including the Gwacheon Jugong Complex 5 and Heukseok District 11. Overseas, high-yielding projects such as Nigeria LNG Train7, in which we are participating as a prime contractor, and the Al Faw worksite in Iraq, which is being carried out through private contracts, are generating sales.

Orders Won over the Past 3 Years

(Unit: KRW 1 million)

Category	2019	2020	2021
Domestic	8,864,712	8,206,843	9,955,599
Overseas	1,774,426	5,705,798	1,127,432

* Data changed due to changes in aggregation criteria

Development of Capacities for Smart R&D

With the advent of the 4th Industrial Revolution era, new cutting-edge technologies and existing technologies can be combined to reduce the rate of accidents, increase work efficiency, and enhance energy efficiency. DAEWOO E&C applies its smart R&D capabilities to various businesses areas by continuing its investment and efforts to develop capacities.

**Promotion of DSC
(Daewoo Smart
Construction)**

Digital technologies can be applied to the construction industry to increase productivity and strengthen competitiveness in the construction market. For smart construction, we have selected seven major technology fields (BIM, AWP, Modular, Smart Home, Drone, Big Data, and Safety Control), and have established step-by-step strategies to apply them together.

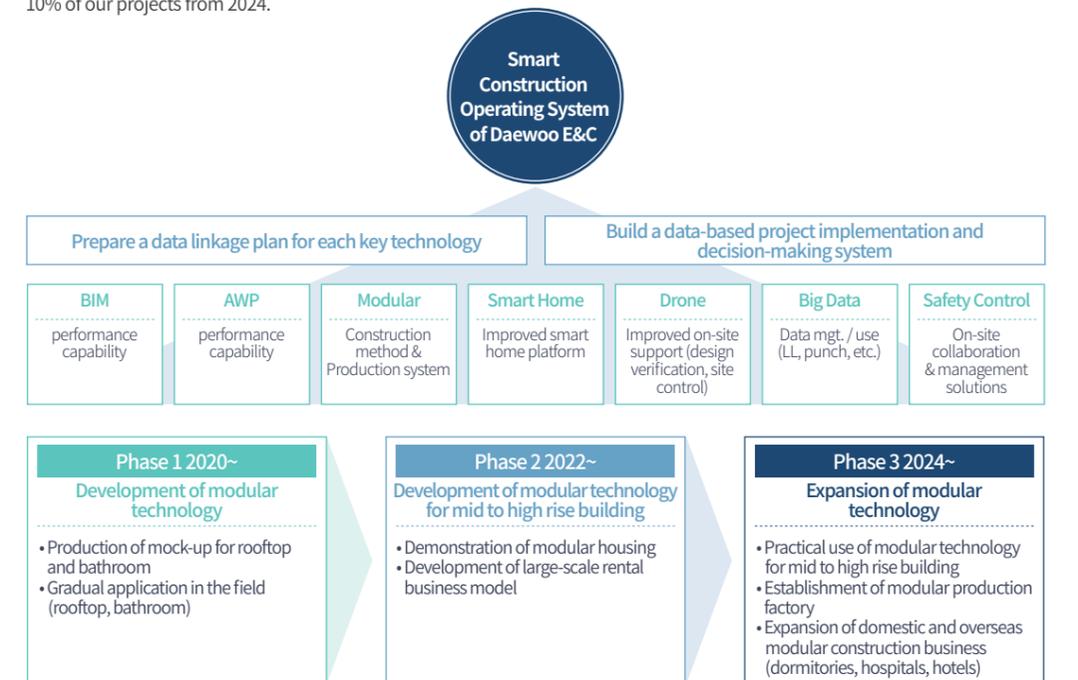
We are also expanding our applications by identifying highly needed technologies in each seven field. And we plan to build data-driven decision making and management systems in all areas of the construction industry by linking and utilizing data from across the industry.

Modular Building Technology

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

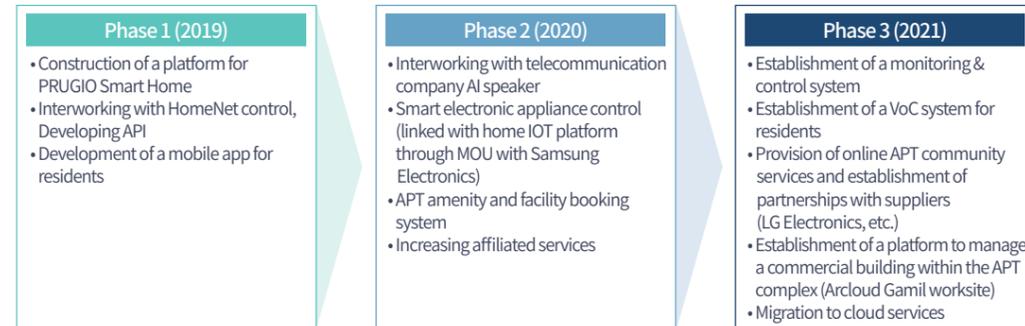
The modular construction method is efficient, so it can shorten the time period: 60-90% of the whole process is pre-fabricated as box-type modules in the factory, and the modules are later assembled on the worksite.

Daewoo E&C has been developing more specific technologies applied to different phases so as to diversify and apply the modular methods to various phases and fields of construction. At the moment, the modular construction method has been applied to the rooftops of three worksites, that is, Paju, Busan, and Gwangmyeong. We plan to apply our modular system to 10% of our projects from 2024.

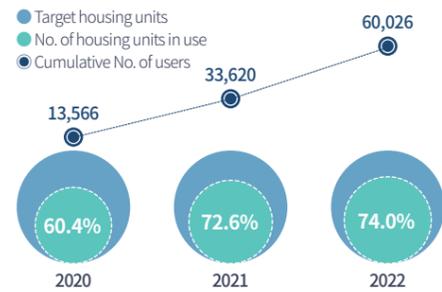


Smart Home

Smart Home is a housing operation system that automatically operates various devices based on user patterns and surroundings by using ICT technology. The 1st phase of Smart Home system controls the living environment such as lighting and gas within the housing unit and provides convenient services such as elevator calls and courier inquiries. The 2nd phase controls smart electronic appliances such as air conditioners, TVs, and robot vacuums; links the system with mobile carriers; reserves apartment amenities and facilities; and provides affiliated services. The 3rd phase adds useful functions such as a monitoring and control system and a customer management system for residents. As we have completed all phases up to the 3rd, we will now create a residential environment that satisfies customers with the market-leading Smart Home platform and based on the housing-related big data that we have accumulated up to now.



Housing units and users



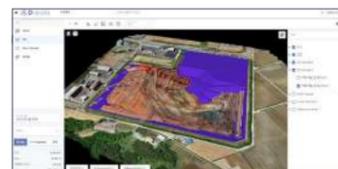
Participation in the 2021 Real Estate Trend Show



Digitization of Worksite Tasks

Dnarsha, Web-based Drone Data Sharing System

Daewoo E&C is actively utilizing advanced drone surveying technology at its worksites, which better calculates the amount of earthwork required at the construction stage and improves the efficiency of related work. We have developed “Dnarsha”, a web-based drone data sharing system, to help construction workers utilize drone surveying technology at the worksite. Users can easily access drone survey data anytime, anywhere via web or mobile devices. Drone operators at the worksite can generate drone survey data by using the engine mounted on Dnarsha. The data generated is used to analyze changes in earthwork quantities, materials and facilities at the worksite while being also utilized as fact-finding records when the worksite unit deals with civil complaints at the worksite. DAEWOO E&C plans to further develop the technology to manage worksite personnel and equipment by using spatial information based on the drone control system and drone survey information.



Reduction of **15%** in construction cost compared to the existing construction method

Construction period shortened by **30%** compared to the existing construction method

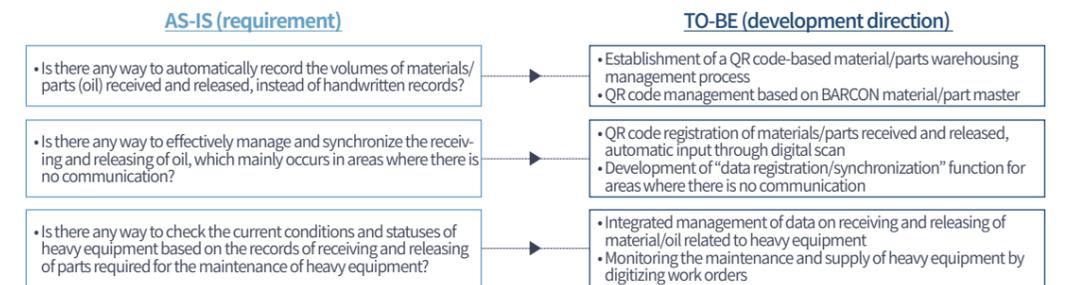
Q BOX, a Web-based Total Platform Service for Processing Quality Data

More than 90% of the quality management at the construction worksite is related to quality testing, and 70% of the testing work is documentation, verification of the suitability, and approval followed by registration and storage of the results. “Q BOX” is an integrated management service that supports the quality inspection of construction worksites. Q BOX easily processes via mobile, digitizes and automatically manages so that quality control can be managed in eco-friendly and dramatically efficient ways.



TITO (Take In Take Out), an Integrated Management System for Heavy Equipment at Directly Managed Worksite

In the case of a worksite where construction is conducted using heavy equipment that is managed directly, the operation/maintenance/supply of the heavy equipment must be carried out right at the worksite. Out of these tasks, supply of equipment takes the largest part to ensure that heavy equipment is used without problems. “TITO”, a QR code & mobile-based automation management system, automatically manages the taking-in and -out of parts (materials) and oil at the worksite by automating the supply of heavy equipment. As a result, TITO can also reduce the costs of equipment operation at worksites.



Eco-friendly Hybrid Watertight Pile Wall Technology

As the Serious Accident Punishment Act and the Special Act on Management of Underground Safety took effect, the demand for retaining walls with excellent water resistance and rigidity methods. With the existing cast-in-place pile construction method, quality deterioration and delay in construction are inevitable due to difficulties in concrete quality control and application of ready-mixed concrete 8 to 5 (working hours). To address this problem, we have developed an Eco-friendly Hybrid Watertight Pile wall technology using pre-made PHC piles. The technology makes it possible to increase the pile construction interval and secure additional construction time per day through the exclusion of ready-mixed concrete pouring. Hence, it is possible to shorten the construction period and reduce construction costs compared to the existing construction method, which is expected to increase the work efficiency at various retaining wall sites.

Advancement of Rebar

DAEWOO E&C is developing a mechanical joint and fixation method for rebar that reduces the amount of rebar used and shorten the work hours required for rebar placement in order to reduce CO₂ emissions at construction worksites where a large amount of rebar is used. In particular, the construction method of rebar assembly using threaded rebar and shortening of joint/fixation lengths will address the performance and quality problems that may occur due to overcrowding of rebars, and reduce worker fatigue and the need for work at height, ensuring safety at the construction site and increasing efficiency to a large extent.



Threaded rebar construction

ENERGY SAVING & CARBON REDUCTION

Ulji Twin Tower Artificial Ground Afforestation

DAEWOO E&C has been focused on “energy saving” and “carbon reduction” for environmental management.

We implemented zero-energy houses to build a highly energy-efficient housing environment, and introduced a condensation prevention solution.

We introduced eco-friendly construction for the first time in the industry, saving water and energy.

DAEWOO E&C has been taking part in the international efforts to achieve carbon neutrality, and has established an organization to respond to climate change, and determined risks and opportunities caused by climate change. DAEWOO E&C operates a risk management process that identifies, evaluates, analyzes and manages risks caused by climate change. DAEWOO E&C manages and monitors carbon emissions at the head office and worksites utilizing “BAROCON Greenhouse Gas Management System”, an IT-based management system.

We strive to reduce carbon emissions by managing GHG emissions and participating in the Carbon Disclosure Project (CDP).

2021 Business Performance

ENERGY SAVING

- Development of eco-friendly, highly energy-efficient housing environment: zero energy houses, condensation prevention solution
- Introduction of eco-friendly construction: water-saving, energy-saving design
- Energy saving activities: monitoring of energy consumption, implementation of the Office Diet campaign

CARBON REDUCTION

- Company-wide response to climate change: establishment of the Climate Change Response Committee, and participation of the Board of Directors in the efforts to respond to climate change
- Establishment of climate change risk and opportunity factors / Climate change risk management process / GHG management system / CDP activities

Aligning with UN SDGs



UN SDG 07

Increased energy efficiency and increased use of renewable energy



UN SDG 13

Strengthening response to climate change-related risks and increasing adaptability

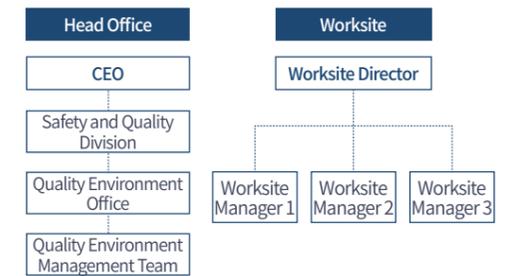
Environmental Management System

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

Environmental Governance

DAEWOO E&C unified the existing environmental management system, which had been divided into the Safety and Quality Division and the Environmental Management Team under the Business Headquarters, into a single system operated by the Safety and Quality Division. In doing so, we intend to respond agilely to changes in the rapidly changing business environment, conduct environmental management efficiently, and actively comply with environmental regulations. In addition, we are laying the foundation for ESG management in line with global trends, such as reducing CO₂ emissions, using new renewable energy, and developing eco-friendly technologies. The Safety and Quality Division is placed directly under the CEO, and the Quality Environment Management Team within the Quality Environment Office of the Division is in charge of environmental management, and works closely with related departments including the ESG team to strengthen the environmental management system. The head of the Safety and Quality Division checks and supervises the effectiveness of the company-wide environmental management system and climate change response policies, reviews the managers’ performance every year, and acts on behalf of the CEO to check, improve, and establish policy directions for the year. To respond to climate change, we established the Climate Change Response Committee in April 2022, chaired by the head of the Safety and Quality Division. The Committee reviews and decides on company-wide climate change response strategies and countermeasures. Decisions are confirmed with the approval of the CEO. At the worksite level, two or more environmental managers are designated for each worksite to establish/ implement the worksite environmental management system, and to reinforce the environmental management system by reducing energy and complying with environmental laws and regulations.

Environmental Management Organization Chart



DAEWOO E&C re-established its environmental management policy and goals in March 2022, and has achieved its environmental management policy and goals for the reporting period of 2021.

Environmental Management Policy and Goals

Environmental management for the future of the plant and future generations

“ZERO” violation of major environmental laws



Minimizing environmental management risks

Environmental Management System

Daewoo E&C establishes on-site support via teams in charge of environment under each business division within 3 months from the time when a new site is opened and the construction begins, so that the site's environmental management system can be operated smoothly. Daewoo E&C is raising awareness on environmental regulations and management through education. In addition, we inspects the environmental system at each worksite to check whether the environmental management system has been implemented efficiently and whether environmental regulations have been complied with.

The inspection results of the environmental system and monitoring results of worksite environmental activities are reflected in the environmental evaluation of the worksites. Every year, rewards are given to worksites (including suppliers at the worksites) with excellent evaluation results. In 2021, plaques and rewards were given to five worksites, and rewards were given to three suppliers.

Environmental Screening, Support, Inspection and Environment-related Rewards

Year	Environmental examination, support, inspection (Time)	Environmental awards (ea.)				
		Worksites			Suppliers	
		Grand award	Excellence award	Exemplary award	Grand award	Excellence award
2021	98	1	2	2	1	2
2020	41	1	2	6	1	2
2019	52	1	2	8	1	2

For environmental management, it is important for employees of Daewoo E&C to share their environmental awareness and practice the principles by themselves in the field, as well as work toward reorganization or system improvement at the company level. In 2021, we conducted online job competency training for worksite environment managers given the constraints cause by COVID-19.

Environmental Education

(Unit: Person)

Category	2019	2020	2021
Job competency training for environment managers at worksites	167	202	327
Environmental education for new environmental managers by division	4	6	-
Environmental education conducted at worksites	14,160	10,346	26,984

The environmental manager of each worksite provides environmental education at least once a month to the members at worksites, including suppliers. In 2021, training was conducted for a total of 26,984 people.

Environmental Education for Employees

DAEWOO E&C has established a response system for environmental accidents based on international standards, and conducted training to help employees address environmental emergencies such as breakdowns of the washing machine and oil spills. We established a response system for worksites to respond and report according to the guidelines for prevention of environmental accidents and response in the event of an environmental accident. In doing so, we do our best to prevent damage to internal and external stakeholders due to environmental accidents.

Records of Environmental Accident Response Training

(Unit: time)

Category	2019	2020	2021
Civil	2	11	15
Housing & Building	9	11	8
Plant	2	1	3
Total	13	23	26

According to the environmental information disclosure system of the Ministry of Environment, DAEWOO E&C maintains records and discloses its environmental information and environmental performance for the head office and construction worksites(all) through the environment information disclosure system of the Ministry of Environment every year.

Business places subject to the disclosure of environmental information	Contents of environmental information disclosure
The head office and construction worksites (all)	Environmental management promotion system Resource and energy conservation goals and performance Environmental pollutant emissions reduction goals, performance, etc.

Response to Environmental Accidents

Environmental Performance Disclosure

DAEWOO E&C has invested in the installation of facilities to control the generation of scattering dust, facilities for separate storage of waste, low-noise and low-vibration construction machinery, noise and vibration reduction facilities, and water pollution prevention facilities to prevent environmental pollution.

Plans and Performance of Environmental Investment (2021)

(Unit: KRW 1 million)

Category	Plans	Performance
Environmental management costs (Prevention of environmental pollution)	31,432	25,451
Environmental technology development cost (Eco-friendly technology)	877	726

Plans and Performance of Environmental Investment

Implementation of Eco-friendly Construction

The government-led carbon neutrality declaration has been implemented. Also, discussions on how to adopt carbon tax and how to facilitate the multi-national carbon trade market are actively and constantly going on while relevant measures have already been taken. To keep up with the current trend, Daewoo E&C is making a company-wide effort to turn environmental risks into opportunities. We are implementing proactive development and investment strategies to improve the value of eco-friendliness in various business areas of the company. For example, we have created housing environment which is highly energy-efficient based on hydro/ new and renewable energy and ICT. Daewoo E&C is committed to becoming a global leading E&C company based on sustainable growth by incorporating the value of environment into our management value.

Eco-friendly Energy

Daewoo E&C is making efforts to make the earth a cleaner and safer place to live with hydrogen and new & renewable energy technologies. In the wake of the Paris Agreement in 2015, the world is striving to move toward an era of eco-friendliness, putting hydrogen economy and environmentally friendly energy at the center of ESG Management.

Hydrogen/ New & Renewable Energy

Global companies are expanding eco-friendly businesses as issues of the environmental crisis such as global warming caused by increased carbon emissions, climate change and fine dust have emerged around the world. Daewoo E&C is also promoting various new and renewable energy businesses such as solar power, wind power, tidal power, biogas and hydrogen energy in keeping with the government's 2030 Renewable Energy Policy, 2050 Long-term Low-Carbon Development Strategy and the advent of hydrogen economy.

Wind power | Daewoo E&C has laid the foundation as a wind power project developer by winning the "Yeongwol Ecowind Power Complex Construction Project (46.2MW)", working on the EPC contract for the "Yeonggwang-Nakwol Offshore Wind Power Project (364.8MW)" and investing a stake in the "Gureopdo Offshore Wind Power Project (233.5MW)". We conducted projects for the "development of offshore wind power substructure system in shallow water (within 40m)" and "development of technology for new and suction-type concrete base structure" through government R&D projects to win orders based on our technological prowess. In accordance with our mid- to long-term goals, we plan to expand our business step by step in the wind power sector by implementing a project for the "development of 15MW offshore wind power floating body design technology".

Solar power | Daewoo E&C completed the "Jeju Citrus Waste Land Solar Power Project (46.4MW)" in the first half of 2020, playing a key role in the "Carbon Free Island 2030" implemented by Jeju Island. We are also engaging in the onshore and floating solar power businesses by developing technologies to support "optimal design for solar power structure" and "independent design for floating platform".

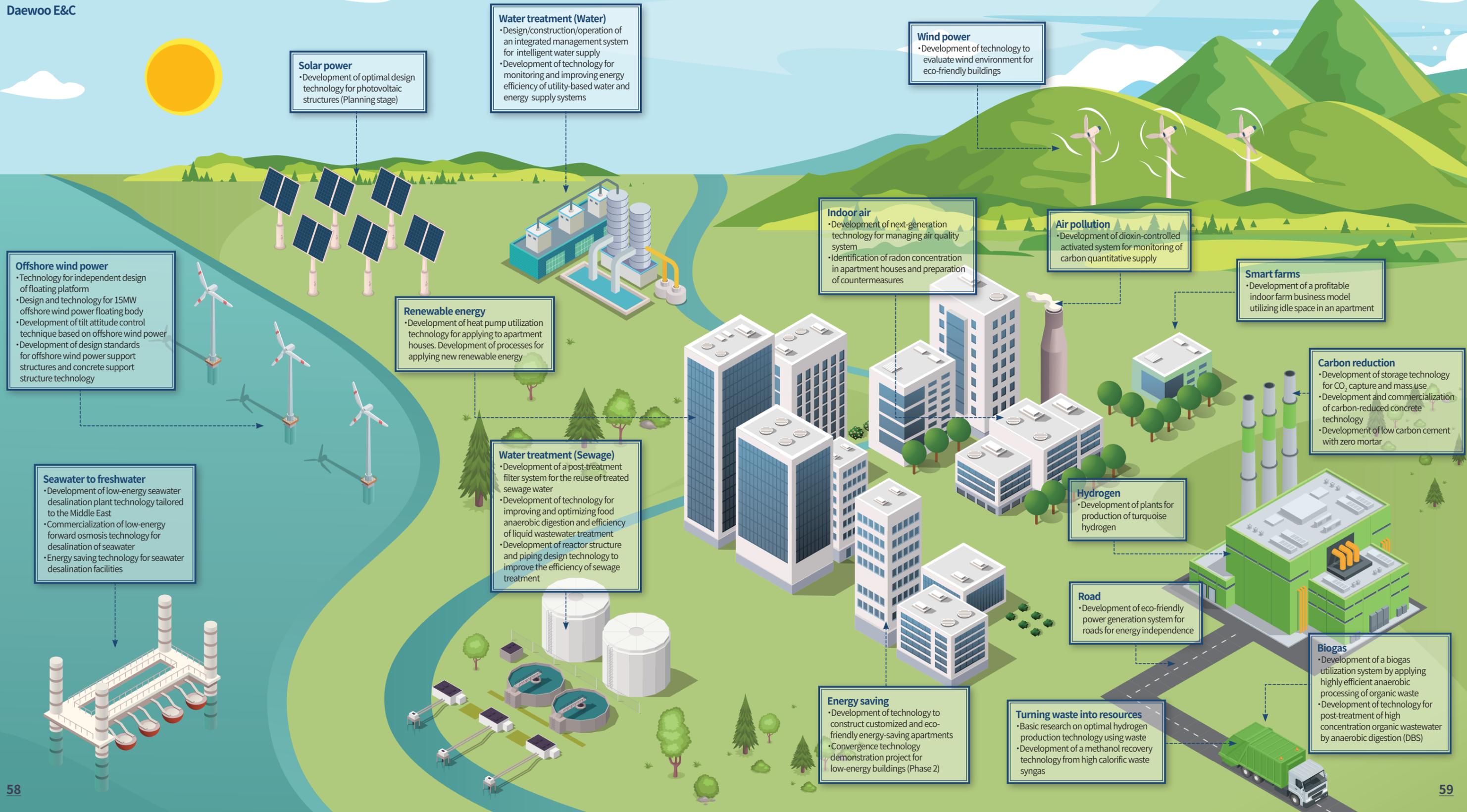
Biogas | Daewoo E&C has developed a "Biogas Production Technology Using Organic Waste" that produces energy from waste materials such as sewage sludge or food waste, and applied the technology to nine projects including Daegu DBS (3MW, built by Daewoo E&C) and Changwon DBS (3.3MW, technologies provided by other companies).

Hydrogen energy | Daewoo E&C has conducted the fuel cell based hydrogen power generation business and is currently focused on research into hydrogen production technology. In order to respond to the expansion of the hydrogen industry according to the government's basic framework for hydrogen economy, Daewoo E&C is concentrating its R&D capabilities on technologies for the production of blue hydrogen and green hydrogen. We have also paid constant attention to turquoise hydrogen (CH4 pyrolysis) or yellow hydrogen, which are expected to be used in the pre-stage of the green hydrogen technology. We also had an external expert group work on a comparative evaluation on economic feasibilities of the production technologies. In addition to the large-scale fuel cell power generation project (200MW) carried out in 2021, we are considering possible application of building type fuel cells to redevelopment areas where large amounts of electricity are expected to be consumed. DAEWOO E&C is strengthening its capabilities to implement new and renewable energy projects by developing differentiated technologies tailored to each new and renewable energy sector in accordance with its mid- to long-term strategies.

Sewage Reusing and Water Purification Technology

Due to rapid climate change, it is expected that more than half of the global population will suffer from water shortages by 2050. Therefore, sewage treatment technology that treats used water resources will be a high value-added technology for the generations to come. DAEWOO E&C has developed and applied a sewage treatment method (DNR) of removing nitrogen and phosphorus in sewage, and an advanced sewage treatment method (DMBR, I3 System) using a separation membrane that can treat sewage water for reuse. These methods will be used to modernize old sewage treatment facilities in Korea. In addition, the membrane separation advanced water purification process (DIMS), which was developed recently in response to the increased demand for eco-friendly water purification technology, is being already used in major domestic advanced water purification facilities.

List of eco-friendly technologies owned by Daewoo E&C



Highly Energy-efficient Residential Environment

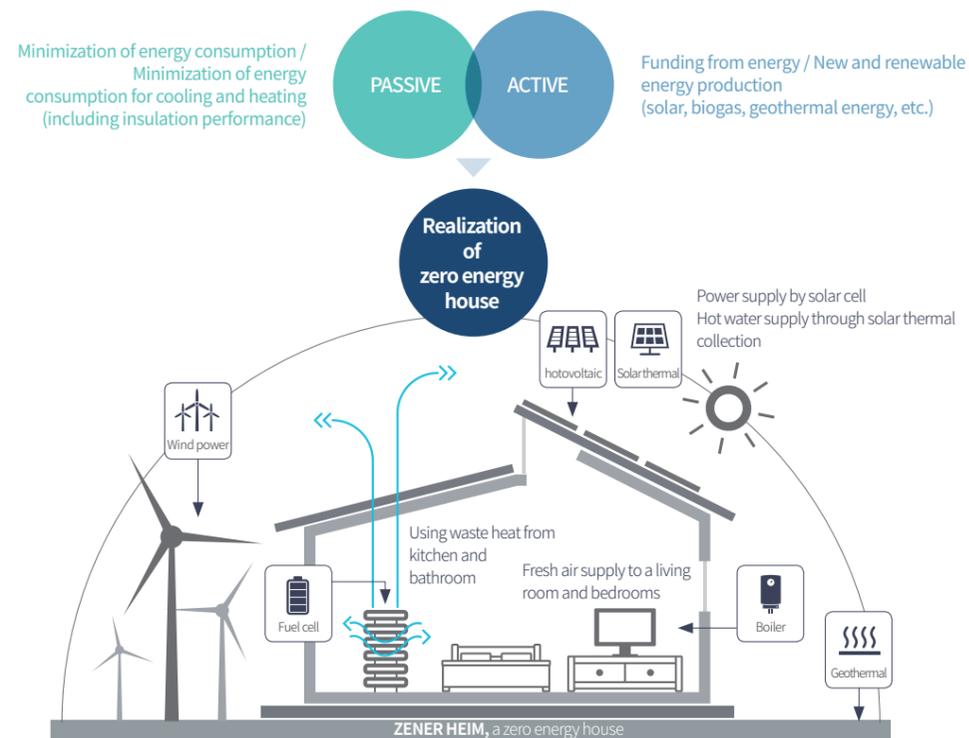
The most efficient way to save energy in buildings is to optimize insulation and airtightness, followed by reducing energy loss from the exterior of the building, improving the efficiency of energy used by equipment, and supplying energy produced from new renewable energy sources to buildings for self-sufficiency.

Daewoo E&C seeks to promote efficient energy use in residential areas based on data and utilization of ICT technologies.

We will continue to lead the development of eco-friendly, high-efficient, energy-saving residential environments.

Zero Energy Houses

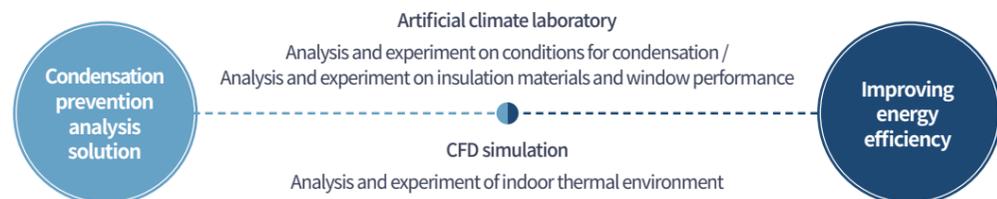
The world is striving to develop technologies to reduce energy consumption and GHG emissions in order to reduce environmental damage caused by global warming. Daewoo E&C has developed “Green Premium,” an energy-saving residential product, and is taking part in the efforts to reduce carbon emission with its various energy-saving systems. We use IoT technologies and big data to analyze the residents’ living patterns, enabling efficient use of energy. By doing so, we intend to implement zero-energy houses with an energy self-sufficiency rate of 100%.



Condensation Prevention Solution

Daewoo E&C analyzes the causes of condensation on outer walls and windows during the winter and in the basement floor during the summer, and provides measures to prevent condensation in accordance with condensation conditions.

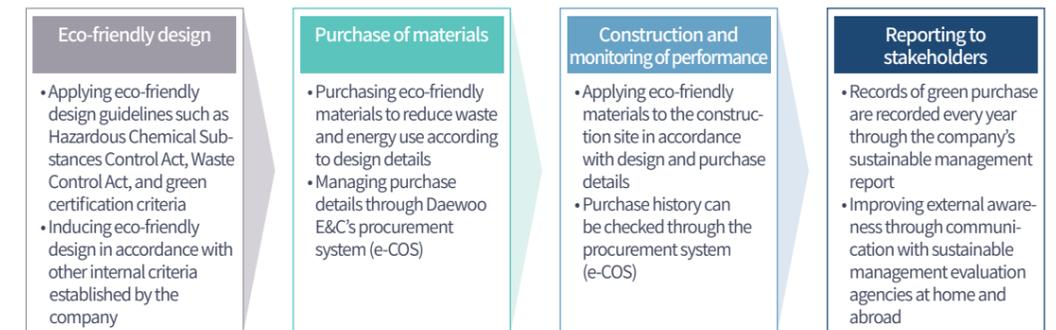
We analyze the cause of condensation and the performance of windows and insulating materials in an artificial climate laboratory. In order to predict the occurrence of condensation, we conduct heat transfer simulation, analyzing the surface temperature and indoor temperature of building materials.



Eco-friendly Design and Purchase

Daewoo E&C has introduced an eco-friendly construction method for the first time in the industry, and applied water-saving and energy-saving designs from the construction stage. We have installed water-saving washbasins, toilets, and sinks using sensors to reduce water consumption, and designed a hybrid security light and elevator power regeneration system to save energy for PRUGIO Apartments, Daewoo E&C’s representative brand. We have applied eco-friendly technologies such as carbon dioxide capture, advanced water purification and sewage treatment, and organic waste-to-energy conversion. In addition, we have developed the world’s first “Cement-free Eco-friendly Mortar”, and applied it to PRUGIO Bucheon Sosa Station. In 2018, we received recognition 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 Inje-Yangyang Tunnel project. Furthermore, we adopted a green procurement process to minimize the environmental impact caused by the use of materials, considering the environmental factors when purchasing materials.

Process for Green Purchase

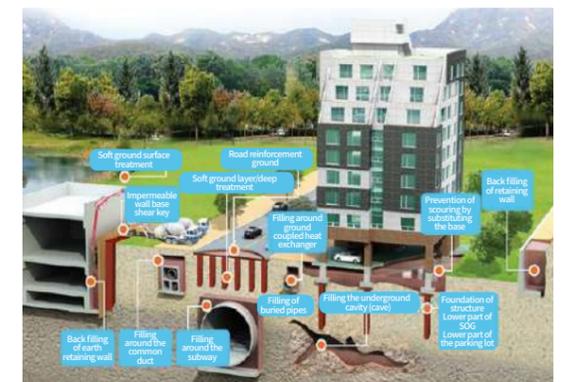


Construction with Eco-friendly Technology

Controlled Quick & Quality Ground Cementation (CQC)

Daewoo E&C uses eco-friendly construction methods to reduce the use of raw and subsidiary materials and to recycle natural resources in a very innovative way. The Controlled Quick & Quality Ground Cementation (CQC), one such method, does not discard industrial by-products such as reclaimed coal ash generated during urban construction, poor waste soil generated at worksites, and calcium carbonate (CaCO₃) generated during the carbon dioxide capture. Instead, it uses blue eco-cement, a binder made of eco-friendly materials, to reinforce industrial by-products and recycle them into high-strength ground materials comparable to weathered rocks. By doing so, we recycle industrial by-products, address problems related to the ground at construction sites, create economical and stable ground materials, and protect the environment by reducing carbon emissions.

This is an eco-friendly construction method developed by Daewoo E&C, and can be applied to the entire construction site in various combinations. This method was developed in 2012 (Patent No. 1241364) and has been applied to 59 projects.



Example of the use of CQC method

Eco-friendly Carbon-reducing Concrete Technology

Daewoo E&C has been developing eco-friendly concrete and cement materials that are made from mixture of industrial by-products such as fly ash and slag powder. These materials reduce use of resources and greenhouse gas emissions, cutting the amount of cement that emit large amount of carbon dioxide by 40%, which is equivalent to 79KG of CO₂ reduction per 1m³. With these new materials, use of cement is expected to be minimized in the near future.

Response to Climate Change

The international community is working in earnest to respond to climate change and abnormal weather events. Korea also declared “Carbon Neutrality by 2050” and announced its vision on Oct. 28, 2020 in accordance with the adoption of the Paris Agreement at the United Nations Framework Convention on Climate Change (COP21) in December 2015. Daewoo E&C is strengthening company-wide responses to climate change based on the climate change framework presented by the Carbon Disclosure Project (CDP), a global initiative to respond to climate change.

Climate Change Governance

Operation of the Climate Change Response Committee

Daewoo E&C is actively responding to climate change by establishing the Climate Change Response Committee, which is dedicated to develop measures for responding to climate change. The Climate Change Response Committee, which was launched in April 2022, is supervised by the CSO under the CEO, and is composed of working group members who take decisions on company-wide issues. The roles of the members are divided according to how severe the issue is and the extent to which countermeasures have been implemented. The Committee has established short-, medium- and long-term reduction targets for the company's GHG emissions, and identified and evaluated risks and opportunities associated with climate change. The risks identified are reviewed with relevant departments within the Committee and reflected in the company-wide management response plans. Among the identified risks and opportunities, high-priority issues are reported to the CEO and reflected in various business decisions. Those issues are regularly reported to the Board of Directors, the highest decision-making body.

Top Management's Participation in Climate Change Response

Daewoo E&C's Board of Directors performs deliberations, decides, and receives reports on matters related to climate change so that response measures for climate change are reflected in the company's management strategies. On May 12, 2022, the “Proposal for Establishment of the Climate Change Response Committee” was presented to the Board. Accordingly, major issues will be reported to the Board after the Climate Change Response Committee meeting. As the company's highest decision-making body, the Board independently and objectively supervises and evaluates responses to climate change-related issues, the impact of climate change, and management of climate change risks and opportunities by Daewoo E&C. The Board also decides major policies, management plans and management strategies for identified climate change risks and opportunities.

Climate Change Risks and Opportunities

Daewoo E&C evaluates risks and opportunities related to climate change from financial and strategic perspectives. The impact of risks and opportunities are mainly identified by two criteria: the degree of business impact and the need to respond. Risks that need to be managed are classified as potential risks. The types of risks we mainly consider include: climate change trends, regulations, stakeholder requirements, physical damage, and government-funded projects. In terms of business impact, they are classified into three categories - High/Medium/Low - based on financial impact, business opportunity and operating profit, and the ripple effect on the company's reputation. If the cost of physical damage due to climate change exceeds KRW 1 billion or if the operating profit suffers a loss of KRW 10 billion or more, the impact is classified as “High”. In terms of the need to respond, the impacts are evaluated by considering whether to disclose information with financial impact such as penalties, or the coerciveness and scale of government-funded projects.

Criteria for Selecting Major Climate Change Issues

Physical loss	Decrease in profits	Disclosure
When the cost of physical damage due to climate change exceeds KRW 1 billion	When physical damage caused by climate change causes a loss of more than KRW 10 billion in operating profits	When there is a penalty imposed by force or when information with financial impact is to be disclosed

Climate Change Risk Management

Analysis of Climate Change Risks and Opportunities

Daewoo E&C analyzes climate change risks and opportunities every month. The targets of the analysis include upstream, downstream, and directly operated business places. When climate change risks and opportunities are identified, impacts are assessed in connection with business strategies and projects. Evaluation considers not just short-term aspects, but medium-term and long-term aspects. For major risks and opportunities, implementation is monitored through regular internal inspections. Corrective measures are taken to improve any shortcomings. One of the examples of climate change risks is being incorporated into the greenhouse gas emissions trading system and facing new regulatory risks. We are establishing measures by identifying trends in the greenhouse gas emissions trading system and the impacts it will have on the company. In doing so, we intend to identify and address any financial risks that may arise when being incorporated into the emission trading system. For market risks, we consider rising raw material prices as a risk, and introduce response measures accordingly. We are continuously monitoring changes in raw material prices, since the prices of construction materials such as cement and steel are expected to increase due to climate change. The impacts of climate change opportunities are as follows: in terms of resource efficiency, the use of high-efficiency products and logistics systems has reduced operating costs; in terms of resource efficiency products and services, sales increased thanks to increased demand for low-carbon products and services; in terms of resilience, return on investment was generated through participation in renewable energy programs and introduction of energy efficiency improvement measures. We recognize these as opportunities associated with climate change and are working to realize them.

Impact Analysis of Climate Change Risks

Unit: KRW

Risks	Major potential financial impacts	Term	Potential financial impacts	Management cost
Regulatory and market risks				
1. Incorporation into the greenhouse gas emissions trading system	Increase in indirect (operational) costs	Mid-term	402,325,000	173,000,000
2. Rising raw material prices	Increase in direct costs	Mid-term	60,685,832,500	310,500,000
Physical risks				
1. Extreme weather events such as floods and typhoons	Increase in direct costs	Short-term	5,880,791,000	158,911,957
2. Extreme changes in precipitation patterns and climate patterns	Increase in direct costs	Long-term	25,708,214,732	1,200,000,000

Impact Analysis of Climate Change Opportunities

Unit: KRW

Opportunities	Major potential financial impacts	Term	Potential financial impacts	Management cost
1. Use of highly efficient products and logistics systems	Decrease in indirect (operational) costs	Mid-term	749,525,000	100,000,000
2. Development and expansion of low-carbon products and services	Increase in sales thanks to the introduction of new products and services	Mid-term	117,615,820,000	726,000,000
3. Participation in renewable energy programs and introduction of measures to improve energy efficiency	Return on investment in low-carbon technology	Long-term	21,000,000,000	1,358,000,000

Strategy of Climate Change Response

Based on the global climate change scenario, Daewoo E&C performed an analysis considering both physical and transitional aspects in order to identify short-, medium-, and long-term risks and opportunities associated with climate change. For the physical aspect, we utilized RCP scenarios (RCP 2.6, 4.5, 6.0, 8.5), the WRI evaluation tool, and the Korea Meteorological Administration's climate change report. For the transitional aspect, we conducted analysis based on the IEA scenarios (2DS, B2DS) and the SBTi science-based methodology, considering the Paris Agreement, the low-carbon transition plans, and the Korean government's Nationally Determined Contribution (NDC). The RCP refers to the analysis of four scenarios of climate change according to the GHG emissions. A feasible reduction target was established at an annual average reduction of 4.2% based on the scenario analysis and the mid- to long-term reduction potential. The midterm reduction goal was set to reduce 40% of emissions by 2030 compared to 2018. The long-term goal was set to realize Carbon Neutrality (Net Zero) by 2050. The scopes of reduction include direct emissions (Scope 1) and indirect emissions (Scope 2). This satisfies the international standards and requirements for GHG reduction, and is in line with the national GHG reduction target announced in 2021.

Climate Change Risk Management Process

Daewoo E&C is strengthening its company-wide risk management process through materiality assessment and integrated risk management. Daewoo E&C manages risks due to climate change through materiality assessment and the BAROCON environmental risk management system, and evaluate and manage those risks in line with the company-wide strategies. At the company level, we evaluate the importance of each risk every quarter to identify and manage factors affecting the long-term sustainability of the company. At the project level, we consider potential risks from the perspectives of business, finance and sustainability through the Order Review Committee before signing a contract. After signing a contract, we manage climate change-related risks as well as physical and environmental risks related to precipitation, quantity of solar radiation, and strong winds that affect the construction period or construction costs at the project level. Both company-wide risk management and project-level management are conducted with annual working units, and important matters and management status are regularly reported to the CEO.

BAROCON Integrated Environmental Management System (Greenhouse gas management system)

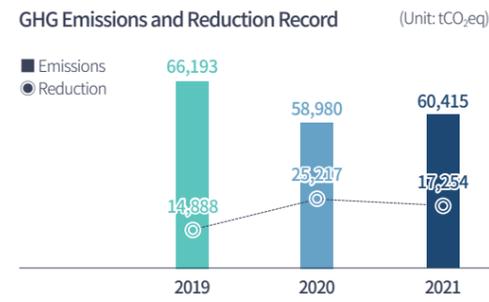
Daewoo E&C has been operating a GHG inventory system under the BAROCON environmental management framework, an integrated management system, since 2012 for IT-based environmental performance management. Through this, GHG emissions at all business places are managed and energy use at all worksites and buildings are measured effectively. In addition, we are maximizing the efficiency of environmental management by operating ISO 14001 (Environmental Management System) and integrating and managing various systems in areas such as GHG emissions management and waste management.

Greenhouse Gas Emissions Management

Daewoo E&C has been leading the carbon management sector in the construction industry by establishing a greenhouse gas inventory system. As companies around the world are working hard to protect the environment from extreme climate change, Daewoo E&C has also joined the movement for green management. As a company subject to GHG energy target management system in the construction industry in accordance with the "Framework Act on Low Carbon, Green Growth", we have managed domestic Scope 1 and 2 emissions, which are subject to mandatory reduction, gaining competitiveness in eco-friendly businesses. In addition, we have signed a "2022 GHG and Energy Reduction Target Agreement" with the Korea Appraisal Board to reduce GHG emissions. Daewoo E&C plans to reduce carbon emissions by 4,301 tCO₂-eq in 2022. We plan to calculate Scope 3 emissions (construction equipment) as well as domestic/overseas emissions, and establish a system for predicting and monitoring greenhouse gas emissions for each worksite. As such, Daewoo E&C is making every effort to achieve its GHG emissions reduction target.

Management of Climate Change Targets

Daewoo E&C is making efforts in line with the global climate change response measures intensified after the Paris Agreement (COP21) and the greenhouse gas reduction goal of the government, which announced the goal of achieving Net Zero by 2050. We are taking the lead in responding to climate change by setting the goals of reducing GHG emissions by 40% within 2030 compared to 2018 and achieving carbon neutrality by 2050. While the target includes only GHG emissions generated by Daewoo E&C (Scope 1 and 2), we plan to add measures and targets to reduce GHG emissions (Scope 3) generated by our suppliers as well. In order to achieve these targets, Daewoo E&C is reducing GHG emissions by optimizing methods for reduction of GHG emissions, conducting energy saving campaigns (office diet, installation of LED lights, etc.), and providing training on GHG to employees.



* GHG reduction refers to the value obtained by deducting the emissions performance from the emissions permitted by the government.



Participation in the Carbon Disclosure Project (Carbon Disclosure Project)

The Carbon Disclosure Project (CDP) is a global non-profit organization that collects information on carbon emissions of major listed companies around the world. The CDP publishes an analysis report on carbon information every year and provides it to stakeholders so that financial institutions around the world can make appropriate ESG investment decisions. The CDP report, which is used to understand a company's ESG-related performance, serves as a communication tool between the company and its stakeholders. Investors, policymakers, civil society, and academic societies around the world use the CDP data to respond to climate change. Daewoo E&C has been participating in the Carbon Disclosure Project and disclosing carbon emissions information since 2013.

Energy Saving Activities

We use energy in an efficient manner by monitoring the energy consumption in the head office and construction sites, and replacing more than 90% of the lighting in the head office with LEDs. We reduce standby power consumption by conducting a monthly campaign called 'office diet' to encourage employees to turn off the power supply of electronic devices that are not in use. We are engaged in various activities to conserve energy. During lunchtime, lights in offices are turned off for one hour and lights in the entire building are turned off at 9 p.m. to minimize unnecessary energy consumption. We have introduced an intensive working hour system to minimize the movement of employees, and allow employees to work from home to reduce the number of people in the building.

Establishment of Mid- to Long-term GHG Reduction Roadmap

Daewoo E&C has established a mid- to long-term roadmap towards 2050 Carbon Neutrality to realize systematic and sustainable climate change responses. All employees have joined hands to achieve the established short-term and mid- to long-term goals and tasks. We will continue to report our activities and performance transparently to stakeholders.

Mid- to Long-term GHG Reduction Roadmap

<p>Analysis of climate change impacts and establishment of strategies</p> <p>2021-2025 (Short-term) Establishment of a carbon-neutral strategy and system</p> <ul style="list-style-type: none"> Establishment of a governance framework to respond to climate change Establishment of short-term, mid-term and long-term GHG reduction targets Optimization of climate change risk and opportunity management Preliminary response to the incorporation of the carbon emission trading system Advancement of the greenhouse gas management system Development of eco-friendly technologies and strengthening of resource/energy efficiency Identification of win-win measures related to climate change for suppliers 	<p>Implementation of climate change response strategies</p> <p>2026-2030 (Mid-term) Establishment and activation of a low-carbon management system</p> <ul style="list-style-type: none"> Leader for low-carbon businesses at home and abroad (nuclear power, renewable energy, resource recycling, etc.) Leading the domestic zero-energy construction market Development of climate change response technologies and leveraging these technologies to win orders Reinforcement of activities for GHG emissions reduction for major stakeholders (supply chain, customers, suppliers) Leading the renewable energy program market 	<p>Leading the climate change market</p> <p>2030-2050 (Long-term) Lead the response to climate change in the construction industry</p> <ul style="list-style-type: none"> Achievement of carbon neutrality Global leader in low-carbon business Global leader in Zero Energy architecture Commercialization of eco-friendly/climate change response technologies and securing market share for businesses based on them Achievement of carbon neutrality by key stakeholders (supply chain, customers, suppliers)
<p>Annual reduction rate 4.2% Total emission target for 2022: 59,563 tCO₂-eq</p>	<p>Conforms to the goal of limiting global warming to 1.5°C</p>	<p>Conforms to Korea's GHG reduction goals</p>

SYSTEM IMPROVEMENT & SAFETY INNOVATION

Safety inspection conducted by the CEO

In 2021, Daewoo E&C promoted company-wide “safety innovation” to achieve “First Zero Serious Accidents in 2021”. We organized a “Safety Innovation Committee” within the management to establish fundamental measures from the Zero-base for discussing and solving the problems in the safety health management system and listening to company-wide opinions for innovation. Based on the discussions and review, we established 32 safety innovation tasks, received approval from the board of directors, and are in the process of implementing them. Moreover, we have a close review on “the procurement obligations of safety and health” by the responsible person in management prior to the enforcement of the Serious Accidents Punishment Act, and have improved the companywide safety health management system through the “Safety Health System Improvement Committee”.

Based on stringent adherence to the principle of “No work without safety”, our company has secured a safe and pleasant work environment and all our employees and suppliers participate actively in the activity to prevent accidents.

2021 Business Performance

- Establishment and implementation of a safety innovation proposal
 - Deduction and implementation of 32 innovative tasks in 5 major innovation fields, viz. organization, manpower, budget, procurement, on-site management, etc.
- Improvement of the health and safety management system
 - Additional implementation of work processes to understand and improve the harmful and dangerous elements at all worksites
 - Improvement of on-site employee safety assessment
 - Newly established inspection on the performance of the procurement obligations of health and safety by a responsible person in management at each worksite
 - Payment of health and safety management costs to all suppliers (expansion of payment to suppliers in materials / heavy machinery / services)
 - Expansion and vitalization of employees’ participation in health and safety activities

SAFETY INNOVATION

- Elevation of the safety organization, new establishment of CSO
- Continuous investment on costs to secure health and safety
- Additional mobilization of personnel for supervision of safety at worksites
- Practice of win-win safety with suppliers
- Securing the workers’ right to suspend work

Aligning with UN SDGs



UN SDG 03

Ensuring healthy life and promoting welfare for workers

Establishment of Safe Construction Site

Safety at construction sites has become even more important since the promulgation of the Serious Accident Punishment Act on January 26, 2021. Daewoo E&C is actively implementing safety management by conducting on-site safety inspections under the CEO’s supervision. We will further strengthen the safety and health system to raise safety awareness among our members.

Establishment and Implementation of a Safety Innovation Proposal

Strengthening of the Health and Safety Organization

Daewoo E&C promoted the Quality Safety Room, an organization that had been operated previously under the CEO, as an organization operating at the headquarters with a powerful control tower function. Though the strengthening of the organization, we have been able to expand our health and safety management system and promote continuous safety innovation by checking whether the health and safety management system is working properly on-site. We have newly established an exclusive organization, the “Safety Innovation Department,” to oversee safety activities within the headquarters. It combines the previous operations that were carried out by two teams within the Quality Control Department (HSE Planning Team, HSE Operation Team). Furthermore, we have established the “Safety Education Team” for “re-establishment of the entire safety education system”, which is one of the 32 tasks in the safety innovation proposal. This team will be re-organized as 1 department / 3 teams (Safety Innovation Department / Safety Innovation Team, Safety Operation Team, and Safety Education Team).

Expanded Mobilization of Safety Supervisory Personnel

To prevent the occurrence of safety blind-spots due to the insufficient number of management personnel on-site, we have additionally mobilized the construction manager, safety monitoring group, and exclusive safety personnel representing the suppliers, to lead the safety management activity. In the case of exclusive safety personnel dispatched by the suppliers, even if they are not qualified to be appointed as safety managers based on the Occupational Safety and Health Act, we provide a certain amount each month for working as exclusive personnel responsible for safety, so that the suppliers may take the initiative in their own safety management activity.



Safety Budget Investment

Daewoo E&C has developed a plan to make additional investments in the field of health and safety and set aside a budgetary allocation for this purpose every year. In addition to the occupational health and safety management costs to be used at the construction site as mandated by the law, we have organized a separate safety investment budget to expand the infrastructure related to safety substantially. This will cover measures such as strengthening of safety inspection and education, investment in safety facilities, supports for suppliers, establishment of a smart safety system, etc.

- ① Reinforcement of safety personnel such as additional deployment of safety managers at small-scale sites
- ② Additional organization of costs to secure safety facility to strengthen the efficiency of on-site safety management and the advancement of capability
- ③ Expansion of education and inspection on the management and employees for strengthening of safety capability
- ④ Improvement of suppliers’ safety levels and provision of support to excellent suppliers

Practice of Win-win Safety with Suppliers

We support the program to improve suppliers’ level to the head office for securing their own safety in cooperation with external specialized institutions. Especially, we practice win-win safety as the suppliers’ safety management systems are checked through scheduled health and safety capability assessments. In order to incentivize excellent safety performance, we provide top level benefits to the suppliers with excellent safety management, such as preferential rights on the conclusion of agreements, reduction of security deposit for the performance of construction, etc.

Guarantee of Right to Suspend Work to All Workers Realization of the principle of “No work without safety”

To pursue work in safe conditions at the worksite without any anxiety is the right of all workers, and ensuring this right is the obligation of business owners. Daewoo E&C asks all workers to suspend the work at any time and anywhere upon the occurrence or prediction of danger during the work, and resume the work after securing safety. Through the introduction of a clause on prohibition of causing disadvantages to the informer, we institutionalized the protection for informers and established a corresponding system at the head office based on the establishment of a safety hot-line to make anonymous reporting possible. Furthermore, we introduced a reward system for good informers to induce the active use of the right to suspend the work. As a result, the number of suspensions of work has increased approx. 6 times from 247 cases in 2020 to 1,551 cases in 2021, and the awareness not to work in dangerous situations has settled among workers.

Improvement of the Health and Safety System

Activity to Improve the Health and Safety System

Daewoo E&C newly established and operated the Health and Safety System Improvement Committee for the review of management risks and the establishment of corresponding measures upon the occurrence of serious accidents.

- ① Performance assessment standards and procedures for the health and safety work carried out by management supervisors,
- ② inspection procedure based on the collection of workers' opinion
- ③ organization of costs to ensure the safety of construction machinery / material delivery installations, etc.,
- ④ essential work needed to secure the health and safety of responsible persons in management such as the establishment of safety management guidance related to defects repair work, are selected and reviewed, and the corresponding measures are implemented actively.

We put our best efforts to minimize the management risks related to health and safety through the activity to improve the health and safety management corresponding to the occurrence of serious accidents.

Monitoring of the health and safety management system is essential to preemptively prevent serious accidents. In order to check the effectiveness and implementation status of the health and safety management system, Daewoo E&C maintains certification through receiving audits by the Korea Occupational Safety and Health Agency and an independent certification agency (BSI), and identifies areas for improvement in the health and safety management system.

In order to convert the health and safety management system certification from OHSAS 18001:2007 to ISO 45001:2018, a conversion audit was conducted for six teams and eight sample worksites from March 15 to March 19 in 2021, and an extension review for KOSHA 18001 was conducted for seven teams at the head office and three sample worksites from May 20 to June 10 in 2021. Daewoo E&C was able to meet international standards, and thereby secure competitiveness to win orders and build a health and safety system that meet customer needs.



Safety Patrol System

In order to prevent serious accidents, Daewoo E&C established mandatory worksite implementation guidelines for each type of work in 2020, and implemented a Safety Patrol System to check the implementation of the guidelines. Under the system, we conduct random worksite inspections without prior notice and have the work stopped and corrective measures taken if a high risk is identified. In 2021, a total of 342 inspections were performed and improvements were made in 847 cases.

Inspection/Support for Construction Machinery

To prevent accidents due to mechanical defects of construction equipment (T/C, crane, etc.), Daewoo E&C conducts inspections of machinery before bringing them in. The inspections include visual inspection and nondestructive inspection, and are conducted by an inspection agency designated by the company. After they are brought into the worksite, we conduct regular inspections on construction equipment that are prone to accidents during use, identifying mechanical defects and supervising workers to prevent unsafe behaviors.

Certification of the Health and Safety System

Support for Preventive Inspection

Accident Prevention Program in the Field

Identification of Near-miss Events

Near-miss events refer to precursors of an accident that could have occurred during construction work but without direct damage to personnel or property. As near-miss events could lead to major accidents if repeated, Daewoo E&C makes various efforts to identify such events. As part of this drive, we run a reward system to prevent the occurrence of accidents in advance. Rewards are paid to 10 sites with excellent performance every half year. The near-miss events identified are registered in BAROCON and the mobile application to be shared immediately from the worksite to the company.



CLEAR, Daewoo E&C's Safety Culture Program

Daewoo E&C has introduced CLEAR to change unsafe behaviors that account for most industrial accidents. The purpose of the CLEAR program is to create a culture in which workers recognize the importance of safety and protect each other. From 2020, CLEAR has been expanded to all worksites. We have provided customized consulting by assessing the worksite safety culture, developed video contents and conducted remote training to help employees understand CLEAR and strengthen core activities related to CLEAR at the worksite.

Category	2016	2017	2018	2019	2020	2021	2022
Pilot operation	Consulting by external agency						
Operation			Consulting by head office				
Expansion to all worksites				Training at all worksites / training CLEAR instructor			
Analysis of effect / Evaluation of operation						Activities carried out at worksites / Evaluation of safety culture	
Worksite-oriented + head office support							Strengthening worksite activities

Health and Safety Education

Daewoo E&C has organized a dedicated team to provide health and safety education, which is the foundation for building a safety-first culture and improving performance. The team has established a safety and health education system to provide training programs related to job-related knowledge, safety awareness, safety leadership, and safety culture required at each level. Although group education could not be conducted in 2021 due to the prolonged COVID-19, we were able to maintain the continuity of education by developing and disseminating high-quality remote education contents. In line with educational needs, we invited in-house instructors and external instructors to conduct regular health and safety training. We also organized training by external agencies to nurture in-house experts in each health and safety field.

Health and Safety Training Records

Category	2019	2020	2021
Internal health and safety training sessions	58	43	53
No. of people who have completed the in-house health and safety training	1,625	978	9,413
External training sessions	30	6	15
No. of people who have completed the external training	58	10	18

* Data changed for 2019 and 2020 due to changes in the aggregation criteria

Reinforcement of Safety Communication



Listening to Opinions

Daewoo E&C takes all measures to strengthen health and safety communication with the on-site personnel. The work sites nationwide are divided into 8 regions, and sessions on health and safety are implemented in each quarter. The employees of the head office, on-site safety managers, and health managers join these sessions to discuss improvements to be made to the system, listen to opinions, improve communication between the head office and the work sites, and to share the guidance, announcement, etc. of head office. Furthermore, in order to listen to on-site workers' opinions on health and safety and address relevant requests, we operate the "Occupational Safety and Health Committee" and "Labor-management Council" based on the Occupational Safety and Health Act and make necessary improvements. Upon the system deliberation and on-site inspection by the head office, we continue the monitoring of performance. Furthermore, the company-wide health and safety organization has implemented monthly regular meetings attended by safety quality team managers of each business headquarter to consider various opinions and address issues related to the health and safety system. We are also operating a safety hot-line for any of our employees and workers to report on any dangerous elements or make suggestions anonymously.

SERVICE IMPROVEMENT & QUALITY ENHANCEMENT

Seoul Forest Warhorse Statue Rose Garden

The two keywords for DAEWOO E&C's customer-oriented management in 2021 were as follows: "Service Improvement" and "Quality Enhancement".

As a construction company that has supplied the largest number of housing units in Korea since 2010, DAEWOO E&C has improved customer satisfaction by diversifying customer contact channels and by implementing "Life Premium", services to enhance residential satisfaction and "Greenery Lounge Planner", services to resolve inconveniences at the time of move-in.

In addition, we have improved the quality of our products and services by establishing a quality management system and operating a system to prevent quality risks.

We will continue to improve our services and strengthen quality management to enhance customer-centered management.

2021 Business Performance

SERVICE IMPROVEMENT

- Resident First Services: Welcome Meal Service, Greenery Lounge Planner Service
- Smart Residential Services: Housing service through the PRUGIO Smart Home Application
- Various channels for customer communication

QUALITY ENHANCEMENT

- Advancement of the quality management system and operation of a proactive system to prevent quality risks
- Improvement of residential quality tailored to the New Normal era: Reduce noise between floors, improve indoor air quality
- Strengthening quality control for worksites and equipment: Designation of a worksite quality manager and gathering opinions

Aligning with UN SDGs



UN SDG 09

Promotion of sustainable industrialization and innovation

Pursuing Customer Satisfaction

DAEWOO E&C, which has supplied the largest number of housing units in Korea since 2010, has puts customer satisfaction first and provides the best products and services throughout the entire process, from the start of construction to after-sales services. We will develop a variety of products tailored to our customers' needs and enhance the quality of our products to offer customer-oriented services.

Resident First Service

Daewoo E&C has implemented "Life Premium", a housing service for residents of PRUGIO. With the idea that PRUGIO prepare a warm meal for residents who would be busy on the day of move-in and could not afford to make meals, we delivered welcome meals to residents living in areas with insufficient commercial stores and small and medium-sized complexes with less than 1,000 households. The welcome meal service was newly introduced in 2019 and has been expanded to the entire PRUGIO apartment complex. In addition to the "Wise Tidy Life" service introduced in 2021, "Kids & Mom Class" and "Wise Sharing Life" were newly launched in 2022. We plan to supplement service items and introduce new services according to customers' preferences, needs, and trends for each complex.



Services for wise organization and storage

Vitalizing the Customer Community

DAEWOO E&C provides the "Greenery Lounge Planner" service, which opens the Greenery Lounge early to resolve any inconvenience experienced by PRUGIO residents at the beginning of their move-in. We established a community facility operation management system in the service application complex so that residents can reserve and use the community facilities through the PRUGIO Smart Home app. In 2021, we provided community facilities for seven complexes including Geomdan New City PRUGIO The Venue despite the pandemic situation to improve living convenience for residents. In 2022, the use of community facilities is expected to increase as the pandemic situation improves, and we will introduce various programs to revitalize community facilities.



Community facilities within the PRUGIO complex

Providing Smart Customer Services

Recently, consumers have developed a preference for convenient products and services that can save their time and effort beyond factors of cost-effectiveness such as price or quality. In line with these trends, Daewoo E&C provides residents with residential services through the PRUGIO Smart Home App in partnership with excellent residential service companies. In 2021, we added car sharing, vehicle maintenance, pet care, organized storage, and home quarantine services in addition to child care, home cleaning, and door-to-door car wash services. In 2022, we plan to continuously add new housing services that meet customer needs.

Attracting Customer Inclusive Services

With the recent revision of the Infant and Child Care Act, apartment complexes with more than 500 households are required to have public daycare centers. DAEWOO E&C signed agreements with 15 national and public daycare centers prior to the completion of construction for the residents' convenience and the early opening of national and public daycare centers. We developed a consent management system for the PRUGIO mobile consultation application, so the consent process was shortened by more than three months compared to written consent, which sped up the installation of daycare centers. In addition, the housing construction standards were revised, making it compulsory for construction companies to establish the Together Care Center, a care center for primary school students living in apartment complexes with 500 or more households. Accordingly, we plan to develop a consent management system through the PRUGIO mobile consultation application.



Signing ceremony for the establishment and operation of national and public daycare centers

Strengthening Communication with Customers using SNS and Brand Magazines

Daewoo E&C provides various information such as information on the apartment the resident is about to move in, as well as pre-sales and basic real-estate information using SNS to engage in active communication with customers. In addition to the existing Facebook page, Daewoo E&C has published video content on our YouTube channel regularly twice a week for the first time in the construction industry since 2019. Daewoo E&C uploads the photos of PRUGIO and the residents' daily life on Instagram to make sure that anyone can have information on PRUGIO easily. In addition, Daewoo E&C is strengthening communication with customers by providing answers to questions with high interest on housing products and real-estate via experts of each field in the form of a magazine. Daewoo E&C publishes the PRUGIO brand magazine "NOBILITY" to communicate with target customers for urban renewal projects on a quarterly basis and provides various information such as housing trends, interior information, and Q&A on urban renewal projects. In addition, DAEWOO E&C's construction works and PRUGIO complex are introduced to provide indirect brand experience to potential customers.



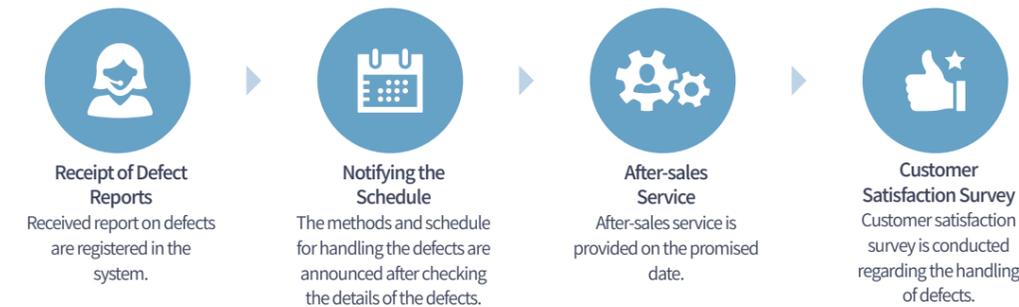
Improvement of Customer Satisfaction with Active Communication

Daewoo E&C's Customer Service Center
www.daewoenc.com/
customer/contact

DAEWOO E&C runs various customer contact channels to listen to customer's opinions. The PRUGIO Customer Center uses a variety of channels such as telephone, website, and the PRUGIO mobile consultation application for customers' convenience. In particular, live chat counseling was newly introduced in 2022 for customers who prefer to use mobile devices. In addition, we listen to customers' opinions by making happy calls to all customers who received after-sales services, and have provided prompt feedback by maintaining an average processing rate of 10 days for two consecutive years.

In order to prevent defects that occur after moving in, quality checks, checks by housewives, and pre-visit checks are conducted 85 days before moving in, collecting customer complaints and reflecting their opinions. After-sales services are provided through the MOT, and expert technicians take care of defects. In order to provide customer-oriented and high-quality services, Daewoo E&C organizes customer satisfaction surveys by external evaluation agencies every year. In 2021, we ranked 3rd in the National Customer Satisfaction Index (NCSI) and 2nd in the Korean Standard-Service Quality Index (KS SQI).

Defect Receipt and Handling Procedures



Strengthening Quality Management

DAEWOO E&C is making every effort to prevent major quality accidents through quality management and minimize quality risks such as construction quality accidents and external penalties. We will provide the best quality to our customers by operating a quality management system based on advanced technologies.

Advancement of the Quality Management System

DAEWOO E&C has formed an organization in charge of quality work within the business division and newly established a quality department in March 2022 to clearly demarcate responsibilities and authority for quality-related work. We are striving to improve quality by further upgrading our organic and efficient quality management system. The Divisional Quality Team monitors and supports the quality activities of the head office and the worksites. As the company's control tower, the company-wide Quality Environment Office monitors systems and guidelines; establishes relevant standards; monitor the quality management; oversees the quality activities of business divisions and construction / quality management of the worksites; identifies and addresses problems within the worksites; inspects equipment; and supports bids and purchases in terms of quality. As such, the Divisional Quality Team and the company-wide Quality Environment Office are separated and operate different tasks to prevent any redundant responsibilities between the two units and facilitate smooth operations.



Quality Management System Audit Record (Organizations in the head office)

No. of organizations	Average score	No. of findings	No. of measures taken
88	94.4 points	119 cases	116 measures

Quality Control at the Head Office and Worksites

Quality Assessment at the Head Office

Unit: Average score



Quality Assessment at Worksites

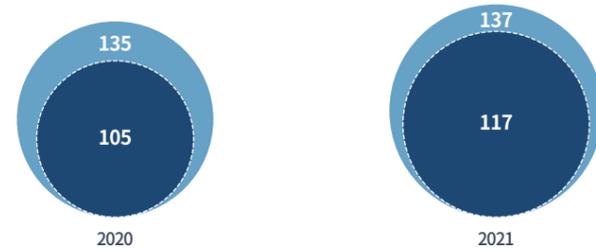
Unit: Average score



Communication with the Site Quality Manager, the Key Person

Smooth communication between worksites and the head office is essential to ensure excellent quality. Daewoo E&C minimizes the difference in quality standards between the site and the HQ by designating a site quality manager called Key Person. In addition, Daewoo E&C is gathering opinions from key persons at worksites through the “Voice of Quality” system, which has been in operation since 2007. In 2021, 117 out of a total of 137 worksites participated in this system despite the ongoing COVID-19 situation.

- All worksites
- Worksite in which worksite quality manager (Key person) participates



Operation of Quality Sound Space

Strengthening Equipment Quality Management

Daewoo E&C reviews and checks the quality requirements and production standards for materials made to order, reviews the purchase specifications in the pre-production stage, and checks for possible omissions. We ensure that high-quality materials are manufactured and delivered through factory inspections at the manufacturing stage. Most of the materials have been delivered to the plant worksites so far. From 2022, we will expand the scope of major building materials and civil engineering materials to produce high-quality products using high-quality materials.

Quality Certification Status



ISO 9001 Quality Management System

KEPIC Nuclear Power Plant Construction and Design Domestic Qualifications

ASME International Qualification for Nuclear and Non-Nuclear Construction, Design and Manufacturing

NBBI International Qualification for Repair of Boilers, Pressure Vessels and Pressure Pipes

Preemptive Quality Risk Prevention System

DAEWOO E&C operates worksites by preventing major quality risks in advance. Through the “External Institutional Inspection Information System” within BAROCON, the status and information for each stage, from pre-examination to results, are monitored periodically and utilized for preventive activities and autonomous inspection. We check, support, and provide training on major issues in advance so that a consensus can be formed among the employees of the company/business division and preventive activities can be carried out in an active manner.

Quality Monitoring without Prior Notice

Since late 2019, the Ministry of Land, Infrastructure and Transport has conducted special inspections and inspections without prior notice on the sites operated by “constructors with a history of fatal accidents” and continued to strengthen such inspections. As “Penalty” (if any) according to the inspection results may damage the company's external credit and competitiveness in winning orders, it is necessary to implement company-wide intensive management of the field. In 2021, the company-wide Quality Management Team conducted activities for “Quality Theme-based Check to Prevent Penalties”.

Quality Capabilities to Grow Together with Subsidiaries/Suppliers

We at DAEWOO E&C are well aware that our quality capabilities will expand further when the quality capabilities of subsidiaries and suppliers working together with us are reinforced. In 2022, we plan to measure the quality level of subsidiaries and suppliers through quality inspections, provide necessary supports, contribute to strengthening their quality capabilities, and help them acquire and renew external quality certifications if necessary.

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

The prolonged COVID-19 has made working from home common. As people spend more time at home, the issue of inter-floor noise has aggravated. In addition, fine dust and the pandemic have increased social demand for better air quality indoors. Accordingly, Daewoo E&C has introduced measures to improve the quality of customized housing.

Reduction of Inter-floor Noise

DAEWOO E&C has developed a “Smart Triple Floor Structure” to reduce inter-floor noise, registered three patents (including two related patents), and acquired a performance certificate for the floor impact sound insulation structure (accredited floor structure).

We are reflecting the “Smart Triple Floor Structure” in the design of new apartment houses while developing a new floor structure with even better performance. We have conducted research and development for inter-floor noise reduction to further enhance the quality of life for consumers.

Improvement of Indoor Air Quality

Daewoo E&C possesses technologies for the measurement, analysis, and improvement of indoor air quality to actively respond to residents' demands for a pleasant indoor environment. Daewoo E&C has been recognized as a testing institute by the KOLAS International Testing Institute and is conducting inspections on materials applied to Daewoo E&C. In addition, we limit the use of natural stone materials that emit radon and conduct radon testing on the artificial stone materials used. In 2020, we developed a ventilation filter with enhanced antibacterial function in response to air quality issues and the spread of COVID-19. An ultraviolet light emitting diode photocatalyst filter that can remove harmful viruses has been applied to this filter, and commercialization is in progress.

STRENGTHEN ABILITY & WORK-LIFE BALANCE

Job Café at the Head Office

The two keywords for DAEWOO E&C's talent nurturing in 2021 were "Strengthen Ability" and "Work-life Balance".

We have established strategies and action plans for talent development to build a horizontal job system for nurturing employees' capacities, conducted customized competency training, and developed content for remote education to ensure continuity of education.

In addition, we hire core talent by diversifying our recruitment channels such as remote, full-time, and on-time recruitment. We also put a lot of effort into creating a pleasant corporate culture by improving employee welfare and promoting work-life balance.

2021 Business Performance

STRENGTHEN ABILITY

- Establishment of talent development strategies and action plans to build a horizontal corporate culture
- Provision of customized competency training: development of job-oriented curricula, improvement of leadership and global competency
- Diversification of recruitment methods to recruit talented people: remote, regular, and timely recruitment
- Ensuring the diversity of workforce: increase in the proportion of female workforce

WORK-LIFE BALANCE

- Corporate culture campaign: under the slogan "Boldly, Honestly, like Daewoo E&C"
- Acquired certification as a "Family-friendly Company": operation of various programs to support work-family balance

Aligning with UN SDGs



UN SDG 04

Ensuring access to quality technical and vocational education



UN SDG 05

Achieving gender equality and promoting the rights and interests of all women

Talent Development

Nurturing new employees into talents that fit the core values of the company and providing them with an appropriate career path matching their potential have a great impact not only on individual growth but also on corporate growth. Recognizing the importance of human resources, DAEWOO E&C has established and implemented new HRD strategies and action plans since 2022.

Strategies for Talent Nurturing

DAEWOO E&C aims to achieve the best value for stakeholders through its systematic talent development strategies.

Organizational Culture

Reboot of organizational culture
Taking a leap forward as a new Daewoo E&C by boosting employee morale and restoring self-esteem through organizational culture improvement

Reinforcement of job expertise (Upskill & Reskill)
Securing corporate competitiveness by developing job competencies of organizational members

Development

Provision of Timely Education (On Time)
Reinforcement of organizational commitment by providing development programs suitable for the life cycle of members

Reinforcement of regularity of education (All Times)
Improving productivity by providing training immediately upon demand

Core Values

Core Values	Challenge and Passion	Autonomy and Responsibility	Trust and Cooperation
Actions	<ul style="list-style-type: none"> • Don't be afraid of change and failure • Ask questions and find answers • Be passionate • Think and practice first 	<ul style="list-style-type: none"> • Be the master of your work • Actively accept powers and responsibilities • Follow the basics and principles • Finish what you have started 	<ul style="list-style-type: none"> • Help each other to achieve a common goal • Prioritize common values over individual values • Respect the other person's opinions and understand the other person's situation • Be confident in your words and actions

Customized Job Training and Competency Training by Level

DAEWOO E&C conducts job training to strengthen the employees' expertise in all business areas ranging from support divisions to worksites including everyone from the junior level to the senior level. In particular, we are in the process of developing a job-oriented education program rather than the existing position-oriented education program. We plan to provide employees with an appropriate career pathway with an educational roadmap customized for each job. In order to measure the effectiveness of education and training, we have developed an index and regularly conduct a survey after the end of education. We will provide high-quality education based on the survey results.

Job Training

Category	Unit	2019	2020	2021
No. of people who have completed education	Person	1,378	6,630	1,843
Total training hours	Time	20,853	11,984	8,212

Survey after the End of Training

Item	Score (5-point scale)	
	2021	2022 (1st)
Satisfaction with the training	4.56	4.82
Understanding of the training contents	4.56	4.64
Training hours	4.56	4.82
Business application	4.36	4.55
Training operation and service	4.60	5.00
Total average	4.53	4.77

Securing Continuity of Training

Daewoo E&C pursues a paradigm shift in the operation of training courses to prepare for the post-COVID-19 era and the New Normal. In addition, we offered real-time online classes, and an hybrid mode of online and offline class depending on the characteristics of training programs and made an effort to provide contents and training optimized for the online platform. To this end, we have established a "Barobaeum Studio" at the head office where remote training can be conducted when necessary, providing high-quality education.



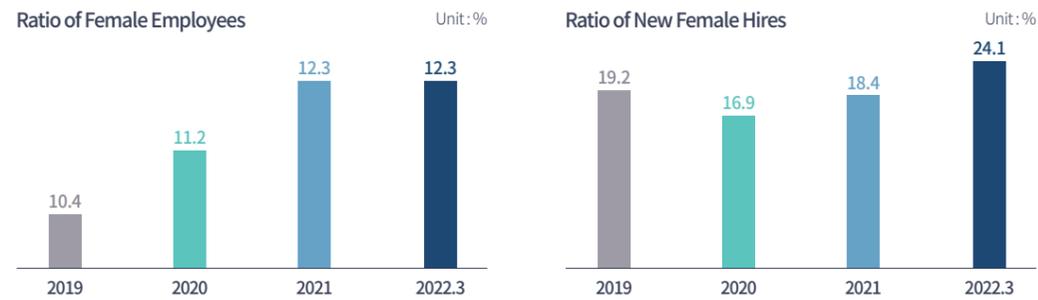
Barobaeum Studio at the Head Office

Expanding the Diversity of Workforce

DAEWOO E&C strives to expand the diversity of the organization's workforce by providing fair and equal employment opportunities to social minorities such as women, foreigners, the disabled, and national veterans.

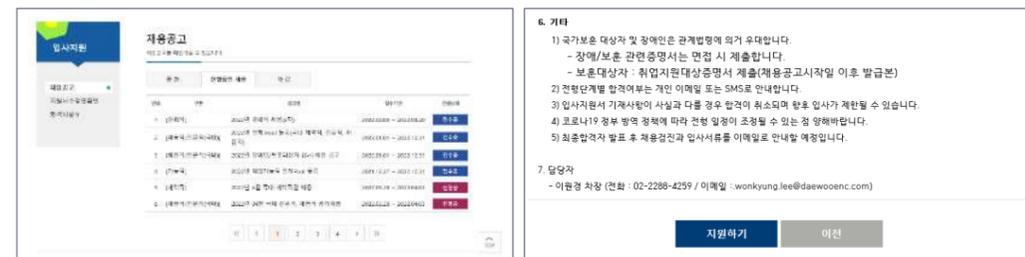
Nondiscriminatory Talent Recruitment (Elimination of Gender Discrimination)

The construction industry has traditionally been perceived as a male-dominated industry, but DAEWOO E&C has expanded the proportion of female workers by hiring talented women, breaking away from stereotypes about gender. The proportion of new female recruits hired through public recruitment over the past three years has increased from 16.9% in 2020 to 24.1% in 2022. We will continue to pursue fair recruitment regardless of gender. In 2021, DAEWOO E&C appointed its first female deputy managing director and worksite director. DAEWOO E&C is contributing to enhancing social equity through fair human resource management without discrimination based on gender.



Employment Preference for the Disabled/Patriots-Veterans

DAEWOO E&C is making various efforts to achieve the mandatory employment rate of 3.1% for the disabled. To this end, we have set a realistic goal of increasing employment of the disabled and established plans to hire at least 90 people over the next three years. In addition, we give preference to relevant applicants in the recruitment process. Since January 1, 2021, we have recruited people with disabilities and national veterans where possible.



Compliance with Local Labor Laws

Daewoo E&C is making various efforts to comply with local labor laws when conducting overseas projects. We analyze the labor laws of the countries where the project is conducted and use standard labor contracts that reflect the labor laws of each country.

Daewoo E&C plans to continuously conduct on-site investigations to understand the labor laws followed by each country in advance so that we can prevent any disputes and complaints about violations of labor laws.

Fair Performance Evaluation

Personnel evaluation for contract workers and professionals is conducted once a year. The results of evaluation are considered for renewal of the hiring agreement, promotions, and position. In the case of fixed-term employees, the contract period is fixed due to the nature of the work, and there may be disadvantages due to the difference in the evaluation period. To address this problem, we plan to conduct the evaluation twice a year in the first and second half of each year from 2022.

Equal Compensation for Male and Female Workers

Given the nature of the construction industry, the employment rate of female employees is lower than that of male employees. However, DAEWOO E&C strictly prohibits discrimination based on gender in the compensation and working conditions offered to its employees. We emphasize the role of women and give them responsible positions such as executives, workplace managers, and team leaders so that they can actively participate in the work. We provide female workers with a lot of supports so that they can serve as a productive member of the company. In terms of remuneration for female employees, the same performance-based compensation policy is applied. While the remuneration is based on the same salary table as that of males, there is an individual difference based on job, age and evaluation results. The promotion system also applies the same evaluation criteria as male employees for fair competition. As of 2022, DAEWOO E&C has one female executive, three team leaders, and one workplace manager. The management is eager to listen to their opinions.

Corporate Culture Campaign

Daewoo E&C regards innovation in corporate culture as a major growth engine for the company, and conducts in-house campaigns to enhance corporate value and improve employee awareness. In order to deliver the campaign message in an effective and continuous way, we maintain DAEWOO E&C's unique identity, but add novelty in the ways of expression to gain employees' sympathy and to encourage changes in behavior. In 2021, a total of nine campaigns (including teasers) were conducted under the slogan "Boldly, Honestly, like Daewoo E&C" and with the 5S (Satisfaction, Smart, Share, Sustainability, Safety) of the Corporate Culture Committee, an in-house organization, as the detailed topics.

We delivered a concise but powerful and pleasant message, and used illustration that fits the message. We produced posters and encouraged all employees to participate in the campaign through intranet and electronic bulletin board postings, and in-house broadcasting.



Operation of PRUGIO Daycare Centers

Daewoo E&C opened "PRUGIO Daycare Center" in 2016 to support work-family balance and childcare responsibilities. The daycare center is open from 7:30 in the morning to 7:30 in the evening. It reduces the burden of commuting time and is of great help to employees in cases where they are unable to find suitable childcare facilities or childcare assistants. PRUGIO Daycare Center is located inside the office building, so employees can leave their children with confidence. PRUGIO Daycare Center received an evaluation grade of A in 2020 in the childcare center evaluation system that is periodically evaluated by the government, and meets all criteria recommended by the national evaluation.



PRUGIO Daycare Center

Anti-smoking Campaign & Clinic for Daewoo E&C Employees

Daewoo E&C operates an in-house anti-smoking campaign and clinic every year as part of its efforts to improve its employees' health. In 2021, Daewoo E&C operated a remote mobile smoking cessation clinic in cooperation with the Jung-gu Public Health Center. Applicants received phone consultations once a week with a smoking cessation counselor at Jung-gu Public Health Center, got encouraging text messages, and evaluated their nicotine dependence. Various smoking cessation aids and nicotine replacements were also provided. A total of 80 people participated in the clinic, and 35 of them succeeded. Rewards were provided to employees who successfully quit smoking after 3 months. Daewoo E&C plans to carry out various activities to improve its employees' health through continuous in-house anti-smoking campaigns.



Daewoo E&C's 2021 Anti-smoking Campaign

Operation of Cafeteria

Daewoo E&C provides nutritious food and beverages to provide employees with welfare benefits and promote the health of employees. We provide menus to promote the health of our employees, offering various choices by reflecting social trends and individual tastes, offering a variety of convenience meals, healthy meals, healthy packs, and salad packs. In addition, various events are held in the cafeteria so that employees can communicate with each other. In doing so, we strive to improve the satisfaction of our employees.



Daewoo E&C's Cafeteria

Workspace for Agile Communication

Building a workspace in a suitable environment where smooth communication can take place is an essential task in the present era where rapid innovation is required. Daewoo E&C is enhancing synergy between departments and headquarters by expanding the physical space for collaboration. The 12th floor of the headquarters is designed for meetings of various sizes, from conferences to small meetings, and is equipped with video conferencing facilities and state-of-the-art equipment to communicate with personnel participating in overseas projects.

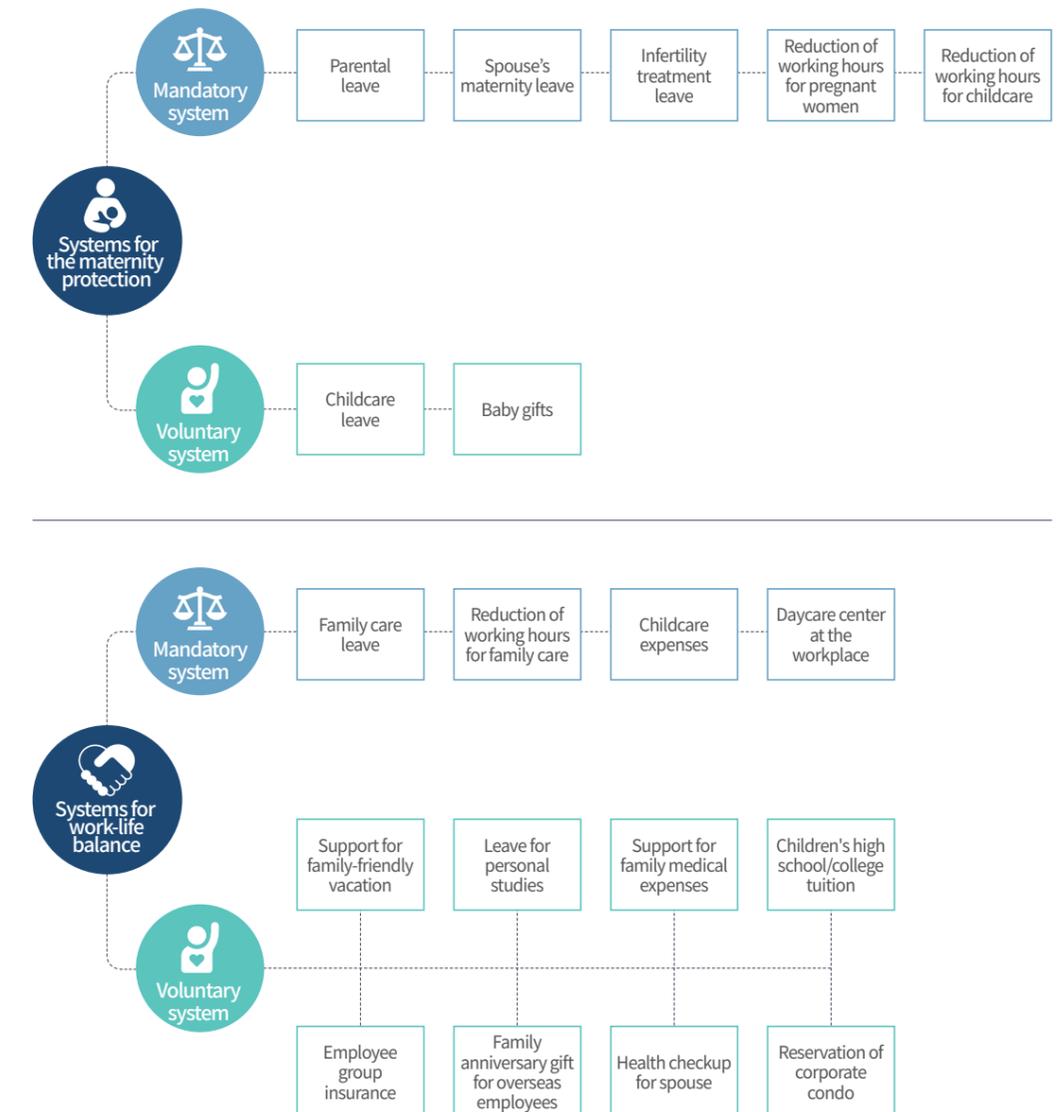
We run the Employee Welfare Fund in Enterprise in accordance with the Framework Act on Labor Welfare and its enforcement ordinances and enforcement rules in order to support the welfare of DAEWOO E&C's employees. Out of the contribution, 80% is used for tuition, medical expenses, and recreation facility for employees, and the remaining 20% of the fund is run as a loan for employees. The proceeds raised (interest income) are used for the activities of the current year to enhance employee welfare.

Council	8 members (4 company representatives, 4 employee representatives)
Executives	4 executives (2 company representatives, 2 employee representatives)
	2 auditors (1 company representative, 1 employee representative)

Acquisition of the Best Family Friendly Certification

In December 2021, DAEWOO E&C obtained the certification for "Best Family Friendly Company," provided by the Ministry of Gender Equality and Family. The Ministry grants the certification to companies and institutions with exemplary family friendly programs that promote work-family balance, assessing factors such as 'childbirth and child rearing support,' 'flexible work systems' and 'a family-friendly workplace culture' after verification. Since DAEWOO E&C obtained the certification for the first time among the construction companies in 2013, we have been making steady efforts to maintain a family-friendly workplace culture. Currently, we are implementing the "Childcare Leave System," which allows employees to take an additional year of leave beyond the legally guaranteed parental leave. We run a daycare center to support employees to manage their childcare responsibilities. In addition, we provide family-friendly vacations and support the use of leisure facilities every year to improve our employees' welfare. In the case of overseas workers who are away from their families, we provide gift certificates and mobile vouchers to their families on family anniversaries.

DAEWOO E&C plans to operate various systems so that employees can pursue better balancing of their work and family life. We will continue to develop systems to respond to social trends and employees' needs.





FAIRNESS & WIN-WIN PARTNERSHIP

2022 Shared Growth Meeting with Outstanding Suppliers

In 2021, Daewoo E&C was committed to ensuring fairness and promoting mutual growth with suppliers based on two keywords: “Fairness” and “Win-win”.

We considered various aspects such as environment, safety, society, and governance when selecting and evaluating suppliers. We improved competitiveness throughout the supply chain, promoted sustainable management, complied with the Fair Transactions in the Subcontracting Act and provided education on fair trade for employees.

In addition, we took the lead and extended practical support measures by creating a smooth cash flow through the Mutual Growth Fund, and strengthened win-win cooperation with SMEs.

2021 Business Performance

FAIRNESS

- Sustainability Assessment of the Supply Chain: Fair evaluation based on sustainability when selecting suppliers
- Strengthening compliance with the Fair Transactions in the Subcontracting Act: Faithful implementation of the four major fair trade practices stipulated by the Fair Trade Commission

WIN-WIN PARTNERSHIP

- Strengthening the Health and Safety Management of Suppliers: Increased the ratio of evaluation items for safety from 4% (2019) to 25% (2021)
- Cash flow support for suppliers: Operation of a shared growth fund worth KRW 20 billion
- Strengthening win-win cooperation with SMEs and identifying and utilizing excellent local suppliers

Aligning with UN SDGs



UN SDG 08

Inclusive and sustainable economic growth

Promotion of Win-win Management with Suppliers

There is no company that can create the best value on its own. In particular, the construction industry is a business area where numerous business partners with shared interests work together, and construction companies should consider measures to increase the value of fairness and win-win growth. Daewoo E&C is inducing sustainability value enhancement led by the value chain, through conducting sustainability assessments for the supply chain. In addition, the company reviews applicable laws to prevent risks related to the Fair Transaction in Subcontracting Act, and continues to prepare practical measures to extend safety and financial support for suppliers.

Sustainability Assessment of the Supply Chain

In order for a supplier to participate in Daewoo E&C's bidding, it must go through the “Certificate of Integrity” approval process when participating in the first bid. Daewoo E&C conducts monthly monitoring to confirm the actual implementation status and encourages suppliers to practice sustainable values. Daewoo E&C enhances competitiveness throughout the supply chain by considering environment, safety, society, and governance when selecting and evaluating suppliers, and encourages suppliers to promote sustainability management. Daewoo E&C cancels the registration of suppliers if it is determined that a serious problem has occurred due to insufficient environmental management at the worksite in environmental terms; or if a serious accident (one or more deaths, etc.) or serious injury occurred or safety accidents are covered up in safety terms. In social terms, Daewoo E&C restricts a supplier from bidding or terminates transactions with a supplier if the supplier has not paid workers for a long period of time or violates the Fair Transactions in the Subcontracting Act/Labor Act/Framework Act on the Construction Industry, etc. In terms of governance, we are working hard to strengthen the supplier's management status and corporate governance by considering the supplier's financial soundness such as credit rating and debt ratio, the number of patents/ISO certifications, establishment and operation period, license holding period, and whether the headquarters and CEO support worksites, etc. Conversely, we provide benefits such as low-interest loan support, private contract and bidding option, and 50% reduction in contract performance guarantee to excellent suppliers selected through comprehensive evaluation, and we plan to significantly expand these benefits.



Strengthening Compliance with the Fair Transaction in the Subcontracting Act

Daewoo E&C ensures that the four fair trade practices enacted and revised by the Fair Trade Commission are faithfully reflected in our fair trade guidelines and internal procedures related to contract signing to block unfair trade practices at the very roots. We protect all assets, including intellectual property rights, of suppliers in accordance with the procedures.

We use Standard Subcontractor Contract for all subcontracting for construction works and construction materials as of 2021. We protect the subcontractors' rights and interests and comply with The Fair Transactions in the Subcontracting Act by receiving the subcontractor's warranty after completing a contract.

In addition, we designate the subcontract payment for construction work on the 10th of the following month, and utilize NOMUBI.COM, a subcontract payment system linked to financial institutions, to prevent delays in the payment of workers' wages or equipment and materials costs.

Strengthening compliance with The Fair Transactions in the Subcontracting Act



Daewoo E&C conducts training for employees to establish proper relationships with subcontractors and suppliers. In 2021, online compliance training was conducted to help employees better understand the Fair Transactions in the Subcontracting Act and to educate them about relevant cases (Sep. 29 – Oct. 19, 2021, a total of 5,346 people completed training).

In addition, we operate a cyber Audit office / Ethics Help Line on the Daewoo E&C's website so that anyone can report unethical transactions/practices anonymously.

Training on Fair Trade for Employees

Cyber Audit Office / Ethics Help Line
www.daewooenc.com/customer/report/index

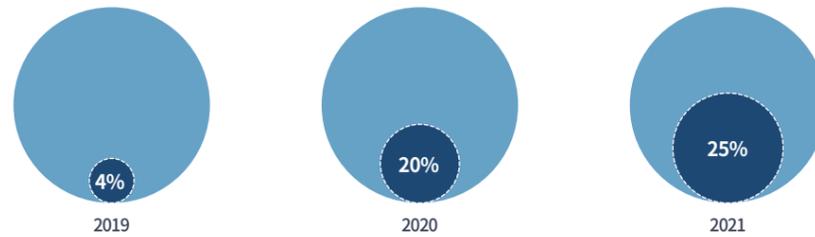
Enhanced Health and Safety Management of Suppliers

Daewoo E&C has declared company-wide safety innovation to strengthen support for the safety management of suppliers. When registering a supplier, we verify its eligibility through safety screening (accident rate, management training, system certification, etc.). We added safety evaluation to the quarterly comprehensive evaluation to evaluate the safety risks as well as the construction capabilities of suppliers in a systematic manner.

Specifically, in the comprehensive evaluation of suppliers, the proportion of safety evaluation items was increased from 4% in 2019 to 20% in 2020 and 25% in 2021. We secured the independence and objectivity of the evaluation by excluding the worksite director from conducting the safety evaluation.

When the safety evaluation scores of a supplier increase, the results are reflected in the bidding rating. We are building a system to increase business with suppliers with excellent safety management performance. Through this, we expect that our suppliers will be empowered to raise safety awareness among their employees, minimize accidents, and prevent enormous damage from accidents. In addition, we added suppliers' health and safety management expenses to our safety budget. Through this, suppliers will be able to voluntarily and actively maintain and improve worksite safety.

Ratio of safety evaluation criteria in the comprehensive evaluation of suppliers



Supplier evaluation process

Step 1	Step 2	Step 3	Step 4	Step 5
Evaluation request by field	Field evaluation - Person in charge of field - Field manager - Head of relevant team	Comprehensive evaluation - Evaluation results for worksite/safety/head office are reflected (3 years)	Progress of evaluation and deliberation - Determination of bidding grade - Selection of an excellent supplier	Information on evaluation results
	Safety evaluation - Safety manager - Construction manager			
	HQ evaluation - Relevant team at HQ			

Daewoo E&C runs the Shared Growth Fund to create a smooth cash flow for suppliers with relatively weak financial footing. This fund was created by signing an agreement with Korea Development Bank in 2012. As of 2021, a fund worth KRW 20 billion is being managed.

When a supplier of Daewoo E&C is approved for a shared growth fund loan, they can automatically receive a 0.55% interest rate cut, and KRW 19.5 billion out of the KRW 20 billion of the fund is currently being used to support suppliers.

In 2022, we have decided to significantly expand the real benefits of the mutual growth fund. We intend to reduce the size of the fund, but increase the discount rate to 2.05% to improve the cash flow for suppliers.

Cash Flow Support for Suppliers

Reinforcement of Win-win Cooperation with SMEs

DAEWOO E&C plans to donate a win-win cooperation fund of KRW 2.3 billion to a cooperative association comprised of large companies, SMEs, and the Agricultural and Fishery Cooperation Foundation. The donated funds will be managed by the foundation to promote technological cooperation among SMEs, create new jobs, close the wage gap between companies, and support innovative start-ups. In doing so, we intend to promote win-win cooperation and shared growth with our suppliers as well as various SMEs in each industry.

Voluntary Protection of Local Suppliers

Due to various complex reasons such as a prolonged downturn in the domestic construction sector and a decrease in local construction orders, the local construction industry has shrunk and local companies are facing difficulties. Daewoo E&C has selected bidders at random since 2019 to ensure transparent procurement, so it was not in a position to select a local supplier as a bidder. In order to revitalize the local construction industry, we are upgrading various systems to improve the rate of subcontracting with local companies and increase the use of local materials/equipment/manpower. Initially, the strict procedure required for manual selection of local suppliers was applied but the procedure has been improved so that the person in charge of bidding can select some of the suppliers to participate in manual selection bidding first. In addition, in order to identify and utilize excellent local suppliers, we regularly visit sites to listen to opinions, and attend various local government meetings and events to consider ways to improve the rate of subcontracting with local companies, and to find improvements for mutual cooperation.

Support for Suppliers to Strengthen Their Quality Management Capabilities

We provided a separate quality education program for 66 new equipment suppliers who partnered with Daewoo E&C over the past year in order to help them better understand the process and procedures of quality and supplier evaluation, and to improve quality control capabilities, ensuring that the contract could be maintained continuously. In addition, we reviewed quality technical specifications for equipment suppliers in the plant division, established manufacturing and quality requirements, with which we provided education to suppliers so that they could comply with established quality standards. Not only that, we provided training on quality requirements at meetings before production inspection so that contracted suppliers could manufacture equipment that meets the delivery standards.

Support for Suppliers to Strengthen Their Environmental Management Capabilities

DAEWOO E&C conducts construction jointly with suppliers at many worksites. In order to fulfill our responsibilities as the original contractor and promote win-win management, DAEWOO E&C supports suppliers to strengthen their environmental management capabilities by providing assistance with environmental management activities, conducting environmental education, and implementing a reward system for suppliers with excellent environmental performance.

Environmental Starter Support Program for Worksites in the Early Stages of Construction

As part of the Environmental Starter Support Program, we visit worksites in the early stages of construction within four months of starting construction. In doing so, we establish a system and provide support to prevent violations of environmental laws and regulations and to improve awareness regarding environmental management among workers at worksites. Through the program, DAEWOO E&C helps suppliers to promote environmental management, and provides environmental education. In 2021, the program was conducted at 51 worksites.

Support for Environmental Education for Suppliers

Daewoo E&C conducts environmental education to strengthen environmental management capabilities among suppliers. In doing so, we prevent the violation of environmental laws and regulations and improve awareness of environmental management among on-site workers. In 2021, a total of 88 companies and 94 people received environmental education.

Incentives for Suppliers with Outstanding Environmental Management Performance

The importance of environmental management in a construction worksite cannot be overemphasized. In addition to the existing reward program for suppliers with excellent environmental performance, DAEWOO E&C plans to provide incentives for suppliers with an excellent track record of environmental management from 2022. Targets of these incentives include suppliers who newly introduced ISO14001 Environmental Management Certification, received awards for excellent environmental performance, and participated in the Best Practices Contest for Construction Environment Management, etc.

DAEWOO E&C sets a new standard for eco-friendly housing culture, conducts sustainable business by securing competitiveness in the field of new renewable energy, and promotes win-win management through social contribution activities and the training of talents.

At Daewoo E&C, all employees strive to create an ethical corporate culture for transparent and rational management.

PERFORMANCE SUSTAINABILITY



Environmental	90
Social	92
Governance	98

Choji Station Major Town Prugio

Environmental

Worksite Environment Management

At each worksite of DAEWOO E&C, worksite environment management is conducted in accordance with the environment-related laws and regulations and internal guidelines, titled the Practical Guide for Worksite Environment Management. The head office strives to create eco-friendly workplaces through monthly environmental monitoring, review of the environmental system, and environmental patrol.

Management of Dust Scattering

Before the start of construction, we report any project that has the potential to generate dust scattering, and install facilities such as washing facilities for construction vehicles, movable high-pressure water sprinklers, sprinklers, movable dust collection facilities, sprinkler trucks, dust proof covers, etc. to reduce the scattering of dust. There are no worksites that are operating an air discharge facility that discharges air pollutants such as NOx and SOx. We install a fine dust concentration meter at the worksites and disclose and monitor the measured values in real time to reduce the emission of scattering dust and fine dust.

Management of Noise and Vibration

We report before the start of construction and minimize noise and vibration by applying low-noise and low-vibration construction methods, using low-noise and low-vibration construction machines, restricting the use of old construction equipment, installing sound-absorbing soundproof walls at the boundary of construction sites higher than the legal standard, and installing movable soundproofing walls. We monitor the noise level by installing a noise meter in worksites, and disclose the real-time noise level. For worksites that are expected to generate noise, the construction noise monitoring system (DW-CNMS) developed by DAEWOO E&C Research Institute is applied to predict the noise level, and based on the prediction results, measures are taken to reduce noise.

Waste Management

DAEWOO E&C strictly manages waste at every stage from generation to disposal in order to minimize the environmental impact of waste generated at worksites. We classify wastes generated during construction work in accordance with relevant laws and regulations, and install storage facilities appropriate for the characteristics of wastes to separate and store wastes by type and method of treatment. We have established a system that can monitor the status of waste treatment in real time by linking the Korea Environment Corporation with the company's waste management system. We developed a mobile application (One Touch HSE-Q) that allows workers to fill out an electronic handover form from anywhere for the first time in the construction industry and have used the system since 2015. We have expanded education on construction waste for domestic worksites, prepared and distributed eight types of teaching plans, and provided construction waste education at worksites on a quarterly basis.

Education on Worksite Construction Waste in 2021 (Unit: time)

Total	Business division		
	Civil	Housing & Building	Plant
669	231	409	29

Rate of Waste Recycling

DAEWOO E&C entrusts construction waste to an intermediate processing company or recycling company. We make sure that waste is incinerated or landfilled only in unavoidable cases, striving to maximize the recycling of waste.

Waste Recycling Rate (Unit: ton)

Category	2019	2020	2021
Waste discharge*	597,800	532,854	772,730
Amount recycled**	595,525	529,156	770,613
Recycling rate	99.62%	99.31%	99.73%

* Amount of waste generated at construction sites, business places, and designated waste

** Amount of waste entrusted to intermediate processing (shredding/grinding, dewatering/drying, etc.) and recycling companies

※ Data changed for 2019 and 2020 due to changes in the aggregation criteria

Management of Suppliers Related to Waste

Since 2011, we have discovered companies with excellent waste treatment performance and registered them as suppliers to dispose of waste generated at worksites. Waste disposal companies undergo evaluation every two years. Companies with poor evaluation results are given warnings or excluded. Warnings are reduced for companies with excellent evaluation results. As of 2021, a total of 43 companies are registered as waste treatment companies. We strive to identify new companies every two years, and plan to discover new companies every year to handle waste properly and improve work efficiency.

Water Quality Management

Wastewater generated during the construction process is discharged at the discharge facilities installed and operated by suppliers. There are two worksites where DAEWOO E&C has installed and operated wastewater discharge facilities under its direct management. Those facilities are entrusted to a specialized company.

Temporary drain and settling basin are installed to deposit and drain underground water or storm water generated during the construction process to prevent muddy water from entering public waters. Sewage generated from temporary offices at worksites is discharged through septic tanks or wastewater treatment facilities that are entrusted to a dedicated company in compliance with effluent standards.

Operation of Wastewater Discharge Facilities in 2021

Category	Legal standards (ppm)	Concentration (ppm)	Discharged amount (m ³)
pH	5.8-8.6	5.8-8.5	25,437
SS	Under 40	5.5-17.8	25,437
COD	Under 10-30	1.0-3.0	25,437
BOD	Under 40	1.2	2,898
Total nitrogen	Under 30	1.7	2,898

Management of Hazardous Chemicals

Management of Hazardous Chemicals DAEWOO E&C uses general chemicals such as poly ferric sulfate and aluminum sulfate as pH adjusters when operating a wastewater discharge facility. We strictly manage hazardous chemicals in accordance with the Chemicals Control Act to prevent pollution of the surrounding environment due to chemical spills, leakage accidents and leakage of hazardous chemical substances.

We ensure that hazardous chemicals such as paints and waterproofing materials used by suppliers are handled by legitimate and transparent methods at every stage. In particular, we replaced facilities that treat high concentrations of hazardous chemicals with eco-friendly alternatives to reduce the risks related to hazardous chemicals. Health and safety managers at worksites perform daily inspections of workplaces that handle hazardous chemicals and storage areas. Worksite environment managers monitor the storage status of hazardous chemicals and check for leaks at least once a week. Wastes containing hazardous substances such as waste oil generated during construction are classified as designated wastes according to the Waste Management Act. Those wastes are stored in a designated waste storage facility that is installed separately, and disposed properly. DAEWOO E&C submits a Chemicals Statistical Survey Table regularly. We transparently disclose the management status of hazardous chemicals by registering the information with the statistical investigation report system of the Chemical Safety Agency under the Ministry of Environment. DAEWOO E&C will make steady efforts to ensure chemical safety.

Consumption of Hazardous Chemicals (Unit: ton)

Category	2020	2021
Sodium hydroxide (25%)	605.96	0
Sodium hydroxide (33%)	671.59	0
Sulfuric acid (50%)	21.01	0
Total	1,298.56	0

※ In 2021, a wastewater discharge facility was operated by replacing hazardous substances such as sulfuric acid with general chemicals (poly ferric sulfate, aluminum sulfate).

Amount of Designated Waste Discharged

(Unit: ton)

Category	2020	2021
Waste oil	12.64	5.50
Waste paint	1.50	0.80
Others	-	4.75
Total	14.14	11.05

Ministry of Environment - Voluntary Agreement to Reduce Fine Dust

Social concerns about the damage to public health caused by fine dust have grown in recent times. DAEWOO E&C took the lead in protecting public health and reducing fine dust by signing the "Voluntary Agreement for Response to a High Concentration of Fine Dust" and the "Voluntary Agreement to Reduce a High Concentration of Seasonal Fine Dust" in 2019. When directives for emergency reduction measures are issued according to the agreement, we limit the use of old construction equipment and adjust the construction hours at construction sites that generate a lot of fine dust. In 2021, 30 worksites implemented the voluntary agreement to respond to a high concentration of fine dust, introducing activities to reduce fine dust. We submitted implementation results to the Ministry of Environment twice a month.

Conservation of Biodiversity

Daewoo E&C strives to minimize the destruction of wild animals' habitats during the construction process. Before construction, we assess environmental impact, identify endangered animals and plants around our business places, and establish a plan to minimize damage to the ecosystem. In accordance with the Protection of Wild Fauna and Flora Act, we have established behavioral guidelines to protect wild animals and plants and reflected them in the construction process. We are continuously striving to preserve biodiversity in areas where we operate and near the construction sites.

Construction of Terrestrial and Aquatic Biotope in the Complex

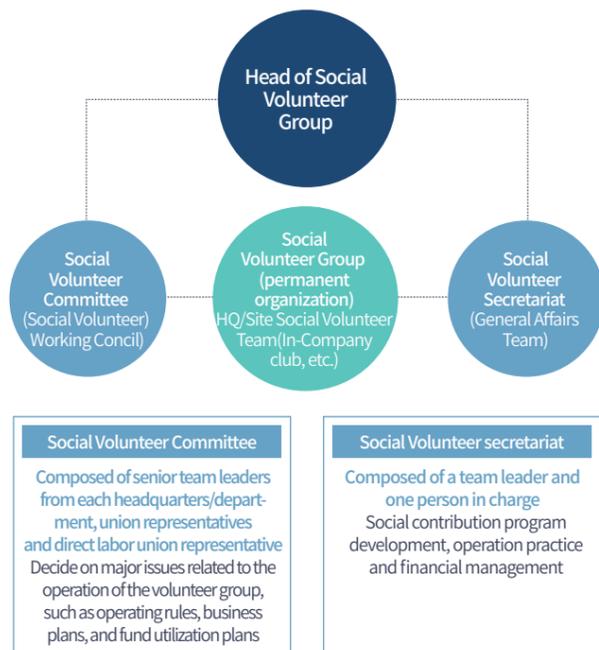
We build parks and green spaces to protect biodiversity and secure habitats for wild animals and plants in the project sites. In addition, we build terrestrial and aquatic biotopes on the outskirts of the sites and in the green areas of the interior landscaping where resident interference can be minimized so that the green areas and the blue axis are connected and the ecosystem can be maintained.

Region	Legally protected species					Activities
	Amphibian, reptiles	Mammals	Birds	Fish	Terrestrial plants	
Four worksites in Gyeonggi-do	Seoul pond frog, narrow-mouthed toad	-	-	-	-	Migration of protected species
Four worksites in Gyeongsang provinces	Kori salamander, narrow-mouthed toad	Five species including marten, otter, and wildcat	Five species including eagle and mandarin duck	White-nose loach, large striped bitterling	Prickly water lily	Implementation of protection measures according to the characteristics of the species based on advice from experts
Two worksites in Jeolla provinces	-	Coreoperca kawamebari	Oystercatcher, kestrel	-	-	Establishment of ecological pathways, and securing habitats
One worksite in Chungcheong provinces	Three species such as Seoul pond frog and narrow-mouthed toad	-	-	-	-	Installation of protective fences, capture/relocation

Social

Social Contribution System

DAEWOO E&C, as a LIFE partner who wants to serve customers with an affluent life and realize the best value, is making every effort to enhance mid- to long-term value for customers and local communities under the vision of “Greater love with greater sharing” for social contribution. We are doing everything we can to fulfill our responsibilities as a member of society and contribute to the development of the local communities. Through the “DAEWOO E&C Social Volunteer Group”, which was founded in 2007 encompassing the head office organization, domestic and foreign worksite organizations, and social service teams, DAEWOO E&C’s employees conduct various relay volunteer activities every year to improve the environment, donate talent, and carry out sharing activities for the disadvantaged. On the internal front, we conducted volunteer activities to create a green environment together with the Jung-gu Office in Seoul near our headquarters. We plan to continue cooperation with local residents and listen to their opinions to conduct projects that support coexistence with the underprivileged. On the external front, we will work with global NGOs in various fields to fulfill our social responsibilities, transferring technological knowhow and providing supports to improve medical facilities, education and the living environment for countries such as Vietnam, Nigeria, and Iraq.



Social Contribution Activities

Habitat House Repair for Hope, Residential Environment

Improvement Project for Descendants of Independence Patriots

Since 2018, DAEWOO E&C has been working with Habitat to implement “House Repair for Hope”, remodeling old facilities and improving the living environment for the benefit of the underprivileged. In 2021, we expanded the project to include Vietnamese nationals in Korea and descendants of independence patriots, improving poor housing conditions and engaging in inclusive and equitable social contribution activities.

In addition, the families of Daewoo E&C employees have engaged in volunteer work with UNICEF, MIRAL Welfare Foundation, and Eastern Social Welfare Society, and donated the proceeds from the bazaar held with various social enterprises. We are also promoting the Urban Green Environment Creation Project in collaboration with the Seoul Metropolitan Government and Jung-gu Office through the Deoksu Middle School greening project.



2021 Daewoo Family Blood Donation Campaign

DAEWOO E&C carries out blood donation campaigns as part of its company-wide social contribution activities every year. The “2021 Daewoo Family Blood Donation Campaign” was held over a period of eight days from May 24 to 31, 2021 to supply blood for COVID-19 treatment. A total of 122 employees from the head office and worksites participated in the campaign. DAEWOO E&C will continue to carry out its blood donation campaign every year.



ESG Challenge to Save the Earth _ Plogging Together

DAEWOO E&C carried out two campaigns to respond to the issues caused by climate change and protect the planet with the university student ambassadors (Dae Daehong). First, we carried out a campaign called “ESG Challenge to Save the Earth” to encourage people to participate in challenges that can be easily practiced in daily lives such as using reusable products and emptying unnecessary email space. A total of 1,414 people participated in the challenge and joined the efforts to protect the environment. Second, we conducted a campaign called “Plogging Together” that encourages people to pick up trash while jogging. To this end, we produced and distributed Daewoo Plogging Kits. A total of 1,000 employees and citizens participated in the campaign, conducting 1,594 sessions of plogging. DAEWOO E&C and its university student ambassadors (Dae Daehong) will continue to devise and carry out various activities to protect the earth.



Contactless Volunteer Activities with Family Members

- Delivery of Masks and Donations

Since 2020, DAEWOO E&C has been delivering cotton masks and donations to the Eastern Social Welfare Society to support families that are directly affected by the prolonged COVID-19 pandemic. In 2021, about 290 employees of DAEWOO E&C and their families participated in the campaign. They made 300 masks and handkerchiefs by themselves and delivered them to the Eastern Social Welfare Society along with a donation of KRW 5 million from DAEWOO E&C. The masks and donations were given to children waiting for adoption at the Eastern Social Welfare Society. DAEWOO E&C will continuously carry out activities to convey warmth to neighbors and realize the value of sharing.



Global Social Contribution

DAEWOO E&C identifies the needs of local residents and provides supports through local community networks and international relief organizations in the countries where the company has a business presence.

Daewoo E&C has provided various supports through overseas branches and worksites. In Morocco in from 2012, we conducted 600 cataract and strabismus surgeries and offered treatment to 7,000 outpatients, and opened a local training school to educate the local people, helping them become self-reliant. In Oman, we planted 440 trees to celebrate the Environment Day and conducted road maintenance. In Iraq, we provided 20,000 COVID-19 test kits and medical supplies, established a temperature monitoring system, and repaired an intensive care unit. In 2021, we worked with Vision Care and performed a total of 168 cataract surgeries for the Nigerian people; donated 150 boxes of Food Packs to a community located at the Duqm worksite in Oman to celebrate Ramadan; conducted beach cleaning near our worksite to commemorate the World Clean Up Day in Kuwait.

We will continue to work with international relief organizations to provide support in countries like Vietnam, Nigeria, Iraq, Mozambique, and Oman to develop the local communities and promote health and education in those communities, improving the living conditions, rebuilding education facilities for children, and offering healthcare supports.



Social

Support Project for Vietnamese Nationals in Korea to Commemorate the 30th Anniversary of Establishing Diplomatic Ties between Korea and Vietnam

DAEWOO E&C is carrying out a project designed to improve the residential environment for Vietnamese nationals in Korea, providing them with a safe and sanitary home environment to commemorate the 30th anniversary of the establishment of diplomatic ties between Korea and Vietnam. We plan to build a shelter in Wonosa, a Vietnamese temple located in Cheonan, Korea, for the Vietnamese nationals and provide them with consultations.



<Lighting Children>, Global Energy Sharing

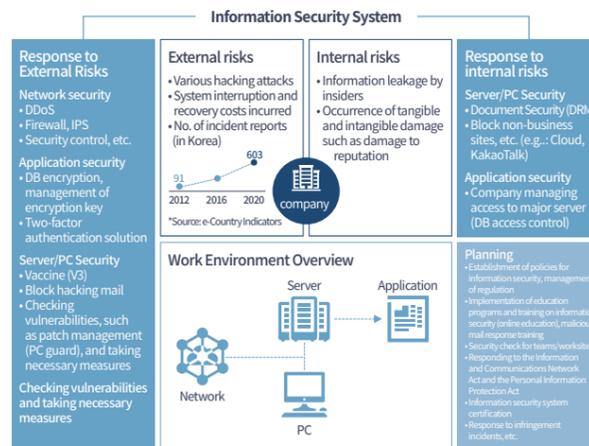
In December 2021, DAEWOO E&C worked with the MIRAL Welfare Foundation, an NGO for international development cooperation, to carry out eco-friendly global social contribution activities for children in energy-poor countries. For the campaign, the families of DAEWOO E&C's employees assembled a solar lantern by themselves. About 170 employees assembled 313 sets of lanterns. The lanterns were delivered to energy-poor countries in Africa. DAEWOO E&C will continue to carry out various social contribution activities working with its employees and their families in order to communicate and pursue coexistence with the local people both at home and abroad.



Information Security

Daewoo E&C operates a stringent information security system as shown below, to protect personal information and trade secrets from cyber threats, and to maintain business continuity by ensuring the confidentiality, integrity, and availability of these information assets.

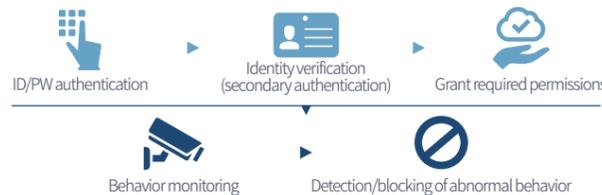
Information Security System



Implementation of Zero Trust Security System

Daewoo E&C is conducting various activities for information security with the goal of improving the system in all directions to implement a Zero Trust security system in 2022. We intend to build a security system that can respond to any threats by granting only minimal access under the principle of "Trust Nothing." In doing so, we aim to conduct our businesses in a stable manner, achieve our vision for the future, and protect the values of DAEWOO E&C and its customers.

Zero Trust Security Model



Category	Unit	2019	2020	2021
No. of customer information leakage incidents	Case	0	0	0
No. of customers affected by incidents of information leakage	Person	0	0	0
Amount of monetary damage caused by leakage of customer information	KRW 1 million	0	0	0

Raising Awareness of Information Security and Strengthening System Security

In 2021, Daewoo E&C focused on the following activities with the goal of improving the system and raising awareness regarding information security. In addition, as the information security organization is operated directly under the CEO, the independence of the organization in charge of information security has been strengthened and the organizational structure came to be more contributive to effective information security activities.

Activities to Raise Information Security Awareness

Information Security Education and Training

- Online video training: 2 times a year
- Mock training to respond to hacking emails: 4 times in 2021
- Frequent notices of major security issues and cautions: 10 times a year

Inspection of Information Security at the Head office and Worksites

- PC security status check, inspection/trainings of electronic document management status
- Inspections were conducted for 7 teams in 2021
- Inspections are scheduled for 30 teams and 10 worksites in 2022

Frequent and Regular Monitoring to Prevent Information Leakage

- Monitoring the history of unlocking encrypted documents
- Monitoring of personal information inquiries
- Monitoring of server and PC virus infection

Enhancing System Security

Operation of the Security System

- Application of new security solutions
 - In-house construction of a DDoS defense system
 - Advancement of the DB encryption system
 - Introduction of an additional system to prevent intrusion into the data center

Security Check of the Business System

- Security training and inspection for new IT projects
- Vulnerability check for new servers and systems
- Vulnerability check for the development system source and web

Mock Training to Respond to Incidents of Intrusion

- Mock server penetration training: 5 servers
- Web vulnerability check: 30 operating web systems

Securing Reliability of the Information Security Management System

DAEWOO E&C acquired ISO 27001 Information Security Management System certification in 2013, and has maintained the certification since then. Through the certification verification process, we have established an information security system that meets international requirements, and are pursuing continuous improvement of information security system by keeping the hard work to address identified weaknesses.

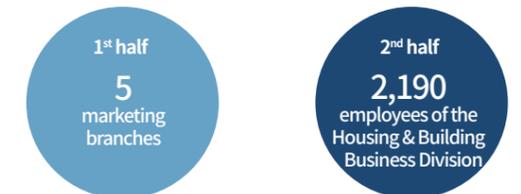


Protection of Personal Information

DAEWOO E&C inspects the personal information management system once a year under the supervision of the Chief Privacy Officer (CPO) to protect personal information. We plan to constantly improve the system and the organizational structure of the personal information protection together with inspection activities in order to clarify the roles of the person in charge of personal information protection, and to further clarify the responsibilities and authority of each organization so that legal requirements are always met when using personal information.

As cyber threats to various IoT devices have increased, we will do our best to protect customer information from Smart Home hacking so that customers' valuable privacy is protected.

Record of personal information inspection



(Inspection was conducted to see the PC security status and whether documents including personal information are encrypted)

Privacy policy
www.daewooenc.com/guide/privacy

Social

COVID-19 Response

DAEWOO E&C's Response to COVID-19

DAEWOO E&C has run the COVID-19 Bulletin Board since February 2020. We provide guidance to employees on preventive measures and rules of conduct according to the stage of the COVID-19 crisis announced by the government.

Places and objects frequently used by employees, such as cafeterias, conference rooms, restrooms, elevators and main door handles, are disinfected regularly. We are stepping up quarantine efforts in the head office by providing hand sanitizers on each table and installing partitions.

We quickly respond to situations by collecting statistics on confirmed cases, and monitoring the situation at each business place (e.g. quarantine measures, shut down, etc.), and worksite.

Telecommuting

DAEWOO E&C has implemented telecommuting in its head office as the COVID-19 infectious disease crisis alert level remains "severe" and group infections have increased in Seoul and Metropolitan areas. Telecommuting has been introduced for people in high-risk groups designated by the Korea Disease Control and Prevention Agency. They include people with a weak immune system, pregnant women, those who are chronically ill, employees who need to take care of their children, etc.

Self-quarantine Facility

DAEWOO E&C uses its own facility "IBC Theoville" as a self-quarantine facility for employees who need to be isolated according to the quarantine law.

- Eligibility: Among the employees who must be quarantined by the quarantine authorities upon entry into Korea or foreign countries, those who are eligible for quarantine cost support.
- Content of support: Expenses incurred due to quarantine for 7-14 days

Examination Fee Support and Vaccination Leave

We have reduced the financial burden on our employees by subsidizing the testing fees for employees who have been tested for COVID-19 at home or abroad. In addition, we have implemented special paid leave for employees that need to receive COVID-19 vaccination. We encourage our employees to rest at home on the day of vaccination and in case of abnormal symptoms.

Improving Employees' Health by Providing Psychological Counseling Services

Since 2015, DAEWOO E&C has provided employees with mental health services through a platform known as "MIND CARE", in cooperation with Kangbuk Samsung Hospital. In particular, we have provided counseling for workers at domestic and foreign worksites who are away from their families due to COVID-19 and experiencing anxiety.

Starting 2022, in order to strengthen the mental health of employees suffering from the prolonged pandemic, we have expanded our cooperation with Kangbuk Samsung Hospital to provide remote medical consultation services to overseas employees.

Through this service, employees working abroad can receive a medical certificate and prescription in English, and get medicines locally through EMS from Korea. DAEWOO E&C spares no effort to ensure that its employees enjoy good health and psychological stability.



Business agreement with Kangbuk Samsung Hospital for contactless medical consultation service

Safe and comfortable "Home Visit Event" through Non-stop and untact service

In consideration of the safety for customers during the COVID 19 pandemic, Daewoo E&C is providing a "Non-stop and untact service" for Home Visit Event. Customers can participate the event without completing a contract confirmation procedure if they register their vehicle number when customers make reservations for this event through the homepage and application. And those who don't register their vehicle number can join the event with contract confirmation procedures with a drive-through way. Moreover, the notice via Kakaotalk, inspection agency service, application use for convenience, self-tour in the community/common area and complimentary sanitary kits are provided. Daewoo E&C is going to enhance customer satisfaction by conducting a safer and more comfortable "Home Visit Event" through a flexible contact/untact service in the post-COVID19 era.



Vaccine Supply for Mumbai Maritime Bridge Workers and Their Families in India

We have provided support for COVID-19 vaccination for workers and their families in overseas fields who are suffering from the re-spread of COVID-19 and the shortage of vaccines in the region.

* 2,000 workers at the Mumbai Maritime Bridge worksite in India and 1,000 members of their families concluded a business agreement for vaccine supply (CoviShield) with TATA Memorial Center; the worksite and GC office were converted into a CVC through cooperation with the project owner.



Vaccination recipients are waiting outside



Entry through the designated entrance



Registration of personal information at Government Portal



Measurement of temperature and blood pressure, and conduct questionnaire screenings



Vaccine inoculation



Observation of adverse reactions



Separate operation of emergency facility



Exit through the designated exit

Governance

Governance

DAEWOO E&C is governed by an independent and professional Board of Directors. Over half of the members of the BOD are independent directors. This has helped us to ensure rational decision-making and transparent, efficient management. In 2020, DAEWOO E&C enacted "Corporate Governance" in its Charter, stipulating governance principles and procedures such as shareholders' rights; duties and responsibilities of directors; protection of stakeholder rights; as well as the formation and operation of the Board of Directors and Audit Committee. DAEWOO E&C strives to establish a sound corporate governance structure based on its Corporate Governance Charter.



Functions and Roles of the Board of Directors

As the highest decision-making body, the Board of Directors takes decisions on matters stipulated in the laws and articles of incorporation and business practices, and supervises the execution of duties by the Board and the management. Through the fair and transparent operation of the Board, DAEWOO E&C seeks to promote efficient corporate management, to create shareholder value, and to strengthen trust with stakeholders by focusing on the balancing of interests among stakeholders.

Composition of the Board of Directors

The Board is composed of one Executive Director and four Independent Directors (as of April 2022). In 2021, an Independent Director was appointed as the Chairman of the Board under the Independent-representation system. In 2022, the CEO, who has a thorough understanding of the company's internal situation, was appointed as the Chairman of the Board. All Board members are committed to their role as a part of the highest decision-making body based on their expertise, practical experience, and the principles of mutual check and balance.

Composition of the Board

As of April 2022

Category	Name	Position	Responsibilities & Occupation
Standing	Baek Jeong-wan	Executive Director	- Corporate Management - CEO
Non-standing	Yoon Kwang-rim	Independent Director (Chairman of the Audit Committee)	- Accounting and Finance - CEO of H Industrial Co., Ltd.
	Kim Jae-woong	Independent Director (Member of the Audit Committee)	- Tax and Administration - Advisor of Gwangjang, a law firm
	Lee In-seok	Independent Director (Member of the Audit Committee)	- Legal Affairs - Attorney of Gwangjang, a law firm
	Kim Jae-joong	Independent Director	- Administration - Advisor of Kim & Chang, a law firm

Committees within the Board

The Independent Director Recommendation Committee and Audit Committee are delegated specific responsibilities by the Board for efficient decision making, bringing expertise and building up sustainable business operations. The Independent Director Recommendation Committee was established to ensure transparency, soundness and independence in recommending candidates for the position of Independent Directors. For this reason, the Committee is comprised of four Independent Directors. The Audit Committee, composed entirely of Independent Directors, oversees the entire process from decision-making to business practices to prevent corruption and conflicts of interest. Daewoo E&C also organizes an internal audit department to support the Audit Committee. Upon request, the internal audit department carries out its duties under the direction and supervision of the Committee. The nomination and denomination of the person in charge of the internal audit department are determined through discussion between the Committee and the CEO, while the person in charge is replaced upon approval of a resolution by the Committee.



Independence and Expertise of the Board

Independent Directors are appointed through a resolution of the general meeting of shareholders and selected among the candidates endorsed by the Board and the Independent Director Recommendation Committee. The Independent Director Recommendation Committee consists of five Directors, including four Independent Directors. In accordance with the Commercial Act and other applicable laws, Independent Directors stand apart from the company's executives and are involved in monitoring management activities and mediating opinions within the Board. In order to ensure the expertise of the Board, Daewoo E&C has appointed Independent Directors with professional knowledge and practical experience from various fields so that the business matters can be checked and monitored from the perspective of specialists and the stability of corporate management can be guaranteed.

Evaluation and Compensation for the Board

At Daewoo E&C, the Directors' compensation is determined based on the company's economic, social, and environmental management performance and the assessment of personal achievements, such as annual committee operations and activities. The annual general meeting of shareholders approves the Director's remuneration within preset limits, and the overall compensation status of Directors is made public in the business report and on the website. In 2021, the average per capita compensation was KRW 449 million (including unpaid Directors) for registered Directors, KRW 60 million for Independent Directors and KRW 64 million for members of the Audit Committee.

Composition of the BOD

Category	No. of people ¹⁾	Total remuneration (KRW 1 million) ²⁾	Average remuneration per person (KRW 1 million)
Registered Directors ³⁾	3 ⁵⁾	1,348	449
Independent Directors ⁴⁾	1	60	60
Members of the Audit Committee	3	191	64

1) Including retired Directors
 2) Including remuneration for registered Directors appointed or retired during the current period
 3) Excluding Independent Directors and members of the Audit Committee
 4) Excluding members of the Audit Committee
 5) Including unpaid Directors (Lee Dae-hyeon Other managing director)

Operation and Activities of the Board

The Board holds and operates two types of meeting based on the Board regulations: regular board meetings that are organized based on schedule, and extraordinary board meetings when deemed necessary. Submitted items on the agenda are decided by the majority votes of the Directors attending the meeting, with more than half of all the Directors present. Furthermore, important resolutions made each time are disclosed in the business reports. In 2021, the Board held 14 meetings making resolutions on 47 agendas, and the attendance rate was 96.6%.

Operation of the BOD

Category	Unit	2019	2020	2021
No. of Board meetings held	Time	13	17	14
No. of agenda decided	Case	47	47	42
Directors' attendance rate	%	93.6	100	96.6

All Executives Directors above managing director, including Independent Directors, are insured for executive liability, in order to secure compensation for damages that might be caused during regular practices and works executed by the Directors.

Training for Independent Directors

Date	Conducted by	Main content
Nov. 09, 2021	Samjong KPMG	Identifying trends in the internal accounting management system, suggesting implications, and acting as the Audit Committee
July 22, 2021	Samjong KPMG	A case study of Audit Committee activity through video drama
Nov. 10, 2020	Samjong KPMG	Introduction of measures for the advancement of the internal accounting management system and the progress of advancement
July 24, 2020	Samjong KPMG	A case study of Audit Committee activity through video drama
July 07, 2020	Audit Committee Forum	Search for reasons and solutions for disagreements between auditors, Audit Committee operation guidelines
May 12, 2020	Samjong KPMG	Training on the internal accounting management system (Outline of the system and the role of the Audit Committee)

Shareholders

Daewoo E&C issued a total of 415,622,638 shares as of March 31, 2022, and the largest shareholder is the Jungheung Group (consisting of Jungheung Engineering & Construction Co., Ltd., and JungHeung Construction Co., Ltd.) which holds 50.75% of the company's shares.

Daewoo E&C transparently discloses its business information and shares annual reports with its shareholders and stakeholders through the Financial Supervisory Service and the Korea Exchange, following legal disclosure requirements.

Governance

Integrated Risk Management

Daewoo E&C has selected risk management as one of the eight strategic tasks to achieve the company's vision, Build Together, and is reinforcing capabilities to identify and prevent potential risk factors. We are improving the stability of the projects by strengthening our capacities for risk sensing.

Enhanced Risk Sensing

Daewoo E&C proactively responds to possible risk factors through risk sensing, the ability to sense and respond agilely to key risk factors. Since 2018, we have been proactively managing risks for projects where we have decided to participate in the bidding while maintaining a risk response rate of over 90% (compared to the risks for which measures can be implemented in the current year). This reduces risks in advance by providing feedback on risks discovered in the bidding stage based on lessons learned from previous projects.

Classification	Unit	2019	2020	2021
Average risk factors per project	number	63	104	64
Risk factors for which actions are taken	number	250	694	223
Action rate against risk (Compared to the current year's risk)	%	99	90	95

* Data for 2020 changed due to changes in aggregation criteria.

Risk Management Organization

We have strengthened Project Life Cycle Risk Management based on the eight strategic tasks of risk management. The Order Project Management Group within the Strategic Planning Division identifies risks before winning a project and manages risks during implementation of project. We have built a Legal Department to address legal issues and disputes throughout the project life cycle. The domestic and overseas legal groups within the department are in charge of the work. In 2020, we established the Change Log System to address claims, prevent recurrence of the same events, and ensure that history of contracts can be efficiently managed by working-level personnel in charge of worksite contract management. Due to the nature of risk management, there are several variables that cannot be predicted. Hence, in order to minimize risks and maximize opportunities, Daewoo E&C tries to detect risks from multiple angles by managing "Risk & Opportunity" and sharing cases of "Lessons Learned"

8 strategic tasks for risk management

Upgrading task management evaluation	Easing cost volatility based on R&O
Improving corporate culture	Making order review more productive
Internalizing innovation in project implementation	Establishing and applying Project grade system
Providing integrated support for focused Project	Upgrading early warning system

Organization in charge of risk management



Management of Poisonous Clauses in Contracts

Daewoo E&C is accumulating data in its Integrated Project Management System by organizing the cases of poisonous clauses and countermeasures in order to share know-how to prevent and respond to risks arising from construction contracts.

The poisonous clauses in contracts will be organized by country, construction type, and the ordering organization to be used in various ways, and this will be used for overseas projects in the future.

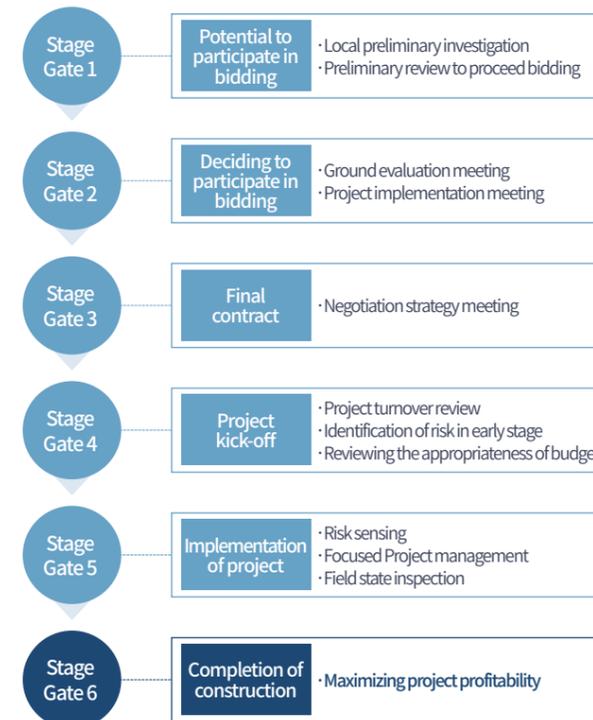
As we expand into international markets, we have built a basic information management system for over 70 items pertaining to about 50 countries, including finance, tax, politics, and culture, and share the database with employees so that they can identify and respond effectively to country-specific risks.

Utilization of a Development Program ("Baro Answer System") for Project Risk Management

Project Life Cycle Risk Management refers to a management system that filters multi-faceted risks at all stages of a project from order information acquisition to construction completion.

In accordance with the Stage Gate Analysis System spanning Review - Decision - Contract - Start - Implementation - Completion, we aim to enhance the filtering function in winning the contract and the initial stage of the project and to maximize the profitability of the project upon construction completion. For overseas EPC business, it is difficult to review up to 7,000 pages of documents such as Invitation To Bid within a limited period of time. To minimize the risk of missing reviews due to the short review period, DAEWOO E&C has developed the "Baro Answer System", a bid document analysis program using AI. With this program, we intend to quickly analyze design and business requirements, shortening the review time, and prevent PJ risks proactively.

Risk filtering stages



Ontology-based Bidding Document Risk Analysis System (DAIA)

The bidding documents provided by the project owner for an overseas project presents information on the owner's requirements regarding the contract, design, construction, and performance that the bidder should consider. The document also includes contract terms and over-spec. that may be unfavorable to the contractor. Failure to detect such terms may lead to risk when receiving work orders.

DAIA is a document analysis system that analyzes documents and detects risks contained therein, so that the person in charge can easily identify the risks and establish countermeasures.

DAIA utilizes Ontology*, an artificial intelligence-based document analysis technique, for risk analysis. DAIA converts the items that experts in each field regard as risks as well as risks that have already been identified into an ontology, inputs them into the system, and uses them for document analysis.

We have established an overseas bidding document analysis system for the civil engineering design field and the legal field such as contracts. We have also built UI/UX to expand application of this system to new fields, and plan to use it for document analysis in various fields.

* Ontology: a network that reveals knowledge of relational relationships between concepts expressed in language

Management of Non-financial Risks

Daewoo E&C separately manages company-wide risks that affect the company's management goals and strategic direction, when the risks are not directly related to a specific project. These include national risks in a broad sense as well as social, cultural, and environmental risks.

Furthermore, we strive to turn crises into business opportunities by analyzing future trends such as ESG, climate change and the 4th Industrial Revolution and by responding proactively to the risks to come.

Governance

Ethical Management

DAEWOO E&C introduced a compliance system in 2015 to establish and operate an autonomous ethical and compliance management system. The system consists of a Compliance Committee that discusses key issues related to compliance, and Compliance Council that discusses specific activities. The Chief Compliance Officer, compliance leaders, and compliance managers are assigned to organize relevant activities.

Charter of Ethics

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

Employee Charter of Ethics

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

Code of Ethics

Daewoo E&C has established the Code of Ethics that presents the direction for correct behavior and criteria for judgement. All management activities across the company are reviewed based on the Code of Ethics.

Code of Conduct

We have posted the Code of Ethics on the company's website to clarify details and standards and to help employees follow relevant guidelines. www.daewooenc.com/company/management/moral-ethics

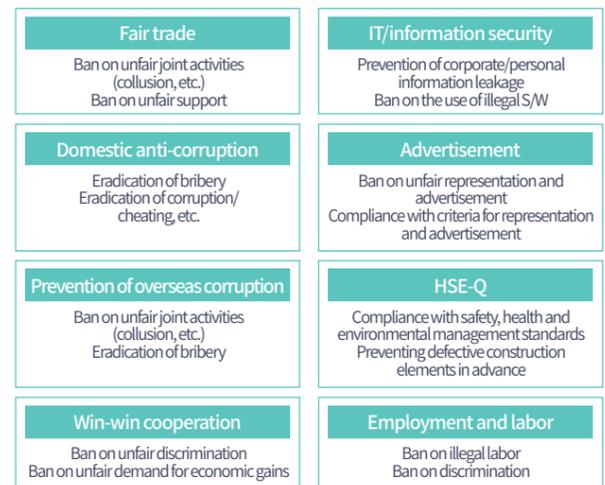
Corruption Prevention System

Daewoo E&C provides all support for compliance management so that executives and employees do not commit illegal activities. We have established the Compliance System Operation Regulations, revise the Fair Trade Voluntary Compliance Manual once a year, and select eight areas where compliance risks exist to systematically manage the matters to be observed in each field. Furthermore, we are implementing risk management to prevent corruption that may occur not only among Daewoo E&C's employees, but also at overseas business sites. We are promoting win-win cooperation based on mutual trust by expanding the scope of compliance management to the supply chain.

Compliance Organization



System of preventing non-compliance



Training and Promotion

In 2021, a total of four online training sessions were conducted. Further, 40 offline training sessions were conducted for 471 employees, and a job workshop for Compliance Leaders and Managers was held to enhance the efficiency and effectiveness of training. In 2021, a new site visit training program was introduced, and a total of 20 sites were visited to provide training for early settlement of the site compliance system and improvement of awareness among employees. In addition, we are raising employees' awareness of compliance through various compliance newsletters on topics such as weekly and daily trends, and prevention activities are carried out by notifying internal and external cases of violation.

Monitoring and Evaluation

In 2021, compliance monitoring was conducted for a total of 20 teams and sites, and surveys and interviews on the compliance activities of unit organizations were carried out beyond simple checks. In addition, commendations were awarded to excellent employees and organizations in order to motivate employees to practice compliance. In 2022, we plan to implement compliance activities by integrating the anti-bribery management system to prevent the occurrence of compliance violations.

Anti-bribery Management System (ISO37001)

Daewoo E&C obtained Anti-bribery Management System Certification for the first time in the construction industry in 2018. Daewoo E&C's anti-bribery activities that meet international standards were verified by review to maintain the certification for 2019-2020. In 2021, the third year of certification, a renewed certificate was issued through the certification renewal audit, enabling us to maintain the certification. In 2022, the company will improve the efficiency by integrating the compliance system.

Compliance Risk Management for the Supply Chain

Daewoo E&C has expanded compliance activities for its subsidiaries, subcontractors and suppliers. Subsidiaries are required to submit a compliance report once a month, and the results of the compliance assessment are reflected in the review of management performance. We distribute relevant anti-corruption guidelines to overseas business sites. We send compliance letters to subcontractors and suppliers in the name of Daewoo E&C's CEO. In 2022, we plan to distribute compliance leaflets to subcontractors and suppliers. If a subcontractor or a supplier violates compliance requirements, it will be restricted by means such as debarment from bidding. In this way we encourage our subcontractors and suppliers to implement ethical management.

Reporting of Unethical Behaviors

Daewoo E&C has a reporting system to foster a clean corporate culture and eradicate unethical behaviors. Anyone who is aware of unethical behavior of employees regarding Daewoo E&C's business activities, and stakeholders who have witnessed or received unreasonable requests from employees may report the matter through the "Cyber Audit Office/Ethics Help Line" on our website, the external reporting system "K-Whistle", which is operated to enhance anonymity, or the smartphone application, mail/phone, etc. Reports of various issues such as ethical dilemma of employees regarding unfair work can also be made. If the reporter wants to maintain anonymity, his or her personal information is kept confidential in accordance with the regulations on protection of reporters.

Cyber Audit Office / Ethics Help Line
www.daewooenc.com/customer/report/index

Protection of Human Rights

Human Rights Policy

Daewoo E&C has established a human rights policy and respects the human rights of those who work in subsidiaries, joint ventures, and all subcontractors, suppliers and partners that are conducting business with us, including all employees at home and abroad. It is our promise that the subjects will be guaranteed protection of international standards such as ILO Declaration and OECD Guidelines and the national Labor Standards Act in fulfilling their duties and will be provided with fair opportunities and assessments regardless of race, religion, region, school relations, kinship and disability. The full text of our human rights policy is available on the company website. <https://www.daewooenc.com/company/management/moral-ethics>

Prevention of Harassment at the Workplace

Daewoo E&C is operating a process to eradicate workplace harassment that causes physical and mental pain to employees or maligns the working environment. Anonymous reports submitted through internal/external unethical reporting channels can be seen only by the head of the Audit Office or Head of the Job Diagnosis Team who assign appropriate team members to investigate the case. If it is deemed necessary, the person subject to the investigation may be requested to attend the proceedings or the department subject to the investigation may be requested to submit data. Furthermore, we are striving to prevent accidents and take reasonable measures, such as requesting correction of unreasonable business procedures.

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ESG Data

Economic Performance

Economic Value Creation (consolidated criteria)

Category	Sector	Unit	2019	2020	2021
Total sales		KRW 1 million	8,651,852	8,136,706	8,685,208
Sales by division	Civil	KRW 1 billion	1,372	1,483	1,424
	Housing & Building		5,121	5,083	5,902
	Plant		1,595	1,100	867
	New Frontier		547	670	679
	Others		17	18	20
	Adjustment and removal		-217	-207	
Construction contract change	Total	KRW 1 billion	10,249	12,893	11,230
	Civil		1,557	3,596	1,738
	Housing & Building		6,730	7,035	8,888
	Plant		1,922	2,228	421
	New Frontier		40	34	183
Construction contract balance	Total	KRW 1 billion	31,698	37,016	40,458
	Civil		5,196	7,346	7,700
	Housing & Building		23,641	25,663	29,049
	Plant		2,827	3,987	3,561
	New Frontier		34	20	149
Sales by region	Total	KRW 1 million	8,651,852	8,136,706	8,685,208
	Korea		6,306,247	6,476,188	7,118,967
	Middle East		1,275,002	908,011	677,852
	Asia		603,108	575,771	707,132
	Africa		467,285	393,888	387,573
	Others		210	138	124
	Adjustment and removal		-217,290	-206,440	

R&D and Industrial Property Performance (consolidated criteria)

Category	Sector	Unit	2019	2020	2021	
Sales by division	R&D amount*	Investment amount	KRW 1 million	63,418	66,847	59,560
	R&D personnel	No. of developers	Person	81	74	74
	R&D performance	Research project	Case	44	44	37
		Industrial property rights		64	58	58
		Paper		22	11	31
		External award		7	6	18
Industrial property rights performance	Patent	Existing patents	Case	331	332	334
		Application		21	25	24
		Registration		28	15	20
		Total effective registration		332	334	317
		External award		7	6	18
	New technology	Existing patents	Case	14	14	9
		Application		1	3	-
		Registration		2	-	1
		Total effective registration		14	9	7
	Others	Existing patents	Case	170	170	171
		Application		4	9	2
		Registration		8	6	11
		Total effective registration		170	171	178
	Total	Existing patents	Case	515	519	514
		Application		26	37	26
Registration		38		21	32	
Total effective registration		519		514	502	

* Data changed due to changes in aggregation criteria

Remuneration for Directors and Auditors

Category	Sector	Unit	2019	2020	2021
No. of persons	Internal directors(excluding external directors and members of the audit committee)	Person	3	3	3
	External director(excluding members of the audit committee)		1	1	1
	Member of the Audit Committee		4	6	3
Total amount of remuneration	Internal directors(excluding external directors and members of the audit committee)	KRW 1 million	1,057	1,190	1,348
	External director(excluding members of the audit committee)		16	60	60
	Member of the Audit Committee		214	193	191
Average remuneration per person	Internal directors(excluding external directors and members of the audit committee)	KRW 1 million	352	397	449
	External director(excluding members of the audit committee)		16	60	60
	Member of the Audit Committee		54	32	64

* including retired directors

Major Shareholders and Credit Ratings

As of December 31, 2021

Category	Sector	Unit	2019	2020	2021	
Shareholders	KDB Investment No.1 Limited company	Ratio	%	50.75	50.75	50.75
		No. of shares	Shares	210,931,209	210,931,209	210,931,209
	National Pension Service	Ratio	%	6.51	7.76	5.45
		No. of shares	Shares	27,057,003	32,236,218	22,643,062
	Employees' Stock Ownership Association	Ratio	%	0.51	0.42	0.24
		No. of shares	Shares	2,126,396	1,761,246	1,017,047
Others	Ratio	%	42.23	41.07	43.56	
	No. of shares	Shares	175,508,030	170,693,965	181,031,320	
Credit ratings	Korea Ratings	Corporate bill	Rating	A2-	A2-	A2-
		Corporate bonds	A-	A-	A-	
	NICE Investors Service	Corporate bill	A2-	A2-	A2-	
		Corporate bonds	A-	A-	A-	

※ As of March 2022

Jungheung Engineering & Construction Co., Ltd.: Ratio 40.60% No. of shares 168,744,967

Jungheung Construction Co., Ltd.: Ratio 10.15% No. of shares 42,186,242

Operation of Board of Director

Category	Sector	Unit	2019	2020	2021
Operation of Board of Director	No. of meetings	Number	13	17	14
	No. of agenda items resolved	Case	47	47	42
	Directors' attendance rate	%	93.6	100	96.6

Number of Meetings held by Subcommittee

Category	Sector	Unit	2019	2020	2021
Subcommittee No. of meetings	The Audit Committee	Number	6	7	6
	Independent Director Nomination Committee Meetings		1	1	-

General Disclosure

Category	Sector	Unit	2019	2020	2021
General Disclosure	No. of company briefing sessions	Number	173	162	216

ESG Data

Environmental Performance

Environmental Governance

Category	Sector	Unit	2019	2020	2021
Violation of environmental regulations*	Total fines	KRW	1,000,000	0	0
	Number of litigations filed	Case	1	0	0
	Number of non-monetary sanctions		0	0	0
Environmental audit	On-site environmental instruction and inspection	Case	37	25	46
	Support for on-site environment		15	16	52
Environmental training	Environmental manager job competency training (integrated)	Person	167	202	327
	Environmental training for new environmental managers by division	Person	4	6	-
	On-site environmental training	Person	14,160	10,346	26,984

* In cases where the company has been prosecuted for violating environmental laws and received punishment equivalent to or heavier than a fine, the disposition of fines for negligence at workplaces is regarded as a separate case and not included

Environmental Management Performance

Category	Sector	Unit	2019	2020	2021	
Greenhouse gas	Total emissions	tCO ₂ eq	66,193	58,969	60,415	
	Direct emission (Scope 1)		Total	7,149	6,865	5,130
			Fixed combustion	3,085	3,324	2,562
			Mobile combustion	4,064	3,541	2,568
	Indirect emission (Scope 2)		Total	59,053	51,920	55,288
			External electricity	55,140	46,560	50,002
			External steam	3,913	5,360	5,286
	Emissions in KRW		tCO ₂ eq/ KRW100 million	1.050	0.963	0.717
	Total emissions (Scope 1+2)		tCO ₂ eq	66,193	58,969	60,415
	Total on-site emissions (Scope 1+2)			57,231	50,849	50,747
Total building emissions (Scope 1+2)	8,968	8,120		9,671		
Carbon Intensity*	tCO ₂ eq/TJ	50.0	50.2	49.1		
Energy	Total energy consumption	TJ	1,323	1,174	1,230	
	Total on-site consumption		1,142	1,005	1,024	
	Total building consumption		181	169	206	
	Usage by Emission Intensity (Energy Intensity**)		TJ/KRW100 million	0.021	0.018	0.017
Significant hazardous (chemical) substance spills	Number of spills	Case	0	0	0	
	Spilled amount	Ton	0	0	0	
Waste discharge	Waste generation (throughput, domestic standard)	Ton	597,800	532,854	772,730	
	General waste		595,525	529,156	770,613	
	Waste to be buried		808	1,877	2,097	
	Waste to be incinerated		1,467	1,821	20	
Water	Water consumption	Ton	1,256,698	898,361	980,581	

*Carbon intensity = Carbon emissions/Total energy consumption

**Energy intensity = Energy consumption/Total domestic sales

Investment in Environment

Category	Sector	Unit	2019	2020	2021
Total amount of environmental protection expenditure and investment	Environmental investment planning	KRW 1 million			877
	Environmental investment performance		106	419	726
	Investment fulfillment rate				83%
	Environmental expenditure planning				31,432
	Environmental expenditure performance		175	67	25,451
	Environmental expenditure fulfillment rate				81%
Eco-friendly purchase*	Eco-friendly purchase	KRW 1 billion	89	94	137

* Data changed due to changes in aggregation criteria

Eco-friendly Building Certification

Project	Initial business approval	Green building rating	Energy efficiency rating
Suwon Mangpo A-1	2021	Good	1+
Gyeongsan Jungsan District C4-1 BL		General	1+
Gumi Geoui 1 District Urban Development		General	1+
Singil-dong Apartment & stores		General	2
Yangju Station District A1 block		General	1+
Hannam Complex Development		Excellent (in reception)	1+ (in reception)
Gasan-dong 60-9 Knowledge Industry Center		Excellent	1++
Yonggye PRUGIO Artsber Complex 1		General	1+
Yonggye PRUGIO Artsber Complex 2		General	1+
Pocheon Taebong Park		Good	1+
Gimhae Gusan-dong		General	1+
Ulsan Sinjeong-dong Apartment & stores		Excellent	1
Sanggye 2 Redevelopment and Maintenance Project		Best	1
Eumseong Seongbon B3BL		General	1+
Dalseo PRUGIO Signature (Daegu Bonri-dong Apartment & stores)		General	1+
Jije Station PRUGIO Eliats (Pyeongtaek Dongsak Sekyo)		Good	1+
Gwangyang-eup Yonggang-ri Apartment Building		General	1+
Wirye Section Office		Excellent	1++
Suncheon Deogam-dong Apartment Building		General	1+
Singil District 10		Best	1+
Dangjin Songak District	General	1+	
Seomyeon PRUGIO City (Busan Bujeon-dong)	Good	-	
Woonjeong New Town PRUGIO Parsena (A13, after sale)	General	1	
Sewoon PRUGIO the Botanic (Sewoon 633 District)	Best	1+	

ESG Data

Social Performance

Employment

Category	Sector	Unit	2019	2020	2021	
Number of employees	Total number of employees	Person	5,385	5,452	5,433	
Employees by employment type	Executives	Total	32	34	34	
		Female	0	0	0	
		Male	32	34	34	
	Permanent Employees	Total	3,782	3,783	3,694	
		Female	312	327	329	
		Male	3,470	3,456	3,365	
	Contract employees	Total	371	489	683	
		Female	10	13	43	
		Male	361	476	640	
	Others	Total	1,200	1,146	1,022	
		Specialized position	Female	83	91	105
			Male	647	681	542
		Employment position	Female	156	174	189
			Male	283	171	161
Foreign employee		Female	2	3	2	
		Male	10	10	7	
Special employee	Male	19	16	16		
Employees by region	Companywide (domestic+overseas)	Sum	5,385	5,452	5,433	
		Total	4,603	4,845	4,843	
		Female	548	596	659	
	Domestic	Male	4,055	4,249	4,184	
		Total	782	607	590	
		Female	15	12	9	
Overseas	Male	767	595	581		
	Total number of female managerial positions (manager or higher)	Person	115	119	129	
Managerial positions status	Number of female executives	Person	0	0	0	
	Total number of managerial positions (manager or higher)	Person	2,725	2,773	2,835	
	Total number of executives	Person	107	100	99	
	New recruitment and voluntary turnover	New employment*	Female	19	22	19
Male			101	113	168	
Voluntary turnover**		Total	Person	55	40	148
		Female	Person	1	1	6
		Male	Person	54	39	142
		Voluntary turnover rate	%	1.45	1.05	3.83

* Including new employees, experienced employees, and status change

** Data changed for 2019 and 2020 due to changes in aggregation criteria

Diversity

Category	Sector	Unit	2019	2020	2021	
Diversity of employees	Employees	Proportions of female workers	%	10.45	11.15	12.29
		Total	Person	5,385	5,452	5,433
		Female	Person	563	608	668
		Male	Person	4,822	4,844	4,765
	Basic salary for women compared to men and compensation percentage	%	100	100	100	
	Elderly (aged 55 or over)	Person	469	361	430	
	Foreigners	Person	20	21	17	
	The disabled	Person	47	42	42	
	High school graduates	Person	349	303	315	
	Patriots-Veterans	Person	63	46	44	

Retirement Pension

Category	Sector	Unit	2019	2020	2021
Status of retirement pension management (Based on separate financial statements)	Operating amount	KRW 1 million	242,264	252,806	281,331
	Number of subscribers	DC	10	26	84
		DB	3,704	3,908	3,613

Maternity Leave and Parental Leave

Category	Sector	Unit	2019	2020	2021
Maternity leave	Total	Person	168	167	171
	Female	Person	16	18	13
	Male	Person	152	149	158
	Return rate after maternity leave	%	100	99	99
Parental leave	Total number of employees that were entitled to parental leave (a)	Person	2,375	2,224	2,331
	Total number of employees that took parental leave, by gender (b)	Total	39	46	52
		Male	22	20	31
		Female	17	26	21
		Total number of employees that returned to work in the reporting period after parental leave ended, by gender (c)	Total	26	30
		Male	11	13	24
		Female	15	17	11
	Total number of employees that returned to work after parental leave ended that were still employed 12 months after their return to work, by gender (d)	Total	23	28	32
		Male	11	13	23
		Female	12	15	9
		Rates (%)	%	67	65
	Return to work and retention rates of employees that took parental leave, by gender (c/b)	Male	%	50	65
Female		%	88	65	52
Rates of employees that returned to work in the reporting period after parental leave ended, by gender. (d/b)	Rates (%)	%	59	61	62
	Male	%	50	65	74
	Female	%	71	58	43

Education and Training

Category	Sector	Unit	2019	2020	2021
Completion of education and training	Education expenses per person*	KRW	673,937	497,043	599,682
	Training hours per person**	Hour	63	64	57
Performance evaluation	Those subject to evaluation	Person	5,348	4,879	5,024
	Ratio of those who were evaluated	%	100	100	100
Information security training	Number of people who completed information security online training	Person	5,385	4,823	4,544
	Information security online training completion rate	%	100	92	97
Sexual harassment prevention and human rights education	Total training hours	Hour	5,200	5,415	5,482
	Training hours (ratio)	%	100	100	100
	Training hours per person	Hour / Person	1	1	1

* Data changed for 2020 due to changes in aggregation criteria

** Based on all employees

ESG Data

Social Performance

Labor Union and Labor-Management Committee

Category	Sector	Unit	2019	2020	2021
Labor union	No. of persons eligible for union membership	persons	4,065	4,205	4,311
	No. of union members	persons	1,642	1,928	2,304
	Labor union subscription rate	%	40	46	53
Status of Labor-Management Committee	No. of meetings held	Number	4	4	4
	No. of agenda items resolved	Case	22	22	26

Shared Growth

Category	Sector	Unit	2019	2020	2021
Suppliers	Total number of suppliers	No. of companies	1,844	1,843	1,840
	Purchase from suppliers	KRW 100 million	29,579	38,740	38,187
Major suppliers	Number of major suppliers	No. of companies	107	113	119
	Total amount of contracts with major suppliers outsourced	KRW 100 million	10,230	10,358	11,049
	Share of purchase from major suppliers out of total purchase cost in total outsourcing amount	%	35	27	29
	Shared growth fund and loans	KRW 100 million	280	140	200
No. of fair-trade violation cases	Number of violations	Case	0	0	0
	Penalties	KRW 1 million	0	0	0

Ethical Management

Category	Sector	Unit	2019	2020	2021
Online compliance education	Education completion rate	%	100	100	100
Offline compliance education	Attendants	Person	1,511	470	471
Autonomous compliance activities	Talk (once/month)	%	100	100	100
	Message (once/quarter)	%	99	98	99.6
	Independent education (once/half-year)	%	100	92	96.3

Quality & Customer Satisfaction

Category	Sector	Unit	2019	2020	2021
Company-wide quality monitoring	Equipment suppliers quality evaluation	New	48	42	39
		Reevaluation	36	9	50
	Plant visiting inspection	Number	2,049	524	221
	Plant resident inspection		44	1	1
	Annual unit price contract for third-party inspection		17	10	10
Protection of customer's personal information	Number of data theft, leakage, and loss	Case	0	0	0
Customer compliant counseling	Average number of consultations per month of PRUGIO Customer Center	Case	23,213	21,385	18,679
	Response rate of PRUGIO Customer Center	%	96	92	80
	Instant response rate of PRUGIO Customer Center	%	90	85	74
	Average number of consultations per month through the voice of the customer (VOC)	Case	590	1,155	782
	VOC processing rate	%	97	97	98
	Happy Call average processing days	Day	12	10	10
Results of National Customer Satisfaction Index (NCSI) Survey	Ranking	3	3	3	
Head office and worksite quality control*	Head office quality evaluation	Average score	93.7	90.6	94.4
	worksite quality evaluation	Average score	89.8	85.4	88

* Data changed for 2019, 2020 due to changes in aggregation criteria

Health and Safety

Category	Sector	Unit	2019	2020	2021	
Industrial accident*	Accident rate	Mortality per 10,000 workers	%oo	1.77	1	0.73 (Prediction)
		LTIR**(Overseas worksite)	%oooo	0	0	0.12 (Prediction)
	Number of casualties	Sum		279	276	277
		Number of domestic casualties	Person	269	270	268
Number of overseas casualties			10	6	9	
Safety training	Domestic HSE training***	Operation of CLEAR program	Number of places	88	105	113
		Operation of supplier win-win safety program	Number	52	0	0
	Overseas HSE training	NEBOSH ICC(Construction safety engineer in the U.K.)		0	0	0
		OSHA 30(Introductory education for construction safety in the U.S.)	Person	19	0	0
		ISO 45001(Safety and Health Management System Senior Auditor Course)		11	0	0
	In-house health and safety training	Safety and health training session	Number	58	43	53
No. of people who have completed health and safety training		Person	1,625	978	9,413	
Outside health and safety training	Safety and health training session	Number	30	6	15	
	No. of people who have completed health and safety training	Person	58	10	18	
Safety inspection, audit and Support****	Management inspection (including CEO inspection)	Business division worksite health and safety inspection		11	2	10
		Business division health and safety system monitoring		176	87	75
		Safety patrol inspection		0	8	9
		Construction machinery inspection support	Case	190	66	342
		Nearmiss identification campaign at domestic worksites		1,088	1,813	1,739
		Number of activations of the right to stop work		332	380	2,811
Safety innovation	Establishment and implementation of safety innovation plans		67	247	1,551	
			0	0	30	

* Including supplier workers

** LTIR formula: [No. of FAT(death accident) + No. of LWC (accident with lost workday of more than one day)] / Annual working hours x 10^6

*** Data changed due to changes in aggregation criteria

**** Data changed due to changes in aggregation criteria

Social Contribution

Category	Sector	Unit	2019	2020	2021
Performance of social contribution activities	Annual number of participants	Person	1,270	1,311	1,041
	Total expenditure		236	749*	967
	Operation cost	KRW 1 million	112	379	57
	Donation (culture, arts, etc.)		124	390	910
	Average participation hours per person	Hour	5	4.54	4.46
Relay Volunteer Work	Number of times	Number	8	5	0
	Number of participants	Person	305	402	0

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

Report Reception

As of 2021

Category	No. of receipts	No. of cases processed
Cyber Audit Office/Ethics Help Line	61	61
K-Whistle (external reporting system)	19	19
Mail, etc.	17	17
Total	97	97

Punishment

As of 2021

Category	No. of people
Fired	4
Temporary suspension of duty to be placed on a waiting list for reassignment	1
Salary cut	1
Warning	26
Total	32

GRI Content Index

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	412-2	Employee training on human rights policies or procedures	103
GRI 413: Local Communities	413-1	Operations with local community engagement, impact assessments, and development programs	92-94
GRI 414: Supplier Social Assessment	414-1	New suppliers that were screened using social criteria	85-86
	414-2	Negative social impacts in the supply chain and actions taken	85-86
GRI 415: Public Policy	415-1	Political contributions	N/A
GRI 416: Customer Health and Safety	416-1	Assessment of the health and safety impacts of product and service categories	N/A
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	N/A
	417-1	Requirements for product and service information and labeling	N/A
GRI 417: Marketing and Labeling	417-2	Incidents of non-compliance concerning product and service information and labeling	N/A
	417-3	Incidents of non-compliance concerning marketing communications	N/A
GRI 418: Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	94
GRI 419: Socioeconomic Compliance	419-1	Non-compliance with laws and regulations in the social and economic area	102-103

Greenhouse Gas Verification



GHG Verification Statement

DAEWOO E&C Co., Ltd.

Verification Scope
 Korean Standards Association has conducted verification for GHG emissions under reasonable level of assurance, based on GHG report provided by DAEWOO E&C Co., Ltd. which includes Scope1 and Scope2 emissions.

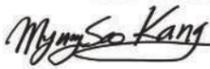
Verification Standards and Guidelines
 To conduct verification activities, verification team applied verification standards and guidelines. The standards and guidelines are as follows.
 · GHG&Energy Target Scheme, Korea ETS guideline provided by Ministry of Environment, Republic of Korea
 · KS Q ISO 14064-1,2,3 : 2019
 · 2006 IPCC Guidelines for National Greenhouse Gas Inventories

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

• 2021 Emissions(Scope1, Scope2) (Unit : tCO₂eq)

Year	Scope 1	Scope 2	Total
2021	5,130	55,288	60,415

* Decimal place is not considered when calculating the emission of each workplace.

June 16, 2022


KOREAN STANDARDS ASSOCIATION

Third-Party Verification

To readers of DAEWOO E&C SUSTAINABILITY REPORT 2022

Introduction

Korea Management Registrar (KMR) was commissioned by DAEWOO E&C to conduct an independent assurance of its Sustainability Report 2022 (the "Report"). The data and its presentation in the Report is the sole responsibility of the management of DAEWOO E&C. KMR's responsibility is to perform an assurance engagement as agreed upon in our agreement with DAEWOO E&C and issue an assurance statement.

Scope and Standards

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

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

- GRI Sustainability Reporting Standards
- Universal standards
- Topic specific standards
 - Management approach of Topic Specific Standards
 - GRI 302: Energy
 - GRI 305: Emissions
 - GRI 306: Effluents and Waste
 - GRI 401: Employment
 - GRI 403: Occupational Health and Safety
 - GRI 405: Diversity and Equal Opportunity
 - GRI 414: Supplier Social Assessment
 - GRI 416: Customer Health and Safety
 - GRI 417: Marketing and Labeling

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

KMR's Approach

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

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

Limitations and Recommendations

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

Conclusion and Opinion

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

Inclusivity

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

Materiality

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

Responsiveness

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

Impact

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

Reliability of Specific Sustainability Performance Information

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

Competence and Independence

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

June 2022 Seoul, Korea



CEO *E. J. Hwang*

Awards

Divisions	Performances
Civil Project Division	Kazungula Bridge, Botswana – won the grand award at the 17th Korea Civil Engineering and Building Awards (Maeil Economic Daily)
	Al Faw breakwater, Iraq- won the grand award at the 2021 Civil Structure of the Year (Korean Society of Civil Engineers)
	Received an appreciation plaque at the commemoration of the 70th anniversary of the founding of the Korean Society of Civil Engineer (Korean Society of Civil Engineers)
	Received a commendation from the Minister of Land, Infrastructure and Transport on 2021 Railroad Day (Seongil Kang, Manager of Seohae Line Railway Section 4)
	Received a commendation from the Minister of Land, Infrastructure and Transport on 2021 Construction Day (Shim Won-moo, Director of Overseas Civil Project Support Team)
Housing and Building Business Division	Won the grand award at Money Today Overseas Construction Awards
	Won in the 3 categories at the 2022 IF Design Awards
	Sewoon PRGIO Heritage – won the grand award in the complex housing category at the Asia Economic Newspaper Brand Awards
	Gwangyang PRUGIO The Central – won the best award in the living service category at the Money Today Housing Culture Awards
	Gwacheon Central Park PRUGIO Summit – won the grand award at the Hangyeong Business Wellbeing Apartment Awards
	Gimhae PRUGIO High-end 2nd – won the grand award in the design category at the Newsway Housing Brand Awards
	Gwangyang PRUGIO THE CENTRAL – won the grand award in the eoc-friendliness category at the Korea Economic Daily TV Representative Apartment Contest (Minister of Land, Infrastructure and Transport)
	Pangyo First Hill PRUGIO – won the grand award in the landscaping category at the Korea Economic Daily First Half of the Year Residential Cultural Awards
	Unseo Station PRUGIO THE SKY – won the grand award in the well-being apartment category at the JoongAng Ilbo Eco-friendly Construction Industry Awards
	Gwacheon PRUGIO Summit – won the best award in the general and large-sized apartment for good living category at the Maeil Business News Korea (Minister of Land, Infrastructure and Transport)
	Yonggye Station PRUGIO Artsber – won the best award at the Money Today Premium Housing Awards
	Daewoo E&C – won the President’s Award at the Win-win Cooperation, Asia Economic Newspaper Asia General Construction Awards
	Greenery Lounge – won the grand award in in the community category at the E-Today Smart Construction Grand Awards
	Yonggye Station PRUGIO Artsber – won the grand award in the residential innovation category at the Aju Economic Construction Awards
	Geomdan New Town PRUGIO THE VENUE – won the best award in the IoT category at the Asia Today Green Construction Awards (Chairman’s Award)
	Dasan New Town Nature & PRUGIO – won the grand award in the community category at the E-Daily Construction Industry Awards
	Won the grand award in the construction cooperation category at the E Korea Economy Awards
	Gwacheon PRUGIO Oullim Ravino – won the grand award in the living design category from Herald Economic Daily
	Chuncheon Central Park PRUGIO – won the grand award in the eco-friendliness category at the Korea Economic Daily Second Half Residential Culture Awards
	Gwangyang PRUGIO The First – won the grand award for Green Smart at the Hankook Ilbo Green Housing Awards
	Yonggye Station PRUGIO Artsber – won the grand prize for Smart ZEB at the Seoul Newspaper Green Construction Awards
	Won the Korea Construction Award from Dong-A Ilbo
	Kazungula Bridge, Botswana – won the grand award at the Maeil Business News Korea Civil Engineering and Construction Technology Awards (Minister’s Award by Ministry of Land, Infrastructure and Transport)
Plant Business Division	Won Minister’s Commendation from the Minister of Trade, Industry and Energy on “the 11th Nuclear Safety and Promotion Day” by Korea Nuclear Safety Association
	Indonesia TANGGUH EXPANSION PH2 worksite – won the commendation from the Indonesia Social Security Corporation
	Bundang Heat Transport Network Performance Reinforcement Construction Phase 2 PJ – won the President’s commendation from the Korea District Heating Corp.
	Kuwait Al-Zour Refinery worksite – won the gold award for HSE Excellence, and gold award for Environmental Excellence from American Association of Safety Engineers
Institute of Construction Technology	Won the technology award from the Korea Institute of Architectural Engineering
	Won the President’s award on Civil Engineering Day from the Korean Society of Civil Engineers
	Won the excellent paper presentation award at the Korean Welding and Joining Society Fall Conference
	Won the excellent paper presentation award from the Korea Society of Agricultural Engineers
	Selected as the 14th Construction Technology Research Excellence Case (National Assembly Land, Infrastructure and Transport Committee)
	Selected as the 14th Construction Technology Research Excellence Case (Minister’s Award by Minister of Land, Infrastructure and Transport)
Won the innovation award in the construction automation category at the 2021 Smart Construction Challenge	

Membership

Divisions	Association and Institutes
Civil	Korean Society of Civil Engineers
	Korea Road Association
	Korea Geotechnical Society
	The Korea Railway Association
	Korean Society of Transportation
Housing and Building	Architectural Institute of Korea
	The Society of Air-conditioning and Refrigerating Engineers of Korea (SAREK)
	The Korean Institute of Electrical Engineers
	The Korea Institute of Building Construction
	The Korean Institute of Landscape Architecture
Korea Housing Association	
Plant	Korea Plant Industries Association
	Korea Engineering & Consulting Association
	Korea Atomic Industrial Forum
Business Support	Korea Construction Engineers Association
	Korea Enterprises Federation
	Korea International Trade Association
	Korea Fire Facility Association
Safety Innovation	Construction Safety Manager Committee
	Korea Electric Power Industry Code (KEPIC WEEK)
	Korea Construction Quality Association
	Korea Environment Construction Association
Strategic Planning	Korea Chamber of Commerce & Industry
	Korea Federation of Construction Contractors Construction Strategy Research Group
	Construction & Economy Research Institute of Korea
Financial Management	Korea Listed Companies Association
	Korea CFO Association
Global Marketing	International Contractors Association of Korea
	Construction Association of Korea
Institute of Construction Technology	Korea Construction Transport New-Technology Association
	Korea Industrial Technology Association

※ Joined a total of 99 academic societies, associations and groups

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