# **HYUNDAI ELEVATOR Company Profile ▲ HYUNDAI ELEVATOR**

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#### MOBILITY TO POSSIBILITY.

# Hyundai Elevator opens up new possibilities for mobility.

The infinite possibilities offered by Hyundai Elevator are unfolding around the world.

Founded in 1984, Hyundai Elevator has been leading the Korean elevator industry as it took the largest share in the Korean market for 16 consecutive years since 2007.

Now, Hyundai Elevator will lead the paradigm of vertical e-mobility with its products and services that incorporate hyper-connectivity technologies, as we enter an era of mobility.

## **MOBILITY TO POSSIBILITY**

by

# TRUST

Maintaining the No. 1 spot in the Korean elevator market for 16 consecutive years attests to Hyundai Elevator's competitive edge.

With world-class technology and sophisticated services, Hyundai Elevator has offered a fast and safe mobility experience to its customers, keeping pace with urban construction trends and satisfying customers' needs. Hyundai Elevator will continue to unfold its limitless potential by continually setting challenging goals and spurring innovation in the way it does business.

# No.1

In number of newly installed elevator units in Korea for 16 consecutive years.
In elevator maintenance service in Korea for 8 consecutive years.

Test tower at Hyundai Elevator's Chungju Smart Campus under construction - expected to be the highest test tower in the world.



# All-in-one

H-PORT's vertical, multi-level structure can house a large number of aircraft within a small space. H-PORT can offer all-in-one service, such as housing, maintenance, charging, etc.

## **MOBILITY TO POSSIBILITY**

by

# NEWBUSINESS

We are focusing on the development of H-PORT, a vertical takeoff and landing facility, which will form part of the key infrastructure in the UAM era.

Hyundai Elevator is developing H-PORT, the takeoff and landing facility for UAM aircraft, which will offer all UAM-related services, including takeoff and landing, aircraft housing, maintenance, charging, control, etc., within a confined space. H-PORT is being recognized as an exceptionally effective solution to the shortage of urban space in the future, as it is designed to be a vertical, multi-level structure.

A birds-eye view of Hyundai Elevator's H-PORT, Hyundai Elevator is developing all elements of H-PORT by itself, including the takeoff and landing pad, energy saving technology, air traffic control and operation system, and other related systems.

# Hyundai Elevator presents digital solutions that combine **MOBILITY TO POSSIBILITY** diverse IT technologies with its elevators. by Hyundai Elevator is no longer satisfied with being a simple elevator manufacturer - we are exploring DIGITIZATION a new frontier by applying 4th Industrial Revolution technologies to our trade. Hyundai Elevator has launched MIRI, a predictive maintenance service, and is offering new digital solutions that connect its elevators to robots and a wide range of external devices through an Open API. MIRI A predictive diagnostics service that analyzes and responds to the data generated by the elevator units on a real-time basis. A service that links the elevator units and robots through Open API.



trusted by global society.

Starting from 2023, Hyundai Elevator will establish ESG management strategies and systems in all areas of its management activities and work diligently to incorporate those strategies and systems across its entire business. We will create an ESG Committee under the Board of Directors, which will create sustainable value by carefully analyzing and improving our influences on the environment and society.

**MOBILITY TO POSSIBILITY** 

Photovoltaic electric power generation facility installed by Hyundai Elevator to reduce greenhouse gas emissions and use more renewable energy (annual generation capacity: 6,000kW)

Hyundai Elevator established Vision 2030 and designed specific strategies in 2022 to realize its goal of becoming one of the top 5 global players in the field.

Hyundai Elevator will broaden and strengthen its global business networks further based on its experience and know-how accumulated throughout its 40 years of history, to show the world its future potential.

MOBILITY TO POSSIBILITY

COMPANY

VISION & STRATEGY 11

# VISION & STRATEGY

Hyundai Elevator will become a future mobility company that offers transfer efficiency services to customers around the world.

In July 2022, Hyundai Elevator proclaimed its Vision 2030 at its Chungju Smart Campus, where its corporate headquarters were recently relocated, to continue its transition into a mobility company that provides leading transfer efficiency services to its customers around the world. Hyundai Elevator will establish a foundation for sustainable growth by implementing 5 strategic tasks and 3 core values and tirelessly endeavor to materialize its corporate vision.





Core Values	3 Core Values	Triple C, 2030			
		Cooperation	Challenge	Change	
	Fundamental Values	Safety & Ethics			

## **HISTORY**

With four decades of experience in overcoming challenges and fostering innovation, Hyundai Elevator embarks on a new journey to become one of the world's top 5 players in the industry.

> New Possibility Go Global 2010

2000

1990

Growth

Establishment

Momentum

## 1980s



12

Founded Hyundai Elevator Co., Ltd.

#### May.1985

Completed the Icheon Elevator Factory (Factory 1)

#### Sep.1986

Completed the Icheon Escalator Factory and Elevator Test Tower

#### Jul 1988

Completed the Icheon Escalator Factory 2



#### Aug.1993

Established the Chinese joint venture (Shanghai Hyundai Elevator Co., Ltd.)

#### Sep.1993

Established a joint venture in the Philippines (Hyundai Elevator Services Phils., Inc.)

#### Nov.1995

Completed the Cheonan Distribution Center

#### Jul.1996

Listed on the Korea Exchange

#### Mar.1998

Obtained the ISO 9001 and ISO 14001 certifications for elevators, Auto-Parking Systems for elevators, Auto-Parking Systems and Materials Handling Systems from DNV

#### Jul.2001

Became the first Korean company to obtain the CE Mark (European safety standards) for elevators (DNV)

Opened a round-the-clock customer center capable of handling customer complaints and serving customers



#### Apr.2009

Completed the worlds' tallest ultra-high-speed elevator test tower "Hyundai Asan Tower" (205m) and the Chung Mong-hun R&D Center

Installed Korea's fastest elevators (600m/min, Hyundai Asan Tower)

Obtained EK certification for safety parts for 600m/min class ultra-high speed elevators

Installed the world's fastest observation elevators

(420m/min, Hyundai Asan Tower) Surpassed the 100,000 mark in

#### Jul.2009

elevator shipment

Exported ultra-high-speed elevators (480m/min) to the Venezuelan governmental complex

#### Dec.2009

Developed and installed the world's fastest elevators (1,080m/min, Hyundai Asan Tower)

Developed and installed the world's fastest double deck elevators (600m/min, Hyundai Asan Tower)

# 2010s

#### Jun.2010

Became the first Korean company to be rated A under the German elevator energy efficiency certification program (TÜV, Germany)

#### Dec.2011

Achieved KRW 100 billion in service



Opened Hyundai Customer Care Center (HCCC)

#### Jan.2014

Established a Vietnam joint venture (Hyundai Thanh Cong Elevator Vietnam Co., Limited)



Installed Korea's fastest elevators (600m/ min, Busan International Finance Center)

#### Dec.2014

Installed and operated Korea's longest escalators (57m. Shinnam station. Line No.3, Daegu Metro)

#### Feb.2015

Installed and operated Korea's first double deck elevators (LG U+ office building in Yongsan)

Surpassed 100,000 mark in the number of paid maintenance elevators

#### Aug 2015

Completed Korea's first elevator training center Hyundai Elevator Institute of Technical Education

#### Aug.2016

Surpassed the 200,000 mark in cumulative elevator production (since 1984)

#### Sep.2016

Established a joint venture in Turkey Türkiye (Hyundai Elevator Asansör ve Servis Sanayi ve Ticaret Anonim Şirketi)

#### Oct.2016

Became the first elevator maker to obtain the global carbon management certification (CARBON TRUST Standard)

#### Nov.2016

Launched the world's first LED glass-adopted elevators and escalators

Exceeded the 20,000 mark in annual production output at the Icheon Factory

#### Jun.2017

Surpassed 2,000 units in the number of elevators installed per month

Hyundai Movex Launched "NEO", a new elevator for low/mid level Buildings

#### Oct.2017

Surpassed the 130,000 mark in the number of paid maintenance elevators

#### Dec.2017

Exceeded the 20,000 mark in the number of elevators installed per year

Started the construction of a new factory in Shanghai, China Jun.2018

Launched the "Hyundai Smart System," an Al chatbot-enabled maintenance

#### Sep.2018

Landed Korea's 1st JUMP Elevator order

Launched the VIVALDI, a new low-to-mid speed model Won the Platinum

#### Mar 2019

Developed an AR/VR-enabled elevator design selection system



#### Mav.2020

Developed the world's first carbon fiber belt-type ultra-highspeed elevator moving at a speed of 1,260m/min

#### Sep.2020

Surpassed 40,000 units of Hyundai Real Time Service (HRTS), an cutting-edge remote management

#### Oct.2020

Launched the "Clean Moving Solution"

#### Feb.2021

Launched the N:EX elevator

#### Mar 2021

Launched the "Air Touch", a contactless button with an IR sensor

Ranked first for 10 consecutive years in the Elevator Sector of the Korea-Brand power Index 2021 published by KMAC



Completed the new factory smart campus in Shanghai, China

#### Sep.2021

Acquired ISO 37301 certification for compliance management system for the first time in the machinery manufacturing industry

#### Dec.2021

6 types of new products for 2022 model of 'N:EX' unveiled

Hyundai Elevator headquarters moved to Chungju Smart Campus

Expanded business with releasing Open API, robot, AI speaker and smartphone connection platform

#### Apr.2022

Introduced photovoltaic power generation through the third party PPA for the first time in Korea. Secured the outcome for RE100 implementation

Announced Vision 2030. Marked KRW 5 trillion in sales, with overseas sales accounting for 50%, entering the global

#### Oct.2022

10 Developed a smart safety equipment system together with LG U+

• USA & CANADA

MEXICO

GUATEMALA HONDURAS EL SALVADOR NICARAGUA

ECUADOR •

PERU •

CHILE

COSTA RICA PANAMA VENEZUELA

COLOMBIA

DOMINICAN REPUBLIC

BOLIVIA

ARGENTINA

• BRAZIL

PARAGUAY

• URUGUAY

# **GLOBAL NETWORK**



#### Headquarters (Chungju Smart Campus)

- · Built in March 2022
- · Gross Area: 172.759.5m<sup>2</sup>
- · World's tallest test tower under construction
- Hyundai Customer Care Center ("HCCC"): Features MIRI, the artificial intelligence maintenance service, and offers customer consultations.
- · Annual manufacturing capacity: 23,413 units
- CPO, CTO

#### Seoul Office (Yeonji-dong, Jongno-gu, Seoul)

 Elevator Business Division, Installation Department, Global Business Department, Service Business Division, CSEO, CDO, CFO, CHO

#### Shanghai Smart Campus, China

- · Built in March 2021
- · Gross Area: 105.517m<sup>2</sup>
- · Test tower (175m above ground, 11m underground)
- · Annual manufacturing capacity:

Approximately 25,000 units (including escalators)

Hyundai Elevator discovers new markets and future competitiveness with its globally leading products and services.

#### Headquarters / Factory (Chungju)

FO1 (Sheet Metal Building), FO2 (Assembly Building), FO3 (TM Building), Service Parts Center, Test Tower (under construction), Hyundai Customer Care Center ("HCCC")

#### Offices in Korea

Seoul Office, Gyeonggi Branch Office, Incheon Branch Office, Jeonju Branch Office, Jeju Branch Office, Ulsan Branch Office, Gangwon Branch Office, Gyeongnam Branch Office, Gwangju Branch Office, Daegu Branch Office, Daejeon Branch Office, Busan Branch Office

#### Logistics Center

Chungju Logistics Center, Cheonan Logistics Center

#### Overseas Corporations (6 countries)

China, Vietnam, Türkiye, Malaysia, Indonesia, Brazil

#### Overseas Agencies (61 countries)

#### · Asia (11 countries)

India, Mongolia, Myanmar, Bangladesh, Sri Lanka, Singapore, Cambodia, Thailand, Taiwan, Pakistan, Philippines

#### · Middle East (9 countries)

Bahrain, Saudi Arabia, Jordan, Iraq, Israel, UAE, Oman, Qatar, Kuwait

#### · Africa (10 countries)

Nigeria, Morocco, Ethiopia, Egypt, Kenya, Republic of South Africa, Libya, Algeria, Republic of Cote d'Ivoire, Tunisia

#### · North / South America (18 countries)

Guatemala, Nicaragua, Dominican Republic, Mexico, Venezuela, Bolivia, Argentina, Ecuador, El Salvador, Honduras, USA & Canada, Chile, Costa Rica, Colombia, Panama, Paraguay, Peru, Uruguay

#### • Europe / CIS (13 countries)

Greece, Rumania, Cyprus, Spain, Ireland, Azerbaijan, Albania, Uzbekistan, Ukraine, Kazakhstan, Kyrgyzstan, Macedonia, Poland

# **SMART FACTORY**

Hyundai Elevator offers outstanding quality and pursues continual innovation at its Smart Campuses in Chungju, Korea and Shanghai, China.



#### Chungju Smart Campus, Korea

Chungju Smart Campus went into commercial operation in 2022. Built on 172,759m<sup>2</sup> of land, it hosts the headquarters building, the R&D center, employee welfare facilities and a dormitory. Hyundai Elevator enhanced its ability to meet and exceed customers' needs by creating a smart factory that integrated manufacturing, packaging and logistics, and integrated industrial Internet-of-Things, big data, artificial intelligence and other technologies to dramatically increase the automation rate.





For the first time since its foundation in 1984, Hyundai Elevator relocated its headquarters and plant to Chungju in 2022, laying the groundwork for a new leap forward. Chungju Smart Campus was designed to incorporate a wide range of 4th Industrial Revolution technologies and systems for manufacturing, R&D and logistics. Chungju Smart Campus is expected to position itself as the hub of Hyundai Elevator's operations. Shanghai Smart Campus, on which construction was completed in 2021, will help foster a spirit of challenge and innovation within Hyundai Elevator together with Chungju Smart Campus.

COMPANY

PROFILE

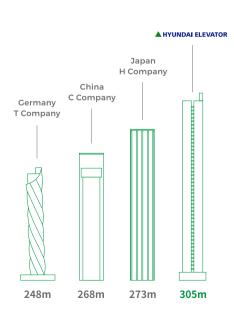


### Shanghai Smart Campus, China

Shanghai Smart Campus was built on 105,517m<sup>2</sup> of land in Jinshan Industrial Zone, Shanghai, China in 2021. It consists of a smart factory with an annual production capacity of 25,000 units, a test tower that can test 8 ultra-fast and mid-to-low-speed elevators, an office building and a welfare building. The smart factory, in which the elevator and escalator production lines and the logistics center are linked, is equipped with production and logistics automation facilities, industrial Internet-of-Things ("IIoT") and artificial intelligence technologies. Shanghai Smart Campus is becoming the springboard for Hyundai Elevator to become the top-tier brand in China, the world's largest elevator market and the company's global market hub.

# TEST TOWER / R&D

Hyundai Elevator develops innovative products and technologies that lead the era of vertical e-mobility at the world's tallest test tower.





#### **Test Tower**

Hyundai Elevator is building the world's tallest (305 meters) test tower on its Chungju Smart Campus, which is expected to play a pivotal role in the company's R&D for future technologies and products.

Hyundai Elevator is heralding the era of the 4th Industrial Revolution with elevators that incorporate a diverse range of convergence technologies. The world's tallest test tower under construction will be the most rigorous test bed for cutting-edge technologies, and the company is continuously investing in its R&D center to provide new value that breaks the boundaries of existing capabilities.

## Hyundai Elevator R&D Center

The R&D Center established in 1986 is where new products are developed, and future competitiveness is created. As the paradigm of mobility is shifting towards the convergence of machines and IT at breakneck speed, Hyundai Elevator R&D Center is developing software-defined\* elevators that continuously evolve through innovation and fuse elevators with artificial intelligence, big data and the Internet-of-Things. Also, as a part of the company's globalization strategy that aims to elevate the company into the ranks of global top 5, Hyundai Elevator is strengthening its future competitiveness by achieving cost-competitiveness through its Global Modular Platform and improving the quality of its development efforts through enhancement of the company's CAE\*\* competencies, such as the digital twin.

\*SW Defined : Software-defined: A technology by which a piece of software can be upgraded remotely, and a function requested by the customer can be provided through the network

\*\*CAE (Computer Aided Engineering): A common designation for technologies that use computers.

#### Basic Direction of R&D

#### Innovation

#### Differentiation of products and services (Smart product / service enhancement / IoT infrastructure construction)

Research and development of products and services based on the convergence of elevator technologies and IT

· R&D of Internet-of-Things cloud platform

#### Globalization

## Securing basic global competitiveness (Core technology)

Optimization of product and parts portfolio based on system platform (Global Modular Platform)

Improvement of logistics efficiency through artificial intelligence-based assignment algorithm

Such as the advancement of the development and design environment via the use of digital twins.

#### Major Achievements

#### **Smart Group Control System**

Smart Group Control System is an artificial intelligence-based system that controls and manages multiple elevator units.

The System enhances elevator operational efficiency by studying the operation data using a deep learning algorithm and analyzing data related to movements of elevator units and their passengers.



#### **Robot Link Service**

Robot Service controls the elevator units by using telecommunication networks to allow robots to move vertically. This Service is expected to bring delivery robots to life. Hyundai Elevator is strengthening the technical effectiveness of Robot Service by linking it to the Smart Group Control System.



## Development of technology that enabled world's first 1,260m-per-minute elevator

Hyundai Elevator, its vendors and research institutions jointly developed the necessary technology, which includes a carbon fiber belt the core element of the technology. The carbon fiber belt weighs only one-sixth of conventional metal rope; thus increasing operational distance and reducing electricity consumption. The carbon fiber belt also features high natural vibration frequency, safeguarding it against the resonance caused by winds or earthquakes.



#### Regenerative Inverter

LOWATT, a regenerative inverter that recycles energy created during elevator operation, is a groundbreaking eco-friendly regenerative energy technology that reduces the amount of energy used by up to 64% through the reuse of energy that would have been otherwise wasted.





# **SOLUTIONS**

23,413 UNITS

Number of elevators Hyundai Elevator can manufacture per year

**NO. 1** 

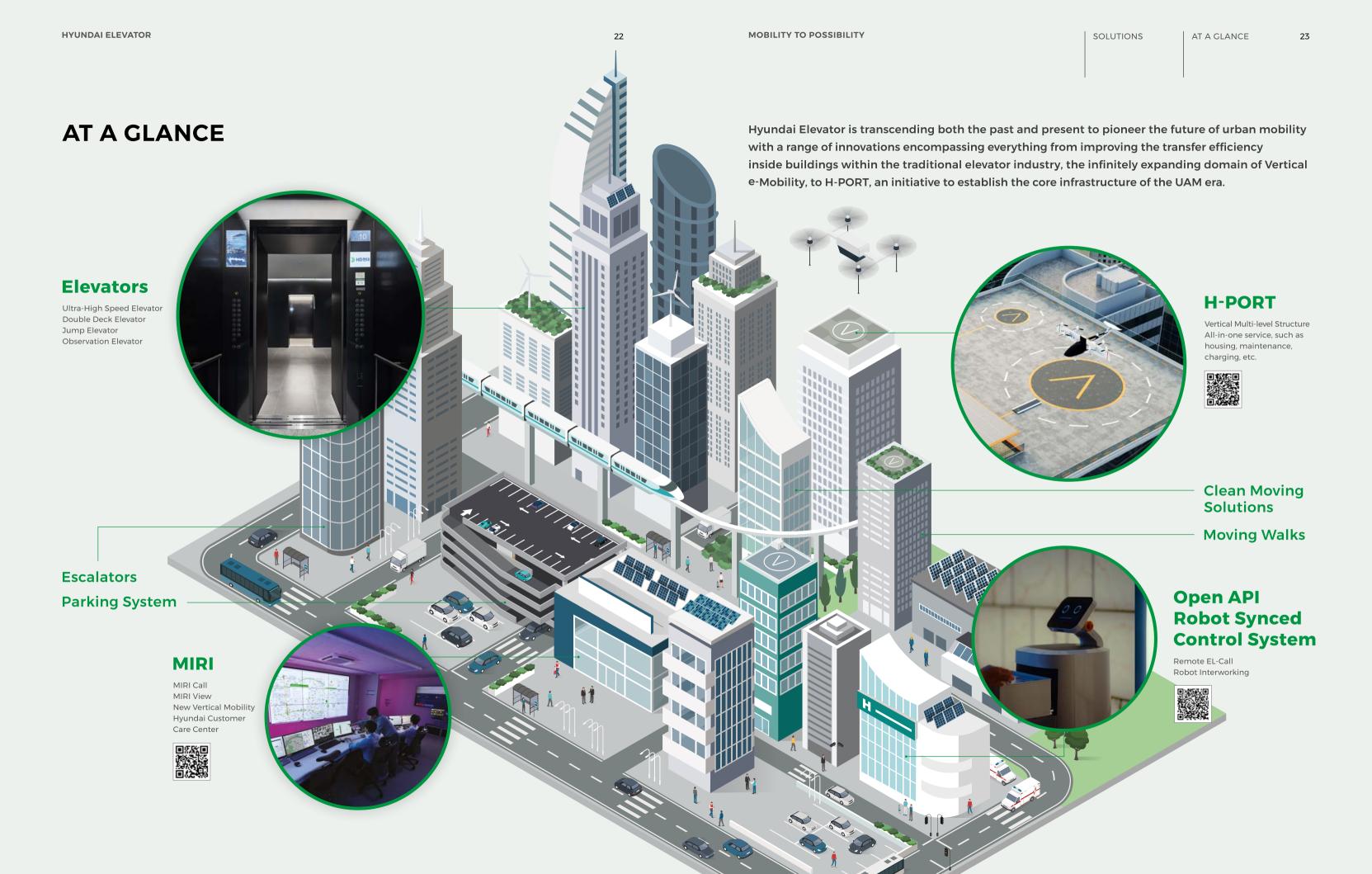
In the area of elevator maintenance in Korea for 8 consecutive years

182,955 UNITS

Number of elevator units Hyundai Elevator maintains (including units serviced by Hyundai Elevator Service Co., Ltd.)

Based on consolidated financia

Hyundai Elevator is the only elevator manufacturer in Korea that has its own in-house manufacturing plant. With the world's most advanced test tower, the company introduces only the very best products with proven reliability and safety. Hyundai Elevator also presents new mobility experiences suited to today's lifestyles through MIRI, based on hyper connectivity technology, and the most advanced services enabled by Open API.



## **ELEVATORS**

Hyundai Elevator offers its customers a variety of customized solutions with a diverse range of products based on elevator usage and building design. Hyundai Elevator's products offer unique ride comfort, outstanding safety performance and efficient use of space during construction and maximize the value of the buildings with their sophisticated designs and convenience features.

#### **Ultra-high Speed Elevators**

#### THE EL

The EL is the world's first carbon fiber belt-type elevator that moves at a speed of 1,260 meters per minute. The ultra-high-speed 9-phase synchronous motor, the NVH system\* that minimizes noise and vibration and the high-performance braking system provide a comfortable ride and stability worthy of a world-class ultra-high-speed elevator.

\*NVH (Noise, Vibration and Harshness) System: A system that reduces vibration and noise generated by a machine's parts.

#### THE EL Duo

THE EL Duo is a double-deck elevator, vertically connecting two elevator units via one hoistway and provides services to two floors simultaneously. By applying floor height variable technology, THE EL Duo can be installed in buildings with floors of different heights, such as the lobby or sky lounge, and boasts a rapid speed of 600 meters per minute.



#### **High Speed Elevators**

#### i-XEL

The electro-permanent magnetic traction machine and the high-precision control system developed by Hyundai Elevator provide outstanding ride comfort and stability. i-XEL offers an optimized level of satisfaction with its dramatic energy savings, modern door design and contemporary car interior.



#### Mid-to-low Speed Elevators

#### N:EX (N:EX Eco)

N:EX is the most advanced H-belt-driven elevator with next-generation eco-friendly technologies that enhance silence, operation efficiency and space utilization.

#### LUXEN

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LUXEN is Korea's leading eco-friendly mid-to-low speed gearless elevator model equipped with a regenerative inverter that provides a high-level of ride comfort and energy savings.

#### **New YZER (New YZER Signature)**

New YZER is Korea's first elevator model that requires no machine room. It improves space utilization in buildings and alleviates restrictions on hoistway layout and skyline design.







#### **Special Elevators**

#### **Observation Elevator**

Parts of the car wall are made of transparent windows to provide an open view, and the value of the building is enhanced by combining cutting-edge technology and sophisticated exterior design.

#### **Medical Elevator**

The medical elevator provides a more comfortable ride and refined atmosphere with safety features and a range of convenience functions specialized for medical facilities.

#### **Marine Elevator**

The marine elevator is a world-class elevator that offers efficiency, comfort and durability optimized for various types of ships, such as oil tankers, cargo ships, transport ships, and cruise ships.







# **ELEVATOR** REMODELING

As the number 1 elevator company in Korea that develops its own original elevator technologies, Hyundai Elevator installs the elevators it manufactures and integrates its maintenance know-how in remodeling projects. Hyundai Elevator guarantees that its products and services will comply with the laws and regulations applicable to its customers and continuously perform safely and comfortably, by optimizing remodeling project designs and calculating the necessary construction period and cost based on a building's characteristics.

> Since the Elevator Safety Management Act was wholly amended in March 2019, elevators installed for 15 years or longer must: receive a complete safety inspection every three years along with regular inspections; and be equipped with 7 types of safety devices. Hyundai Elevator provides services optimized to the remodeling environment with its team of experts dedicated to the elevator renovation business and considerable technological competence.

#### **Remodeling Types**

Elevators can be replaced totally or partially, depending on the scope of parts subject to replacement. Hyundai Elevator provides reasonable remodeling solutions that can minimize construction costs and time with its rich know-how and well-organized systems.

#### **Total replacement**

The entire existing legacy elevator, other than some recyclable items, is removed, and a new product is installed.

#### Partial replacement

The list of items to be replaced is minimized so that the elevator can be upgraded at the least cost possible for maximum effect.





#### **Total Replacement Process**

#### A thorough on-site survey

A visit to the site where the elevator needs to be replaced

#### Specification and replacement period consultation

Consultations with customers on the scope and period of replacement

#### Quotation

Presentation of a reasonable quote for replacement suitable for the designated scope

#### Design and

Design and manufacturing of elevators optimized to the customers' building

#### Post-design supervision

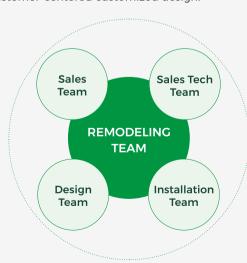
ELEVATOR

REMODELING

Flawless installation of a high-quality product and subsequent supervision

#### **Teams Dedicated to Remodeling**

For the first time in the industry, Hyundai Elevator operates teams specialized in remodeling to respond to the issue of compatibility with other models, the biggest challenge in remodeling, and provides solutions optimized for buildings through customer-centered customized design.





# **ESCALATOR / MOVING WALKS**& REMODELING

A safe and comfortable ride and affordable maintenance are essential elements for escalators and moving walks that connect spaces and help people move comfortably. Hyundai Elevator facilitates relaxed and efficient movement within buildings with technology and designs that match the purpose and status of the building.

For remodeling, for which design and construction is more complex than that of new installation, it is important to optimize the design in order to match the existing elements installed. Hyundai Elevator strictly abides by removal and construction schedules, offers reasonable prices and actively reflects the needs of customers through its teams dedicated to remodeling.

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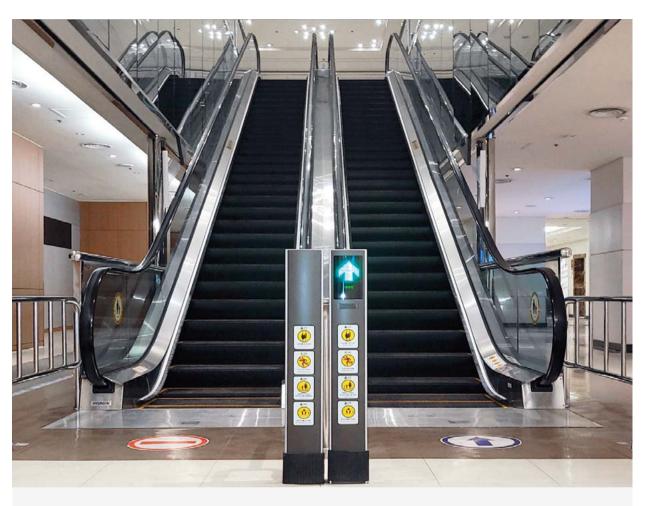
#### **Escalators**

Escalators that incorporate Hyundai Elevator's know-how enable open communication between spaces and people through efficient design and construction tailored to specific architectural spaces. Sophisticated and compact designs, as well as reliable performance, improve building utilization and value.



#### **Moving Walks**

The safety and reliability of Hyundai Elevator's moving walks has already been proven in large-scale transportation infrastructure such as international airports and subway stations. Our moving walks provide better ride comfort with a noise-free design suitable for quiet spaces, and Hyundai Elevator offers a wide range of moving walk products, such as horizontal and inclined types.



#### **Remodeling Type**

Replacement of escalators and moving walks are categorized into total replacement and modernization ("MOD"), depending on the scope of parts to be replaced. When an escalator or a moving walk is modernized, its quality and safety can be upgraded while merchants in the applicable building remain open for business.

#### Complete replacement

The entire product is replaced with a new product.

#### Modernization

All parts other than truss and rail are replaced to improve product safety and interior decoration to the maximum extent possible.

#### **Advantages of Remodeling**



Quality can be improved and safety can be assured to a similar level as a new installation.



Ensure compliance with laws and regulations, upgrade parts and improve the interior of the building.



Prevent damage to the building by recycling the truss and the rail



Merchants can remain open during the construction period.

# **PARKING SYSTEMS &** REMODELING

A parking system must be designed to achieve maximum efficiency in a limited space with a minimum of management costs. With its cutting-edge technologies and rich experience of its dedicated teams, Hyundai Elevator provides safe and convenient experiences to both users and managers while enhancing the reputation of the building.

> Hyundai Elevator upgrades legacy mechanical parking systems that break down often and are inconvenient to use into modern parking systems that are suited to the conditions and usage of a particular building. By offering cost effectiveness and reasonable construction periods, Hyundai Elevator provides a reliable parking experience to both the managers and the users of its parking system.





#### Improved operational efficiency

Significantly reduced entry and exit time and convenient vehicle entry



Increased number of acceptable vehicle types and parking capacity

Can accept a greater number of mid-to-large passenger vehicles and SUVs.



#### **Enhanced safety**

Less noise, vibration and failure with redundant safety features, such as motion detection sensors



#### Increased building value

Greater space efficiency and functionality for user convenience (e.g., control panels and LED signals) can be integrated.





#### **Elevator Type** (Pallet Type / Fork Type)

**MOBILITY TO POSSIBILITY** 

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The elevator type parking system, which can hold up to 76 cars on land designed for 3 cars, boasts outstanding structural stability and rapid entry and exit. The elevator type tower-shaped parking system can be installed either inside or outside a building as envisioned by the building's construction plan.



#### **Flat-surface Round-trip Type** Parking System (Cart Type)

With a lift and cart that operate simultaneously, mid-to-large size vehicles can be efficiently parked in a large underground space. This system is operated by an inverter control system and can be configured to meet the needs of customers.



#### Large-scale Multi-dimensional Parking System (HIP)

As the conveyor-type (slat-conveyor) pallet-less method was used in this system for the first time in Korea, no empty pallet is extracted during loading and unloading, thus speeding up the entire parking process. It provides impressive convenience and safety to users, and vehicles can enter and exit the parking facility with ease.



#### **Multi-layer Circulation Type** Parking System (Right-angle Type)

The multi-layer circulation type parking system can accommodate the largest number of vehicles within a limited underground space. Personal safety was enhanced by integrating motion detection sensors as standard to ensure customer safety.



# CLEAN MOVING SOLUTION

In the era of post-pandemic new normal, contemporary transportation methods, including elevators, are rapidly evolving into spaces that provide new usage scenarios and mobility experiences. As the leader of the future elevator industry, Hyundai Elevator presents clean moving solutions that adopt various novel technologies for the health and convenience of users.



#### **Bluetooth Tagging**

Bluetooth tagging is a mobility system that adopts the new concept of controlling elevators using a mobile app. Using the H-Mobile Thru app, a user can easily and conveniently move to the desired floor by tagging his/her mobile phone to the registration device.



#### **Air Touch**

A user can register a desired floor and call the elevator without touching a button, using a position recognition sensor with advanced IR sensing technology. This system enhances public health as it prevents the spread of germs and infections.



#### **Motion Call Button**

The motion recognition sensor recognizes the vertical movement of the human hand and calls an elevator. This solution alleviates concerns over bacterial or viral infection from direct contact.



#### **Touchless Foot Button**

A user whose hands are full or who cannot use his/her hands can call an elevator using a sensor built into the lower part of the hall button panel without needing to use his/her hands.



# Automatic Heating/Cooling Fan with HEPA Filter

A heating/cooling fan and an air purifier with a HEPA filter that automatically controls and maintains air temperature and cleans the air using a temperature sensor. The system can be installed within the existing fan hole and provides an optimized solution for small elevators (for 7 to 13 passengers).



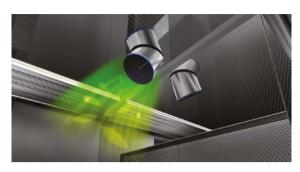
#### **Smart Indicator**

The smart indicator displays a wide range of information such as the floor, power mode and CCTV operation, and maintains a pleasant indoor environment with built-in ultrasonic pest repellant and ozone-free negative ion air purifier.



#### **Antiviral Handrail**

Certified antiviral materials are applied to handrails that are easily exposed to viruses, blocking 99% of germs and effectively preventing the spread of germs and infections.



# Negative Ion Air Purifier with HEPA Filter

Negative ions remove germs and fine dust to keep the air inside the elevator car pleasant, and the purifier provides aesthetic satisfaction through its design and color that takes the occupants' line of sight into consideration.



#### **Indicator Type Air Sterilization Purifier**

A high-performance HEPA filter that targets fine particles and a dedicated sterilization solutions (hydroxyl radicals) remove airborne germs and viruses on the surface of the elevator. The purifier has been certified by Korea Conformity Laboratories and KSD Sungdae Environmental Testing Institute, and was a recipient of the iF Design Award.



#### **Ultra UV Cleaner**

The ultra UV cleaner is a system that cleans and sterilizes dusts and pollutants on escalator handrails to enhance user hygiene and safety.

MAINTENANCE

SERVICE

# **MAINTENANCE SERVICE**



MIRI, an acronym that stands for Maintenance Innovation & Real-time Information, is the brand name of Hyundai Elevator's new-level elevator maintenance services. MIRI is a predictive service that integrates the artificial intelligence, Internet-of-Things, cloud, big data and robot technology of Hyundai Elevator that analyzes the maintenance data generated by the elevators on a real-time basis to achieve more efficient and safer operation.



#### **Distinguishing Factors of MIRI**



#### **Minimization of Elevator Downtime**

- · Artificial intelligence analyzes the cause of failure when an elevator fails and provides information related to the failure and diagnostic metrics.
- · Minimizes elevator downtime by applying artifi cial intelligence solutions and stocking necessary components in advance.

#### **Advance Detection of Abnormalities**

- · Early detection of elevator abnormalities before breakdowns.
- · The system evolves and prevents risks by learning from big data.

#### **Predictive Maintenance of Parts**

- · MIRI provides information on usage and replacement of parts by analyzing collected elevator data.
- · Customers can check the status of parts directly through the customer portal.

#### **Additional Services**

#### MIRI Call

MIRI Call uses Open API technology to facilitate remote calling. Users can easily call an elevator using an app. Users can also call an elevator with their voices, as the service is linked to various artificial intelligence platforms, such as Siri and



#### **MIRI View**

MIRI View detects movements and sounds inside elevator cars using CCTV cameras and responds accordingly. When MIRI View detects a large movement, fall or scream inside the elevator car, it notifies the customer center and the safety manager for immediate identification of the situation and appropriate follow-up.

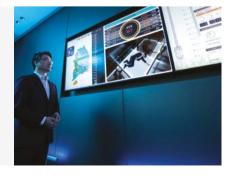


#### **New Vertical Mobility**

The elevator of the future will go beyond a simple means of vertical transportation - it will become a new platform that connects more people and infrastructure. MIRI will foster improved mobility efficiency and value by closely connecting buildings, delivery platforms, service robots and delivery robots. Also, MIRI can be connected infinitely to a wide range of services using Open API technology.

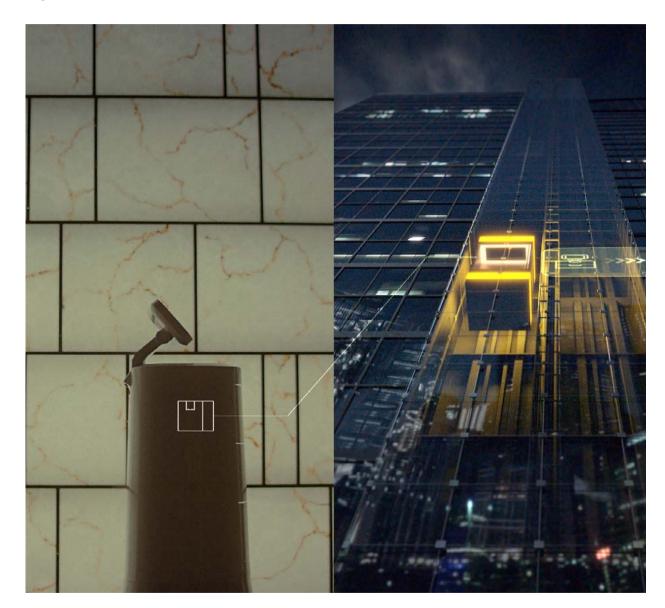
#### **HCCC**, Cutting-Edge Customer Care Center

HCCC is a cutting-edge customer care center that utilizes a geographic information system ("GIS") for the first time in the Korean elevator industry. Over 4,000 maintenance experts provide quick and accurate troubleshooting services in real time, 24 hours a day, 365 days a year. Hyundai Elevator is realizing zero-breakdown elevator operations by offering a predictive diagnostics service through the newly launched MIRI platform.



# CONNECTED **ELEVATOR**

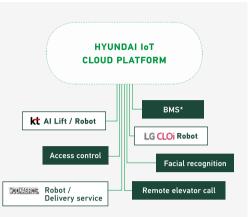
#### **Open API**



Hyundai Elevator offers a standardized API\* and testing environment, enabling rapid and cost-effective integration with external systems and devices. By using Open API, the service can be effectively scaled up by interworking the elevator to a range of Internet-of-Things devices and external systems, such as robots, artificial intelligence speakers smartphones, digital signage and building management systems.

#### **Hyundai Elevator IoT Cloud Platform**

Since Open API is operated on the cloud, it can be easily connected to external devices, such as robots and smartphones, wherever the Internet is available without installing additional equipment. A variety of services, including smartphone-enabled elevator calls and personalized in-elevator display information based on passenger identification, can be developed. In addition, the operating system can be improved by analyzing elevator usage to reduce power consumption and waiting time by automatically positioning elevators on crowded floors.



\*BMS : Building Management System

#### **Services Provided Using Open API**

#### **Remote Elevator Call**

Uses a cloud-based network to connect elevators and external systems (artificial intelligence speakers, facial recognition, etc.) to enable remote elevator calling.

#### **Robot Interworking**

Robot interworking supports interaction with robots through precise elevator control and linkage with various external robot services based on Open API connectivity.







#### **Application of Open API-Cases**

#### Yonsei University College of Medicine **Yongin Severance Hospital**

Hyundai Elevator connected the elevators installed at Yongin Severance Hospital with robots using the Open API platform it released to the public in 2022. By building a system that allows robots to board the elevator, Hyundai Elevator operates elevators that are exclusively for robots, such as blood transport robots, sample transport robots and bellboy robots, as well as elevators co-used with humans, such as drug transport robots and medical consumables transport robots.

#### NAVER's New Corporate Headquarters (NAVER 1784) and Robot-Elevator Collaboration

Hyundai Elevator provides robot interconnection and Open API services to the elevators at NAVER 1784 and is collaborating on robot-elevator interconnection with about 10 robot vendors, including LG Electronics.

<sup>\*</sup>API (Application Programming Interface): A software interface that helps computers or computer programs connect to each other.

# ACHIEVEMENTS MINISTRA

39.1%

Market share in Korea (Based on new and replacement elevator installation completion inspections)



Corporate credit rating by Korea Ratings Corporation

# KRW 2 TRILLION 129.3 BILLION

in revenue

\*Based on consolidated financia statements for FY 2022

Hyundai Elevator has been supplying its products and services to landmark buildings around the world for various purposes, including public facilities, terminals, integrated commercial facilities and residential buildings. Hyundai Elevator has proven its reputation and value by providing a differentiated mobility experience everywhere in the world.



LG U<sup>+</sup> Yongsan Office Building 2 units x 240m/min double deck elevators (the first in Korea), 4 units x 240m/min elevators and 2 units x 210m/min elevators (10 in total),

# **SIGNATURE PROJECTS 1**

**Domestic** 



#### **Busan International Finance Center**

2 units x 600m/min elevators (the fastest in Korea), 3 units x 540m/min elevators, 8 units x 480m/min elevators and 6 units x 360m/min elevators (32 in total), 14 escalators



40

Park Hyatt Busan (Korea)

(11 in total)

2 units x 360m/min elevators, 3 units x 240m/min elevators and 2 units x 210m/min elevators

#### **Seoul Dragon City**

23 units x 240m/min elevators, 4 units x 210m/min elevators (33 in total), 10 escalators



20 escalators, 5 dumbwaiters



#### Dongdaegu Complex Transfer Center

27 units x 105m/min elevators (36 in total), 99 escalators, 8 moving walks



#### **Lotte World Mall**

45 units x 105m/min elevators (60 in total)



SIGNATURE

PROJECTS 1

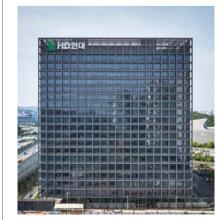
#### Hillstate Songdo The Terrace

62 units x 210m/min elevators (69 in total) and 3 escalators (including Korea's first Jump Elevators)



#### **NAVER 1784** (New corporate headquarters)

10 units x 300m/min elevators, 10 units x 240m/ min elevators (20 in total), The world's first robot-friendly building, Features a 'Roboport', an elevator dedicated to robots, Linked Rookie, the self-driving service robot, and passenger elevators



#### HD Hyundai R&D Center

3 units x 240m/min elevators, 24 units x 180m/min elevators and 1 unit x 120m/min elevator (34 in total), 4 escalators



# **SIGNATURE PROJECTS 2**

**Overseas** 



42

Venezuela

Integrated Government Building of Venezuela

2 units x 480m/min elevators, 5 units x 420m/min elevators and 4 units x 360m/min (22 in total), 6 escalators



China

4 units x 360m/min elevators, 4 units x 210m/min elevators (8 in total)



Myanmar

5 units x 180m/min elevators, 2 units x 150m/min elevators and 6 units x 120m/min (20 in total)



Türkiye

Metropol Istanbul

**MOBILITY TO POSSIBILITY** 

6 units x 360m/min elevators, 1 unit x 300m/min elevator and 26 units x 240m/min (93 in total), 26



Iset Tower

2 units x 360m/min elevators, 1 unit x 210m/min



Vietnam

Hanoi Landmark Tower

2 units x 240m/min elevators (29 in total), 27 escalators



Türkiye

Varyap Meridian

14 units x 240m/min elevators, 10 units x 210m/ min elevators (71 in total)



Indonesia

**Gallery West** 

4 units x 240m/min elevators (23 in total), 12 escalators



Uzbekistan

IBC Hotel

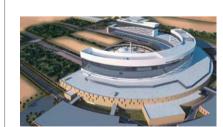
10 units x 150m/min elevators (19 in total)



Panama

F&F Tower

5 units x 240m/min elevators



Saudi Arabia

Security Forces Medical City

21 units x 150m/min elevators, 38 units x 105m/ min elevators (184 in total), 24 escalators



SIGNATURE

PROJECTS 2

Malaysia

Space Residency (Vistana Tropika)

6 units x 300m/min elevators, 4 units x 240m/min elevators and 3 units x 210m/min elevators (23 in total), 2 escalators



Muong Thanh Song Han Hotel

18 units x 180m/min elevators, 6 escalators



Türkiye

Inaniar Terrace Lotus

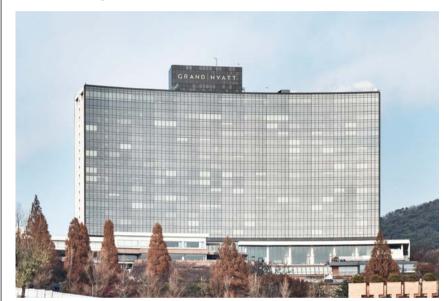
5 units x 150m/min elevators (12 in total), 4 escalators

The passion of becoming the best in the world has led to the success of numerous Hyundai Elevator projects in various regions around the world. Hyundai Elevator's global business prospects are expected to continue to expand thanks to its rich experience and know-how.

# SIGNATURE PROJECTS 3

#### Remodeling, Escalators, Moving Walks and Special Elevators

#### Remodeling



**Grand Hyatt Seoul** 4 units x 240m/min elevators



Main Building of Seoul Metropolitan Government Complex

10 units x 210m/min elevators



Main Building of HANA Financial Investment

8 units x 240m/min elevators, 1 unit x 120m/min elevator and 2 units x 90m/min elevators (11 in total)



Jongno Towe

3 units x 210m/min elevators, 3 units x 180m/min elevators, 2 units x 120m/min elevators and 1 unit x 60m/min elevator (9 in total)



Headquarters of Shinhan Bank

8 units x 210m/min elevators, 1 unit x 150m/min elevator and 1 unit x 105m/min elevator (10 in total)

From demanding remodeling and ergonomically curved escalators, to flexible moving walks that boast organic connectivity and special elevators, Hyundai Elevator has been providing optimal moving solutions to match its customers' operating environments.

#### **Escalators, Moving Walks and Special Elevators**



Hyundai Premium Outlets SPACE 1 38 escalators



**Garden 5** 78 escalators



Incheon international Airport 22 escalators, 40 moving walks



Hyundai Department Pangyo Store 82 escalators



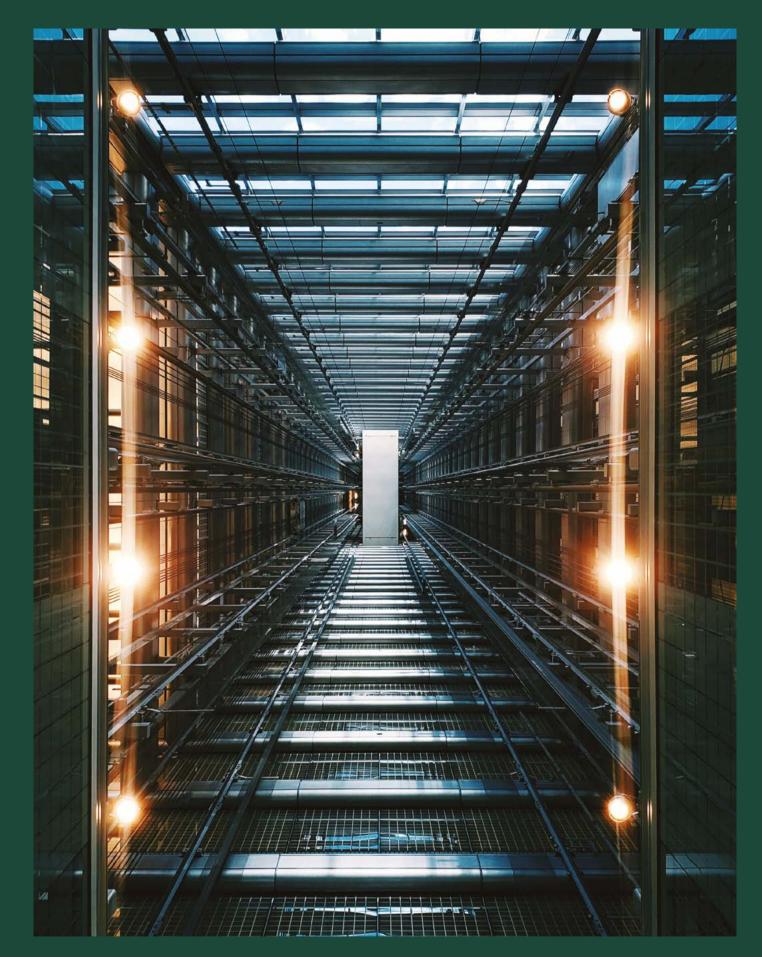


**Dongdaegu Complex Transfer Cente** 99 escalators, 8 moving walks



AIAD Cruise (PRIMA/PERIA)
66 marine elevators

# **ESG**



ESG Vision 2030

#### **Green Mobility**

#### trusted by global society

S

E

Response to global climate change and achievement of net zero carbon neutrality Implementation
of ESG
management
practices together
with local
communities and

**\**/

Integrated environmental management system

Response to climate change

Eco-friendly technologies and products

Management system for virtuous resource cycle

Responsible supply

their members

chain management

Impact on local
communities

Health and safety –

– Human capital company

G

**Enhanced ESG** 

management

practices to

become a trusted

Environmental, Social and Governance Management

Integrated ESG risk management

Enhancing shareholder value

Stakeholder communication

Hyundai Elevator aims to establish and faithfully implement sustainable management strategies from an Environmental, Social and Governance (ESG) management practices perspective to become a global-recognized top 5 company. We will realize our goal of "green mobility trusted by global society" through ESG management practices that take into account diverse stakeholders such as the environment, future, nation, society, employees and shareholders.

# **ENVIRONMENT**

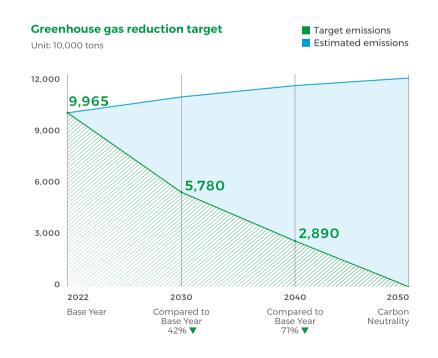




#### Response to Climate Change and Emission Reduction Activities

Hyundai Elevator is making efforts to reduce greenhouse gas emission and achieve carbon neutrality by 2050. In addition, the company has established an ESG Council, which identifies the critical risks of climate change to all aspects of the company's business, discusses the relevant issues in detail and establishes specific mitigation plans and targets. Hyundai Elevator is establishing a mid-to-long-term greenhouse gas emission reduction roadmap that targets a 42% cut in carbon emissions by 2030; introducing a 3rd party power purchase agreement (PPA)\*; installing additional renewable energy power generators (photovoltaic panels); and developing eco-friendly technologies.

\*Third-party PPA: A system that allows renewable energy power generation companies to sell their electricity to companies that are trying to meet RE100 standards through the mediation of Korea Electric Power Corporation. The system was first introduced in 2021 after the revision of a Ministry of Trade, Industry and Energy announcement and is one of the important means of realizing RE100 goals.



To fulfill our corporate social responsibilities related to the environment, Hyundai Elevator is systematically establishing and implementing an environmental management system (as prescribed by the international standard on environmental management, ISO 14001), setting environmental goals, complying with all applicable laws and regulations, encouraging all employees to participate, and cooperating with stakeholders for mutual sustainability all with environmental management as our top priority.



#### Waste and Pollutant Management

Hyundai Elevator processes general and designated wastes from business sites as prescribed by waste management laws and regulations from generation to transportation and to treatment. The company is also making concerted efforts to recycle and reuse the by-products of waste treatment. The air pollutants created during the manufacturing

process are processed by air pollution prevention facilities to minimize their emission content; harmful chemical substances are reviewed for safety by using the chemical substance material safety data sheet (MSDS); and efforts are made on a continual basis to find substitute substances.



# SOCIAL



#### **Human Rights** Management

To protect human dignity and the value of various stakeholders, including employees and vendors, the company has established a human rights management policy and is implementing it in phases. Hyundai Elevator is fulfilling its responsibilities to protect human rights by operating a complaint handling center, providing human rights improvement training for executives and employees, safeguarding employee diversity and prohibiting discrimination; and creating a corporate culture of harmonious and win-win labor-management relations.





#### **Talent** Management

Based on a healthy and horizontal corporate culture that emphasizes selffulfillment and skill utilization, Hyundai Elevator develops and manages a workforce that is vital, professional and globally minded.





#### Quality Management

To supply safe and highquality products, Hyundai Elevator implements a quality management system that spans all business processes, from sales to development, design, purchasing, manufacturing, installation and service. The company has acquired ISO 9001 certification (on quality management), along with certification from other organizations such as Korea Certification and Conformité Européen, by thoroughly verifying the quality of its products, conducting periodic reliability testing and improving quality issues, especially those related to product defects.





50

#### **Health & Safety** Management

activities across various sectors.

Hyundai Elevator established "CSEO Vision 2030," a health & safety management strategy, which aims to achieve the goal of zero serious accidents and an accident rate of 0.135% or lower. The company is dealing with health & safety risks by strengthening responsible safety management; implementing on-site safety patrols; supervising safety management practices at overseas subsidiaries; implementing activities aimed at preventing mass casualty incidents; and raising safety awareness among employees.





Hyundai Elevator seeks to share and grow together with its vendors, local communities and nations based on limitless trust in quality. We grow our positive influence through responsible corporate management, safety management and sincere social contribution

#### **Responsible Supply Chain Management**

Hyundai Elevator evaluates its vendors semi-annually, benchmarks them against the Win-Win Growth Index and systematically helps vendors enhance their competitiveness. The company established evaluation standards that cover ESG-related areas to mitigate potential supply chain risks and is making efforts to grow in tandem with its suppliers by providing smart and safe protective equipment.









#### Sharing

Under the slogan, "a company that grows by sharing," Hyundai Elevator has been carrying out various social contribution activities focused on participatory service, volunteer service, purchasing and sharing products from social enterprises and fulfilling personal and corporate social responsibility.





# GOVERNANCE



# **Ethical Management**

Hyundai Elevator established a dedicated ethical management division in 2007 that persistently reviews all company activities and has recently updated its entire ethical code in 2023. In addition to ex-post facto audits focused on uncovering corrupt practices, the company mitigates ethical risks by periodically visiting branch offices and employing a whistleblowing system; and strengthens its ethical management foundation through the use of in-house diagnostic tools, distribution of an ethical management practices casebook, and by mandating self-assessments of ethical management practices among executives and employees.





# Legal Compliance

Hyundai Elevator is prioritizing a culture of fair trade by introducing a voluntary fair trade compliance program and encouraging voluntary compliance activities. The company has established a set of compliance directives and obligates its executives and employees to comply with the directives. Violators are dealt with under a principle of zero-tolerance. Hyundai Elevator has acquired ISO 37301 certification in compliance management for the first time among Korean machinery manufacturing companies in 2021 and strives to maintain its certification, highlighting our commitment to compliance management.





Hyundai Elevator is establishing a sound governance structure centered around a board of directors characterized by enhanced independence, expertise and transparency, and creating a culture of fair trade by establishing a dedicated ethical management organization and corporate ethics standards. We are also striving to establish and implement strict management systems for information security and risk management.



# Establishment of Sound Governance Structure

Hyundai Elevator has a transparent and professional board of directors consisting of 2 internal directors, 4 external directors and 1 part-time director. The four committees under the board of directors (Audit Committee, External Director Recommendation Committee, Remuneration Committee and ESG Committee) operate with full independence and objectivity, in accordance with their respective roles and responsibilities. The company is doing its utmost to enhance corporate value and maximize profit by systematically communicating with various stakeholders.





#### MOBILITY TO POSSIBILITY.

Leveraging increasingly sophisticated technologies, we will work alongside our customers across the globe to shape a brighter future.

Hyundai Elevator remains unceasing in its pursuit of challenges and innovations, as we strive to connect people, spaces, the environment, and the future on the global stage.

As the leading elevator brand in Korea, we promise to once again dramatically impact daily living by transcending traditional boundaries with our innovative concepts and technology.







This brochure is using FSC\* (Forest Stewardship Council\*) - certified paper that has bee processed using chlorine-free practices (PCF). Moreover, it is printed using so based ink that is more environmentally-friendly than petroleum-based inks and reductional translations are those polyvargate.

Designed by Killing Mario

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