

**HDC LABS**

HDC LABS is a spatial AIoT platform company  
providing spatial solutions  
and lifestyle platform services  
that encompass all lifestyles and values  
by redefining space, life and future.

**HDC LABS**

**We shall do our best  
to provide new values for our customers  
by adding technology to space.**

HDC LABS has been newly founded as a result of the merger between HDC I-CONTROLS and HDC I-SERVICE.

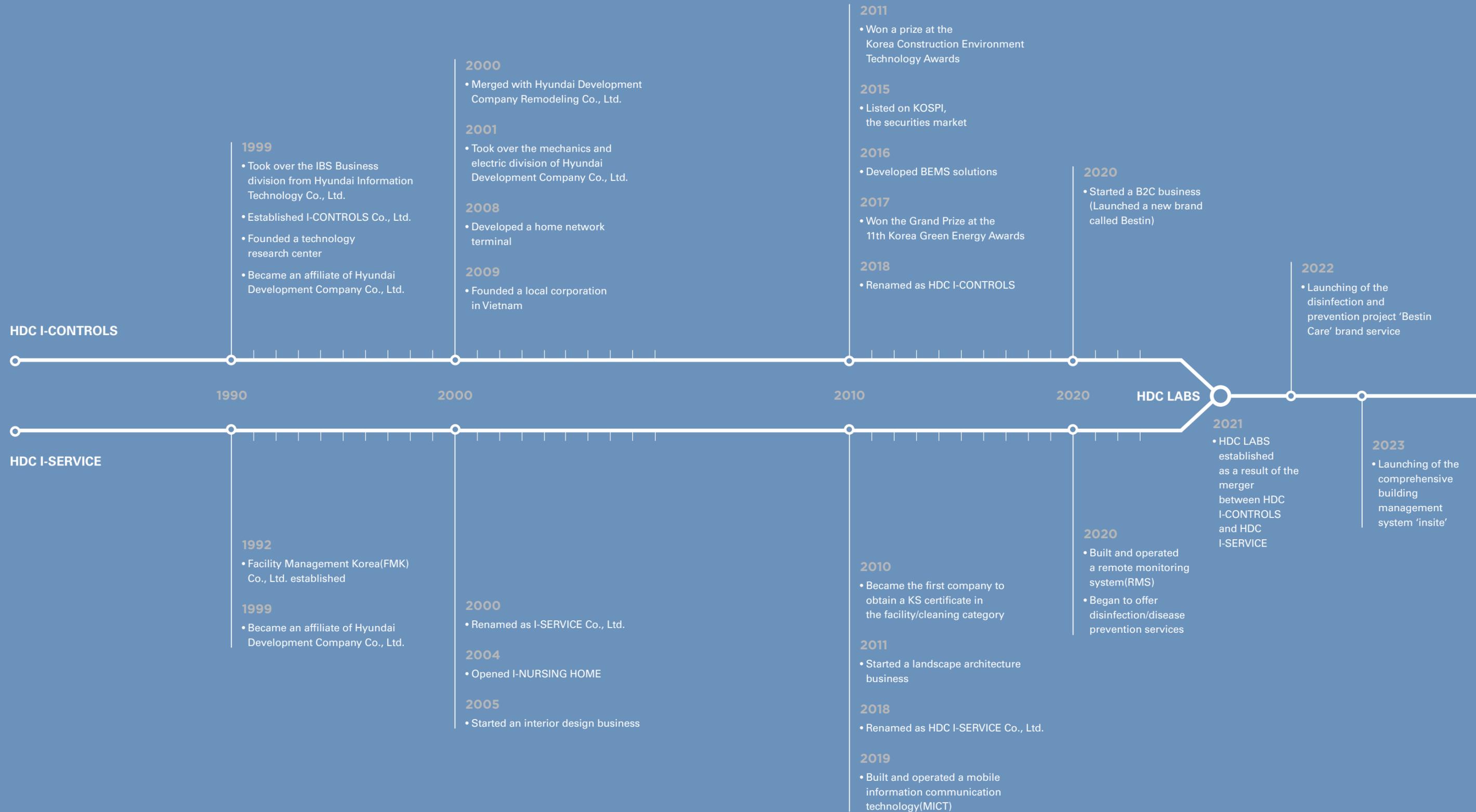
HDC I-CONTROLS is an eco-friendly construction IT specialist that has been leading the cutting-edge workplace environment and housing culture by proposing the best IT solutions, and has built a solid location in various business areas. On the other hand, HDC I-SERVICE is a leading building management company in Korea and provides optimal services to improve the real estate value of its customers' real estate.

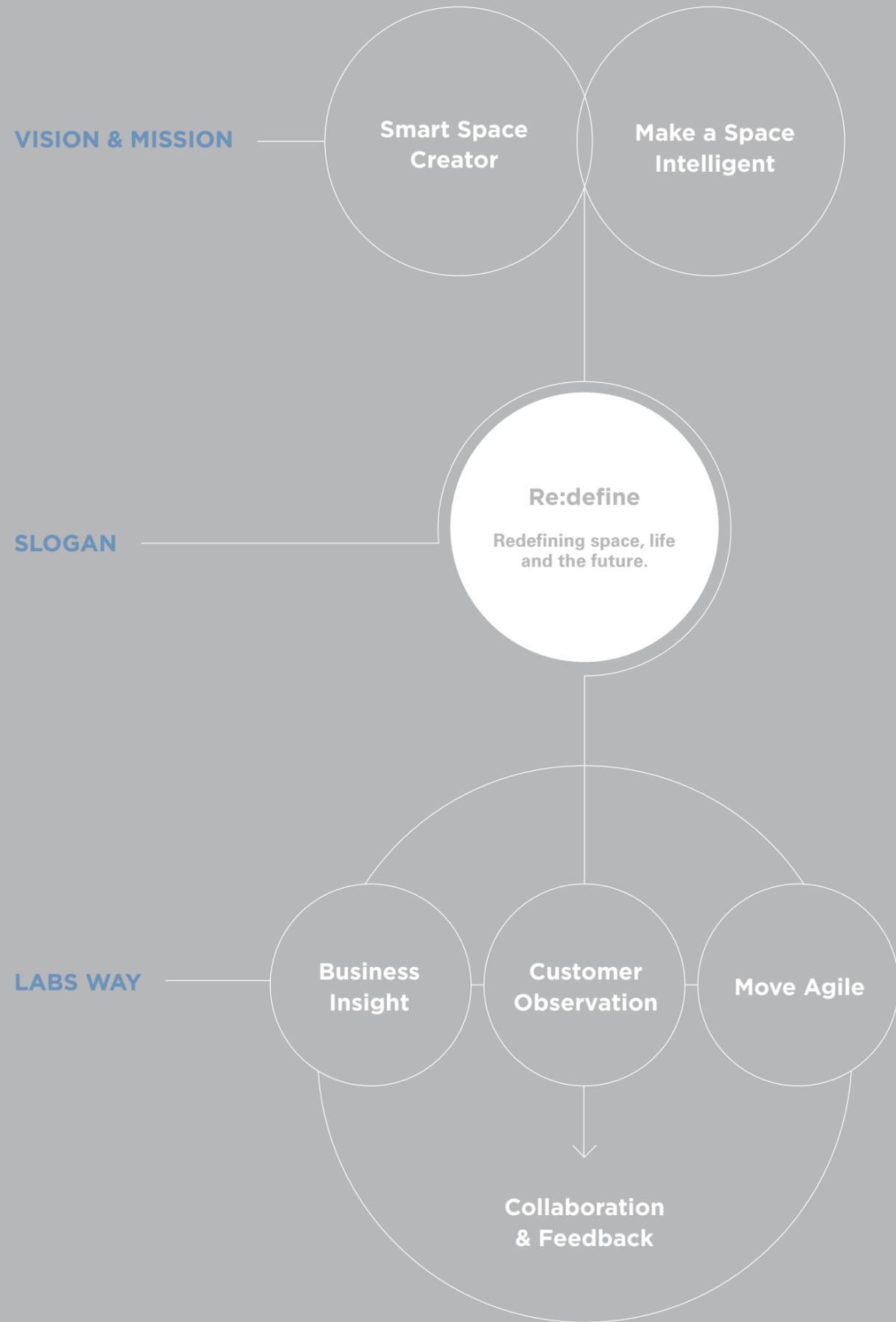
As the merger of the two companies, HDC LABS is going to improve itself as a high value-added business by diversifying its portfolio and actively seeking out new businesses that utilize spatial data. At HDC LABS, we aim to enhance customer value by adding technology to space, and shall do our best to provide safer and more pleasant workplaces and residential environments.

**Seong Eun Kim** CEO of HDC LABS

# COMPANY HISTORY

Based on its accumulated AIoT technological competence in the smart home/building field and expertise in building management, landscape architecture, and interior design business, HDC LABS aims to be a spatial AIoT platform company, redefining space, life and the future.





## CERTIFICATE

Information and communications construction business	Interior construction business	Facility maintenance business
Building construction business	Landscape architecture, tree-planting and facility construction business	Business specializing in facility management
Industrial facility construction business	Landscape architecture business	Facility security business
Firefighting system installation business	A member of the Tree Hospital Association(Type 1)	Housing management business
Electrical construction business	Gas facility construction business	Disinfection business, water tank cleaning business
Mechanical equipment construction business	Engineering activities	Sanitation management business
Mechanical equipment inspection business	Elevator installation business	KS certificate for facility management
ESCO (Energy Service Company)	Metal doors/windows construction business	KS certificate for cleaning services
ISO 9001, ISO 14001	ISO 45001, ISO 50001	ISO 37001

## AWARDS

### Design Awards

Facial Recognition Door Lock (IDL-312R)	2023 Good Design Award Silver Prize (Minister of Trade, Industry and Energy Award)
Smart Wall Pad (IHN-2400)	2023 Good Design Award 2014 German iF Design Award, 2013 Good Design Award
Digital door lock(IDL-400)	German Red Dot Award 2022, Good Design Award 2021
Digital door lock(IDL-300)	Good Design Award 2019, German Red Dot Award 2019
LED dining table light(Connected Light D1)	Selected for the WINNER prize at the Asia Design Prize 2019
LED dining table light(ORGANICO DINING-L)	Selected for the WINNER prize at the K-Design Award 2018
Home network system (IHN-D101, IEM-300)	German Red Dot Award 2018 The Minister Award from the Ministry of Trade, Industry and Energy at the Good Design Award 2017
Home network system (IHN-1020ML, IDC-840SL)	German iF Design Award 2014 Good Design Award 2013

### Intelligent Building Awards

Daegu Bank's 2nd Head Office (IBS/SI/BEMS applied)	Gold Prize at the APIGBA Awards 2018 First Prize at the Korean Intelligent Building Awards 2017 The Minister Award from the Ministry of Land, Infrastructure and Transport at the Korea Green Building Awards 2016
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### Landscape Architecture Awards

Mindscape Garden	Excellence Award at the Korea Garden Show 2017
Fences - Boundaries for Communing in the Garden	Selected for the artist's garden category at the 5th Gyeonggi Garden Culture Fair
Trip to a Loft	Bronze prize in the model garden category at the 3rd Chungju Gardening Festival
Empathy - A Garden of Communication that Connects Boundaries	Presidential Prize at the 12th National Award of Korean Landscape Architecture

## PATENT

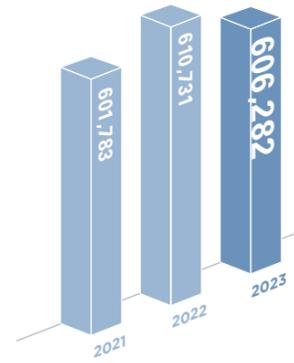
2022. 4	Photovoltaic louver system with bypass component	1020210109919
2021. 9	Method for effectively manufacturing microbial fermentation carriers for air purification systems	10-2300802
2021. 9	Perforated drain pipes for plant cultivation with air purification function	10-2300803
2021. 8	Method for producing information for building cleaning services	1020210021949
2019. 3	Room-controlled ventilation system with air cleaning function	No. GT-19-00603
2018. 2	DC lighting module and a lighting system that uses the DC lighting module	10-1830643-0000
2017. 7	Energy load estimation device, method, and computer-readable medium	1017210990000
2017. 3	Home network system for the disabled	1017207620000
2016. 5	Digital door lock with a wireless charging function	1016277770000
2013. 9	Energy management system	1013130490000
2003. 3	Integrated remote control device and its methods for use	1003786740000

# FINANCIAL HIGHLIGHTS

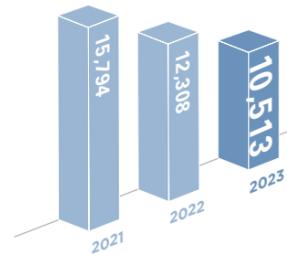
HDC LABS prepares for a sustainable future based on its stable financial structure.

## Consolidated Financial Statements

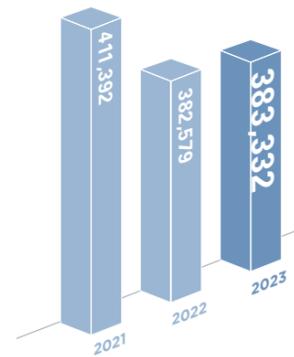
Unit: KRW 1 million



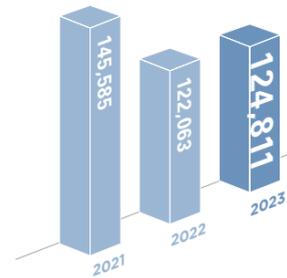
Revenue



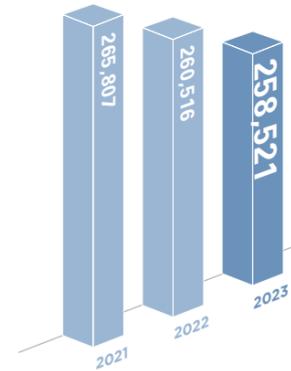
Operating Profit



Assets



Liabilities



Equity

\*The 2021 figures are the sum of the financial performances of HDC I-CONTROLS and HDC I-SERVICE. Therefore, official figures may differ from those disclosed.

## Credit Rating

As of 2023

Credit Rating Agency	Credit Rating
NICE D&B	A+
E CREDIBLE	A+
Korea Rating & Data	A+

# BUSINESS STRATEGY

HDC LABS has transformed its business model to a platform business that targets both demand and supply markets in order to provide solutions that maximize customers' values.

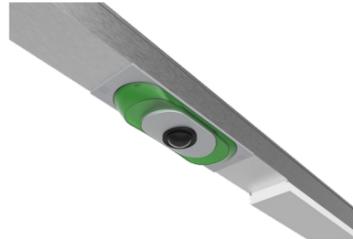


# HOME SERVICE

Based on our credibility and know-how built through our continuous development and supply of home network systems, we are leading the shift towards home IoT and mobile-based smart home technology, and providing customized solutions that consider housing characteristics.

## Smart Home IoT System

We are at the forefront of new trends in the home network market with our specialized design products, and we provide solutions that correspond to customer needs and social issues.



### 3 Smart LED Mood Lighting System

User-oriented smart LED system with various lighting functions and effects that can be controlled using a home network system or a smartphone application.

### 4 Underground Parking Lots with Tracking Devices

Provides parking guidance, recognition of parking locations and security, using 360-degree cameras and CCTV analysis technology.



### 6 IPARK App and HDC Homepad Solution

Provides control over smart home systems and convenient services through an integrated app for IPARK and HDC Homepad.

### 7 Home Network Solution

Our smart home IoT solution provides user-oriented convenience and a smart living space by changing the existing living space environment.

### 1 Premium Housing Solutions

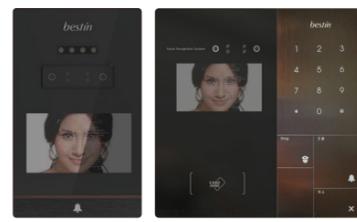
We offer high-end residential space solutions that follow KNX, a standard communication protocol.

### 2 DC Power Distribution System

Maximizes power efficiency by reducing the number of power conversion steps between AC and DC power. It also provides solutions for energy management and stability, and helps to extend the life of products by supplying high-quality power.

### 5 Field Test Runs

On-site remote-control system based on an integrated data-based dashboard.



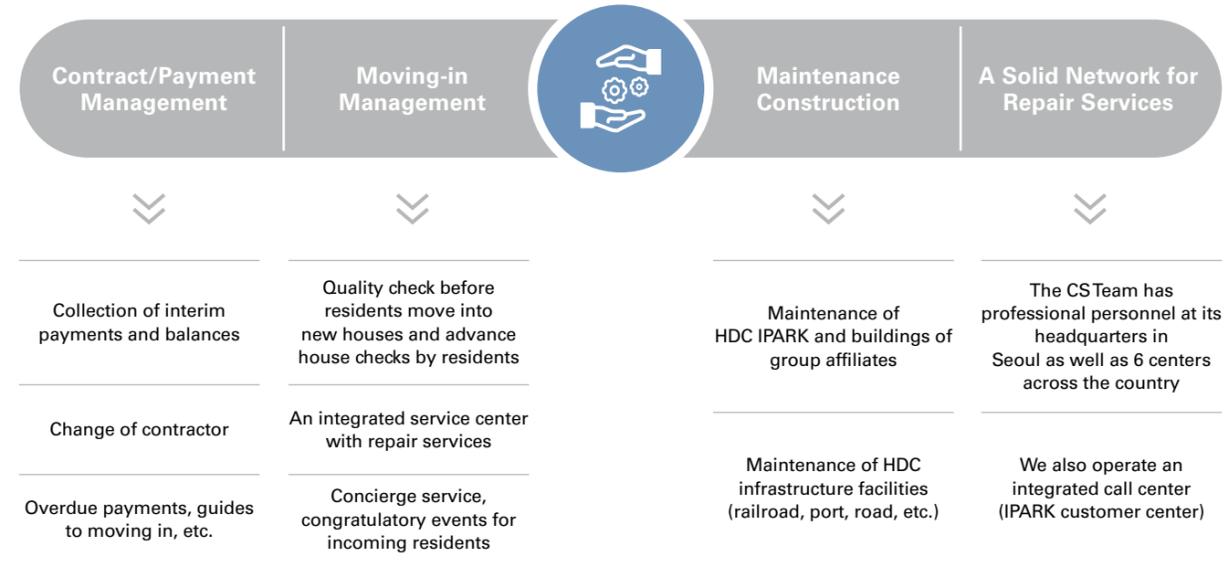
### 8 Facial Recognition Access

This access control system that uses contactless facial recognition technology, enables fast, convenient and high-security control.



## Customer Satisfaction

With more than 20 years of maintenance/repair know-how, a nationwide network for repair services, and a digital customer management system, we are able to provide high-quality integrated services which range from managing contracts/payments for housing, as well as helping with move-ins and any follow-up management that's required. We aim to continuously innovate our services by seeing through the customers' perspective.



## Major Performance

Construction Company	Construction Site Name	Number of Households	Completion Date	Applied Services
Daewoo E&C	Gwell Prugio, Cheongju Technopolis	1,148	2022. 5	Home network system
Hyosung Heavy Industries	Hyosung Harrington Place, Hongje Station	1,144	2022. 3	Home network system
SK Ecoplant	SK Leaders View, Luwon City	3,104	2022. 1	Home network system, one-pass system
Ilseung Construction	Truel, Samcheok	885	2021. 12	Home network system, one-pass system
Hyundai E&C	The Penthouse, Cheongdam PH129	29	2020. 8	KNX solution, underground parking lot solution
KCC Engineering & Construction	Switzen, Sacheon	1,738	2020. 6	Home network system, one-pass system
Seoul Housing & Communities Corporation	Wirye District A1-5, 12BL	-	2020. 6	Underground parking lot solution
HDC Hyundai Development Company	Taepyeong IPARK, Jeonju	1,319	2022. 5	DC distribution, lighting, wiring equipment, underground parking lot solution, parking control, one-pass system, etc.
HDC Hyundai Development Company	Daejeon IPARK City	2,560	2021. 11	
HDC Hyundai Development Company, Lotte E&C	IPARK CASTL, Byeongjeom Station	2,666	2021. 3	
HDC Hyundai Development Company	Dream Forest IPARK	1,711	2020. 12	
HDC Hyundai Development Company, Lotte E&C, POSCO E&C	FORESTIA, Sanseong Station	4,809	2020. 7	
HDC Hyundai Development Company	IPARK, Unjeong New Town, Paju	3,042	2020. 7	

## Better life, Bestin

Bestin creates a space that encompasses all of a customer's lifestyles and values, as well as providing new experiences and values. We strive to go beyond customers' expectations with its digital-based and life-centered smart home business, and make a better life and enhanced spatial value.



## Bestin Smarterior Line-up

### DOORLOCK

With luxurious and high-tech designs, our door locks provide high security and various convenient features, thereby redefining the standards of premium door locks.



### IoT LIGHTING

Our lighting technology will allow you to make your own space with 100 different types of lighting. We offer optimal lighting environments that can be adjusted to the situation, studying, resting, sleeping and so on.



### IoT SENSOR

IoT sensors control lighting and other devices using Bestin's Home App through Bestin's IoT Hub – the center for a smart and convenient life.



# FACILITY · PROPERTY MANAGEMENT

## Comprehensive Real Estate Management

We provide total solutions and technical analysis for optimized building management that reduce maintenance costs and extend the life of building.



**Facility Management**

- Operation of mechanical/electrical/fire safety/braking control facilities
- Physical building due diligence
- Energy management and mechanical facility inspections

**Cleaning Management**

- Cleaning services for buildings
- Specialized cleaning (marble, carpet, waxing work)
- Consulting for cleaning services

**Security Management**

- Manned guarding at vulnerable and major areas
- Security patrol (electronic patrol system)
- VIP protocol and reception

**Parking Management**

- Calculation of parking fees and guidance for vehicles
- Operation of parking lot and management of consignments
- Valet parking services in partnership with professional businesses

**Disease Prevention/Pest Control**

- Disinfection, surface sterilization, pest control
- Sanitation equipment rental service
- R&D center for technology development

**Clerical and Administrative Support**

- Call center operation
- Stationery, mail, parcel and pantry management
- Management of various rental equipment

## Property Asset Management

We provide optimized lease services for both building owners and tenants as well as comprehensive consultation services for the purchase and sale of real estate, in order to increase satisfaction and improve the value of building assets.

**Operation Management**

- Set and manage an operating budget
- Maximize rental yield
- Efficient financial/accounting management

**Lease Management**

- Attract and maintain anchor tenants
- Manage rental/maintenance fees and overdue payments
- Improve tenants' satisfaction and ensure stable lease

**Lease Service for Lessors**

- Calculate appropriate rental and maintenance fees
- Design and provide lease packages
- Review and prepare lease agreements

**Lease Service for Lessees**

- Provide a guide on optimal lease space
- Suggest lay-out plans
- Negotiate terms of lease agreements

**Purchase/Sale and Investment**

- Analysis of a real estate's location, profitability and legal rights
- Management of ownership transfer process
- Analysis of real estates for investment and help with search for investors

**Reports**

- Monthly report
- Report on the collection of rental/maintenance fees and overdue payments
- Real estate lease market trend reports

'insite' is a smart building management solution that combines HDC Labs' expertise in building management with advanced AIoT technology for data collection and analysis.



### Main Functions

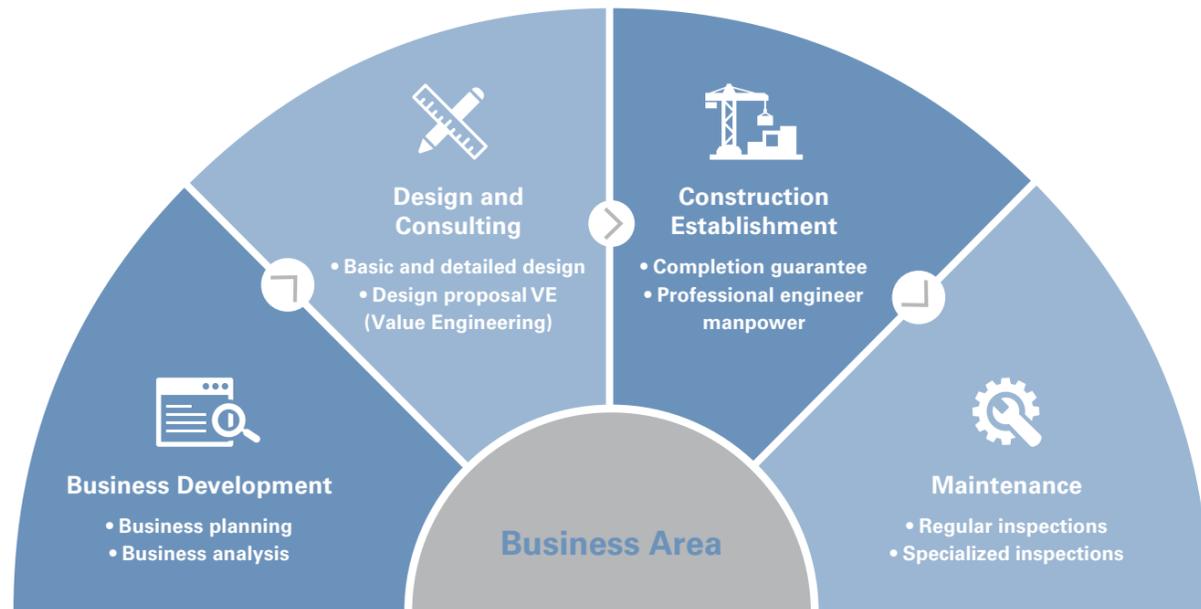
<p><b>Integrated Control Center</b></p> <p>Dashboard optimized for integrated control operations, enabling a real-time monitoring environment</p>	<p><b>RMS</b> Remote Monitoring System</p> <p>365-day, 24-hour integrated monitoring service with a dual surveillance system for enhanced security</p>	<p><b>ECM</b> Energy Conservation Measure</p> <p>Continuous energy savings achieved through HDC labs' expertise in diagnosis and analysis</p>	<p><b>BIM</b> Building Information Modeling</p> <p>Maximizing operational efficiency via an optimized management staffing configuration</p>	<p><b>VOC</b> Voice Of Customer</p> <p>Swift customer service from compliant reception to processing and statistical analysis</p>
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### Major Performance

Nationwide Integrated Management		<b>KB Kookmin Bank</b>	Branch, Stand-alone Building	Facilities, Cleaning, Parking
		<b>Hankook Tire &amp; Technology</b>	Technodome, Geumsan/Jeonju Factories	Facilities, Dleaning, Security, Information, Parking
		<b>Citibank Korea</b>	Branch, Computer Center	Facilities, Cleaning, General Affairs
		<b>Coupang</b>	Distribution Center	Cleaning, Disease Prevention
Business and R&D Facilities		<b>Samsung Digital City</b>	280,236m <sup>2</sup>	Facilities, Cleaning, General Affairs
		<b>Kakao Pangyo Office</b>	162,731m <sup>2</sup>	Facilities, Security
		<b>Nuri Dream Square</b>	152,569m <sup>2</sup>	Facilities, Cleaning, Security, Information, Parking
		<b>AhnLab &amp; Solid Pangyo Office</b>	69,421m <sup>2</sup>	Facilities, Cleaning, Security, Information, Parking
Commercial Facilities		<b>IPark Mall, Yongsan</b>	266,538m <sup>2</sup>	Facilities, Cleaning, Security, Parking
		<b>Garden 5 Life</b>	426,785m <sup>2</sup>	Facilities, Cleaning, Security, Parking
		<b>Alleyway Gwanggyo</b>	38,755m <sup>2</sup>	Facilities, Cleaning, Security, Parking
		<b>Ikea</b>	Goyang, Giheung, Dongbusan	Facilities
Large Hospitals		<b>Asan Medical Center</b>	2,715 Sickbeds	Cleaning, Funeral hall
		<b>Yongin Severance Hospital</b>	708 Sickbeds	Cleaning
		<b>Gangbuk Samsung Hospital</b>	736 Sickbeds	Cleaning
		<b>Konkuk University Medical Hospital</b>	908 Sickbeds	Cleaning

# CONSTRUCTION SOLUTION

We provide customers with better spatial experiences converged with ICT total solutions; from planning, analysis, design, construction, to maintenance for all types of structures including buildings for business, residential, commercial and R&D, and social infrastructure.



1 **Smart Building**  
Installation of smart building systems including building automation, ICT, integrated security management, audio and video systems, System Integration(SI), Facility Management System(FMS), and etc.

2 **Energy**  
Installation of renewable energy plants including photovoltaics, BIPV, fuel cells, ESS, waste to energy, and etc.

3 **Fire Safety**  
Installation of fire safety and disaster prevention systems including fire extinguishment, smoke control equipment, fire detectors and receivers, evacuation guidance, and etc.

4 **Interior Design**  
Differentiated interior design and installation for residential, commercial, and business spaces.

5 **Mechanical Equipment**  
Installation of mechanical equipment including HVAC, cooling/heating, sanitation and gas equipment.

6 **Electricity**  
Installation of power systems and equipment including substations, lighting equipment and fixtures, power and motorised equipment, and grounding.

7 **Landscape Architecture**  
Customized total landscape and gardening solutions from design, installation, to management.

8 **Social Overhead Capital(SOC)**  
Installation of integrated operation solutions, applying ICT to social overhead infrastructures such as roads, railroads, and ports.

## Smart Building(FRONNIX)

FRONNIX provides all the devices, networks, and software necessary to control broadened and super-high-rise smart buildings. This system actualizes efficiency of building operation and management, and energy saving through artificial intelligent digital control.



**iCOS**  
Central control unit for automatic control, security equipment, and SI



**iBEMS, iFMS**  
Central control unit for energy and facility management of buildings



**Master Controller**  
Repeater between Human Machine Interface (HMI) and DDC



**DDC(BACnet IP)**  
Digital control unit for data acquisition and equipment control

## Smart Fire Safety(Bestin Fire Guard)

Bestin Fire Safety enables integrated linkage of automation control, security systems, system integration, and energy solutions; this system supplies integrated and effective disaster prevention functions.



**R-Type Composite Receiver**  
Capable of monitoring and controlling up to 65,024 fire-related circuits, including detectors, transmitters, and fire suppression systems.



**Repeater**  
Available on receiver  
Provides 2/4 circuit I/O port



**Repeater Panel**  
Links up to 32 units/4CH



**Emergency Power Board**  
Supplies up to 15A output current for fire safety



**Air Intake Type Detector**  
Smoke detection through air intake ducts



**Analog Sensor**  
Detects fire and transmits a signal to the repeater panel



**Evacuation Lights**  
Detects fire and guides people along the evacuation route in case of an emergency

## Smart Air Cleaning(Bestin Air)

Bestin Air discharges polluted air inside the living space, and supplies outside fresh air into buildings.



**Applied Prefilters, deodorising filters, and HEPA filters(Optional)**  
Total heat exchanger : counter flow type  
Noise: 40dB(living space) / 50dB or less(non-living space)  
Air conditioning efficiency: cooling 45% / heating 70%  
Materials: ABS(exterior), EPS(interior)



### Major Performance

**IBS, Facilities, Fire protection, Energy, SOC**

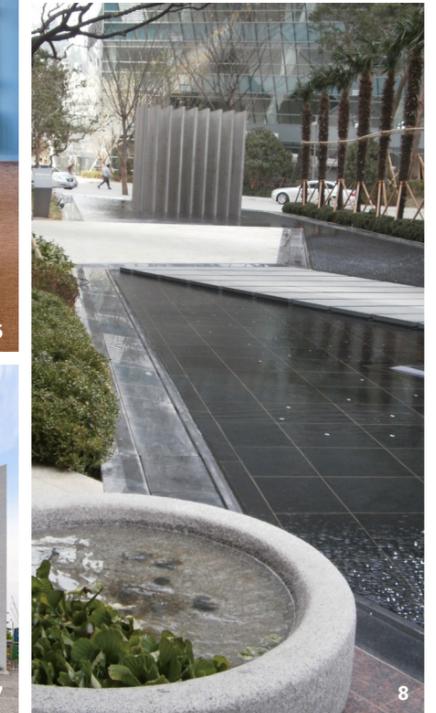
- Choseong and Gaecheon Reservoir Floating Solar Power Generation Project
- Busan Harbor Bridge Intelligent Transport System (ITS)

**Interior**

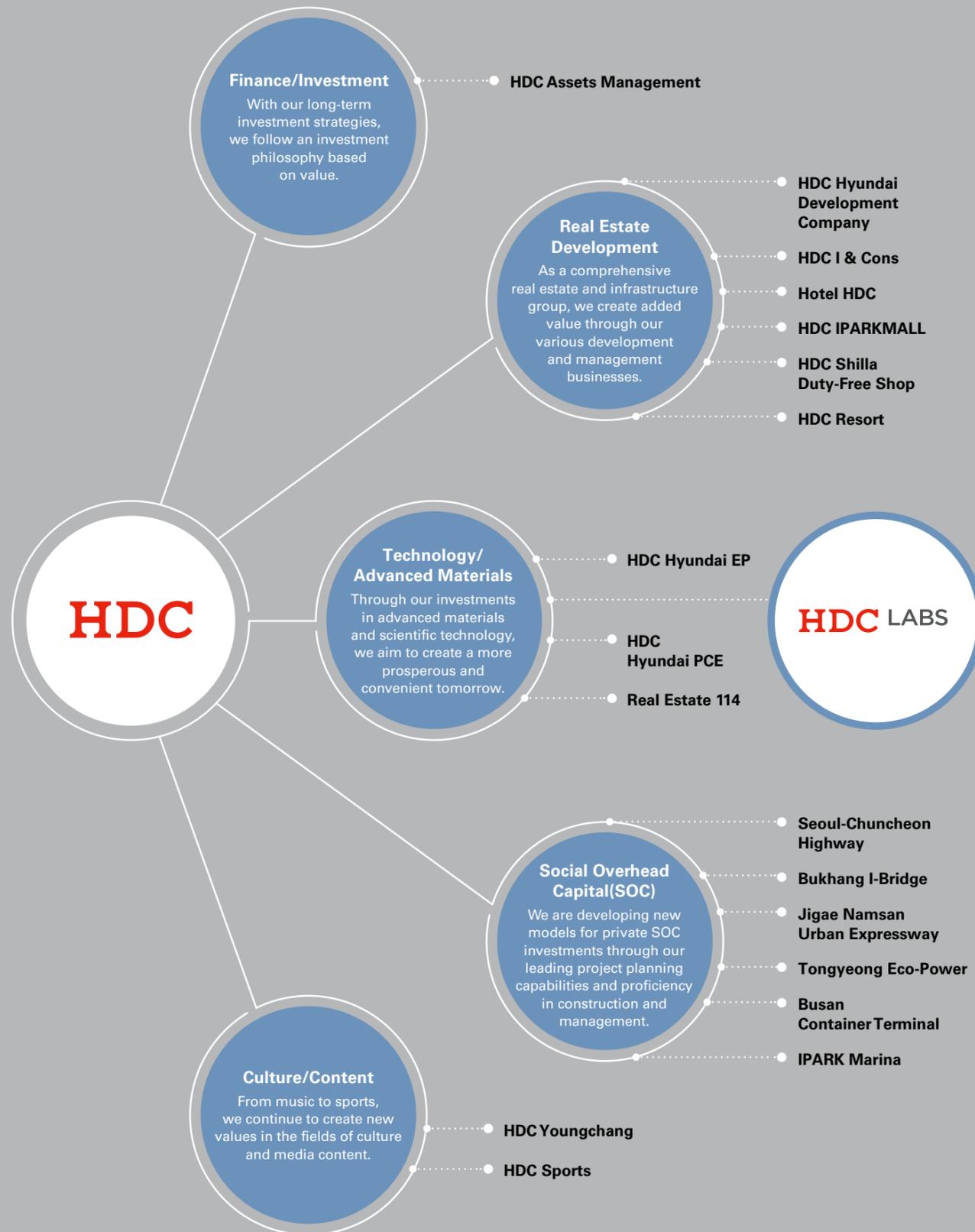
- Jeongseon Park Roche
- Park Hyatt Seoul
- COMPASS Shared Office
- The H Firstier Community Facilities
- GS Paju Unjeong Model House

**Landscaping**

- Busan Haeundae IPARK
- Seongmunan CC
- Jeongseon Park Roche
- Singil Central IPARK D'Flora



# AFFILIATES



## Finance/Investment

**HDC Assets Management** HDC Assets Management implements responsible management by separating ownership from management to ensure transparency in asset management and autonomous decision-making.

## Real Estate Development

**HDC Hyundai Development Company** HDC is a comprehensive real estate infrastructure company and has considerable market dominance based on its know-how as the largest private housing supplier in Korea, and due to the power of its brand, IPARK. The company provides comprehensive services for construction projects, and boasts the best services in not only contract-type construction, but also in development-type construction, which ranges from land purchase to sales. The company also carries out many projects in the private SOC market.

**HDC I & Cons** Based on its information network with securities companies, trust companies, and developers, as well as its specialized planning services, HDC I & Cons focuses on developing a wide variety of real estates, such as small and medium-sized housing near subway/train stations, new commercial areas with potential, and parking lots, as well as in-house development projects.

**Hotel HDC** Hotel HDC develops, plans, and manages global hotels and is raising its status as a management company that helps improve hospitality services.

**HDC IPARKMALL** HDC IPark Mall pioneered the concept of a 'comprehensive shopping mall' as well as introducing the idea of a 'mall' culture. It is taking the lead in setting new trends through various experiential projects that are based on the concept of 'Urban Nature.'

**HDC Shilla Duty-Free Shop** This is the world's largest downtown duty-free shop. The synergy between the 30-year know-how of Hotel Shilla, a world-class duty-free business operator, and HDC Group's ability to create complex facilities, has allowed this business to continue to grow.

**HDC Resort** HDC Resort runs and develops resorts, such as Oak Valley, the largest single resort in Korea, Park Roche Resort & Wellness, which has been selected as an excellent wellness tourist destination, and IPARK Condominium, a family resort.

## Technology/Advanced Materials

**HDC Hyundai EP** HDC Hyundai EP began as the petrochemical division of Hyundai Industrial Development & Construction in 1988. Through its innovation in the functional polymer industry, it has grown as a leading company over the last 30 years in various industrial fields, such as automobiles, electronics, construction, and daily necessities. The company is aiming to create new values and strengthening its future competitiveness by developing eco-friendly and high-quality advanced materials.

**HDC LABS** After HDC I-CONTROLS acquired HDC I-SERVICE in December 2021, HDC Labs was founded with a new name. The company combines AIoT technology for smart homes and smart buildings with its know-how of comprehensive real estate management, landscaping and interior design. It also nurtures future growth businesses, such as building operation and B2C service platforms. The company provides digital-based services that combine technology and data with expertise in construction and maintenance, and seeks to grow as a spatial AIoT platform company that redefines space, life and the future.

**HDC Hyundai PCE** HDC Hyundai PCE began as the business division of Hyundai Development Company in 1988 and became an independent affiliate in 2014. It is a precast concrete company with high price competitiveness because precast concrete is taken to the construction site and assembled there. In addition, precast concrete can be used to construct safe earthquake-resistant buildings in a short amount of time and is useful in building residential spaces with outstanding soundproofing and insulation. With its experience from various construction projects across the country, HDC Hyundai PCE seeks to grow into the best precast concrete company in Korea.

**Real Estate 114** Using various sources of data, such as real estates for sale, market prices, and actual transaction prices, Real Estate 114 offers objective pieces of information that help its customers make smooth transactions and rational investment decisions. The company also uses REPS, which is the only real estate statistical service available in Korea, and K-Atlas, a community-based data integration service, to provide real estate big data services that can meet customers' needs. It seeks to be a leading company in the big data platform market by providing comprehensive real estate solutions.

## Social Overhead Capital(SOC)

**Seoul-Chuncheon Highway** The first private-invested infrastructure in Korea under the Act on Public-Private Partnerships in Infrastructure. The expressway has eased traffic congestion and reduced travel distance and time, thus contributing to national development and providing economic benefits.

**Bukhang I-Bridge** With the opening of the Busan Harbor Bridge, along with Gwangan Bridge and Geoga Bridge, the chronic traffic congestion to old downtown Busan has been eased, saving travel time and logistics costs.

**Jigae Namsan Urban Expressway** The only expressway that connects the downtown area of Changwon to the new town in the northern part of the city.

**Tongyeong Eco-Power** A privately-funded development project that includes a 900 MW LNG power plant, a 200,000 kl LNG storage tank, and supplementary facilities in an area of 260,000m<sup>2</sup> at Gwangdo-myeon, Tongyeong-si, Gyeongsangnam-do.

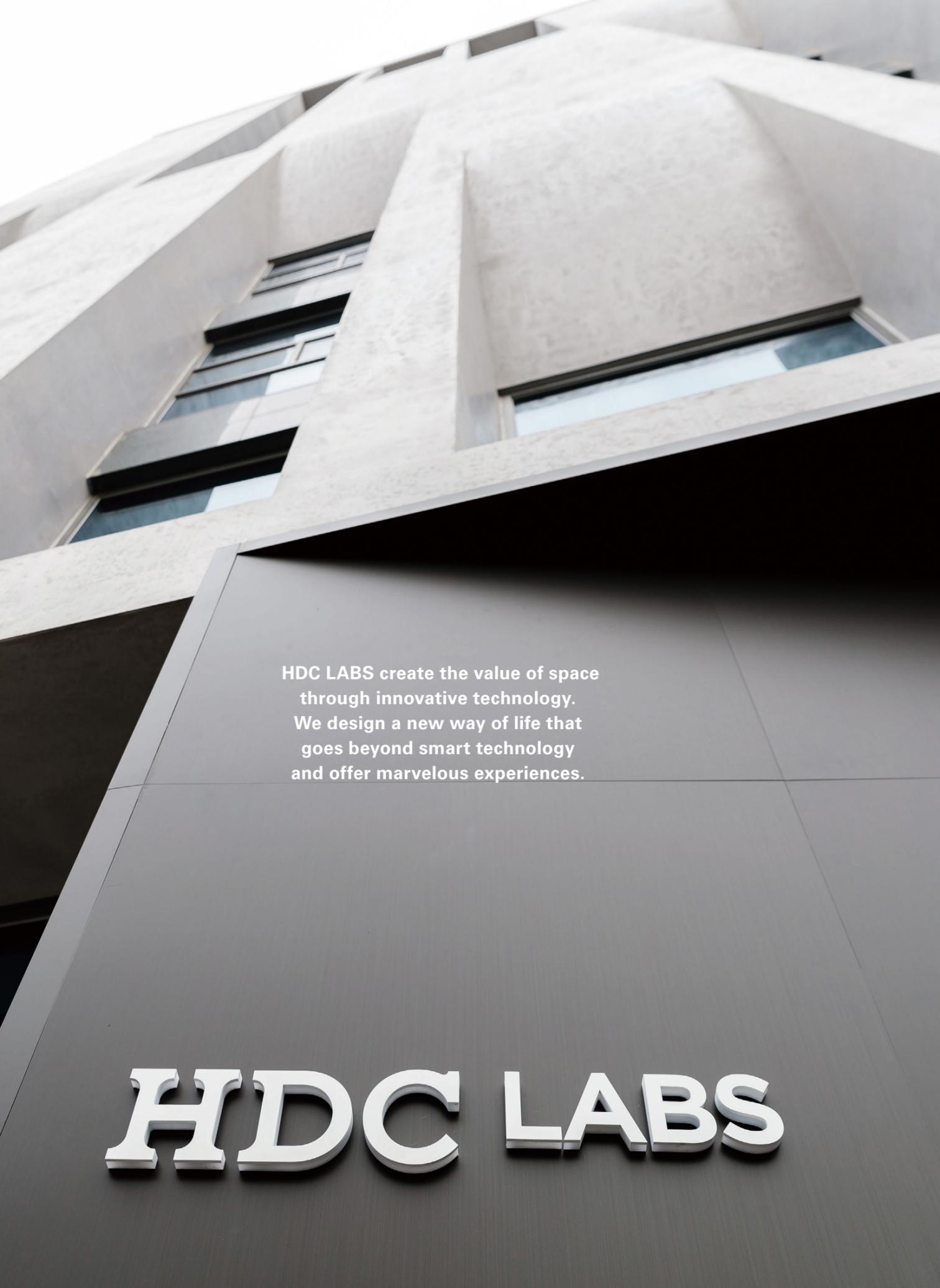
**Busan Container Terminal** Established for designs, construction, management, and maintenance of the Busan New Port Phase 2-4, it will take advantage of being located at the entrance of seaway point to the Busan New Port, satisfactory depth for large vessels, and the modernized automatic terminal.

**IPARK Marina** The IPARK Marina is the 'Suyeong Bay Yachting Center Redevelopment Private Investment Project' located in Woo-dong, Haeundae-gu, Busan. The project is planning to develop and operate berthing facilities for 628 ships, as well as accommodation and commercial facilities for users in an area of 234,711m<sup>2</sup>.

## Culture/Content

**HDC Youngchang** HDC Youngchang is a comprehensive music company that manufactured pianos for the first time in Korea. It seeks to grow into a global culture company that helps to spread different lifestyles and cultural content.

**HDC Sports** HDC Sports runs Busan IPark, a professional soccer team, and aims to nurture players, expand the football base, and develop sports culture. They make continuous efforts to make Busan IPark a beloved soccer team that is the pride of Busan citizens.



HDC LABS create the value of space  
through innovative technology.  
We design a new way of life that  
goes beyond smart technology  
and offer marvelous experiences.

**HDC LABS**