



GS E&C Affiliated Company

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BEST SPACE FOR A BETTER LIFE

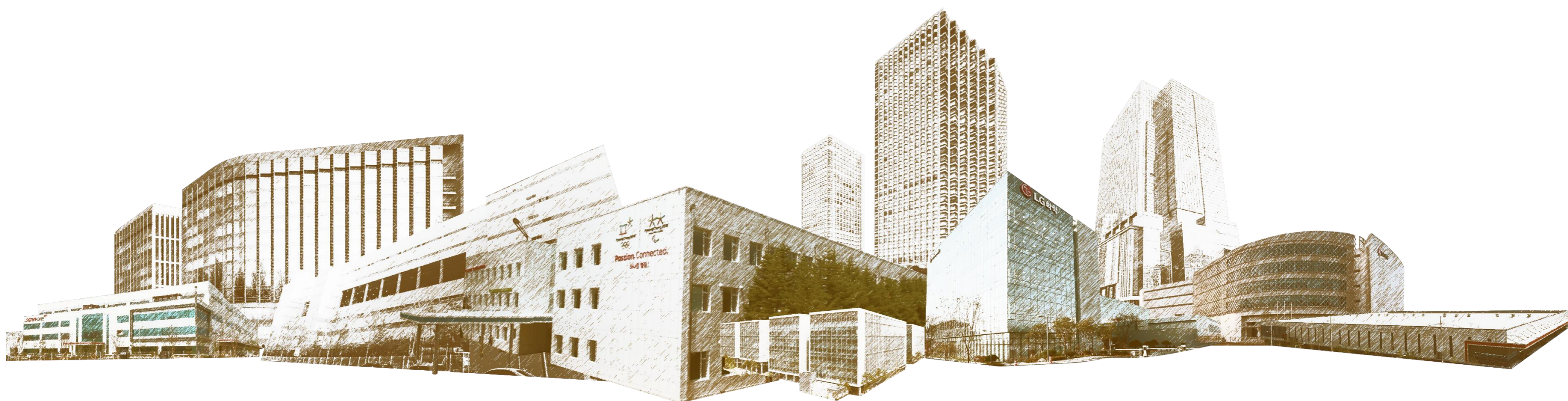
Xi XiC&A is

We build a better future for our customers by creating new spaces that generate long-term value.

As a GS E&C affiliate, Xi C&A provides the best value to customers in accordance with the management philosophy of 'Dreaming of tomorrow with customers and creating new life value'. We have successfully carried out the construction of all industrial facilities such as clean rooms, data centers, research facilities, high-tech factories, and chemical plants. We are constantly striving to become a truly strong construction company.

Based on our know-how, we will continue to build global leading production facility construction capabilities and leap forward as a "Top Tier construction company in the industrial facility sector."

We will always be with you as the best partner who can exceed customer expectations and realize customer satisfaction.



Company Overview

Prologue
Contents

About Us

Introduction / Management Philosophy / Vision System
Introduction / Talent Management, History, Business Unit
Status of Engineers and Patents
Construction Technology
Smart Construction
Smart Safety
Safety and Environment Management System
Quality Management System
Environment / Social & Governance

What we do

High-tech Industrial Facilities
Business Research Facilities
Plant Industrial Facilities
Logistics Facilities

Epilogue

Epilogue

'Creating new value for life, together with our customers.'

Xi C&A's strong commitment to fulfilling social responsibilities and achieving sustainable development is the foundation of its management philosophy and value system.

Based on this, We will go beyond being the best in Korea to become a global Top Tier construction company, providing the best value to its customers.

Management Philosophy

Xi C&A's management philosophy is

'Dreaming of tomorrow with customers and creating new values of life.'

It embodies Xi C&A's commitment to creating value that can be shared by various stakeholders and fulfilling the company's social responsibility.



Together with Customers

Customers are like family to Xi C&A.
We think and act from the customer's perspective
and always strive to be close.



Novelty

Xi C&A stays ahead of the times.
We actively embrace the demands of the times with
an open mind, and lead developmental changes.



Creating Life Value

Xi C&A leads in improving the value of life.
We create tangible and intangible values that make life
more convenient and enjoyable, so that everyone
in the social community can enjoy a better life.



Dreams of Tomorrow

Xi C&A opens dreams of tomorrow.
We nurture possibilities with passion.
We create a brighter, more dynamic future.



Vision
We build a better future for our customers
by creating new spaces that generate long-term value.

Mid-to Long-Term Goals
Achieving Top Tier in the industrial facility sector based on
global leading production facility construction capabilities

Implementation Strategy

**Establishing a Sustainable
Growth System**
(Market, Portfolio)

Leading the construction of
customer's
manufacturing/core facilities

Advancing Pre-con Services

Securing New Markets

**Advancing Differentiated
Construction Competitiveness**
(Customer Value, Safety-Centered,
Smart Construction)

Customer-Tailored
Construction
Strengthening Competitiveness

Advancing Safety and Health
Management Capabilities

Advancing Smart Construction
Capabilities

**Optimizing Business
Operation Structure**
(People, System, Partnership)

Strengthening Financial
Soundness and Ethical
Awareness

Strengthening Mutual Growth
and Partnership

Strategic Tasks



Safety



**Fair Personnel
Management**



Problem Solving



Value System

"Talent that drives change, pursues excellence, and is trusted"

Xi C&A's talent profile is someone who leads change, aims for the best, and is trusted.

To this end, we are fostering job experts and global talents through strategic talent development.

We strive to create a great workplace by maintaining positive labor-management relations and building a safe working environment for a healthy organizational culture.

We are enhancing Xi C&A's value creation capabilities through improving employee capabilities and providing a pleasant work environment.

Our strategy & commitment



We provide various training programs to develop the expertise of our employees.

We divide the training courses into three parts: 'Leadership Competency', 'Management Competency', and 'Job Expertise'.

We are building a talent development system optimized for employees' Career Paths.

Above all, to form values regarding a safe working environment, we are strengthening employees' safety awareness Mind Set and capabilities through the Safety Innovation School, and improving the execution culture of safety, health and construction technology capabilities.

Fair Performance Evaluation and Compensation Nurturing Performance Management System



Xi C&A operates a nurturing performance management system that simultaneously pursues employee performance improvement and talent development.

Xi C&A deviates from the existing performance management paradigm that is only for evaluation and operates a 'nurturing performance management system' that pursues competency development and talent development through setting challenging and achievable goals tailored to each employee's level, thorough performance management conducted frequently throughout the year, and regular feedback on goal achievement, thereby promoting a healthy and desirable organizational culture where employees can feel motivated and growing on their own.



We operate a system that links fair evaluation and performance to compensation for reasonable performance compensation for employees.

Xi C&A strives for fair evaluation based on individual abilities and performance by applying various methods such as achievement/competency evaluation and evaluation sessions. In addition, we motivate employees through fair compensation that reflects individual performance.



Evaluation System Based on
Ability and Performance



Compensation Based on
Performance and Competency



Employee Motivation
and Talent Development

Xi C&A History

Learning from the past
Shaping the present
Creating the future

Poland

Xi C&A
Korea

USA

China

India

Vietnam

2007~11

2011~14

2015~17

2018~20

2021~22

2023~26

2007. 1.

- Launched CM Division

2008. 2.

- Registered Civil Engineering and Construction Business
- Registered Industrial Environment Facility Construction Business (Seoul)

2009. 7.

- Korea Occupational Safety and Health Agency
- Received Award for Contribution to Workplace Safety Management

2009.12.

- Established Nanjing Corporation in China

2010. 1.

- Entered the Plant Sector

2011. 1.

- Changed Division Name (CM Division → Construction Division)

2011. 7.

- Selected as Excellent Disaster Management Construction Company (Ministry of Employment and Labor)

2011. 9.

- Acquired ISO9001, ISO27001 Certification

2012. 5.

- Coca-Cola Yangsan Plant Site
- Received Safety Commendation from Busan Regional Employment and Labor Administration

2012. 9.

- Acquired ISO14001 Certification

2012.12.

- Started Construction Business in Nanjing Corporation, China

2013.10.

- Acquired OHSAS 18001 Certification

2014. 4.

- Acquired Tier III Design Certification for LG U+ Pyeongchon IDC New Construction Site

2014. 8.

- Acquired 2 Joint Patents for IDC Air Conditioning Technology

2014. 9.

- Signed MOU with LG Electronics for Joint Research on IDC High-Efficiency CRAC

2015.12.

- Merged with LG Toyo Engineering

2016. 1.

- Established Vietnam Construction Corporation

2016. 4.

- Established Poland Construction Corporation

2016. 7.

- Industrial Safety and Health Emphasis Week <Excellent Case Presentation Contest for General Construction Companies>
- Received Minister of Employment and Labor Award

2016. 12.

- China Corporation Acquired China General Contracting Grade 2 Construction License Qualification

2017. 5.

- LG Display Vietnam Hai Phong V-PJT Site Received the People's Committee Chairman Award for Labor Hygiene and Safety in Vietnam

2017. 6.

- LG Display Gumi CR&UT Received Commendation from Daegu Employment and Labor Office

2017. 11.

- Received Presidential Award at the Korea Electrical Awards

2018. 2.

- Selected as Smart System for Environmental Management (Dust Prevention) (Nanjing Environmental Protection Federation, China)

2018.12.

- Poland LG Chem Automotive Battery Plant Phase 2 Site Won 2nd Place in the Dolnoslaskie Province Safety Competition in Poland

2019. 5.

- LGD VH Site Received the Best Site Award for Safety Prevention Activities Organized by the Vietnam Department of Labor LGD VH Site Received the Best Site Award for Safety Prevention Activities Organized by the Vietnam Department of Labor

2020. 11.

- Excellent Case Competition for Construction Environment Management
- Korea Occupational Safety and Health Agency Chairman's Award
- Selected as a leading construction company in Nanjing City by the Nanjing Corporation in China

2020. 12.

- Received the Ministry of Employment and Labor's Occupational Safety and Health Commendation

2021. 5.

- LG Energy Solution China Nanjing Cylindrical Battery Electrode Line
- Selected as an excellent site by the Xinjiang District Safety Bureau at the expansion site

2021.12.

- LG Energy Solution Poland Activation Building 4
- Awarded at the site safety competition

2022. 6.

- **Xi** 자이 C&A New corporation spin-off

2022. 12.

- LGD Paju P10B CR&UT site, hosted by the Ministry of Employment and Labor Received the "Excellent Retirement Allowance Business Site" award
- Hosted by the Win-Win Growth Committee
- Received the Korea Win-Win Growth Award "Best Company"

2023. 2.

- Established US Branch

2023. 7.

- Completed the construction of LG Uplus Pyeongchon NEXT IDC

2024. 1.

- Started A-PJT in Arizona, USA

2024. 3.

- Established Indian Construction Corporation

2024. 4.

- Acquired 'Grade 1 Construction Business License' by the Vietnamese corporation

2025. 1.

- Received 'Excellent Company' commendation from Haiphong Vietnamese corporation

2025. 7.

- LG Electronics · Xi C&A signed 'Strategic Partnership' MOU

2026. 1.

- Naver Data Center 'Gak' Sejong Second Construction starts

Architecture

While most domestic construction companies possess experience limited to general building construction, Xi C&A stands apart with deep expertise in high-tech industrial facilities that drive future growth. We provide differentiated solutions based on advanced technologies, executing projects that include state-of-the-art buildings, advanced factories, and specialized facilities.

From the early stages of a project, we support technical and feasibility reviews, offer optimized alternatives, and deliver value-driven construction services that enhance client trust and profitability realizing truly successful projects.



Advanced Factory Facilities

We provide cutting-edge industrial facilities and exceptional client services, built upon top-tier construction technology.

Our extensive project experience enables thorough quality and process management, ensuring outstanding project completion.



Office and Research Facilities

Serving as a foundation for industrial advancement, our office and R&D buildings deliver new value to clients.

Through distinctive design and specialized know-how in intelligent building systems, we create structures that harmonize functionality, safety, and environmental responsibility, while achieving architectural excellence.



Logistics and Other Facilities

In logistics centers, cultural complexes, and hospitality facilities, we maximize client satisfaction by providing optimal spatial solutions driven by expert personnel and proven know-how.

Based on our extensive experience in remodeling and corporate office interior projects, we guarantee perfect execution and thorough maintenance service.

Plant

Xi C&A is leading the establishment of national and industrial infrastructure in Korea's petrochemical sector.

Starting with the Engineering, Procurement, and Construction (EPC) of SAP (Super Absorbent Polymer) plants, we have successfully expanded into BR (Butadiene Rubber) and EO (Ethylene Oxide) capacity expansion projects — accumulating rich experience and technical capability through numerous achievements.

We provide one-stop services across the entire plant value chain — from project planning, technical and economic analysis, engineering design, procurement, construction, commissioning, to project management — as both Project Manager and EPC Contractor.

To maintain competitiveness, Xi C&A is continuously enhancing its chemical plant EPC capabilities and IT systems, while securing and developing top-tier engineering talent.



LG Chem Yeosu 5AA Project



LX MMA M3 Revamping



LG Chem Yeosu BRU Project

High Technology

Smart Construction

Smart Safety

Smart Environment

Global Top Tier Technology

Xi C&A Endless technological innovation drives our future.

High Technology

Design Automation System for Clean Rooms

Xi C&A has established a DX-based automated design system for high-tech production facilities, enhancing design quality and operational efficiency to deliver maximum value to our clients.

Urgent start of construction

- Fast Track
 - Insufficient time for design and construction review
 - Quality decline and increased loss
- Numerous design modifications

Design schedule reduction

- Design automation system
 - DB and 3D-based equipment attribute matching
 - Automation of capacity aggregation
 - Quick response to design changes

Optimized design execution

- Securing construction review period
- Reducing factors of cost rise
- Ensuring design quality

BIM-based automated basic design for equipment piping and duct systems



- Establishment of integrated database for design data and history management
- Process optimization and automation to reduce design change response time
- Enhancing design quality by minimizing human errors through system-based review and integration

Quality

Enhancing capability for advanced design proposals through various case studies

Flexibility for inform changes and prompt solution development

Human error elimination through automation system implementation

Cost

Minimizing construction loss through reduction of work process steps

Delivery

Fast-track response through shortening of basic design and delivery schedules

2019

U.D.I.S

Utility Design Integration Sys.

- Automated Design Data Validation
 - Piping Flow Consistency Check
 - Early Design Review Efficiency
- Automated Matrix Comparison
 - Matrix Ver. Changed Data Extraction
 - History Management (Database)
- Matrix Total Summary
 - Automated Data Aggregation
 - Capacity Review Time Reduction

Automated Design Data Verification

Copyright registration completed



U.D.I.S | Utility Design Information System

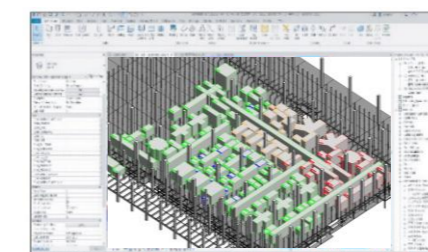
2021 (1st Step)

P.E.I.S

Process Equip. Integration Sys.

- Integrated Equip. Verification System
 - Matrix(U.D.I.S)- BIM Integration
 - Equip. BIM Implementation
- Equipment UT Usage Summary
 - BIM-Based Equip. Data Integration
 - Case-Based Equip. Layout Proposal
- Data Management Upgrade
 - Data Management via Secure Server
 - Integration Matrix & Layout Management

BIM-based precision design integration



P.E.I.S | Process Equipment Integration System

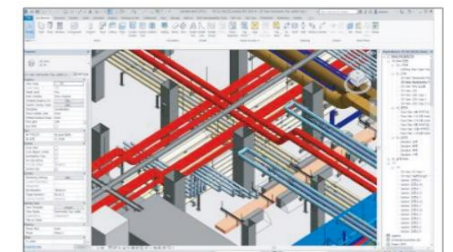
2023~24 (2nd Step)

P.E.I.S

Automated Basic Design Sys.

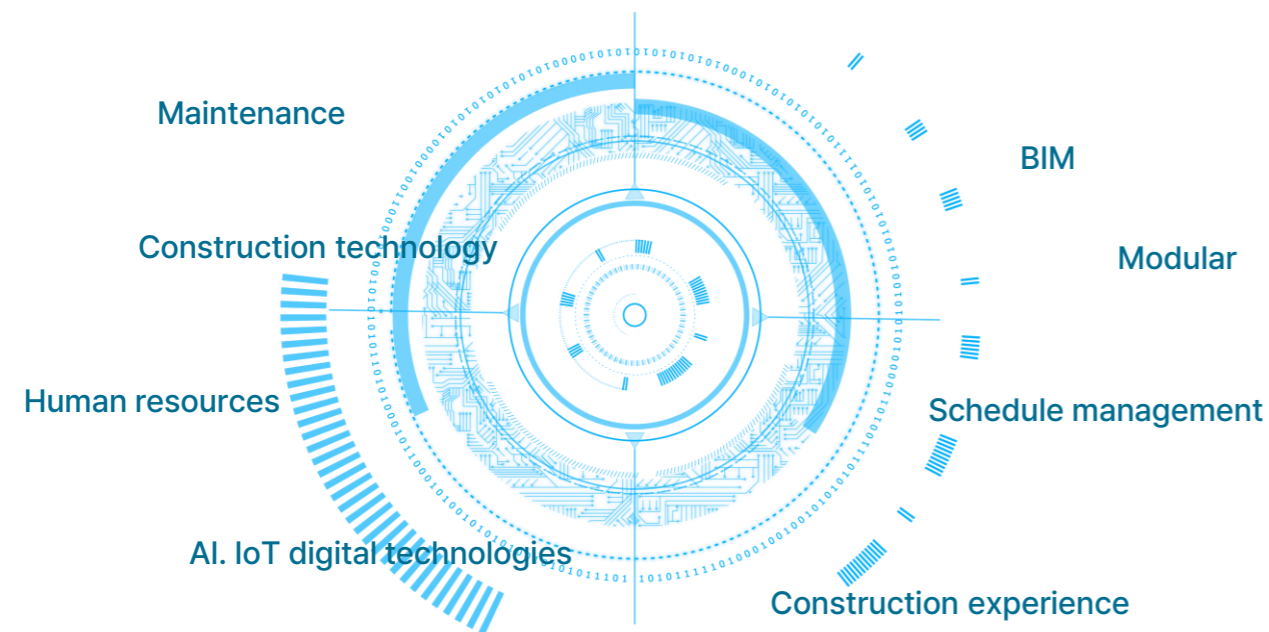
- Basic Design Logic Implementation
 - Pipe Sizing and Installation Standards
 - Pipe/Duct Sizing Logic
 - Detailed Pipe Routing Setup
- Automation System Implementation
 - Automatic calculation of pipe sizes
 - Automatic routing of supply
 - Application of installation priority for supply piping
 - Preparation of hook-up drawings

Automated Process Optimization for Faster Design Response



Smart Construction

Creating innovative technological value through Smart Construction



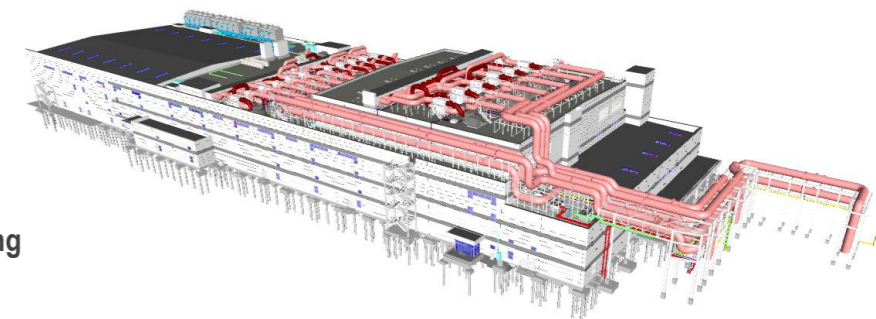
XI Xi C&A promotes digital innovation in the construction industry, leveraging AI, IoT, and Big Data technologies to enhance productivity and competitiveness.



XI Xi C&A is actively adopting Smart Construction to enhance safety and precision at construction sites.

BIM

- Design optimization
 - Checking for drawing errors and interferences
- Construction simulation and sequencing
- Equipment operation Simulation
- Utilization of modeling automation
- Establishment of BIM-based 2D shop drawing system



DX

- Digital surveying
 - 3D Scan : Accuracy floor flatness, steel verticality inspection
 - Drone : Earthwork volume calculation, verification of building position and steel joint connections
 - Layout : Determination of construction positions
- Utilization of smart construction digital platform
- Adoption and collaboration of AI and Big Data technologies



Measurement

Construction Management

Safety Management

BIM/Scan/360cam

The amount of earthwork, Length, Area calculation
Check earthwork and strata cross section

Comparison of Drawing and Construction Status, Marking the location of equipment, materials, Area calculation, Sharing work instructions and actions

CCTV, Real-time Labor Location, Warning when entering danger zone

Review of Integrated Model by Public Type : Create section, measure distance
Check 3D Scan Results, Check indoor 360-degree photo, video

OCS / AUTO MATION

- 3D Printer
 - Printing and utilization of process sequence models
 - Application to construction of irregular structures
- Modular
 - Semi/Unit Modular
 - MEP Modular
- Construction robots (for cleaning, welding, etc.)



Smart Construction

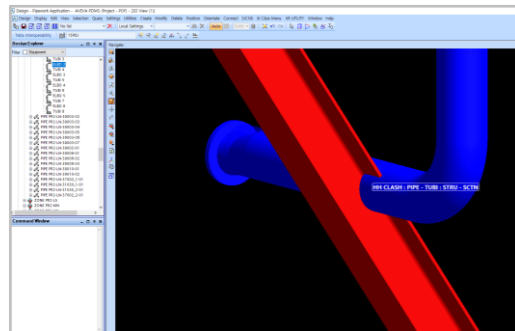
Maximizing customer value through Smart Engineering and Construction in the plant industry.

Xi C&A realizes customer value by enhancing design quality and improving productivity through Digital Operation transformation (3D Engineering, Data driven design automation, DX) to maximize operational efficiency.

Advancing 3D design

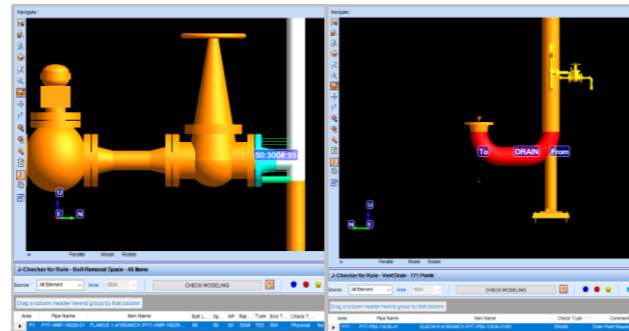
Xi C&A is continuously advancing plant design by expanding the use of 3D modeling for drawing generation and quantity take-off. Automatic clash and design rule checks are implemented to identify design errors in 3D models, minimizing human errors and reducing verification time to enhance overall design quality.

Auto Clash Check System



Integrated system that automatically checks, shares, and manages interference results

Design Rule Check System

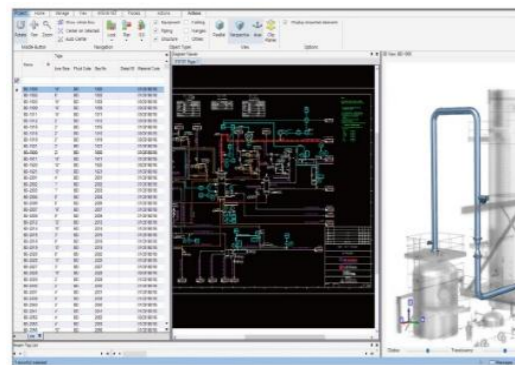


Design quality management system for automatic verification of design consistency using 3D data.

Design DX

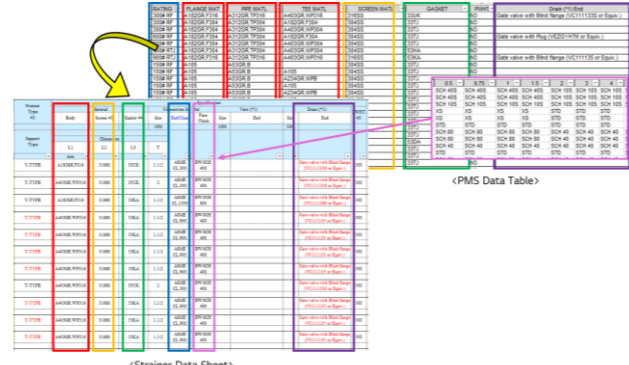
Xi C&A has established a database system to enable digital transformation (DX) of document-based design data and integrated management across design disciplines. By implementing design RPA (Robotic Process Automation), the company enhances design quality and maximizes work efficiency.

Design data management system



System for minimizing errors through integrated sharing of process, piping, and control design data.

Design RPA System

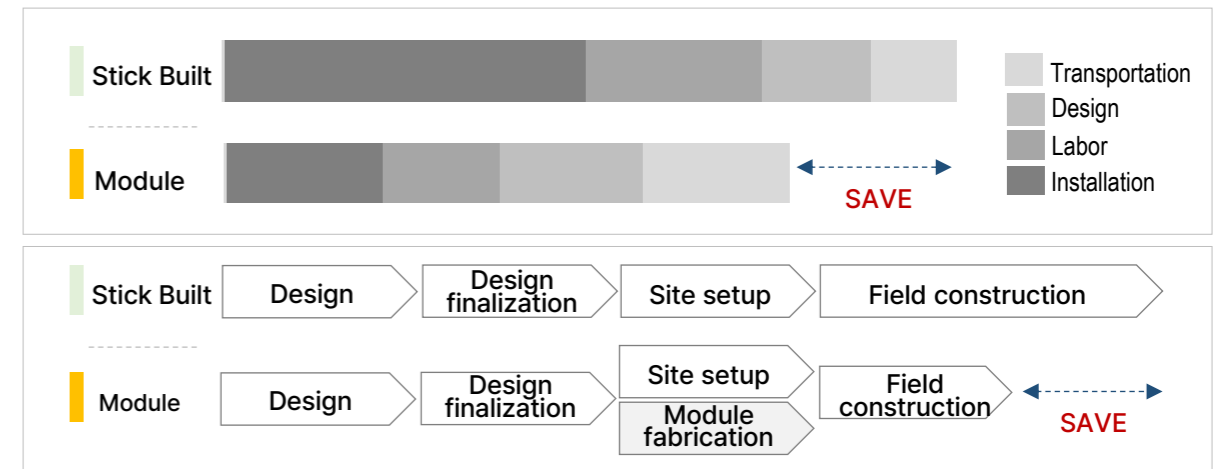


Automated system for generating piping line schedules, datasheets, and bill of materials (BM).

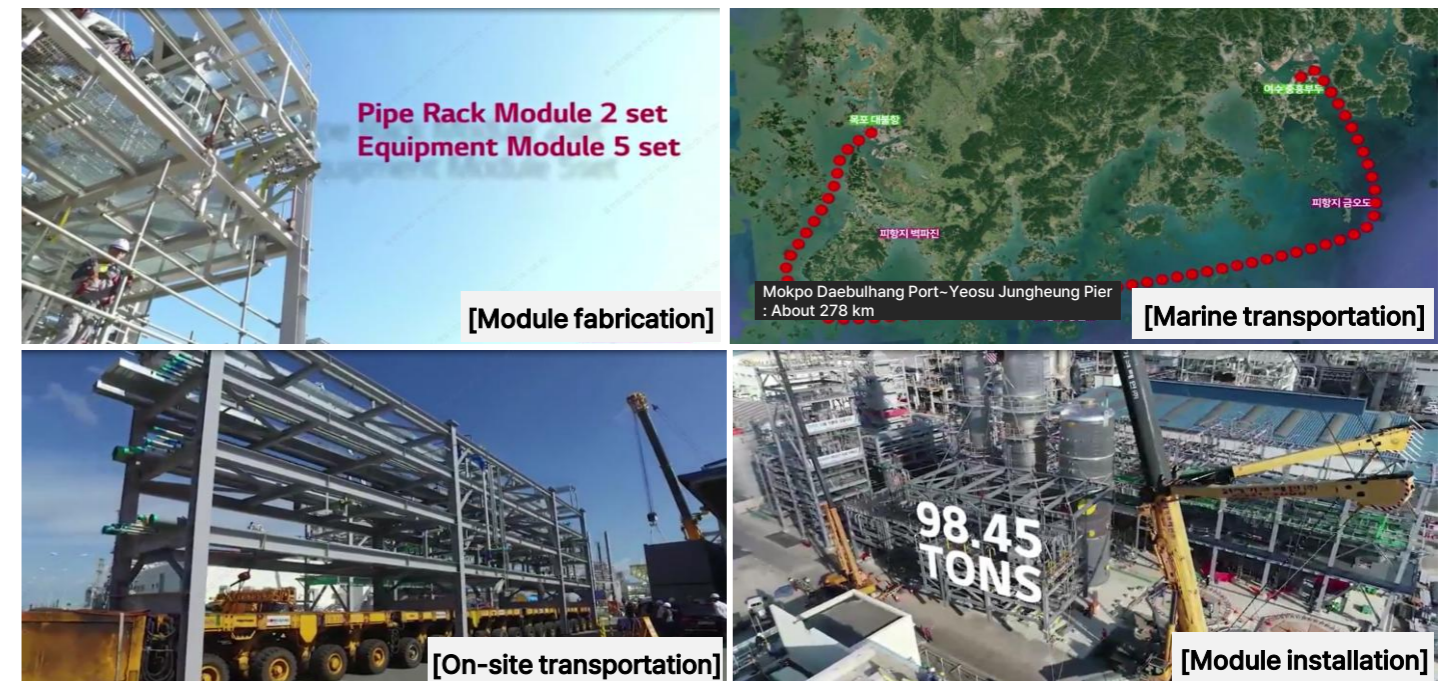
Xi C&A has been actively utilizing the modular construction method since its initial introduction in 2016 to enhance safety and reduce costs at plant construction sites. The modular construction method is an innovative approach that departs from the traditional stick-built process, in which all construction activities are performed directly on-site. Instead, structures are fabricated at off-site facilities and then transported, assembled, and installed at the construction site. Through this method, Xi C&A has achieved improved safety, shortened construction periods, enhanced productivity, and reduced costs. Furthermore, to provide greater value to clients, the company has established a feasibility study process to propose modular construction applications from the FEED design and bidding stages.

Cost reduction

Schedule reduction



Modular construction application cases



Smart Safety

Smart safety institutionalization is responsible for the safety of construction sites.



PRIOR PREPARATION

Standard Safety and Health Care Guidelines

- **Standard Health and Safety Management Procedures**(A full revision)
 - Presentation of safety and health management standards in the field
 - Standard safety and health work and work procedures

Regulations

- **Occupational Safety and Health Act, Construction Technology Promotion Act, the Serious Accident Punishment Act**
 - Legal Risk Zeroization
- **Compliance Risk enabled organization**
 - Health and Safety Officer
 - Technical responsibility : Quality, Environment
 - Regional Safety Exclusive

BEFORE CONSTRUCTION

Pre-Safety and Health Management Items

- **A report on the start of construction** (direct participation of management)
- (The main focus) **Selection of safety management items**
- (Plan) **Application and installation of safety facilities**
- **Occupational Safety and Health Management Expenses**
- **Safety personnel input**
- **Output Management(RFID)**

UNDER CONSTRUCTION

Safety and Health Management of Construction Site Process

- (S)PCM Report by Construction Type
- **The input of safety personnel**
- **Conducting autonomous safety activities**
- **Conduct on-site inspection**
- **Construction Machinery Inspection**
- **Emergency response training**
- **A special inspection**



Site Construction DX & Smart Safety

VG Voice Guidance System

- Install VG System in Dangerous Places
- Voice transmission of risk situations to approach workers
- Can be installed by risk factor to recognize risk

A wide beam

- Ensuring visibility due to LED
- Installation in places and equipment that require access/displacement
- Peripheral workers visually identify risks
- No access shall be set at least 1m to prevent worker access/ material yardage

RTLS Real-Time Location System

- Safety helmet tag when worker enters or exits / Wearing a tag for a necklace
- Installation of UWB sensor when carrying in construction equipment & dangerous section
- Warning due to entry into the danger zone, warning of danger signal after applying emergency button in case of emergency situation & danger

An intelligent surveillance system

- Securing the basis for safety management
- Zero safety management blind spots by installing all areas on site
- Major welding operations/shop area/dangerous material storage/extension, etc
- Required operation of control room (mandatory)

Industrial direct chamber installation

- Immediate notification in case of emergency
- Blind spots and high-risk work sections
- Difficult to reside high risk operations
- Centralized management in the control room

The opening Area

- Double or triple fall/fall safety management
- Installation of safety facilities in small openings
- Installation of double safety facilities for all openings except small ones
- Attaching an opening hazard mark

ISO standard certification

Leading eco-friendly construction for nature and humans.

Safety is the practice, the environment is the responsibility

Since Xi C&A knows that safety and environment are the absolute conditions for sustainable growth, it is doing its best to ensure that everyone at the construction site, including customers, employees, partners, and workers, is safe and protected, and furthermore, we will keep the promise of nature for our children's future.

Health & Safety | Safety and Health Management



Environment | Environmental management



Management system

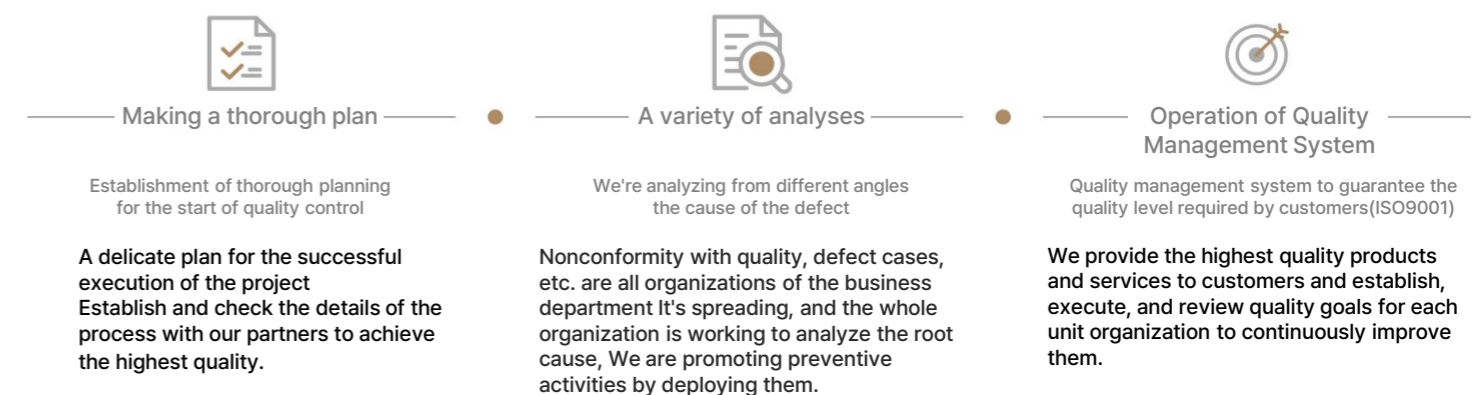


Implement high-quality, uncompromising until the end.

Quality is customer value

In the rapidly changing business environment and fierce competition, quality management is essential for a company's growth, and the importance of quality management is being emphasized as stakeholders demand quality assurance and product responsibility.

Quality | Strengthen quality capabilities



Aimed at a quality level that will impress customers and carry out from the planning stage, To maximize customer value throughout all processes of completion and operation

All executives and employees are the main agents of quality control Total Quality Management Performing an activity

Depending on the case, we use the Data System to share information to analyze the cause of the defect and find the best solution and apply it quickly. In addition, we will manage this as Big Data and apply it to all stages of product planning, design, and construction in the future to achieve flawless and flawless.

Shared Growth Policy

To be happy and grow together to create value

Best Space, Best Partners A company that makes a future together

We are expanding internal and external communication through various methods to grow with stakeholders who do business with Xi C&A, and establishing fair market order by establishing fair trade principles and correct trading agreements with stakeholders to establish a fair trading order.

To be happy and grow together to create value

Shared growth full of not only professionalism but also personality, calling, and passion as corporate citizens



Shared Growth Between Large and Small Businesses

We intend to implement shared growth management by creating a fair trade environment, open communication, and operating a shared growth program to strengthen the competitiveness of our partners.

History of Xi C&A Shared Growth Outstanding, Best Rating for 3 Years of Shared Growth Index (2021-2023)

2020	2021	2022	2023~
<ul style="list-style-type: none"> Establishment of a dedicated organization for shared growth Contributing to the rural win-win cooperation fund Contributing investment resources for shared growth Innovation-led wage gap closing agreement Agreed on decomposition of polarization Establishment of an internal review committee on subcontracting transactions Implementation of a meeting for shared growth, etc 	<ul style="list-style-type: none"> Conclusion and operation of shared growth fund agreement ESG training/diagnosis/consultation support Support for hiring excellent human resources from partner companies Implementation of a meeting to share know-how for overseas construction projects Technology protection and implementation of the technology pregnancy system Support for small and medium-sized enterprises (SMEs) in Korea Award for Outstanding Partner, etc 	<ul style="list-style-type: none"> Business agreement on the introduction of shared growth mall Conduct quality/safety training for partner companies Support for technology (joint R&D, etc.) Labor cost.Com payment fee support Support for quarantine supplies due to COVID-19 Support for self-development books 	<ul style="list-style-type: none"> Agreed to resolve polarization autonomous re-agreement Further discovery of shared growth programs

2024 Information on Shared Growth Program and Operational Status

Creating a Fair Trade Environment

- Operation of the four major implementations for establishing fair trade order between large and small enterprises
- Operation of standard subcontracts
- Win-Win Payment System and Labor Cost Dotcom Operation

Open Communication

- Operation of the Partnership Meeting for Shared Growth
- Self-inspection of compliance and operation of internal subcontracting review committee
- Listen to cyber newspapers and VOCs

Strengthen the competitiveness of partner companies

- Operation of the Shared Growth Fund
- Operation of a welfare mall exclusively for employees of partner companies
- Operation of partner company's technology protection service
- Support partner ESG education/diagnosis/consultation
- Support for small and medium-sized enterprises (SMEs) in Korea, etc

Best Space, Best Partner!

- Innovation-led wage gap closing campaign agreement for shared growth between large and small enterprises



SPACE INNOVATION

The Future of

DISPLAY Facilities



**Open the Tomorrow of the World's Top Display
Production Facility**

In line with the reputation of the world's first and world's best LG display, Xi C&A built a display production facility based on the best construction technology and abundant human resources. Leading a new spatial culture with bold challenging spirit and creativity. On my way.



Display

XiC&A is the world's largest based on multi-year cleanroom production facility Know-how
Paju Display centered on the display production plant P10 (14 football fields size building area)
LG Display, the world's only mass production company of OLED TV panels, built an industrial complex
We provide customer value to strengthen our OLED leadership.

LGDisplay Paju P10 Factory

Total floor area : 958.742m² Period : 2015.10~2022.03

XiC&A, which has maintained its position as a "high-tech construction powerhouse ' ' " in the field of high-tech industrial facility construction
We have been carrying out various and numerous high-tech factory projects such as the Paju LG Display plant.
Based on this performance, XiC&A has made a new history in many parts of the world, including China and Vietnam I'm going to make it.



01 A full view

02 / 03 Clean Room internal

SPACE INNOVATION

The Future of **BATTERY** Facilities



open the tomorrow of new energy production facilities

XiC&A is a major driver of the electric vehicle battery industry, and the growth of demand. Through constant efforts and innovation in line with changing market trends, we are leading the market for new energy production facilities beyond domestic and overseas markets with the best technology.



Battery

XiC&A specializes in building high-tech battery plants not only in Korea but also overseas, such as Ochang, North Chungcheong Province, Nanjing, China, and Wroclaw, Poland, and provides customer value that matches the characteristics of the customer's battery plant construction project based on its accumulated technology over many years.

Over a long period of time, we have accumulated knowledge-how while continuing to carry out various battery factory construction projects around the world, and we have an accurate understanding of the characteristics and needs of the battery factory construction projects

Based on understanding, we have secured all the necessary competencies to carry out the project.

Since 2020, we have been able to successfully provide integrated solutions to our customers by carrying out battery factory construction projects using various overseas application laws and understanding of the construction environment and related infrastructure to expand our business areas around the world.

Polish Battery Factory

Location: Wroclaw Total floor area: 730.000m², 3rd floor period: 2016.07 to present



- 01 A full view
- 02 Mixer Room
- 03 Production Area

SPACE INNOVATION

The Future of

R & D Facilities



**Open the Tomorrow of Advanced Research
Facilities for Future Growth**

XiC&A has been pondering questions and possibilities, finding answers, and challenging innovation beyond the impossible to move forward without following the fast-changing work and research environment.



R&D

XiC&A, which has maintained its position as a 'powerhouse of high-tech construction' in the construction of high-tech industrial facilities, has carried out a variety of projects, including LG Science Park and Electronics/Chemical R&D.

It provides new value to R&D facilities for convergence technology research and accumulation in high-tech factories.

Magok Science Park

Location: Magok, Gangseo-gu Total floor area: 337,000m² Period: 2015.05~2020.06

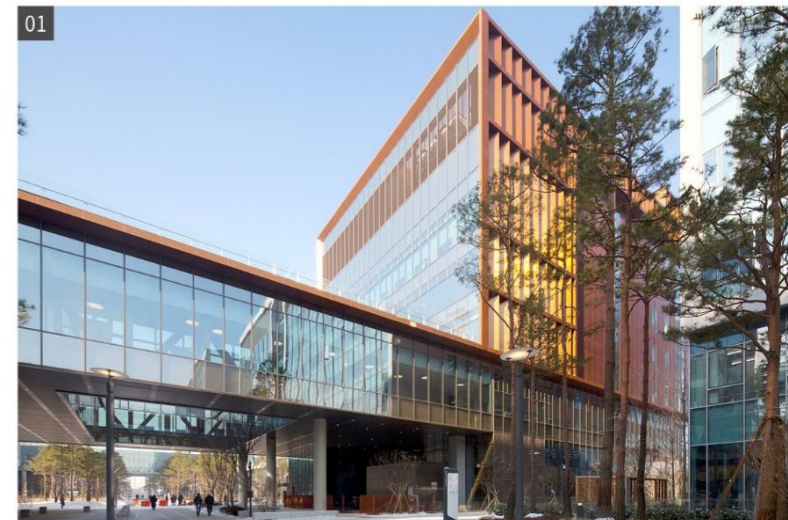
LG Science Park is located on 24 football fields (about 53,000 pyeong) with a total floor area of 337,000m²

As a large-scale convergence research complex, it is a complex research complex that creates technology for future growth of Korea beyond Moyo LG in various fields in LG such as electronics, chemistry, bio, software, and telecommunications, This is a group-level Hub that leads LG's digital transformation, open innovation, and future preparation R&D.

Accelerating digital transformation is a top priority for continuous customer value creation in the era of the 4th industrial revolution

It is selected as a task, and the core technologies of digital transformation such as artificial intelligence, big data, and cloud capabilities are selected

We are intensively strengthening it.



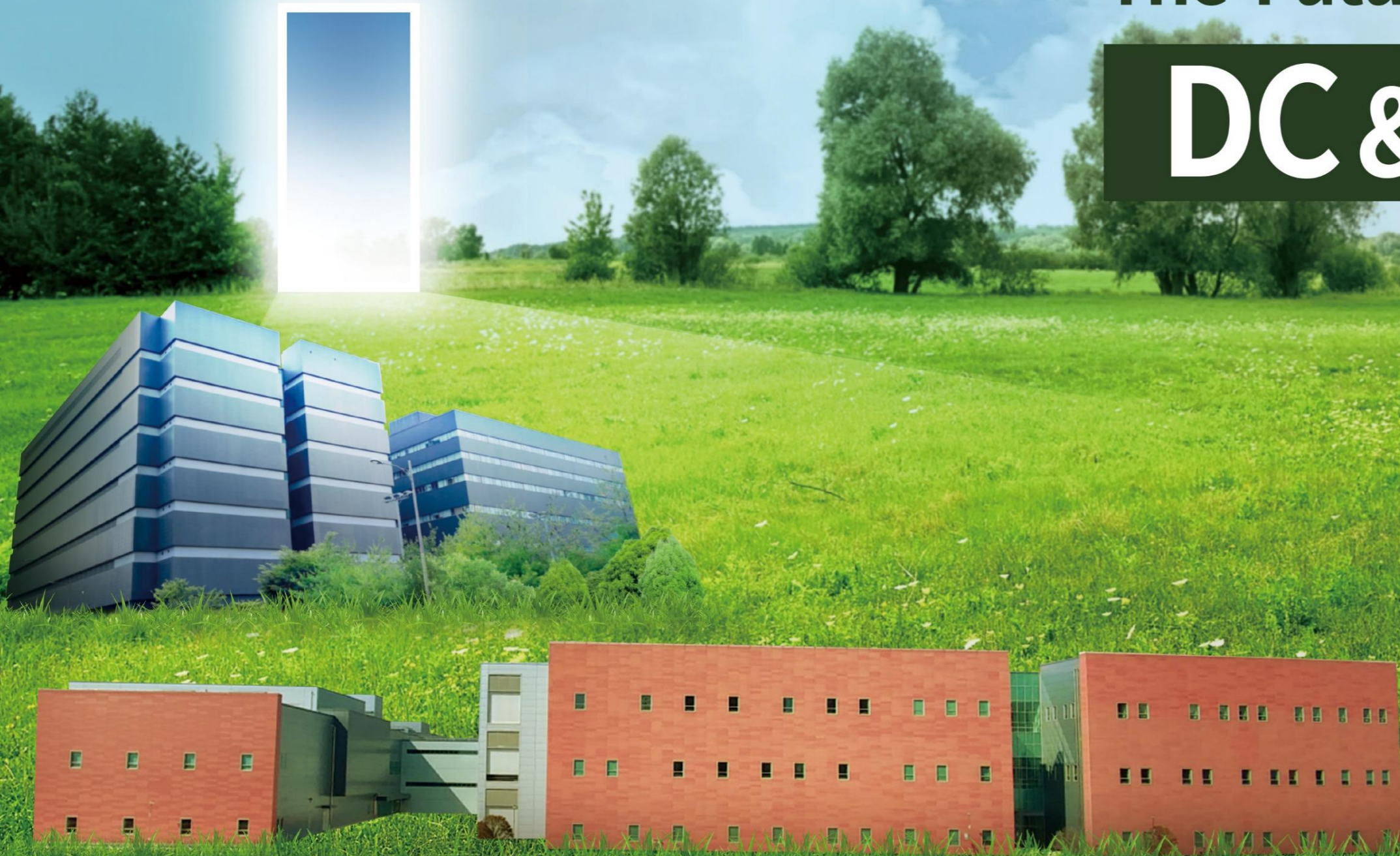
01 A full view

02 A large conference room

03 Lobby

공간의 내일을 열다.
SPACE INNOVATION

The Future of DC & GMP Facilities



**Open the Tomorrow of Advanced Industrial
Facilities with Future Values**

XiC&A has abundant experience and construction of high-tech industrial facilities
Leading the change of industrial facilities that evolve based on know-how
There is. Based on stability, durability, water resistance, heat dissipation, vibration, etc
In addition to excellent high-quality construction, it combines eco-friendly technology
We provide optimized solutions for high-tech industrial complexes.



DC

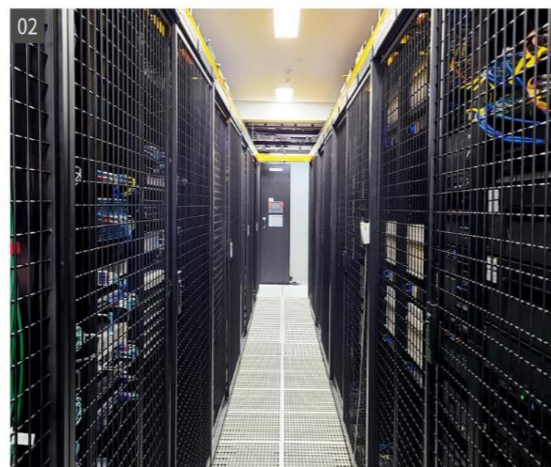
LG U+ Pyeongchon Center is located in Pyeongchon Smart Square, Gwangyang-dong, Anyang-si, Gyeonggi-do, with a land area of 5,227 pyeong and a total floor area of 25,714 pyeong, with 19,490 pyeong in the first floor, and 3 basement floors to 7 ground floors. It is a state-of-the-art IDC with the largest building area in Korea and 165MVA water capacity, and supports Front Engineering from the planning stage to help customers' needs. Reflected, we provided differentiated customer value to LG U+.

LG U+ Pyeongchon Mega Center New Construction

Location: Anyang, Gyeonggi-do Total floor area: 84,384m², 3 basement floors/7 ground floors Period: 2013.09~2020.08

※DC

It is a term that has emerged with the growth of the Internet business, and the lease of computer or network facilities to enterprises and individual customers or attract customers' facilities to provide services such as maintenance and maintenance. It refers to the place where it is provided. The operation and management of server equipment and communication equipment that are too burdensome for individual companies to operate. It is equipped with state-of-the-art facilities, security, and a perfect communication network on behalf of it. Demand is increasing a lot as the Internet business has increased significantly.



01 LG U+ Next IDC

02 Inside the computer room

Total floor area: 40,405m² Period: 2021.06~2023.07



GMP

As LG Chem's first antibody drug, 'Ucept' production facility, the smart factory. For this purpose, LGV (Laser Guided Vehicle) and vertical conveyor are applied. It is a representative factory in Cheongju-si that plans to minimize the number of production personnel. XiC&A will capture the ambition of LG Chem to contribute to the world. We have provided a space. Because it deals with germs, it makes them quickly to block the possibility of contamination. That's the key point. For the first time in Korea, all pathogens in high-, medium-, and low-risk groups can be detected. It is equipped with facilities to handle earthquakes and various accidents. Make the walls of the workshop with special panels so that they don't escape. Technology has been added in consideration of the characteristics of the chemical plant.

LG Chem Osong Factory

Location: Cheongju, North Chungcheong Province
Total floor area: 75,728m², Period: 2009.05~2019.01

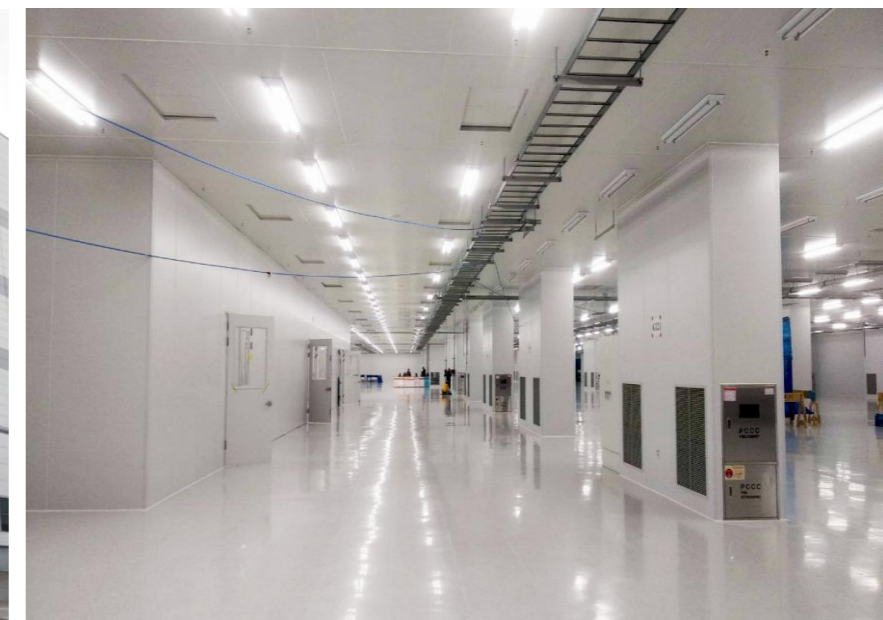


01 A full view

High-tech Industrial Facilities



High-tech Industrial Facilities



01. LG Display Vietnam
[Display facility]
Total floor area: 463,722m²
Period: March 2016 to the present

02. LG Display Guangzhou

[Display facility]

Total floor area: 1,141,904m²

Period: from June 2015 to the present



03. LG Display Paju City

[Display facility]

Period: 2015~present

04. LG Display Gumi

[Display facility]

Floor area: 1,156,998m²

Period: from June 2008 to the present





05. LG Energy Solution, Nanjing, China
Bin Gang Automobile Battery Factory
 [Battery facility]
 Total floor area: 379,900m²
 Period: 2018.09~2021.05



06. LG Energy Solution China, Nanjing
Shingang Small Battery Factory
 [Battery facility]
 Total floor area: 32,482m²
 Period: 2020.09~2022.04





07. LG Energy Solution 2nd Plant of automobile battery in Nanjing, China
 [Battery facility] Total floor area: 86,967m² / Period: 2018.09~2021.05

08. LG Energy Solution 5 small batteries in Nanjing, China
 [Battery facility] Total floor area: 58,493m² / Period: 2016.08~2017.08



**09. LG Energy Solution Ochang Plant 2
 Test Research Center**
 [Battery Facility]
 Total floor area: 56,700m²
 Period: 2021.06~2022.05



**10. LG Energy Solution Ochang Energy Plant 2
 Battery production building 2**
 [Battery facility]
 Total floor area: 73,162m²
 Period: In progress from 2023.07

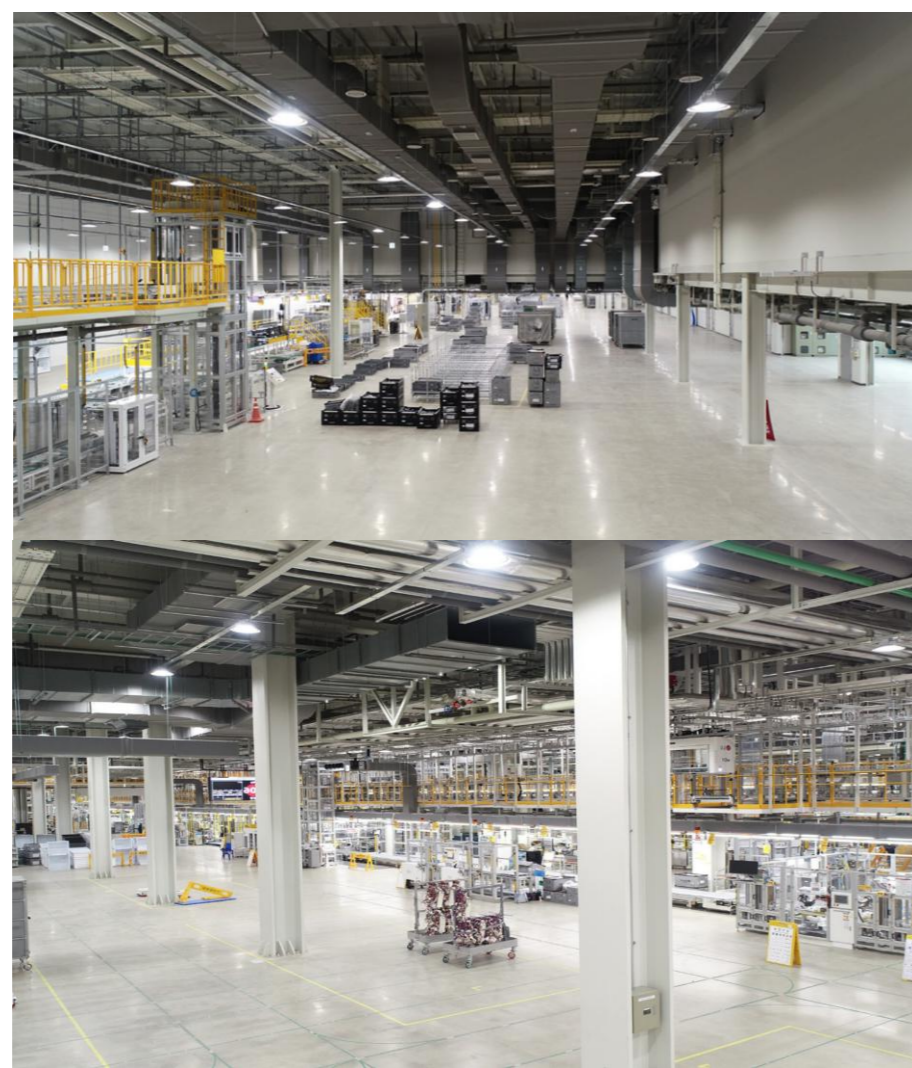


11. LG Energy Solution Ochang Plant 1
 [Battery facility]
 Total floor area: 243,800m² / Period: 2010.07~2017.07





12. LG Electronics' Changwon Plant 1 Smart Factory
 [Home appliance production facility]
 Total floor area : 104,504m²
 Period : February 2018~present



13. LG Magnai Powertrain Headquarters/Production Factory

[Motor production facility for vehicles]
 Total floor area: Production research building_103,502m², complex building_69,095m²,
 Period: Production Research Building_07-2011 / Complex Building, 2017.05-2018.09





14. LG Innotek Vietnam Hai Phong V1, V2, and V3 factories

[Camera module production facility]

Total floor area: V1 plant-58,125m² / V2 plant-58,829m² / V3 plant-150.809m²

Period: V1 Factory-2016.09~2017.06 / V2 Factory-2017.11~2018.10 / V3 Factory-2023.06~ in progress

* Camera module: Advanced product that converts visible subject information into electrical image signals



15. LG Innotek Pyeongtaek Plant

[Electric parts production facility]

Total floor area: 74,076m²,

Period: 2017.06~2018.06



16. LG Innotek Gumi 1A Plant

[A stand production facility]

Total floor area: 31,110m²,

Period: February 2012 to July 2012



17. LGCNS Busan Mieum District Data Center

[IDC(Internet Data Center)]

Total floor area: 32,531m²

Period: March 31, 2012 to January 31, 2013



Dust-free facilities : * Dust-free structures of floors and walls (patent application)

* Dust-free structures : A design method for earthquake response to reduce shaking of buildings and minimize damage by installing special vibration devices (stacked rubber, etc.) at the base of the building to reduce the vibration of the ground to the building during an earthquake

20. Comiparm Osong Anti-cancer Drug Factory

[GMP facility]

Total floor area: 9,411m²

Period: July 2012~2013.11



18. Taegeuk Pharmaceutical Co., Ltd.'s Buyeo Factory

[Toothpaste GMP production facility]

Total floor area: 32,531m²

Period: May 2018~2020.05



19. Daewoong Pharmaceutical's Hyangnam Plant

[Pharmaceutical GMP production facility]

Total floor area: 8,058m² / Period: 2014.10~2015.06



21. Chemical Iksan Life Sciences Synthetic New Drug Factory

[GMP facility]

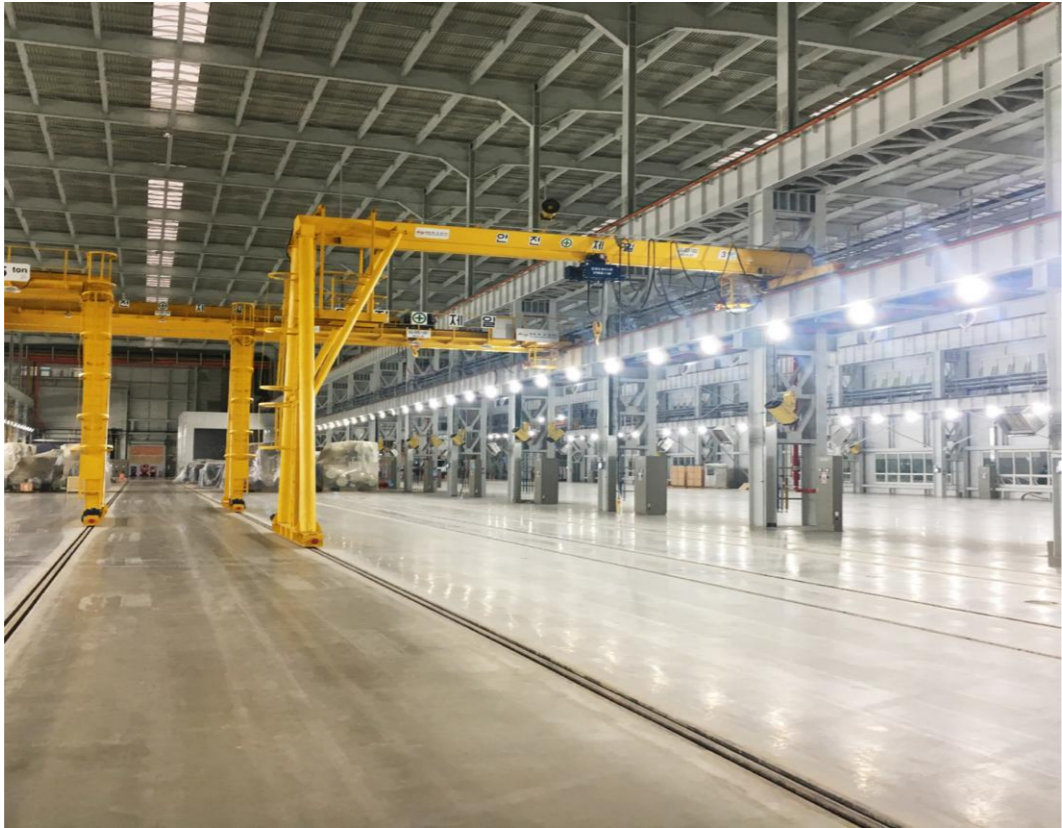
Total floor area: 53,476m²

Period: 2024.02~In progress

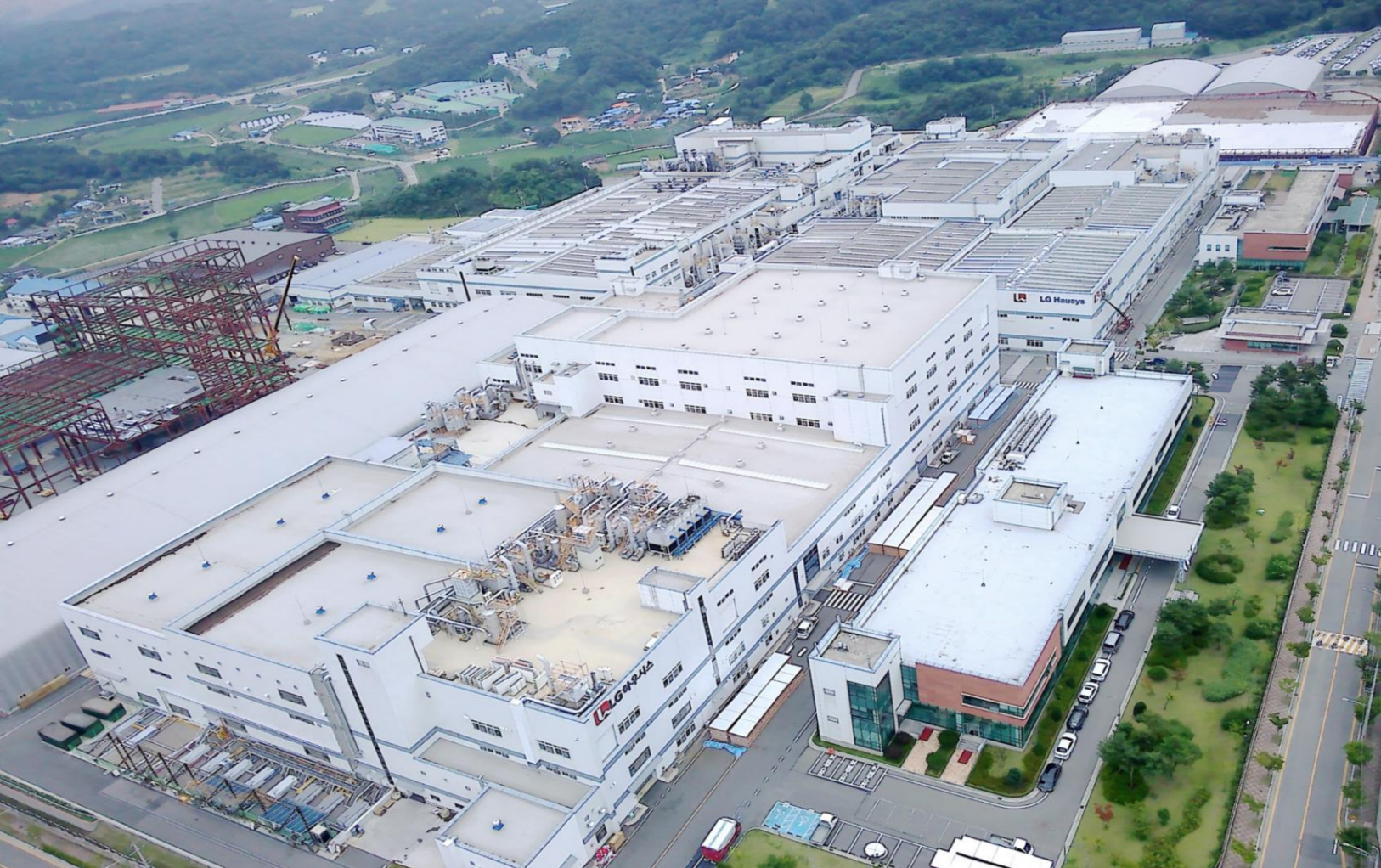


22. LG Electronics' Pyeongtaek Chiller Factory

[Chiller production facility]
Total floor area: 52,352m²
Period: February 2012~2013.01



23. LG Innotek Gumi C4CR
[High-tech production facilities]
Total floor area: 232,306m²
Period: February, 2022 to December, 2023



24. LX Hausys Cheongju Factory

[Production Facility]
Total floor area: 84,010m² / Period: 2012.07~2022.04

25. LG Innotek Paju CR Corporation
[High-tech production facilities]
Period: 2021.11~2022.08



27. LG Electronics Changwon Plant 2
Integrated Living Appliances Test Building
[High-tech production facilities]
Period: February 2021 to February 9, 2022



26. LG Chemicals Cheongju Anode Material Plant 4
[Battery facility]
Period: November 2020 to 22.09



28. LG Chemicals Cheongju Osong Plant
[GMP production facility]
Period: February 2020 to 22.09

29. LG Energy Solution Poland Automobile Battery Plant Revitalized 4 new buildings

[Battery facility]
Period: 2021.03~2022.07



**31. LG Energy Solution Polish Pack Factory
Remodeling and Reliability Construction Work**

[Battery facility]
Period: July 2018~2020.06



30. LG Energy Solution Poland Automotive Battery Plant Construction

[Battery facility]
Period: 2016.07~2019.01



**32. LG Energy Solution Poland Automobile Battery Factory Construction
of Electrode Building 2 and Assembly Building 3**

[Battery facility]
Period: April 2018~2021.06





33. LGU+ Pyeongchon Next IDC construction
/ 154 kV underground line construction
 [IDC(Internet Data Center)]
 Period: 2021.06~2023.07



34. LG Innotek Paju 2nd Plant New Construction (1 Plant Capa-up)
 [High-tech production facilities]
 Period: October, 2022 to March, 2023



35. Expansion of LG-HYBCM Gumi Cathode Material Plant 1
 [High-tech production facilities]
 Period: 2022. 01 – 24. 12



36. Construction of Hanam M Center in Seegene
 [GMP production facility]
 Period: 2024.06~2026.06



37. LGU+Paju 1239 (IDC) Project
 [IDC(Internet Data Center)]
 Period: 2025.04~2027.03

38. Naver Data Center GAK Sejong 2nd~3rd Construction Project
[IDC(Internet Data Center)]
Period: 2026.01~2029.02



LG Sciencepark



Business Research Facilities

Business Research
Facilities



01. LG Science Park Magok
[R&D facilities]
Total floor area: 377,000m²
Period: May 2015~December 2020



02. LG Chem Osan Tech Center
 [R&D facilities]
 Total floor area: 22,325m²
 Period: June 2018 to October 2019



03. LG Electronics Changwon R&D
 [R&D facilities]
 Period: December 2014 to December 2017





05. Hive Yongsan HQ

[Office B/D]

Total floor area: 62,857m²

Period: December 2016 to November 2019



녹색건축인증

04. LG U+ Yongsan headquarters

[Office B/D]

Total floor area: 54,500m²

Period: from June 2012 to February 2015



녹색건축인증





06. D&O Magok Building / Hotel

[Office B/D / Accommodation]

Total floor area: 57,028m²

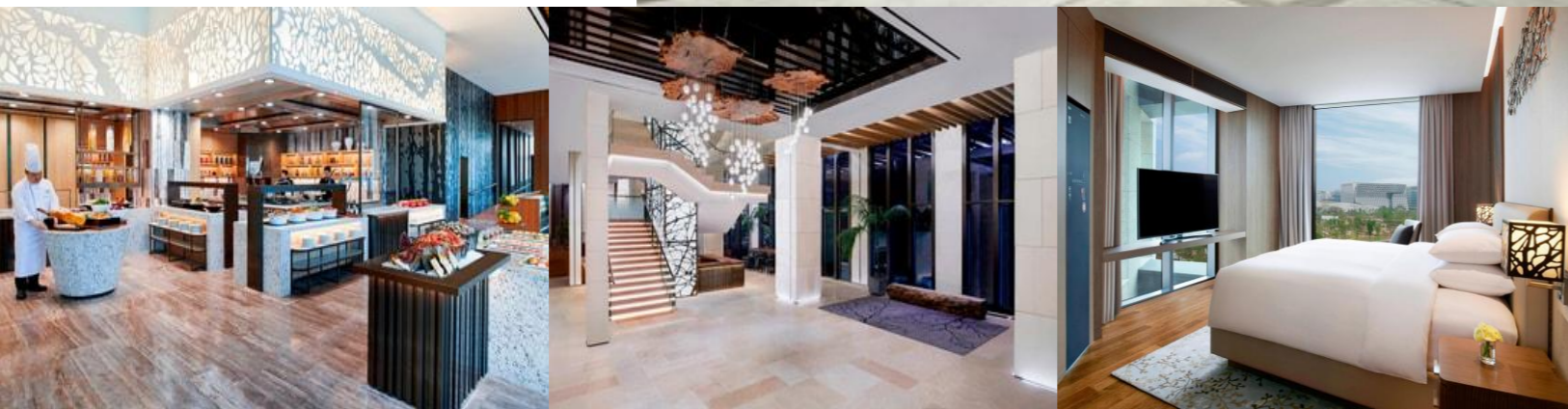
Period: November 2015-2018.07



07. LG U+ Sangam headquarters

[Office B/D]

Period: 2006.05~2008.07





08. LG Energy Solution Poland Automotive Battery Factory Welfare-dong
[Office and welfare facilities]
Period: 2020.08~2022.06



10. LG Chem Daejeon Research Institute
[Work and research facilities]
Period: January 2015 to June 2017

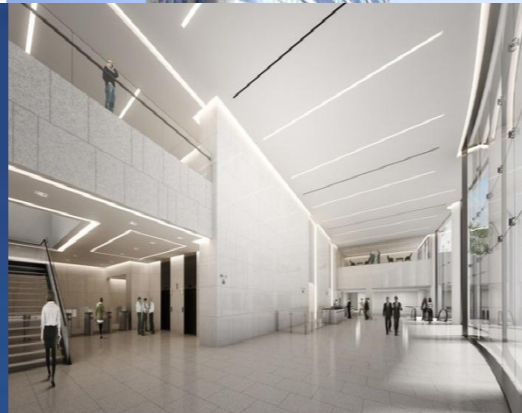
09. Office of the Organizing Committee for the PyeongChang Winter Olympics
[Office B/D, Modular]
Period: November 2015-2016.08



11. LG Chem, Guangzhou, China Tech Center
[Research and Education Facilities]
Period: from June 2014 to April 2015



12. LG Seoul Station Building Co., Ltd
[Office B/D]
Period: November 2017 to July 2018



13. LG Display Paju Running Center
[Education and research facilities]
Period: 2014.09~2017.05



14. LIG Nex1 Daejeon Techbelly
[Research facility]
Period: April 2016 to October 2017



15. New construction of LG Electronics' V-ENS Incheon Campus
[Research facility]
Period: December 2011 to May 2013



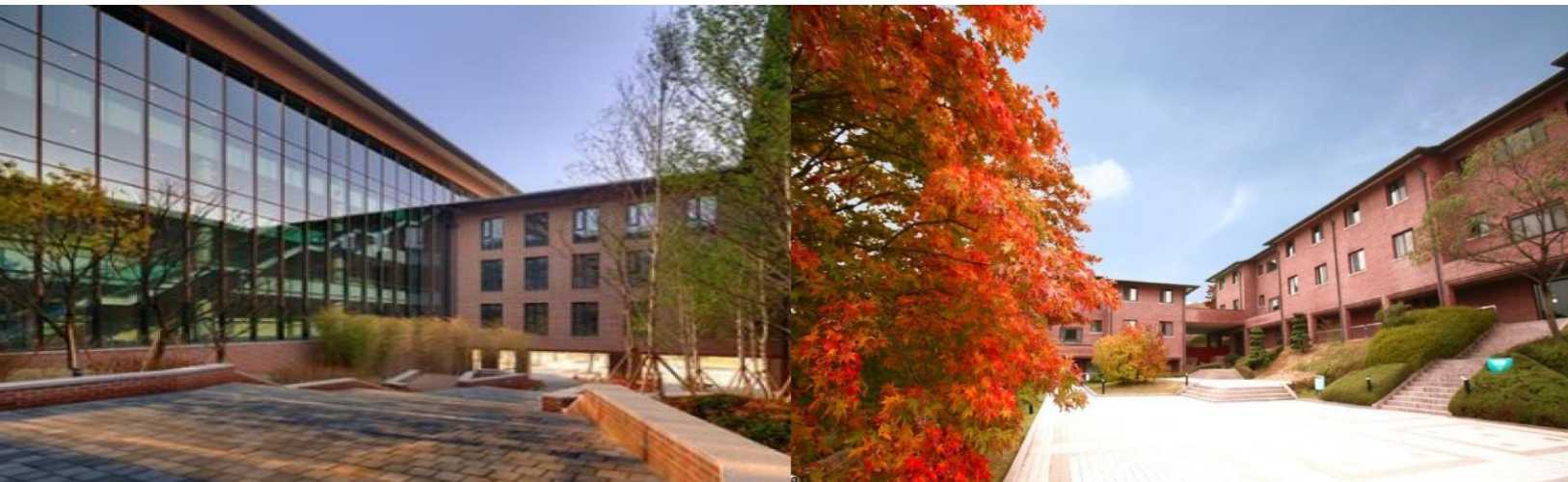
17. LG Chem Gwacheon 2nd Laboratory
[Work and research facilities]
Period: August 2014-2015.01

16. LG Chem Daejeon Institute of Technology 5th Research Building
[Research facility]
Period: May 2014-2015.01

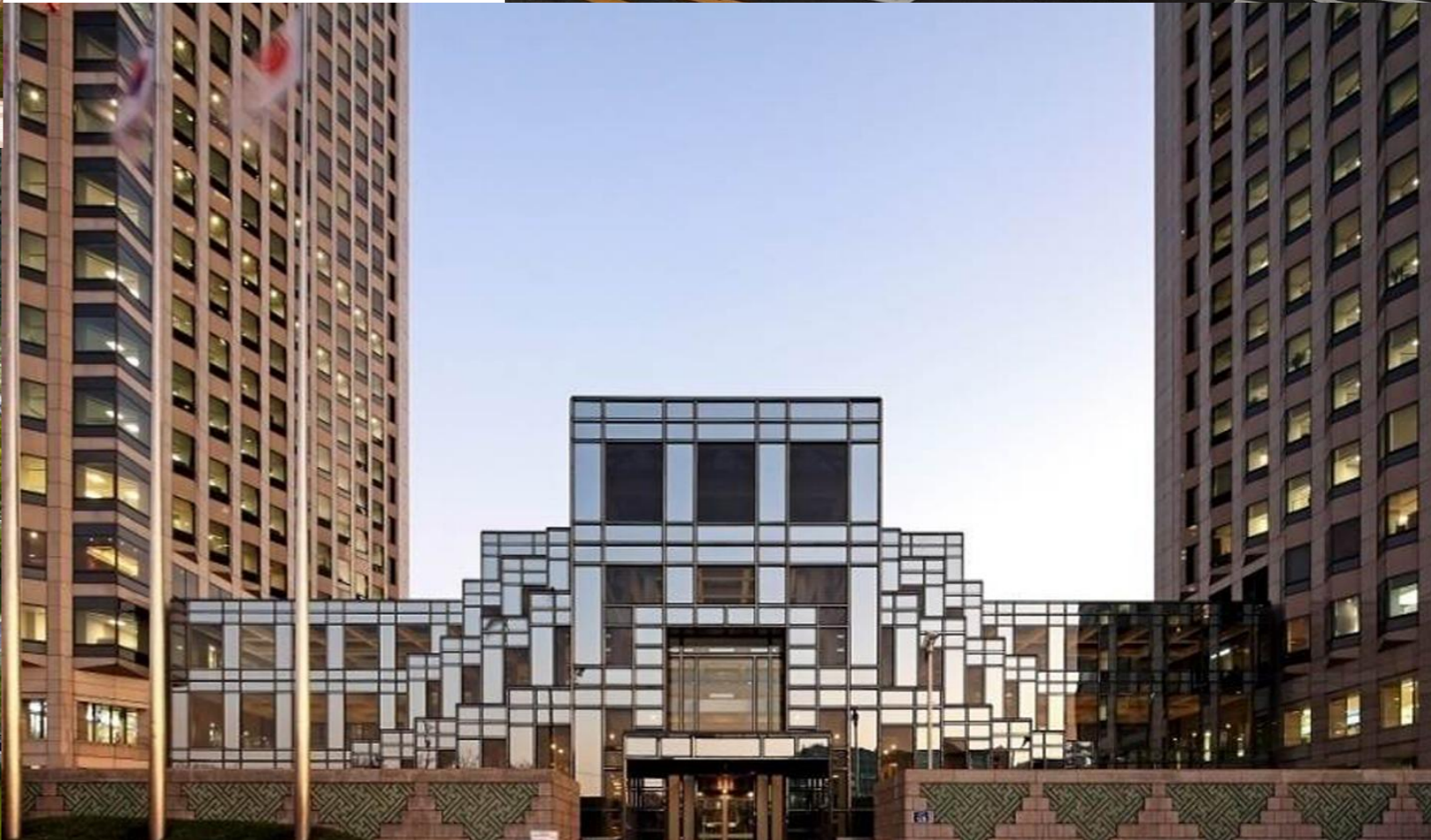




18. LG Inhwawon Remodeling Project
 [Educational Research Facility]
 Total floor area: 31,897m² / Period: 2010.10~2011.10



19. LG Twin Tower Remodeling Construction
 [Work facilities]
 Total floor area: 157,835m²
 Period: 2010.10~2012.07



**20. LGES Ochang Plant 2
Experimental Research Center**
[Business / Research Facilities]
2021.05.31 ~ 2023.08.31



**21. LGES Poland Environmental
Safety Test Center**
[business/research facilities]
2022.01~ In progress



22. Renewal Corporation of the Osan Leadership Center at LG Chem
[business/research facilities]
2022.01.20~2022.06.30



23. Renewal of the Yeouido Twin Towers
[Business / Research Facilities]
2021.11.01~In progress

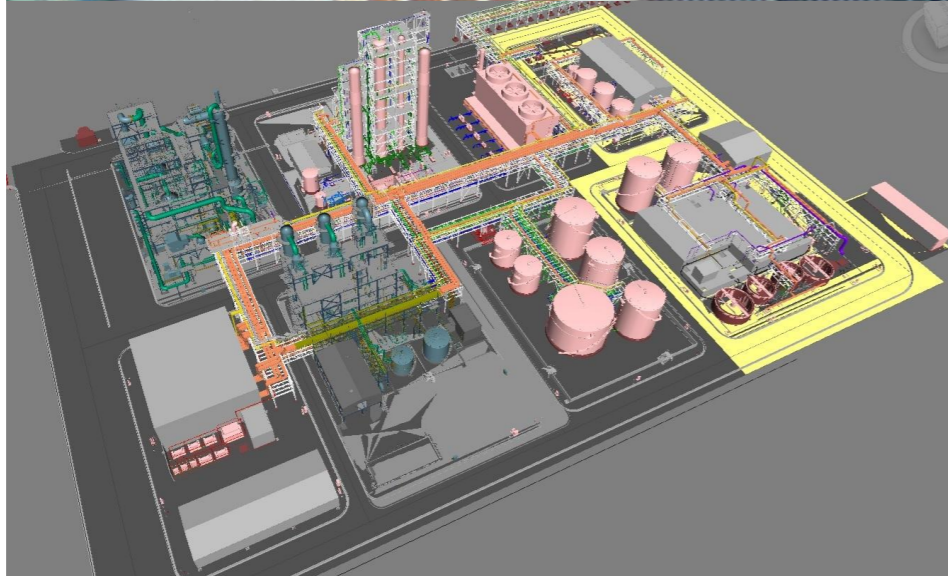
**24. LG Electronics ES Headquarters Changwon
HVAC Research Center Construction**
[business/research facilities]
2026.01~2027.04



Chemical Plant



Chemical Plant



**01. LG Chem Yeosu
5AA Project**

[Petrochemical_Acrylic/SAP]

Capacity:CAA(Crud Acrylic Acid)

_160,000 tons/year

Period: May 2014 to December 2015



02. LG Chem's new Bisphenol A (Bisphenol A) project

[Petrochemical_BPA]
Capacity: Cumene-420,000 tons/year, Penol-300,000 tons/year,
BPA-150,000 tons/year
Period: November 2011 to 2013.08



03. LG Chem Yeosu BRU Project

[Petrochemical_NCC]
Capacity: Benzene-350,000 tons/year
Period: 2019.6~2021.08



04. LG Chem's Daesan POE 200,000 tons Project

[Petrochemicals_PO]
Capacity: POE-200,000 tons/year
Period: March 2017 to December 2018





07. LG Chem Yeosu SAP5 Expansion Project
 [Petrochemical_Acrylic/SAP]
 Capacity:SAP(Super Absorbent Polymer)-100,000 tons/year
 Period: from June 2017 to May 2019



05. LG Chem B-Project
 [Petrochemicals_NCC]
 Capacity:BD(Butadiene)-130,000 tons/year
 Period: January 2019~2021.08



06. LG Chem's Daesan R-Project
 [Petrochemicals_NCC]
 Capacity:BD(Butadiene)-550,000 tons/year
 Period: February 2017 to December 2019



08. Daesan 3BE Project
 [Petrochemicals_NCC]
 Capacity:BD(Butadiene)-30,000 tons/year
 Period: September 2017 to February 6, 2019





**09. LG Chem Yeosu NPG Expansion Project
for 10,000 tons**

[Petrochemical_Acrylic/SAP]

Capacity:NPG(Neopentyl Glycol)-40,000 tons/year

Period: November 2017 to May 2018



12. LG Chem Yeosu 5AA Project

[Petrochemical_Acrylic/SAP]

Capacity:CAA(Crude Acrylic Acid)

-160,000 tons/year

Period: May 2014 to December 2015



10. LG Chem Yeosu CA2 Expansion Project

[Petrochemicals_CNT]

Capacity: NaOH-150,000 tons/year

Period: February 2018~2020.03



11. LG Chem Yeosu CNT 2nd Project

[Petrochemicals_CNT]

Capacity:CNT(Carbon Nanotube)-1,200 tons/year

Period: December 2019~2021.06



13. LG Chem Yeosu IPA Expansion Project

[Petrochemical_Acrylic/SAP]

Capacity:IPA(Isopropyl Alcohol)- 50,000 tons/year

Period: September 2018 to November 2019



14. LG Chem's new SSBR plant in Daesan Project
 [Petrochemical_HPM]
 Capacity : SSBR(Solution Styrene Butadiene Rubber)-60,000 tons/year
 Period: January 2013-2014.01



16. LG Chem's Daesan EVA Project
 [Petrochemicals_PO]
 Capacity:EVA(Ethylene Vinyl Acetate)-60,000tons/year
 Period: 2012.06~2013.12



15. LG Chem Daesan CDC Project
 [Petrochemical_catalyst]
 Period: October 2018 to December 2019
 * CDC: Catalyst Development Center



17. LX MMA M2 MTBE Expansion Project
 [Petrochemical_MMA]
 Capacity : MTBE(Methyl Tertiar Butyl Ether)
 -150,000tons/year
 Period: 2019.07~2021.02

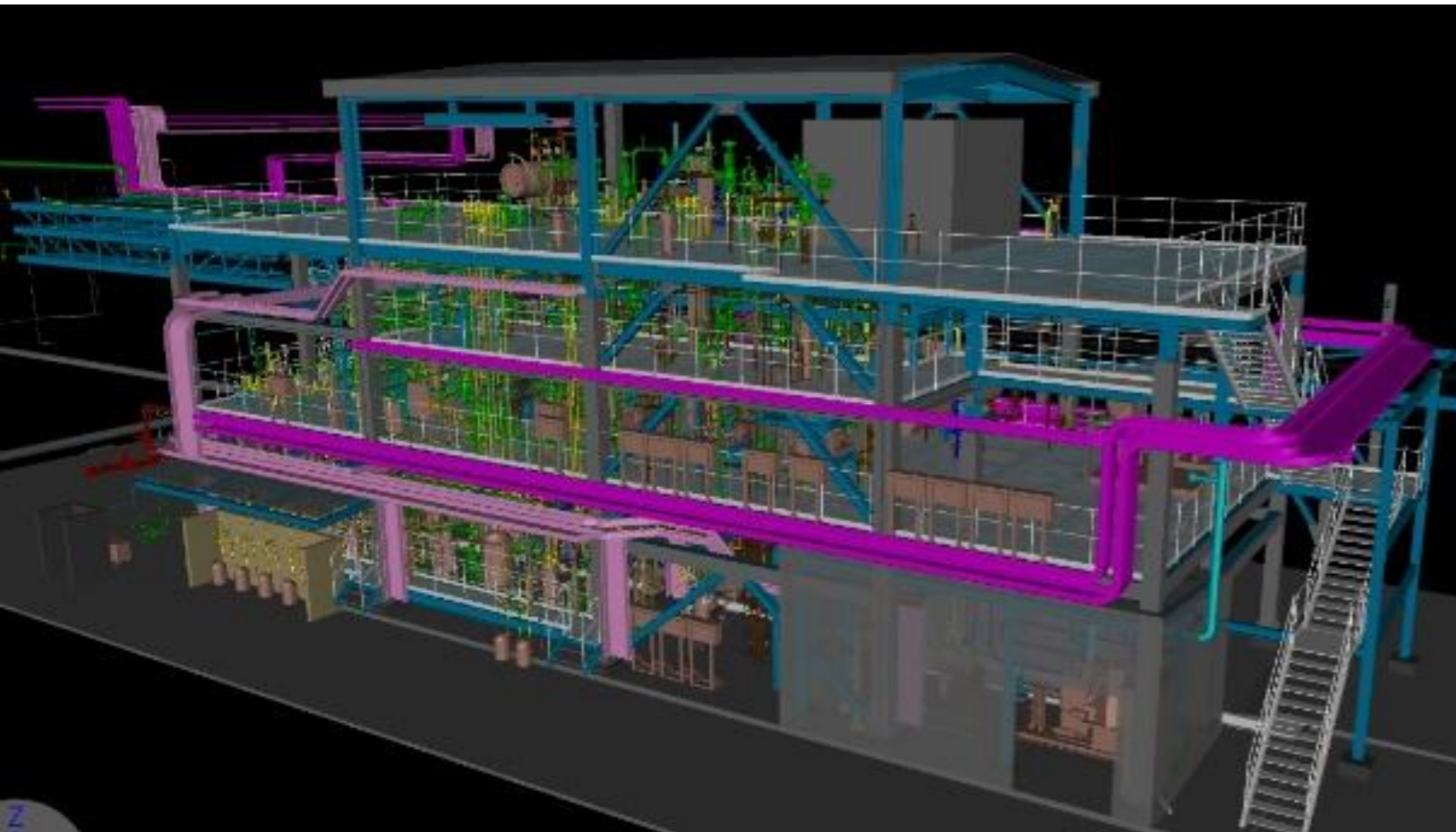


18. LX MMA M3 Project
 [Petrochemical_MMA]
 Capacity:MMA(Methyl Methacrylate)- 80,000 tons/year
 BMA(Butyl Methacrylate)- 30,000 tons/year
 Period: 2017.06~2019.08

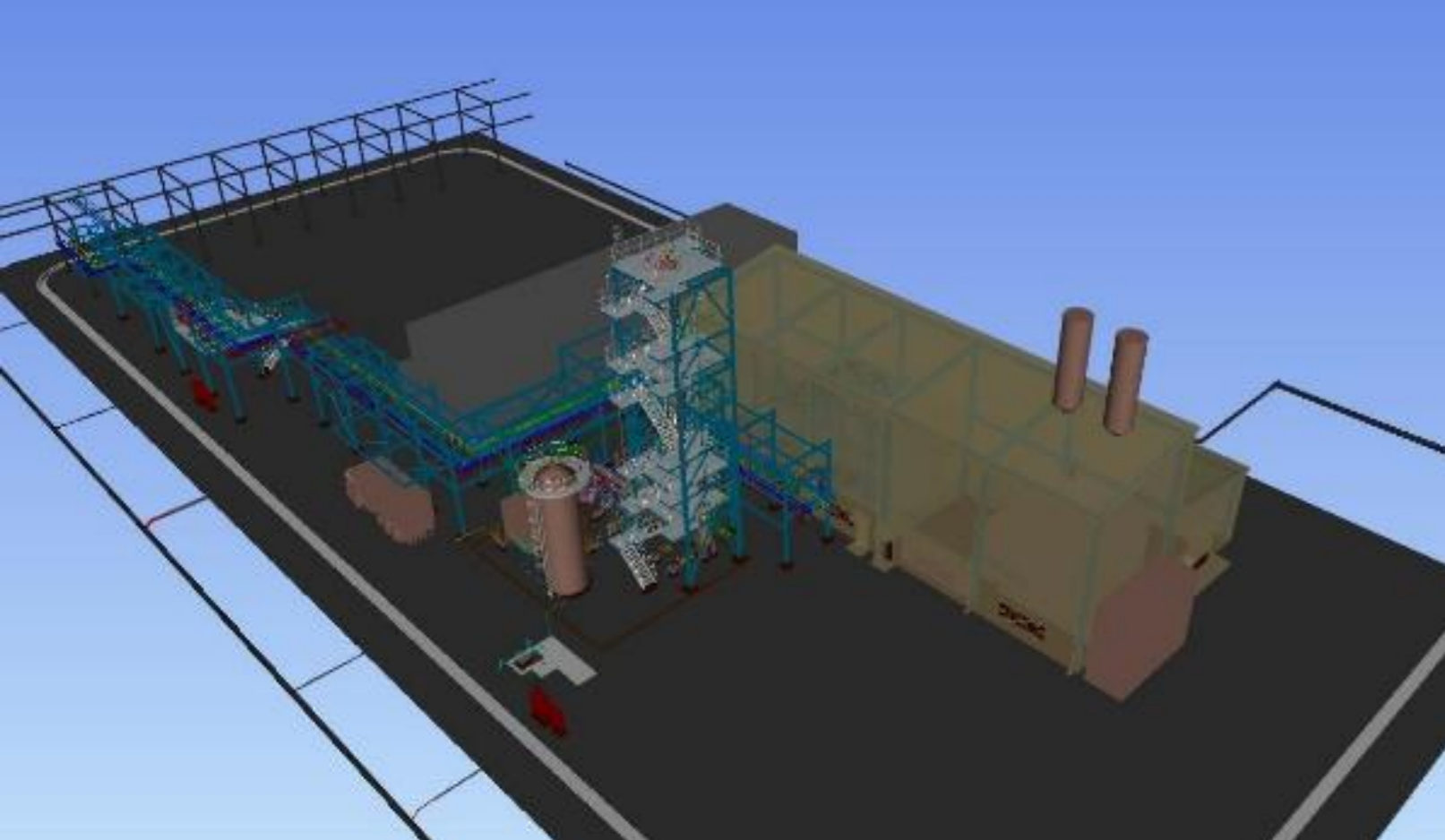


19. LG Chem Yeosu NCC UT/OS Corporation
 [Petrochemicals_NCC(Naphtha Cracking Center)]
 Period: 2019.06~2021.08

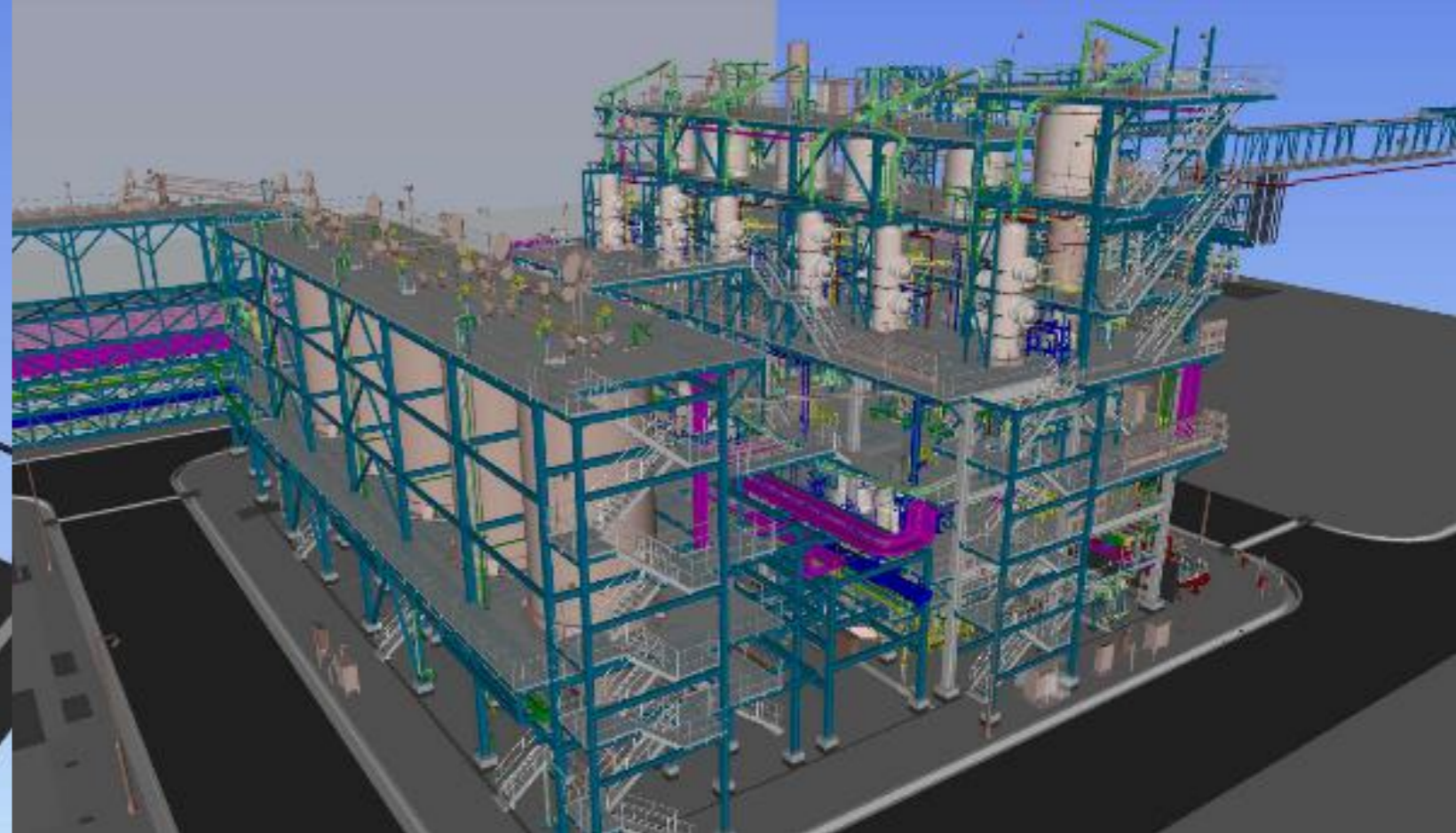
20. LG Chem's Daesan P5 Project
 [Petrochemicals_POE]
 Period: 2021.08~2022.11



21. LG Chem Yeosu NBL 110,000 tons expansion project
 [Petrochemicals_NBL(Nitrile Butadiene Latex)]
 Period: 2021.03~2022.07



22. LG Chem Daesan PLA Pilot Project
 [Petrochemicals_PLA (Poly Lactic Acid)]
 Period: 2023.05~2025.07



24. LG Chem Daesan CNT4 Project
 [Petrochemical_CNT (Carbon Nano Tube)]
 Period: October 2022 to December 2025

23. LG-HYBCM Gumi Cathode Material Plant 1
Extension Engineering Production Facility Corporation
 [Polarizing]
 Period: February 10, 2022 to February 12, 2024



25. LG Chem Yeosu NCC T/A Project
 [Petrochemicals_NCC(Naphtha Cracking Center)]
 Period: 2022.05~2023.08





26. 100MW Onshore Wind Farm Project in Jeollanam-do

[Development]

Capacity: Wind Power - 63 MW

Period: February 2016~2018.12



27. Namyang Dairy Energy Rationalization Project Project

[Development]

Capacity: Steam Turbine-5MW

Period: January 2015 to December 2016

Modularization

Modularization means transportation, performance, safety, Advanced 3D for operational (including maintenance) based on design technology, each construction site most of the production is done at the shop therefore, high productivity and high quality can be secured I have it.

It also reduces the risk of on-site safety accidents and High accuracy for shop drawing and unnecessary Reduce one volume to realize investment savings It was here.



MS5A,B,C (PAU02A,B,C) Installation



MS2 (PAU01B) Installation



MS5A,B,C (PAU02A,B,C) Installation



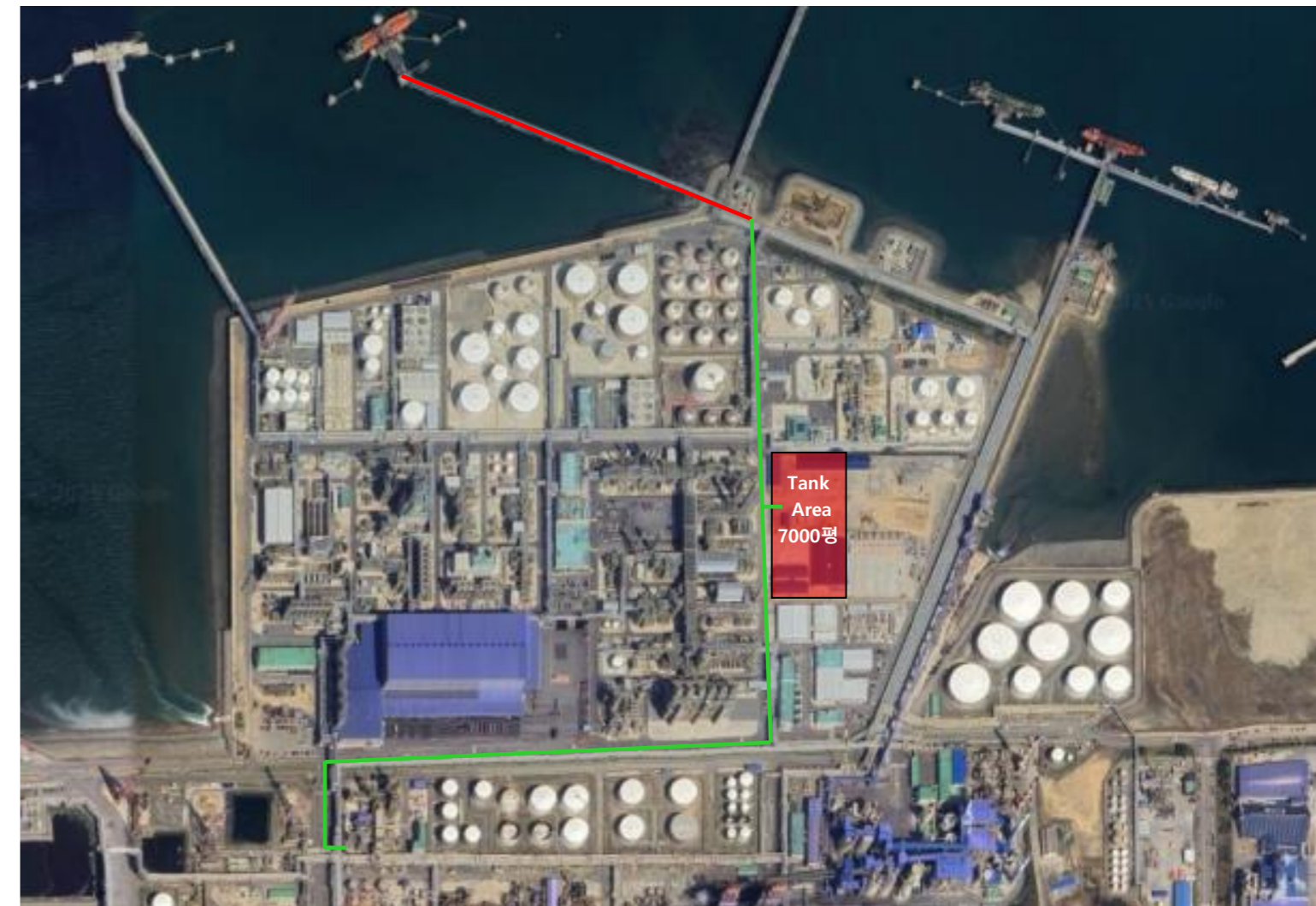
MS5A,B,C (PAU02A,B,C) Installation

28. Hyundai Oilbank LBO Gr3.Project

[Development]

Capacity: Wind Power - 63 MW

Period: 2025. 08~2027. 11



Tank Area 7000평



pantos
LOGISTICS

Logistics Facilities

신개념 명품 유통단지
195-1315 / 011-7508-5992



01. SERVEONE Yeosu HUB New Construction

[Distribution Center]
Period: May 2014 to December 2015



**02. Coca Cola Pyeongtaek
Integrated Logistics Center**
[Distribution Center]
Period: 2020.04~2021.04



03. LX Pantos West Center
 [Distribution Center]
 Total floor area: 85,902m²
 Period: July 2017 to October 2018



03. LX Pantos West Center
 [Distribution Center]
 Total floor area: 85,902m²
 Period: July 2017 to October 2018





05. Construction of Our Home Dong Seoul Logistics Center
 [Distribution Center]
 Total floor area: 8,258m²
 Period: 2015.05-2016.08



06. Construction of Our Home Yangsan Logistics Center
 [Distribution Center]
 Total floor area: 2,783m²
 Period: 2015.05-2016.06



07. Construction of Our Home Jeju Logistics Center
 [Distribution Center]
 Total floor area: 1,110m²
 Period: 2016.04-2016.12



05. SERVEONE Central Hub
 [Distribution Center]
 Total floor area: 34,073m²
 Period: November 2015 to October 2016



06. Haitai Beverage Cheonan
 [Distribution Center]
 Total floor area: 85,088m²
 Period: July 2014 to March 2016



08. LG Chem Ochang Solar Power Plant

[Solar light]
Facility capacity: 3MW
Period: February 2014~2014.12



07. Taeon Solar Power Plant

[Solar light]
Facility capacity: 14 MW
Period: November 2007 to 2008.06



09. LG Electronics Co., Ltd.'s Gumi Plant 3 solar power plant

[Solar light]
Facility capacity: 3MW
Period: February 2014~2014.12

10. Our Home Yongin Jisuwon New Construction
[Education and training facilities]
Period: November 2014 to June 2017



12. LG Welfare Foundation Hannam-dong Daycare Center Construction
[Welfare facilities]
Period: July 2017 to March 2018



11. Construction of LG Display's Paju Nursery Facilities
[Welfare facilities]
Period: June 2009 to April 2010



13. Korea Exchange Bank BPO
[Business and other facilities]
Period: March 2011 to April 2016



14. LG Display Paju Dormitory Building B
 [Other facilities_dormitory]
 Period: February 2010 to November 2011



15. LG Innotek Paju Dormitory
 [Other facilities_dormitory]
 Total floor area: 25,902m²
 Period: 2009.08~2010.08



16. LG Display Paju Dormitory Building A
 [Other facilities_dormitory]
 Total floor area: 28,069m²
 Period: 2009.09~2011.04



17. D&O Gonjiam Resort Dormitory
 [Other facilities_dormitory]
 Total floor area: 11,719m²
 Period: December 2011~2012.09



18. D&O Gonjiam Resort Parking Lot

[Other facilities]

Total floor area: 24,680m²

Period: April 2016 to March 2017



19. D&O Gonjiam Hwadamchae Media Center Parking Lot

[Other facilities]

Total floor area: 24,680m²

Period: 2023.02-2023.12

THINK.

SOLVE.

INNOVATE.  **SPACE**