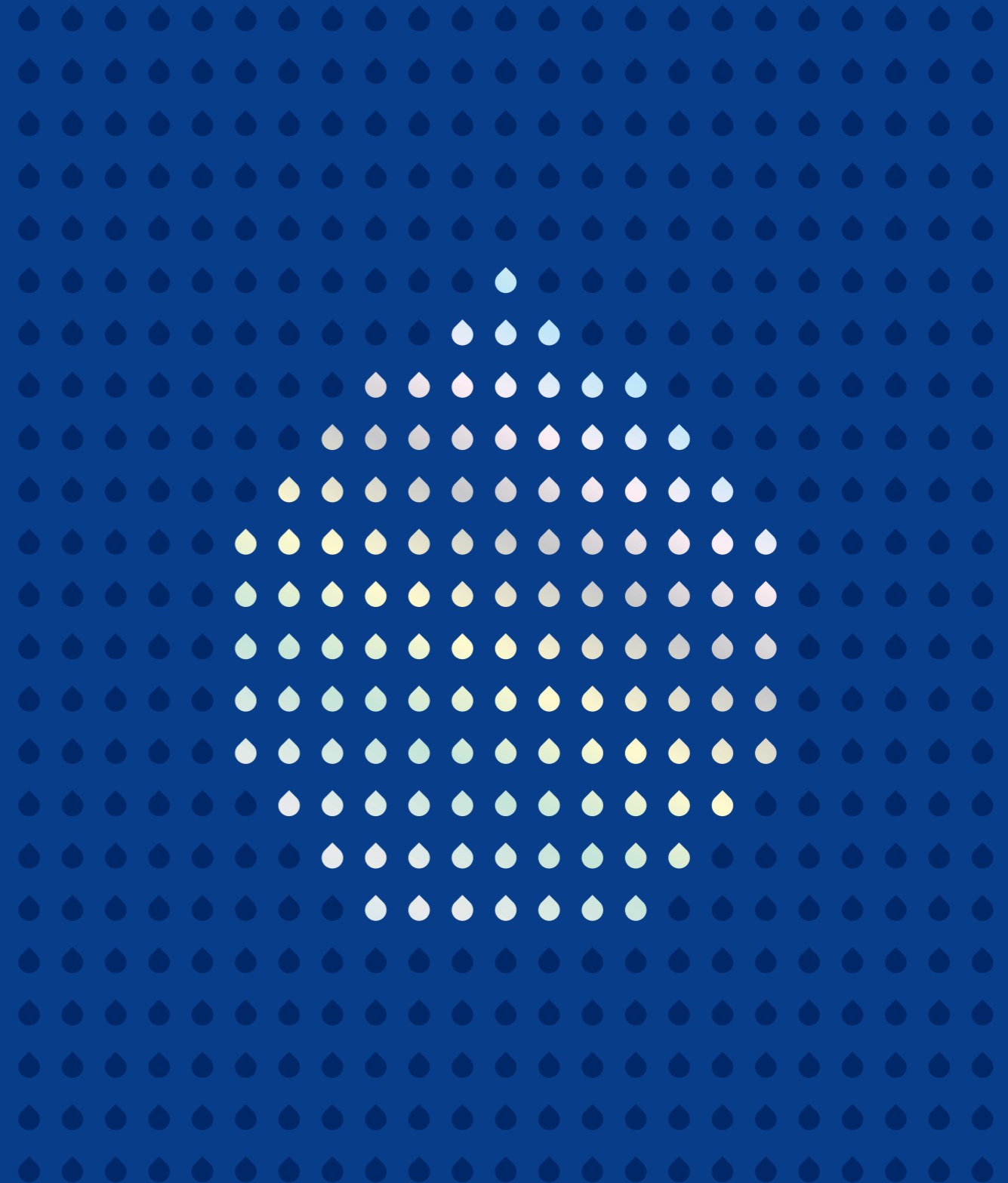


A Global Environmental Company for People,
Environment and Future



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**Delivering
a more sustainable
environment
with technology**



A global environmental company for people, environment and future

Since our foundation in 1990, Hansung Cleantech has grown into an industrial water treatment solution provider with global competitiveness.

We have secured competitive advantages in water and wastewater treatment technologies for a wide range of industries including ultrapure water for semiconductors, wastewater treatment, wastewater reuse, and seawater desalination.

Through localization and specialization of ultrapure water technologies, we are expanding into large-scale ultrapure water production facilities across semiconductor and relevant industries that have been monopolized by foreign companies and provide comprehensive solutions from the design to the operation stage.

We are also expanding our business portfolio to include rechargeable battery-related supply facilities and air pollution prevention facilities. Not only do we have our headquarters based in Korea, but we also have local subsidiaries in Vietnam and Hungary to participate in global markets.

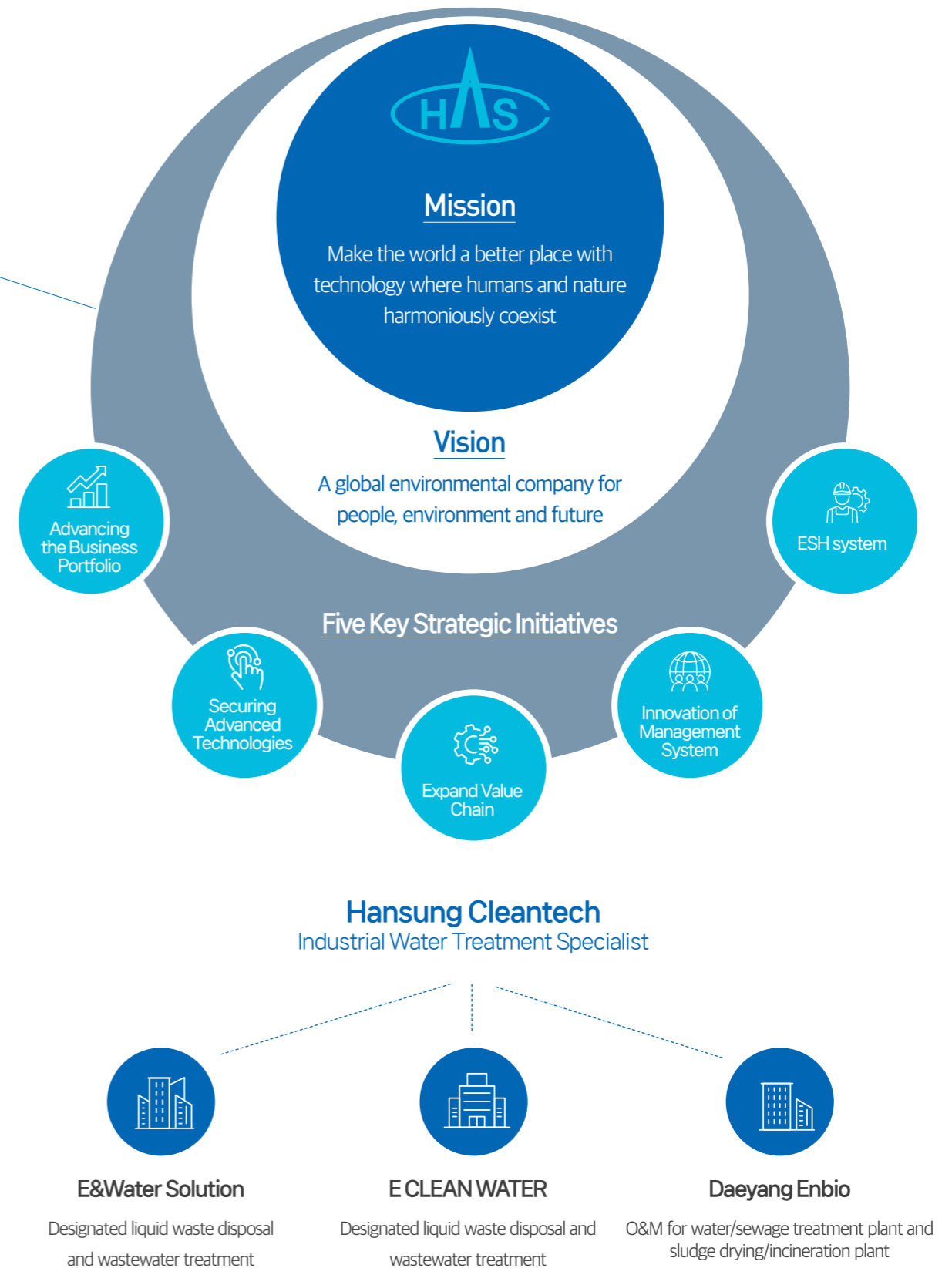
In addition, our affiliates have started the operation of environmental infrastructure for the industrial and public sectors and have secured cutting-edge facilities for treating highly concentrated liquid wastes.

As a global environmental company bridging people, environment, and future, Hansung Cleantech is committed to making the world a better place with technology where humans and nature harmoniously coexist. We actively invest in the development and advancement of green technologies for the future and place the highest priority on our 'environment.'

It is our goal to become a global environmental company that makes the world a better place to live with our customers, grows together with all our stakeholders, and implements ESG management to fulfill our social responsibility.

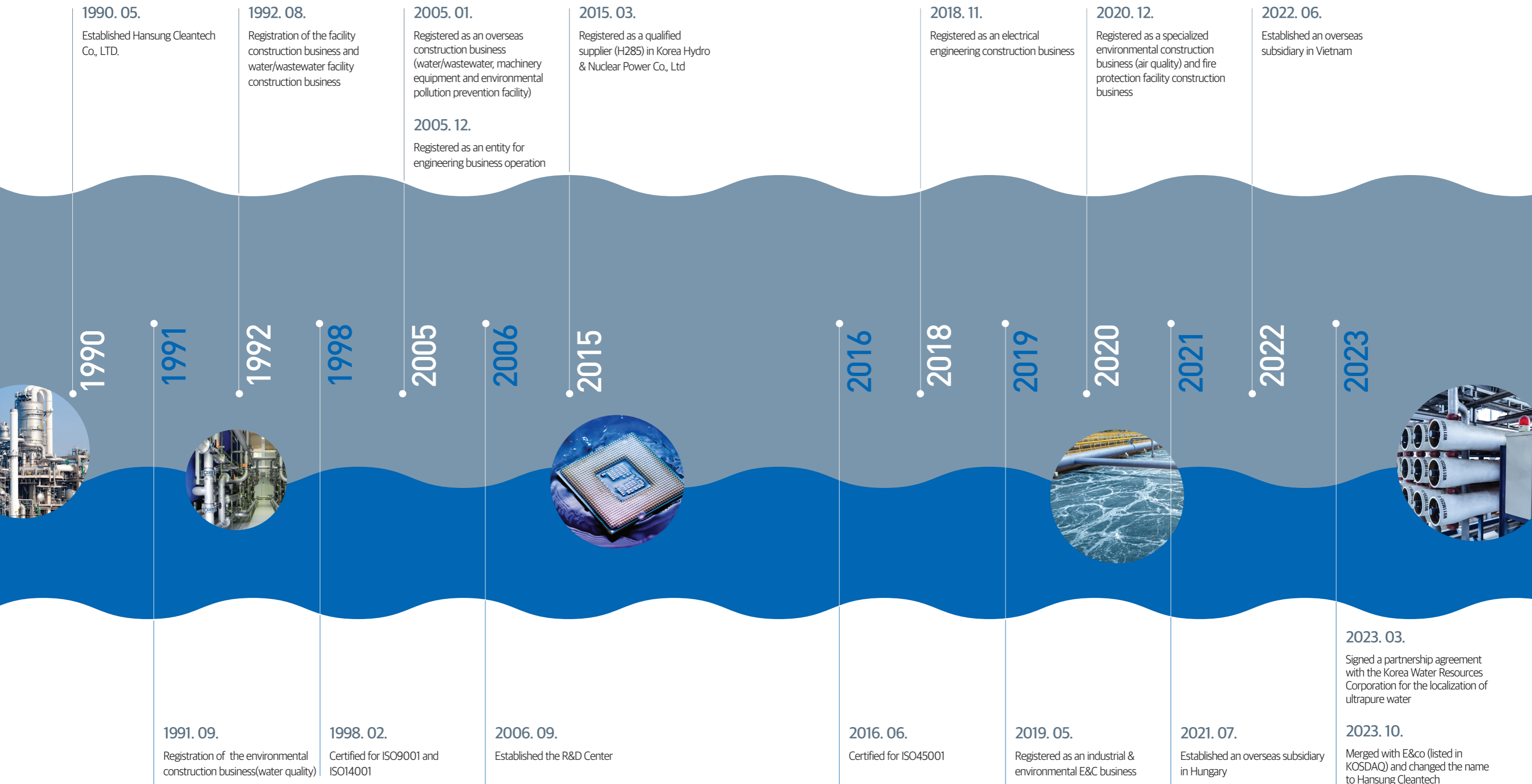
Hansung Cleantech

From an industrial water treatment specialist to an environmental company
From Korea's leading environmental company to a global leader



History

Transforming into a global environmental company through value chain in the environmental business



Water Treatment

Hansung Cleantech develops facilities and systems for the treatment of industrial water, drinking water, pure water, and ultrapure water based on its extensive experience and know-how for various industries, including electric, electronics, semiconductor, petrochemical, as well as power generation plants. With efficient systems and processes in place, we provide water treatment service that meets the needs and expectations of our customers.



Becoming a global environmental leader in industrial water treatment

Industrial Water

A water treatment process that produces specific quality of water for different industries through pretreatment (physical filtration) and posttreatment of raw water

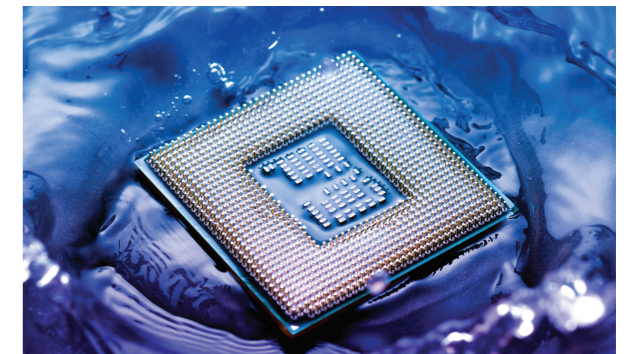
- Supply of high-quality industrial/purified water treatment facilities (e.g., power generation, refinery, petrochemical, electronics, semiconductor, and steel)
- The treatment process employs physical and chemical coagulation, membrane filtration (MF, UF, RO), MDG, EDI, and ion exchange



Ultra Pure Water

A technology that uses pure water to remove various substances (ions, particles, silica, dissolved oxygen, total organic carbon, and bacteria) to the desired water quality through physical and chemical processes

- The process consists of a pretreatment system, a make-up system, and a polishing system
- Supply of high-quality ultrapure water systems for the semiconductor, food, brewing, and pharmaceutical industries



Seawater Desalination

A process in which salt and dissolved substances are removed to produce drinking or industrial water

- Production of high purity industrial water using reverse osmosis (RO) and electrodialysis (ED), depending on the salinity of the source water
- Energy recovery through the use of energy-saving high-pressure pumps



Wastewater Treatment & Recycling

With over 30 years of experience and know-how in wastewater treatment for various industries, including power generation, refinery, petrochemical, electronics, and semiconductor, we develop and supply the most suitable and efficient systems for industrial wastewater treatment based on characteristics of industrial wastewater.



Providing a total solution for water and wastewater treatment across industries

Wastewater Treatment

Treatment of wastewater from various industrial plants using physicochemical, biological, membrane filtration (MF/UF, MBR, R/O), and advanced oxidation processes

- **MBR (Membrane Bio Reactor) System**
A process aimed at removing both organic and inorganic contaminants, it combines microbial removal of organic matter and nutrient with membrane separation
- **Biological Treatment System**
A process that eliminates organic contaminants from wastewater using microorganisms
- **Oily Water Treatment System**
A process in which oil and water are separated by density differences, skimming to eliminate free oil on the water



Wastewater Recycling

Implementation of a zero-discharge system that eliminates organic and inorganic contaminants from wastewater and recycles treated water in the process for drinking water and industrial water production

- Building a zero-discharge system by recycled water process water in steel mills, power plants for semiconductor, paper, and electronics industries
- Easy to secure and maintain the water quality in compliance with laws



Chlorine Electrolysis, Utility Piping & System, and Vacuum Sewage Collection System

Hansung Cleantech focuses on R&D, patent applications, and collaboration with partners to improve the efficiency and performance of its water treatment systems. We offer a total package of water treatment processes, including piping, water collection, and treatment.



Contributing to advancement of treatment processes, stability in treated water, and economic viability

Chlorine Electrolysis System

Inhibiting attachment of marine organisms such as shellfish and seaweed and preventing blockages in seawater cooling water supply lines for refineries, petrochemicals, and power plants

- Injects high-concentration chlorine to intake risers, intake basins, and cooling water pump basins to increase efficiency



Utility Piping & System

Hook-up piping, such as interconnected piping for HVAC, vent and gas, chemical lines, vacuum lines, and toxic gas lines

- Ultrapure water and wastewater piping, specialty piping, secondary piping, chemical piping, etc.
- Applicable to various industries including electronics, semiconductor, display, petrochemical, and power plant

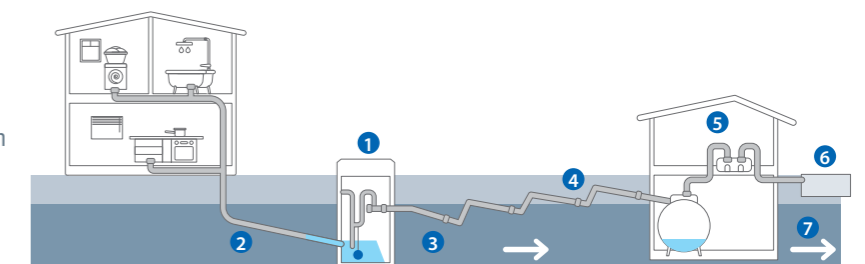


Vacuum Sewage Collection System

A system that transports sewage from the source to vacuum pump stations or discharge point using vacuum and air flow

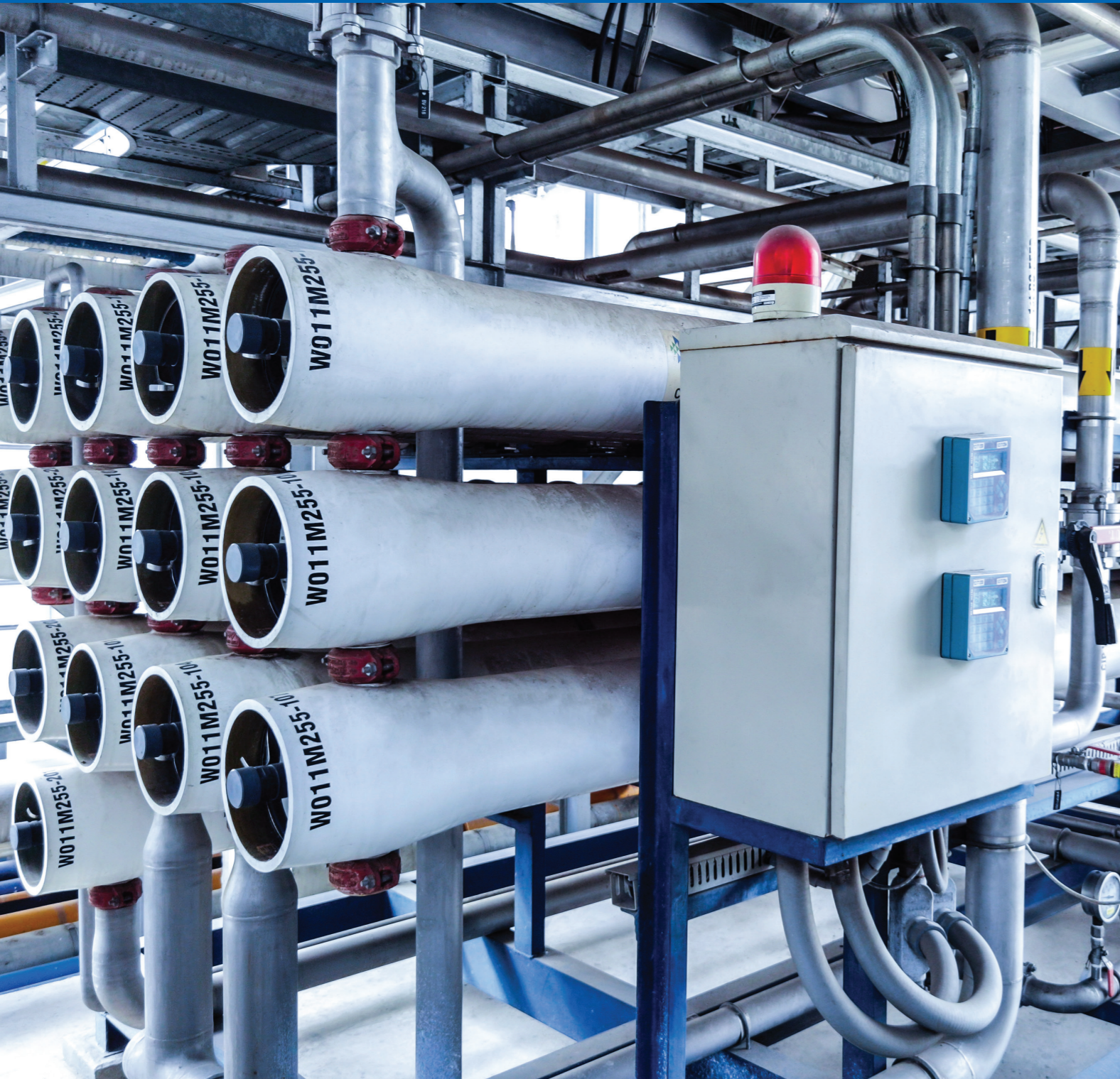
- Applicable to locations where gravity sewer system is difficult due to dispersed sewage sources, soft ground, rocky areas, areas with high groundwater levels or with many underground utilities, coastal areas, and water supply protection areas
- An economically and operationally efficient system

- | | |
|------------------------|----------------------|
| 1 Inflow section | 5 Vacuum station |
| 2 Gravity flow section | 6 Deodorizing system |
| 3 Vacuum piping | 7 System outlet |
| 4 Vacuum tank | |



R&D

With continuous investment in research and development, Hansung Cleantech has been recognized for its superior expertise and achievements in ultrapure and industrial water treatment. In recognition of our excellence, we were nominated as one of the Top 20 Environmental Technology Development Projects by the Ministry of Environment and the Korea Environmental Industry & Technology Institute and the Top 100 National R&D Performers by the Ministry of Science and ICT for our successful execution of the ultrapure water localization project.



Securing independent technologies and competitive advantages through continuous investment in R&D

Top 20 Environmental Technology Development Projects 2023

(Best Project: Awarded by the Minister of Environment)

- Selected for ultrapure water localization project (2021.06~2025.12)
- Completed design and construction of the first phase of localization system
- Supplied ultrapure water to semiconductor wafer production process (2023.05)

Top 100 National R&D Performers 2023

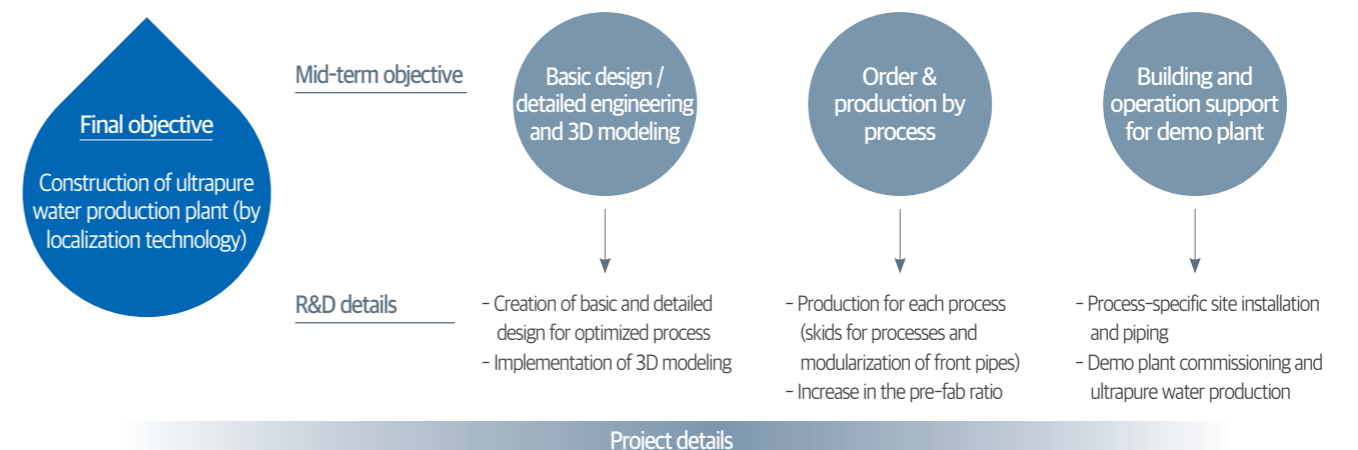
(Ministry of Science and ICT)

- Technology for localizing ultrapure water (the only one in the environmental sector)
- Successfully commercialized the R&D project (Won the contract of large-scale ultrapure water project for semiconductor manufacturing company in Gumi)



R&D Project for Localization of Ultrapure Water

- Project name: Development of plant design/construction technology for localization of high-purity industrial water production process
- Project owner: Ministry of Environment / KEITI (Korea Environmental Industry & Technology Institute)
- Project objective: Localization of UPW technology (Design & Construction: 100%, Major materials & equipment: 70%)



Daeyang Enbio

With 30 years of experience and a track record in the operation and maintenance of environmental infrastructure facilities, we have secured global competitiveness beyond the Korea market. We operate over 300 environmental facilities and the largest sludge drying and incineration facilities in Korea, offering specialized services and solutions.



Water and Wastewater Project

- Executed projects based on accurate analysis, diagnosis, and simulation
- Completed a number of O&M projects in Korea, Singapore, Indonesia, Saudi Arabia, and Vietnam



Sludge Recycling Project

- Operation of the largest sludge drying and incineration facilities in Korea
- Introduction of advanced management processes to save energy and support eco-friendly operation



Commissioning Project

- Successfully completed over 300 domestic and overseas projects using different processes and facilities
- Secured environmental value chains including water supply, sewerage, sludge treatment, and environmental plants

E& Water Solution



We provide a range of water treatment services, including wastewater outsourcing business and liquid waste treatment, and, we possess facilities and advanced treatment technologies for handling high-concentration wastewater generated by the semiconductor, display, and chemical industries. We possess the largest treatment facilities in the relevant industry, allowing us to provide reliable waste and wastewater outsourcing services.

Business area and capacity

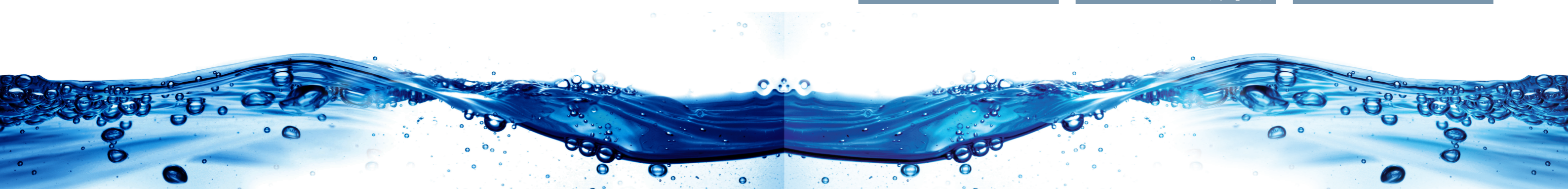


E CLEAN WATER



As a wastewater treatment specialist in the intermediate waste disposal and wastewater treatment service business, we treat various hazardous wastewater and liquid waste from industries. With our pride as an integral part of the "public environmental infrastructure," we are committed to the research and development of high-concentration wastewater treatment and stepping up as a leading industrial wastewater treatment specialist.

Business area and capacity



Licenses

Business Licenses	
1	License of the Professional Construction Business (Steel Structures Construction Work)
2	License of the Professional Construction Business (Water Treatment & Sewage Treatment, Include Oversea license)
3	License of the Professional Construction Business (Dismantling Construction Scaffolding Structures)
4	License of the Professional Construction Business (Industrial and Environmental Facilities, Include Oversea license)
5	License of the Professional Construction Business (Mechanical Works, Include Oversea license)
6	Certificate of Environmental Construction Business (Water Treatment Field)
7	Certificate of Environmental Construction Business (Atmospheric Field)
8	License of the Construction Business (Electrical Construction Work)
9	License of the Professional Construction Business (Firefighting Facility Construction Work)
10	Certificate of Engineering Activity Entity

Intellectual Properties

Patent Applications		Date of Registration/ Application
1	Method of Wastewater Treatment Combined Electrolysis and Chemical with Biological Process	Jul 2006
2	Electrolysis Treatment Facilities and Method of CPP Regeneration Wastewater	Jan 2007
3	The Organic Sludge Reduction Facilities by means of Electrolysis	Feb 2008
4	Fabrication Method of Disinfection Water Using Electrolysis	Jun 2008
5	Biological Treating and Filtering System for Wastewater and the Method of Recycling the Wastewater	Feb 2009
6	An Apparatus Combined CPI with IAF for Separating Oil-Water Effluent from HOU and the Method of Using It	Aug 2009
7	Apparatus for Wastewater Single Reactor Composed of Biological and Membrane Process	Jul 2011
8	A Disposal Equipment for CMP Slurry	Mar 2013
9	Appliance for Electrolysis Attached Ship and the Method of Sterilizing Red Tied Using It	Feb 2014
10	Fabrication Method of Hydrogen gas Using Electrolysis	Sep 2016
11	Polymer Coating Composition for Corrosion Protection of Piping and Metals	Sep 2019
12	High Internal-Chemical And High-Heat-Resistant Coating Composition	Dec 2019
13	A System for deodorizing using activated carbon	Jul 2020
14	Plant assembly structure by skidized of equipment and modularized of pipe	Aug 2020
15	Wastewater treatment system containing nitrogen discharged from semiconductor facility process	Apr 2021
16	Disposal system according to wastewater discharge characteristics in each process of semiconductor facilities	Apr 2021
17	High-efficiency system for advanced biological treatment of wastewater containing nitrogen compounds	Sep 2021
18	Assembled activated carbon tower	Dec 2021

ISO Certifications



ISO 9001



ISO 14001



ISO 45001

Business Highlights

Ultra Pure Water



- Samsung Electronics P3 Ph-4 Ultrapure Water System Project (2023)
- Samsung Electronics P4 Ph-1 Ultrapure Water System Project (2022)
- Samsung Electronics P3 Ph-3 Ultrapure Water System Project (2022)
- Samsung Electronics P3 Ph-2 Ultrapure Water System Project (2022)
- SK Siltron N-Project UPW System Manufacturing and Installation Project (2022)
- Onsemi-Korea UPW System Manufacturing Facility Construction S1 Line (2022)
- Paikwang Industrial New UPW Supply System Installation Project (2022)
- NES Materials UPW Package Manufacturing and Installation Project (2022)
- Onsemi-Korea UPW System Manufacturing Facility Construction C2&C3 Line (2021)
- LG Display Vietnam V-Project Demi. Water System Project (2017)
- SK Siltron Gumi Plant 3 Pretreatment and UPW System Expansion Project (2017)
- Dongwoo Fine-Chem Iksan Plant UPW System Manufacturing and Installation Project (2016)
- LGD M2 DI. Make Up Project (2013)
- SSLM ULTRA Pure Water Treatment System Project (2011)
- LG Display LCD P9 Environmental System Project (2011)

Wastewater Treatment



- Samsung Electronics P3 Green Building Pipeline Utility Ph-3 Project (2023)
- GS Caltex Wastewater Treatment Plant #2 MBR Package Installation Project (2022)
- SK Hynix M15 Ph-2A Wastewater Treatment Plant WWT System Project (2021)
- LG Chem Y2C Project Wet EP Water Treatment Package (2020)
- Hyundai Chemical HPC Project Waste Water Treatment Package (2020)
- Dongwoo Fine-Chem Sinheung Plant Wastewater Treatment Plant Expansion Project (2018)
- Korea Petrochemical Onsan Plant New Reuse System Project (2018)
- SK Hynix C2F WWT M&E Project in Wuxi, China
- Samsung Electronics E Project Wastewater Green Building #4 Discharge Pipe Installation (2018)
- GS Caltex RFCC Purge Treatment Installation Project (2017)

Wastewater Recycle



- Yeosu Green Hub (Techcross Water & Energy) Yeosu Sewage Reuse Facility (BTO) Project (2023)
- Samsung Electronics P1 P2 Wastewater Reuse UT2 Mechanical/Pipe Construction Project (2021)
- SK Hynix Cheongju Campus #3 New WWT Reuse Facility Project (2018)
- Korea Petrochemical Onsan Plant New WWT Reuse Facility Project (2016)
- GS E&C Gumi Sewage Water Reuse Facilities BTO Mechanical/ Pipe Construction Project (2016)
- Dongwoo Fine-Chem TS-2 Project Wastewater Treatment Plant Installation (2013)
- LG Display P61 LTPS Wastewater Reuse System Project (2013)
- LG Display Submerged Hollow Fiber Membrane PILOT Project (2013)