



KOREA WATER CLUSTER

The foundation to grow water industry of Korea!



By public transportation

- ① Dongdaegu Station > Daegok station > EXP Bus '08' (Daegok station (across Halla Hauzent))
 > Get off at Guji Cheong-aram station > 10 minutes by walk
- ② Hyunpoong inter - city bus terminal > Bus '600' (Hyunpoong terminal) > Eungam 2 ri > 3 minutes by walk

By car

- ③ Hyunpoong IC > turn to 'Guji' direction > Daegu National Industrial Complex
 (Korea Water Cluster, Water Industry Promotion Facility)

Shuttle bus route



From creating jobs to supporting companies in their R&D, technology verification, and penetration into domestic & international markets! To ensure all Koreans to enjoy clean water



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The foundation to grow water industry of Korea!



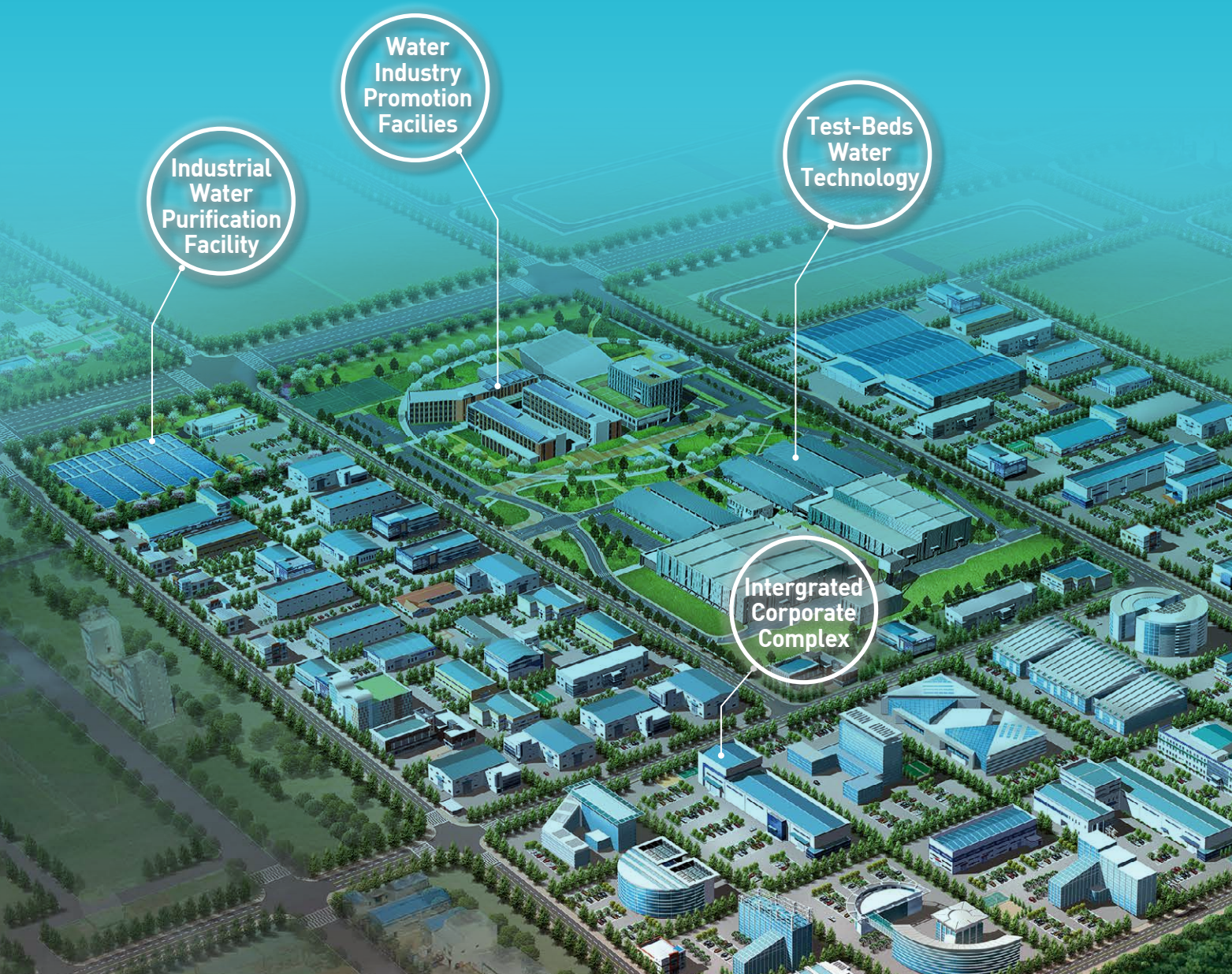
(43008) 40 gil 20 Gukgasandandaero, Guji-myeon, Dalseong-gun, Daegu
 Tel 053.601.6042-7 Fax 053.601.6029 www.watercluster.or.kr



Water Industry, Our New Future

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Verification Plant Facility Usage Fee

Unit: KRW 1,000 / Month

Facility	Regular Fee	Facility	Regular Fee
Total demonstration plant for purification	9,100	Total demonstration plant for reuse	5,460
[Series 1 Total]	3,640	[Series 1 Total]	2,730
Pre-/Post-ozone treatment facility	910	Pre-treatment (Multimedia filter)	910
Coagulation/precipitation facility	910	UF/RO facility	910
Rapid filtration facility	910	Ozone oxidation facility	910
Active carbon treatment facility	910	[Series 2 Total]	2,730
[Series 2 Total]	5,460	Pre-treatment facility	910
Coagulation/precipitation facility	910	UF/RO facility	910
Sedimentation basin	910	UV disinfection facility	910
Membrane filtration (pressurized) facility	910	Total demonstration plant for wastewater	9,100
DAF facility	910	[Series 1 Total]	5,460
UV AOP facility	910	Coagulation/precipitation facility	910
Active carbon absorption facility	910	Bio-reactor facility	910
Total demonstration plant for sewage	8,190	2nd precipitation facility	910
[Series 1 Total]	5,460	T-P removal facility	910
1st precipitation facility	910	Filtration facility	910
Bio-reactor facility	910	3rd treatment facility	910
2nd precipitation facility	910	[Series 2 Total]	3,640
T-P removal facility	910	Bio-reactor facility	910
Filtration facility	910	Membrane separation facility	910
Disinfection facility	910	T-P removal facility	910
[Series 2 Total]	2,730	3rd treatment facility	910
Bio-reactor facility	910	Total pipe network testing facility	7,961
Membrane separation facility	910	D100mm	884
T-P removal facility	910	D300mm	2,654
-	-	D500mm	4,423

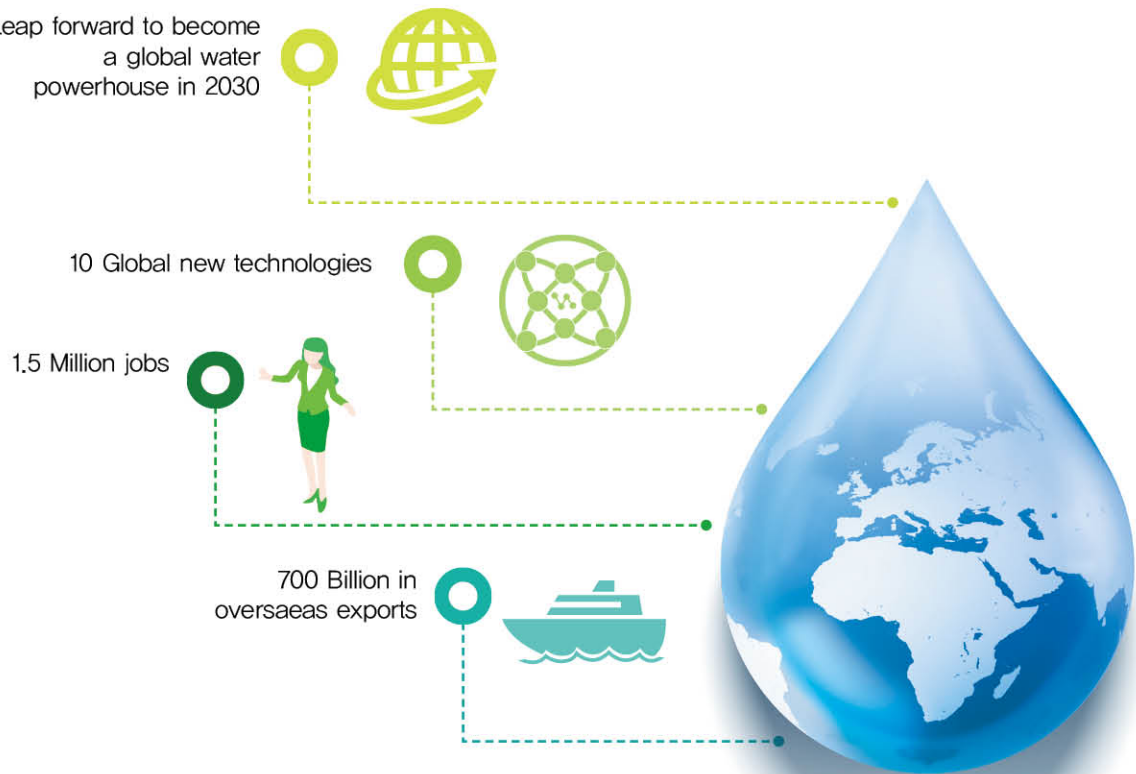
❖ Facilities can be used per each unit process

“The center of the world water industry that leads innovation”

Korea Water Cluster leads the development of local water sector businesses

- ✔ Building a good environment for companies
- ✔ Lead innovations in water management technology
- ✔ Identify and develop talents in water sector
- ✔ Establish process for active entry into global markets

Leap forward to become a global water powerhouse in 2030



Key-Player	World-Best	Cooperation
<p>Enterprise development</p> <p>Creating an entrepreneurial environment Establishing an enterprise-centered cluster management system Technology development, business convenience</p>	<p>Technology development</p> <p>Leading innovation in water technology Establishing a joint industry-academia-research R&D process Future-leading core technology development</p>	<p>Talent Development</p> <p>Developing water professionals Fostering specialized talent in the water industry Fostering water industry overseas experts</p>
		<p>Going International</p> <p>Enabling Overseas Expansion Building a comprehensive platform to support water companies Brand development, attracting international events</p>



Project Outline

- Purpose** Build infrastructure to provide lifecycle support for water businesses to develop technology and penetrate global markets
- Location** 40 gil 20 Gukgasandandaero, Guji-myeon, Dalseong-gun, Daegu
- Project cost** KRW 240.9 billion (Government funded)
- Area** 145,000 m²
- Construction Period** Nov 2016 ~ Jun 2019

Laws and Regulations

Act on the Development of Water Management Technology and Promotion of the Water Industry

Legislation Purpose

Establish the foundation for developing water management technology to contribute to the promotion of water industry and to build on a sustainable water circulation system

Key Highlights

Detailed provisions for the establishment of the foundation for developing water management technology and promoting water industry, for building and operating verification facilities and business hub complex, and to support overseas market expansions of water companies

Establish the foundation for developing water management technology Promotion of water industry

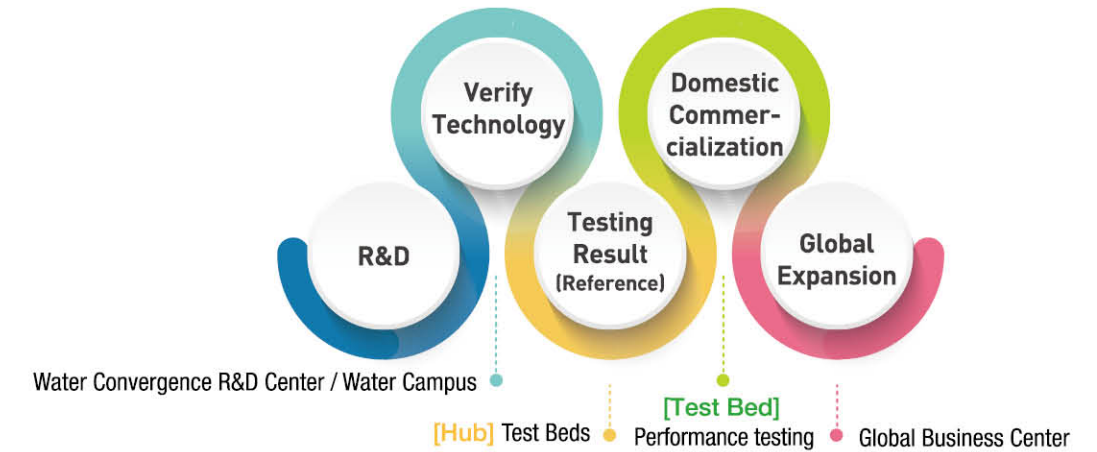
- Article 15 Establishment and operation of water industry verification facilities and business hub complex
- Article 16 Support for in-housed companies
 - ① Provide below supports to facilitate technology development, business commercialization, and overseas expansion of companies in-housed in the verification facilities and business hub complex
 1. Priority use and reduced fee for the research, promotion and verification facilities
 2. Priority use and reduced fee for dispersed verification facilities
 3. Priority selection in overseas expansion projects
 4. Priority financing as defined under the "Korea Environmental Industry & Technology Institute Act"
 5. Participation in other project as determined necessary by the Minister of Environment or Regional Governing Bodies
 - ② Recommend policies to facilitate the business and supply of the technology and products created by the in-housed companies



Project Purpose

To Implement a One-Stop Support System Hub

That supports Korean water companies in all stages of global market penetration



Key Facilities



Water Industry Basic, Applied, and Convergence Research
Talent development, Start-ups and incubators
Support for marketing, consulting, and global expansion

Water Convergence R&D Center

Establish business-friendly R&D ecosystem by connecting industry, academia, and research

Global Business Center

Expand network and enhance professionalism to support local and international business

Water Campus

Build on the foundation for water industry talents and support start-ups



Providing customized assessment space
Real-scale Test Beds

Test-Bed Plant

Real-scale performance tests for developed technology and/or products (performance evaluations / technology verifications)

User-Customized Area

Companies can freely install facilities to carry out technology developments and tests

Pipe Network Testing Area

Technology development and performance testing on piping materials and supplementary facilities

Experiment Analysis Lab

Analysis of product and process characteristics, performance, and experimental testing



Facilities in Korea Water Cluster



Korea Water Cluster Facility status

Facility status details:

- Demonstration Facilities**
 - Demonstration Plant
 - Comprehensive observation test facility
 - Customer design area (45 rooms)
- Water Convergence Research Center**
 - Laboratory (KOLAS certified)
 - Leased laboratory (35 rooms)
 - Leased laboratory (33 rooms)
- Water Campus**
 - Incubator (13 rooms)
 - Classrooms (5 rooms)
 - Headquarters of the Water Technology Certification Institute
- Global Business Center**
 - Offices for rent (11 rooms)
 - Guesthouse (52 rooms)
 - Hall rental facility (6 rooms)
- PR Exhibition Center**
 - Product exhibition of tenant companies
 - Water industry promotion and education center
 - For exhibitions and fairs



Establish technology-friendly R&D environment

- ◆ Embed virtuous cycle from R&D to business development
- ◆ Lifecycle support, including demand-driven R&D planning, management, and business development
- ◆ R&D One-Stop service dedicated coordinator



- R&D Hub**: Enhance its role as a hub for local and international R&D resource (companies, research institutes, academia, and talents) exchanges
- Information Platform**: Build platform to provide detailed information on R&D completed technologies
- Joint research projects between the industry, academia and research institutes**: Establish water industry policies, monitor business planning trends, and identify and implement R&D initiatives that meet the company needs
- International Joint Research**: Open joint projects with research institutes of advanced nations and leverage on global talents to overcome the limitations of local water industry R&D investment scale and capacity



Facilities in Korea Water Cluster



Global Business Center

Business Support program

- Marketing and exports (brand, events, networks)
- Growing together and supporting ventures (share performance, develop technology, Water Campus)
- Technology innovation and protection (R&D, verifications, technology custodian)
- Experts and trainings support (advisory committee, connect to academia)



Korea Water Cluster

Role of the anchor for local water industry companies to enter global markets

One-Stop support for companies

(technology development, promotions, pioneering new markets)

Expand local and global networks and provide information to build a stable business venture framework

- Priority purchase of technology verified products and support entry into new local and global markets
- Provide information via consultation services between Korea Water Cluster and companies
 - (Online system) collect information and host community on the webpage
 - (Expert) Use of advisor pool of Korea Water Cluster advisory committee




National support to help businesses to resolve the difficulty in entering global markets

- Global promotion led by 'KWC Global Cooperation Group' and support business networking
- Register overseas buyer vendors and continue to update list

Items	Key Details
Classification	Participate in international exhibitions/ hold Korean exhibitions
Overseas exhibition	Support small and medium businesses for export discussions with global buyers
Trade delegations Export conference	Invite global buyers and support export discussions with small and medium businesses
Global marketing for specific regions	Total overseas marketing support program customized by sector or business type
Global market survey	Identify buyers, investigate supply flow of raw materials, collect and share customized market intelligence

Promote company products and support business activities based on Cluster's status

- Raise the value and reliability of products verified and certified by Cluster
- Improve Cluster certification brand awareness and use Promotion Exhibition Hall to promote products

Items	Cluster Brand (proposal)
Name	KWC-VEP
Design	 <ul style="list-style-type: none"> Cluster R&D technology/ products Cluster performance assessment certification/ verification Cluster performance sharing technology/ products
Details	Korea water cluster Verified Excellent Product
Advantage	Develop technology, assess performance, and share outcomes based on Cluster quality assurance brand

Water Campus

- Develop water experts and technology talents customized to demand
- Support prototype production and technology-based business development for commercialization

Basic Concept

Institute to develop experts to carry out holistic management of all processes



Key Features

[Professional Trainings]

- Skill enhancement programs for existing employees customized by company demand
- Develop industry-academia joint talents (joint projects, internships)
- Develop experts in overseas market entry and R&D
- Develop human resource in developing nations (technology training)

[Support Business Startup]

- Provide startup trainings and business space
- Professional consulting, marketing and promotion for technology and business management
- Production of prototype, creating and protecting intellectual property rights
- Public funding support via Venture Nara recommendations

Test Beds

- Provides verification TB and customized research space for water management technology development
- Support commercialization of water technology products with international standard performance assessment and certification and validations

Test-Beds
 Purification 2,000m³/day
 Sewage 1,000m³/day
 Waste Water 1,000m³/day
 Reclaimed Water 1,000m³/day

User-Customized Area
 Purification 15 plants 200m³/day
 Sewage 10 plants 100m³/day
 Waste Water 10 plants 100m³/day
 Reclaimed Water 10 plants 100m³/day

Outdoor Testing Area
 Pipe Network Testing Area
 Large-scale pilot Testing Area



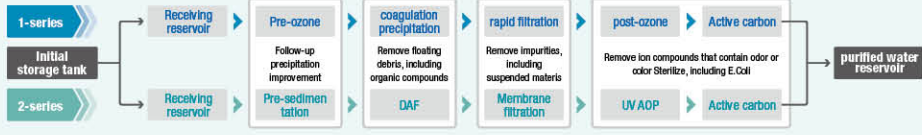
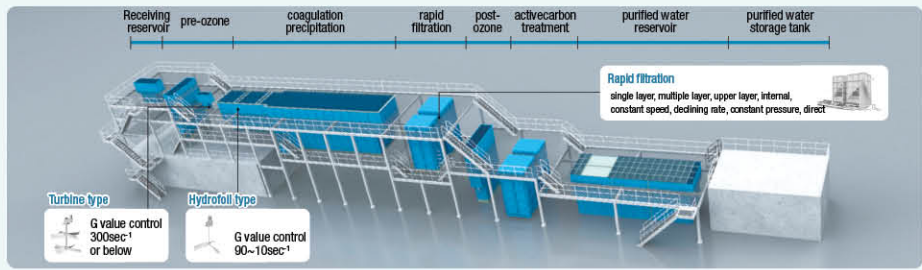


Facilities in Korea Water Cluster

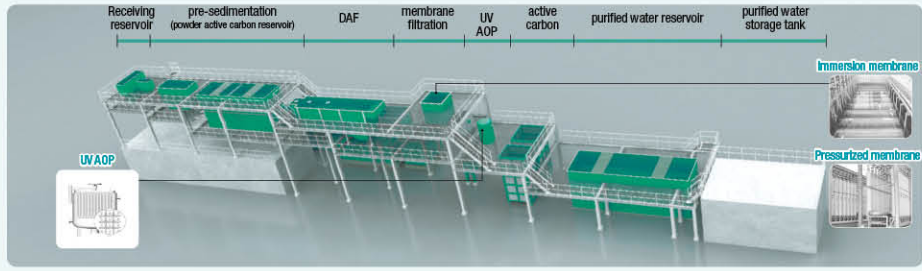


Test-Beds(Purification)

1-series
standard advanced treatment process

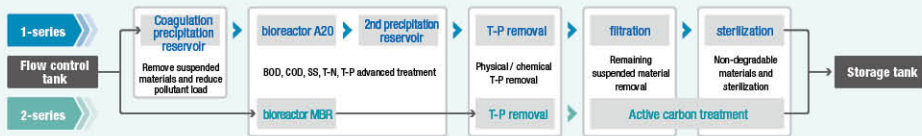
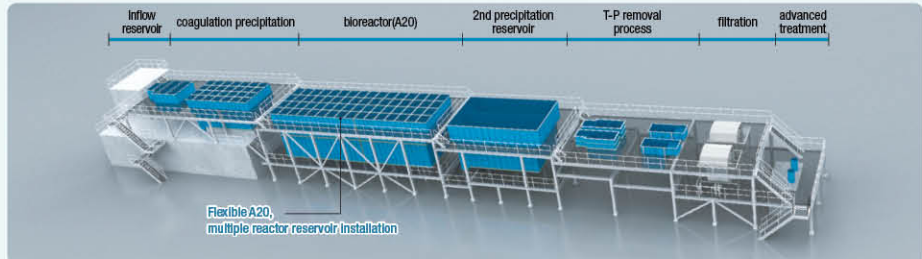


2-series
New technology advanced treatment process

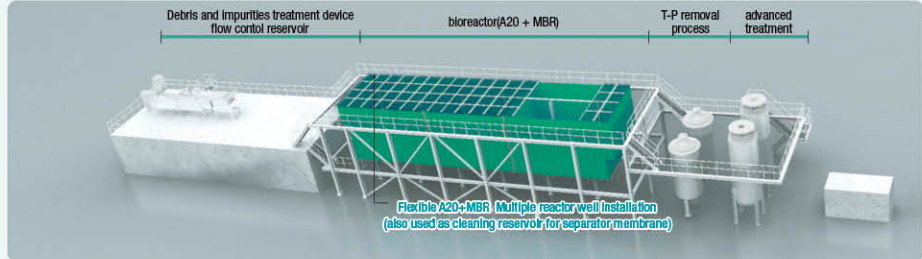


Test-Bed Plant (Waste Water)

1-series
standard advanced treatment process

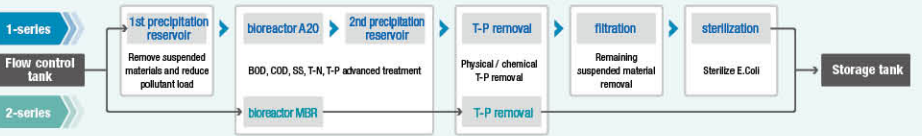
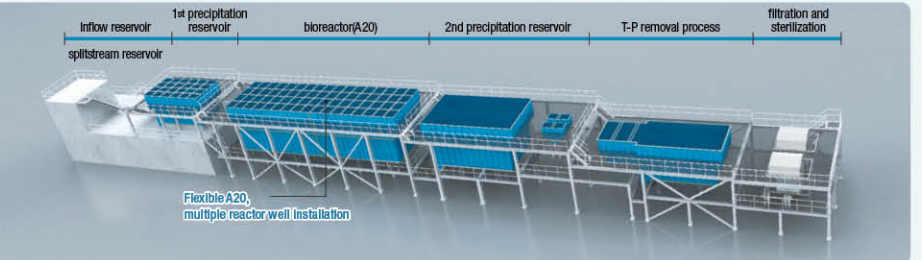


2-series
New technology advanced treatment process

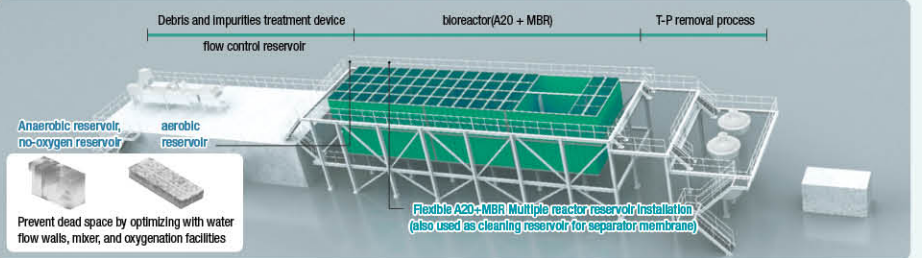


Test-Bed Plant (Sewage)

1-series
standard advanced treatment process

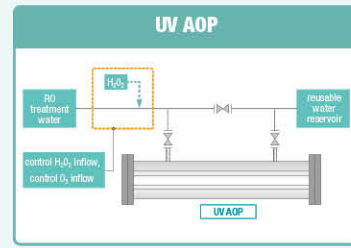
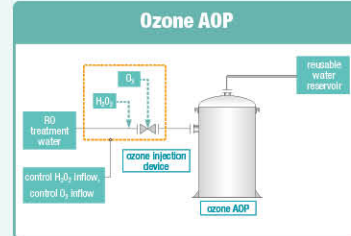
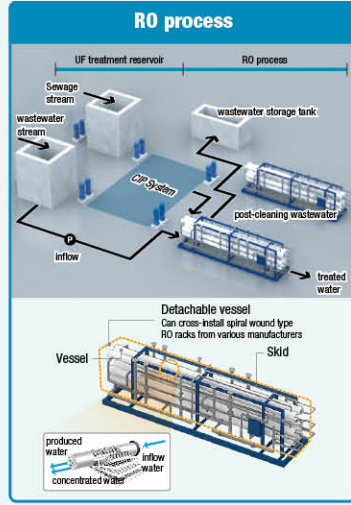
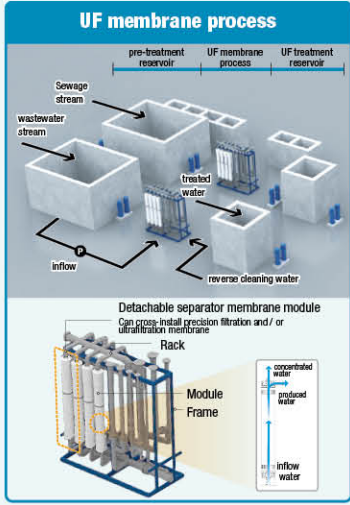
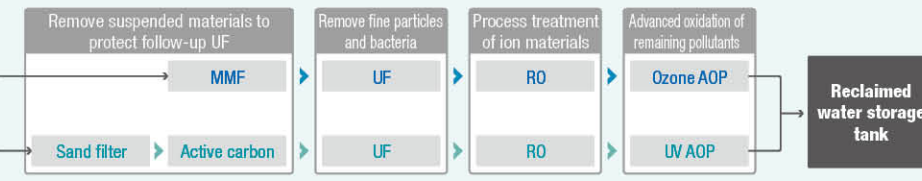


2-series
New technology advanced treatment process



Test-Bed Plant (Reclaimed Water)

1-series
Water reservoir





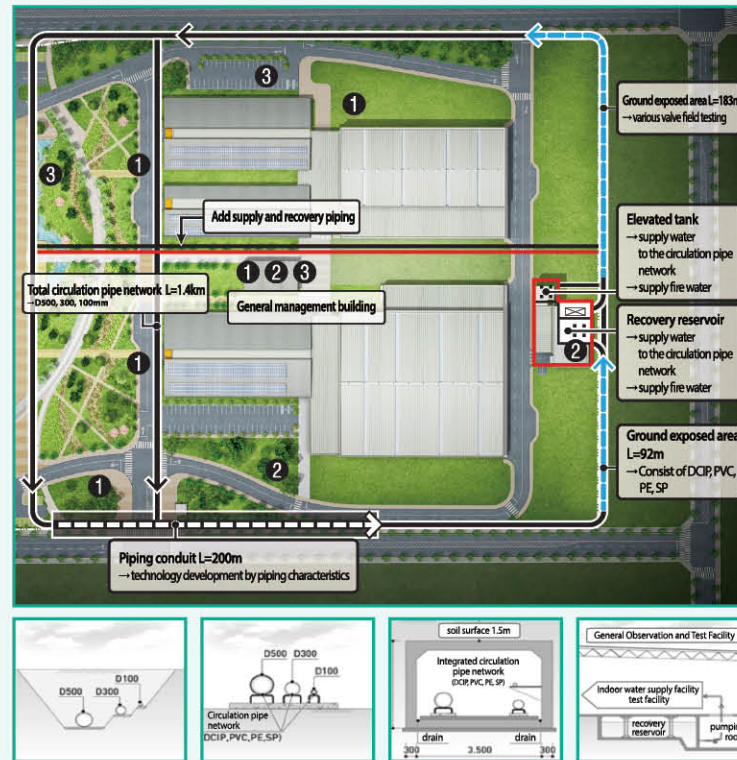
Facilities in Korea Water Cluster

Pipe Network Testing Area

Pipe Network Testing Area

Test indoor water supply facilities

- 1 Pipe cleaning and supervise maintenance and enhancement tests
- 2 Supplementary facility performance test
 - Pipe interior / exterior diagnosis and inspection device
 - Pipe connection types and relevant materials
- 3 Long-term property test
 - Long-term material deterioration, water quality (corrosion, bio-membrane)



Experimental Analysis Lab

Support verification research with sample analysis for in-housed companies

- All water quality analysis and material testing to confirm material product standards compliance
- Possess water quality testing and analytical instrument (238 types 414 devices)

Characteristics analysis and performance assessment of products and water treatment processes

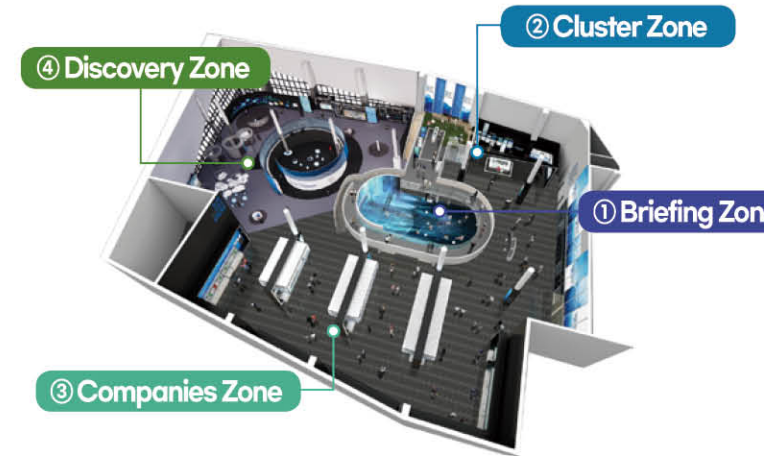
- Expand scope of analysis and support for experiment analysis, including analysis of external samples
- Issue global test certificates to enter international markets
- Run product performance enhancement program (Tech-up program)
- Support field customized trainings using testing and analysis functions
- Increase support for promoting water industry



Designate as testing institution

Drinking water · Water treatment materials · Virus Protozoa Hygiene safety · Sewage and wastewater · Environment measurement system · Materials testing

PR Exhibition Hall Information



Hours

9:30 AM–5:30 PM Monday–Friday
(Closed on weekends and alternative holidays)

Entrance Fee

Free

How to Enjoy

Open exhibition
(Up to 20 people per group and reservation is required)

Reservation

Via KWC's website or phone
PR Dept: **+82-53-601-6042~7**

1 Briefing Zone



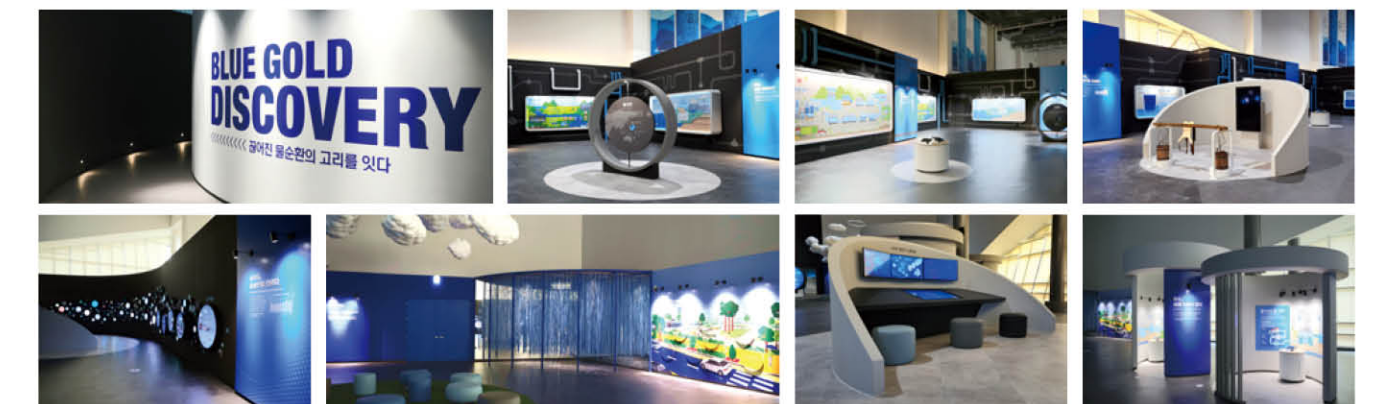
2 Cluster Zone



3 Companies Zone



4 Discovery Zone





Enterprise Development



Startup ventures

Focused support for startup venture companies to strengthen their capabilities as small and medium-sized enterprises

- ✔ Support for management, technology development, and marketing (recommendation of Public Procurement Service venture startup innovation procurement products)
- ✔ Holding a contest to discover and foster startup companies



Support for SMEs/Commercialization

Strengthening corporate capabilities through customized support that reflects the challenges of small and medium-sized enterprises

- ✔ Capacity building support customized to corporate needs (specialized consulting, marketing, technical support)
- ✔ Recommendation support for tenant companies for the selection of official materials of the Environment Corporation
- ✔ Support for market development promotion by operating a joint pavilion at water industry exhibitions

Technology Development



Technology development, R&D

Supporting companies in developing leading technologies in the water industry at home and abroad and linking them to commercialization

- ✔ Support for smart digitalization and carbon reduction technology development, demonstration, and commercialization
- ✔ R&D mentoring Providing technical data, technology development and market entry consulting
- ✔ Support for joint technology development, demonstration, and commercialization by industry, academia, and research institutes

Demonstration/Experimental Analysis

Strengthening support for demonstration and test analysis of water companies using cluster demonstration facilities

- ✔ Support for technology demonstration, environmental certification, domestic and international market development and promotion through selection of star companies
- ✔ Provide performance verification support, test analysis and technical consulting
- ✔ Support for reliability and performance verification of materials, parts, and equipment



Talent Development



Support for specialized education

Creating a foundation for fostering specialized human resources to lead the revitalization of the water industry for water industry workers

- ✔ Fostering professional manpower through the operation of graduate schools specializing in integrated water management (practical, master's)
- ✔ Professional education for employees of related organizations and SMEs (aptitude, practical, professional, design, modeling, etc.)

Going International



Business Development

Collaboration with related organizations to promote overseas business of SMEs and support for new business discovery

- ✔ Consulting, local research, and marketing support for ODA new business discovery
- ✔ Selection of promising water technology and support for demonstration such as local technology evaluation
- ✔ Support for export logistics, overseas certification and consulting
- ✔ Participation in overseas exhibitions, operation of joint pavilions with customs agencies, and online and offline export counseling sessions





Facility Rental and Usage Fees

Discounts

Category		2024	2025~
Rent	Research facility	30%	Check the website or call for inquiries
Facility Fee (Resident Company)	Rental space	50%	
	Verification plant fee	30%	

❖ Discount rates per year: Research facility (office) in 2021: $8,700 \times (100-30)\% = 6,000$ (rounded down by KRW 10)

❖ Facility discounts are only available for rental space and verification plant fee.

Facility Rental Cost

Category	Number of units	Average space per unit (M2)	Monthly rent per unit (KRW/month)	
Research office	35	47~102 m ²	8,700	
Laboratory	33	72~111 m ²		
Office	15	71~361 m ²		
Start-up office	13	28~53 m ²		
User-customized zone	Purification	15	130~197 m ²	5,100
	Reuse	10	136~196 m ²	
	Sewage	10	131~193 m ²	
	Wastewater	10	131~193 m ²	
Wastewater			2,230	

❖ Utility bills based on actual usage will be charges separately, including electricity and water bills

❖ Rental key deposit (separate): equals to sum of the monthly rental fee for 10 months

Usage Fee for Classrooms and Seminar Halls

Type	Number of units	Average space(m ²)	Per day (KRW/m ²)	Hourly Charge (KRW/hr)
Main auditorium	1	356.81	900	40,000
Seminar hall	1	93.04	900	11,000
Utility room	1	111.89	900	13,000
Master classroom	1	147.90	900	17,000
Classroom	5	101.18	900	11,000
Computer room	2	106.43	900	12,000
Promotion exhibition hall	1	2,894.28	KRW 900 /m ² -day	
Large meeting rooms	1	560.60	900	63,000
medium meeting rooms A,B	2	194.55	900	22,000
Multi-purpose rooms	1	622.68	900	70,000
Guest house	For 1 person	23	KRW 30,000 /day	
	For 2 person	25	KRW 40,000 /day	
	Dorm type	4	KRW 50,000 /day	

❖ Can be used by the hour (excluding Promotion exhibition hall and guest house)