

2018 Woongjin Coway Sustainability Report





Putting the 'Goodness' philosophy into action for a better world

Woongjin Coway pursue business in water and air, which are the essentials of life, sound sleep and beauty and deeply recognize the impact of our work on people's lives. As a life care company, we will make great efforts to add value and make life better for all stakeholders throughout all stages of our business activities.



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Message from the CEO

We hope to be by your side with our “new value of cleanliness”.

I extend my best wishes for health and happiness to all stakeholders of Woongjin Coway.

The year 2019 is a meaningful year for us, marking the 30th anniversary of our company. In 1998, Woongjin Coway introduced Korea's first rental business and coordinating system, changing the lives of consumers and setting new trends. Our Care Service achieved through expert service coordinators(called CODY) have helped us gain our customers' trust for the past three decades with evolution and innovation leading our path toward the top of the industry. Based on the experience and expertise we have gained over the years driving innovation and breakthrough, we will continue to adapt to this new era and business environment, and achieve sustainable growth.

The pledge we make to continue our development moving forward is “new value of cleanliness.” Cleanliness is the most essential value we should pursue as a company whose business operates on air and water. The new value of cleanliness embraces innovation integrated with our core and passion. We believe that we can reach innovative outcomes by adding sincere passion to the essence of our business in maintaining cleanliness. To this end, in 2019, Woongjin Coway plans to expand the scope of trust and innovation, proactively advance with the changes of the era and place ourselves in the global market.

Woongjin Coway will expand the scope of trust and innovation.

The world is changing at unprecedented speed. In this rapidly changing era, constant development based on rooted foundation is the only way to survive. Two major pillars that anchor Woongjin Coway are trust and innovation. Given that, we plan to lead growth by combining our core capabilities with new business sectors in 2019. One exemplary case of this is the launch of the Smart Pure Electric Range, which connects the capability for indoor air quality management to the kitchen appliance sector. Our belief is that a strong foundation leads to authenticity. As Woongjin Coway, which focuses on air and water has quickly gained trust in the market with a FWSS (Fresh Wear Styling System) for clothing with our authentic focus on health, new products imbued with our strengths will surely enhance the value of trust and innovation.

Woongjin Coway will proactively advance with the changes of the era.

The world is led by companies with keen awareness of the emerging era and the new trends that follow. One of the major directions we are heading towards is the Fourth Industrial Revolution, including the use of AI, big data and machine learning. We plan to improve our level of care by combining these technologies with our strengths. The launch of air purifiers with AI, automatic ordering services for filters and water purifiers that autonomously keeps track of water intake are excellent examples of how Woongjin Coway integrates our essence to the changes.

Climate change is another major trend Woongjin Coway needs to pay attention to, given our focus on water and air quality. It is expected that environment-oriented consumption will drastically increase due to concerns over environmental pollution. More people agree on the need to practice eco-friendly consumption for our future. Woongjin Coway's vision stands firm in that an environmentally conscious company will be selected by consumers. In 2019, we will garner support and sympathy by providing products and services that actively counter social concerns of drinking water and fine dust. With the wisdom to swiftly adapt to changes in the era, Woongjin Coway will achieve the innovation that will be absolutely necessary for the world.

Woongjin Coway will achieve growth in the global market.

As the global business gained momentum for growth in 2019, Woongjin Coway will take another step forward to accomplish our dream to become a hidden champion. The most remarkable characteristics of the Fourth Industrial Revolution are openness and connectivity. In 2019, we will reinforce and expand our global platform, including connection with AI such as Amazon Alexa and Google AI. As our business deals with the essential value of health and environment, we have a firm vision for the future. In this sense, many innovative companies overseas have recognized our value and have begun to actively cooperate with us. These connections will serve as a support for us to flexibly overcome the endless competition on a global level.

In accordance with our 30th anniversary, Woongjin Coway aims to be renewed by adding our unblemished passion to our foundation in order to secure the value of cleanliness. Woongjin Coway possesses infinite potential for growth with our calling as a healthy and clean company, leadership that initiates change and technological competence and business environment.

We would appreciate your confidence in us as we share our new value of cleanliness.

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CEO Woongjin Coway



Company Profile

Woongjin Coway Profile



Cordial Life Care Science & Solution Company, WOONGJIN COWAY

ESTABLISHMENT May 2nd, 1989

SALES KRW 2,707.3 billion (December 2018, K-IFRS Consolidated)

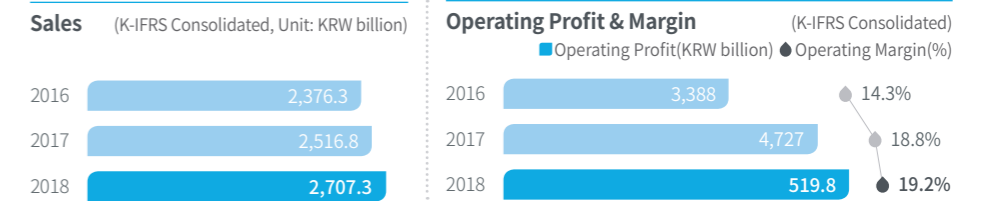
OPERATING PROFIT KRW 519.8 billion (December 2018, K-IFRS Consolidated)

PRODUCT

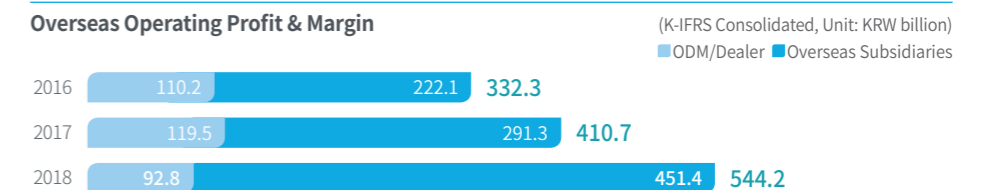
- Water Care: Water Purifier
- Air Care: Air Purifier
- Body Care: Bidet, Water Softener
- Sleep Care: Mattress
- Living Care: Cosmetics, Other household appliances

Financial Highlight

2018 has been another record-breaking year for us as our consolidated sales reached KRW 2,707.3 billion, an increase of 7.6% over the past year, maintaining steady growth in sales. Meanwhile, our operating profit increased by 10.0% to KRW 519.8 billion with an operating profit margin of 19.2%.



Our overseas sales grew by 32.5% year-over-year to KRW 544.2 billion. ODM/Dealer sales declined by 22.3% year-over-year to KRW 92.8 billion due to a decrease in sales of air purifier ODM business in China. On the other hand, we saw considerable sales growth in our overseas subsidiaries in Malaysia and the U.S. with KRW 451.4 billion, representing 55.0% growth year-over-year.



Company Profile

Business Areas

Home Wellness Appliances Business

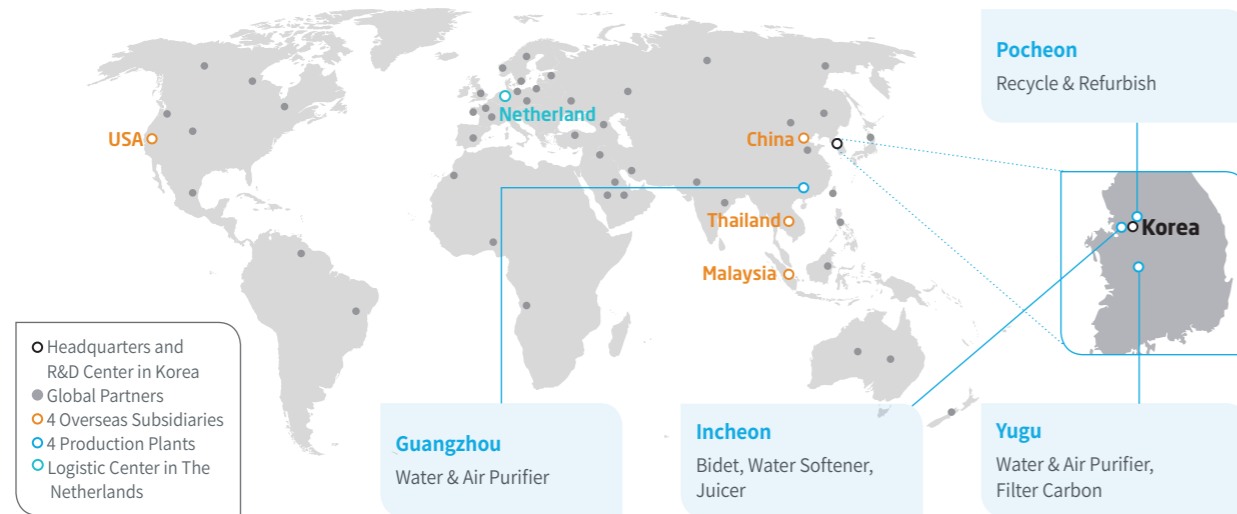
Our Home Wellness Appliances Business has grown from the idea that 'leasing expensive water purifiers at low cost allows many people access to clean water every day.' As the world's first water purifier rental service provider we have driven innovation and led the market by expanding our rental business and coordinator service(called Cody service) to cover air purifiers, bidets, water softeners and mattresses.



Overseas Business

We set our sights on the overseas market based on our world best water and air R&D infrastructure. Our main products are home wellness appliances, including air purifiers, water purifiers, bidets and juicers. Based on our internationally integrated brand Woongjin Coway, we are accelerating our overseas business through active cooperation for sales with global home appliances manufacturers.

Global Network



- Headquarters and R&D Center in Korea
- Global Partners
- 4 Overseas Subsidiaries
- 4 Production Plants
- Logistic Center in The Netherlands

Expand markets based on technological expertise

- **Japan & U.S.:** Launch "AIRMEGA" brand
- **China:** Launch "Premium RO Water Purifier"
- **Malaysia:** Develop "Ice water purifier" specific to Asian market

Drive growth through localization

- **Malaysia:** Secure 1 million customers and release localized products
- **Thailand:** Launch Cody service organization
- **U.S. & Thailand:** Expand strategic sales hub and localize service

Develop new target markets

- Secure key sales channels in Taiwan and Saudi Arabia
- **China & Taiwan:** Develop brand sales channels
- Launch new channels e.g. online

Cosmetics Business

After we established the Cosmetics Research Lab in 2003, we entered the cosmetics market in full force in 2010 focusing on premium products for a healthy and beautiful lifestyle. Based on the customer base we built from the home wellness appliances line, we started with door-to-door sales and expanded our distribution channels to the home shopping network, department stores, duty-free shops, and online malls, driving continuous growth in the sector. In 2018, in particular, we launched the "Refresh by Re:NK" brand.

Sustainability Management System

Sustainability Management Strategies

"Putting the Goodness philosophy into action for a better world" is the vision that we pursue in our sustainability management. Thus, we pursue business in water and air, which are the essentials of life, sound sleep and beauty and deeply recognize the impact of our work on people's lives. As a life care company, we will make great efforts to add value and make life better for all stakeholders throughout all stages of our business activities.

STRATEGY



"We cherrfully pursue unexplored paths together, believing that all of our actions can create a better world."

MISSION

Healthy Environment Happy People

VISION

Cordial Life Care Science & Solution Company

CORE VALUES

Coway Trust

Health

Coway Pride

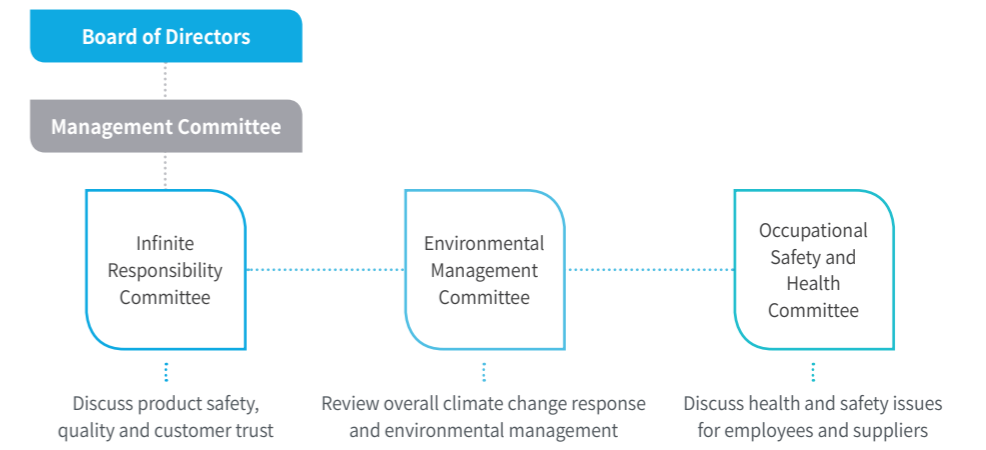
Convenience

Coway Fresh

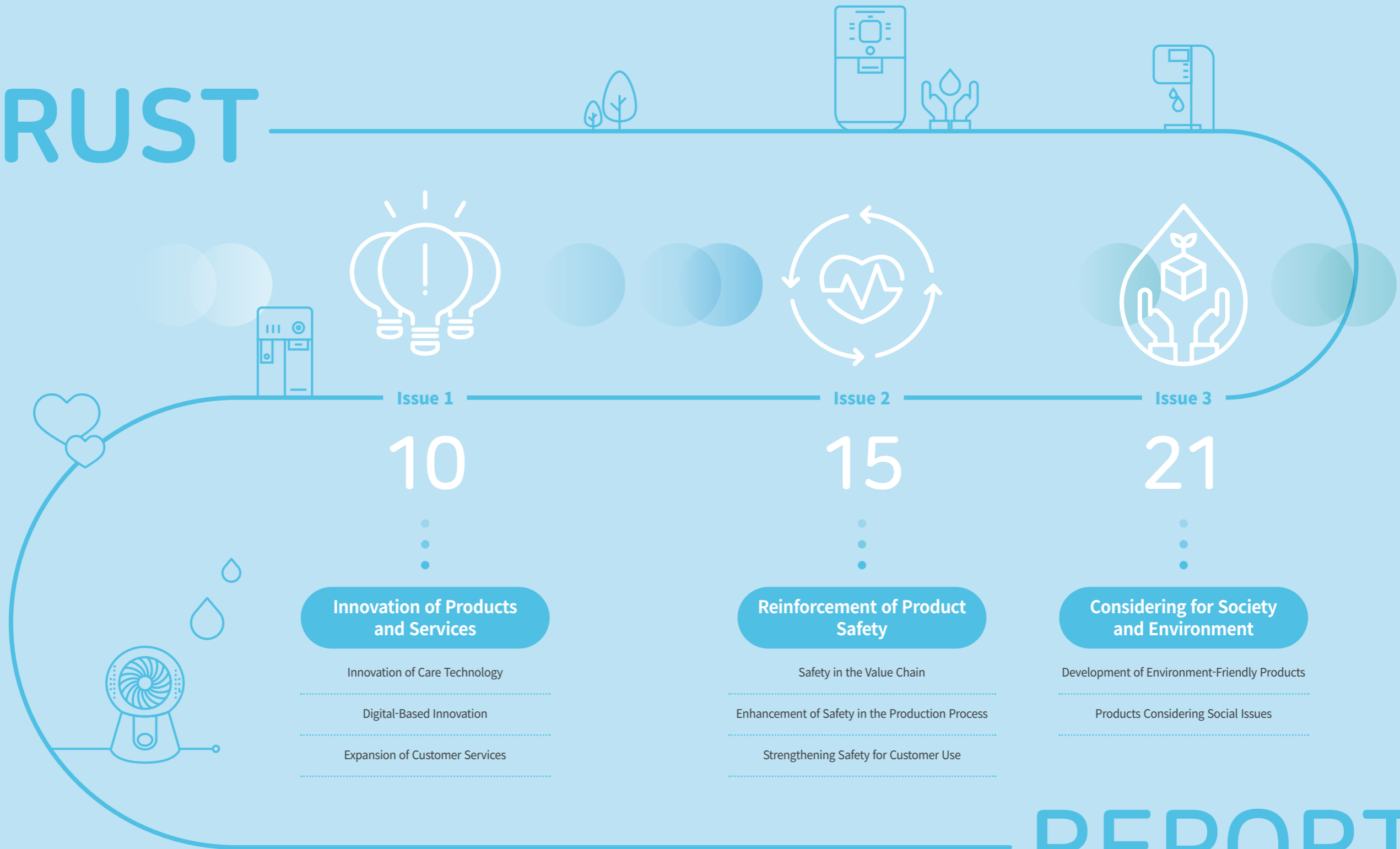
Pure Beauty

Sustainability Management Governance

Woongjin Coway continuously monitors major issues related to sustainability management and identifies and manages various risks in advance. The highest decision-maker for sustainability management is the CEO, who appoints sustainability management operators in each sector, including the director of business management division, head of TQA center, director of ethics management office and director of SCM division, and makes the final decision by directly reporting any issue to the Board of Directors. We also operate three sub-committees under the Management Committee and reflect their opinions in establishing management strategies. Meanwhile, major sustainability management activities are regularly reported to the BoD twice a year.



TRUST



Issue 1

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Innovation of Products and Services

Innovation of Care Technology

Digital-Based Innovation

Expansion of Customer Services

Issue 2

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Reinforcement of Product Safety

Safety in the Value Chain

Enhancement of Safety in the Production Process

Strengthening Safety for Customer Use

Issue 3

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Considering for Society and Environment

Development of Environment-Friendly Products

Products Considering Social Issues

REPORT

ISSUE 1 Innovation of Products and Services

Business Relevance & Our Approach

The deterioration of environmental pollution such as an increase of fine dust, new pollutants, and changes in consumer living patterns due to the increase of double-income and single-person households have a significant impact on the environmental home wellness appliance market and demand. In addition, digital technology affects our overall lives and evolves into smart homes that incorporate artificial intelligence(AI) and IoT(Internet of Things) technologies into home appliances and residential spaces.

These changes signify a new opportunity and challenge for the environmental home appliance rental market. Woongjin Coway has maintained its status as a leading environmental home appliance company in pursuit of continued innovation in products and services by combining its 'passion' for new technology into our 'nature' to clean water and air. At Woongjin Coway, by combining core competencies with new areas, we are developing products that we didn't have previously by integrating various products with IT technology and improving our capability of care. In particular, we developed the CIROO Tankless Water Purifier, which strengthens hygiene based on the essential role of purifying water and launched products in connection with digital technology such as the Active Action Air Purifier to lead the changes in the market. We also improve customer experience and service value by connecting service to digital technology such as big data.

Activities

- Innovation of care technology
- Digital-based innovation
- Expansion of customer services

Business Case

- Development of CIROO Tankless Water Purifier
- Active Action Air Purifier
- Air Simulation System
- Launch of CODY Service Kit and Cody-On Service

Performance



Percentage of R&D cost (compared to sales)

1.36%



CES Innovation Award

4 consecutive years received

Innovation of Care Technology

Development of CIROO Tankless Water Purifier

Woongjin Coway demonstrates technology to make clean and tasty water with the "CIROO Tankless Water Purifier". Woongjin Coway's CIROO Tankless Water Purifier, which was awarded the 'CES 2019 Innovation Award', is an innovative product fitted with CIROO(Woongjin Coway Intensive Reverse Osmosis) 2.0 Filter, a culmination of our filter technology. The CIROO 2.0 Filter was jointly developed by world-renowned chemical materials company TORAY and applied a patent. The filter used the "Intensive Active Dense Layer", which removes ion substances equivalent to the size of tens of thousandths of hair in thickness.

In addition, the new filter is six times larger than the existing CIROO filter increasing the amount of water filtered by 30 times, which means water can be provided without a holding tank, despite being an RO membrane filter. The filter also applies technology to prevent scale by self-cleaning thereby extending product lifespan. CIROO Tankless Water Purifier also achieves perfect tankless water in a hygienic way through the "water path drainage mode" and "automatic drainage system". In the water path drainage mode, the product discharges remaining water inside the faucet to provide freshly purified water. With the automatic drainage system, the product also discharges all water from the purifier when water is not used for more than 24 hours.



BUSINESS CASE | CES 2019 Innovation Award

Woongjin Coway has participated in the CES(Consumer Electronics Show) for 4 consecutive years and displayed innovative products and services caring for water, air and the overall daily living environment on the global stage. Receiving the CES Innovation Award for 4 consecutive years, Woongjin Coway has demonstrated innovative technology and superior design to the world.

Award Category	Home Appliances	Smart Home	Tech For A Better World	Home Appliances
Awarded Product Name	Woongjin Coway CIROO Tankless Water Purifier (CHP-7300R)	Woongjin Coway CIROO Stand Water Purifier (CHP-5700R)	Woongjin Coway Oriental-Medicine Thermal Massage Chair(MC-S01)	Woongjin Coway Body Refresher Water Softener
Concept	<ul style="list-style-type: none"> Implementing tankless water supply equipped with "CIROO 2.0 Filter" with filter 6 times larger and 30 times more water filtration than the existing CIROO(Woongjin Coway Intensive Reverse Osmosis) filter Supply water directly without a tank 	<ul style="list-style-type: none"> Linked with oriental-medicine Provide thermal massage with major acupoints by using independently developed thermal therapy tools 	<ul style="list-style-type: none"> Integration of water softener and rain shower system Tidy appearance by designing an embedded-type hose line Control the density of water softness depending on user's conditions and external environment 	

Digital-Based Innovation

Development of Products Based on Digital Technology

Active Action Air Purifier

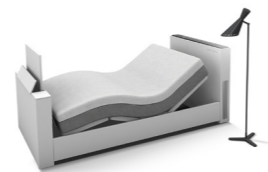
Woongjin Coway has launched the “Active Action Air Purifier” through the innovation of air purifying technology onto the market. Woongjin Coway Active Action Air Purifier has the most significant features of smart “AI-based care” to purify the air by itself before the indoor air is polluted and “Active Swing Care” to circulate the air more swiftly and strongly by free rotation in four directions circulation care.



<p>AI-based care</p> <p>Learning air quality pollution patterns based on machine learning, predicting the change in fine dust every five minutes, managing indoor air quality by itself at the time of predicted pollution and maintaining optimal air quality at all time</p>	<p>Active Swing Care</p> <p>Cleaning the air in a desired direction as the head part freely rotates in four directions circulation</p>
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Smart Bed System

Woongjin Coway has released the Smart Bed System in a combination of mattress and IoT. The system monitors and analyzes user’s sleeping pattern and surrounding area on a real-time basis and creates the best environment for sound sleep by adjusting the indoor light and air purifier.



BUSINESS CASE | Joint Research by using Brain Waves for Sleeping Care

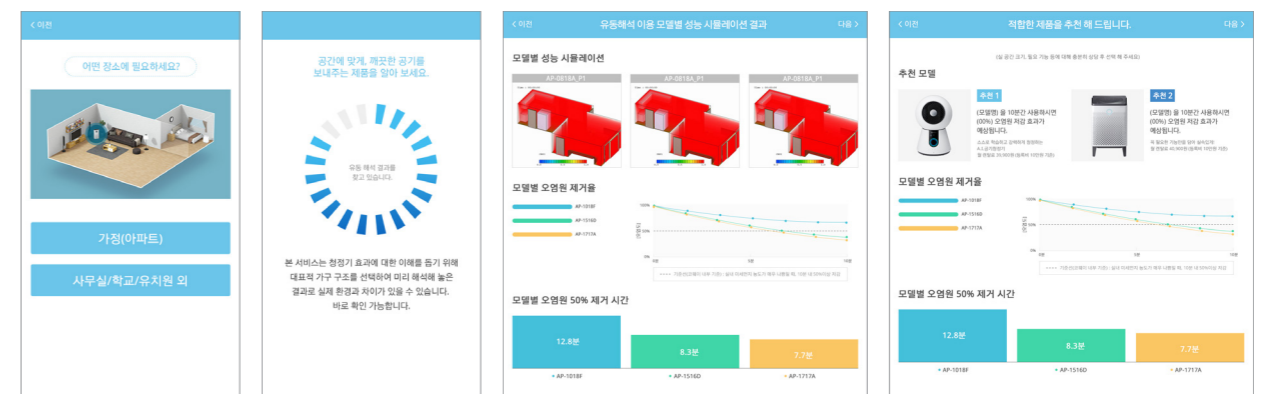
Woongjin Coway has signed an agreement with Professor Jeong Jae-seung, Department of Bio and Brain Engineering of KAIST for research on the improvement of sleep by using brain waves. To reinforce the capability for sleeping care solution in mattress-customized care rental business, we will jointly analyze the stages of sleep and sleep solution optimized for each individual person. We expect to offer differentiated sleep care solutions to modern people suffering from irregular patterns of sleep. Woongjin Coway will continue to provide customers with new experiences and values through research and convergence of diverse technologies.



Air Simulation System

The performance of an air purifier can be different depending on the number of pillars, households and people even though it is the same model in the same space. Woongjin Coway develops products to show customers how different cleaning performance depends on space in the house and provides customized air care solutions to suggest suitable product types and optimal placement.

The Air Simulation System predicts the flow of air or water through computational fluid dynamics technologies utilizing the big data of air quality with approximately 196 billion cases and actually verifies invisible air-purifying effects. In 2018 and 2019, we presented suitable air purifier models to about 20 schools and companies as a pilot case by utilizing the simulation system. Woongjin Coway will provide customers with the best air quality based on the Air Simulation System.



Global Open Innovation Based on Digital Technology

Woongjin Coway conducts innovation for products and services in cooperation with many IT companies and enhances the level of customer care. We will continue to collaborate with various outstanding companies and take the lead in the home wellness appliance market.



- Launched Air Mega Air Purifier with the service based on DRS(Dash Replenishment Service) in cooperation with IoT. A sensor embedded in the product checks the filter on a real-time basis; when a filter needs to be replaced, the sensor automatically orders and delivers a new filter through Amazon, thereby allowing customers to use the best-quality filter at all times.



- “Woongjin Coway Tower”, the world’s first air purifier that connects to Apple’s smart platform, “Home Kit”, is scheduled to launch. The users can control the system through iOS apps and Siri.



- Linked “Google Home” AI speaker based on Google Assistant with the air purifier and allows customers to use the product conveniently in Korean
- Users can easily control the product by simple voice commands through Google Home Speaker or smartphone application.



- Linked “Kakao Home” Kakao smartphone platform, with the air purifier, voice recognition service boosts user convenience.
- Users can easily control the product purely by voice commands through Kakao Mini Speaker.



- Smart air purification system with the Naver AI platform “Clova” support were launched.
- Features voice control through Clova speakers and smart phone applications.

Expansion of Customer Services

CODY Service Kit

Woongjin Coway has developed the CODY Service Kit for water purifiers to improve the quality of service and enhance customer satisfaction. We maximized our unique differentiation by reflecting opinions from business sites and customers from planning to production to provide customers with visibility and Codys with convenience.

The CODY Service Kit can be commanded by voice and seen on the LCD screen and provides the same service process and standardized service for customers to enhance reliability of each Codys. In addition, as the smallest and lightest water purifier device of all the domestic and overseas water purifier devices, it makes Codys more convenient. In particular, as a filter is installed in the service kit, inspection is conducted with clean water purified by the filter.



Cody-On Service

Woongjin Coway has started the Cody-On Service for 24 hours a day with the aim of communicating with customers more closely and addressing information requested by customers and grievances in a prompt and precise manner.

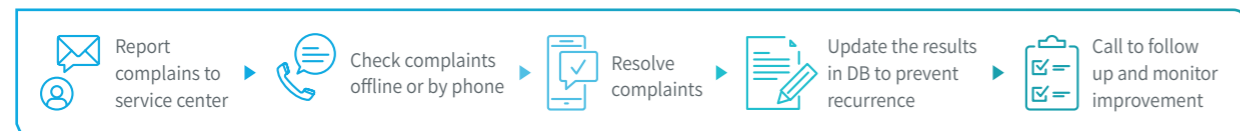
With the Cody-On Service as a new concept service model, customers can request information, including inspection schedules, inspection records and user manual by mobile without limitations in time and space and simply apply for warranty and product consultation by Kakao Talk for counseling. The service enhances accessibility and convenience as it does not require an additional application, membership or certification procedure.



Before visit	After visit		Apply for warranty and counseling			User information inquiry	
Cody-On Service	e-Inspection Card/Heart Service	Mobile monitoring (sending notification for mobile assessment)	Self-diagnosis	Apply for warranty	Kakao Smart Talk for counseling	User manual	FAQ
Pre-notice service · Notifying service inspection schedule and Cody for visit	Share the current status of service in a prompt and precise manner	Satisfaction monitoring system · Evaluating the level of satisfaction within 1 hour after service is provided, improving satisfaction immediately	Inform/ Address the case to allow customers to carry out self-diagnosis after applying for warranty	Receiving/ Addressing product failure and grievances	Consulting with a representative after identity verification in case of Kakao Talk for counseling · Representative directly responding to customers to enhance the accuracy of counseling	Delivering details of product functions and instructions	Identifying questions for Woongjin Coway and finding solutions

Introduction of Service Quality Assurance Program

Woongjin Coway fulfills our responsibility to conduct service for customers in various ways. We operate the Service Quality Assurance System to receive and address customer grievances and identify improvements with on-site managers. After the service is provided, we conduct a satisfaction survey and listen to and reflect customers' opinions. In addition, the Quality Committee is run in order to reflect service quality improvements and enhance customer satisfaction.



BUSINESS CASE | 1st in the Water Purifier and Air Purifier Sector of NCSI

In the National Customer Satisfaction Index(NCSI) 2018 by Korea Productivity Center, Woongjin Coway was selected as the top company in the water purifier and air purifier sector. Companies are directly evaluated and selected in terms of quality and satisfaction by customers who have experience of using products and services produced and sold at home and abroad, and Woongjin Coway was highly acclaimed in innovation for products and services.



ISSUE 2 Reinforcement of Product Safety

Business Relevance & Our Approach

As various issues regarding hazardous household chemical products and home appliances are emerging, product safety has recently been highlighted. Currently, product safety is a significant issue, and this can have a direct impact on corporate brand and financial value.

As Woongjin Coway products deal with water and air, which are closely related to health, and are essential to daily life, the issue of product safety and consistent performance is crucial. Woongjin Coway actively fulfills product responsibility to ensure safe and harmless product use and consistent performance and strives to build customer's trust.

Woongjin Coway has established and implemented the principle of quality management to ensure product safety and maintain consistent performance. We conduct verification for reliability, safety and environmental features at each stage in the entire value chain. We also prepare high-level safety verification system as the TQA Center permitted CCC·CQC approval in 2018. We will provide product quality in return for customer trust, by including safety certification and reinforcement of chemical substance system.

Activities

- Safety in the general value chain
- Reinforcement of safety in the production process
- Strengthening safety for customer use

Business Case

- Acquisition of CCC·CQC qualifications
- Management of certification through CICS (Company Integrated Certification System)

Performance



Current status of ownership of public test labs for International Safety Certification Center

13 labs

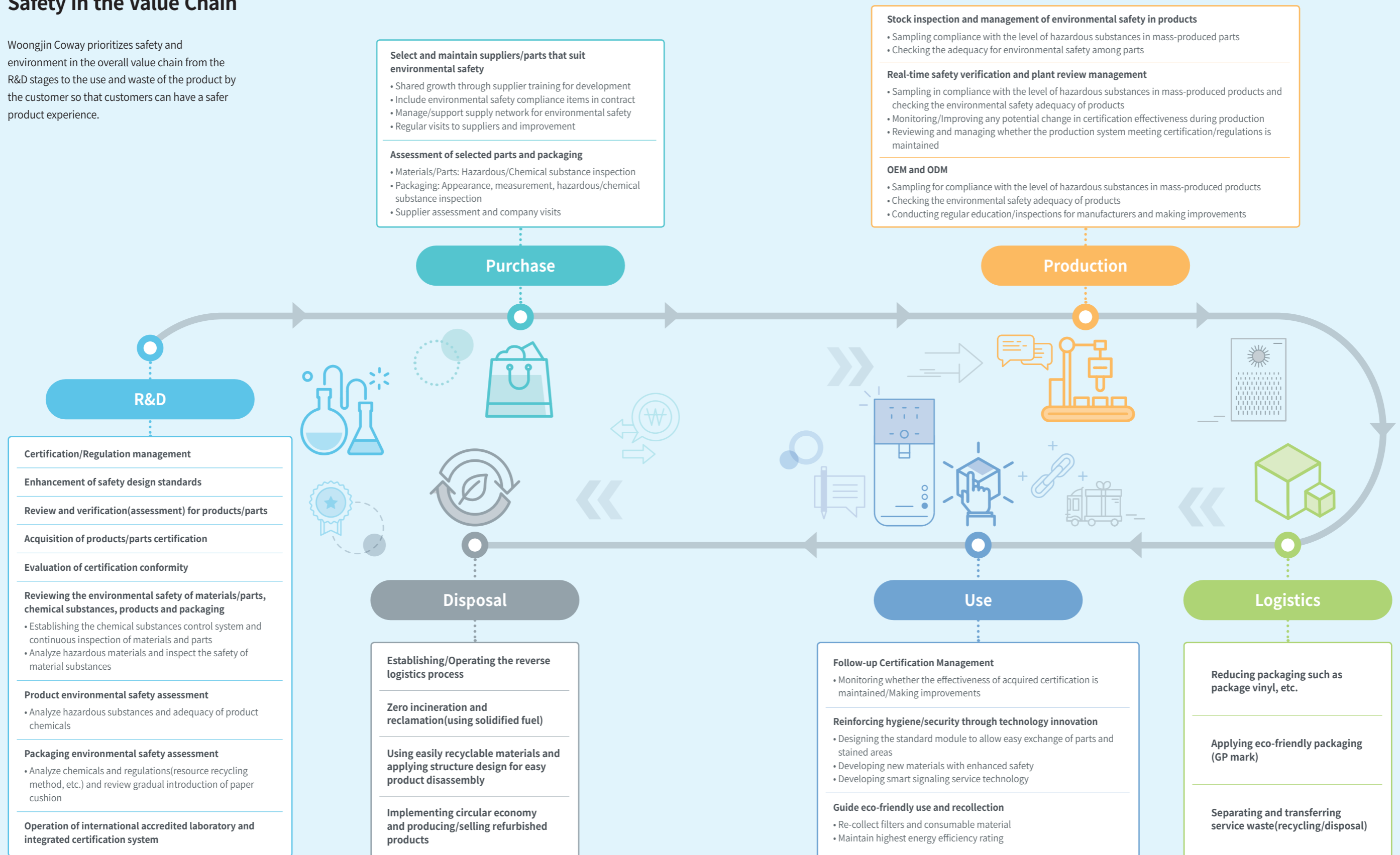


Number of violation cases regarding product safety

Zero

Safety in the Value Chain

Woongjin Coway prioritizes safety and environment in the overall value chain from the R&D stages to the use and waste of the product by the customer so that customers can have a safer product experience.



Enhancement of Safety in the Production Process

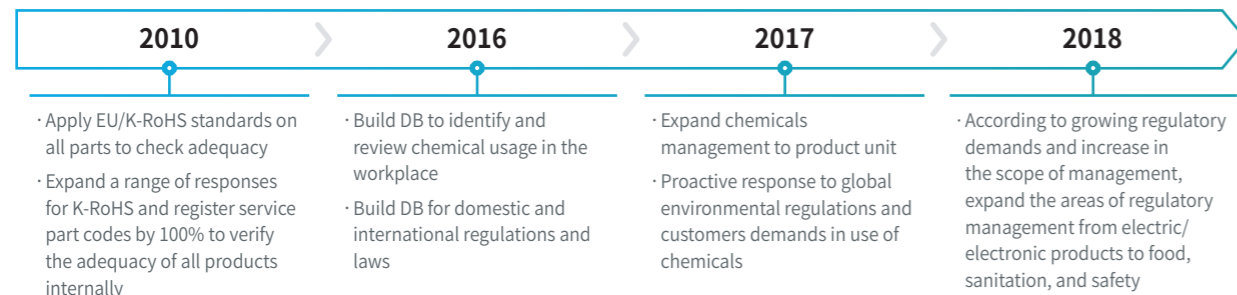
Strengthen Inspection System for Safety and Reliability

Woongjin Coway verifies products by considering safety, harmfulness, hygiene and customer-use environment through the entire value chain.

Pre-Design Review	Expansion of reliability test planning fair	Enhancing the reliability of foreign substances	Advancement of verification to prevent failure and defect
<ul style="list-style-type: none"> Applying the PDR(Pre Design Review) in all product development stages to proactively manage risk factors Identifying new quality risks and improvements in cooperation with external experts 	<ul style="list-style-type: none"> Holding a fair to evaluate all risk factors with the participation of departments related to development, reliability and quality Reviewing all product development stages, identifying factors for improvement and sharing experiences of failure cases 	<ul style="list-style-type: none"> Development test methods suitable for a product by collecting and verifying information on potential foreign substances in products 	<ul style="list-style-type: none"> Establishing advanced equipment and process to prevent any potential failure and defect in using a product Analyzed causes and developed measures to standardize the design

Reestablishment of Chemical Substances Management System(CSMS)

With the HSPM(Hazardous Substances Processing Management) certification, we reinforced our chemical process control system based on a cycle of planning, execution, review, and continuous improvement. As domestic and overseas laws/regulations DB is linked to the Chemical Substances Management System(CSMS), chemical substances for regulation are managed for each customer/region of launch. Any substances contacting water and food are managed by the standard for food device, container and package through the CSMS. We also secure the environmental safety of products and reinforce the capability to verify products by managing biocidal substances and devices in all products in accordance with domestic and international standards so that consumers can use our products with security.



Commitment for 2020 All Air purifier of PVC FREE & BFR FREE

- Woongjin Coway has progressed to such an extent that it uses less than 0.5% of PVC and BFR(PVC and BFR FREE) in all of its air purifiers.
- We are currently at the stage of the survey on the usage status and reliability review of alternative materials and components, which so far, has been 50% completed. According to the schedule, Coway will apply the 'PVC FREE & BFR FREE' technology to all of its air purifiers by 2020.

Safety Certification Enhancement

Woongjin Coway maintains requirements for national safety and performance certification from the stage of planning a new product to discontinued production. In 2018, we reviewed indications for certification and performance attached to all products thoroughly and corrected any potential misunderstanding from the perspective of a customer to sustain relationships with customers based on trust. In 2019, the scope of certification will expand to global regulations. By establishing a world map for global certification and regulation management, we will provide planners/developers with relevant information in a simple, easy way and continue to provide reliable products for customers.

Certification Management by CICS(Company Integrated Certification System)

Woongjin Coway has reformed the integrated certification system to efficiently manage certificates, which guarantee the safety of products. By managing product certification, part certification and follow-up certification management through the integrated system, we have improved convenience in searching, browsing and registering product certification and prevented any use of wrong certification information.

Safety certification

473cases

Public test lab owned

13labs

Development of Global-Level Safety Testing Method

With the reinforced corporate responsibility, Woongjin Coway has also developed a safety testing method to meet a higher standard than international standards and customer needs. In particular, we have strengthened fire safety in the heat insulating materials for hot water tanks in domestic water purifiers by introducing the standard of fire applicable only to North America and established the management process. We also changed the cover material for water purifiers in Malaysia to prevent fire by considering the cultural environment of the country where a candle is usually put on the water purifier.

BUSINESS CASE | Procurement of CCC and CQC Certification Qualification

Woongjin Coway acquired qualification as a certified test lab by CCC·CQC¹⁾, which is product safety certification for electric and electronic products exported to China, from CQC(China Quality Certification) Center. Based on the advanced test facilities of International Safety Certification Center in TQA(Trust & Quality Assurance) Center and remarkable capability for test, Woongjin Coway has been permitted to approve CCC·CQC only by independent testing results; with this achievement, we reduced the test cost by 50% and time period by 30%. Through the acquisition of the certified test lab, Woongjin Coway made it possible to supply safety-certified products to the Chinese market more promptly. We will make every effort to reinforce the safety of products and develop products for global consumers to use with security.

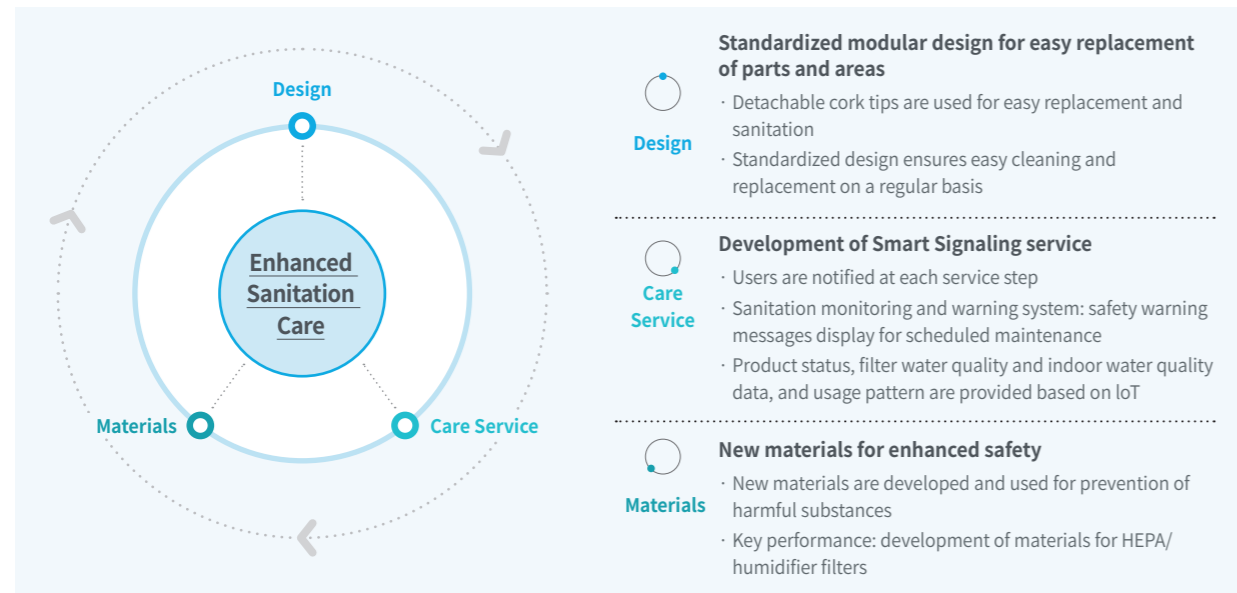


1) CCC(China Compulsory Certification) is required for domestic companies to export electric and electronic products such as water purifiers, air purifiers and bidets to the Chinese market, while CQC(China Quality Certification) is an autonomous certification system.

Strengthening Safety for Customer Use

Reinforcement of Hygiene/Security Value with Technology Innovation

Woongjin Coway secures product hygiene and stability from the design stage. We have applied a separate cock tip, which is easy to clean and exchange, to all models. For customers who do not receive regular care service, we are developing technology to indicate a safety warning message for the product at the time of designed inspection.



Reinforcement of Follow-Up Product Safety Management

To ensure continuous management and maintenance for product safety and performance, Woongjin Coway has organized the CFT(Cross Functional Team) between departments with regard to certification and analyzed and standardized the process from the acquisition of 21 key certificates to follow-up management. With this process, we selected 70 types from existing products and carried out reexamination to prevent failure to meet the standard for product safety and performance in the future.

Country	Product Group	Certification Category	Product Name	Quantity
Domestic	Water purifier	Electricity safety	CHP-264L, etc.	8
		Energy efficiency	CHP-590N, etc.	3
	Air purifier (dehumidifier)	Electricity safety	AP-3018B, etc.	7
		Energy efficiency	CHP-590N, etc.	6
		CA	AP-1717A, etc.	6
		HH	APMS-0815C, etc.	3
		HD	AD-1615, etc.	3
	Bidet	Electricity safety	BA14-E, etc.	4
	Electric range	Energy efficiency	CHR-03, etc.	2
Overseas	Water purifier	Electricity safety	CHP-250L, etc.	8
	Air purifier	Electricity safety	AP-1008CH, etc.	6
		Energy Star	AP-1516D	5
		GBT18801	AP-2510EH	5
	Bidet	Electricity safety	BA13-BRAU, etc.	4
Total				70

ISSUE 3 Considering for Society and Environment

Business Relevance & Our Approach

The world is facing grave environmental issues such as depletion of our natural resources, increasing waste, particularly plastics, and climate change. Due to increasing severe social issues by waste treatment and disposal, the government has implemented a major system with a focus on reinforced public waste management and enforced more rigorous laws and regulations. Accordingly, eco-friendly products are established as regulations beyond consumer preference, while circular economy is vitalized to minimize disposed resources and reduce environmental pollution. In terms of domestic conditions, we experience a rapidly changing social structure, including our aging society and changes in the concept of a family.

To meet the needs of customers and society, Woongjin Coway has continuously developed and produced eco-friendly and nature-friendly products and pioneered a new market with these products. We have already developed energy-efficiency products and launched eco-friendly products, reducing packaging and using eco-friendly packaging. We also provide products to deal with social issues such as microplastics and fine dust. Further, we share our products and values with various customers by providing products considering socially disadvantaged people, including the elderly and people with disabilities.

Activities

- Development of eco-friendly products
- Products considering social issues

Business Case

- Energy Winner Grand Prize and Energy Technology Prize
- Research for the performance of removing microplastics and new hazardous substances

Performance



Number of eco-friendly certified products

29 cases



Sales of eco-friendly products

KRW 586.9 billion

Development of Environment-Friendly Products

Development of Eco-Friendly Products

The biggest impact of Woongjin Coway products on the environment is energy consumption and water use in the process of customers using a product. Accordingly, Woongjin Coway is developing products to improve energy consumption efficiency and reduce water use by applying vacuum insulation materials and nano-trap filters in order to minimize environmental impact. In particular, we have launched a product with the technology for instant heating and semiconductor cooling and drastically enhanced energy efficiency.

Energy Efficiency Improving Products		Environmental mark certification	
 <p>Nano Direct Water Purifier Improved cooling efficiency by approximately 34% compared to existing products - Equipped with inverter compressor - Applied the instant hot water system</p>	 <p>CIROO Tankless Water Purifier Improved energy efficiency by approximately 34% compared to existing products - High-efficiency ice-storage cooling system - Spiral flow hot water system</p>	<p>Mattress CMK-S03 / Mattress CMK-PR02</p> <ul style="list-style-type: none"> Use eco-friendly foam to reduce environmental contamination of the Earth Reduce the generation of hazardous substances and indoor air pollutants 	

Acquisition of Eco-Friendly Product Certification

Through carbon label and environmental mark certification system, we share the progress we made on environmental sustainability in our products.

Eco-friendly Product Certification Status¹⁾

Model Name	Unit	2016	2017	2018
Environmental Mark Certification		17	31	25
Water Footprint ²⁾		-	1	1
Carbon Neutral Product Certification ³⁾	Case	2	1	1
Carbon Balloon ⁴⁾		2	2	2

1) Cumulative number of eco-friendly products that have valid certification in the relevant year including mattresses.
 2) Water Footprint: quantifies the environmental impact based on the total amount of water used directly or indirectly for the entire process from acquisition of raw materials, production, distribution, use and disposal, and verified in accordance with ISO 14046 requirements
 3) Carbon Neutral Product Certification: certification given to products that have acquired CER (certified emissions reduction) equivalent to the greenhouse gas emitted throughout the entire production, distribution, use and disposal process or offsets the carbon emissions through greenhouse gas reduction activities
 4) Carbon Balloon: whereas Carbon Label calculates the environmental impact made throughout the entire process under Korean certification standards, Carbon Balloon is an international carbon certification that calculates the carbon emissions under more stringent ISO14044 & PAS 2050 standards.



Current Sales of Eco-Friendly Products

	Unit	2016	2017	2018
Sales of Eco-Friendly Products	KRW 100 million	7,025	6,858	5,869

BUSINESS CASE | Woongjin Coway, Awarded the Energy Winner Grand Prize and Energy Technology Prize This Year

Woongjin Coway Nano Direct Water Purifier and CIROO Tankless Water Purifier awarded the grand prize and energy technology prize, respectively at the 21st Energy Winner. The Nano Direct Water Purifier is equipped with the inverter compressor and improves cooling efficiency by about 34% compared to products with an existing compressor. It also minimizes the rate of compressor operation by applying a new inverter compressor control algorithm. In addition, any unnecessary electricity consumption is reduced through the system heating water only when necessary.

Woongjin Coway CIROO Tankless Water Purifier enlarges the contact area where cooling and heating are conducted inside the purifier by utilizing high-efficiency ice-storage cooling system and spiral flow hot water system, enhancing energy efficiency.

 <p>Nano Direct Water Purifier</p> <p>Improves cooling efficiency by about 34% (compared to when using an existing compressor)</p>	 <p>CIROO Tankless Water Purifier</p> <p>Improving energy efficiency</p>
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Products Considering Social Issues

Dealing with clean water and air is directly related to life and core business of Woongjin Coway. As interest in clean water and air is increasing due to new social issues such as microplastics and indoor and outdoor fine dust, Woongjin Coway provides customers with higher value through relevant products. We also launch products in consideration of socially disadvantaged people such as the elderly to allow more diverse customers to use our products more easily.

Addressing the Issue of Fine Dust

Big Data Research for Indoor Fine Dust

Based on big data with 120 billion cases accumulated through the air purifier, Woongjin Coway categorizes indoor air quality into 24 types and provides customers with customized filter services for each type. Through big data-based application, customers can check the current conditions of indoor and outdoor air quality and time-based change in air quality. For instance, it was found that the level of air pollution increased greatly when cooking in the kitchen for dinner and coming back home after going outside. To address such issues, we are developing products and services to improve the issue of indoor air pollution in addition to the air purifier.

Product Development for Improvement

Care for air quality in the kitchen with a hood-integrated electric range

The integrated product with hood and electric range helps to make the kitchen area more pleasant by immediately removing any odor and hazardous gas while cooking. The smart panel in the front of the product not only provides information on heat level, hood operation and food recipes but also allows control of the product.



Air care in the dressing room with FWSS(Fresh Wear Styling System)

Clothes worn outside are one of the main pollutants of indoor air. Woongjin Coway developed FWSS(Fresh Wear Styling System), which allows you to take care of the quality of indoor air as an innovative product as a combination of wear care and air purification functions.



Consideration for Socially Disadvantaged People



Introduction of Silver Care Function for Senior Customers

Woongjin Coway HANDSPAN Water Purifier IoCare adds another care function in innovative technology for clean water for the silver generation in the aging era. If the water purifier is not used for more than 48 hours, it sends a notification to pre-registered family members and users. This allows swift measures to be taken in the case of an emergency.



Braille for Customers with Disabilities

Existing bidets have limitations in use as braille is displayed only on major control buttons. To overcome the limitations, Woongjin Coway plans to launch a new product with braille on all bidet control buttons for the first time in the industry, based on opinions from consumer groups and consumers with visual impairment and has already applied the changed system to one type of existing product.



Home Appliance Accessibility Project for Various Users

In the process of manufacturing various products, Woongjin Coway not only considers convenience for general consumers but also reflects factors to allow many socially disadvantaged people, including those with disabilities, to use our products more conveniently.

- By establishing a disability-specific water purifier user guide, Woongjin Coway conducted a three-year review for the process of reaching a water purifier, location of putting a cap, selecting temperature and amount of water and completing discharge.
- Based on research results, we launched a product using voice sounds feedback that provides vocal instructions for leakage and turned-off status to enhance convenience for customers.

BUSINESS CASE | Research on the Performance of Purifying Microplastics and New Hazardous Substances

Microplastics that are small-sized pieces of plastic less than 5mm in size destroy the environment and threaten health, and microplastics in water are emerging as a recent and serious issue. Woongjin Coway has conducted research and established a system for microplastics and is carrying out relevant certification such as WQA/NSF Protocol to enhance reliability. In addition, we evaluated the performance of our company's filter to remove microplastics and based on the results of research study found that the filter has the ability to remove microplastics.

Furthermore, Woongjin Coway has built a system and process to measure and analyze new hazardous substances such as 2MIB, geosmin, cobalt and vanadium to deal with not only microplastics but also new hazardous substances with a high possibility to become an emerging issue. Evaluating the performance of a water purifier to remove new hazardous substances is currently underway and will be completed by November 2019.

APPENDIX

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Economic Data

Economic Value Creation

• Financial Data

Summarized Consolidated Financial Position

Category	Unit	2016	2017	2018
Current assets		733,134,075,994	791,471,166,861	843,718,066,082
Non-current assets		1,234,573,817,352	1,367,401,907,951	1,535,185,010,977
Total assets		1,967,707,893,346	2,158,873,074,812	2,378,903,077,059
Current liabilities		735,390,765,837	1,124,750,166,848	1,234,310,147,963
Non-current liabilities	KRW	48,973,368,952	51,866,378,423	56,894,696,679
Total liabilities		784,364,134,789	1,176,616,545,271	1,291,204,844,642
Share of the controlling company		1,183,343,758,557	982,256,529,541	1,087,698,232,417
Total liabilities and shareholders' equity		1,967,707,893,346	2,158,873,074,812	2,378,903,077,059

Summarized Comprehensive Consolidated Income Statement

Category	Unit	2016	2017	2018
Sales		2,376,328,167,259	2,516,772,498,930	2,707,315,204,077
Cost of sales		812,176,526,166	798,486,300,322	878,256,396,789
Gross income		1,564,151,641,093	1,718,286,198,608	1,829,058,807,288
Selling and administrative		1,225,354,188,064	1,245,537,247,916	1,309,231,592,487
Operating income		338,797,453,029	472,748,950,692	519,827,214,801
Other income		28,737,581,966	27,760,922,985	23,461,552,800
Other loss	KRW	38,890,265,528	49,282,233,491	58,173,262,609
Financial income		1,212,324,916	984,897,197	1,232,780,295
Financial expense		6,103,169,863	12,336,806,182	17,781,224,022
Net income before income tax		323,753,924,520	439,875,731,201	468,567,061,265
Income tax expense		80,442,692,413	114,268,322,165	118,755,572,156
Net income		243,311,232,107	325,607,409,036	349,811,489,109
Total comprehensive income		242,507,162,506	332,506,201,778	343,930,243,225

Distribution of Economic Value

Category	Unit	2018
Employees	Salary	2,870
	Severance Payment	220
	Welfare	454
Government	Tax and Utilities	1,188
Local community	Social Contribution Cost	8
Suppliers	Purchase Cost	5,957
	Supplier Support	87
Shareholders and investors	Interest Cost	178
	Dividends	2,598
Total		13,560

R&D Investment and Performance

Woongjin Coway continues to invest in R&D projects to strengthen its technological expertise. In 2018, we invested KRW 36.8 billion which accounted for 1.36% of our sales.

R&D Investment

Category	Unit	2016	2017	2018
R&D expense	KRW million	36,520	36,174	36,823
Ratio to the sales	%	1.47	1.44	1.36

Intellectual Properties

Category	Unit	2017	2018
Patents		799	930
Utility models		182	17
Brands	case	2,645	2,841
Designs		641	668
Total		4,267	4,456

Social Data

Employees

Woongjin Coway supports the Universal Declaration of Human Rights and has established the Global CSR Guide that includes our principles on labor, environmental and safety practice. Throughout our HR management including employment, promotion, and training, we ensure equal opportunities and strictly prohibit any kind of discrimination based on gender, age, religion, ethnicity and race. In 2018, there were no violations regarding child and forced labor.

Domestic Sites

Category	Unit	2016	2017	2018
Total number of employees		4,771	4,879	4,927
Work area	Production	249	264	300
	Sales	3,358	3,397	3,406
	R&D	358	361	355
	Administration	779	830	835
	Others	27	27	31
Employment type	Permanent jobs	3,920	4,007	4,627
	Temporary jobs	851	872	300
Gender	Male	1,588(33.3%)	1,685(34.5%)	1,773(36.0%)
	Female	3,183(66.7%)	3,194(65.5%)	3,154(64.0%)
Foreigner		6	5	5
People with disabilities		44	51	49

Employee Diversity

Category	Unit	2018
Female Managers	Percentage of Manager Positions	37.3
	Percentage of Working-Level Manager Positions	54.9

Global Sites

Category	Unit	2016	2017	2018
Total number of employees		1,631	1,885	2,579
Employment type	Expatriate	13	15	15
	Locally recruited	1,618	1,870	2,564

Employees by Age

Category	Gender	Unit	2016	2017	2018
Executive over 50 years of age	Male		11	15	16
	Female		1	0	0
Employee over 50 years of age	Male		37	78	78
	Female		581	849	795
Executive aged 30-50	Male	person	14	11	13
	Female		1	1	2
Employee aged 30-50	Male		1,462	1,489	1,539
	Female		2,352	2,107	2,144
Employee under 30 years of age	Male		64	92	127
	Female		248	237	213

New Employment, Turnover and Average Years of Employment

Woongjin Coway is fulfilling its social responsibility through creating employment for vulnerable populations such as people with disabilities, as well as recruiting talented individuals to maintain its leading position in the market and strengthen the company's competitiveness.

Category	Unit	2016	2017	2018
Number of new employees	person	668	683	666
Turnover rate	%	14.1	11.8	12.6
Average years of employment	year	6.8	7.2	7.5

Training

Category	Unit	2016	2017	2018
Total training cost(Training cost per person, KRW million/person)	KRW million	11,227(2.4)	11,740(2.4)	11,693(2.4)
Total training hours (Training hours per person, hour/person)	hour	106,436(88.7)	106,796(89.0)	107,564(89.6)

Equal Pay

At Woongjin Coway, we pay equally from the moment of employment and do not discriminate based on gender. In addition, we comply with local minimum wage policy and take into account consumer prices when determining wages.

Category	Unit	2016	2017	2018 ¹⁾
Ratio of women's base pay to men's base pay	%	100	100	100
Ratio of new employee's wage to the minimum wage		251	202	235

1) The minimum wage set by the Korean government in 2018 is KRW 1,573,770.

Employee Communication

Woongjin Coway discusses its major decisions and the changes it implements regarding corporate management through regular meetings of the Labor-Management Council. If significant operational changes occur, we transparently share them in advance. In 2018, through 0 meetings of the Labor-Management Council we held discussions on 0 Agendas, including evaluation committee operations and promotion, annual salary adjustment, incentive payment, system improvement in corporate culture and education.

Category	Unit	2016	2017	2018
No. of council meetings ¹⁾	case	5	5	5
No. of agenda discussed	case	8	9	8
No. of agenda decide	case	8	9	8

1) The issues discussed at the Labor-Management Council Meeting apply to all employees.

Grievance Counseling Program

HR, sales, work, personal matters, etc.

Category	Unit	2016	2017	2018
No. of grievances raised	case	28	52	59
No. of grievances handled	case	28	52	59
Handling rate	%	100	100	100

Parental Leave

Category	Unit	2016	2017	2018
No. of employees on parental leave	person	129	115	152
Returning from parental leave	%	95	97	99

Safety and Health

Safety and Health Certifications

With a high portion of administration and sales employees, Woongjin Coway tends to have a lower industrial accident rate compared to other manufacturing industry companies. However, at our business sites with a high risk of accidents such as the Yugu and Incheon plants as well as the R&D Center, we operate the Occupational Safety and Health Committee for each business site to respond to risks and maintain certification for safety and health management.

Category	Seoul Office(HQ)	Yugu Plant	Incheon Plant	Pocheon Plant	R&D Center
OHSAS 18001	○	○	○	○	○

Industrial Accidents

Category	Unit	2016	2017	2018
No. of industrial accidents	Employees case	0	0	0
LTIFR(Lost Time Injury Frequency Rates) ¹⁾	Employees n/million hours worked	0	0	0
	Suppliers	0	0	0

1) LTIFR: Lost-Time Injuries Frequency Rate(Number of lost-time injuries x 1,000,000)/(Total hours worked in accounting period)

Ethics

Anti-corruption

Category	Unit	2017	2018
Number of participants for ethics management training	person	4,290	4,245
Participation rate in ethics management training	%	94	89

Category	Unit	2016	2017	2018
No. of workplaces subject to corruption analysis	workplace	7	7	7
Actions taken against violation of ethics management and corruption case ¹⁾	person	40	46	4 ²⁾

1) The 2016-2017 data includes restrictions due to disruptive sales operation. Excluded as of 2018.

2) Offensive behavior against corporate culture: 1 person, information security: 1 person, negligent supervision: 1 person, improper use of assets: 1 person, disciplinary measures were taken against them(e.g. suspension with pay)

Business Partners

• Purchase and Supplier Management

Suppliers

Category	Unit	2016	2017	2018
No. of suppliers	All	273	268	274
	1 st tier suppliers	178	173	179
	2 nd tier suppliers	95	95	95

• Mutual Growth Activities

Strengthening Business Foundation

Category	2017 Performance	2018 Performance
Financial support	Financial support: KRW 9.075 billion	Financial support: KRW 8.621 billion
Payment	Average payment term: 9.63 days	Average payment term: 9.67 days
Payment method	100% cash(equivalent) payment	100% cash(equivalent) payment
Dispute resolution procedures	· Ethics Report Center · Corporate policy and website announcement	· Ethics Report Center · Corporate policy and website announcement
Support for sales growth	· Support for participation in global exhibition(1 time) · Participation in purchase consulting seminar(4 times)	Purchases from suppliers: KRW 377 billion in 2017 → KRW 423.2 billion in 2018(12.2%)

Supporting Infrastructure for Growth

Category	2017 Performance	2018 Performance
Training support	Mutual Cooperation Center training: 937 people	Mutual Cooperation Center training: 823 people
Technical support & protection	· Technical support/joint development: 28 cases · Technology protection/escrow: 13 cases	· Technical support/joint development: KRW 36 million, 5 cases · Technology protection/escrow: 11 cases
Employment opportunity	Startup support training: 1,347 people	
Energy saving	Electricity: 146,139Kwh/year ↓ GHG: 64.29tonCO ₂ eq ↓	Electricity: 141.32toe/year ↓ GHG: 242.83tonCO ₂ eq ↓
Productivity improvement	Companies with improved productivity: 68 companies, process innovation 117 cases	Companies with improved productivity: 68 companies, process innovation 60 cases

Social Contribution and Membership Activities

Social Contribution Activities and Performance

Category	Unit	2016	2017	2018
No. of employee volunteers	person	1,412	1482	1,713
Total hours of service per employee	hour	20.0	24	19.9
Social contribution cost + donation	KRW 100 million	6.3	10.5	8.4

• Donations and Association Expense

Annual Donations and Initiative Participation Expense

Classification	Unit	2018
Total	KRW thousand	430,162

* The amount of funding provided to associations and organizations is KRW 430 million. In accordance with Article 31 of the Political Fund Act(Limitation of Donations), Woongjin Coway does not provide political funding.

Major Organizations and Initiative Participation Expenses

Organization	Classification	Unit	Amount
Korea Packaging Recycling Cooperative	Trade association	KRW thousand	151,081
Daejeon Chamber of Commerce	Trade association		103,200
Korea Direct Selling Industry Association	Trade association		30,000

Environmental Data

Environmental System and Investment

• Environmental Certifications

Certifications¹⁾

Category	Environmental Management System ISO 14001	Quality Management System ISO 9001	Hazardous Substance Process Management System QC08000 HSPM
Seoul Office(HQ)	○	○	○
Yugu Plant	○	○	○
Incheon Plant	○	○	○
Pocheon Plant	○	○	○
R&D Center	○	○	○

1) The scope of each certification per production volume is ISO 14001 100%, ISO 9001 100%, QC08000 HSPM 100%.

• Investment in Environmental Sustainability

Investment Performance

As part of our efforts to reduce our environmental impact, we are investing in our facilities and systems to build eco-friendly practices and ensure compliance with environmental laws and regulations.

Areas of Focus	Unit	2016	2017	2018
Facilities Operation ¹⁾		322.1	86.5	377.4
System Operation ²⁾		95.9	253.3	407.8
Communication ³⁾	KRW million	181.5	229.2	327.6
New Environmental Project ⁴⁾		-	50.8	80.0
Total		599.4	619.8	1,192.8

- 1) Facilities Operation: refers to replacement with high efficiency facilities, investment in new facilities, and an increase in environmental facility investment e.g. R-600 eco-friendly refrigerant production line
- 2) System Operation: refers to IT development and operation, internal review, benchmarking, training, and verification. The investment was increased due to an increase in the external test cost and the advancement of a chemical control system for more production conformity validation.
- 3) Communication: response to regulatory demands, government projects, promotion/event/training, donations, social contributions, etc.
- 4) New Environmental Projects: external consulting, new renewable energy investment, etc.

• Natural Resources Used for Business Activities

Use of Materials

Category	Unit	2016	2017	2018
Non-renewable raw materials	Plastics(filter, 5 product groups ¹⁾)	10,017	9,123	10,100
	Metal ²⁾	5,096	4,398	4,537
	Packaging materials ³⁾	2,335	2,160	2,131
Total		17,448	15,681	16,768

- 1) 5 product groups: water purifier, air purifier, bidet, water softener, food waste disposer/filter: filter for water purifier and bidet
- 2) Theoretical weight applied
- 3) Paper box, plastics/protective films, EPS(cushioning materials)

Energy/GHG

• Energy Use

Use by Energy Source

Category ¹⁾	Unit	2016	2017	2018
Direct	Butane	0.4	-	-
	Diesel	265	276	114
	LNG	402	323	554
	Kerosene	250	432	225
	Propane	5,394	5,407	6,052
Direct total		6,311	6,438	6,945
Indirect	Electricity	101,543	103,205	106,441
Indirect total		101,543	103,205	106,441
Total		107,854	109,643	113,386
Intensity of energy consumption	GJ/sales (KRW 100 million)	4.89	4.72	4.73

1) Sources: JoongAng Ilbo Building(Seoul Office), Seoul National University Environmental Technology Institute, Cosmetics Research Center, Yugu Logistics Center, Production Plant
Data of the Water Environment Division(Woongjin Coway Entech) is excluded from the 2016 data due to company division.

• GHG Emissions

GHG Emissions(Scope 1, Scope 2)

Category	Unit	2016	2017	2018
Direct emissions(Scope1)		401	308	402
Indirect emissions(Scope2)	tCO ₂ e	5,261	5,012	5,170
Total emissions(Scope1+2)		5,662	5,392	5,572
GHG(Scope 1, Scope 2) emission intensity	tCO ₂ e/sales (KRW 100 million)	0.257	0.232	0.233

Other Indirect GHG Emissions(Scope 3)

Category	Unit	2016	2017	2018
Domestic logistics and transport(Scope 3)		4,795	5,047	5,420
Commuting vehicles(Scope 3)	tCO ₂ e	49	49	49

* Domestic logistics and transport operations are carried out through subcontracts, which are excluded from the emissions calculation and external verification.

GHG Emissions by Business Site

Category	Unit	2016	2017	2018
Yugu Plant		2,165	1,950	2,240
Incheon Plant		677	598	652
Pocheon Plant		387	359	187
Environmental Technology Institute(R&D Center)	tCO ₂ e	1,588	1,708	1,858
Cosmetics Research Institute		183	203	104
Seoul Office(JoongAng Daily Building)		382	287	239
Logistics Center(Yugu)		328	287	292

* The data was proven as of June 2018 due to the close down of the Cosmetic Research Center.

GHG Emissions from the Use of Refrigerants

Category	Unit	2016	2017	2018
R-134a Use of refrigerants in product manufacturing		52,340	46,580	49,230
R-600a, R-436B Use of eco-friendly refrigerants in product manufacturing	kg	950	800	3,220

Water Resource Management

• Use of Water Resources and Wastewater Discharge

Use of Water Resources

Category	Unit	2016	2017	2018
Industrial water		-	-	-
Underground water		26,086	26,084	21,962
Surface water	ton	54,405	45,901	49,385
Total use of water resources		80,491	71,985	71,347
Wastewater discharge		-	-	-
Water resource intensity	ton/sales (KRW 100 million)	3.651	3.102	2.987

Use of Water Resources by Business Site

Category	Unit	2016	2017	2018
Yugu Plant		40,083	37,879	34,501
Incheon Plant		16,711	6,482	4,401
Pocheon Plant	ton	146	134	509
Environmental Technology Institute(R&D Center)		19,358	22,597	26,045
Logistics Center(Yugu)		4,071	4,893	5,806

Resource Recycling

Waste Generation and Resource Recycling

Waste Generation by Disposal

Category	Unit	2016	2017	2018		
Products	Total	14,024	13,770	13,866		
	Incinerated	0	0	0		
	Buried	0	0	0		
	Recycled	14,024	13,770	13,866		
Services	Total	9,095	9,307	8,823		
	Incinerated	0	0	0		
	Buried	0	0	0		
	Recycled	9,095	9,307	8,823		
Work Site (Manu-facturing Process)	General	ton	Total	1,619	1,431	851
			Incinerated	104	160	157
			Buried	0	0	0
			Recycled	1,515	1,271	694
	Designated		Total	38	28	0
			Incinerated	0	0	0
			Buried	0	0	0
			Recycled	38	28	0
	Total		24,776	24,536	23,540	
	Waste recycled		24,672	24,376	23,383	
Recycling rate	%	99.6	99.3	99.3		

- 1) Waste generated in home wellness appliances(excl. cosmetics, mattress)
- 2) The recycling rate was changed due to a change in certain data for classification as incinerated/buried/recycled in the previous year.
- 3) Since 2016, all service waste has been used for SRF(Solid Refuse Fuel). Almost all waste generated at work sites are used for SRF
→ More than 99% of waste is recycled
- 4) Due to termination of the recycling operation at the Pocheon Plant in 2018, the product recycling is included in Coway's recycling business.
- 5) Due to termination of the recycling operation at the Pocheon Plant in 2018, the amount of waste was reduced.
- 6) Recycling Rate: Amount recycled/Amount of product and service waste

Sales of Refurbished Products

Category	Unit	2016	2017	2018
Water purifiers		9,165	4,267	1,757
Air purifiers		6,584	8,533	5,708
Water softeners	No. of units	1	-	-
Bidets		5,362	4,548	3,144
Total		21,112	17,348	10,609

Support for Global Initiatives



Joined the UNGC(United Nations Global Compact)

We joined the UN Global Compact(UNGC) in June 2006 to abide by the 10 principles in the areas of human rights, labour, environment and anti-corruption and to fulfill our role as a corporate citizen - a citizen who not only pursues its own growth, but also does its part in meeting and going beyond its social responsibility. This online sustainability report represents our commitment to becoming what we aspire to be.



Supports the UN Framework Convention on Climate Change at the COP21

Climate change is one of the major challenges of our time. Woongjin Coway wants to be a positive player in climate change, ensuring climate is kept on safe levels around the world for communities and environment. This demands important investments and collaborations. Woongjin Coway is the only Korean company which declared its support for the 'UN Framework Convention on Climate Change' agreed by 195 countries at the COP21 held in Paris in December 2015. We've been participating in the corporate voluntary carbon reduction plan scheme.



Selected as the Carbon Management Sector Honors

Woongjin Coway was selected as the Carbon Management Sector Honors by the CDP(Carbon Disclosure Project) Korea for ten consecutive years in recognition of its excellence in response to climate change.



Listed as the Dow Jones Sustainability Indices(DJSI) World

Woongjin Coway has been consistently named in DJSI Asia-Pacific since 2013. In particular, Woongjin Coway has been added to the DJSI World index for three consecutive years since 2016 and was highly acclaimed for responsible activities.



Sustainable Development Goals(SDGs) Implementation Declaration

Following the adoption of the United Nations Sustainable Development Goals(SDGs) that are replacing the Millennium Development Goals(MDGs), we will endeavor to develop and implement solutions to attain the SDGs, exploring new opportunities for sustainable growth. SDGs(Sustainable Development Goals) are a U.N. global initiative to be implemented from 2016 to 2030. It consists of 17 goals, pertaining to climate change, economic growth, and gender equality, and 169 targets.

About This Report

Overview

This report is a summary of the 14th '2018 Woongjin Coway Sustainability Report' for this year, and the full report is published online.

- Sustainability report site address is <http://sustainability19.coway.co.kr>, and it is available in Korean and English.
- The site is optimized for both desktop computers and mobile devices.(Responsive web Design)

Reporting Scope

Focusing on the head office in Seoul, research institutes and production plants Including overseas operations for a portion of the data.

Reporting Period

Jan. 1, 2018 - Dec. 31, 2018

To ensure there is enough data to provide comparable referencing, three years' worth(in some case five years' worth) of data was disclosed. In the case of quantitative activities related to core issues, activities conducted until 2019 were included.

Reporting Standards

Core option of the GRI Standards Guidelines and IIRC's Integrated Reporting Framework.

Reporting Assurance

This report received third party assurance for the audits of financial information through an independent audit corporation, while the non-financial information received third party assurance from Korea Management Registration(KMR).

Inquiry

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