

METAWATER REPORT 2020

The Fiscal Year Ended March 2020



METAWATER Co., Ltd.



I continue to stably operate water purification plants. So that the lifeline that is water can be protected.
METAWATER SERVICE Co., Ltd. O&M Division
Shinya Asano



Continue,
to make it sustainable.



We continue to be sincere in what we do.
We work on problems earnestly and strive to provide solutions.

We continue to collaborate with our partners.
We respect our partners and work to achieve with diverse knowledges, technologies and cultures.

We continue to innovate for the future.
We experiment in new ideas and take challenges.

To make sustainable what is truly important.



I continue to make suggestions to promote recycling in the future. So that we can continue to support a recycling-oriented society.
Service Solution Division
Yukihiro Yamazaki



I continue to passionately carry out research and development. So that I can make water better.
Business Strategy Division, R&D Center
Yusuke Hisamoto



I continue to offer sincere customer service. So that I can earn the trust of all those who use our waterworks.
Public Private Partnership Division Div., Regional Project Promotion Dept.
Arao Management Group
Masayo Yoshida



I continue to suggest the best technologies. So that I can ensure safe and secure water is the norm.
Plant Engineering Division
Masahiro Ito



I continue to make the most of my team's strengths. So that we can continue our climb to the top.
Business Strategy Division, R&D Center
Hirokazu Goto



Special website
Interviews and movies introducing the thoughts and efforts of various employees aiming for the realization of the corporate philosophy, "Continue, to make it sustainable."
<https://www.metawater.co.jp/zokuzoku/>



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Glossary

EPC	Design and construction of facilities and equipment
O&M	Operation and maintenance of facilities and equipment
PPP	A concept referring to an approach allowing the private sector to participate in projects related to public services offering in a wider sense. Improvement of efficiency and quality of services are sought by making positive use of private funds, technologies, know-how and management skills.
PFI	Comprehensive implementation of facility design, construction, maintenance, repair, etc., utilizing the capital and know-how of private businesses.
DBO	An approach using the know-how of private businesses to comprehensively implement facility design, construction, maintenance, repair, etc.
DB	An approach using the know-how of private businesses to comprehensively implement facility design and construction.
SPC	Companies whose purpose is to run specific business operations
PFI Act	An act related to the promotion of public facility improvement, etc. by making positive use of funding from the private sector and so forth.
Concession	An approach granting operating rights of public facilities that collect usage fees to a private business while the public entity maintains ownership.

Public-private partnerships are an unstoppable global trend moving toward next-generation water systems from a long-term perspective

Waterworks have moved from an era of installation and expansion to one of maintenance and renewal. Pursuing efficient and economical operation and maintenance that can respond to changes in the business environment, and the sustainability of a safe and secure water environment. It is our responsibility to provide that for future generations.

Nowadays, “gratitude” for waterworks is gradually being forgotten, instead being replaced with a sense of them being “a matter of fact”

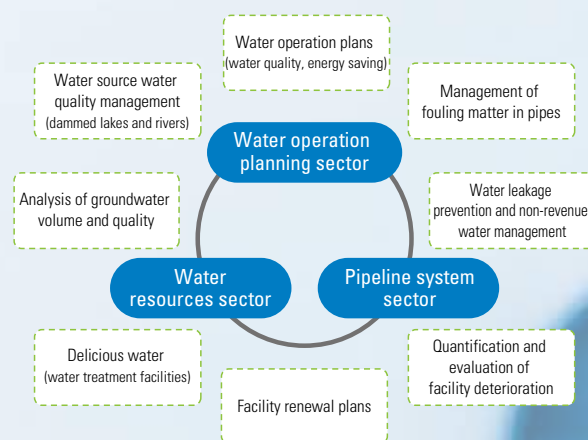
Our country’s waterworks have achieved a high level of coverage of 98%, providing a safe and stable water supply like no other in the world. I believe this is the result of the untiring efforts of water suppliers, forward-looking investments in facilities, and the development and innovation of new technologies. On the other hand, it can also be said that trust and cooperation on the part of citizens and local residents have helped to build the world’s highest level of water supply. However, recently when I hear about waterworks, it’s that their existence is “a matter of fact”, and that if there is even a slight problem, complaints will not stop. For example, in the past it was said that tea would be given out when work on water pipes was being done, but now it seems that with the quake-proofing work for pipelines being performed, it is not tea being served, but complaints. I believe that this is because the world is forgetting about the gratitude they should be having for waterworks in the first place. When I ask students who are just starting school at Tokyo Metropolitan University, they understand the value of tap water, but aren’t sure about any of the details behind it, including how it is normally purified and distributed, how used water is collected and purified once more, etc. I think this lack of understanding leads to a “virtual world” where we believe that our present conveniences will last forever, without any effort on our parts. This “matter of fact” thinking is not only showing the indifference residents have regarding waterworks, but is also a dangerous sign that gratitude is disappearing. Technology and research must always be moved forward in a positive way, as it is said that if you stop, you will start moving backwards. I think we are entering an era in which we are not satisfied with the current situation, and are taking new steps

toward the next generation. In other words, the 21st century is the time to rebuild our waterworks. To that end, industry, government, and academia must work together to integrate their superior technologies and ingenuity into a next-generation water system that is “for the benefit of the world and all its people”.

Cooperation among industry, government, and academia is essential for the realization of next-generation waterworks

It is said that waterworks assets amount to about 46 trillion yen, of which close to 70% are pipelines, or so-called water pipes, and which span approximately 680,000 kilometers throughout Japan. This corresponds to a distance of 17 revolutions around the Earth’s equator, and these pipelines must be properly renewed. Recent pipelines are manufactured with a lifetime of 100 years, so a renewal rate of at least 1% is necessary. However, at the current renewal rate of 0.75%,

[Fig. 1] Main themes of the Research Center for Water System Engineering



Source: Tokyo Metropolitan University Research Center for Water System Engineering pamphlet

Akira Koizumi

Distinguished Professor, Doctor of Engineering, and Professional Engineer (water supply and sewerage) for the Department of Civil and Environmental Engineering, Tokyo Metropolitan University. Born in Kanagawa Prefecture. After graduating from Tokyo Metropolitan University, he worked as a waterworks consultant for 10 years. He became a Lecturer at the Tokyo Metropolitan University Department of Engineering in 1980, an Assistant Professor in 1983, and a Professor in 1994. He has been a Professor in the Department of Civil and Environmental Engineering since 2005, a Distinguished Professor since 2012, and the Director of the Research Center for Water System Engineering since 2015. His specialty is water system engineering. He has experience serving on the government, the Japan Water Works Association (JWWA), the Japan Water Research Center (JWRC), and a number of water utilities.



it will take more than 130 years, which is far from acceptable. This will leave a “negative legacy” for the future.

Similarly, water treatment and water source facilities must be renewed in a timely manner and need to be robust enough to withstand disasters such as earthquakes and typhoons. Only when these facilities and pipelines come together can safe and delicious tap water be supplied.

Five years ago, Tokyo Metropolitan University established the “Research Center for Water System Engineering” with the aim of realizing a “next-generation water system” that could continuously supply safe and delicious water. The three pillars of the Center’s research are (1) water operation planning, (2) next-generation pipeline systems, and (3) next-generation water resource management. (1) covers topics such

as research on water treatment processes, an appropriate renewal plan for pipeline systems, and an investigation of deterioration factors in waterworks facilities. (2) covers preventive maintenance of water leakage accidents and control of tap water quality. (3) covers management of reservoir water quality and investigation of river catchments. The water supply field is closely related to all faculties in the university (not only engineering but also science, law, economics, sociology, psychology, international studies, etc.), and I believe it is truly a comprehensive academic field. [Fig. 1]

It is clear that the cooperation of industry, government, and academia mentioned above is essential to sustain and strengthen our aging and deteriorating water system for the future. [Fig. 2]

[Fig. 2] Prospective image of waterworks in the future



Source: Pipe Stars Project Report, Japan Water Research Center

Even if wide area waterworks management becomes possible thanks to the evolution of ICT/IoT technology and AI, “human power” remains important

In the late 1970s, when I was working as a consultant, I was in charge of a number of wide area water supply projects, and while I recognized the need to fully consider the history and climate of the target area, I felt the need for a “greater area that transcended prefectural boundaries” in terms of management and technology. As I encounter the exhausted reality of small- and medium-sized water supply businesses today, I am keenly aware of the need for wider area management. This is just one proposal, but if we focus on the technological capabilities of specific private companies (or JV is also possible), I believe it is possible to technologically monitor numerous small- and medium-sized waterworks.

For example, nearly 10 years ago I was surprised when I visited the waterworks in the suburbs of Melbourne, Australia. Seven water treatment plants scattered across a vast water supply area were being remotely controlled and operated by a single private engineer on an iPad. As ICT and IoT technologies continue to advance along with the evolution of AI, we are entering an era in which a wide range of areas can be managed. With the latest technology from private companies, waterworks management for large areas is no longer just a dream. Needless to say, however, it is necessary to improve the various laws and institutions and make efforts to connect the world of fiction with the world of reality. In this area, you may find management points where private companies can play an active role.

Waterworks are systems with their feet firmly planted to the ground, and we have no choice but to rely on human power in cases of emergency construction, disasters, etc. In the future, this work may be replaced by robots, but ultimately the premise of “human power” cannot be eliminated. I believe that perspective of “human power” will become especially important in Japan. What underlies this is the “human heart”, which sincerely addresses the ideal form of “sustainability” for waterworks in each region. For an advanced example of this, look at the Hachinohe Regional Water Supply Authority in Aomori Prefecture, known for adopting earthquake-resistant

pipes for the first time in Japan. They are searching for a new wide area cooperation that covers not only the Hachinohe area as a wide area water supply, but also the northern area of Iwate Prefecture, crossing prefectural borders. Alternatively, the introduction of private-sector participation in the water supply business in Aizuwakamatsu City, which I assisted with from the planning stage, is centered on collaboration between companies with outstanding water treatment technologies and management capabilities, and local companies that are well-versed in local conditions. This “Aizuwakamatsu method” has attracted nationwide attention and is the new “wisdom” created by human power and the human heart.[Photo 1]



[Photo 1] Takizawa Water Treatment Plant in Aizuwakamatsu City

It is important to not only sell things, but to train people when providing overseas support

Many companies are turning their attention to overseas water business, but there are various risks involved in working overseas, and a perfect batting average is just not possible. I think that normally, Japanese companies should be responsible for the ODA budget, but in reality, often times it is foreign companies who are responsible for this.

Two years ago, I had the opportunity to visit the waterworks for the Republic of Rwanda (formerly a Belgian territory), located in East Africa. At a water treatment plant in the capital city of Kigali, an instrumentation facility was installed by a Turkish company and controlled using the latest equipment, known as a SCADA system. However, the water surface of the clarifier

was undulating, and the turbidity of the water treated in the sedimentation tank was high, placing a heavy burden on the subsequent filtration tank. Meanwhile, workers were sweating over low wages due to the staggering labor gap, while highly educated, high-income “high class” operators made decisions based only on inaccurately measured numbers, without ever looking at the site itself. [Photo 2]

This is just one example, but we often see water technologies that took us 100 years to grow being introduced in emerging countries in a sudden leap. In other countries, despite frequent blackouts on a daily basis, I have seen water treatment plants that are “fully automated” yet are unable to fulfill their original functions. Going from 0 to 100 isn’t feasible, as things



[Photo 2] Nzove Water Treatment Plant in Kigali (photo by author)

generally need to develop over time, but those in charge seem to always want the latest cutting-edge technology. For the sake of the community, I believe that it is important to introduce a system appropriate for the actual situation with courage and conviction.

One example of this is the “MaWaSu”, the Project for Improvement of Management Capacity of Water Supply Sector, with the aim of improving the management capabilities of Water Supply Authorities in Laos. “MaWaSu” provides technical assistance in close proximity with local engineers, and I think this is what our country should be doing. In other words, I believe that the most important aspect of technical assistance regarding waterworks is not just selling things, but training people first.

Expect management and optimal investments from private companies, and opportunities for young people involved in waterworks to play an active role

The worldwide trend toward public-private partnerships is unstoppable, and will further increase with the passage of time. With this, the work traditionally performed by the public will instead be done privately, but I urge us to place great importance on the feeling that “waterworks are for the benefit of the world and all its people”. I also hope that we will continue to put forth effort to develop technology and implement various ideas. To that end, it is important to work together with a long-term perspective to the greatest extent possible, and I hope that a mentality of cutting corners and providing cheap products driven by a desire for short-term profits will not prevail.

The elements of a water system are diverse and sustained based on multifaceted assessments. The unit of time for this must be considered from a perspective of at least 100 years, or even 1000 years in some cases. Up to now, I’ve been saying that the public side considers water resources and pipelines on a 50- to 100-year-plus basis, while the private side pursues the efficiency and economics of facilities such as water treatment plants on a 10- to 20-year basis, believing that public-private partnerships would combine the best of both worlds.

In the future, expectations will be placed on private companies not only from the perspective of construction, operation and maintenance, but also from the perspective of management and optimal investment based on renewal.

Furthermore, it is important to give opportunities to the next generation of young people who are interested in the field of water supply and carry out public relations activities in which young people want to be involved. Education and research on the waterworks at universities and high schools are of course necessary, but I am looking forward to the arrival of an era in which water supply-related fields grow significantly and young people will be able to play an active role in supporting future water systems.

Top Message

Water supply and sewage works are essential for preventing the spread of novel coronavirus infections.

The METAWATER Group is committed to sustaining the water and environmental infrastructure that is indispensable to people's lives.

Yasushi Nakamura

President and Representative Director

Before being designated as the President and Representative Director in June 2016, he experienced a series of management positions in the Plant Engineering and Service Solution Divisions, as well as accepting the role of Executive General Manager of the Corporate Strategy Planning Division. He has been engaged as a key member of the development of the Water Business Cloud (WBC), and is well versed in business execution in a wide range of fields supported by his affluent experience.

In April 2008, the METAWATER Group was established as the first comprehensive engineering enterprise in Japan engaged in the water and environmental fields. Since then, we have worked as a corporate group engaged in the social infrastructure indispensable to industries and people's lives, promoting the fusion of mechanical technology, electrical technology, ICT, and operation and maintenance know-how, to develop our water, sewage, and resource environment (waste recycling) businesses. Much of Japan's water and sewage infrastructure was developed during a period of high economic growth, and the aging of these facilities and equipment is becoming more serious. Measures to protect against natural disasters such as earthquakes, torrential rains, and typhoons, which have been occurring frequently in recent years, are also a major issue.

Additionally, the global spread of the novel coronavirus since January 2020 has increased the role water supply and sewage works play, which are a cornerstone of public health. However, local governments that plan and operate water and wastewater business are having problems of their own, such as a shortage of engineers and a decreased income due to a declining population.

In order to solve these issues, wider area management and further comprehensiveness through public-private partnerships (PPP), which have been examined up to now, are now moving from the examination stage to the implementation stage, including legal development. Our Group has been steadily building up its track record, developing technologies that make use of ICT, etc., and formulating concrete codes of conduct that can be shared by all Group employees. We are finally ready to move on to concrete measures. We will continue to make sincere efforts to become a corporate group that can be entrusted with social infrastructure with peace of mind and contribute to the sustainability of water and environmental infrastructure, which is essential to people's lives. We will also contribute to the United Nations' "Sustainable Development Goals (SDGs)*1" through both business and CSR activities.

We will continue to implement bold measures to respond to the rapidly changing business environment.

The business environment surrounding us is undergoing major changes. Aging facilities and equipment are being renewed, measures against natural disasters are being taken, and the business continuity of water and environmental infrastructure is becoming increasingly more important as a cornerstone of public health. In response to these changes, our Group is strengthening our corporate structure in order to realize our long-term vision of 200 billion yen in sales, through the implementation of the "Mid-Term Management Plan 2020" (April 2018 to March 2021).

Under the "Mid-Term Management Plan 2020", in addition to conventional development investments, we will implement development of products, solutions, and new businesses as "strategic development investments" that are essential for medium- to long-term growth. As part of our business strategy, we are capturing replacement demand and reinforcing the Engineering, Procurement and Construction (EPC) business, while at the same time steadily increasing the Operation and Maintenance (O&M) business, which is one of our stock businesses. We are also working to expand our PPP and overseas businesses, which are growth areas, through regional and partner strategies that capitalize on our achievements thus far. Regarding the PPP business, the implementation of the "revised Water Supply Act" in October 2019 is expected to increase the number of further comprehensiveness projects as well as the demand for wider area management projects represented by concessions. The METAWATER Group has participated in about half of the approximately 60 PPP projects in the water supply and sewage field, and has been involved in a variety of further comprehensiveness projects. Looking ahead to the full-scale implementation of wider area management projects in the

future, we will further promote reductions in construction costs and improvement of operation and maintenance efficiency through the incorporation of cutting-edge technologies such as AI and ICT in addition to the "three centers" centered around the "Training center for facility operators", "Supply center for parts", and "Knowledge center". In addition, we will contribute to the sustainability of water and environmental infrastructure through "WOODAP^{*2}", our original concepts for design, construction, operation, and maintenance centered around quick recovery of water and sewage facilities in the event of a disaster.

As for our overseas business, in addition to the German company FUCHS^{*3} joining our Group in May 2019, the American company Wigen^{*4} joined us in April 2020. As a result, in North America, AAS^{*5}, which offers wastewater solutions, and Wigen, which offers water supply and reclaimed drinking water solutions, have joined forces to strengthen our business platform. In Europe, we are expanding the use of filtration technology in response to the strengthening of environmental regulations. In Asia and other regions, we will continue to address local needs through means such as the use of ODA^{*6}.

On the capital policy front, in November 2019, we acquired 4.2 million shares of our company stock held by NGK INSULATORS, LTD. and Fuji Electric Co., Ltd. (2 million shares from NGK and 2.2 million shares from Fuji Electric) through a tender offer, and increased our year-end dividend forecast for the fiscal year ended March 31, 2020 to 40 yen per share, enhancing capital efficiency (ROE) and returning profits to shareholders.

We have also been promoting further work style reforms, such as by improving the telework environment and shortening scheduled working hours. In the future, as a second stage we will work to reform the work flow and create a working environment where employees can actively work with a high level of productivity.

We aim to be a company that can contribute to the SDGs as a water and environmental infrastructure company.

The METAWATER Group is the first water and environmental infrastructure company to be classified as a "electric power and gas" on the Tokyo Stock Exchange by industry, and our business activities themselves play a role in CSR. We also believe that as a good corporate citizen it is our responsibility to continue to be a fair and sincere company and to contribute to the sustainable development of society and the global environment through both our CSR and business activities. To this end, in light of the expectations of our stakeholders and changes in society and the business environment, we will strengthen and sustain our ESG (Environment, Social, and Governance) initiatives to become a company trusted by all.

With regard to the environment, we are promoting environmental protection and conservation activities through our business activities. Regarding society, we are promoting work style reforms and diversity based on the idea that "people are our greatest asset". We are also promoting initiatives for safety, health, and quality, as well as environmental awareness and community contribution activities. As for corporate governance, we are working to enhance the efficiency and strength of our management structure, including compliance with the Corporate Governance Code, and strengthen risk management, including achieving more thorough compliance and strengthening internal control functions, BCP^{*7}, and information security. We are also aiming to achieve highly reliable and transparent management through active communication with stakeholders in accordance with our Disclosure Policy. Of the 17 SDGs, we have positioned Goals 6, 11, and 17 as priority areas. We take the "for all" part of Goal 6, "ensure availability and sustainable management of water and sanitation for all" seriously, aiming to create a

community where everyone has access to clean water and sanitation, and can continue to live with comfort and peace of mind. We believe that these efforts can only be achieved through "partnerships" with citizens, local governments, partner companies, and local companies all working together. We will continue to consider and promote concrete measures to achieve these three goals of the SDGs.



In-vehicle ceramic membrane filtration system



Delivering mobile water purification systems to emerging countries in Asia and Africa to ensure a safe water supply even in the event of a natural disaster



SDGs the METAWATER Group is focusing on

"Mid-Term Management Plan 2020"

Establishing a business structure capable of realizing our long-term vision

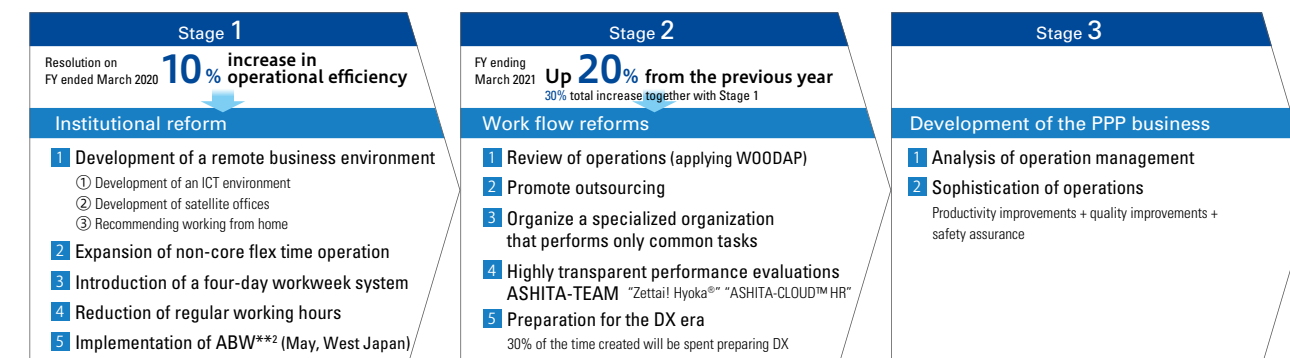
Key measures	
1 Expanding strategic development investments	Enhancing development of products, solutions, and new businesses that are essential for medium- to long-term growth
2 Strengthening and expanding business	Promoting efforts to strengthen core areas and expand growth areas
3 Engaging in continued ESG initiatives	Promoting activities that contribute to the environment and local communities, as well as actively strengthening corporate governance

Goals of the Mid-Term Management Plan

(Consolidated)	FY ended March 2019 (Results)	FY ended March 2020 (Results)	FY ending March 2021 (Targets)
Orders received	123.8billion yen	125.0billion yen	140.0billion yen
Sales	117.3billion yen	128.7billion yen	130.0billion yen ^{**1}
Operating profit	7.6billion yen	8.2billion yen	9.0billion yen
Net profit	5.2billion yen	5.7billion yen	6.2billion yen
ROE	9.1%	10.5%	10.0% or more

^{**1} On April 27, 2020, forecast sales for the fiscal year ending March 2021 were revised from 128.0 billion yen to 130.0 billion yen

Promotion of work flow reforms



^{**2} ABW (Activity-Based Working): A system for improving performance by selecting a work place according to the work content and purpose (Refer to Topics on page 46 for details)

Top Interview

Working toward sustainable water and environmental infrastructure

Yoshiharu Izumi, who is currently working as an analyst, conducted an interview with President Nakamura via video conference, asking about the progress of the “Mid-Term Management Plan 2020” and METAWATER’s initiatives toward achieving its goals for the final year of the plan.

Yasushi Nakamura

METAWATER Co., Ltd.
President and Representative Director



Yoshiharu Izumi

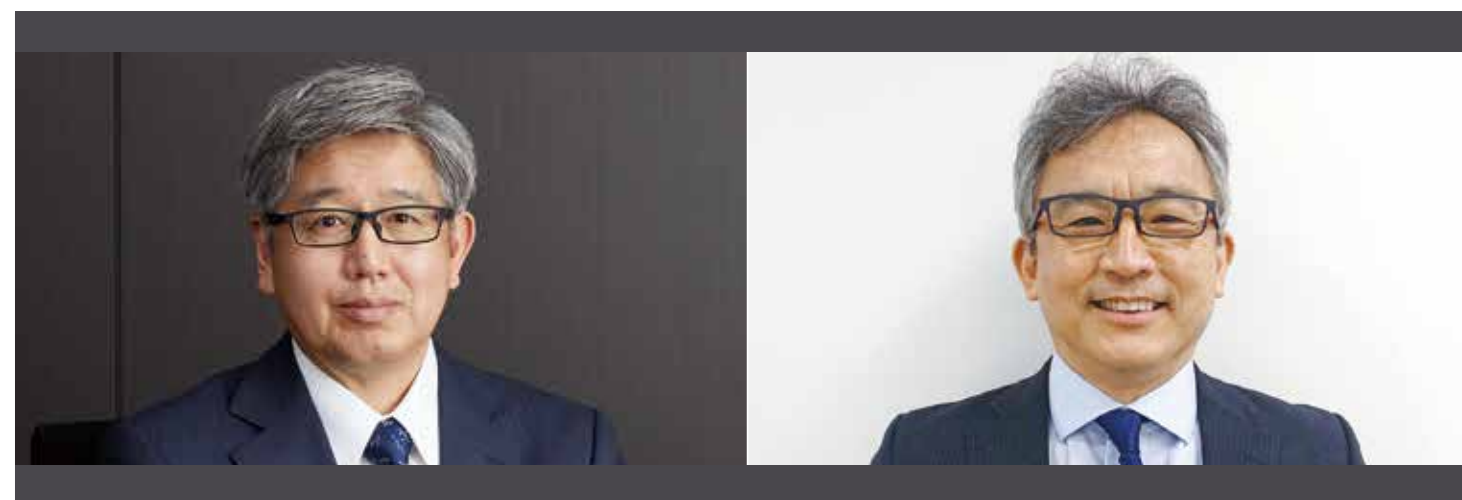
Corporate Research Department, SBI SECURITIES Co., Ltd.
Senior Analyst

— The fiscal year ended March 2020 was the second year of the “Mid-Term Management Plan 2020” (FY ended March 2019 to March 2021). Could you summarize the company’s performance for this important period?

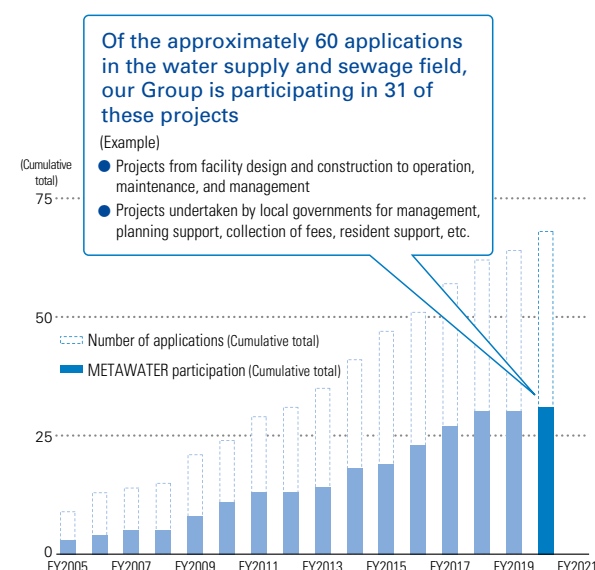
The long-term vision of the “Mid-Term Management Plan 2020” is achieving sales of 200 billion yen. To accomplish this, companywide we are focusing on key measures: (1) strategic development investments such as the development of new products and incorporating cutting-edge technologies such as AI and ICT, (2) business strategy (strengthening core areas and expanding growth areas), and (3) engaging in continued ESG initiatives.

For the fiscal year ended March 2020, our second year, sales increased favorably in both the PE business (domestic EPC, overseas) and the SS business (O&M, PPP). As for profit, after making the strategic development investments as planned, we achieved increases in operating profit, ordinary profit, and net profit. Both sales and profits were generally in line with the forecast (October 29, 2019). Orders received for waste recycling facilities were strong, exceeding both the previous fiscal year results and the forecast, and the order backlog remained at a high level.

In the fiscal year ending March 2021, the final year of the plan, in addition to an increase in sales, we expect an improvement in profitability due to an increase in the number of highly profitable completed projects and a reduced impact from low-gross margin projects. We will continue our company-wide efforts to achieve the plan.



Trend regarding number of PPP project applications and participation by our company in the water supply and sewage field



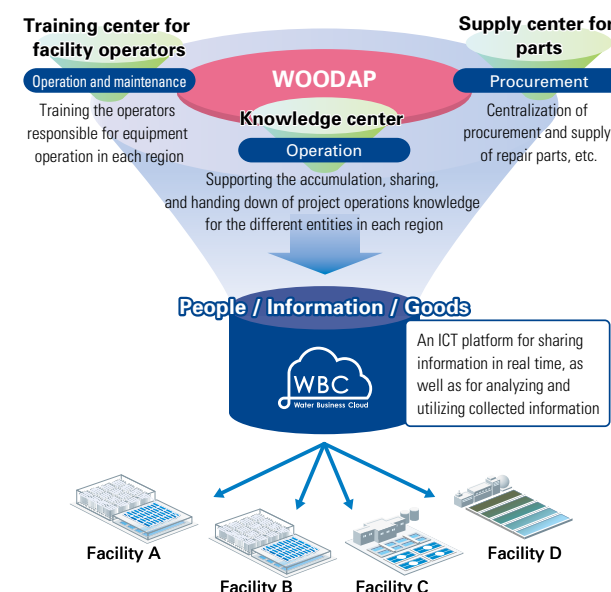
— What can you tell us about efforts regarding PPP (public-private partnership) projects, which are areas of growth?

Two concessions are currently under way: the “Miyagi

Prefecture integrated water supply, industrial waterworks, and sewage public-private partnership management project” and the “Kumamoto Prefecture Ariake/Yatsushiro industrial waterworks operation project”. These two projects are important for predicting whether PPP will accelerate in this field or whether the current situation will continue for the time being.

The Group has involved in a number of further comprehensiveness projects, including some where we have been entrusted with everything from the design and construction of facilities to their operation and maintenance, as well as others where we provide services traditionally undertaken by the local governments, including management and planning support, collection of fees, and resident support. In anticipation of the full-scale implementation of wider area management projects, in addition to establishing the three centers, “Training center for facility operators”, “Supply center for parts”, and “Knowledge center”, we are working on reducing construction costs and improving operation and maintenance through the incorporation of cutting-edge technologies such as AI and ICT. In addition, our company has established a unique code of conduct called “WOODAP”, dealing with design, construction, operation, and maintenance centered around quick recovery of water and sewage facilities in the event of a disaster. By establishing a concrete code of conduct that can be shared by all Group employees, we are finally ready to enter the PPP market, which we have been aiming for since the company was established.

Mass benefit management corresponding to “wider area management + further comprehensiveness”



—What kind of method is WOODAP?

Together with PDCA (Plan, Do, Check, Action), which has traditionally been regarded as a problem-solving process, OODA (Observe, Orient, Decide, Act) has recently attracted attention. This method starts with observing the site (Observe), identifying the situation and guiding the direction (Orient), making a quick decision (Decide), and executing

(Act). It was originally used during war, especially on the front lines where the situation was constantly changing, so that soldiers could respond quickly by making decisions on the spot based on thorough observation, instead of needing to wait for approval from headquarters each time. "WOODAP" is "W + OODA + P", with the "W" standing for Wisdom and effort, and the "P" standing for Preparation. OODA is sandwiched between "wisdom" and "preparation". A timeline with clear goals are set, and preparations are made to achieve them. It is necessary for everyone to share their wisdom so that accurate decisions can be made on site in an emergency and preparations can be made for a solution. For example, let's assume a meter of flooding caused by a catastrophe. Recalling past experience with

disasters of a similar scale, we set a recovery timeline of three days and then train for this situation over and over again. As individual issues pop up in training, such as "What about electricity?", "What about piping?", or "What about the operators?", the results of OODA training, primarily the "Observe" aspect, are reflected in the next iteration of training. The concept is to link the large, slow PDCA cycle of the Head Office with the OODA loop, which enables a site to act promptly, by "picking out the best parts". In addition, activities for considering the ideal way to implement these so-called "high-speed recovery" operations expand beyond the framework of operations to include design and construction as well. This is reflected in questions such as "What should be standardized?", "What should

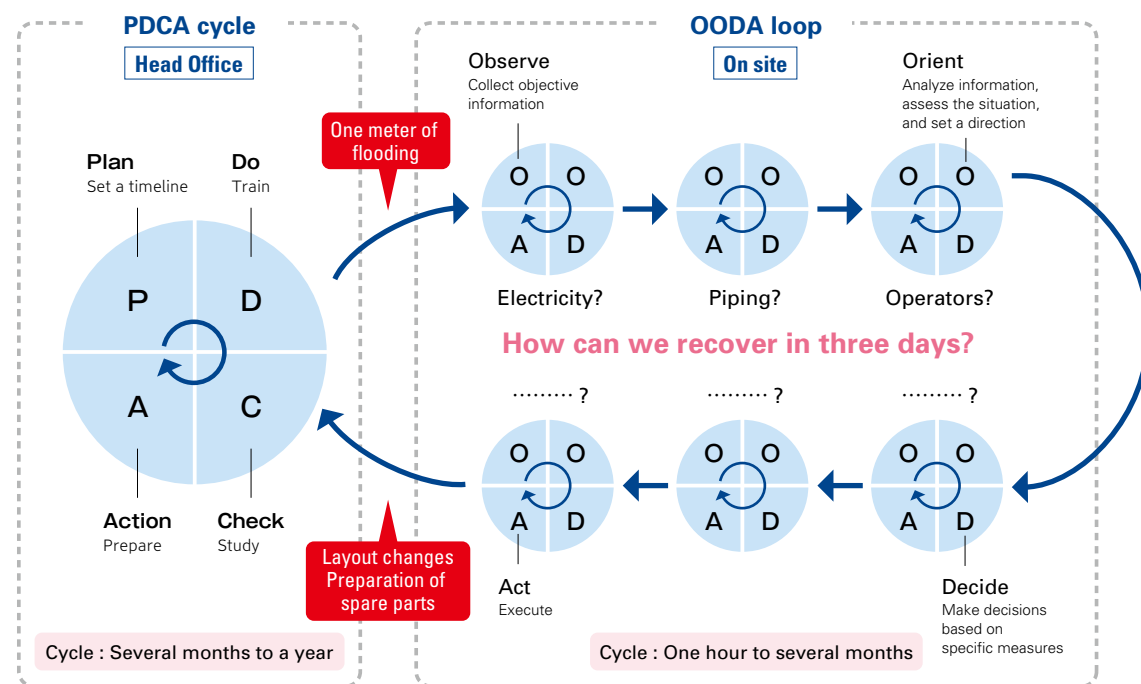
be reconstructed next?", and "Should spare parts be kept individually or at a parts center widely?", from a perspective of flexible resilience, which focuses less on "How can we prevent it from breaking?" and more on "What should be done for immediate recovery if it does break?" With the progression of PPP, we would like to respond to the concerns of citizens and the question of "Can we leave water to the private sector?" by clarifying our code of conduct. That code of conduct is "WOODAP".

— What can you tell us about initiatives in the overseas business, another area of growth?

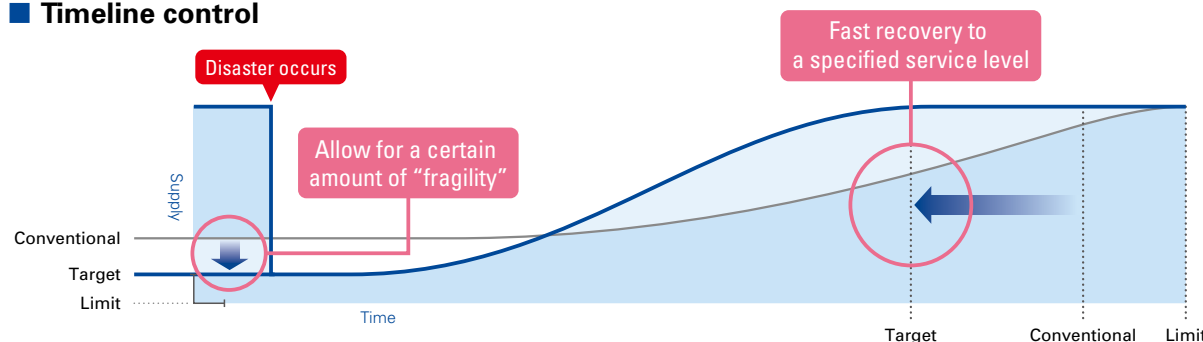
While the METAWATER Group's aim in Japan is "comprehensive strength", covering everything from design and construction to on-site operation and management regarding water and sewage systems, our aim overseas is the pursuit of "Deep Technology". As the Group still lacks a track record of "comprehensive strength" in Japan, we are unable to implement strategies that take advantage of our track record, as the overseas "Water Majors" corporate group does. With the current situation, we believe that it is important to compete with technological capabilities that quickly lead to high evaluations in order to build up achievements overseas and raise awareness. Of all our technological capabilities, we will focus on filtration

(removing impurities from water), demonstrating our value through the filtration technology. The METAWATER Group calls this the "Remove strategy" and allocates management resources in a graded manner. The reason why we are focusing on filtration technology is because of our unique "ceramic membrane". Rather than lifting up our weaknesses to be on par with others, we want to maximize our strengths so that they can't be imitated. We want people all over the world to rely on us, so that when they think "I want to get something out of the water", they think "Let's talk to METAWATER." As such, we have inevitably decided to focus on M&A in promoting "Deep Technology" and the "Remove strategy". In addition to incorporating the U.S. wastewater treatment engineering company Aqua-Aerobic Systems (AAS) into our Group, in May 2019, we added the German company FUCHS Enprotec (FUCHS), and in April 2020, we added the U.S. company Wigen Companies (Wigen) to our Group as well. FUCHS has strengths in the development, design, and manufacture of air diffusers and agitators for wastewater treatment, while Wigen specializes in the development, design, and manufacture of water treatment equipment such as membrane treatment and ion exchange. As a result, the Group now has a strong sales channel covering the entire United States and we are able to respond to a wider range

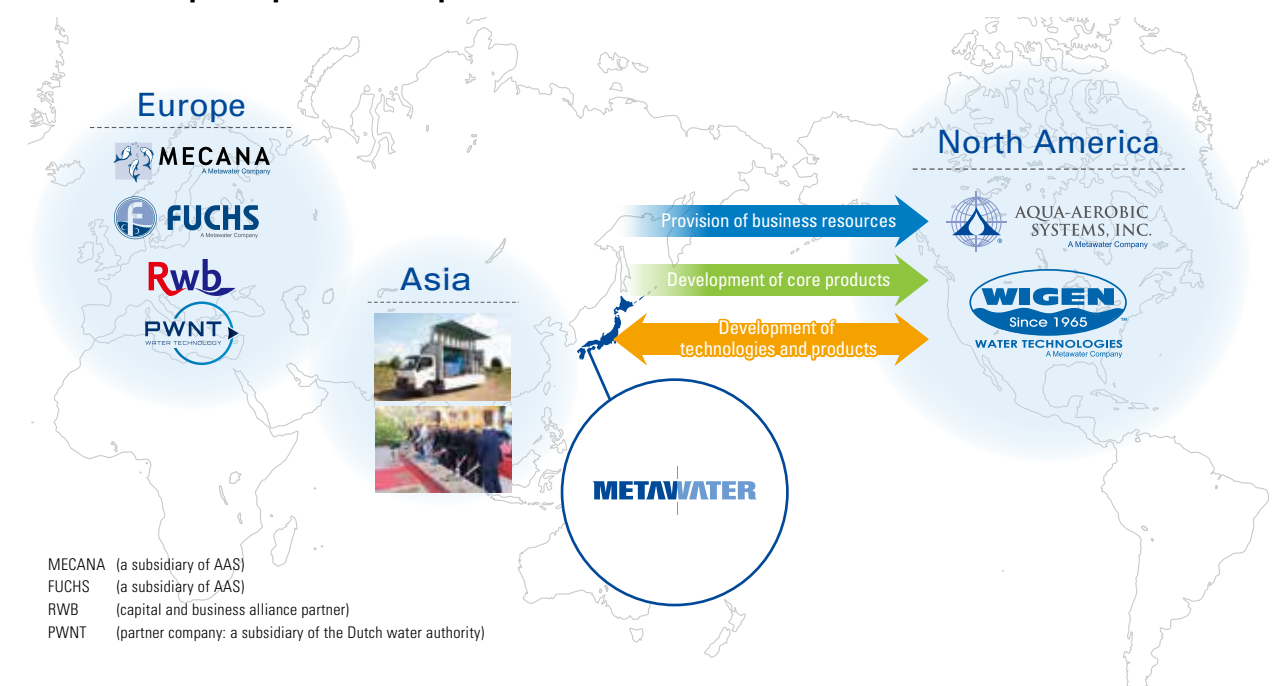
■ Linking the PDCA cycle and the OODA loop



■ Timeline control

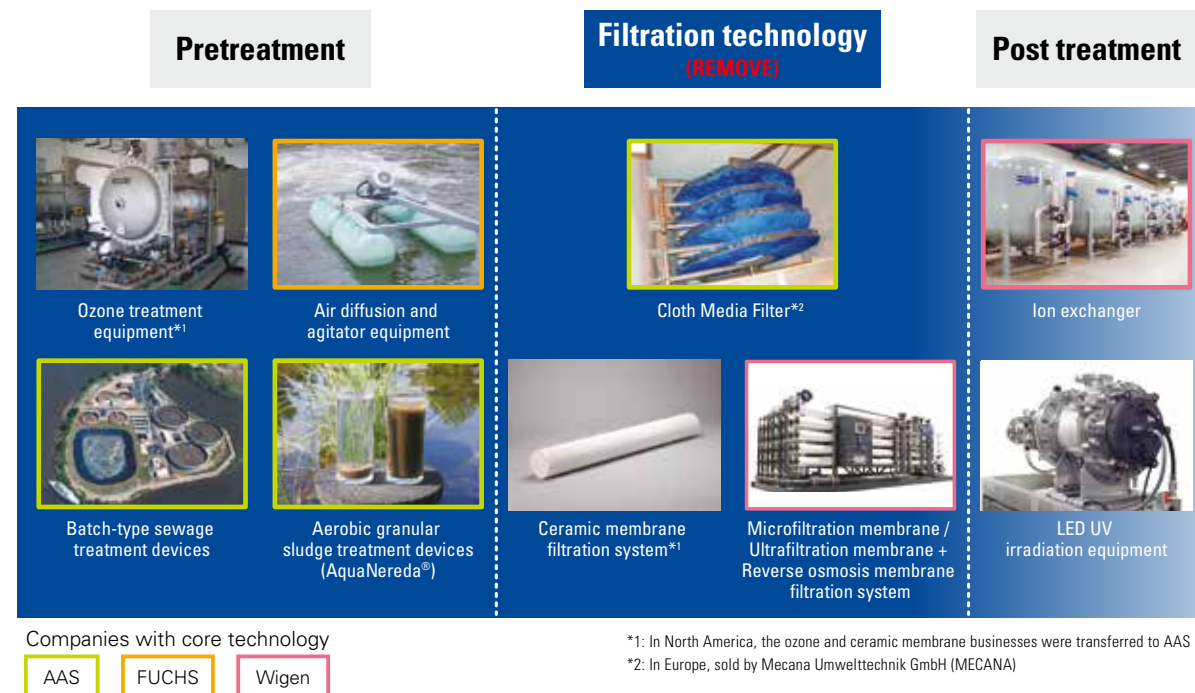


■ Our Group and partner companies in the overseas business



MECANA (a subsidiary of AAS)
FUCHS (a subsidiary of AAS)
RWB (capital and business alliance partner)
PWNT (partner company: a subsidiary of the Dutch water authority)

Core technologies possessed by AAS, FUCHS, and Wigen



of customer needs by mainly using our strength in filtration technology to handle advanced water treatment processes such as reclaimed wastewater. Although the United States is a large market with 40 billion dollars in annual water supply and sewage related investment and has numerous competitors, many of their facilities are aging and there is great potential for the Group's equipment and facilities to be installed. We will work to achieve steady growth with AAS as a base, and through Wigen we will devise new growth strategies to build a foundation for the field of reclaimed drinking water.

In Europe, the market is expanding due to population growth, and environmental regulations are being tightened, requiring more advanced water treatment process than ever before. The Group will further strengthen our collaboration with partner companies, led by Mecana Umwelttechnik GmbH (MECANA), a subsidiary of AAS, and the newly added FUCHS, in order to expand the applications of our proprietary technologies such as ceramic membranes and cloth media filters. Demand for water supply and sewage systems is also increasing in Asia and other regions. We are promoting initiatives related to infrastructure development projects in Asian countries utilizing ODA (Official Development Assistance).

Overseas, there are several major companies that offer a comprehensive range of services, from water infrastructure facilities to operation services. Chinese and South Korean companies are also expanding their businesses, taking advantage of their low-costs. The Group, however, aims to expand business by emphasizing the "Remove strategy" and "Deep Technology", while ultimately aiming for business expansion in the unique direction of "strong and flexible comprehensive social infrastructure", which is something that can only be achieved by Japan, having experienced the Great East Japan Earthquake.

—What is METAWATER's approach to the SDGs advocated by the United Nations?

In Japan, there is a saying, "Sanpoyoshi (Good for the buyer, good for the seller, good for society)". It means that not only is the buyer and seller happy, but society (the whole world) is happy as well. At the METAWATER Group, we consider CSR to be a modern version of "Sanpoyoshi".

We believe that supporting social infrastructure, such as the water supply, sewage works and waste recycling, contribute to both our customers and citizens as a whole. I am confident that every one of our employees is conscious of CSR, naturally practicing "Sanpoyoshi", building up a steady

track record, and disseminating information, which will lead to trust in our Group. We believe that developing this way of thinking will contribute to the sustainable growth of the world as a whole and lead to the realization of sustainable growth as a company. As such, we are positioning three of the Sustainable Development Goals (SDGs), which are advocated by the United Nations, as priority areas.

One specific initiative is the development of a membrane filtration system called the "CPCM (Container Package Ceramic Mobile)", which is packaged with our ceramic membrane.

The idea is to make it possible to move water treatment plants (facilities), which are a part of the social infrastructure, like the Marunouchi Line trains that were once active in Tokyo and are now active in emerging countries. As one measure against the frequent occurrence of natural disasters in recent years, CPCM will be introduced in medium and large cities, and later, they will be used as normal water treatment facilities in small cities and emerging countries. We are proposing sustainable social infrastructure through large loops such as this.

SDGs being focused on



We will strive to achieve the SDGs by ensuring access to clean water and sanitation for all people and creating a community where everyone can continue to live with comfort and peace of mind, through partnerships with partner companies, citizens, local governments, and local companies all working together.



—Lastly, what is your message to shareholders, investors, and other stakeholders?

With the spread of the novel coronavirus, drinking water (water supply) and sanitation (sewage) are being reconsidered as cornerstones of public health. As stated in Goal 6 of the SDGs, access to "clean water and sanitation" will become even more important as the world moves forward. Contributing to the development of a prosperous and sustainable society has been and will continue to be our mission. We have renewed the belief that we must further focus our efforts on this.

We are also actively engaged in activities aimed at reducing environmental impacts and contributing to local communities as part of our "ESG" initiatives. The METAWATER Group will continue to cooperate with local governments, local residents, and our domestic and overseas partners in business operations to contribute to the sustainability of water and environmental infrastructure around the world. We look forward to your continued support.

*Environment, Social, Governance

Analyst Comment

"Expectations for METAWATER" - Becoming a globally attractive company -

Senior Analyst, Corporate Research Department,
SBI SECURITIES Co., Ltd.

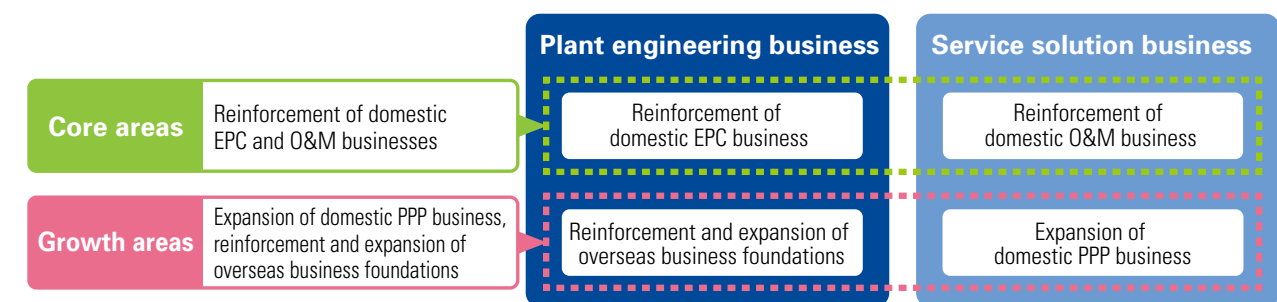
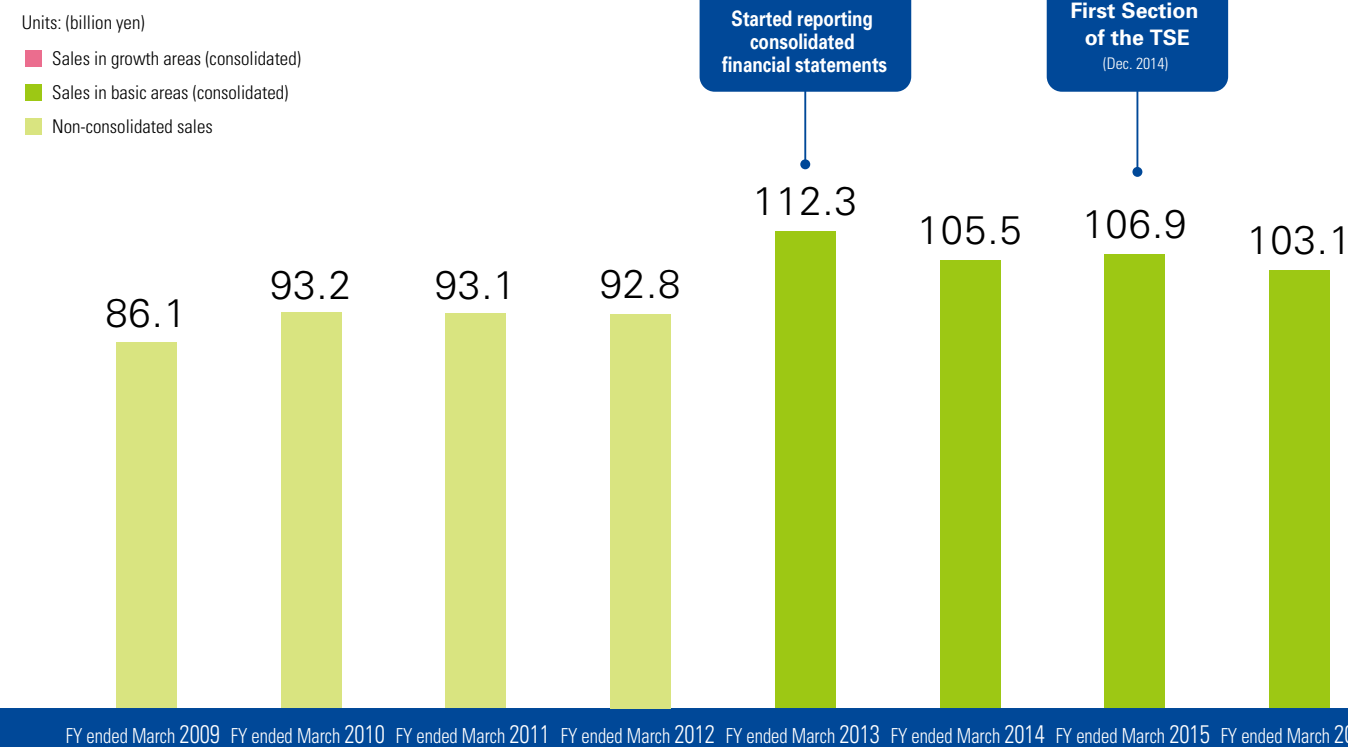
Yoshiharu Izumi

Water infrastructure is important, and is required by everyone on Earth. In developed countries, the challenge is to maintain and renew aging existing facilities without delay. On the other hand, emerging countries face challenges such as expanding water demand due to population growth and needing to deal with water pollution. I expect that METAWATER will be able to use the know-how it has cultivated up to now to solve these problems. For this reason, I would like for them to become not only a top-class water infrastructure company in Japan, but a company that attracts attention from around the world. In this sense, the long-term vision of achieving sales of 200 billion yen in the fiscal year ending March 2028 is an important milestone. I will be closely watching whether they can win orders for large-scale PPP projects and realize mergers and acquisitions both in Japan and overseas without damaging their financial base.

Achieving our long-term vision

In the future, major environmental changes are expected in the domestic water and sewage market, including a further increase in the number of projects for further comprehensiveness and a growing demand for wider area management represented by concessions. In anticipating these changes, in April 2018 the METAWATER Group formulated the "Mid-Term Management Plan 2020" (FY ended March 2019 to FY ending March 2021) to strengthen our corporate structure. For the "Mid-Term Management Plan 2020", we are capturing Japanese demand for renewal of water and sewage facilities and reinforcing the domestic EPC business, while at the same time steadily increasing a stock business, the O&M business. We are also working to achieve our long-term vision by expanding the domestic PPP business, which is positioned as a field for growth, and reinforcing and expanding overseas business foundations through regional and partnership strategies.

Changes and targets for sales



"Mid-Term Management Plan 2020"

(FY ended March 2019 to FY ending March 2021)

Targets (consolidated)

● Sales	140 billion yen	● Net profit	6.2 billion yen
● Orders received	130 billion yen*	● ROE	10.0% or more
● Operating profit	9 billion yen		

*Revised in the announcement of financial results for the fiscal year ended March 2020

117.3 128.7 130.0 (forecast)



History



Highlights of consolidated financial results

Summary of operating results for the fiscal year ended March 2020

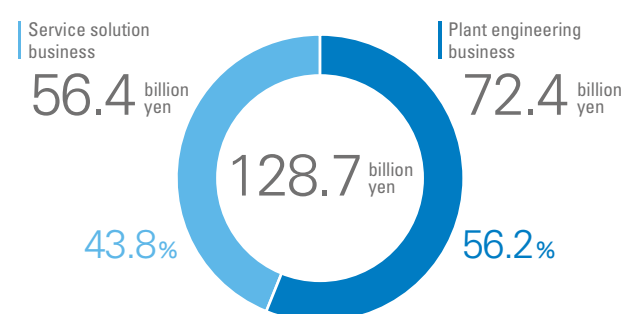
Profit and loss

- For the year ended March 2020, the second year of the "Mid-Term Management Plan 2020", in addition to contributions from sales of projects with long delivery periods that had already been ordered and increases in completed projects of highly profitable construction, we achieved increases in operating profit, ordinary profit, and net profit after implementing strategic development investments for the future.

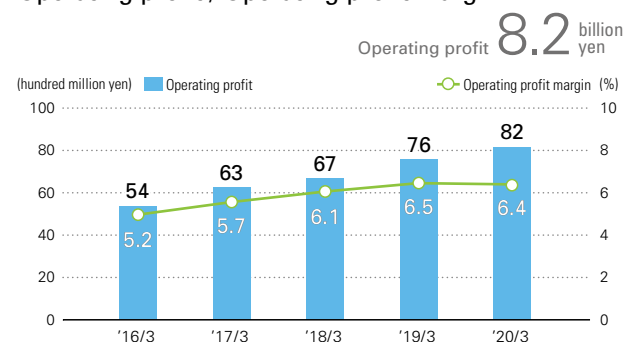
Financial

- The acquisition of the Company's shares held by NGK Insulators, Ltd., and Fuji Electric Co., Ltd., through tender offers in November 2019 led to a decline in net assets for the fiscal year ended March 2020, but the equity ratio remains high.
- "Current earnings per share", which is an indicator for profitability and growth analysis, has been showing an increasing trend. "Book value per share", which indicates stability, continues to increase as well.

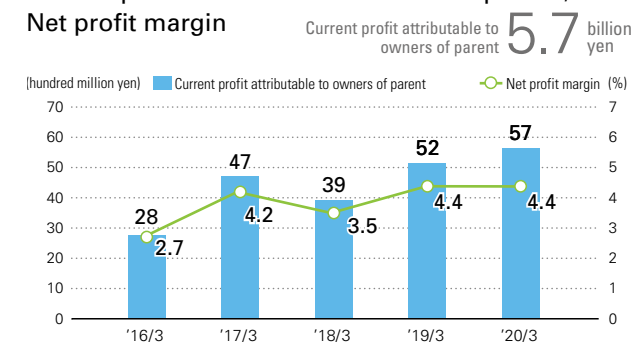
Sales composition (FY ended March 2020)



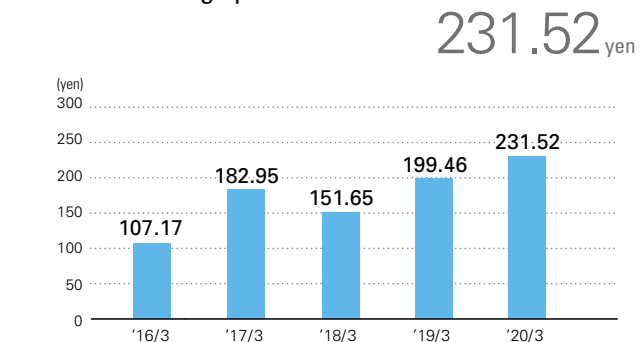
Operating profit / Operating profit margin



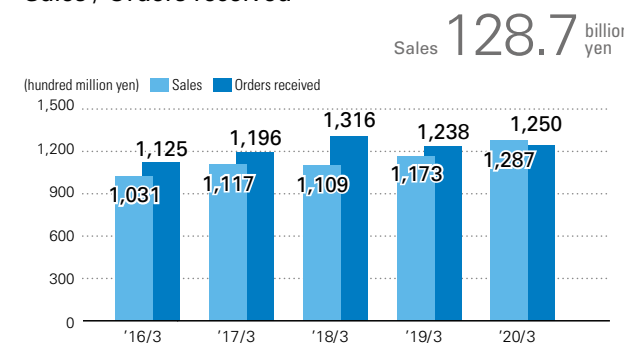
Current profit attributable to owners of parent / Net profit margin



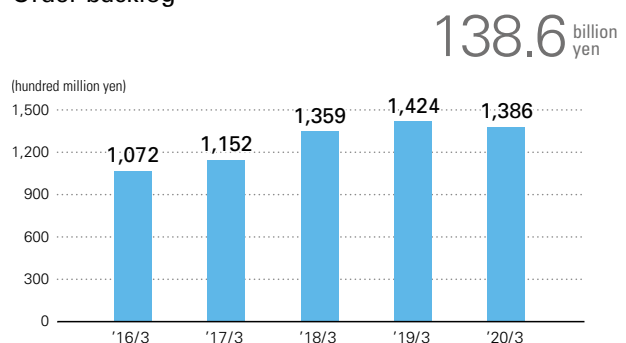
Current earnings per share



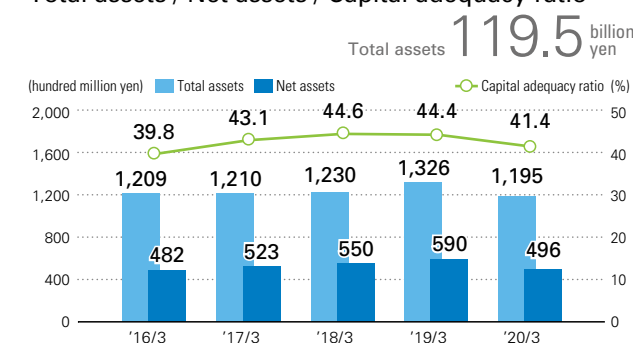
Sales / Orders received



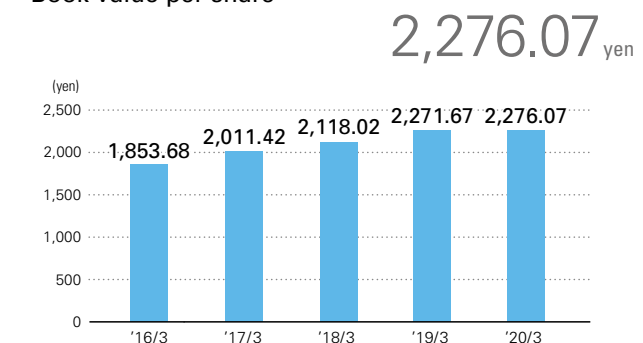
Order backlog



Total assets / Net assets / Capital adequacy ratio

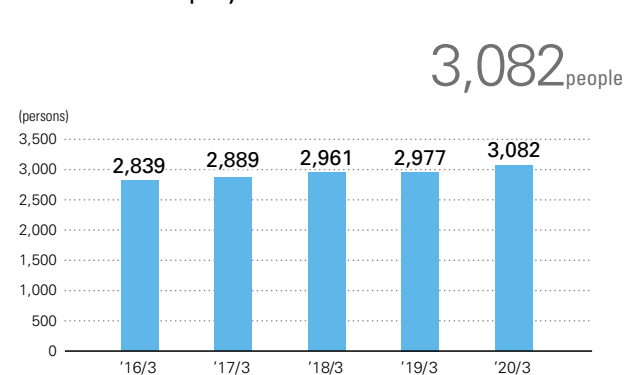


Book value per share

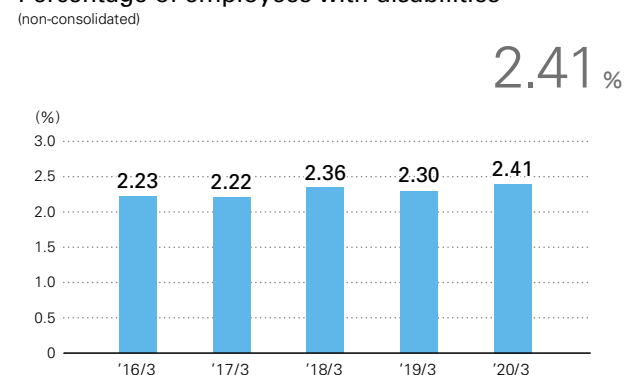


Consolidated non-financial highlights

Number of employees



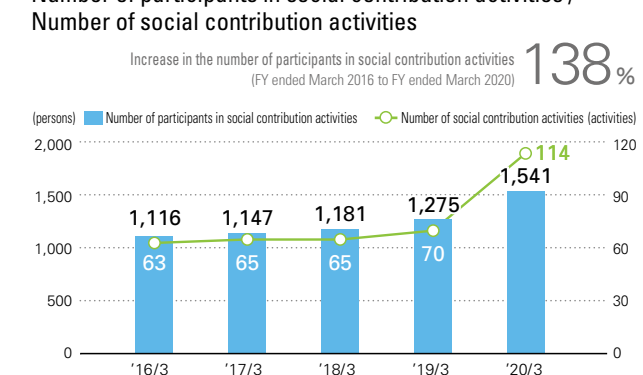
Percentage of employees with disabilities (non-consolidated)



Number of employees taking childcare leave



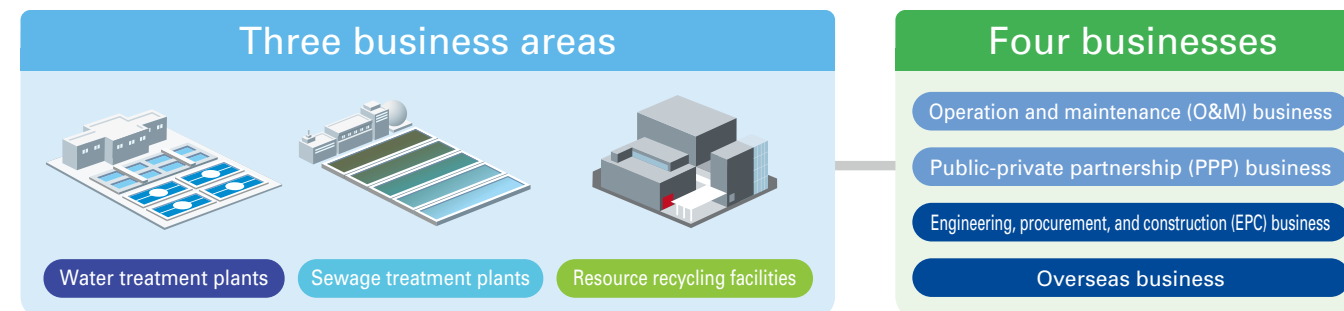
Number of participants in social contribution activities / Number of social contribution activities



Four businesses and three business fields

The METAWATER Group is one of the few water and environmental infrastructure companies with both mechanical and electrical technologies. Utilizing cloud services taking advantage of advanced ICT and maintenance and management know-how cultivated over many years, we propose all sorts of optimal solutions, from design and construction to maintenance and management.

We are contributing to the development of sustainable water and environmental infrastructure by developing four businesses: "Operation and Maintenance (O&M)", "Public-Private Partnerships (PPP)", "Engineering, Procurement and Construction (EPC)", and "Overseas operations" across three business areas both in Japan and overseas: "water treatment plants", "sewage treatment plants", and "resource recycling facilities".



Service solution business

Sales
56.4 (43.8%) billion yen
 4.5 billion yen year-on-year ↑

Operating profit
5.0 billion yen
 6 billion yen year-on-year ↑

Operation and maintenance (O&M) business

Operates and maintains facilities and equipment

Number of facilities whose operation and maintenance are consigned to us *1
 Approx. **100** facilities

*1 Number of waterworks facilities (including PFI and DBO), wastewater treatment facilities, and resource environment facilities being operated and maintained

Number of on-site staff
 Approx. **1,200** people

Number of domestic bases
 Approx. **30** facilities

Number of prefectures where WBC*2 has been delivered
41 prefectures

*2 Water Business Cloud
 METAWATER's original information and telecommunication technologies used for sharing information in real time, as well as for analyzing and utilizing collected information

Public-private partnership (PPP) business

Further comprehensiveness and wider area management of businesses are promoted through PPP

Number of public-private partnership (PPP) projects consigned*3
31 Water and sewage business fields projects / **68** projects in total

*3 Based on the Company's data



Plant engineering business

Sales
72.4 (56.2%) billion yen
 6.8 billion yen year-on-year ↑

Operating profit
3.2 billion yen
 0 billion yen year-on-year →

Engineering, procurement, and construction (EPC) business

Designs and constructs facilities and equipment

Number of facilities and equipment designed/constructed
 More than **2,000** locations

Number of high-speed filtration systems delivered
40 locations

Number of monitoring and control systems delivered
 Approx. **300** locations

Overseas business

Provides solutions to water and environmental needs overseas

Ceramic membranes for large-scale water treatment plants installed
 Approx. **10** locations

Large-scale ozone generation systems installed
 Approx. **60** locations

Local bases/Partners
 Approx. **20** locations



We will continue contributing to the preservation of local communities, society, and the global environment, while also increasing corporate value by solving water and environmental issues.

The METAWATER Group wishes to be a corporate group that is trusted by both partner companies and local companies, is highly regarded by local governments, and is requested by society. To that end, our aim is to continue contributing to the preservation of local communities, society, and the global environment, while at the same time increasing corporate value, though activities aimed at maintaining, improving, and sustaining water and environmental infrastructure, as well as CSR activities such as water and environmental conservation, awareness raising, and disaster recovery and support.

Issues faced by local communities and society

There are many diverse issues surrounding water and environmental infrastructure. The METAWATER Group is standing with local communities and society, offering up ourselves as a one-stop solution by working with people, technology, and information to solve these problems.

Domestic water and sewage market

- Decreases in local government revenue and shortages of engineers
- Aging facilities and equipment
- Natural disasters such as major earthquakes and heavy rains



Overseas water and sewage market

- Aging facilities and equipment in developed countries
- Stricter environmental regulations
- Increasing demand for infrastructure in emerging countries

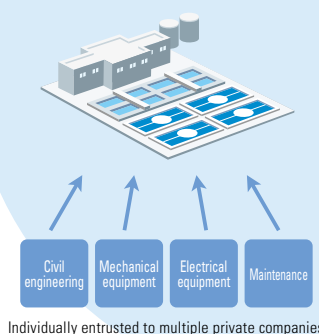


Solutions to these issues

In the domestic market, the role of private enterprises is expected to grow as the need for further comprehensiveness and wider area management of the water and sewage businesses increases due to decreases in local government revenues and shortages of engineers caused by a decreasing population. In addition to the METAWATER Group's mechanical and electrical technology, operation and maintenance know-how, and abundant experience with public-private partnerships, we are working on solving these issues by building our own ICT platform and management system.

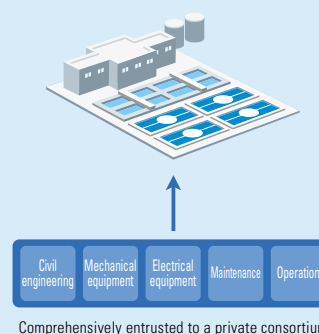
In the North American and European markets, we are developing businesses centered around group companies and partner companies, while in markets such as those of emerging countries we are promoting initiatives tailored to the local needs.

Traditional method



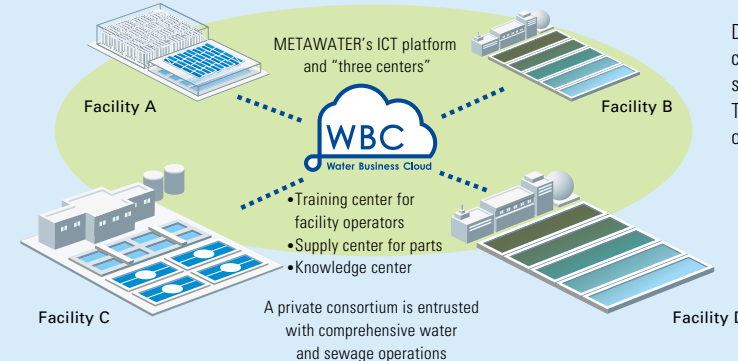
The primary roles of private companies are facility design, construction, and maintenance (inspections and maintenance), ordered individually for each piece of equipment. The local government is responsible for operating the facility. The METAWATER Group is entrusted with the design, construction, and maintenance of mechanical and electrical equipment.

Further comprehensiveness



Facility design, construction, maintenance (inspections and maintenance), and operations are comprehensively ordered to a private consortium. The METAWATER Group acts as a representative of that private consortium, promoting efficient management through overall optimization with partner companies and local companies.

Further comprehensiveness + wider area management



Design, construction, maintenance, and operations of multiple facilities are centrally ordered to a private consortium. A typical example of this is concessions. The METAWATER Group is aiming for efficient and sustainable business operations with our unique ICT platform and "three centers".



Contributing to society, the global environment, and SDGs

Through our business and CSR activities, the METAWATER Group will not only improve corporate value, but also contribute to the sustainable development of local communities and society as well as the preservation of the global environment. Additionally, by taking the business characteristics and social responsibilities of the Group into consideration, we will contribute to the achievement of the following three of the 17 SDGs.



Created value

The METAWATER Group strives to achieve sustainable corporate value through business and CSR activities, and to achieve the following quantitative goals set as our long-term vision.

- Sales (consolidated) **200** billion yen
- Overseas sales (consolidated) **20** %

Partnerships

In the domestic market, the METAWATER Group will strengthen partnerships with complementary companies to promote PPPs through "further comprehensiveness + wider area management". In the European and North American markets, we plan to work on expanding business and creating synergies centered around group companies and partner companies, promoting partnership strategies with M&A in mind. In other regions, we will promote PPPs utilizing ODA, yen loans, etc., to meet each local needs.

Promoting development of products and solutions for medium- to long-term growth

The METAWATER Group is working on solutions for a new generation, integrating our Group's strengths in mechanical and electrical technologies, joint research, open innovation with partners, etc., with the goal of more advanced technological development that will help sustain infrastructure and improve operational efficiency.

Electrical technology Water environment controller "ZLS"

Achieving the high level of availability and environmental resistance required for water environments

We have developed "ZLS", a controller for water environments that supports the optimization of operation, maintenance, and engineering of ever-more advanced and ever-more complicated water and sewage facilities. "ZLS" has improved specifications from previous models, including an increased CPU processing speed, reduced instruction execution time, and increased program capacity. It also has application compatibility and allows for smooth inheritance of program libraries when updating the water environment control system.



ZLS

AI / ICT Cutting-edge technology initiatives

Utilizing cutting-edge technology to respond to an era of population decline, contributing to securing the labor force and improving safety and productivity

Providing local contribution solutions from a BCP perspective

In order to support the continuation and early recovery of the water and wastewater business in times of disaster and other emergency situations, we are providing solutions for water supply and sewage infrastructure using drones deployed at domestic bases and local contribution solutions from a BCP perspective, with the aim of developing sustainable water and environmental infrastructure through public-private partnerships.



Water pipe bridge inspection using drones

Image recognition technology using AI

We constructed a system that can detect the equipment and inspection objects necessary for ensuring safety at construction, operation and maintenance sites, enclosing them in a frame.



Prevent entry into cordoned-off areas



Ensure safety during night shifts with a single employee

B-DASH Project*1

*1 Innovative sewage system technology demonstration project sponsored by MLIT

ICT technology

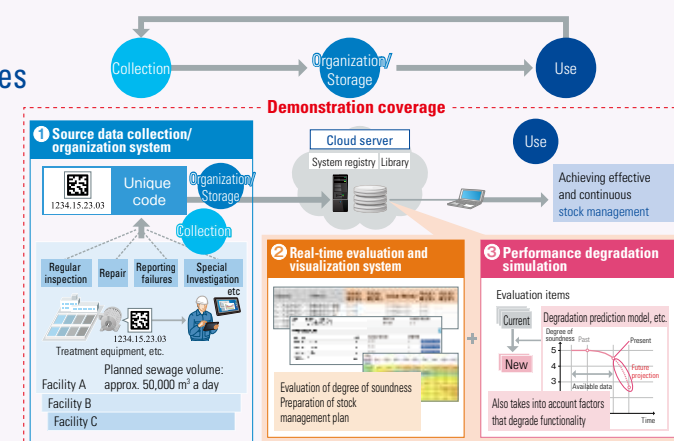
(FY2018 B-DASH Project)

Demonstration research of continued stock management realization system technology in a cloud environment with maintenance data as original sources

Supporting the establishment of effective stock management amid the ever-increasing number of aging facilities

We have demonstrated that continuous stock management can be achieved through an ICT platform and cloud system that makes it possible to effectively collect, organize, store, and use the maintenance data generated in day-to-day operations.

Demonstrators: Joint research group organized by METAWATER Co., Ltd., Ikeda municipal government, Ena municipal government
Demonstration areas: Sewage Treatment Plant in Ikeda City, Osaka, Water Purification Center in Ena City, Gifu, and five other facilities
Demonstration years: FY2018 - FY2019



Characteristics of this technology

- 1 Source data collection and organization system** Efficiently collect and organize (store) operations and maintenance data centrally in the cloud, regardless of location constraints
- 2 Real-time evaluation and visualization system** Using the collected and organized operations and maintenance data, automatically calculate the degree of soundness and visualize necessary information for stock management
- 3 Performance degradation simulation** Create models predicting long-term changes in equipment operating performance and introduce a probabilistic distribution for future equipment performance to help determine optimal timing of measures

With the above three component technologies formed in a cloud environment, maintenance data generated through day-to-day operations are used to prepare various plans, thereby achieving effective and continued stock management.

Sewage technology

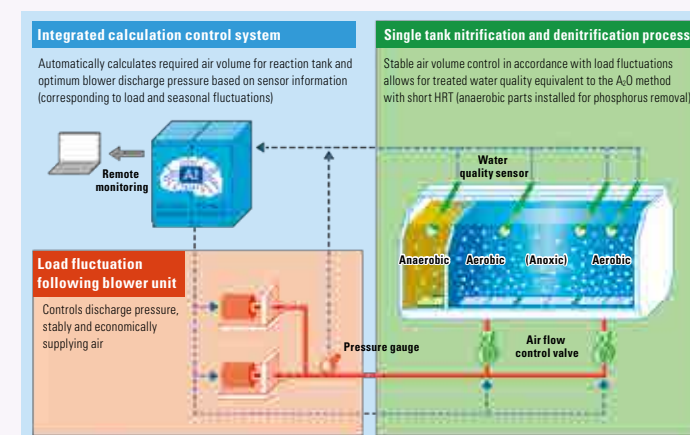
(FY2019 B-DASH Project)

Demonstration research for advanced treatment technology through ICT and AI control of single tank nitrification and denitrification process

Realizing short HRT advanced processing, reduced energy use, and reduced maintenance burden

A treated water quality equivalent to the A:O method is achieved with short HRT by controlling the air volume corresponding to fluctuations in the reaction tank inflow load. At the same time, by using ICT and AI for integrated management, the optimal discharge pressure for the blower is calculated from the required air volume in real-time, and the discharge power is reduced by controlling the discharge pressure.

Demonstrators: Joint research group organized by METAWATER Co., Ltd., Japan Sewage Works Agency, and Machida City
Demonstration areas: Naruse Clean Center (Machida City, Tokyo)
Demonstration years: FY2019 onward



Characteristics of this technology

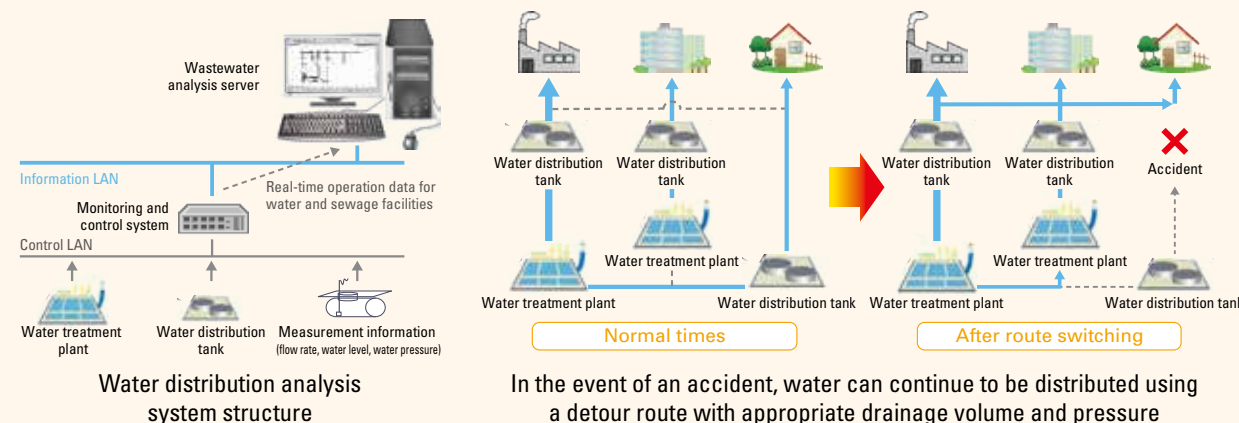
- 1 Realization of short HRT (retention time) through air volume control using ICT** Formation of optimal aerobic and anoxic zones in accordance with loads using ICT*2
*2 NOx and NH₄ meters are used in this technology
- 2 Realization of equipment cooperation through the utilization of ICT and reduced blowing power through pressure optimization** Calculating the optimal blower discharge pressure from the required air volume in real-time, the discharge pressure is controlled
- 3 Realization of reduced operation adjustment burden by responding to seasonal fluctuations, etc., using AI** Control parameters for required air volume calculations are automatically tuned using AI (machine learning functions)

Cutting-edge technology

Water supply technology Water distribution analysis system

Supporting rapid decision-making (BCP) for efficient water operation and stable water supply in the event of an accident

Online water pipe network analysis technology can estimate the status of water transition (flow rate, water level, water pressure, etc.) within the network up to 24 hours in advance, supporting efficient water operation (water distribution plans) and quick decision-making in order to consider countermeasures in case of an accident. Advanced scenario analysis functionality allows for various simulations and contributes to BCP support (consideration of operation methods to shorten water outage time, etc.), technology transfer and know-how accumulation, and systematic inspection and repair planning of pipeline facilities (measures for extending facility life).

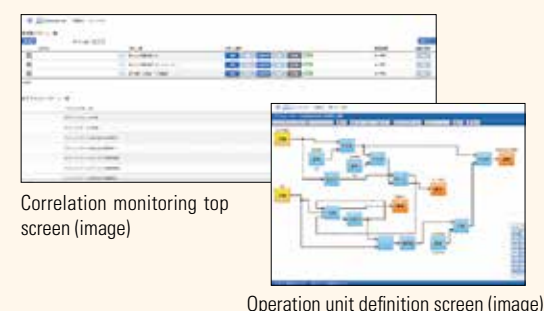


ICT technology Correlation monitoring service

Early detection of abnormalities to reduce plant operational risks

As an option of the WBC* wide area monitoring system, signals are captured from field servers (GSA) installed at each site, and when abnormalities during plant operation are detected an alarm is issued at an early stage by making full use of arithmetic operations, comparisons, theoretical operations, etc. The system can be easily operated by drag and drop to freely create formulas, and frequently used formulas are provided by default, enabling the user to easily monitor the plant on a PC, thereby reducing plant operational risks.

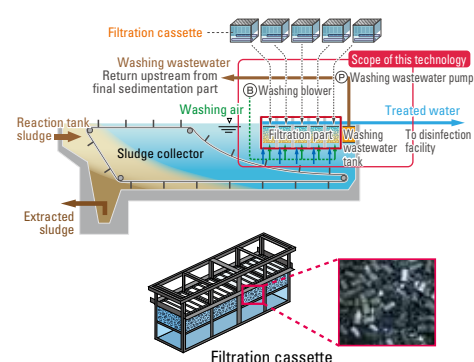
*Abbreviation for "Water Business Cloud" METAWATER's unique information and communications technology for real-time sharing of information and the analysis and utilization of collected information



Topics FY2017 B-DASH Project

Guidelines for "Technology to improve the treatment capacity of final sedimentation tanks"

In a demonstration study conducted at the Ryoshima Purification Center (Matsumoto City, Nagano Prefecture) in cooperation with the Japan Sewage Works Agency and Matsumoto City, a filtration system was installed in the existing final sedimentation tank with the aim of improving the treatment capacity of the system quantitatively or qualitatively without increasing the number of building frames. As a result, it was recognized as a technology capable of achieving stable treated water quality throughout the year and significantly reducing construction costs compared to cases where an additional final sedimentation tank or where new rapid filtration equipment is installed. In December 2019, the National Institute for Land and Infrastructure Management established Technology Introduction Guidelines (draft) for this technology.



Aiming to become a corporate group trusted by citizens

The METAWATER Group aims to be a corporate group that is trusted by citizens, allowing them to entrust us with the water and wastewater business with peace of mind. To this end, the Group is working to improve corporate awareness, promote branding, and proactively disseminate information on the current situation of the water supply and sewerage industry, as well as our ideas, strengths, and achievements. We believe our business itself will lead to the sustainability of the water and wastewater business in Japan, which is one of the world's largest, as well as improve our presence in the water and wastewater business.

Communication activities through participation in local events

The METAWATER Group actively participates in events held at facilities we are in charge of and their surrounding areas all throughout Japan, striving to communicate with citizens.

In addition to holding quizzes and panel displays regarding water at local events, we also host social study tours for local elementary and junior high school students at our water, sewage, and resource environment facilities.

Aiming to communicate the importance of the water and environmental infrastructure that is essential to our daily lives, we are also working with local governments and business entities to create educational facilities, pamphlets, and other in-building communication tools used in awareness-raising activities.



Takizawa Water Treatment Plant
(Aizuwakamatsu City, Fukushima Prefecture)
Staff from the Group explain the mechanisms of a water treatment plant through an in-building exhibition



METAWATER Sewerage Science Museum Aichi (Inazawa City, Aichi Prefecture)
Exhibition at a summer festival held at the museum



Takizawa Water Treatment Plant
(Aizuwakamatsu City, Fukushima Prefecture)
Explanation being given on METAWATER's Ceramic Membrane Filtration System at a local event held at the water treatment plant



Ofunato City Industrial Festival
(Ofunato City, Iwate Prefecture)
Exhibition at a local industry PR event held in the city

Brand activities through in-train commercials, radio programs, etc.

As part of our efforts to increase corporate awareness and understanding, as well as to increase the value of water and environmental infrastructure, the METAWATER Group conducts brand activities through radio programs as well as commercials on the train vision.

Commercials on the train vision, featuring quizzes on water by the Miss Japan "Angel of Water"

We created commercials played on the train vision, by featuring Nanami Nishio, the 2019 Miss Japan "Angel of Water", who presents quiz questions on water. The quizzes were created with themes such as "Protecting water resources" and the "Role of equipment used at water treatment plants", and were designed to give people an opportunity to think about the importance of water.



To commemorate 1,000 episodes of the program "Mizuoto Sketch", a special one-hour program was produced

The TBS Radio program "Mizuoto Sketch", which the Group has been offering since 2015, is a program that introduces the water landscape in various parts of Japan through narration and the sounds of water. In September 2019, a special one-hour program was produced to commemorate 1,000 episodes. We have presented original radio dramas related to the sound of water and selected masterpieces of the water landscape introduced in the past to listeners all across Japan.



Actor Jun Kunimura appeared as a special guest on the special program commemorating 1,000 broadcasts

Plant Engineering Division

We will bring new value and contribute to achieving a sustainable society.

The Plant Engineering Division is engaged primarily in the design and construction of mechanical and electric equipment for water treatment plants and sewage treatment plants at home and abroad, as well as the engineering, procurement, and construction of a variety of devices used with the equipment. METAWATER is a unique corporation with expertise in both mechanical and electric technologies. We design and construct eco-friendly plants incorporating energy-saving, energy-creation technologies, etc. using electric technologies that maximize our unique mechanical technologies and capabilities. Combining mechanical and electric technologies and product development expertise, we develop efficient water treatment plants and sewerage treatment plants, save energy, and efficiently use resources.

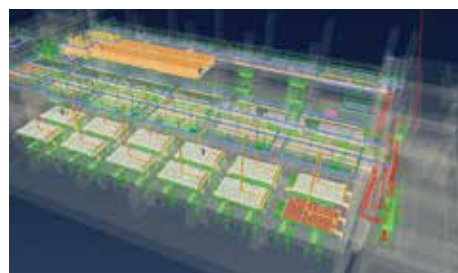
Director, Senior Executive Officer
Executive General Manager of Plant Engineering Division

Noboru Okuda



Major activities

- Given the frequent occurrence of local heavy rainfalls in recent years, we identify rain clouds using radar installed on high ground, detect cumulonimbus clouds at an early stage, and project rainfalls to mitigate flood damage. In addition, we work to improve confluences of rainwater and wastewater with high-speed membrane filtration technologies, which contribute to elevating water quality in rivers and marine areas.
- As facilities continue to age and the population continues to decline, we are working on joint research with the Japan Sewage Works Agency to spread alternative technology for the primary sedimentation tank, which can save space, in order to respond to the growing need for consolidation of facilities and sewage treatment plants.
- We are proposing a number of energy solutions, including various power generation technologies utilizing waste heat from digestion gas emitted through processes of sewage treatment and sludge incineration treatment.
- We are contributing to building local communities that offer comfortable lives through a disaster rehabilitation project on the coast of the Tohoku region.



Construction designs in virtual space

Future developments

Looking at trends over the next 10 years, we will have to respond to significant environment changes, expansion of PPP projects, a serious shortage of engineers and aging facilities, evolution and expansion of IoT and AI, and development of work-style reforms. To respond to changing social and customer needs driven by these changes in the business environment, the Plant Engineering Division will pursue optimal design, procurement, and construction through engineering reforms and the rationalization and streamlining of operations, bringing about new value and thus contributing to achieving a sustainable society.

SDGs
being
promoted



Implementing leading-edge technologies, including advanced water-quality improvement technologies, energy-saving technologies, and clean energy power generation for degraded water purification plants and sewage treatment plants enables stable supplies of safe and clean water of sufficient quality and capacity through plant construction.



Constructing sustainable plants with downsized technologies in response to a social environment with falling populations and super-aging societies



Developing technologies and supplying solutions for increasing sewage inflows due to abnormal weather such as heavy rainfalls



Engaging in disaster rehabilitation work centered on the coast of the Tohoku Region and contributing to building sustainable local communities by improving the water environment



Project Topics

Business topics Area-wide Sewage Sludge Recycling Project in northern district of Akita Prefecture

Sludge recycling facility begins operation



External view of the sludge recycling facility



Sludge recycling furnace

With regard to the "Area-wide Sewage Sludge Recycling Project in northern district of Akita Prefecture", which was awarded to a group of companies represented by METAWATER, the sludge recycling facility was completed in March 2020 and started operation in FY2020.

The facility will continuously process sludge generated in the northern district of Akita Prefecture and produce recyclable materials from sewage sludge, body waste, and purification tank sludge generated in daily life. This system enables the effective use of sludge, which were previously incinerated, and stably produces recyclable materials over a long period of time, utilizing them as valuable resources.

It is attracting attention as an advanced model that maximizes "business continuity" and "contribution to the local community", and contributes to the creation of a new recycling-oriented society.

Outline of Area-wide Sewage Sludge Recycling Project in northern district of Akita Prefecture

Project name: Area-wide Sewage Sludge Recycling Project in northern district of Akita Prefecture
Project method: DBO method (Design, Build and Operate)*
Project period: [Design/construction] May 26, 2017 (contract date for this project) - March 31, 2020
[Operation and maintenance] April 1, 2020 - March 31, 2040
Address: 1 Naka-kawaguchi, Kawaguchi, Odate, Akita (on the premises of Odate Disposal Center)

*Centrally carrying out the design, building, and operation of a facility

Sewage sludge recycling system

The sewage sludge recycling system makes it possible to effectively use sludge and municipal waste by recovering recyclable materials without incineration.

Characteristics

Production of high-quality recyclable materials is possible

Incombustibles (iron, aluminum, debris, etc.) mixed in with sludge and waste are separated and removed in the recycling furnace, producing high-quality recyclable materials without impurities.

Helps to reduce greenhouse gases (CO₂)

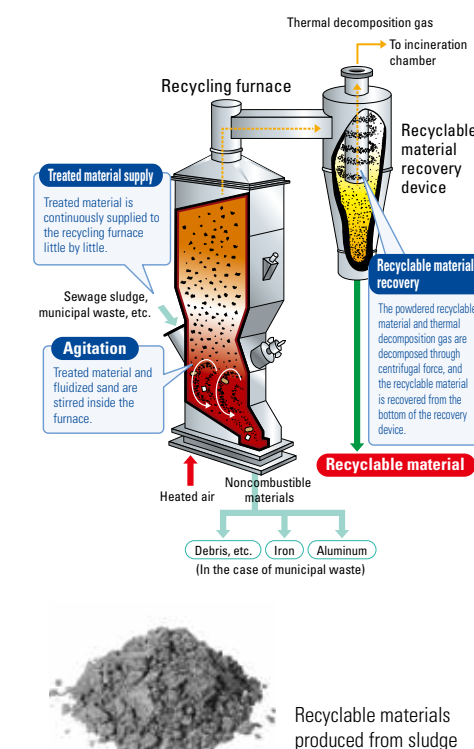
Since sludge and waste are recycled using their own energy, the amount of auxiliary fuel used is small, and the use of recyclable materials as a substitute for fossil fuel also contributes to the reduction of carbon dioxide emissions.

Equipment can be started and stopped safely and easily, and intermittent operation is simple

The heat retention offered by sand shortens the start-up time of the equipment and facilitates intermittent operation. In addition, starting and stopping are safe because the amount of treated materials (combustible material) retained in the recycling furnace is small.

Use of recyclable materials

They are used as a substitute for fossil fuels such as coal and coke in steelworks, thermal power plants, and cement plants. They can also be used as a soil conditioner thanks to their adsorption effect due to the porosity of the recyclable material.



Service Solution Division

We will continue to create and offer new services that contribute to the stability and sustainability of water and environmental infrastructure.

The Service Solution Division is engaged in business activities that include inspection, repair, operation, and maintenance of mechanical and electric equipment of domestic water supply and sewage facilities, as well as design, construction, operation, and maintenance of waste treatment facilities (bulk waste, incombustible waste, and recyclable waste). Given a domestic water supply and sewage business facing degradation of facilities and equipment, there are high expectations of private companies when local governments are experiencing financial squeezes and there are shortages of engineers and staff to operate and maintain facilities. The Service Solution Division provides services through networks run by 30 operating bases across the country. Our services are oriented toward customers in local communities. For instance, if a customer experiences an emergency, such as a failure or problem with mechanical and electric equipment, we visit them immediately to provide support.

Senior Executive Officer
Executive General Manager of Service Solution Division

Makoto Shimizu



Major activities

- We provide wide-area administration services for facilities, based on the Water Business Cloud (WBC) using IoT and cloud computing technology, and registry services for equipment and devices to support asset management.
- We are continuously proposing service technologies that lead to maintaining and improving safety and quality, as well as optimization such as energy saving measures, automation, and full-automation, through the introduction of cutting-edge technologies such as AI and ICT.
- We strive to strengthen partnerships with local companies in order to offer more stable and local-community oriented services.



Operation and maintenance using ICT



Sharing information through tablets

Future developments

In the future, in addition to conventional maintenance services, we will continue to provide new services including a variety of outsourced services related to stock and asset management, along with expanding PPP projects. We are also strengthening partnerships with local companies and local governments, as well as actively promoting proposals for profit sharing, in which profits from the sale of recyclable materials generated in the waste sorting process are shared with local governments, and proposals for basic facility improvement projects that extend the life of aging waste treatment facilities without closing them. FY2020 began in the midst of a national crisis caused by the spread of the novel coronavirus, and we were once again convinced of the importance of maintaining a stable infrastructure, including water supply, sewage works, and waste treatment. We will work to ensure our various services and technologies can play an important role in supporting these efforts.

SDGs
being
promoted



Contributing to generating and supplying safe and clean water by maintaining the functions of clean water treatment equipment and devices



Contributing to stable operations by maintaining the functions of sewage treatment equipment and devices (maintenance of discharged water quality)



Supporting innovations and energy-saving maintenance operations by offering new technologies and new services, such as automated unmanned operation



Services for WBC-based and SaaS-type operations (providing software and software operating system environment through a network)



Design and operation of waste treatment facilities with functions attached which enable local residents to address the importance of reducing and recycling waste, and supporting their education and encouragement



Reinforcing the service solution business through partnerships with local companies



Project Topics

Business topics Operation and management of recyclables intermediate processing facility commissioned by Kodaira, Murayama, Yamato Hygiene Association

Operation management of a core facility for wide-area resource recycling business spanning three cities



Recyclables intermediate processing facility



Sorting work

With our resource environment business, we design, build, operate, and maintain recycling facilities that sort and recycle waste into usable resources. With this project, it would be difficult to achieve the intended purpose of the installation by just designing and constructing the facility. Close cooperation with operation and maintenance tasks is necessary to enhance the operational effectiveness of facilities to be delivered. This is why, in the design and construction phase, we draw up a rational facility design and construction plan that reflects our extensive experience in delivery, operation, and maintenance. In the operation and maintenance phase, we utilize our design know-how to conduct stable and efficient daily operation and maintenance. We are also contributing to the long-term stable operation of the recycling facility by improving equipment in cooperation with the design and construction departments in response to social demands such as changes in waste properties, CO₂ reduction measures, extending the life of the facility, and disaster countermeasures.

This "Kodaira, Murayama, Yamato Hygiene Association recyclables intermediate processing facility", which we have been involved with from the design and construction phase, is a joint project between the three cities of Kodaira, Higashiyamato, and Musashimurayama. The purpose of the facility is to sort, compress, bale, and store PET bottles and plastic containers and packaging for recycling. The facility is located on a small site in an urban area and required manual sorting work. Therefore, we proposed and delivered a new type of "gravity separator for plastics" to reduce space and labor, and started its operation in May 2019. It has been highly evaluated for its ability to reduce the number of workers and workload required in manual sorting for municipal projects where job creation is required but it is difficult to secure a sufficient number of workers. At present, we are in charge of the operation and management of the facility, and through this project, we will support the three cities to continue safe, secure, and stable waste treatment, making a recycling-oriented community.

Outline of operation and management of recyclables intermediate processing facility commissioned by Kodaira, Murayama, Yamato Hygiene Association

Facility name: Kodaira, Murayama, Yamato Hygiene Association Recyclables Intermediate Processing Facility
Facility nickname: Eco Plaza Three Harmony
Address: 2-122-2 Sakuragaoka, Higashiyamato-shi, Tokyo

Newly introduced gravity separator for plastics reduces the burden on workers in the manual sorting process

Gravity separator for plastics

In order to reuse plastic waste, it is necessary to remove sand, metal, and other foreign substances before sorting in accordance with the collection quality guidelines established by the Japan Containers and Packaging Recycling Association. We developed the gravity separator for plastics by applying technologies used in the wind separator for incombustibles, for which we have proven delivery records, and have started operation of the first unit. This machine can separate plastics into heavy and lightweight types with high accuracy before manual sorting work, reducing the workload during the manual sorting process and improving sorting accuracy. It has been highly evaluated in the situation where it is difficult to secure a sufficient number of workers. Additionally, downsizing and weight reduction of the equipment makes it possible to construct facilities in smaller premises and also contributes to reducing construction costs. By using this machine as one of the differentiating technologies for our resource recycling projects, we will expand our resource environment and service solution businesses.



Gravity separator for plastics

International Business Division

We will contribute to solving the world's water environmental issues by continuously and thoroughly adhering to localism.

The International Business Division aims to develop business focusing on providing METAWATER's unique and differentiated products and technologies, especially our filtration technology, to countries all around the world, including Asia, where further market expansion is expected, and centering on North America and Europe, where environmental regulations are becoming increasingly strict. In order to accomplish this, we strive to maintain a focus on localism.

We participate in the global water business, which is expected to expand in the future, by promoting the localization of bases and delivering products and technology customized to meet local demands and environmental changes, allowing us to become a reliable presence in the regions we're working in. We are also contributing to the development of the water environment in various regions all throughout the world, as well as to SDGs from the viewpoints of improving sanitary conditions, creating a comfortable place to live, and fighting global warming.

Executive Officer
Executive General Manager of International Business Division

Ken Aikawa



Major activities

- In North America, Aqua-Aerobic Systems, Inc. (AAS), which became part of our Group in 2016, is deploying differentiated technologies with an impressive presence, such as a Sequencing Batch Reactor, a Cloth Media Filter, and the Aerobic Granule Sludge Technology (Aqua Nereda®). The company has a stable revenue base with a sales network covering the entire United States. Additionally, we are also developing our own water treatment technologies, ozone generation systems, and Ceramic Membrane Filtration Systems with AAS at the core. Wigen Companies, Inc. also joined our Group in April 2020, making it possible to support more advanced water treatment processes using ion exchange technologies and membrane filtration technologies such as reverse osmosis. Our first step is to increase our presence in the potable water reuse market, primarily in the southwestern United States.
- In Europe, we are expanding the CeraMac® system worldwide using our ceramic membranes together with the Dutch company PWNT. Based on the results we receive regarding introduction of this technology to water treatment plants in the Netherlands, UK, Switzerland, and Singapore, we will promote the expansion of water treatment technology using our technology by strengthening strategic cooperation with PWNT.
- In Asia, We delivered the first plant of an Advanced Energy Saving Wastewater Treatment System, which has been certificated by Japan Sewage Works Agency, succeeding in localizing technology for emerging countries. Through representative offices in Hanoi, Phnom Penh, and Singapore, we will focus on gathering information in Southeast Asian countries with the aim of expanding our business in the growing market of Asia.
- In other news, we sold a total of 25 Mobile Ceramic Membrane Filtration Equipment in six African countries and Southeast Asia. Additionally, we have been contributing to the development of local communities, receiving a letter of thanks from the government of Myanmar regarding use of this system in times of flooding. In 2019, we also received an order for a filtration system to be carried by a helicopter and are aiming to expand sales in the future.

SDGs
being
promoted



Sale of sewage treatment systems, potable water reuse systems, and water purification systems in North America



Development of ceramic membrane filtration technology in cooperation with overseas companies



Implementing Advanced Energy Saving Wastewater Treatment Systems in Asia



Expanding sales of Mobile Ceramic Membrane Filtration Equipment



Creating jobs and providing education through local companies, subsidiaries, representative offices, and projects in local areas



Future developments

To further accelerate localization, we will discover partner companies in various regions and engage in dialogue with customers throughout the world so that all regions will take new water environment issues seriously. We will also create new value by taking advantage of our technology and experience. We will continue to contribute to the realization of a sustainable society by quickly detecting changes in the ever-changing global water environment and providing solutions.

New Partners

Business topics Expanding the METAWATER Group through M&A

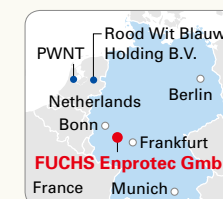
FUCHS Enprotec GmbH



In May 2019, the Group company Aqua-Aerobic Systems, Inc. (AAS) acquired all shares of the German water treatment equipment supplier FUCHS Enprotec GmbH (FUCHS).

FUCHS provides machinery and technologies related to wastewater treatment, sewage sludge and exhaust gas treatment, and has installed more than 3,500 aerators, mixers, and odor control systems in approximately 60 countries.

We will work to further expand our wastewater treatment business by strengthening our ability to provide products to customers around the world.



FUCHS OXYSTAR Aerator



Air diffusion and agitation with FUCHS products

Overview of FUCHS Enprotec GmbH

Company name: FUCHS Enprotec GmbH
Location: Mayen, Rhineland-Palatinate, Germany
Establishment: 1974
President and CEO: Christian D. Henrich
Main business activities:
Development, design, and manufacture of air diffusers and agitators for wastewater treatment

Wigen Companies, Inc.



In April 2020, we acquired all shares of Wigen Companies, Inc. (Wigen), a U.S. supplier of water treatment equipment, through METAWATER USA, INC., a U.S. subsidiary of our company. Wigen, which specializes in membrane filtration and ion exchange technologies for water supplies, private use, and reclaimed wastewater, is operating its business primarily in North America.

Through this, we will enhance our presence in the rapidly growing potable water reuse market in the southwestern United States and strengthen and expand our North American business by leveraging synergies with AAS.



Reverse osmosis membrane filtration system



Ion exchanger

Overview of Wigen Companies, Inc.

Company name: Wigen Companies, Inc.
Location: Minnesota, USA (near Minneapolis)
Establishment: 1965
Director and Chairman: Ken Aikawa
President and CEO: Jeff W. Wigen
Main business activities:
Development, design, and manufacture of water treatment equipment such as for membrane treatment and ion exchange systems

Project Topics

Business topics Choa Chu Kang Water Treatment Plant, Singapore

Started operation of the world's largest water treatment plant using ceramic membrane



Delivered ceramic membrane (CeraMac®)

Overview of Choa Chu Kang Water Treatment Plant, Singapore

Treatment capacity: 180,000 m³/day
Commemoration ceremony held on August 29, 2019

Our ceramic membrane (CeraMac®) was adopted for the first time in Singapore at the Choa Chu Kang Water Treatment Plant, which began operating in August 2019. PWNT, a partner company in the Netherlands, conducted a verification test of the ceramic membrane in collaboration with PUB* at the water treatment plant for a year and a half from 2011. The results showed that the ceramic membrane was highly evaluated for its stable membrane filtration performance and excellent water recovery rate, and the system was finally approved and put into operation. The introduction of ceramic membrane filtration technology is expected to improve the treatment of the tap water supplied to household, commercial, and industrial sectors, and to address the effects of rapid urbanization of catchment areas and climate change on raw water quality in Singapore.

We will continue to develop water treatment technologies using ceramic membranes and contribute to solving water issues in various parts of the world.

*PUB: Public Utilities Board of Singapore



Commemoration ceremony

PPP Division

We are making progress in building a new business platform. We will steadily expand our business and enhance our competitiveness.

The Public Private Partnership Division promotes PPP projects in the Japanese water and sewage market. At a time where we face a declining population, degradation of facilities and equipment constructed during a period of high economic growth, and major earthquakes and torrential rains, here in Japan we need to take early measures to resolve a string of issues including financial difficulties and a lack of engineers in local governments operating water supply and sewerage projects. Since the implementation of the PFI Act in 1999, public infrastructure developments have been carried out through PPP using the capital, technologies, and know-how of the private sector. Furthermore, since the revision of the Water Supply Act in 2018, with the promotion of large-scale concessions, the demand for PPP using private companies is expected to increase even further.

Executive Officer and Executive General Manager of PPP Division Masashi Sakai



Major activities

- We undertook the "Comprehensive Consignment of the Arai City Water Business, etc." in 2016, which was a consigned project package comprehensively covering areas from customer services to asset management for water supply facilities. When launched, this consigned project was the first in Japan to provide comprehensive.
- In 2015, we participated in a project related to a third-sector company, Kitakyushu Water Service Co., Ltd., with joint investments from the municipal government of Kitakyushu City, Fukuoka Prefecture, and six private companies, and are engaged in monitoring operations and centralized control of municipal water and wastewater facilities as well as wider area management projects.
- In Nakatsugawa City, Gifu Prefecture, the scope of water supply services and other comprehensive consignment operations has been expanded. Furthermore, we are beginning to see the results of collaborations with local companies and have been entrusted with a new comprehensive consignment operation in Gero City, which is adjacent to Nakatsugawa City.
- In Fukuchiyama City, Kyoto Prefecture, we are accelerating initiatives for public-private partnership projects, such as by taking on newly entrusted comprehensive water supply consignment work in collaboration with local companies.



BCP training held in Arai City

SDGs being promoted



Activities ranging from design and construction to operation and maintenance of water treatment plants, including mechanical and electric equipment.



We propose appropriate solutions tailored to local government issues, such as the transfer of technology and financial deterioration in the water and sewage business. A number of our unique value-added services for PPP projects are also proposed.



Execution of a Business Continuity Plan (BCP) in the event of a natural disaster such as water supply activities following the Kumamoto Earthquakes in April 2016.



Future developments

Amidst increasingly expanding business areas that are expected to be covered by the private sector, we have positioned the PPP business as a growth area and are seeing progress in formulating a new business platform targeting privatization and wider area management in the water and wastewater business. We have already participated in more than 30 PPP projects. In the future, we will promote the following three measures: (1) creating projects making use of a proposal system under the PFI Act; (2) improving efficiency and developing tools such as asset management tools using ICT; and (3) promoting alliances and partnerships to respond to wider area management and further comprehensiveness. We will steadily expand our business and enhance our competitiveness to win large-scale projects.

Project Topics

Business topics Comprehensive consignment for Arai water business

An advanced water supply comprehensive consignment project implementing "WOODAP"



Arai City Enterprise Bureau



BCP training session

Since FY2016, our Group has been working on comprehensive outsourcing of the water supply business in Arai City, Kumamoto Prefecture. While the Arai City Enterprise Bureau has the authority to manage business plans and finances, the wide-ranging water supply business is comprehensively entrusted to a special purpose company, "Arai Water Service Co.", of which our company is a leading company. Now in its fifth year, we are deepening our operational efforts. In particular, our original methodology, "WOODAP", was developed in this business in a practical manner, and established.

Specific measures include "More efficient on-site judgments by assigning head office employees with decision-making authority to Arai Water Service Co.", "Practical BCP training for rapid business recovery from disasters", and the "Wani No Kando" campaign in which employees think about their work from the viewpoint of water users".

Thanks to these efforts, streamlining and rationalization have resulted in a "9% reduction in work hours (compared to the first year)", a "40% decrease in long-term delinquency in water charges (stricter closure rules)", and more.

As the number of PPP projects is expected to increase, we will continue to use WOODAP methods to provide and improve services from the user's perspective.

Outline of the comprehensive consignment for Arai water business

Project name: Comprehensive consignment for Arai water business
Project period: April 1, 2016 to March 31, 2021
Business operations covered: (1) Administrative and planning support; (2) Management support; (3) Sales; (4) Design and construction; (5) Maintenance and inspection; (6) Crisis management

Business topics Comprehensive outsourcing of privately contracted services, including water supply services, in Fukuchiyama City

Comprehensive consignment of the water supply business in Fukuchiyama City, including counter services and operation management of water supply facilities



Cutting tape at the opening ceremony in April 2019

Since April 2019, a consortium of companies represented by METAWATER has been entrusted with the water supply business in Fukuchiyama City, Kyoto Prefecture. The scope of the contract includes business operations such as maintenance, sales, management, administration and planning, as well as social contribution activities. We have entrusted repair work for pipe leaks, which requires a quick response, to a company affiliated with a local pipe works association, and oversee a total of 54 operations, including placing orders to specialized companies.

As a representative company of the consortium, we will utilize our abundance of business experience to ensure the sustainability of the water supply business and to improve citizen services in Fukuchiyama City.

Outline of comprehensive outsourcing of privately contracted services, including water supply services, in Fukuchiyama City

Project name: Comprehensive outsourcing of privately contracted services, including water supply services, in Fukuchiyama City
Trustees: METAWATER / METAWATER SERVICE / FUTUREINN Consortium
Contract period: April 1, 2019 to March 31, 2024

Business operations covered: Maintenance and inspections, sales, administrative tasks, management and planning, facility maintenance and management, unplanned repairs, customer counter/meter reading/fee-related operations, fee system construction management, social contribution activities, etc.

E

Environment

S

Social

G

Governance

METAWATER Group's ESG

Aiming at sustainable growth of corporate value

Major activities

Based on a vibrant corporate culture, the METAWATER Group believes that its responsibility is to remain a fair and sincere company as a good corporate citizen, contributing to the sustainable development of society and the global environment through its business activities.

To that end, we are working to solve social issues related to ESG (Environment/Social/Governance) by identifying the important issues from the perspective of the SDGs based on the expectations of our stakeholders and changes in social and business environments.

Reaffirming the importance of our mission as a company whose business is focused on the water and environmental lifelines, we will strive to ensure that we earnestly do what is needed in order to contribute to the sustainable growth of society.

CSR proposed by METAWATER Group



Identifying important issues (materiality) from the perspective of SDGs

We have positioned Goal 6 of the SDGs as our top-priority materiality, while also aiming to achieve Goal 11 through strategic promotion of Goal 17.



Goal 6 of the SDGs is an essential materiality to maintain social activities, and for humans to live safely and with dignity. The METAWATER Group believes that achieving Goal 6 can lead to other issues being solved as well.

METAWATER Group's ESG activities

	Important themes	METAWATER's major initiatives
E Environment → P.39	Natural resources	Water-supply area <ul style="list-style-type: none"> Ceramic Membrane Filtration System reduces waste and saves energy Water treatment systems reduce river and sea pollution in wet weather
	Climate change	Sewage area <ul style="list-style-type: none"> No. 1 market share for diffuser equipment, with significantly reduced power consumption Waste recycling facility <ul style="list-style-type: none"> Wastewater sludge fuel system that converts waste into fuel Recycling systems that contribute to highly efficient and safe recycling Our offices <ul style="list-style-type: none"> Promoting the reduction of paper use and office power consumption
S Social → P.45	"People are our greatest asset"	<ul style="list-style-type: none"> Promoting work-style reforms, developing abilities to support individual employees, and promoting diversity
	Quality	<ul style="list-style-type: none"> Health and safety management so that employees can work happily and enthusiastically
	Partnerships	<ul style="list-style-type: none"> Ensuring the quality of products and services provided
	Social contribution	<ul style="list-style-type: none"> Strengthening relationships with partner companies and promoting CSR procurement Community contribution and environmental conservation activities in cooperation with local governments, environmental awareness activities for the next generation of children, international support, and disaster recovery and reconstruction support Water source forest preservation and environmental conservation efforts
G Governance → P.55	Corporate Governance	<ul style="list-style-type: none"> Assuring management transparency
	Risk management	<ul style="list-style-type: none"> Forming Compliance Working Group and implementing compliance education Improving information security measures
	Compliance	<ul style="list-style-type: none"> Strengthening Business Continuity Management (BCM) activities Implementation of internal controls

Topics

Mobile water treatment plants useful in times of disaster

Development of an emergency water treatment system

METAWATER has developed an emergency water treatment system that can contribute to people in affected areas in the event of a disaster such as an earthquake, storm, or flood, and we are promoting initiatives to lend them to local governments free of charge. Based on experience from past disasters, this system incorporates a number of innovations to ensure effective operation in the affected area. These include the use of a ceramic membrane that can be stored in a dry state for quick use, the use of a dolly to separate the system so that it can be moved manually, the ability to flexibly change specifications depending on the water quality of the water source and the installation location of the system, and the ability for it to be used with commercial power sources. Through initiatives leveraging our company's strengths such as these, METAWATER will continue to contribute to local communities.



Emergency water treatment system (during a demonstration)

We are positively engaged in technological development that contributes to environmental preservation and reducing environmental burdens, while promoting the active use of natural energy sources and the development and introduction of energy-saving and energy-creation technologies.

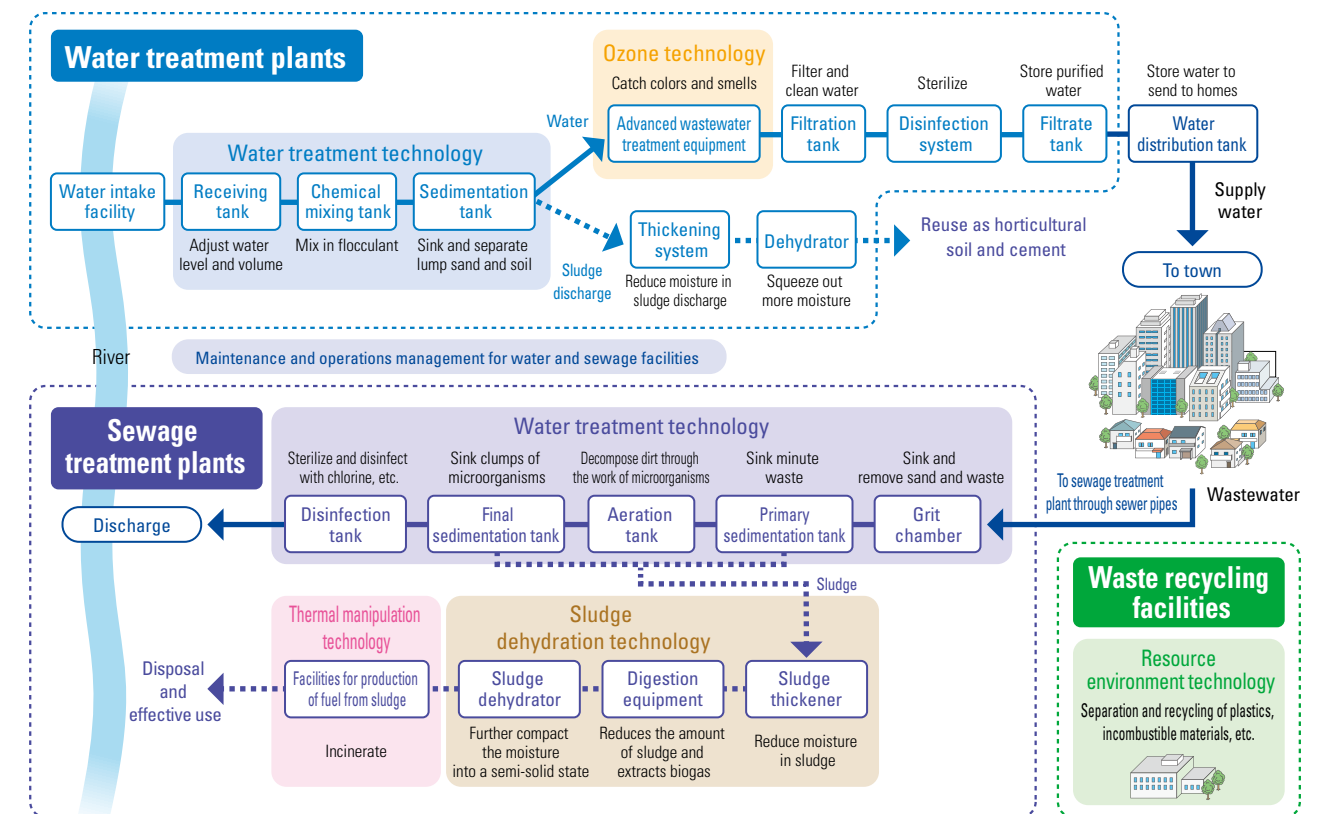
Contributing to water and environmental infrastructure through business

The environment surrounding water changes daily, and challenges vary by country and region. In recent years, environmental destruction caused by plastic waste has also become a major problem. Beginning from the era of our founding companies NGK Insulators, Ltd. and Fuji Electric Co., Ltd., the METAWATER Group has been engaged in various technological development for over 50 years as a company supporting water and environmental infrastructure. We were established in 2008, adopting the genes of both those companies. Since then, changes in the natural environment have been intensifying and accelerating, including global warming, climate change, and frequent wind and flood damage. As a company supporting water and environmental infrastructure, the METAWATER Group will continue to focus on the technological development required by the times.



Development facility

Treatment processes and technology for water and sewage treatment plants



Changes in the development of new technology (2007 to present)

METAWATER established															(Year)	
Technology		2007	2008	2009	2010	2011		2012	2013	2014	2015	2016	2017	2018	2019	
		Development of new technology through electromechanical fusion					Development of new technologies for reuse and recycling of resources, as well as higher functionality					Development of technologies to respond to climate change and the environment				
Water treatment plants (water supply field)	Water purification technology		● Japan's first PFI Kawai Purification Plant			● First delivery of UV disinfection equipment			● First delivery of mobile Ceramic Membrane Filtration Equipment			First delivery of LED UV disinfection equipment		First delivery of RB flash mixer for water treatment plants	●	
	Ozone technology	● Began verification of sewage reuse system		● Developed glass lining type ozone generation tubes						● Developed high air-concentration both-side cooling ozone generation tubes	● First delivery of new diffuser plate for ozone					
Sewage treatment plants (sewage field)	Water treatment technology	● First delivery of high-speed sewage treatment systems for wet weather		● First delivery of multi-wing vertical-axis agitator		● First delivery of sewage water reuse system				● Pre-treated Trickling Filtration (PTF)	● Simultaneous nitrification and denitrification treatment (deep tank type)			● High-speed filtration technology using floating media		
	Sludge dehydration technology	● Phosphorus recovery from incinerator ash (2006)												● First delivery of high performance digester mixer	● First delivery of post-injection dual-liquid type belt press dehydrator	
	Thermal manipulation technology	First delivery of multi-layer fluidized incinerator				● First delivery of fluidized carbonizing furnace	● Delivery of world's first gasification furnace		● Joint research into circulation-type multi-layer incineration	● First delivery of kiln type (external heat) carbonizing furnace	● First delivery of dual heat source binary generator					
	B-DASH Project* (Breakthrough by Dynamic Approach in Sewage High Technology project by Ministry of Land, Infrastructure, Transport and Tourism)			[FY2011] Energy management system using intensive solid-liquid separation technology	●				● [FY2013] Innovative wastewater sludge energy conversion system that optimizes overall dehydration, combustion, and power generation		● [FY2014] Non-aeration circulation water treatment technology	● [FY2015] Water management technologies for urban areas subjected to local downpours	[FY2019] Advanced treatment technology through ICT and AI control of single tank nitrification and denitrification process	● [FY2017] Technology increasing the processing capacity of final sedimentation tanks	●	
Waste recycling facilities	Resource environment technology				● First delivery of waste plastic specific gravity difference sorter						● First delivery of new counter-current trommel sorter		First delivery of improved counter-current trommel sorter	● First delivery of compact high-speed rotary vertical crusher	●	

*B-DASH Project Abbreviation of Breakthrough by Dynamic Approach in Sewage High Technology Project. By accelerating research, development and commercialization of new technologies, efficiency of energy use and reduction of life cycle costs in the wastewater business are promoted. It is a demonstration project that has been implemented by MLIT since FY2011 to support overseas development of the water business. Consignees installed a full-scale plant in their sewage treatment plants and demonstrated cost reductions, reductions in greenhouse gas emissions, etc.

and reduction of life cycle costs in the wastewater business are promoted. It is a demonstration project that has been implemented by MLIT since FY2011 to support overseas development of the water business. Consignees

Main environmental technology

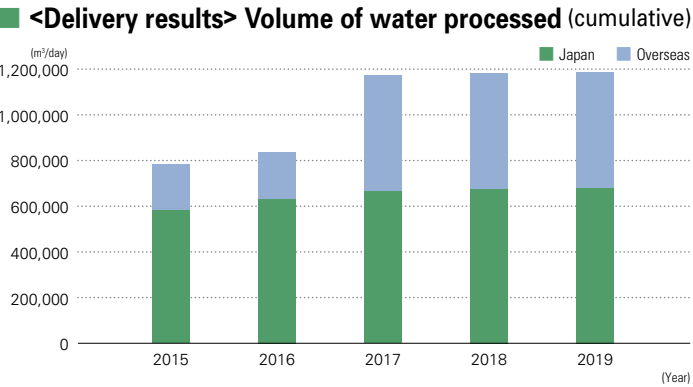
Water purification technology Safe water purification system effective even in the face of climate change

Ceramic Membrane Filtration System

Our Ceramic Membrane Filtration System boasts the No. 1 market share in Japan for water treatment plants utilizing membrane filtration systems. The risk of membrane breakage is extremely low, it can be installed in small spaces, and it can also remove protozoa, allowing for safe filtered water. Thanks to its exceptionally long life, there is a minimal frequency of membrane replacement. In fact, the first unit of this system was delivered over 20 years ago, and it continues to operate to this day without having had the ceramic membrane replaced yet. Additionally, it is expected to be used as ceramic materials after use, leading to a significant reduction in waste. Finally, only a low amount of pressure is required to filter raw water, and filtration using differences in water level is possible as well, reducing the power needed by pumps, etc., and saving energy.



Ceramic membrane



A mobile water treatment plant that is also active in times of disaster

Mobile Ceramic Membrane Filtration Equipment

This simplified Ceramic Membrane Filtration System, mounted on a truck, is easy to operate and maintain. Since it is mobile, it can be operated even in areas where there are no skilled engineers. In areas that do not yet have water piping laid, the truck can be moved to various water sources, such as lakes, rivers, and wells, allowing that water to be processed and used as safe drinking water. Water transferred using piping requires a lot of energy, but since this system can move on its own, it contributes to a reduction in transportation energy. The system can also be used in the event of a disaster such as an earthquake or heavy rain, thanks to the features of the ceramic membrane that enables stable filtration of even high turbidity raw water.



Mobile Ceramic Membrane Filtration Equipment

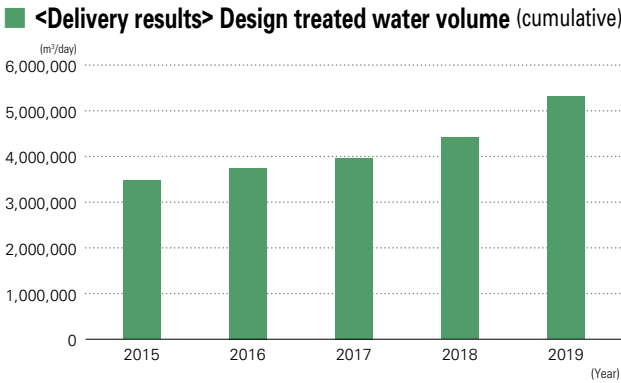
Water treatment technology Water treatment systems that reduce river and sea pollution in wet weather

High speed CSO filtration system

Combined sewer systems discharge simply treated wastewater and untreated sewage into public waters such as rivers when it rains, which adversely affects the quality of water and public health. As such, with the 2004 amendment of the Sewerage Act enforcement order, measures to improve combined overflows are being promoted throughout the country. This includes the start of the "combined sewer system urgent improvement project", which has the aims of (1) reducing pollutant loads, (2) ensuring public health and safety, and (3) reducing refuse. This system filters simply treated water and untreated sewage at high speeds using our uniquely developed special small filter, which is only about 7.5 mm. By installing it in the primary sedimentation tank of a sewage treatment plant or relay lift station, it can filter out floatable solids and pollutants such as oil balls and plastics at a rate of up to 1,000 m³/day. Additionally, existing primary sedimentation tanks can be remodeled and set. Since it is easy to operate and maintain, it has been adopted as one measure for improving combined overflow in Japan, contributing to environmental conservation measures regarding public water areas.



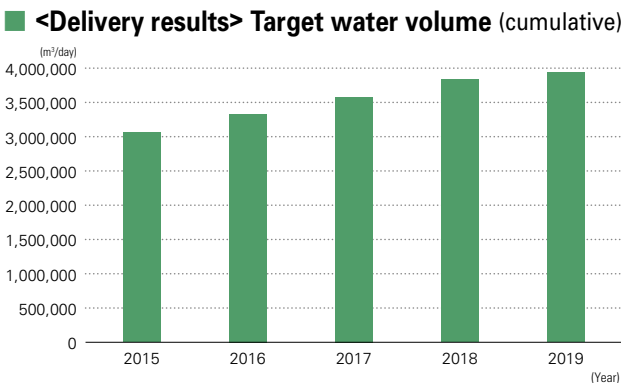
Special filter medium



Water treatment technology System with the No. 1 market share, featuring significantly reduced power consumption

High integration configuration air diffusion system

The sewer system collecting and treating domestic wastewater uses 0.7% of Japan's total electricity consumption (equivalent to the annual electricity consumption of 2.11 million households). Approximately 50% of this is electricity used to treat sewage inside wastewater treatment plants. When treating wastewater, microorganisms decompose the pollutants in the sewage, and the microorganisms then sink together with the fine impurities to remove the pollutants. A large amount of air needs to be blown (diffused) into the wastewater in order to activate the microorganisms. METAWATER has developed a system capable of diffusing ultra-fine air by applying ceramic technology, achieving a high oxygen transfer efficiency. In addition, by reducing the pressure loss when air is blown, the amount of power required can be reduced by about 30% compared to the conventional system. The system is maintenance-free and has long-lasting performance, earning it the No. 1 market share in Japan.



Main environmental technology

Thermal manipulation technology

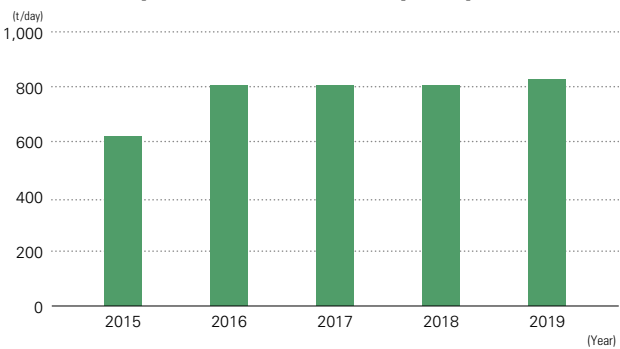
Thermal manipulation technology that converts waste into fuel

Wastewater sludge fuel system

As a general rule, sewage sludge in urban areas is dehydrated to reduce the amount of moisture present and then incinerated. The ash generated from the incineration is effectively used as a raw material for cement, etc. METAWATER's "wastewater sludge fuel system" is a technology that produces fuel (carbon) by steaming and incinerating sewage sludge. The fuel produced is valuable and can be sold, and is effectively used as an alternative fuel source to coal in thermal power plants, etc. There are high expectations for wastewater sludge fuel to be a new effective use of sewage sludge.



<Delivery results> Treated capacity (cumulative)



Resource environment technology

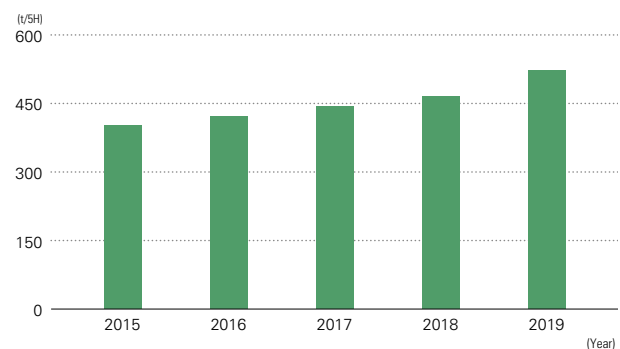
Improved plastic sorting efficiency and accuracy

Domestic waste recycling system

The amount of waste plastics generated in Japan is said to be over 9 million tons a year, accounting for approx. 2% of all waste. Waste plastics are subject to import restrictions by countries such as China, and marine pollution, etc., caused by microplastics has attracted attention as a major social and environmental problem. In addition to reducing emissions, the importance of recycling resources is also becoming more important. However, in order to recycle waste plastics, in addition to the manual removal of refuse required, lightweight items such as plastic bags, and heavy items such as detergent bottles, need to be separated. For many years, the METAWATER Group has been developing equipment that improves efficiency and accuracy in manual sorting work by utilizing differences in specific gravity in order to improve the recycling rate of plastics. Since the risk of explosions or fires caused by contamination of items such as spray cans and lithium batteries is increasing at crushing and sorting facilities, we are also contributing to facility safety through the development of a system that prevents the spread of fires, detecting and extinguishing them quickly in the event of an accident. As of FY2019, approximately 300 of our domestic waste recycling systems have been delivered.



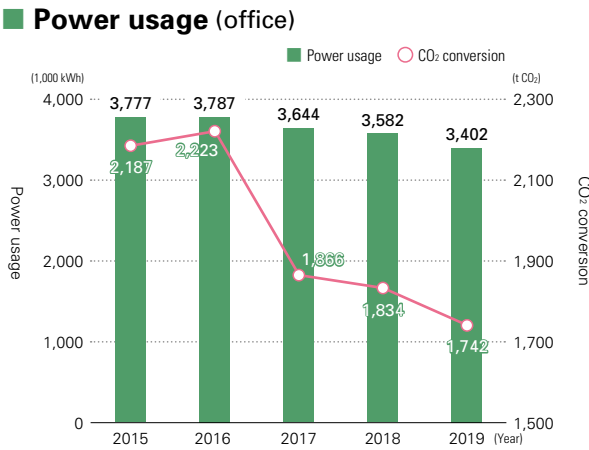
<Delivery results> Treated capacity (cumulative)



Activities for reducing environmental burdens

Promoting energy-saving measures

METAWATER has set a goal of "a 1% reduction compared to the previous year" with regard to office power consumption and is actively implementing office lighting reduction activities. Various initiatives are being explored to reduce the amount of electricity used. Lights are turned off during the lunch break, PC monitors are turned off when employees step away from their desk (energy-saving and security measures), and in addition to work-style reforms (introduction of a 4-day workweek, telecommuting, etc.), there are also "Super Refresh Days", where employees are asked to leave at a specific time and all the lights are turned off. As a result, our electricity usage in FY2019 decreased by 5.0% compared to the previous year, and CO₂ emissions were also reduced by 4.7%.



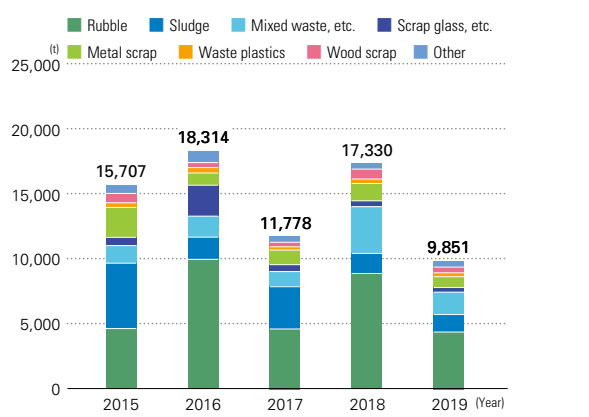
Promoting paperless work environment and purchasing eco-friendly items

Since FY2013, METAWATER has abolished the paper-based distribution of meeting materials at executive meetings, instead shifting to the use of tablets to view materials. This meeting format has already been introduced at other general meetings, as we continue our work to achieve a paperless work environment throughout the company. At the same time, we are promoting green purchasing of office supplies, and nearly 100% of the paper we use internally is certified by the Forest Stewardship Council.

Initiatives regarding industrial waste

Although the amount of industrial waste generated by our business activities (office and domestic construction work) varies depending on the type of construction work and the number of projects undertaken each fiscal year, a certain amount of waste is generated due to the nature of the business. To fulfill our responsibilities as a producer of waste, we are strengthening our management of industrial waste processing through ongoing departmental education, working to ensure that industrial waste is properly disposed of. In addition, in order to promote the reuse of the industrial waste that has been created, we outsource the disposal to industrial waste treatment companies that have recycling facilities. The recycling rate of the industrial waste that we primarily create, such as debris, sludge, and mixed waste, is 95.3%.

Changes in industrial waste emissions (by type <within Japan>)



Promoting the adoption of electronic manifests

By selecting companies that support electronic manifests, we are, as a producer of waste, making the status of industrial waste processing visible, and continually strengthening monitoring through an advance application for the use of a paper-based manifest. Depending on local conditions, in some cases we had to use a company only handling paper manifests. However, in FY2019, the adoption rate was 97.3%, only a 1.0% decrease from the previous year, allowing us to maintain a similar level of adoption (nationwide adoption rate of electronic manifests: 63%). We will continue working to increase the adoption rate of electronic manifests while paying attention to local conditions.

Focus

Aiming to become the best company at which to work

Under the management policy that "people are our greatest asset", the METAWATER Group is actively working to achieve a life-work balance while also respecting all aspects of diversity, from human rights to employment.

Our Western Japan office, which introduced ABW (Refer to Topics on page 46 for more information regarding ABW)

A "life-work balance"* that allows employees to choose their working style

The METAWATER Group is promoting various work-style reforms, including satellite offices and telecommuting, with the aim of achieving a "life-work balance" that allows employees to choose a style of work that suits their lifestyle.

The relationship between companies and their employees has changed dramatically due to a declining birthrate, aging population, shortage of human resources, development of IT, and a diversification of values regarding lifestyle. It is amongst these changes that we have removed the existing concepts of working styles, such as work hours and locations, creating an environment where employees can choose a working style that suits them in particular. We believe this leads to happier and more highly motivated employees that see the value in their work.

For example, if employees with small children can take advantage of teleworking to choose where and when to work, we are confident that it will be beneficial not only for them, but for their families and the company as well.

Communication is the key to becoming the company people most want to work for

The METAWATER Group believes that communication is the key to becoming the No. 1 company people want to work for. If the use of satellite offices or telecommuting becomes part of the natural work environment, conventional communications methods will also need to change based on the fact that people won't be face-to-face at the same workplace at the same time. As such, we are also focusing on infrastructure development for that purpose. On the other hand, some people have difficulty using the existing system depending on the type of job, work environment, etc. To ensure that everyone can work enthusiastically, we will continue to evolve the existing system through communication with our employees, knowing that we will never stop on a "completed form".

In addition to work-style reforms, we also try to see things from various other viewpoints, promoting diversity, enhancing ability development systems to help employees grow, health management to support mental and physical health, safety management so that employees can work with peace of mind, etc.

Work-style reforms are the key to corporate competitiveness

The METAWATER Group has entered its fourth year for work-style reforms, and the environment for realizing various styles of work is steadily taking shape. As a water and environmental infrastructure company, it is our belief that these work-style reforms are indispensable for the sustainable growth of the Group, as human resources are the key to corporate competitiveness. In order to become a company full of active, diverse human resources, we are creating an environment and culture that enables more diverse work, and where each employee can find what work-style reforms work best for them. In recognizing these various work styles, we are also working to reform awareness of mutual respect.

Reforming work styles and creating opportunities for a diverse range of human resources

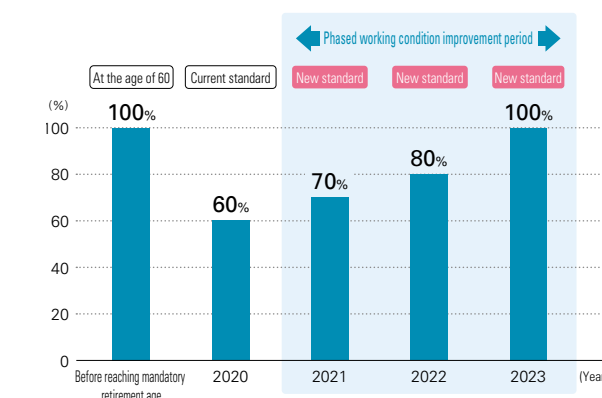
In order to realize a variety of work styles, we have been improving the work environment in terms of hardware, such as through the "Introduction of a telework system", "establishment of satellite offices", "four-day workweeks", and "implementation of ABW" (Refer to the Topics below for information on ABW). Flexible working styles that take advantage of this environment are steadily spreading throughout the company. In FY2019, as an approach toward changing mindsets so that the various environments we have been developing are taken for granted and used, we conducted a "work-style reform questionnaire" targeting approximately 2,000 employees, and are now identifying issues and considering new measures.

Since FY2020, we have been working to change the way in which work is traditionally carried out, reducing fixed working hours by 30 minutes, granting annual paid leave by the hour, raising the limit on accumulated leave, and relaxing conditions for leave.

The aim of these reforms is to create opportunities for input outside of work, allowing each employee to grow as an individual by utilizing the newly created time, and in turn, growing the company by multiplying that growth.

In addition, as a system for enabling a diverse range of human resources to play an active role in business, we are improving the working conditions for employees who are 60 or older in order to create more opportunities for senior human resources, who will be the volume generation in our company in the future. Specifically, we plan to gradually implement this improvement over the next three years starting in FY2021. One issue for our company is a shortage of supervising engineers, and so we are addressing this with regard to the above-mentioned improved working conditions for those 60 and older. We are raising the pay scale for field supervisors above a certain level without requiring any additional steps, introducing a "super field supervisor system" as a measure to secure excellent human resources, and have begun taking efforts to prepare exceptional field supervisors for General Manager-level working conditions.

Review of the working conditions for those aged 60 and older



Review of working hours and leaves/holidays

Item	Currently	After review
Scheduled working hours	7 hours 45 minutes/day (9:00 to 17:30)	7 hours 15 minutes/day (9:00 to 17:00)
Accumulated leave	Cap: 35 days	Cap: 100 days Relaxation of acquisition requirements

Topics ABW

ABW (Activity-Based Working) is a system for improving performance by selecting a work place according to the work content and purpose.

Our company's Western Japan office, for example, has created an environment where each employee can choose the most appropriate location to work, such as a cafe-like "communication area" where it is easy to communicate and a "concentration area" which facilitates focusing on work.

Bird's eye view of METAWATER's Western Japan office (CG image)



*We use the term "life-work balance" based on the belief that having a fulfilling life leads to better work performance.

Initiatives for supporting individual achievement

People are the greatest asset of the METAWATER Group, and so the development of their skills is positioned as one of our most important management themes. This is because they are the greatest source of management resources and corporate value. In accordance with the HR philosophy of "supporting personnel who desire to develop themselves, providing them with opportunities to develop competency", we are creating a culture of self-learning, building an environment that respects employee individuality and allows them to effectively develop their abilities and potential autonomously.

Ability development system diagram

A variety of training programs are held with the aim of identifying roles and developing skills in accordance with employees' growth stages. In addition to training by rank and nomination, we support the growth of each employee through elective training focused around the idea of autonomous and voluntary learning.

	By rank	Nomination	Optional	Specialized by job type	Workplace	By specialty
Officers	Officer training	Elective training	Internal/external group training / correspondence course	Individual WGs of Ability Development Committee	Implementation at each workplace / dispatch to external seminars	Various courses based on specialty
General Managers	General Manager training					
Managers	Manager training Promotional training					
Mid- to senior- level	BP/SP Promotional training					
Junior employees (2 to 3 years with the company)	Follow-up training					
New employees	New employee training					

Follow-up training for mid-career employees

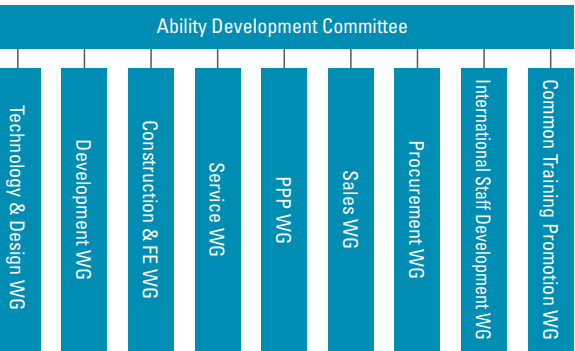
To ensure that mid-career employees firmly take root, we help them confirm and understand workplace conditions (individual counseling) and conduct compliance-related education necessary for our company employees (internal control, human rights awareness, information security, etc.). Individual counseling helps with mental care for mid-career employees, who can be prone to stress due to environmental changes.

Example follow-up training curriculum for mid-career employees

Content	Instructor
Orientation	Secretariat
Self-introduction	Individuals
Breaking the ice	Secretariat
Mental health courses and individual counseling	Counselor
Outline of employee invention regulations	Intellectual Property Department
CSR Course I (Internal Control, Social Contribution, ESG)	CSR Promotion Department
CSR Course II (Antimonopoly Act, National Public Service Ethics Act, Unfair Competition Prevention Act, Anti-gang Act, Political Funds Control Act)	Legal Department
Compliance Course I (Human Rights Awareness)	Personnel and Labor Department
Compliance Course II (Act on the Protection of Personal Information, Information Security)	IT Planning Department
Basics of our accounting system	Financial Planning Office

Efforts to enhance education for each occupation

In order to promote the development of abilities for all employees, we have established an Ability Development Committee to formulate priority policies and follow up on various educational situations. The committee has nine specialized working groups (WGs), each of which plans, develops, and implements specialized education based on the job type. The PDCA cycle for effective education is looped through by providing regular opportunities to exchange opinions between the WGs.



Company-wide specialized education website

In 2018, we established the "company-wide specialized education website", a compilation of educational materials for all occupations in the METAWATER Group. All the Group employees now have easy access to specialized educational materials for each occupation that were not centrally managed before, and basic educational materials that are useful to know. By "aggregating" and "visualizing" the educational materials on this site, we plan to enhance its functionality as a "web library"



Front page of the "company-wide specialized education website"

To be a company where everyone can work enthusiastically

We promote diversity based on the belief that the abilities of various employees with diverse personalities will lead to the growth of the Group. In addition to expanding the system to accommodate a variety of human resources, we are implementing measures such as creating rewarding environments where employees can improve their careers.

Aiming to be a company where various human resources can play an active role in operations

Since METAWATER was established, we have introduced an impartial personnel system that is not bound by personal factors such as nationality, and we regularly recruit foreign employees and accept employees at overseas sites (national staff). We also hold sessions to deepen mutual understanding among overseas Group companies in order to promote overseas business activities. We introduce the business activities and the culture of each country, fostering a sense of solidarity as a group. In addition, members of the International Staff Development WG from Japan participate in the program and use it as an opportunity to improve language skills and gain an understanding of other cultures.



Presentation of overseas companies

Round-table discussion on women's health and careers

In this era of 100-year lifespans, physical and mental health management is essential to maintaining a rich and fulfilling public and private life. Therefore, we held a round-table discussion with health management center nurses to learn about women-specific health, symptoms and how to deal with issues, and the points of self-care. In addition, through dialogue between participants in the form of round-table discussions, participants gained tips for women on how to enjoy livelier and more active work.



Round-table discussion on women's health and careers

Acquisition of "Eruboshi"

In March 2020, the company was recognized as a "Grade 3 Eruboshi company" under the Minister of Health, Labour and Welfare's certification system, which is given to companies undertaking outstanding efforts to promote women's participation. We will continue to work on increasing the ratio of women in the company, raising employee awareness, and improving the working environment to create an environment where female employees can further play an active role.



"Eruboshi (Grade 3)"

Becoming a company where employees with disabilities can play an active role

Another initiative for promoting diversity is to create an environment where people with disabilities can play an active role in the company. Employees with disabilities are engaged in a wide range of activities, taking up responsibility for various tasks in numerous departments. Every morning, instructors (vocational life instructors for persons with disabilities) check the health of each member at the morning meeting and during exercise periods, deciding upon their work assignments for the day by taking their condition into consideration. The recent work converting internal documents to PDFs has contributed to the promotion of telecommuting, one of our work-style reforms. Positive feedback results in expanded requests for work and more opportunities for active participation in the company.

Common internal work

Creating business cards for employees; sorting, collecting, and distributing internal mail; preparing meeting and training rooms; lending out projectors and other equipment; managing and sending out company-wide catalogs; etc.

Department work

Converting internal documents to PDFs; organizing and filing expense slips; aggregating and digitizing handwritten questionnaires; creating various materials; sending out purchase orders; etc.

Initiatives for promoting better health

We believe that people are our greatest asset, and as such the METAWATER Group has established various support systems for the mental and physical health of employees and their families. It is our belief that promoting the good health of each employee leads to improvements in corporate vitality, and so we will continue promoting health management.

Health management system

The METAWATER Group has established health management centers at our head office, as well as in Nagoya, Osaka, and other offices. This allows professional physicians, psychological counselors, and dedicated health management staff to follow up with employees promptly and whenever it is needed. We conduct individual interviews and give health-related guidance throughout the year so that employees themselves can maintain and improve their health.

Improving health awareness

With the declining birthrate, aging population, and a shortage of labor, it is becoming more common throughout the world to continue working regardless of age if there is an opportunity to play an active role, and health management from an early age is becoming more important than ever. As such, proper health management from an early age is becoming more important than ever. METAWATER carries out "health-care activities" and gives "health advice" with the aim of ensuring that employees can continue to work healthily and enthusiastically. "Health-care activities" include various events tailored to employees' occupation, age, physical condition, etc., such as exercise or meal seminars that can be incorporated into everyday life and health education for specific age groups. In FY2018, approximately 700 people participated in these activities. Additionally, health management staff travel around the country, talking one-on-one with employees and giving health advice.



Giving health advice through personal interviews

Mental health care

In order to prevent mental health issues from arising, we have e-learning classes such as "line care education" for employees in management positions and "self-care education" for all employees. Our work-style reforms also include working to reduce commuting stress and improve "life-work balance". We will continue to promote various mental health care initiatives in conjunction with our work-style reforms.

Safety and hygiene initiatives

The METAWATER Group has established a basic policy for health and safety management. Based on the philosophy, "No one will get injured or injure others", our focus is on creating a safe work environment that protects our employees from work-related accidents, illnesses, and traffic accidents.

Establishment of local safety and health rules and online guideline education

METAWATER has established "local occupational safety and health guidelines" to be used as a guide for safety and health rules for local construction and work. Our safety and health rules are based on the Safety and Health Act, and are compiled into a single volume that is revised annually in response to legal revisions, etc. Beginning this fiscal year, we are promoting the online publication of the "guideline education", which explains the content of this document. By creating an environment in which employees can take the necessary courses regardless of time or place in accordance with a variety of working styles, we aim to ensure the dissemination and sharing of safety and health rules.



Booklet (A5 size, 313 pages)

When selecting a subject online, contents are explained via voice and animation

Implementation of special education on full harness-type fall-arrest system

The Order for Enforcement of Industrial Safety and Health Act was revised and enacted in February 2019, and the name and structural standard of the conventional safety belt was changed to a "fall-arrest system". In addition, workers who use full harness-type fall-arrest systems are required to take special education. METAWATER also started offering special education for use of full harness-type fall-arrest systems for its employees in FY2019. From April to July 2019, a total of 10 seminars were held at each site, and a total of 214 employees participated. In the practical training curriculum, participants wore an actual full harness-type fall-arrest system, experienced hanging and self-rescue, and learned how to properly wear the device, the correct posture and feeling of hanging, and about the need for immediate rescue. Through this education, we are promoting the proper use of fall-arrest systems and thorough implementation of measures to prevent accidents, especially regarding falls and slipping, which account for the largest number of casualties in the construction industry (around 40%).



Academic education



Practical training

Training for construction supervisors

It is necessary for local supervisors of subcontractors engaged in local construction work for our company to have a wide-ranging understanding of the contents of safety-related documents and construction manuals. Since FY2018, METAWATER has held training for construction supervisors, which, in principal, applies to all local supervisors*, and provides them with training to learn the above contents and education on local occupational safety and health guidelines. This training was traditionally only required for some subcontractors, but we have turned it into a new program which now applies to all our construction subcontractors. The aim is to ensure that those working in the field can do so safely and comfortably. This course focuses on education regarding local occupational safety and health guidelines, explaining in detail the content of the guidelines, items pointed out in disaster case studies and during patrols, and details from a legal standpoint. The local supervisors of relevant construction work must attend the course and are issued a certificate of completion after finishing. In FY2019, these seminars were held six times, with 219 participants from 57 companies. We will continue to work to establish and further enhance this course.

*Target requirements: Local supervisors for work requiring the appointment of a chief engineer as stipulated by the Construction Business Act



Seminar for subcontractor construction supervisors



Examination at the end of the course

Quality initiatives

The METAWATER Group has a basic quality policy, which is to ensure that all of its products and services meet optimal quality standards to satisfy its customers, always aiming to leave customers further fulfilled.

Preventing accidents is the most important issue in maintaining quality. Plant risk assessment education is one of the activities that the Group carries out to achieve this.

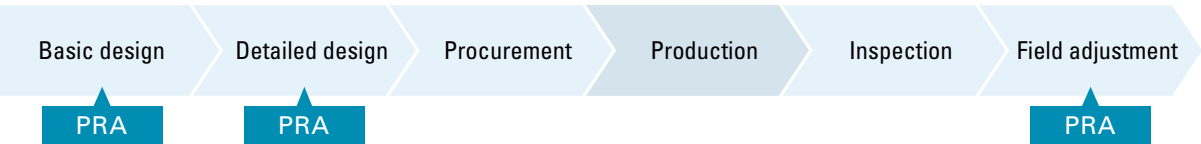
Goals

- Zero serious accidents
- Continual quality improvement

Preventing equipment accidents through plant risk assessment education

In order to prevent serious accidents and failures, the METAWATER Group conducts a PRA (Plant Risk Assessment) for each operation process, striving for continuous improvement.

■ Operation processes for plant construction



In order to avoid a worst-case scenario, we conduct PRA case study education for service department personnel regarding critical facilities that have a significant impact on the lives of the general public.

This course targeted a broad audience ranging from junior to veteran staff. Teams held discussions with members from different locations that they normally do not have a chance to speak with. In addition to gaining an understanding of the necessity of preventing equipment accidents and discovering that risks and countermeasures are perceived differently by various groups, it is also an opportunity for attendees to take notice of what skills and knowledge they are lacking through group discussions. As a result, equipment accidents in target departments have been reduced.

As one measure to prevent a facility accident from becoming more serious, in FY2019 we provided education on plant “correlation (prediction) monitoring”, which leads to early detection of such accidents.

We will continue these educational activities in order to maintain and improve quality in cooperation with related departments.



PRA education

» Comments from PRA education participants

- It was a good opportunity to understand the systems behind how water treatment plants work.
- Expanding education so that we can grasp when there is a sense of unease with the plant, such as with correlation warnings*, is a good thing.
- I'll do my best not to cause an accident that could be used as a case study to teach future generations.
- I want to learn from my seniors what actions are important in preventing accidents.
- I will make sure that no facility accidents occur.

*Correlation warning: Correlation means the intimate association of two or more things.
In a water treatment plant, numerous things are correlated, including the relationship between flow rate and water level, such as “The water level drops when water flows out of a tank”.
A “correlation warning” is issued when it is found that such a correlation is in an unusual state.

CSR procurement

The METAWATER Group promotes procurement operations based on three basic policies: promoting transparent procurement, strengthening partner relationships with suppliers, and promoting CSR procurement.

Promotion of transparent procurement – 107 new suppliers

The "Inquiries about purchasing and dealings" form is posted on our corporate website, and we provide fair and equitable entry opportunities to all business partners. We launch new transactions with around 100 companies every year. The number of new corporate business partners in FY2019 was 107.



Business negotiations

Enhancing paperless operations through EDI*

The METAWATER Group promotes the implementation of EDI. In addition to improving the accuracy and efficiency of procurement operations, we are promoting implementation of EDI with the understanding and cooperation of business partners to work on becoming paperless, reducing our impact on the environment. Introduction of EDI began with development-related and in-house equipment orders, and as of FY2019 approximately 52% of orders were through EDI.

This made the paper used traditionally in order forms, invoices, etc., unnecessary, leading to a reduction of approximately 30,000 sheets. Like us, our suppliers have also eliminated invoices and envelopes, leading to a paperless environment.

We will continue expanding the scope of transactions and applications for EDI, aiming to further improve operating efficiency and reduce our environmental burden.

*EDI: Electronic Data Interchange, a framework supporting electronic business transactions

Promotion of green procurement

The METAWATER Group is promoting the procurement of eco-friendly office supplies (products with socially recognized eco-friendly marks such as the Eco Mark and Green Mark).

Efforts were strengthened for 12 frequently used items in particular, including copy paper, business cards, and highlighters, which were designated as green procurement promotion items. In FY2019, the green procurement rate for these items reached approximately 95%. We will continue efforts to improve the green procurement rate throughout the entire company.

Legal compliance

We actively promote participation in social insurance for construction work, etc. Enrollment in insurance, etc., is thoroughly enforced by ensuring notifications are sent to suppliers, providing instructions for clarifying statutory welfare expenses in estimates, exchanging opinions with individual visits, and more and more.

Thorough enforcement of internal education

We hold study sessions on the “Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors” for all employees in charge of purchasing, ensuring thorough compliance and promoting understanding.

We also offer e-learning courses for other employees to strengthen compliance throughout the company.

Social contribution

The METAWATER Group handles "water", a natural resource indispensable for life. As a water and environmental infrastructure company, protecting the water cycle is our mission. We are promoting social contribution activities so that people from all walks of life can gain an understanding of the importance of water and the environment. We act with the aim of contributing to society and the global environment through both business and social contribution activities through the lens of water and the environment.

METAWATER's policy on social contribution activities

The METAWATER Group's social contribution activities contribute to the realization of a sustainable society by solving social issues through water and the environment.

METAWATER's guidelines on social contribution activities

- We will improve water-related environmental improvement activities and water and environmental awareness activities.
- We will value cooperation and collaborations with various stakeholders.
- We will foster awareness for voluntary employee participation.

Environment preservation

■ Forest conservation activities to protect green dams (water source reforestation)

The METAWATER Group participates in forest conservation activities at six locations throughout Japan, primarily in Okutama, Tokyo. For example, at the "METAWATER Okutama Forest", we hold water forest conservation activities jointly with the NPO Green Earth Center, planting trees and clearing undergrowth every year.



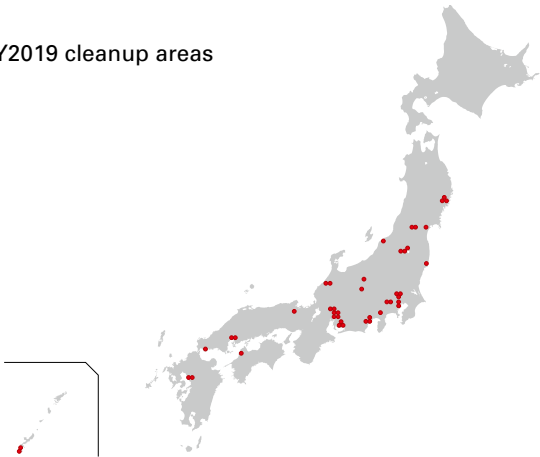
Okutama forest

Contribution to local community

■ 72 cleanup activities in 28 municipalities nationwide

The Group holds cleanup and beautification activities around each of our offices and local areas, either monthly or several times throughout the year. In FY2019, we carried out 72 cleanup activities at 28 locations throughout Japan.

FY2019 cleanup areas



■ Blood donations at two business sites

At the Head Office and Nagoya Branch, the Japanese Red Cross Society brought a blood donation vehicle and 84 employees participated in blood donation activities.

International support / relationships

■ President Nakamura gives a lecture to international students from various countries

In August 2019, we co-sponsored "Water and Earth", a summer seminar for international students hosted by the National Graduate Institute for Policy Studies. During the session, President Nakamura gave a lecture on water infrastructure.



Summer seminar for international students

Support for disaster recovery and restoration

■ Donation of support funds for damage caused by Typhoon No. 19 in 2019

In November 2019, we made donations to Miyagi Prefecture, Fukushima Prefecture, Iwaki City (Fukushima Prefecture), and Nagano Prefecture, which were damaged by Typhoon No. 19 in October 2019.



Donation of funds to Iwaki City, Fukushima Prefecture

Education / Public education

The Group sends employees to schools and events to teach children who will lead the next generation about water recirculation and environmental conservation through the knowledge and technologies related to our core businesses of water and the environment.

■ Hands-on classes held at world heritage forest

Shirakami-Sanchi (Fujisato, Yamamoto, Akita Prefecture) is a primeval forest rich in nature, and is registered as a World Natural Heritage Site. In this forest, every year, we hold an on-site class for elementary school students, called "Adventures Around the Waters of Shirakami". Children enjoyed themselves in the adventure through the local forest while learning about water source forests. For lunch they enjoyed nagashi somen using spring water from Shirakami-Sanchi. At the "Shirakami-Sanchi World Heritage Conservation Center (Fujisatokan)", after an explanation on water recirculation using a model, children made sand filtration systems using a plastic bottle and conducted filtration experiments. Filtration experiments were also demonstrated using a ceramic membrane from our company. At the end of the session, the children submitted their impressions and a report. The hands-on lesson was an excellent opportunity to learn about the role of forests and water while interacting with nature.



Learning about water source forests while venturing into Shirakami-Sanchi



Lecture on water recirculation at the "Shirakami-Sanchi World Heritage Conservation Center (Fujisatokan)"

■ Holding "METAWATER Children's Water Classes" at nursery schools

At "Hiyori Nursery School" (Kirishima City) and "Solanomachi Hoikuen" (Kagoshima City) in Kagoshima Prefecture, for the first time, we were invited to hold classes for nursery school children (3 to 5 years old). The children were delighted by the appearance of our corporate characters "Mae-chan" and "Tah-kun"! In the classes, we talked about how water is usually used by showing picture cards, and the children conducted a sand filtration experiment. The children themselves cooperated with each other to make the sand filtration system for the experiment by putting sand in plastic bottles. Water mixed with volcanic ash from Sakurajima in the garden was filtered through the system, and the children's eyes lit up when clean water came out. It was a good opportunity for both the children and teachers to learn about the importance of water and how to clean it.



The children are overjoyed by Mae-chan and Tah-kun's appearance!



A group of three packing sand into a filter

The METAWATER Group is strengthening the entire group's risk management structure including information security. In addition, we are committed to promoting Business Continuation Management (BCM) as an entire group to continue business operations even in the event of various unforeseen situations.

Corporate governance

Basic concept of corporate governance

So that we can grow sustainably with society, we are committed to improving our internal control based on our corporate mission. We are aiming to be a group trusted by society through our continuous contribution to it while meeting the expectations of our stakeholders including customers, local communities, shareholders and investors. To realize this aim, we are engaged in improving the following aspects of corporate governance.

1. The Board of Directors and the Board of Auditors are arranged and independent directors are designated to reinforce the organization for supervising our business with the purpose of creating corporate management with excellent reliability and transparency.
2. Promotion of compliance and reinforcement of internal control functions are realized to establish an organization that can sustainably enhance corporate value.
3. We disclose information in a fair, objective and appropriate manner and at an appropriate timing. Further, we communicate proactively with our stakeholders.

As a basic policy of the METAWATER Group based on the rules of the "Corporate Governance Code" (hereinafter "CG Code") stipulated by the Tokyo Stock Exchange on June 1, 2015, the Group established the "Basic Policy on Corporate Governance" (hereinafter "CG Basic Policy") on November 27, 2016 (updated November 29, 2018), and disclosed the policy on the corporate website. <https://www.metawater.co.jp/csr/responsibility/pdf/governance.pdf>

Approaches to improve corporate governance

1 Framework of directors

- The majority of the Board of Directors members are outside directors now (5 out of 9 directors are outside directors)

We have five outside directors of nine directors to ensure management transparency and soundness.

- One-third of the Board of Directors are independent directors (outside directors) (3 out of 9 directors are independent directors)

The METAWATER Group stipulates criteria for the independence of outside directors in the Basic Policy on Corporate Governance. The number of outside directors satisfying the criteria is three, and these directors were designated as independent directors together with two outside auditors in the report to the Tokyo Stock Exchange.

2 Response to Corporate Governance Code

METAWATER was listed on the First Section of the Tokyo Stock Exchange Market in December 2014. As the CG Code was established in June 1, 2015, the group implemented the measures stated on the right. We are committed to moving forward with corporate governance also in future.

*Only (Supplementary Rule 4-2-1) is the Explain Item in the "Report on Corporate Governance" (hereafter "CG report") submitted on June 23, 2020. The reason for non-implementation (Supplementary Rule 4-2-1) (from CG Report) The current remuneration for standing directors is comprised of fixed remuneration based on their post and a bonus linked with the company's performance in the applicable business year. We will continue reviewing the percentage of remuneration linked with mid-term or long-term performance and the appropriate setting of percentage for cash and the company's own stock as remuneration.

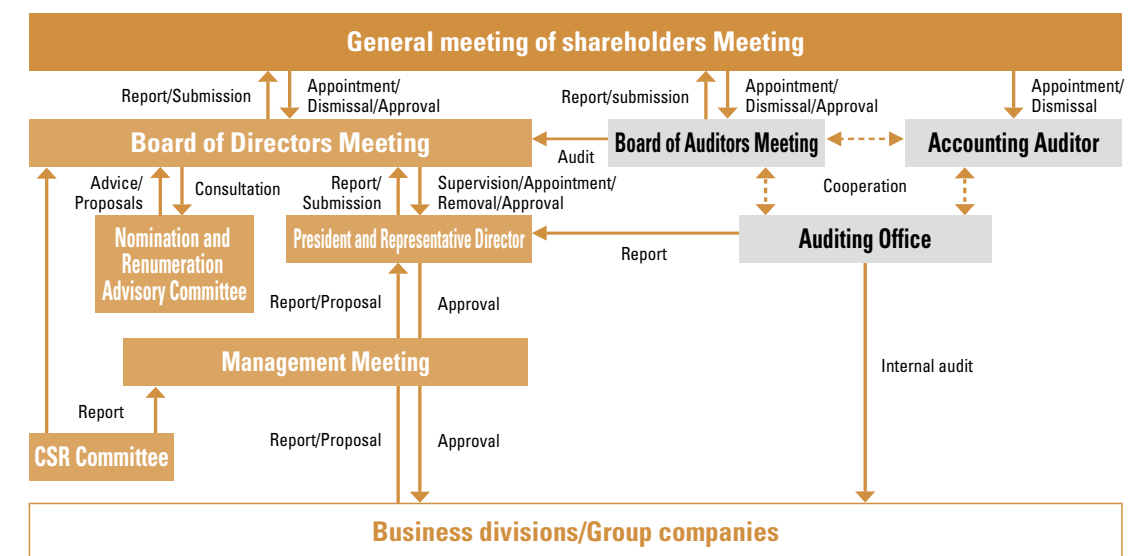
November 2015	● Established "Basic Policy on Corporate Governance"
June 2016	<ul style="list-style-type: none"> ● Added one independent director (outside director) *in compliance with CG Code (Rule 4-8) ● Disclosed evaluation on effectiveness of the Board of Directors *in compliance with CG Code (Rule 4-11-3)
June 2017	<ul style="list-style-type: none"> ● One independent director (outside director) was added ● Held a meeting by independent outside director
November 2018	● "Basic Policy on Corporate Governance" revised in accordance with partial revision of CG code
November 2018	● Established Nomination and Remuneration Advisory Committee



47th ordinary general meeting of shareholders

Corporate governance organization

METAWATER Group opts for an arrangement of a Board of Auditors as an organization design based on the Companies Act. The Board of Directors makes important decisions related to management and supervises business execution. At the same time, auditors and the Board of Auditors independent from the Board of Directors audit the status of directors' execution of their duties and the like. For the purpose of strengthening independence, objectivity, and accountability for the function of the Board of Directors related to the nomination of candidates for directors and auditors, determining remuneration for executive officers and directors, etc., a Nomination and Remuneration Advisory Committee has been established under the Board of Directors. Furthermore, METAWATER Group has introduced the Executive Officers System to accelerate management-related decision-making, reinforce functions to monitor business execution, and clarify responsibility. Additionally, a CSR Committee has been arranged as an organization to determine the important activities, systems, organizations, and the like of the Group to ensure compliance with regulatory requirements and corporate ethics. The position and role of each function are mentioned below.



Board of Directors Meeting

The Board of Directors meetings, held on a monthly basis and also as needed, function to supervise management and decision-making. The Board of Directors is comprised of nine members including five outside directors. The status of business execution by directors, including the representative director, is monitored by auditors, where, as a basic rule, three auditors attend the Board of Directors meeting and express their opinions whenever necessary.

Board of Auditors Meeting

The Board of Auditors meetings are held on a monthly basis and function to monitor management. The Board of Auditors is comprised of three members including two outside auditors. Auditors are selected from those with expertise and experience regarding our business as well as in legal and financial affairs. The Board of Auditors determines the audit policies and scope of work for each auditor, as well as specific action plans and schedules, and monitors the status of business execution by directors.

Nomination and Remuneration Advisory Committee Meeting

The Nomination and Remuneration Advisory Committee was established under the Board of Directors as a voluntary advisory body that functions as both a nomination committee and remuneration committee. These meetings are held as necessary, deliberating on matters related to the appointment and dismissal of directors, auditors, and executive officers, as well as remuneration for directors, executive officers, etc., in consultation with the Board of Directors, and also providing advice and proposals to the Board of Directors. The committee is comprised of six members total, including the Director and President, three independent

outside directors, and two independent outside auditors, with an independent outside director selected as the chairperson.

Executive Officers System

The Executive Officers System has been introduced to accelerate management-related decision-making, reinforce functions to monitor business execution, and clarify responsibility. The executive officers are comprised of fifteen members including four directors and executive officers. Their term of office is one year and their appointment, reappointment, and dismissal are determined at Board of Directors meetings.

Management Meeting

The Management meetings consist of fifteen executive officers and, as a general rule, are held twice a month. In these meetings, reports are given and discussions are held regarding important management-related matters stipulated in our official competence rules. Standing auditors attend the meeting and express opinions as necessary, monitoring the status of business execution by the President & Chief Executive Officer as well as those executive officers below him.

CSR Committee Meeting

CSR Committee meetings are held twice a year, with a function of promoting compliance and reinforcing internal control. The CSR Committee has seven subordinate working groups under it. The committee is comprised of fifteen members, including the chairperson and fourteen committee members. Details of the CSR Committee's activities are reported to the Management Meeting and Board of Directors Meeting as needed.

Corporate governance

Outside Director’s roles

- 1 Provide advice to promote the Company’s sustainable growth and improve medium- and long-term corporate value based on own knowledge and insights, and supervise the execution of business by the Company
- 2 As a position that is independent from the management, receive opinions from stakeholders including minority shareholders, and appropriately reflect those opinions at Board of Directors Meetings
- 3 Appropriately manage risks including conflicts of interest arising from the execution of business by leveraging internal and external knowledge and insights, as well as experience

Reasons for selection by individual

	Corporate title	Reasons for selection
Susumu Sakabe	Outside Director	Mr. Sakabe held important positions at NGK INSULATORS, LTD. and has a wealth of management experience as well as a depth of expertise in the areas of finance and accounting. Considering that he has the required skill set to supervise the execution of the business of the Company by leveraging his management experience and expertise, we appointed him as an Outside Director of the Company.
Motofumi Matsumura	Outside Director	Mr. Matsumura held important positions at Fuji Electric Co., Ltd. and has a wealth of management experience as well as a depth of knowledge in a broad range of business areas. Considering that he has the required skill set to supervise the execution of the business of the Company by leveraging his management experience and expertise, we appointed him as an Outside Director of the Company.
Keiichiro Sue	Outside Director Independent Director	Mr. Sue is a lawyer and is well versed in international legal affairs including international commercial relations. He also held the position as an outside director of another company and has balanced and broad perspectives of industries related to the Company. Although he has no direct management experience in a company except as an outside director, we consider him to have the required skill set to supervise the execution of the business of the Company by leveraging his experience and expertise, and accordingly appointed him as an Outside Director of the Company. Because he meets the standards set by the Company for Criteria for Independency of Outside Directors and also fulfills the requirements of an Independent Director stipulated by the Tokyo Stock Exchange, we consider him to have no potential conflicts of interest with general shareholders, and have designated him as an Independent Director.
Kaoru Aizawa	Outside Director Independent Director	Mr. Aizawa held important positions, including Representative Director of Nitto Denko Corporation. He also has a wealth of management experience gained through his position as an outside director of another company and possesses balanced and broad perspectives of industries related to the Company. We consider that he has the required skill set to supervise the execution of the business of the Company by leveraging his experience and extensive knowledge. Accordingly, we appointed him as an Outside Director of the Company. Because he meets the standards set by the Company for Criteria for Independency of Outside Directors and also fulfills the requirements of an Independent Director stipulated by the Tokyo Stock Exchange, we consider him to have no potential conflicts of interest with general shareholders, and have designated him as an Independent Director.
Fumiko Kosao	Outside Director Independent Director	Ms. Kosao is well versed in corporate accounting with expertise in the area of taxation and has broad perspectives gained through her position as an outside director of another company. Although she has no direct management experience in a company, except as an outside director, we consider that she has the required skill set to supervise the execution of the business of the Company by leveraging her experience and expertise. Accordingly, we appointed her as an Outside Director of the Company. Because she meets the standards set by the Company for Criteria for Independency of Outside Directors and fulfills the requirements of an Independent Director stipulated by the Tokyo Stock Exchange, we consider that she does not have potential conflicts of interest with general shareholders, and have designated her as an Independent Director.
Kimihiko Uemura	Outside Auditor Independent Director	Mr. Uemura is a lawyer and is well versed in corporate legal affairs including the Companies Act. With a wealth of experience gained through his position as an outside director of another corporation, he has balanced and broad perspectives of industries related to the Company. We consider him to have the required skill set to supervise the execution of the business of the Company by leveraging his experience and high level of independence, and accordingly appointed him as an Outside Auditor of the Company. Because he meets the standards set by the Company for Criteria for Independency of Outside Directors and also fulfills the requirements of an Independent Director stipulated by the Tokyo Stock Exchange, we consider him to have no potential conflicts of interest with general shareholders, and have designated him as an Independent Director.
Kazuo Takimoto	Outside Auditor Independent Director	Mr. Takimoto is well versed in corporate taxation as a certified public accountant and tax accountant. With a wealth of experience gained through his position as an outside director of another company, he has balanced and broad perspectives of industries related to the Company. We consider him to have the required skill set to supervise the execution of the business of the Company by leveraging his extensive experience of finance and accounting, as well as high level of independence, and accordingly appointed him as an Outside Auditor of the Company. Because he meets the standards set by the Company for Criteria for Independency of Outside Directors and also fulfills the requirements of an Independent Director stipulated by the Tokyo Stock Exchange, we consider him to have no potential conflicts of interest with general shareholders, and have designated him as an Independent Director.

Interview with Outside Director

We strive to reflect external points of view in our efforts to improve corporate governance and further develop our business.

Outside Director Keiichiro Sue



— What are your overall impressions regarding the management of the Board of Directors, state of discussions, etc.?

Our company’s Board of Directors engage in frank and heated discussions on important management decisions. However, no director is married to their own views and opinions. Rather, everyone listens to other opinions and discusses them from a professional perspective. I feel that these discussions are very productive. Participating in such discussions can be trying, but it’s an effort everyone is willing to put in.

Over the past 5 years, we have not only been actively engaged in PPP projects in Japan, but have also been focusing on expanding our overseas business. However, we are still in the midst of this process, and as we move beyond our 10-year anniversary, we will have to make difficult decisions, including deciding on the direction for further development of our business. I would like to improve myself so that I can more actively participate in such discussions.

— Please tell us about your role as an Outside Director.

I was asked to serve as an Outside Director because I was highly evaluated for my overseas experience, including dealing with WTO disputes involving legal disputes over trade issues in each country’s systems and enacting domestic laws when I worked for the Ministry of Economy, Trade and Industry. Since returning to my position as a lawyer, I have dealt with a number of domestic and overseas issues, mainly in the area of personnel and labor relations for both domestic and foreign companies. Since our company has been aggressively entering the water supply and sewage business in Europe and the United States, I thought that I might be able to use my knowledge on how to deal with legal issues in Japan and overseas, and decided to accept the offer of Outside Director.

I believe that the most important aspect of corporate governance is the attitude of management. Things like “pursuing self-interests” and a “lack of compliance” are obviously out of the question, but it is also possible that the internal logic of the company may work to damage the business without anyone even realizing. I believe my role is to participate in discussions from an external perspective so that the company does not fall into such a situation. In studying the water and wastewater business and industry as a whole, I try to reflect that “outside point of view” in the discussions of the Board of Directors.

— What are your thoughts on the governance of the METAWATER Group?

Our company was formed as a result of the merger of NGK and Fuji Electric’s water supply and environment subsidiaries. In terms of corporate governance, I feel that the unique tension among the three parties has been working positively.

However, I believe that this relationship will change as the company develops, and as we expand our overseas business in anticipation of further globalization, governance will inevitably become more difficult from the perspective of balance as a group company.

In order for corporate governance to function in this process, it is important to gain the understanding of our business activities from stakeholders and to ensure the transparency of the business. I would like to gain a complete understanding of our company’s business activities and help ensure their transparency.

— What is necessary for the sustainable improvement of corporate value?

I understand that the core of our company’s business is to play a vital role in society, equivalent to the kidneys in a human body. In order for the business to survive and develop, it is essential for all employees to have an understanding that “our company underpins the survival of society” and to be aware of “what is most important in doing business”. Things such as safety, security, and efficiency are essential for this purpose, and I believe that we should place importance on the perspective of contributing to society through our business.

It is also extremely important to create a comfortable working environment so that employees can work with a sense of duty or purpose. I think the company deserves high marks for its active promotion of human resource strategies and work style reforms.

— What are your future aspirations as an Outside Director?

I would like to do what I can to improve corporate governance and develop our company’s businesses, which have social significance.

Management organization (As of end of June 2020)

Directors



Yasushi Nakamura Operation execution control
President and Representative Director

April 1981 Joined Fuji Electric Co., Ltd.
April 2008 Director at METAWATER
April 2012 Executive General Manager, Service Solution Division at METAWATER
April 2014 Executive General Manager, Corporate Strategy Planning Division at METAWATER
June 2015 Senior Executive Officer at METAWATER
June 2016 President and Representative Director at METAWATER (current)
June 2020 President & Chief Executive Officer at METAWATER (current)
June 2020 Outside Director, NTT Data Intramart Corporation (current)



Akira Kato
Assistance to the Chief Executive Officer
Executive General Manager, Corporate Strategy Planning Division

March 1980 Joined NGK Insulators, Ltd.
June 2013 Director at METAWATER (current)
June 2015 Senior Executive Officer at METAWATER
June 2016 Executive General Manager, Corporate Strategy Planning Division at METAWATER (current)
Chief of Export Management Office at METAWATER
April 2017 Senior Executive Officer at METAWATER
April 2019 Vice President & Executive Officer at METAWATER (current)



Noboru Okuda
Executive General Manager, Plant Engineering Division

April 1982 Joined Fuji Electric Co., Ltd.
April 2013 Deputy Executive General Manager, Plant Engineering Division at METAWATER
April 2014 Executive General Manager, Service Solution Division at METAWATER
June 2015 Executive Officer at METAWATER
April 2016 Senior Executive Officer at METAWATER (current)
Executive General Manager, Plant Engineering Division (current)
June 2019 Director at METAWATER (current)



Kenji Yamaguchi
Executive General Manager, Business Strategy Division

April 1987 Joined NGK Insulators, Ltd.
April 2013 Deputy Executive General Manager, Business Strategy Division at METAWATER
April 2015 Executive General Manager, Business Strategy Division (current)
June 2015 Executive Officer at METAWATER (current)
June 2019 Director at METAWATER (current)



Susumu Sakabe Outside
Director of NGK INSULATORS, LTD. Senior Executive Officer

March 1981 Joined NGK Insulators, Ltd.
June 2007 Executive Officer at the company
June 2010 Director & Executive Officer at the company
June 2011 Director & Senior Vice President at the company
June 2014 Outside Director for METAWATER (current)
June 2015 Director & Senior Vice President at NGK Insulators, Ltd. (current)



Motofumi Matsumura Outside
Advisor of Fuji Electric Co., Ltd.

April 1978 Joined Fuji Electric Co., Ltd.
June 2004 Director at Fuji Electric Systems Co., Ltd.
April 2008 Executive Managing Director at the company
April 2011 Executive Officer at Fuji Electric Co., Ltd.
April 2016 Advisor at the company (current)
June 2016 Outside Director for METAWATER (current)
June 2016 Director at Fuji Furukawa Engineering & Construction Co., Ltd.



Keiichiro Sue Outside Independent
Partner of Blakemore & Mitsuki Law Firm

April 1984 Registered as an attorney (Daichi Tokyo Bar Association)
Joined Nobuo Takai Law Office
October 1995 Registered as an attorney in New York state
June 2003 Outside Auditor for Nippon Signal Co., Ltd.
June 2009 Partner at Blakemore & Mitsuki (current)
June 2014 Outside Director for METAWATER (current)
June 2014 External Audit & Supervisory Board Member for NHK Spring Co., Ltd.
June 2015 External Director at the company (current)



Kaoru Aizawa Outside Independent
Independent Director of Nicca Chemical Co, Ltd.

April 1977 Joined Nitto Denko Corporation
April 2003 Executive Officer at the company
June 2007 Board Member & Executive Vice President at the company
June 2010 Board Member & Senior Executive Vice President at the company
June 2011 Representative Director & Senior Executive Vice President at the company
September 2014 Advisor at NICCA CHEMICAL CO., LTD.
March 2016 Outside Director at the company (current)
June 2016 Outside Director for METAWATER (current)



Fumiko Kosao Outside Independent
Licensed tax accountant, Kosao Fumiko Accountant Office
Outside Director of CTI Engineering Co., Ltd.

April 1973 Jointed the National Tax Agency
July 2011 Director, Gyoda Tax Office, Kanto-Shinetsu Regional Taxation Bureau
July 2014 Director, Nihonbashi Tax Office, Tokyo Regional Taxation Bureau
August 2015 Registered as a tax accountant
Tax accountant, Fumiko Kosao Certified Tax Accountant Office (current)
June 2016 Outside Auditor for TOBISHIMA CORPORATION
March 2017 Outside Director for CTI Engineering Co., Ltd. (current)
June 2017 Outside Director for METAWATER (current)

Auditors



Shigeru Hatsumata
Audit and Supervisory Board Member

April 1982 Joined Fuji Electric Co., Ltd.
April 2008 Deputy Executive General Manager, Business Development Division at METAWATER
April 2014 Deputy Executive General Manager, CSR Division at METAWATER
April 2015 Executive General Manager, CSR Promotion Office at METAWATER
June 2015 Executive Officer at METAWATER
June 2019 Audit and Supervisory Board Member at METAWATER (current)



Kimihiko Uemura Outside Independent
Partner of Midosuji Legal Profession Corporation

April 1987 Registered as an attorney (Osaka Bar Association)
Joined Midosuji Law Firm
(currently Midosuji Legal Profession Corporation) (current)
June 2007 Outside Auditor for Fudo Tetra Corporation
June 2013 Outside Auditor at METAWATER (current)



Kazuo Takimoto Outside Independent
CPA and Tax Accountant of Tokyo Kudan Accounting Office

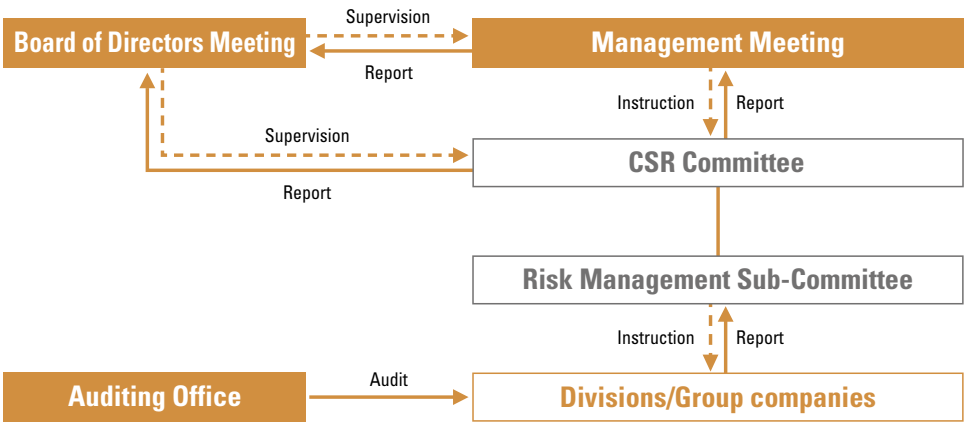
November 1978 Joined Asahi Accounting Co., Ltd.
October 1988 Opened Takimoto Accounting Office
(currently Tokyo Kudan Accounting Office) (current)
June 2007 Outside Director for Vitec Co, Ltd.
June 2014 Outside Auditor at METAWATER (current)

Executive Officers

President & Chief Executive Officer	Yasushi Nakamura	Operation execution control
Vice President and Executive Officer	Akira Kato	Assistance to the Chief Executive Officer / Executive General Manager, Corporate Strategy Planning Division / Responsible for Corporate Administration Department, Affiliates Coordination Department, and Legal Department, Corporate Strategy Planning Division / Executive General Manager, Export Control Office and Affiliates Coordination Department, Corporate Strategy Planning Division
Senior Executive Officer	Noboru Okuda	Executive General Manager, Plant Engineering Division / Responsible for Product Center / Responsible for Quality Assurance Office
Senior Executive Officer	Makoto Shimizu	Executive General Manager, Service Solution Division / President and Representative Director, METAWATER TECH Co., Ltd.
Senior Executive Officer	Masashi Sakai	Executive General Manager, Public Private Partnership Division
Executive Officer	Eiji Nakamura	President and Representative Director, METAWATER SERVICE Co., Ltd.
Executive Officer	Kenji Yamaguchi	Executive General Manager, Business Strategy Division / Responsible for WBC Center
Executive Officer	Michio Fujii	Deputy Executive General Manager, Corporate Strategy Planning Division / Executive General Manager, HR & General Affairs Planning Office, Corporate Strategy Planning Division / Responsible for CSR Promotion Office, Corporate Strategy Planning Division / Chief of Export Management Office / Responsible for Risk Management / President and Representative Director, METAWATER Research Institute Co., Ltd.
Executive Officer	Masahiro Takagi	Executive General Manager, Sales and Marketing Division
Executive Officer	Masayuki Nakagawa	Executive General Manager, Financial Planning Office, Corporate Strategy Planning Division / Responsible for Information Technology Planning Department, Corporate Strategy Planning Division
Executive Officer	Yoshito Ezure	Deputy Executive General Manager, International Business Division / Director and Deputy President, METAWATER USA, INC. / Chairman of the Board, Aqua-Aerobic Systems, Inc.
Executive Officer	Tsugio Kusano	Executive General Manager, Plant Construction Center / Responsible for Safety and Health Management Office
Executive Officer	Susumu Kadowaki	Deputy Executive General Manager, Sales & Marketing Division
Executive Officer	Koichi Yamaguchi	Executive General Manager, Cost Engineering Center
Executive Officer	Ken Akikawa	Executive General Manager, International Business Division / Director and President, METAWATER USA, INC. / Director and Chairman, Wigen Companies, Inc.
Executive Officer	Tatsuo Kato	Deputy Executive General Manager, Plant Engineering Division

Risk management and compliance

With the “METAWATER Group Risk Management Rules” in place, the METAWATER Group has a systematic awareness of various risks that can affect the Group’s operations, evaluates and manages those risks appropriately, and thereby seeks to prevent their occurrence or to reduce losses associated with them, while striving to improve and expand the corporate value of the Group. Furthermore, the Risk Management Working Group has been established within the CSR Committee in an effort to improve and reinforce the corporate framework so that the Group can appropriately address individual risks in order to meet stakeholders’ expectations.



Furthermore, in order to respond to individual risks, in addition to establishing the “METAWATER Business Continuity Plan (BCP)”, “Compliance Rules”, and “Information Security Policies”, we have also established regulations, standards, and manuals for responding to accidents, the environment, and safety and health, so that we can respond quickly and accurately to various events that may occur.

BCM activities

With a commitment to strengthening Business Continuation Management (BCM), the METAWATER Group has developed the Business Continuation Plan (BCP), which is suitable for its business characteristics. Furthermore, the Group regularly holds BCM Promotion Working Group meetings in order to improve the effectiveness of the formulated BCP. In FY2019, we made major revisions to our BCP, including establishing “emergency priority operations”, reviewing BCP (recovery action) procedures, and streamlining documents by consolidating related rules. In FY2020, we plan to further improve effectiveness by promoting greater permeation and familiarization of the BCP through various training and education programs. Additionally, at the Head Office and Hino Branch, we continue to conduct skill training for our in-house firefighting teams, which are made up of employees, to familiarize them with various skills such as emergency calls, cardiopulmonary resuscitation, and fire extinguisher training. In response to the spread of novel coronavirus infections, we have established an emergency response division headed by the President and are implementing various measures in a flexible manner. In light of our social mission to provide water and environmental infrastructure, all of METAWATER is working to prevent the spread of infection in order to ensure business continuity and the safety of employees.



BCM Promotion Working Group



Training for each department walking through the revisions of the BCP

Initiatives for strengthening information security

The utilization of Information and Communications Technology (ICT) is indispensable for promoting work style reforms, improving operational efficiency and convenience, etc. However, the development of an information society is increasing, and with it information security risks are increasing as well, such as leakage of confidential or personal information, cyber-attacks, etc. As such, the METAWATER Group is making various efforts to combat information security risks.

Upgrading security countermeasures at construction and plant operation sites

In addition to strengthening information security in offices, the METAWATER Group is also taking measures to strengthen information security at construction sites and operation and maintenance sites for water and sewage treatment plants. At the same time, we conduct IT internal audits to identify issues and implement countermeasures. Opportunities for minor improvements were identified in FY2019 audits, and all of those issues were corrected, with continuous improvements being made.



Information security is imperative at construction sites

Information security training for all employees

Collective education and e-learning training is being carried out for all employees to improve their information security knowledge. For new employees in particular, all group companies are holding individual workshops. Easy-to-understand examples are used to raise awareness and strengthen information security.



Information security seminar for new graduates

Compliance

We believe that ensuring proper compliance and being widely trusted by society leads to sustainable growth of the METAWATER Group, as well as fosters a healthy corporate culture. Based on this understanding, we have established Compliance Rules that serve as guidelines for the Corporate Charter of Conduct, the Employees' Code of Conduct, and the compliance issues that the Group could implement and realize. In order to link these to specific action, various internal regulations have been established, ensuring thorough compliance with laws and internal rules.

Compliance Working Group

As a specialized working group under the CSR Committee, we have established the Compliance Working Group, which is comprised of five chief department managers and the Legal Division as the secretariat. They are engaged in activities that include checking on and improving implementation of compliance programs, studying and developing company-wide compliance education and measures, and offering consultation on issues received from the compliance helpline. In response to these matters, we hold emergency and temporary meetings in addition to regular quarterly meetings.

Compliance Education

The METAWATER Group provides lecture-based courses, including company-wide education provided at main bases throughout the country, company-wide e-learning, executive education, and education by rank. From FY2018 to FY2019, we conducted company-wide education on the themes of personal information protection, information security, and harassment prevention. In FY2019, 18 seminars were held at five sites, and a total of 2,570 employees participated over a two year period.

FY2019 e-learning and company-wide education results

Company-wide education	Head Office (5 times), Hino (4 times), Nagoya (3 times), Osaka (3 times), Fukuoka (3 times)
e-learning education	Total of 22,183 people across 8 sessions

Analysis on Operating Results

Descriptions and statements in relation to forward-looking projections disclosed in this document reflect the judgment of the Group as of March 31, 2020.

Operating Results Review for the Current Fiscal Year

During the fiscal year ended March 31, 2020, business conditions of the Japanese economy have recovered moderately, although some weakness remained. This is due in part to the effects of various government policies amid the improving labor market and increasing salary levels. The global economy continued to recover moderately as a whole, despite the risks of uncertainty related to developments in trade issues, the outlook for the Chinese economy and the government policies. Meanwhile, the global outbreak of COVID-19 has been constraining the economic activity since January 2020, and the economy has slowed rapidly.

Under such circumstances, in order to achieve the Midterm Business Plan 2020, covering the period up to FY2020 (fiscal year ending March 31, 2021), the Group has been trying its best to implement the priority measures: i) strategic development investment, ii) business strategy (enhancement of foundation field and expansion of growth field) and iii) efforts of sustainable ESG.

The domestic business environment in which the Group operates has continued to face challenges including a downward trend in the level of public spending, a sharp increase in labor costs arising from shortage of human resources, and some delays in civil engineering projects and construction work.

In the overseas businesses, the Group sought to accelerate business developments centered around Europe and the United States., where stable market growth is expected. As part of it, the Group has sought to achieve further business expansion especially through Aqua-Aerobic Systems, Inc., the subsidiary located in the United States, as our business base.

The operating results of the Group for the fiscal year ended March 31, 2020 are as presented in the table below.

	Fiscal year ended March 31, 2019 (Millions of yen)	Fiscal year ended March 31, 2020 (Millions of yen)	Increase/ (decrease) (Millions of yen)	Increase/ (decrease) (%)
Net sales	117,342	128,723	11,381	9.7
Operating income	7,607	8,223	615	8.1
Ordinary income	7,624	8,132	508	6.7
Profit attributable to owners of parent	5,170	5,677	506	9.8
Sales orders	123,807	125,011	1,204	1.0
Outstanding orders	142,351	138,639	(3,711)	(2.6)

The Group’s business consists of two segments: Plant Engineering Business Segment including EPC as foundation field and foreign business as growth field and Service Solutions Business Segment including O&M as foundation field and PPP as growth field.

Operating results by segment are as follows:

(Plant Engineering Business)

The operating results of the Plant Engineering Business are as presented in the table below.

In the EPC business, the net sales showed a steady growth, while the operating income remained at the same level year on year due to the differences in the composition of projects. Both net sales and operating income in the international business remained approximately at the same level year on year.

	Fiscal year ended March 31, 2019 (Millions of yen)	Fiscal year ended March 31, 2020 (Millions of yen)	Increase/ (decrease) (Millions of yen)	Increase/ (decrease) (%)
Net sales	65,517	72,366	6,848	10.5
Operating income	3,191	3,188	(3)	(0.1)
Sales orders	73,915	67,861	(6,053)	(8.2)
Outstanding orders	83,047	78,542	(4,505)	(5.4)

(Service Solutions Business)

The operating results of the Service Solutions Business are as presented in the table below.

Both net sales and operating income in the O&M business showed a steady growth. Both net sales and operating income in the PPP business also showed a steady growth.

	Fiscal year ended March 31, 2019 (Millions of yen)	Fiscal year ended March 31, 2020 (Millions of yen)	Increase/ (decrease) (Millions of yen)	Increase/ (decrease) (%)
Net sales	51,824	56,356	4,532	8.7
Operating income	4,416	5,035	619	14.0
Sales orders	49,892	57,150	7,258	14.5
Outstanding orders	59,303	60,097	793	1.3

Financial Position Review for the Current Fiscal Year

Total assets as of March 31, 2020 decreased by ¥13,151 million compared to March 31, 2019 to ¥119,469 million. Current assets decreased by ¥13,596 million compared to March 31, 2019 to ¥101,941 million due to a decrease in work in process and cash and deposits, offsetting with an increase in accounts receivable - trade. Non-current assets increased by ¥444 million compared to March 31, 2019 to ¥17,527 million due to an increase in assets for retirement benefits. Current liabilities decreased by ¥1,992 million compared to March 31, 2019 to ¥54,333 million due to a decrease in advances received, offsetting with an increase in accounts payable - trade. Non-current liabilities decreased by ¥1,720 million compared to March 31, 2019 to ¥15,542 million due to a decrease in PFI and other project finance loans. Total net assets decreased by ¥9,438 million compared to March 31, 2019 to ¥49,592 million due to a decrease resulting from purchase of treasury stock.

Cash Flow Review

The balance of cash and cash equivalents (hereinafter the “funds”) as of March 31, 2020 decreased by ¥14,920 million compared to March 31, 2019 to ¥12,876 million. An analysis of the cash flows for the fiscal year ended March 31, 2020 and related commentary thereon is presented below:

(Cash flows from operating activities)

The funds generated by operating activities was ¥3,521 million (¥2,715 million decrease year to year): ¥8,132 million of income before income taxes and ¥1,098 million of depreciation, offsetting with ¥1,859 million increase in notes and accounts receivable - trade and ¥2,537 million used for payment of income taxes.

(Cash flows from investing activities)

The funds used for investing activities was ¥1,380 million (¥575 million increase year to year): ¥600 million used for purchase of property, plant and equipment and ¥179 million used for purchase of intangible assets.

(Cash flows from financing activities)

The funds used for financing activities was ¥17,072 million (¥14,455 million increase year to year): ¥1,607 million used for payment of dividends, ¥844 million used for repayments of PFI and other project finance loans and ¥14,288 million used for purchase of treasury stock.

Issues to be Addressed

In the Group’s main business in the domestic water and sewage treatment market, the financial difficulties of local governments and shortage of engineers have become evident, which are attributable to the population decline. In addition, measures for facilities and equipment, which are aging, as well as natural disasters such as large earthquakes and torrential rains are urgent issues. Under these circumstances, new government policies including revisions of the PFI Act and the Water Supply Act (promulgated in December 2018) are encouraging public-private partnerships using private funds, technology and know-how in public infrastructure development as well as studies of expanded coverage areas as measures to strengthen the management of water and sewage business operators. In addition, the creation of new business opportunities and business models backed by technological innovations such as IoT, AI and 5G is expected in the future. On the other hand, overseas water and sewage market, mainly in Europe and the United States, are faced with needs for countermeasures against aging facilities and equipment and the tightening of environmental regulations. While in areas including emerging Asian countries, demand is growing for the development of a water and sewage infrastructure in conjunction with the increasing population and demand for water. Going forward, the emergence of business opportunities in line with these issues and needs of the water and sewage market of each country is expected to continue.

In light of this business environment, the Group has developed the Midterm business plan 2020, covering the period up to FY2020 (fiscal year ending March 31, 2021), as the first stage in achieving its long-term vision (ten-year-vision). The entire Company is working together to address three priority issues of “strategic development investment,” “business strategy,” and “efforts of sustainable ESG,” in order to achieve the management targets for FY2020 of sales orders of ¥140.0 billion, net sales of ¥130.0 billion, and operating income of ¥9.0 billion. The economy has continued to rapidly slowed down since January 2020, due to the impact of COVID-19. Since the trends going forward are uncertain at present, the impact of COVID-19 is not incorporated in the plan for FY2020.

	Millions of yen		Thousands of U.S. dollars	
	As of March 31, 2018	As of March 31, 2019	As of March 31, 2020	As of March 31, 2020
Assets				
Current assets				
Cash and deposits	*3 25,805	*3 28,589	*3 13,645	125,379
Notes and accounts receivable - trade	*3 72,164	*3 76,282	*3 78,109	717,715
Work in process	2,623	4,670	3,357	30,846
Supplies	3,299	3,932	4,711	43,287
Other current assets	*4 1,508	*4 2,062	*4 2,118	19,461
Total current assets	105,401	115,538	101,941	936,699
Non-current assets				
Property, plant and equipment				
Buildings and structures, net	1,189	1,300	1,222	11,228
Machinery and equipment, net	818	970	1,172	10,769
Tools, furniture and fixtures, net	423	462	391	3,592
Construction in progress	235	153	117	1,075
Other property, plant and equipment, net	315	301	280	2,572
Total property, plant and equipment	*2 2,982	*2 3,188	*2 3,184	29,256
Intangible assets				
Software	890	517	445	4,088
Software in progress	94	29	144	1,323
Goodwill	1,842	1,670	1,671	15,354
Customer-related assets	2,769	2,539	2,506	23,026
Other intangible assets	1,463	1,314	1,240	11,393
Total intangible assets	7,060	6,072	6,008	55,205
Investments and other assets				
Investment securities	*1, *4 1,345	*1, *4 1,342	*1, *4 1,568	14,407
Long-term loans receivable	*4 224	*4 196	*4 173	1,589
Guarantee deposits	1,528	1,604	1,561	14,343
Assets for retirement benefits	821	1,374	2,172	19,957
Deferred tax assets - non-current	3,541	3,268	2,783	25,571
Other non-current assets	47	35	74	679
Total investments and other assets	7,509	7,822	8,333	76,568
Total non-current assets	17,551	17,082	17,527	161,049
Total assets	122,952	132,620	119,469	1,097,757

	Millions of yen		Thousands of U.S. dollars	
	As of March 31, 2018	As of March 31, 2019	As of March 31, 2020	As of March 31, 2020
Liabilities				
Current liabilities				
Accounts payable - trade	18,372	18,278	19,801	181,944
Electronically recorded obligations	8,155	8,380	11,603	106,615
Short-term loans payable	269	337	276	2,536
Current portion of PFI and other projects finance loans	*3 833	*3 844	*3 855	7,856
Income taxes payable	2,173	2,419	2,206	20,270
Advances received	10,719	16,075	9,011	82,798
Provision for warranties for completed construction	857	1,361	1,340	12,312
Provision for loss on construction contracts	204	517	579	5,320
Other current liabilities	7,340	8,111	8,658	79,555
Total current liabilities	48,927	56,326	54,333	499,246
Non-current liabilities				
Long-term loans payable	2,050	1,847	1,539	14,141
PFI and other projects finance loans	*3 11,549	*3 10,705	*3 9,849	90,498
Liability for retirement benefit	5,294	4,603	4,025	36,984
Other non-current liabilities	88	107	128	1,176
Total non-current liabilities	18,982	17,262	15,542	142,809
Total liabilities	67,910	73,589	69,876	642,065
Net assets				
Shareholders' equity				
Capital stock	11,946	11,946	11,946	109,767
Capital surplus	15,080	15,080	15,080	138,564
Retained earnings	30,214	33,830	37,900	348,249
Treasury stock	(0)	(0)	(14,289)	(131,296)
Total shareholders' equity	57,241	60,856	50,638	465,294
Accumulated other comprehensive income				
Valuation difference on available-for-sale securities	54	49	54	496
Foreign currency translation adjustment	84	(371)	(366)	(3,363)
Remeasurements of defined benefit plans	(2,474)	(1,645)	(882)	(8,104)
Total accumulated other comprehensive income	(2,335)	(1,967)	(1,194)	(10,971)
Non-controlling interests	136	142	148	1,359
Total net assets	55,042	59,031	49,592	455,683
Total liabilities and net assets	122,952	132,620	119,469	1,097,757

[Consolidated Statement of Income]

	Millions of yen		Thousands of U.S. dollars	
	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019	Fiscal year ended March 31, 2020	Fiscal year ended March 31, 2020
Net sales	110,895	117,342	128,723	1,182,789
Cost of sales	*1 86,925	*1 91,442	*1 101,846	935,826
Gross profit	23,970	25,899	26,877	246,963
Selling, general and administrative expenses	*2, *4 17,224	*2, *4 18,291	*2, *4 18,653	171,395
Operating income	6,745	7,607	8,223	75,558
Non-operating income:				
Interest income	193	194	175	1,608
Dividends income	34	56	52	477
Foreign exchange gain	—	152	—	—
Miscellaneous income	17	7	25	229
Total non-operating income	245	410	253	2,324
Non-operating expenses:				
Interest expenses	217	218	190	1,745
Loss on valuation of investment securities	—	87	—	—
Loss on disposal of non-current assets	*3 66	*3 84	*3 68	624
Foreign exchange loss	236	—	59	542
Miscellaneous loss	4	3	25	229
Total non-operating expenses	526	394	344	3,160
Ordinary income	6,465	7,624	8,132	74,722
Income before income taxes	6,465	7,624	8,132	74,722
Income taxes - current	2,187	2,526	2,355	21,639
Income taxes - deferred	325	(80)	91	836
Total income taxes	2,513	2,446	2,446	22,475
Net income	3,951	5,178	5,686	52,246
Profit attributable to non-controlling interests	20	7	8	73
Profit attributable to owners of parent	3,931	5,170	5,677	52,163

[Consolidated Statement of Comprehensive Income]

	Millions of yen		Thousands of U.S. dollars	
	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019	Fiscal year ended March 31, 2020	Fiscal year ended March 31, 2020
Net income	3,951	5,178	5,686	52,246
Other comprehensive income				
Valuation difference on available-for-sale securities	21	(4)	4	36
Foreign currency translation adjustment	(49)	(455)	4	36
Remeasurements of defined benefit plans	364	828	763	7,010
Total other comprehensive income	*1 336	*1 367	*1 772	7,093
Comprehensive income	4,287	5,545	6,458	59,340
(Details)				
Comprehensive income attributable to owners of parent	4,267	5,538	6,450	59,266
Comprehensive income attributable to non-controlling interests	20	7	8	73

Fiscal year ended March 31, 2019

(Millions of yen)

	Shareholders' equity				
	Capital stock	Capital surplus	Retained earnings	Treasury stock	Total shareholders' equity
Balance at April 1, 2018	11,946	15,080	30,214	(0)	57,241
Changes during the year					
Dividends from surplus			(1,555)		(1,555)
Profit attributable to owners of parent			5,170		5,170
Purchase of treasury stock				(0)	(0)
Changes in other equity, net					
Total changes during the year	—	—	3,615	(0)	3,614
Balance at March 31, 2019	11,946	15,080	33,830	(0)	60,856

	Accumulated other comprehensive income					Non-controlling interests	Total net assets
	Valuation difference on available-for-sale securities	Foreign currency translation adjustment	Remeasurements of defined benefit plans	Total accumulated other comprehensive income			
Balance at April 1, 2018	54	84	(2,474)	(2,335)	136		55,042
Changes during the year							
Dividends from surplus							(1,555)
Profit attributable to owners of parent							5,170
Purchase of treasury stock							(0)
Changes in other equity, net	(4)	(455)	828	367	5		373
Total changes during the year	(4)	(455)	828	367	5		3,988
Balance at March 31, 2019	49	(371)	(1,645)	(1,967)	142		59,031

Fiscal year ended March 31, 2020

(Millions of yen)

	Shareholders' equity				
	Capital stock	Capital surplus	Retained earnings	Treasury stock	Total shareholders' equity
Balance at April 1, 2019	11,946	15,080	33,830	(0)	60,856
Changes during the year					
Dividends from surplus			(1,607)		(1,607)
Profit attributable to owners of parent			5,677		5,677
Purchase of treasury stock				(14,288)	(14,288)
Changes in other equity, net					
Total changes during the year	—	—	4,070	(14,288)	(10,218)
Balance at March 31, 2020	11,946	15,080	37,900	(14,289)	50,638

	Accumulated other comprehensive income					Non-controlling interests	Total net assets
	Valuation difference on available-for-sale securities	Foreign currency translation adjustment	Remeasurements of defined benefit plans	Total accumulated other comprehensive income			
Balance at April 1, 2019	49	(371)	(1,645)	(1,967)	142		59,031
Changes during the year							
Dividends from surplus							(1,607)
Profit attributable to owners of parent							5,677
Purchase of treasury stock							(14,288)
Changes in other equity, net	4	4	763	772	6		779
Total changes during the year	4	4	763	772	6		(9,438)
Balance at March 31, 2020	54	(366)	(882)	(1,194)	148		49,592

(Thousands of U.S. dollars)

	Shareholders' equity				
	Capital stock	Capital surplus	Retained earnings	Treasury stock	Total shareholders' equity
Balance at April 1, 2019	109,767	138,564	310,851	(0)	559,184
Changes during the year					
Dividends from surplus			(14,766)		(14,766)
Profit attributable to owners of parent			52,163		52,163
Purchase of treasury stock				(131,287)	(131,287)
Changes in other equity, net					
Total changes during the year	—	—	37,397	(131,287)	(93,889)
Balance at March 31, 2020	109,767	138,564	348,249	(131,296)	465,294

	Accumulated other comprehensive income				Non-controlling interests	Total net assets
	Valuation difference on available-for-sale securities	Foreign currency translation adjustment	Remeasurements of defined benefit plans	Total accumulated other comprehensive income		
Balance at April 1, 2019	450	(3,408)	(15,115)	(18,074)	1,304	542,414
Changes during the year						
Dividends from surplus						(14,766)
Profit attributable to owners of parent						52,163
Purchase of treasury stock						(131,287)
Changes in other equity, net	36	36	7,010	7,093	55	7,157
Total changes during the year	36	36	7,010	7,093	55	(86,722)
Balance at March 31, 2020	496	(3,363)	(8,104)	(10,971)	1,359	455,683

Millions of yen

Thousands of U.S. dollars

	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019	Fiscal year ended March 31, 2020	Fiscal year ended March 31, 2020
Cash flows from operating activities				
Income before income taxes	6,465	7,624	8,132	74,722
Depreciation	1,441	1,348	1,098	10,089
Amortization of goodwill	140	138	148	1,359
Increase/(decrease) in liabilities for retirement benefits	(349)	(156)	(196)	(1,800)
(Increase)/decrease in assets for retirement benefits	68	(550)	(631)	(5,798)
Increase/(decrease) in provision for warranties for completed construction	(194)	510	(19)	(174)
Increase/(decrease) in provision for loss on construction contracts	37	313	61	560
Interest income and dividends income	(228)	(250)	(228)	(2,095)
Interest expenses	217	218	190	1,745
Foreign exchange (gain)/loss	209	(174)	59	542
Loss on disposal of property, plant and equipment	66	84	68	624
Loss/(gain) on valuation of investment securities	—	87	—	—
(Increase)/decrease in notes and accounts receivable	(4,311)	(4,165)	(1,859)	(17,081)
(Increase)/decrease in inventory	1,292	(2,707)	605	5,559
Increase/(decrease) in notes and accounts payable - trade	(858)	248	5,169	47,496
Increase/(decrease) in advances received	2,067	5,361	(7,073)	(64,991)
Other cash flows from operating activities	1,496	441	501	4,603
Subtotal	7,562	8,372	6,027	55,379
Interest and dividends income received	228	250	228	2,095
Interest expenses paid	(220)	(220)	(196)	(1,800)
Income taxes paid	(2,394)	(2,165)	(2,537)	(23,311)
Net cash provided by operating activities	5,175	6,236	3,521	32,353
Cash flows from investing activities				
Net (increase)/decrease in time deposits	50	34	23	211
Purchase of property, plant and equipment	(527)	(555)	(600)	(5,513)
Purchase of intangible assets	(217)	(114)	(179)	(1,644)
Purchase of investment securities	(110)	(95)	(223)	(2,049)
Acquisition of newly consolidated subsidiaries	—	—	(426)	(3,914)
Payments of loans receivable	(1)	—	(2)	(18)
Collection of loans receivable	28	27	27	248
Other cash flows from investing activities	(91)	(103)	0	0
Net cash used in investing activities	(868)	(805)	(1,380)	(12,680)

	Millions of yen		Thousands of U.S. dollars	
	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019	Fiscal year ended March 31, 2020	Fiscal year ended March 31, 2020
Cash flows from financing activities				
Proceeds from short-term loans payable	452	55	—	—
Repayments of short-term loans payable	(740)	(282)	(330)	(3,032)
Repayments of PFI and other projects finance loans	(825)	(833)	(844)	(7,755)
Purchase of treasury stock	(0)	(0)	(14,288)	(131,287)
Cash dividends paid	(1,503)	(1,555)	(1,607)	(14,766)
Cash dividends paid to non-controlling interests	(1)	(1)	(1)	(9)
Net cash used in financing activities	(2,619)	(2,617)	(17,072)	(156,868)
Effect of exchange rate change on cash and cash equivalents	(63)	4	11	101
Net increase/(decrease) in cash and cash equivalents	1,625	2,819	(14,920)	(137,094)
Cash and cash equivalents at April 1	23,352	24,977	27,796	255,407
Cash and cash equivalents at March 31	*1 24,977	*1 27,796	*1 12,876	118,312

[Notes to Consolidated Financial Statements]

(Basis of Presentation)

The accompanying consolidated financial statements of METAWATER Co., Ltd. (the “Company”) and consolidated subsidiaries are prepared on the basis of accounting principles generally accepted in Japan, which are different in certain respects as to the application and disclosure requirements of International Financial Reporting Standards, and are compiled from the consolidated financial statements prepared by the Company as required by the Financial Instruments and Exchange Act of Japan.

Certain amounts in the prior year’s financial statements have been reclassified to conform to the current year’s presentation.

(Presentation of Amounts in the Consolidated Financial Statements)

The yen amounts are truncated at millions and U.S. dollar amounts are rounded off in thousands. The total Japanese yen and U.S. dollar amounts shown in the financial statements do not necessarily agree with the sum of the individual amounts. U.S. dollar amounts presented in the financial statements are included solely for convenience. The rate of ¥108.83 to US\$1.00, prevailing on March 31, 2020, has been used for translation into U.S. dollar amounts in the financial statements. The inclusion of such amounts should not be construed as a representation that Japanese yen amounts have been or could in the future be converted into U.S. dollars at that or any other rate.

(Principles of Consolidation)

The accompanying consolidated financial statements include the accounts of the Company and any significant companies controlled directly or indirectly by the Company.

Investments in companies over which the Company exercises significant influence in terms of their operating and financial policies have been accounted for by the equity method.

As of March 31, 2020, the numbers of consolidated subsidiaries were 10 (9 in 2019). Non-consolidated subsidiaries whose combined assets, net sales, profit and retained earnings are not significant in the related consolidated totals, have not been consolidated with the Company. Investments in non-consolidated subsidiaries and affiliated companies which have immaterial effect on the consolidated financial statements are accounted for at cost without applying the equity method of accounting. METAWATER USA, INC. and five other subsidiaries are consolidated using their financial statements as of their fiscal year end, which falls on December 31 and necessary adjustments are made to their financial statements to reflect any significant transactions from January 1 to March 31. All significant intercompany balances and transactions have been eliminated in consolidation.

(Summary of Significant Accounting Policies)

1. Valuation standard and methods for significant assets

(1) Securities

1) Available-for-sale securities

Available-for-sale securities with market value

Available-for-sale securities with market value are stated at fair value based on the market price as of the end of the accounting period. Any unrealized gain or loss, net of applicable taxes is reported as a component of accumulated other comprehensive income. The cost of securities sold is calculated using the moving average method.

Available-for-sale securities without market value

Available-for-sale securities without market value are stated at cost using the moving average method.

- (2) Inventory

1) Supplies

Supplies are stated at cost using the weighted average method. (Balance sheet amounts are written down on the basis of any decreased profitability.)

2) Work in process

Work in process is stated at cost using the individual identification method.
- (3) Derivatives

Derivatives are stated at fair value.
2. Method of depreciation and amortization

(1) Property, plant and equipment

Depreciation of property, plant and equipment is mainly computed by the declining-balance method over the applicable useful lives. However, the buildings acquired on and after April 1, 1998 (excluding accompanying facilities) and the accompanying facilities and structures acquired on and after April 1, 2016 are depreciated by the straight-line method.

Useful lives of assets are principally as follows:

Buildings and structures:	2 to 50 years
Machinery and equipment:	2 to 17 years

(2) Intangible assets

Intangible assets are amortized by the straight-line method. Computer software for internal use is amortized by the straight-line method over the estimated useful life of 5 years. Customer-related assets are amortized by the straight-line method over the estimated useful life of 17 years.

3. Accounting standard for significant allowances and provisions

(1) Allowance for doubtful accounts

To provide for potential loss on receivables, the Company provides an allowance for the expected amount of irrecoverable receivables. Allowances for ordinary debt are computed based on the historical rate of default. For certain debts, such as those where recovery is doubtful, the Company considers the likelihood of recovery on an individual basis and records an allowance for the amount of debt expected to be unrecoverable. Allowance for doubtful accounts was not recorded at the end of the fiscal year ended March 31, 2020.

(2) Provision for warranties for completed construction

The Company records provision for warranties for completed construction based on the estimated amount of future warranties for construction revenue in order to provide for costs of free-of-charge repair under defect liability for contract construction.

(3) Provision for loss on construction contracts

In order to provide for potential loss on construction contracts, the Company records provision for loss on construction contracts at an estimated amount of loss on contracts undelivered at the end of the fiscal year, loss of which are expected to be incurred and such expected amount of loss can be reasonably estimated.

4. Accounting method for retirement benefits

(1) Method of allocating projected retirement benefit obligation

In calculating the retirement benefit obligation, the benefit formula basis is used to allocate the projected retirement benefit obligation to the estimated periods of service of the eligible employees until the end of the fiscal year.
- (2) Method for amortizing actuarial gain or loss and prior service cost

Prior service cost is amortized as incurred by the straight-line method over a period not exceeding the estimated average remaining service period of employees (10 to 14 years) at the time of occurrence.

Actuarial gain or loss is amortized from the fiscal year following the year in which the gain or loss is recognized, amortized by the straight-line method over a period not exceeding the average remaining service period of the employees (10 to 14 years) at the time of occurrence.

5. Recognition for revenue and cost

For long-term construction contracts whose outcome can be estimated reliably, the percentage-of-completion method is adopted. The stage of completion of a contract is determined by the percentage of the cost incurred to date to the estimated total cost. When the outcome of the construction contracts cannot be estimated reliably, the completed-contract method is adopted.

6. Foreign currency translation

Monetary receivables and payables in foreign currencies are translated into yen using the spot exchange rates on the consolidated balance sheet date, and translation adjustments are recorded as gains or losses. For foreign subsidiaries assets and liabilities are translated into yen using the spot exchange rates on the consolidated balance sheet date; revenues and expenses are translated into yen using the average exchange rates during the period; and translation adjustments are included in foreign currency translation adjustment under net assets.

7. Hedge accounting

(1) Hedge accounting method

As interest rate swaps meet the requirements for short-cut method, the accounting is applied to them.

(2) Hedging instruments and hedged items

Hedging instruments: Interest rate swaps

Hedged items: Interest on loans payable

(3) Hedging policy

Interest rate swaps are used on some of loans payable from financial institutions to avoid risks resulting from interest rate fluctuation.

(4) Method for evaluating hedging effectiveness

The evaluation of hedging effectiveness is omitted for interest rate swaps as the requirements for short-cut method are met.

8. The amortization method and amortization period of goodwill

Goodwill is amortized by the straight-line method over a period of 10 or 15 years.

9. Cash and cash equivalents in the consolidated statement of cash flows

Cash and cash equivalents consist of cash at hand, demand deposits at banks, and highly liquid short-term investments with negligible risk of fluctuation in value and maturities of three months or less.

10. Consumption tax

Consumption tax and local consumption tax are excluded from respective transaction amounts.
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(Unapplied Accounting Standards, etc.)

- Accounting Standards Board of Japan (ASBJ) Statement No. 29 “Accounting Standard for Revenue Recognition” (March 31, 2020)

- ASBJ Guidance No. 30 “Implementation Guidance on Accounting Standard for Revenue Recognition” (March 31, 2020)

- (1) Outline
- A comprehensive accounting standard on revenue recognition. Revenue is recognized by applying the following five steps.
- Step 1: Identify the contract with a customer
 - Step 2: Identify performance obligations in the contract
 - Step 3: Determine the transaction price
 - Step 4: Allocate the transaction price to the performance obligations in the contract
 - Step 5: Recognize revenue when (or as) the performance obligations are satisfied
- (2) Scheduled date of application
- They are scheduled to be applied from the beginning of the fiscal year ending March 31, 2022.
- (3) Impact of application of the accounting standard, etc.
- The impact of application is under evaluation at the time of preparing the consolidated financial statements.

(Notes to Consolidated Balance Sheets)

*1.	Investments in non-consolidated subsidiaries and affiliated companies are as follows:			
		As of March 31, 2019 (Millions of yen)	As of March 31, 2020 (Millions of yen)	As of March 31, 2020 (Thousands of U.S. dollars)
	Investment securities	1,020	1,167	10,723

*2.	Accumulated depreciation of property, plant and equipment			
		As of March 31, 2019 (Millions of yen)	As of March 31, 2020 (Millions of yen)	As of March 31, 2020 (Thousands of U.S. dollars)
	Accumulated depreciation of property, plant and equipment	3,827	4,287	39,391

*3. “Current portion of PFI and other project finance loans” and “PFI and other project finance loans” are loans payable secured by the PFI business from financial institutions to WATER NEXT YOKOHAMA Co., Ltd., which is a special purpose company established for the PFI business and the Company’s consolidated subsidiary, and other consolidated subsidiaries.

The amounts of assets including accounts receivable of the special purpose company corresponding to the above PFI and other project finance loans are as follows:

	As of March 31, 2019 (Millions of yen)	As of March 31, 2020 (Millions of yen)	As of March 31, 2020 (Thousands of U.S. dollars)
Cash and deposits	1,599	1,598	14,683
Notes and accounts receivable - trade	13,393	11,437	105,090
Total	14,993	13,035	119,773

The following assets eliminated in the consolidation procedures are pledged as security.

	As of March 31, 2019 (Millions of yen)	As of March 31, 2020 (Millions of yen)	As of March 31, 2020 (Thousands of U.S. dollars)
Investments in subsidiaries	152	152	1,396
Long-term loans receivable	487	448	4,116
Total	639	601	5,522

*4. The following assets are pledged as security for PFI and other project finance loans to subsidiaries and affiliated companies operating the PFI business (non-consolidated).

	As of March 31, 2019 (Millions of yen)	As of March 31, 2020 (Millions of yen)	As of March 31, 2020 (Thousands of U.S. dollars)
Investment securities	408	431	3,960
Long-term loans receivable	195	169	1,552
Total	603	601	5,522

*5. Guarantees of indebtedness

The Company provides guarantees to the following companies for their loans payable from financial institutions.

(1) Guarantee for loans payable

	As of March 31, 2019 (Millions of yen)	As of March 31, 2020 (Millions of yen)	As of March 31, 2020 (Thousands of U.S. dollars)
Osaka Bioenergy Co., Ltd.	144	126	1,157

(2) Performance guarantee

	As of March 31, 2019 (Millions of yen)	As of March 31, 2020 (Millions of yen)	As of March 31, 2020 (Thousands of U.S. dollars)
Ariake Water Management Co., Ltd.	27	27	248
Aizuwakamatsu Aqua Partner Co., Ltd.	542	523	4,805
Sasebo Aqua Solution Co., Ltd.	242	226	2,076
Sorami Bio Partners Co., Ltd.	63	63	578
Northern Akita Eco-resource Management Co., Ltd.	17	17	156
Ofunato Sewer Management Co., Ltd.	13	14	128
Gotemba Oyama Eco Partners Co., Ltd.	14	14	128
Total	922	887	8,150

(Notes to Consolidated Statement of Income)

*1. Provision for loss on construction contracts included in cost of sales are as follows:

Fiscal year ended March 31, 2019 (Millions of yen)	Fiscal year ended March 31, 2020 (Millions of yen)	Fiscal year ended March 31, 2020 (Thousands of U.S. dollars)
363	(74)	(679)

*2. The major items and their amounts of selling, general and administrative expenses are as follows:

	Fiscal year ended March 31, 2019 (Millions of yen)	Fiscal year ended March 31, 2020 (Millions of yen)	Fiscal year ended March 31, 2020 (Thousands of U.S. dollars)
Salaries and allowances	4,050	4,284	39,364
Bonuses	1,466	1,484	13,635
Retirement benefit expenses	501	424	3,895
Provision for warranties for completed construction	446	(16)	(147)
Research and development expenses	1,908	2,374	21,813

*3. The details of loss on disposal of non-current assets are as follows:

Fiscal year ended March 31, 2019	Fiscal year ended March 31, 2020
Loss on sales and retirement of machinery and equipment	Loss on sales and retirement of machinery and equipment

*4. Total amount of research and development expenses included in general and administrative expenses and in production cost in the fiscal year are as follows:

Fiscal year ended March 31, 2019 (Millions of yen)	Fiscal year ended March 31, 2020 (Millions of yen)	Fiscal year ended March 31, 2020 (Thousands of U.S. dollars)
1,908	2,374	21,813

(Notes to Consolidated Statement of Comprehensive Income)

*1. The following table presents reclassification adjustments and tax effects allocated to each component of other comprehensive income for the years ended March 31, 2020 and 2019

	Fiscal year ended March 31, 2019 (Millions of yen)	Fiscal year ended March 31, 2020 (Millions of yen)	Fiscal year ended March 31, 2020 (Thousands of U.S. dollars)
Valuation difference on available-for-sale securities			
Amount arising during the year	(7)	6	55
Reclassification adjustments	—	—	—
Amount before tax effect	(7)	6	55
Tax effect	3	(1)	(9)
Valuation difference on available-for-sale securities	(4)	4	36
Foreign currency translation adjustment			
Amount recognized during the year	(455)	4	36
Remeasurements of defined benefit plans			
Amount recognized during the year	533	546	5,016
Reclassification adjustments	659	553	5,081
Before tax effect adjustment	1,193	1,100	10,107
Tax effects	(365)	(336)	(3,087)
Remeasurements of defined benefit plans	828	763	7,010
Total other comprehensive income	367	772	7,093

(Notes to Consolidated Statement of Changes in Shareholders' Equity)

Fiscal year ended March 31, 2019

1. Shares issued

Type of shares	Number of shares as of April 1, 2018	Increase	Decrease	Number of shares as of March 31, 2019
Common stock (shares)	25,923,500	—	—	25,923,500

2. Treasury stock

Type of shares	Number of shares as of April 1, 2018	Increase	Decrease	Number of shares as of March 31, 2019
Common stock (shares)	91	59	—	150

(Details of the changes)

Increase resulting from purchase of shares less than one unit: 59 shares

3. Dividends

(1) Dividends paid

Resolution	Type of shares	Total amount of dividends (Millions of yen)	Dividend per share (Yen)	Cut-off date	Effective date
Board of Directors' meeting held on May 23, 2018	Common stock	751	29.00	March 31, 2018	June 7, 2018
Board of Directors' meeting held on November 13, 2018	Common stock	803	31.00	September 30, 2018	December 4, 2018

(2) Dividends whose record date falls in the fiscal year ended March 31, 2019, but whose effective date is in the following fiscal year

Resolution	Type of shares	Source of dividends	Total amount of dividends (Millions of yen)	Dividend per share (Yen)	Cut-off date	Effective date
Board of Directors' meeting held on May 22, 2019	Common stock	Retained earnings	803	31.00	March 31, 2019	June 6, 2019

Fiscal year ended March 31, 2020

1. Shares issued

Type of shares	Number of shares as of April 1, 2019	Increase	Decrease	Number of shares as of March 31, 2020
Common stock (shares)	25,923,500	—	—	25,923,500

2. Treasury stock

Type of shares	Number of shares as of April 1, 2019	Increase	Decrease	Number of shares as of March 31, 2020
Common stock (shares)	150	4,200,036	—	4,200,186

(Details of the changes)

Increase resulting from purchase of shares less than one unit: 36 shares

Purchase of treasury stock in accordance with the resolution of the Board of Directors' meeting held on October 29, 2019: 4,200,000 shares

3. Dividends

(1) Dividends paid

Resolution	Type of shares	Total amount of dividends (Millions of yen)	Dividend per share (Yen)	Cut-off date	Effective date
Board of Directors' meeting held on May 22, 2019	Common stock	803	31.00	March 31, 2019	June 6, 2019
Board of Directors' meeting held on November 12, 2019	Common stock	803	31.00	September 30, 2019	December 3, 2019

Resolution	Type of shares	Total amount of dividends (Thousands of U.S. dollars)	Dividend per share (U.S. dollars)	Cut-off date	Effective date
Board of Directors' meeting held on May 22, 2019	Common stock	7,378	0.28	March 31, 2019	June 6, 2019
Board of Directors' meeting held on November 12, 2019	Common stock	7,378	0.28	September 30, 2019	December 3, 2019

(2) Dividends whose record date falls in the fiscal year ended March 31, 2020, but whose effective date is in the following fiscal year

Resolution	Type of shares	Source of dividends	Total amount of dividends (Millions of yen)	Dividend per share (Yen)	Cut-off date	Effective date
Board of Directors' meeting held on May 21, 2020	Common stock	Retained earnings	868	40.00	March 31, 2020	June 5, 2020

Resolution	Type of shares	Source of dividends	Total amount of dividends (Thousands of U.S. dollars)	Dividend per share (U.S. dollars)	Cut-off date	Effective date
Board of Directors' meeting held on May 21, 2020	Common stock	Retained earnings	7,975	0.36	March 31, 2020	June 5, 2020

(Notes to Consolidated Statement of Cash Flows)

*1. Cash and cash equivalents in the consolidated statement of cash flows are reconciled to cash and deposits in the consolidated balance sheets as follows:

	Fiscal year ended March 31, 2019 (Millions of yen)	Fiscal year ended March 31, 2020 (Millions of yen)	Fiscal year ended March 31, 2020 (Thousands of U.S. dollars)
Cash and deposits	28,589	13,645	125,379
Time deposits with maturities of over three months	(792)	(769)	(7,066)
Cash and cash equivalents	27,796	12,876	118,312

(Financial Instruments)

1. Overview

(1) Group policy for financial instruments

The Group restricts its fund management to short-term deposits and raises funds through loans from financial institutions including banks.

Derivatives are used for receivables and payables arising from transactions associated with the actual demand, and the Group does not intend to make speculative transactions.

(2) Type of financial instruments, related risk and risk management system

Although notes and accounts receivable - trade are exposed to customer credit risk, the Group works to reduce such risk in accordance with credit management rules. Although trade receivables in foreign currencies arising from overseas operations are exposed to currency fluctuation risk, they are hedged with forward foreign currency contracts where necessary.

Investment securities are mainly limited to shares of companies with which the Group has built a business relationship. Listed stocks are exposed to risk of fluctuation in the market value, while they are marked to market on a quarterly basis.

The payment terms of notes and accounts payable - trade are mostly one year or less than one year.

Although some of trade payables are denominated in foreign currencies and are exposed to currency fluctuation risk, they are hedged with forward foreign currency contracts where necessary.

Loans payable are mainly used for the acquisition of shares of subsidiaries, with the maximum maturity period of 7 years after the balance sheet date. PFI and other project finance loans are intended to raise funds for specific businesses such as the PFI business, with the maximum maturity period of 15 years and 8 months after the accounting period. Although some of PFI and other project finance loans are exposed to risk of interest rate fluctuation, while they are hedged with derivatives (interest rate swaps).

Derivatives include forward foreign currency contracts which are used to hedge currency fluctuation risk associated with trade receivables and payables, and interest rate swaps which are used to hedge risk of fluctuation in interest on loans payable. The evaluation of hedging effectiveness is omitted based on the judgment that interest rate swaps meet the requirements for short-cut method.

2. Fair value of financial instruments

The carrying value of financial instruments on the consolidated balance sheets as of March 31, 2020 and 2019 and estimated fair value are shown in the following table. The financial instruments whose fair value is deemed extremely difficult to determine are not included in the table below (please see Note 2).

As of March 31, 2019

	Carrying value (Millions of yen)	Fair value (Millions of yen)	Difference (Millions of yen)
(1) Cash and deposits	28,589	28,589	—
(2) Notes and accounts receivable - trade	76,282	76,332	49
(3) Investment securities			
Available-for-sale securities	103	103	—
Total assets	104,976	105,025	49
(1) Accounts payable - trade	18,278	18,278	—
(2) Electronically recorded obligations	8,380	8,380	—
(3) Short-term loans payable	337	337	—
(4) Current portion of PFI and other projects finance loans	844	844	—
(5) Long-term loans payable	1,847	1,840	(6)
(6) PFI and other projects finance loans	10,705	10,974	269
(7) Derivatives	—	—	—
Total liabilities	40,392	40,655	262

As of March 31, 2020

	Carrying value (Millions of yen)	Fair value (Millions of yen)	Difference (Millions of yen)
(1) Cash and deposits	13,645	13,645	—
(2) Notes and accounts receivable - trade	78,109	78,088	(20)
(3) Investment securities			
Available-for-sale securities	110	110	—
Total assets	91,865	91,844	(20)
(1) Accounts payable - trade	19,801	19,801	—
(2) Electronically recorded obligations	11,603	11,603	—
(3) Short-term loans payable	276	276	—
(4) Current portion of PFI and other projects finance loans	855	855	—
(5) Long-term loans payable	1,539	1,560	21
(6) PFI and other projects finance loans	9,849	10,060	211
(7) Derivatives	—	—	—
Total liabilities	43,925	44,158	233

	Carrying value (Thousands of U.S. dollars)	Fair value (Thousands of U.S. dollars)	Difference (Thousands of U.S. dollars)
(1) Cash and deposits	125,379	125,379	—
(2) Notes and accounts receivable - trade	717,715	717,522	(183)
(3) Investment securities			
Available-for-sale securities	1,010	1,010	—
Total assets	844,114	843,921	(183)
(1) Accounts payable - trade	181,944	181,944	—
(2) Electronically recorded obligations	106,615	106,615	—
(3) Short-term loans payable	2,536	2,536	—
(4) Current portion of PFI and other projects finance loans	7,856	7,856	—
(5) Long-term loans payable	14,141	14,334	192
(6) PFI and other projects finance loans	90,498	92,437	1,938
(7) Derivatives	—	—	—
Total liabilities	403,611	405,752	2,140

(Note 1) Computation method of fair values of financial instruments and other matters concerning securities and derivatives

Assets

(1) Cash and deposits

The fair value of cash and deposits is based on their carrying amount, since the fair value approximates their carrying amount due to the short maturity period of the instrument.

(2) Notes and accounts receivable - trade

The fair value of notes and accounts receivable - trade is based on their present value calculated by discounting the amount of each receivable classified by a certain period using a discount rate that reflects the credit risk and the period until the maturity.

(3) Investment securities

The fair value of stocks is based on their prices quoted on the concerned stock exchanges.

Liabilities

(1) Accounts payable - trade, (2) Electronically recorded obligations, (3) Short-term loans payable and (4) Current portion of PFI and other project finance loans

The fair value of accounts payable - trade, electronically recorded obligations, short-term loans payable and current portion of PFI and other project finance loans is based on their carrying amounts, since the fair value approximates their carrying amounts due to the short maturity period of the instruments.

(5) Long-term loans payable and (6) PFI and other project finance loans

The fair value of long-term loans payable and PFI and other project finance loans is computed based on their present value calculated by discounting the aggregate value of principal and interest using the discount rate at which a similar and new borrowing is assumed to be made.

(7) Derivatives

The fair value of interest rate swaps is based on the quoted price obtained from the counterparty financial institution.

Since interest rate swaps under short-cut method are treated together with long-term loans payable and PFI and other project finance loans that are subject to hedging, their fair value is included in the fair value of PFI and other project finance loans.

(Note 2) The amount of financial instruments recorded in the consolidated balance sheets, of which it is deemed extremely difficult to determine the fair value.

Category	As of March 31, 2019 (Millions of yen)	As of March 31, 2020 (Millions of yen)	As of March 31, 2020 (Thousands of U.S. dollars)
Unlisted stocks (including shares of non-consolidated subsidiaries and affiliated companies)	1,238	1,457	13,387

Since there is no quoted market price for the above item and it is deemed extremely difficult to determine its fair value, the item is not included in “(3) Investment securities”.

(Note 3) The redemption schedule for monetary receivables subsequent to the consolidated closing date
As of March 31, 2019

	Due in one year or less (Millions of yen)	Due after one year through five years (Millions of yen)	Due after five years through ten years (Millions of yen)	Due after ten years (Millions of yen)
Cash and deposits	28,589	—	—	—
Notes and accounts receivable - trade	62,894	4,892	3,971	4,524
Total	91,483	4,892	3,971	4,524

As of March 31, 2020

	Due in one year or less (Millions of yen)	Due after one year through five years (Millions of yen)	Due after five years through ten years (Millions of yen)	Due after ten years (Millions of yen)
Cash and deposits	13,645	—	—	—
Notes and accounts receivable - trade	66,676	3,857	3,802	3,773
Total	80,322	3,857	3,802	7,546

	Due in one year or less (Thousands of U.S. dollars)	Due after one year through five years (Thousands of U.S. dollars)	Due after five years through ten years (Thousands of U.S. dollars)	Due after ten years (Thousands of U.S. dollars)
Cash and deposits	125,379	—	—	—
Notes and accounts receivable - trade	612,661	35,440	34,935	34,668
Total	738,050	35,440	34,935	69,337

(Note 4) The repayment schedule for loans payable and PFI and other project finance loans subsequent to the consolidated closing date

As of March 31, 2019

	Due in one year or less (Millions of yen)	Due after one year through five years (Millions of yen)	Due after five years through ten years (Millions of yen)	Due after ten years through fifteen years (Millions of yen)	Due after fifteen years (Millions of yen)
Loans payable	337	1,292	554	—	—
PFI and other projects finance loans	844	3,477	3,694	3,532	—
Total	1,181	4,769	4,249	3,532	—

As of March 31, 2020

	Due in one year or less (Millions of yen)	Due after one year through five years (Millions of yen)	Due after five years through ten years (Millions of yen)	Due after ten years through fifteen years (Millions of yen)	Due after fifteen years (Millions of yen)
Loans payable	276	1,266	272	—	—
PFI and other projects finance loans	855	3,320	3,735	2,794	—
Total	1,131	4,587	4,007	2,794	—

	Due in one year or less (Thousands of U.S. dollars)	Due after one year through five years (Thousands of U.S. dollars)	Due after five years through ten years (Thousands of U.S. dollars)	Due after ten years through fifteen years (Thousands of U.S. dollars)	Due after fifteen years (Thousands of U.S. dollars)
Loans payable	2,536	11,632	2,499	—	—
PFI and other projects finance loans	7,856	30,506	34,319	25,673	—
Total	10,392	42,148	36,818	25,673	—

(Securities)

Available-for-sale securities

As of March 31, 2019

Category	Carrying value (Millions of yen)	Acquisition cost (Millions of yen)	Unrealized gain (loss) (Millions of yen)
Amounts in the consolidated balance sheets exceeding acquisition cost:			
Stocks	103	33	70
Total	103	33	70

As of March 31, 2020

Category	Carrying value (Millions of yen)	Acquisition cost (Millions of yen)	Unrealized gain (loss) (Millions of yen)
Amounts in the consolidated balance sheets exceeding acquisition cost:			
Stocks	110	33	76
Total	110	33	76

Category	Carrying value (Thousands of U.S. dollars)	Acquisition cost (Thousands of U.S. dollars)	Unrealized gain (loss) (Thousands of U.S. dollars)
Amounts in the consolidated balance sheets exceeding acquisition cost:			
Stocks	1,010	303	698
Total	1,010	303	698

(Derivatives)

1. Derivative transactions to which hedge accounting is not applied

No items to report.

2. Derivative transactions to which hedge accounting is applied

Interest rate-related derivatives

As of March 31, 2019

Hedge accounting method	Type of derivative transaction	Main hedged items	Contract amount (Millions of yen)	Contract amount due after one year (Millions of yen)	Fair value (Millions of yen)
Short-cut method for interest rate swaps	Interest rate swaps: Payment on a floating interest rate/Receiving on a fixed interest rate	Long-term loans payable	971	832	(Note)
	Interest rate swaps: Payment on a floating interest rate/Receiving on a fixed interest rate	PFI and other projects finance loans	10,571	9,806	(Note)
Total			11,543	10,638	

(Note) Since interest rate swaps to which short-cut method is applied are accounted together with long-term loans payable and PFI and other project finance loans that are subject to hedging, their fair value is included in the fair value of such long-term loans payable and PFI and other project finance loans.

As of March 31, 2020

Hedge accounting method	Type of derivative transaction	Main hedged items	Contract amount (Millions of yen)	Contract amount due after one year (Millions of yen)	Fair value (Millions of yen)
Short-cut method for interest rate swaps	Interest rate swaps: Payment on a floating interest rate/Receiving on a fixed interest rate	Long-term loans payable	816	680	(Note)
	Interest rate swaps: Payment on a floating interest rate/Receiving on a fixed interest rate	PFI and other projects finance loans	9,806	9,029	(Note)
Total			10,622	9,709	

Hedge accounting method	Type of derivative transaction	Main hedged items	Contract amount (Thousands of U.S. dollars)	Contract amount due after one year (Thousands of U.S. dollars)	Fair value (Thousands of U.S. dollars)
Short-cut method for interest rate swaps	Interest rate swaps: Payment on a floating interest rate/Receiving on a fixed interest rate	Long-term loans payable	7,497	6,248	(Note)
	Interest rate swaps: Payment on a floating interest rate/Receiving on a fixed interest rate	PFI and other projects finance loans	90,103	82,964	(Note)
Total			97,601	89,212	

(Note) Since interest rate swaps to which short-cut method is applied are accounted together with long-term loans payable and PFI and other project finance loans that are subject to hedging, their fair value is included in the fair value of such long-term loans payable and PFI and other project finance loans.

(Retirement Benefits)

1. Overview of retirement benefit plans

The Company has lump-sum payment plans and a contract-type corporate pension plan as its defined benefit plan. In addition, the Company has a defined contribution pension plan. The Company has established a retirement benefit trust.

Certain overseas consolidated subsidiaries have a defined benefit or defined contribution plan.

Certain domestic consolidated subsidiary has The Smaller Enterprise Retirement Allowance Mutual Aid Scheme. In addition to such scheme, certain domestic consolidated subsidiary has a retirement benefit plan under which such subsidiary pays additional retirement benefits to employees who meet the prescribed requirements upon their retirement.

In certain cases, the Group may also pay additional retirement benefits that are not subject to any actuarial calculations.

2. Defined benefit plans

(1) The changes in the retirement benefit obligation are as follows:

	Fiscal year ended March 31, 2019 (Millions of yen)	Fiscal year ended March 31, 2020 (Millions of yen)	Fiscal year ended March 31, 2020 (Thousands of U.S. dollars)
Retirement benefit obligation at the beginning of the year	16,804	17,163	157,704
Service cost	736	697	6,404
Interest cost	154	157	1,442
Actuarial gain and loss	117	195	1,791
Retirement benefits paid	(636)	(807)	(7,415)
Other	(12)	(10)	(91)
Retirement benefit obligation at the end of the year	17,163	17,396	159,845

(2) The changes in plan assets are as follows:

	Fiscal year ended March 31, 2019 (Millions of yen)	Fiscal year ended March 31, 2020 (Millions of yen)	Fiscal year ended March 31, 2020 (Thousands of U.S. dollars)
Plan assets at fair value at the beginning of the year	12,331	13,935	128,043
Expected return on plan assets	146	161	1,479
Actuarial gain and loss	653	673	6,183
Contribution by the companies	1,036	1,082	9,942
Retirement benefits paid	(267)	(353)	(3,243)
Other	43	44	404
Plan assets at fair value at the end of the year	13,935	15,544	142,828

(3) The following table sets forth the funded status of the plans and the amounts recognized in the consolidated balance sheets as of March 31, 2019 and 2020 for the Company's and the consolidated subsidiaries' defined benefit plans:

	As of March 31, 2019 (Millions of yen)	As of March 31, 2020 (Millions of yen)	As of March 31, 2020 (Thousands of U.S. dollars)
Funded retirement benefit obligation	14,761	14,944	137,315
Plan assets at fair value	(13,935)	(15,544)	(142,828)
	826	(599)	(5,503)
Unfunded retirement benefit obligation	2,402	2,452	22,530
Net amount of liabilities and assets recognized in the consolidated balance sheet	3,228	1,852	17,017
Liability for retirement benefit	4,603	4,025	36,984
Assets for retirement benefits	1,374	2,172	19,957
Net amount of liabilities and assets recognized in the consolidated balance sheet	3,228	1,852	17,017

(4) The components of retirement benefit expenses are as follows:

	Fiscal year ended March 31, 2019 (Millions of yen)	Fiscal year ended March 31, 2020 (Millions of yen)	Fiscal year ended March 31, 2020 (Thousands of U.S. dollars)
Service cost	736	697	6,404
Interest cost	154	157	1,442
Expected return on plan assets	(146)	(161)	(1,479)
Amortization of actuarial gain or loss	648	613	5,632
Amortization of prior service cost	8	8	73
Other	(43)	(53)	(486)
Retirement benefit expenses	1,358	1,263	11,605

(5) The components of remeasurements of defined benefit plans included in other comprehensive income (before tax effect) are as follows:

	Fiscal year ended March 31, 2019 (Millions of yen)	Fiscal year ended March 31, 2020 (Millions of yen)	Fiscal year ended March 31, 2020 (Thousands of U.S. dollars)
Prior service cost	8	8	73
Actuarial gain and loss	1,184	1,091	10,024
Total	1,193	1,100	10,107

(6) The components of remeasurements of defined benefit plans included in accumulated other comprehensive income (before tax effect) are as follows:

	As of March 31, 2019 (Millions of yen)	As of March 31, 2020 (Millions of yen)	As of March 31, 2020 (Thousands of U.S. dollars)
Unrecognized prior service cost	16	7	64
Unrecognized actuarial gain and loss	2,355	1,264	11,614
Total	2,372	1,272	11,687

(7) The fair value of plan assets, by major category as a percentage of total plan assets are as follows:

	As of March 31, 2019	As of March 31, 2020
Stocks	29%	31%
Bonds	39	33
General accounts	20	19
Other	12	17
Total	100	100

(Note) Retirement benefit trust established for the corporate pension plans is included and equivalent to 9.4% of total amount of plan assets as of March 31, 2019 and 10.5% as of March 31, 2020.

The long-term expected rate of return on plan assets have been determined as a result of consideration of both the portfolio allocation at present and in the future, and long-term rates of return from multiple plan assets at present and in the future.

(8) The assumptions used in accounting for the defined benefit plans are as follows:

	Fiscal year ended March 31, 2019	Fiscal year ended March 31, 2020
Discount rates	0.6–1.2%	0.05–1.2%
Long-term expected rates of return on plan assets	Mainly 1.5	Mainly 1.5
Expected rates of salary increase	1.2–8.5	1.2–8.5

3. Defined contribution plans

Contributions of defined contribution plans for the fiscal years ended March 31, 2019 and 2020 were ¥142 million and ¥151 million (US\$1,387 thousand), respectively.

(Income Taxes)

1. The significant components of deferred tax assets and deferred tax liabilities

	As of March 31, 2019 (Millions of yen)	As of March 31, 2020 (Millions of yen)	As of March 31, 2020 (Thousands of U.S. dollars)
Deferred tax assets:			
Enterprise tax payable	178	189	1,736
Accrued bonuses	824	872	8,012
Provision for loss on construction contracts	158	182	1,672
Provision for warranties for completed construction	367	359	3,298
Excess of depreciation	328	330	3,032
Liability for retirement benefit	1,849	1,425	13,093
Unused tax losses (Note 2)	187	165	1,516
Other	705	753	6,919
Subtotal	4,600	4,278	39,309
Valuation allowance for unused tax losses (Note 2)	(165)	(160)	(1,470)
Valuation allowance for the total amount of deductible temporary differences	(257)	(233)	(2,140)
Valuation allowance subtotal (Note 1)	(422)	(394)	(3,620)
Total deferred tax assets	4,177	3,884	35,688
Deferred tax liabilities:			
Gain on contribution of securities to retirement benefit trust	(727)	(858)	(7,883)
Other	(282)	(362)	(3,326)
Total deferred tax liabilities	(1,009)	(1,221)	(11,219)
Net deferred tax assets (liabilities)	3,168	2,662	24,460

(Notes)1. The valuation allowance has decreased by ¥28 million (US\$257 thousand). This decrease mainly consists of the reversal of the valuation allowance relating to the provision for loss on construction contracts in the amount of ¥8 million (US\$73 thousand) at the Company and the valuation allowance for unused tax losses in the amount of ¥4 million (US\$36 thousand) at a consolidated subsidiary, METAWATER USA, INC.

2. Amounts of unused tax losses and deferred tax assets by carryforward period

As of March 31, 2019

	One year or less (Millions of yen)	After one year through two years (Millions of yen)	After two years through three years (Millions of yen)	After three years through four years (Millions of yen)	After four years through five years (Millions of yen)	After five years (Millions of yen)	Total (Millions of yen)
Unused tax losses (a)	1	—	—	23	—	162	187
Valuation allowance	(1)	—	—	(2)	—	(161)	(165)
Deferred tax assets	—	—	—	21	—	1	22

(a) Unused tax losses are multiplied by the effective statutory tax rate.

As of March 31, 2020

	One year or less (Millions of yen)	After one year through two years (Millions of yen)	After two years through three years (Millions of yen)	After three years through four years (Millions of yen)	After four years through five years (Millions of yen)	After five years (Millions of yen)	Total (Millions of yen)
Unused tax losses (a)	—	—	—	2	3	159	165
Valuation allowance	—	—	—	(2)	(0)	(158)	(160)
Deferred tax assets	—	—	—	—	3	1	4

	One year or less (Thousands of U.S. dollars)	After one year through two years (Thousands of U.S. dollars)	After two years through three years (Thousands of U.S. dollars)	After three years through four years (Thousands of U.S. dollars)	After four years through five years (Thousands of U.S. dollars)	After five years (Thousands of U.S. dollars)	Total (Thousands of U.S. dollars)
Unused tax losses (a)	—	—	—	18	27	1,460	1,516
Valuation allowance	—	—	—	(18)	(0)	(1,451)	(1,470)
Deferred tax assets	—	—	—	—	27	9	36

(a) Unused tax losses are multiplied by the effective statutory tax rate.

2. The breakdown of major items that caused differences between the effective statutory tax rate and the effective income tax rate

	As of March 31, 2019	As of March 31, 2020
Effective statutory tax rate	30.6%	30.6%
(Adjustment)		
Permanently non-deductible items such as entertainment expenses	4.0	1.9
Permanently non-taxable items such as dividends income	(0.1)	(0.2)
Per capita inhabitants' tax	0.9	0.8
Tax credit for experiment and research expenses	(3.0)	(2.1)
Reduction of deferred tax assets at end of period due to change in tax rates	—	—
Changes in valuation allowance	3.4	(0.3)
Difference in tax rates of overseas consolidated subsidiaries	(0.5)	(0.4)
Other	(3.2)	(0.2)
Effective income tax rate	32.1	30.1

(Asset Retirement Obligations)

The Group recognizes asset retirement obligations to restore corporate offices to their original condition upon termination of their lease contracts. However, the statement is omitted because the total amount of the asset retirement obligations is immaterial.

Regarding some of the obligation to restore corporate offices to their original condition, the Group estimate nonrecoverable amounts of deposits for those premises and record the portion attributable to the current year as expenses, instead of recording asset retirement obligations.

(Segment Information)

[Segment Information]

1. Outline of reportable segment

The Company's segments represent components of the Company for which separate financial information is available and that are subject to periodical review by the board of directors in determining how to allocate operating resources and evaluating performance.

The Company has established business divisions by its products and services at the corporate office, each of which operates under comprehensive domestic and overseas strategies developed for its products and services.

Therefore, the Group basically consists of two reportable segments: "Plant Engineering" and "Service Solutions", which are based on the Company's business divisions in consideration of similarities of types and natures of products and services. "Plant Engineering" segment is primarily involved in design and construction of water and sewage treatment plants. "Service Solutions" segment is primarily involved in operation, control and repair of water and sewage treatment plant facilities.

2. Determination of sales, income or loss, assets, liabilities and other items for each reportable segment

Accounting treatment applied to the business segment reported is generally consistent with accounting treatment stated in "Important Matters for Basis of Preparation of Consolidated Financial Statements".

In addition, segment income is determined based on operating income, which is consistent with operating income for the consolidated statement of income.

3. Sales, income or loss, assets, liabilities and other items by reportable segment

	Reportable segments			Adjustments (Note)	Consolidated
	Plant Engineering Business	Service Solutions Business	Total		
Net sales					
Sales to third parties	65,517	51,824	117,342	—	117,342
Inter-segment sales and transfers	—	—	—	—	—
Net sales	65,517	51,824	117,342	—	117,342
Segment income	3,191	4,416	7,607	—	7,607
Segment assets	56,158	46,512	102,671	29,949	132,620
Other items					
Depreciation	765	582	1,348	—	1,348
Capital expenditures	584	307	891	—	891

(Note) The amount of corporate assets included in adjustments of segment assets is ¥29,949 million. The corporate assets mainly represent cash and deposits and investment securities.

	Reportable segments			Adjustments (Note)	Consolidated
	Plant Engineering Business	Service Solutions Business	Total		
Net sales					
Sales to third parties	72,366	56,356	128,723	—	128,723
Inter-segment sales and transfers	—	—	—	—	—
Net sales	72,366	56,356	128,723	—	128,723
Segment income	3,188	5,035	8,223	—	8,223
Segment assets	50,187	53,053	103,240	16,228	119,469
Other items					
Depreciation	630	467	1,098	—	1,098
Capital expenditures	526	267	794	—	794

	Reportable segments			Adjustments (Note)	Consolidated
	Plant Engineering Business	Service Solutions Business	Total		
Net sales					
Sales to third parties	664,945	517,835	1,182,789	—	1,182,789
Inter-segment sales and transfers	—	—	—	—	—
Net sales	664,945	517,835	1,182,789	—	1,182,789
Segment income	29,293	46,264	75,558	—	75,558
Segment assets	461,150	487,485	948,635	149,113	1,097,757
Other items					
Depreciation	5,788	4,291	10,089	—	10,089
Capital expenditures	4,833	2,453	7,295	—	7,295

(Note) The amount of corporate assets included in adjustments of segment assets is ¥16,228 million (US\$149,113 thousand). The corporate assets mainly represent cash and deposits and investment securities.

[Related Information]

Fiscal year ended March 31, 2019

1. Information by products and services

A description is omitted because similar information has been disclosed under segment information.

2. Information by region

(1) Net sales

A description is omitted because sales to third parties in Japan exceed 90% of net sales in the consolidated statement of income.

(2) Property, plant and equipment

(Millions of yen)			
Japan	The United States	Switzerland	Total
1,346	1,449	391	3,188

3. Information about major customers

(Millions of yen)		
Name of customer	Net sales	Related business segment
TOKYO METROPOLITAN GOVERNMENT	19,967	Plant Engineering Business Service Solutions Business

Fiscal year ended March 31, 2020

1. Information by products and services

A description is omitted because similar information has been disclosed under segment information.

2. Information by region

(1) Net sales

A description is omitted because sales to third parties in Japan exceed 90% of net sales in the consolidated statement of income.

(2) Property, plant and equipment

(Millions of yen)				
Japan	The United States	Switzerland	Other	Total
1,327	1,421	404	30	3,184

(Thousands of U.S. dollars)				
Japan	The United States	Switzerland	Other	Total
12,193	13,057	3,712	275	29,256

3. Information about major customers

(Millions of yen)		
Name of customer	Net sales	Related business segment
TOKYO METROPOLITAN GOVERNMENT	17,267	Plant Engineering Business Service Solutions Business

(Thousands of U.S. dollars)		
Name of customer	Net sales	Related business segment
TOKYO METROPOLITAN GOVERNMENT	158,660	Plant Engineering Business Service Solutions Business

[Information about Impairment Loss on Non-current Assets by Reportable Segment]

Fiscal year ended March 31, 2019

No items to report.

Fiscal year ended March 31, 2020

No items to report.

[Information about Amortization and Unamortized Balance of Goodwill by Reportable Segment]

Fiscal year ended March 31, 2019

(Millions of yen)

	Reportable segments			Corporate/ Eliminations	Total
	Plant Engineering Business	Service Solutions Business	Total		
Amortization	138	—	138	—	138
Unamortized balance	1,670	—	1,670	—	1,670

Fiscal year ended March 31, 2020

(Millions of yen)

	Reportable segments			Corporate/ Eliminations	Total
	Plant Engineering Business	Service Solutions Business	Total		
Amortization	148	—	148	—	148
Unamortized balance	1,671	—	1,671	—	1,671

(Thousands of U.S. dollars)

	Reportable segments			Corporate/ Eliminations	Total
	Plant Engineering Business	Service Solutions Business	Total		
Amortization	1,359	—	1,359	—	1,359
Unamortized balance	15,354	—	15,354	—	15,354

[Information about Gain on Bargain Purchase by Reportable Segment]

Fiscal year ended March 31, 2019

No items to report.

Fiscal year ended March 31, 2020

No items to report.

(Related Party Information)

Fiscal year ended March 31, 2019

1. Business transactions with related parties

(1)Business transactions between the company filing the consolidated financial statements and related parties

Unconsolidated subsidiaries and affiliated companies of the company filing the consolidated financial statements

Category	Related party	Address	Capital stock or contributions (Millions of yen)	Type of business	Percentage of voting rights holding (held) (%)	Relationship	Nature of transaction	Transaction amount (Millions of yen)	Account title	Balance at the end of year (Millions of yen)
Other affiliate	NGK INSULATORS, LTD.	Mizuho-ku, Nagoya-shi	69,849	Development, manufacture, and sale of products related to electric power, ceramics, electronics, and process technology, and provision of services related thereto	(Held) Direct 28.9	Purchase of products Concurrent holding of positions by officers	Purchase of products (Note 1, 2)	1,590	Accounts payable - trade	1,258
Other affiliate	FUJI ELECTRIC CO., LTD.	Kawasaki-ku, Kawasaki-shi	47,586	Development, manufacture, and sale of products related to power electronics systems, electric generation, electronic devices and food distribution, and provision of services related thereto	(Held) Direct 28.9	Purchase of products	Purchase of products (Note 1, 2)	7,268	Accounts payable - trade	2,786
Subsidiary of other affiliate	FUJI FURUKAWA ENGINEERING & CONSTRUCTION CO. LTD.	Saiwai-ku, Kawasaki-shi	1,970	Design and execution of construction of plant facilities, air conditioning/ electricity/building/incidental facilities, and telecommunications	—	Entrustment of the Company's construction contracts	Entrustment of construction contracts (Note 1, 2)	5,048	Accounts payable - trade	1,221
Subsidiary of other affiliate	Hokkaido Fuji Electric Co., Ltd.	Chuo-ku, Sapporo-shi	100	Sale, installation, and repair of electrical machinery and apparatus/control systems and electronic components	—	Acceptance of construction contracts of said company	Acceptance of construction contracts (Note 1, 2)	858	Accounts receivable - trade	831

- (Notes)
1.

Of the amounts stated above, the transaction amount excludes consumption taxes, while the balance at end of the fiscal year includes consumption taxes.
2.

Transaction terms and the policy to determine transaction terms

Transaction terms such as prices are determined through negotiation in each case based on a quotation as is the case with general transactions, as well as by reference to actual situation of the market.

(2)Business transactions between consolidated subsidiaries of the company filing the consolidated financial statements and related parties

No items to report.

2. Note concerning the parent company or significant affiliated companies

No items to report.

Fiscal year ended March 31, 2020

1. Business transactions with related parties

(1)Business transactions between the company filing the consolidated financial statements and related parties

Unconsolidated subsidiaries and affiliated companies of the company filing the consolidated financial statements

Category	Related party	Address	Capital stock or contributions (Millions of yen)	Type of business	Percentage of voting rights holding (held) (%)	Relationship	Nature of transaction	Transaction amount (Millions of yen)	Account title	Balance at the end of year (Millions of yen)
Other affiliate	NGK INSULATORS, LTD.	Mizuho-ku, Nagoya-shi	69,849 (US\$641,817 thousand)	Development, manufacture, and sale of products related to electric power, ceramics, electronics, and process technology, and provision of services related thereto	(Held) Direct 25.3	Purchase of products	Purchase of products (Note 1, 2)	958 (US\$8,802 thousand)	Accounts payable - trade	797 (US\$7,323 thousand)
							Purchase of treasury stock (Note 3)	6,804 (US\$62,519 thousand)	—	—
Other affiliate	FUJI ELECTRIC CO., LTD.	Kawasaki -ku, Kawasaki -shi	47,586 (US\$437,250 thousand)	Development, manufacture, and sale of products related to power electronics systems, electronic devices, food distribution and power plant, and provision of services related thereto	(Held) Direct 24.4	Purchase of products	Purchase of products (Note 1, 2)	8,292 (US\$76,192 thousand)	Accounts payable - trade	3,153 (US\$28,971 thousand)
							Purchase of treasury stock (Note 3)	7,484 (US\$68,767 thousand)	—	—
Subsidiary of other affiliate	FUJI FURUKAWA ENGINEERING & CONSTRUCTION CO. LTD.	Saiwai-ku, Kawasaki -shi	1,970 (US\$18,101 thousand)	Design and execution of construction of plant facilities, air conditioning/ electricity/building/incidental facilities, and telecommunications	—	Entrustment of the Company's construction contracts	Entrustment of construction contracts (Note 1, 2)	4,706 (US\$43,241 thousand)	Accounts payable - trade	1,485 (US\$13,645 thousand)
Subsidiary of other affiliate	Hokkaido Fuji Electric Co., Ltd.	Chuo-ku, Sapporo-shi	100 (US\$918 thousand)	Sale, installation, and repair of electrical machinery and apparatus/control systems and electronic components	—	Acceptance of construction contracts of said company	Acceptance of construction contracts (Note 1, 2)	764 (US\$7,020 thousand)	Accounts receivable - trade	671 (US\$6,165 thousand)

- (Notes)
- Of the amounts stated above, the transaction amount excludes consumption taxes, while the balance at end of the fiscal year includes consumption taxes.
 - Transaction terms and the policy to determine transaction terms
Transaction terms such as prices are determined through negotiation in each case based on a quotation as is the case with general transactions, as well as by reference to actual situation of the market.
 - The purchase of treasury stock was conducted through a tender offer with the purchase price of ¥3,402 (US\$31.25) per share of common stock in accordance with the resolution of the Board of Directors’ meeting held on October 29, 2019.

(2)Business transactions between consolidated subsidiaries of the company filing the consolidated financial statements and related parties

No items to report.

2. Note concerning the parent company or significant affiliated companies

No items to report.

(Per Share Information)

	Fiscal year ended March 31, 2019 (Yen)	Fiscal year ended March 31, 2020 (Yen)	Fiscal year ended March 31, 2020 (U.S. dollars)
Net assets per share	2,271.67	2,276.07	20.91
Net income per share	199.46	231.52	2.12

- (Notes)
- Diluted net income per share is not presented as there are no diluted shares.
 - Net income per share is calculated on the following basis.

	Fiscal year ended March 31, 2019 (Millions of yen)	Fiscal year ended March 31, 2020 (Millions of yen)	Fiscal year ended March 31, 2020 (Thousands of U.S. dollars)
Net income per share			
Profit attributable to owners of parent	5,170	5,677	52,163
Profit not attributable to common shareholders	—	—	—
Profit attributable to owners of parent related to common stock	5,170	5,677	52,163
Average number of shares outstanding during the period (number of shares)	25,923,379	24,523,326	24,523,326

3. Net assets per share are calculated on the following basis.

	Fiscal year ended March 31, 2019 (Millions of yen)	Fiscal year ended March 31, 2020 (Millions of yen)	Fiscal year ended March 31, 2020 (Thousands of U.S. dollars)
Total net assets	59,031	49,592	455,683
Deduction from total net assets	142	148	1,359
(Non-controlling interests included in the above)	(142)	(148)	(1,359)
Net assets attributable to shares of common stock	58,889	49,443	454,314
Number of common stock used for calculation of net assets per share (number of shares)	25,923,350	21,723,314	21,723,314

(Significant Subsequent Event)

No items to report.

5. [Supplementary Schedules]

[Schedule of Bonds]

No items to report.

[Schedule of Loans]

Category	Balance as of April 1, 2019 (Millions of yen)	Balance as of March 31, 2020 (Millions of yen)	Balance as of April 1, 2019 (Thousands of U.S. dollars)	Balance as of March 31, 2020 (Thousands of U.S. dollars)	Average interest rate (%)	Due date
Short-term loans payable	337	276	3,096	2,536	3.32	—
Current portion of PFI and other project finance loans	844	855	7,755	7,856	1.06	—
Long-term loans payable	1,847	1,539	16,971	14,141	3.21	April 25, 2022 to January 14, 2026
PFI and other projects finance loans	10,705	9,849	98,364	90,498	1.17	June 22, 2026 to November 30, 2033
Total	13,733	12,520	126,187	115,041	—	—

- (Notes)
1. “Average interest rate” is stated at weighted average interest rate on the balance of loans payable at the end of the fiscal year.
 2. Repayment schedule for long-term loans payable and PFI and other project finance loans (excluding current portion) per year for five years subsequent to the consolidated balance sheet date

Category	Due after one year through two years (Millions of yen)	Due after two years through three years (Millions of yen)	Due after three years through four years (Millions of yen)	Due after four years through five years (Millions of yen)
Long-term loans payable	276	446	272	272
PFI and other projects finance loans	862	873	885	698

Category	Due after one year through two years (Thousands of U.S. dollars)	Due after two years through three years (Thousands of U.S. dollars)	Due after three years through four years (Thousands of U.S. dollars)	Due after four years through five years (Thousands of U.S. dollars)
Long-term loans payable	2,536	4,098	2,499	2,499
PFI and other projects finance loans	7,920	8,021	8,131	6,413


[Schedule of Asset Retirement Obligations]

No items to report.

- (1) The Company's consolidated financial statements are prepared based on “Ordinance on Terminology, Forms, and Preparation Methods of Consolidated Financial Statements” (Ordinance of the Ministry of Finance No. 28 of 1976).
- (2) The Company's non-consolidated financial statements are prepared based on “Ordinance on the Terminology, Forms, and Preparation Methods of Non-consolidated Financial Statements, etc.” (Ordinance of the Ministry of Finance No. 59 of 1963; hereinafter “Ordinance on Non-consolidated Financial Statements, etc.”)
The Company falls under a company submitting special financial statements, and therefore prepares its non-consolidated financial statements pursuant to the provisions of Article 127 of Ordinance on Non-consolidated Financial Statements, etc.
- (3) The Company is carrying out special initiatives to ensure the appropriateness of its consolidated financial statements, etc. Specifically, we have joined the Financial Accounting Standards Foundation and participate in trainings organized by audit firms, etc., in order to develop a system to accurately grasp the content of accounting standards, etc., and appropriately respond to changes in accounting standards, etc.

Corporate Overview

Company Name	METAWATER Co., Ltd.		
English Name	METAWATER Co., Ltd.		
Main Business Activities	Design and construction of equipment for water treatment plants, sewage treatment plants, and waste treatment facilities; design, manufacture, and sale of various devices; implementation of repair work; provision of services including operation management.		
Construction Industry Qualifications	Civil engineering work, building work, electrical work, plumbing work, tile, brick and block work, machine and equipment installation work, telecommunication work, water and sewage facilities work, sanitation facilities work.		
Establishment	April 1, 2008		
Chairman and Representative Director	Yasushi Nakamura		
Number of employee	3,082	*As of March 31, 2020, consolidated	
List of bases	Head Office: JR Kanda Manseibashi Bldg., 1-25 Kandasuda-cho, Chiyoda-ku, Tokyo 101-0041 TEL:+81-(0)3-6853-7300 Hino Branch: 3-1-30 Asahigaoka, Hino, Tokyo 191-0065 TEL:+81-(0)42-589-6900 Nagoya Branch: Nagoya Prime Central Tower, 2-27-8 Meieki, Nishi-ku, Nagoya, Aichi 451-0045 TEL:+81-(0)52-884-6800		
Main sales bases	Tokyo (Headquarters), Sapporo, Sendai, Yokohama, Nagoya, Osaka, Hiroshima, Takamatsu, Fukuoka		
R&D Centers	Handa (Aichi), Ichihara (Chiba), Chiyoda-ku (Tokyo)		
Main group companies	METAWATER SERVICES Co., Ltd.* METAWATER TECH Co., Ltd. METAWATER USA, INC.* SIC Co., Ltd. Aqua-Aerobic Systems, Inc.* Toriden-Shoji Co. Wigen Companies, Inc.* Akebono Engineering Co. Mecana Umwelttechnik GmbH* Water Next Yokohama Co., Ltd.* FUCHS Enprotec GmbH* Techno Clean Hokuso Co.* Rood Wit Blauw Holding B.V. Aqua Service Aichi Co.*		
	*: Scope of consolidated statemen		
Overseas bases	United States, Netherlands, Switzerland, Germany, Vietnam, Cambodia, Singapore		

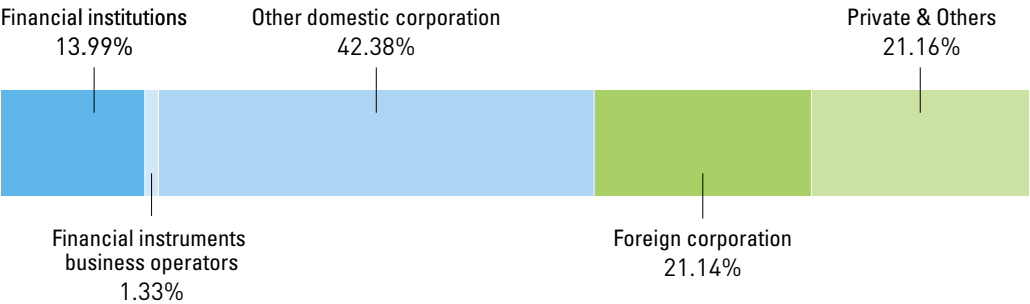




Stock-related matters As of March 31, 2020

Stock Exchange listing	First section of the Tokyo Stock Exchange
	Industrial Classification : Electric Power and Gas. (code: 9551)
Total number of authorized shares	70,000,000 shares
Total number of issued shares	25,923,500 shares
Number of shareholders	3,720

Breakdown of shareholders

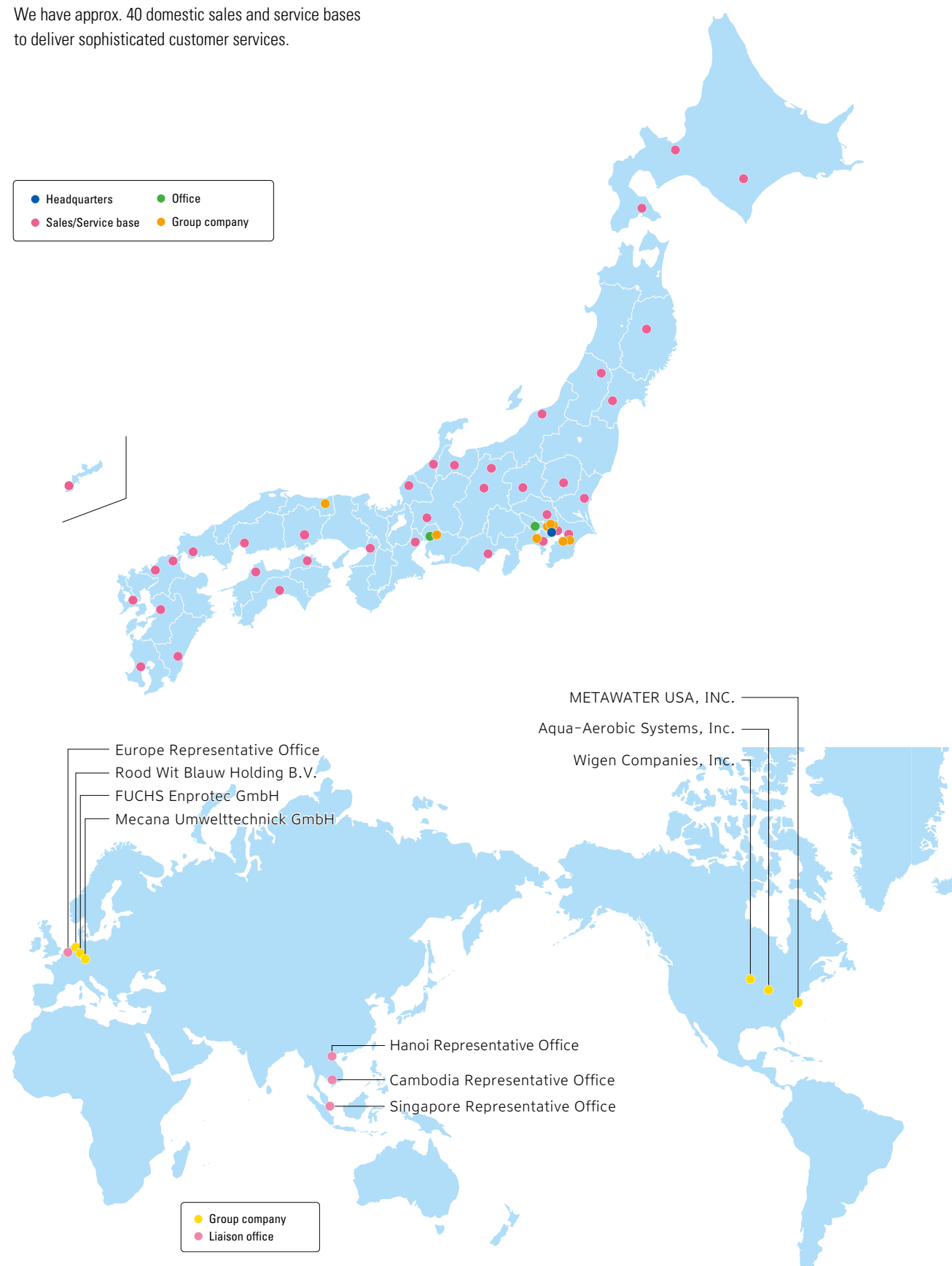


Status of dominant shareholders (Top 10)

Name of shareholder	Number of shares owned (1,000 shares)	Percentage of shares owned (%)
NGK INSULATORS, LTD.	5,500	25.32
Fuji Electric Co., Ltd.	5,300	24.40
The Master Trust Bank of Japan, Ltd. (Trust account)	1,163	5.36
JP MORGAN CHASE BANK 385632	863	3.98
Japan Trustee Services Bank, Ltd. (Trust account)	833	3.84
GOVERNMENT OF NORWAY	671	3.09
Japan Trustee Services Bank, Ltd. (Trust account 9)	425	1.96
The Nomura Trust and Banking Co., Ltd. (Trust account)	346	1.59
CREDIT SUISSE AG, DUBLIN BRANCH PRIME CLIENT ASSET EQUITY ACCOUNT	216	1.00
SSBTC CLIENT OMNIBUS ACCOUNT	212	0.98

Map of bases as of March 31, 2020

We have approx. 40 domestic sales and service bases to deliver sophisticated customer services.

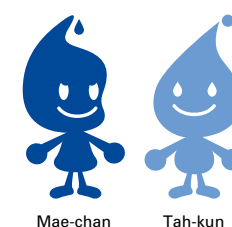


“META” in the corporate name “METAWATER” is a prefix representing
“transcendence” or “transformation.”

It symbolizes our desire to be a company that evolves continuously to hand down “WATER,”
an indispensable resource, to people in the future generations.

The line vertically intersecting the logo in the center represents the role of
METAWATER and its advanced technologies and products.

The deep blue on the left symbolizes “water before purification” and
the clear blue on the right represents “water after purification and regeneration.”



Corporate Characters

To symbolize our corporate identities, we have mascot characters called “Mae-chan” and “Tah-kun.”

The synergetic growth of “Mae-chan,” representing natural water, and “Tah-kun,” representing purified water, symbolizes the growth and symbiosis of METAWATER with the environment.

Issuing the “METAWATER REPORT 2020”

As a good partner of the water supply and sewage industry, METAWATER Group contributes to the sustainability of the water supply and sewage systems in cooperation with the local community. Further, METAWATER is proactively engaged in social contribution activities including environmental preservation as a corporate citizen to realize a sustainable society and preserve the global environment. We have issued this report to communicate the entire picture of our group in an easy-to-understand manner. Besides our corporate mission and business details, it offers comprehensive and concise information about our activities including the following: Financial information such as changes in performance and mid-term management plan for water management business in future; and CSR activities not listed in the financial statements and non-financial information such as social contribution activities as a part of CSR activities.

• Period in the scope of reporting

The performance for FY2019 (fiscal year ending March 2020) is the main scope for this report. However, some events in this report may have occurred before or after this period.

• Reference guidelines

- ISO26000 (International Standard of Social Responsibility issued in November 2010)
- Ministry of Environment: Environmental Reporting Guidelines (Version 2018)
- International Integrated Reporting Council (IIRC): International Integrated Reporting Frameworks
- GRI Sustainability Reporting Guideline Version 3.1 (G3.1), Version 4 (G4)
- United Nations Global Compact

