

2018 Yokogawa Report

For the year ended March 31, 2018

Co-innovating tomorrow™

Ever since Yokogawa’s foundation in 1915, based on our core competences in measurement, control, and information, we have been a source of the cutting-edge products and solutions for the industry while contributing to the development of society. Yokogawa prospered by being sensitive to evolving needs and transforming itself in step with the changing era. Aspiring to become an enterprise indispensable to society and committed to fulfilling customers’ expectations, Yokogawa will continue to pursue innovations.

Under the corporate brand slogan of “Co-innovating tomorrow,” Yokogawa seeks to establish ever greater levels of trust with its customers and to work with them to create new value for a brighter future, both for its customers and society.



Founding Principles

- Quality first
- Pioneering spirit
- Contribution to society

The Yokogawa Philosophy

As a company, our goal is to contribute to society through broad-ranging activities in the areas of measurement, control, and information.

Individually, we aim to combine good citizenship with the courage to innovate.

The Founder’s Aspirations

In his instructions to Ichiro Yokogawa and Shin Aoki, Dr. Tamisuke Yokogawa said, “You don’t need to worry about profits. Just learn and improve our technology. You must make products that earn us the respect of our customers.” This is the origin of the founding principles that have been handed down for more than a century as the pioneering spirit.

Although first set into words in 1988, the Yokogawa Philosophy is based on these founding principles, and is embodied in the code of conduct that guides employees in the performance of their daily tasks and in all pronouncements on our corporate objectives.



Yokogawa will resolve social and environmental issues in partnership with customers through business activities.



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Editorial Policy
The purpose of editing and publishing this report is to give shareholders, investors, and other stakeholders a better understanding of the Group’s process to create mid- to long-term values. The annual reports issued for fiscal year 2015 onward, named Yokogawa Report, provide non-financial information, such as Yokogawa’s mid to long term business strategies and information about ESG (environmental, social, governance), in addition to financial information, such as business results and plans, which were featured in previous editions of our annual report. As well as presenting the relationship between financial and non-financial information in an integrated approach from the perspective of management, this report presents Yokogawa’s initiatives to resolve social and environmental issues and issues affecting industry in partnership with customers through creation of value for customers so that readers will be able to grasp the big picture of the Yokogawa Group’s value creation process.

In preparing the 2018 Yokogawa Report, which mainly features the new mid-term business plan, we aimed to communicate Yokogawa’s mid to long term initiatives for achieving sustainability goals based on the long-term business framework. In the new mid-term business plan, we have set key performance indicators (KPIs) for basic strategies and quantitative targets to be achieved through our businesses.

Period covered by the Report: Fiscal year 2017, the period from April 1, 2017 to March 31, 2018 (includes some information on fiscal year 2018)

Scope of the Report: Yokogawa Electric Corporation and its subsidiaries and affiliates

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● Investor Relations website: <https://www.yokogawa.com/pr/ir/index.htm>
● Sustainability website: <https://www.yokogawa.com/about/sustainability/>

Cautionary statement regarding forward-looking statements
Statements made in this report regarding Yokogawa’s plans, estimates, strategies, and beliefs are forward-looking statements about the future performance of Yokogawa.

These statements are based on management’s assumptions and beliefs in the light of currently available information. Yokogawa cautions that a number of important factors, such as general economic conditions and exchange rates, could cause actual results to differ materially from those discussed in the forward-looking statements.

The History of Yokogawa

1915	Tamisuke Yokogawa, Doctor of Architectural Engineering, established an electric meter research institute in Shibuya, Tokyo with Ichiro Yokogawa and Shin Aoki
1917	First to produce and sell electric meters in Japan
1920	Incorporated as Yokogawa Electric Works Ltd.
1933	Started research and manufacture of aircraft instruments and flow, temperature, and pressure controllers
1948	Made public offering of the Company's stock
1950	Developed Japan's first electronic recorder
1955	Signed a technical assistance agreement for industrial instruments with Foxboro, USA
1957	Established Yokogawa Electric Works, Inc. as North American sales office
1964	Made a full-scale entry to the industrial analyzer market
1969	Developed world's first vortex flowmeter
1974	<ul style="list-style-type: none"> Established Yokogawa Electric Singapore Pte. Ltd. as Singapore plant Established Yokogawa Electric (Europe) B. V. as European sales office
1975	Released CENTUM, the world's first distributed process control system
1983	Formed Yokogawa Hokushin Electric Corp. through merger with Hokushin Electric Works, Ltd.
1985	Jointly established Xiyi Yokogawa Co., Ltd. in Xian, China, with Xian Instruments Factory
1986	Changed the Company name to Yokogawa Electric Corporation
1988	Entered the high-frequency measuring instruments business
1990	Established Yokogawa Middle East E.C. in Bahrain
1996	Released a confocal scanner and entered the biotechnology business
2002	Acquired all the shares of Ando Electric Co., Ltd.
2008	Entered the drug discovery support market with a new bio test system
2010	Transferred the measuring instruments business to Yokogawa Meters & Instruments Corporation (current Yokogawa Test & Measurement Corporation)
2013	Formed Yokogawa Solution Service Corporation to handle sales, engineering, and services for the Japan industrial automation business
2015	Announced Transformation 2017 mid-term business plan
2016	Acquired KBC Advanced Technologies
2018	Announced Transformation 2020 mid-term business plan

2017

Financial Results Summary

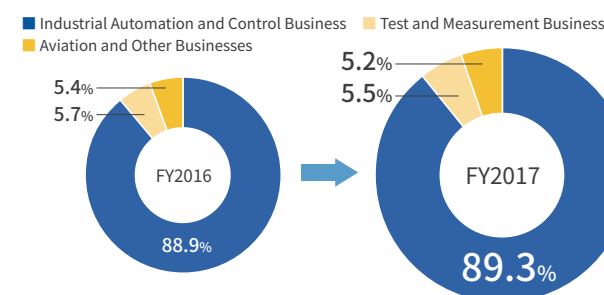
Return on equity (ROE)



Return on assets (ROA)



Net sales ratio by segment



IR and ESG Topics

Included in major ESG indexes

Sustainability goals, “Three Goals” for 2050



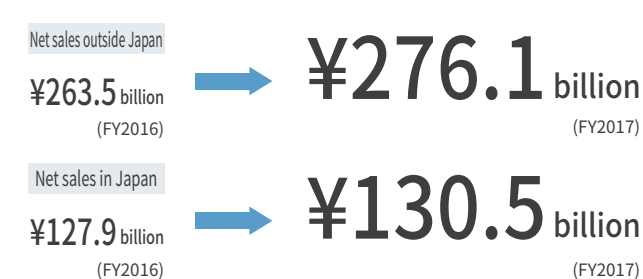
Net sales



Operating income



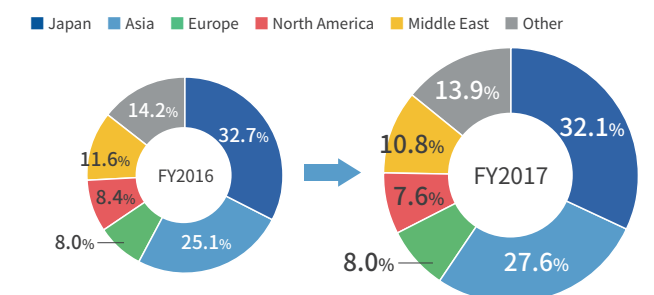
Net sales by region



Return on sales (ROS)



Earnings per share



*Others: Russia, Brazil, Australia, etc.

Global

MEMBER OF
Dow Jones Sustainability Indices
In Collaboration with RobecoSAM

FTSE4Good

MSCI

2018 Constituent
MSCI ESG
Leaders Indexes

CDP
DISCLOSURE INSIGHT ACTION

Japan

FTSE Blossom Japan

MSCI

2018 Constituent
MSCI Japan ESG
Select Leaders Index

MSCI

2018 Constituent
MSCI Japan Empowering
Women Index (WIN)

MS-SRI Morningstar Socially Responsible Investment Index

Appointed
a woman for the first time
as an outside member of the Audit & Supervisory Board



Nominated for both
Excellent Integrated Reports and
Most-improved Integrated Reports
selected by GPIF
(Government Pension Investment fund)

Selected to the “White 500”
list of large companies with
Excellent Health and Productivity Management Practices

健康経営優良法人
Health and productivity
ホワイト500

Yokogawa's Businesses

Industrial Automation and Control Business

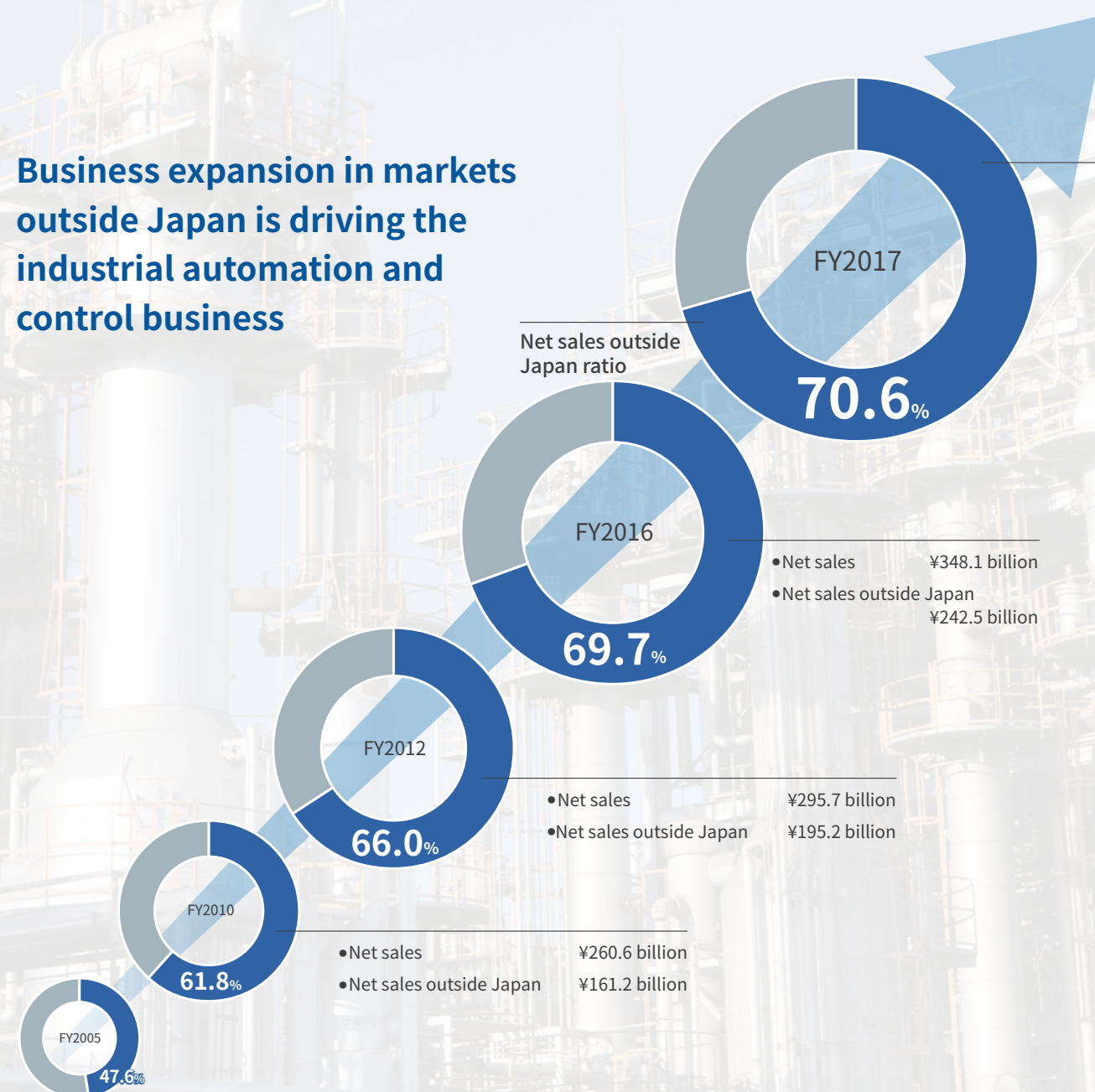
Yokogawa is highly regarded around the globe as a leader in the control field. For use in a wide range of production facilities, the Company provides highly reliable sensors for the real-time measurement of processes, analyzers, high-availability distributed control systems that ensure the monitoring and control of processes, safety instrumented systems for preventing plant accidents, and highly reliable software products and services that support production management. In 2016 Yokogawa acquired KBC Advanced Technologies, a provider of consulting services and software that enhance productivity at refineries and other oil & gas facilities, which is a key market for Yokogawa. As a result of this acquisition, Yokogawa has transcended the conventional framework of the industrial automation and control business and can now help its customers resolve a more diverse range of issues, including by offering consulting services at the executive level. The Company partners with its customers to create new value by providing optimum

solutions that enhance production efficiency, ensure high availability, make maximum use of assets, maintain safety, and optimize costs over the entire lifecycle of a plant facility. Yokogawa works hand in hand with its customers in a wide range of industries, including oil and gas, chemicals, electric power, iron and steel, pulp and paper, pharmaceuticals, and foods.

Yokogawa integrates its own technologies, expertise, and solutions with those gained through mergers and acquisitions, and alliances with IT vendors. We create value for our customers by helping them visualize and optimize business activities that occur throughout their value and supply chains.

[Details on page 30](#)

Business expansion in markets outside Japan is driving the industrial automation and control business



Industrial Automation and Control Business (comparison with FY2005)

Net sales	¥252.9 billion (FY2005)	→	¥363.3 billion (FY2017)
Net sales outside Japan	¥120.5 billion (FY2005)	→	¥256.3 billion (FY2017)

Test and Measurement Business

Dating back to its earliest days as a company, Yokogawa has long been involved in the measurement field, which has made a key contribution to industry through the provision of measurement solutions used in research and development, manufacturing, and other sectors. As global environmental problems become increasingly serious and the realization of a sustainable society assumes ever greater importance, Yokogawa is offering highly reliable measuring instruments to customers in a number of key markets where great changes are afoot: the electric energy/mechatronics market, IoT, the high-capacity data communication market centering on 5G mobile communication systems, and the market for maintenance services that are essential for plant safety and security.

[Details on page 35](#)

Aviation and Other Businesses

Yokogawa is also engaged in the provision of aviation equipment, marine navigation equipment, and hydrological and meteorological equipment. The Company's multifunctional flat-panel cockpit displays feature high visibility and outstanding environmental resistance and are widely used in aircraft, including the latest Airbus airliners. Gyrocompasses, autopilots, and other types of Yokogawa marine navigation equipment are utilized in ships of all types, ranging from cruise liners to freighters. Yokogawa also supplies rain gauges, hydrostatic level gauges, and other types of hydrological and meteorological equipment that are needed to monitor weather conditions and stay prepared for natural disasters.

[Details on page 35](#)

From Automation Supplier to Trusted Partner

To help its customers respond to a changing business environment and support them in the digitalization of their operations, Yokogawa is moving beyond the traditional role of automation supplier to become a trusted partner that continuously creates value through the offering of comprehensive solutions not only for production processes but also entire businesses, including the supply chain. It will accomplish this through co-innovation, an approach for co-creation of value with customers.

A changing vision for the industrial automation and control business

2005 **vigilantplant.**TM

 **Realization of an ideal state in plant operations**

The offering of solutions to customers that help them optimize and realize an ideal state in their plant operations

Automation Supplier

As a preferred vendor, the offering of highly reliable industrial automation solutions that keep plants running safely and securely for long periods of time

2017

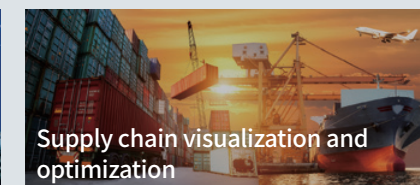


The creation of sustainable value by linking all elements in the customer organization

The integrated use of **Yokogawa's business and domain knowledge** as well as **digital automation technologies** for the co-innovation of solutions with our customers that interlink all elements in their organizations and drive a transformation in their business processes



Trends impacting our customers' businesses



Provision of comprehensive solutions covering everything from business to operations

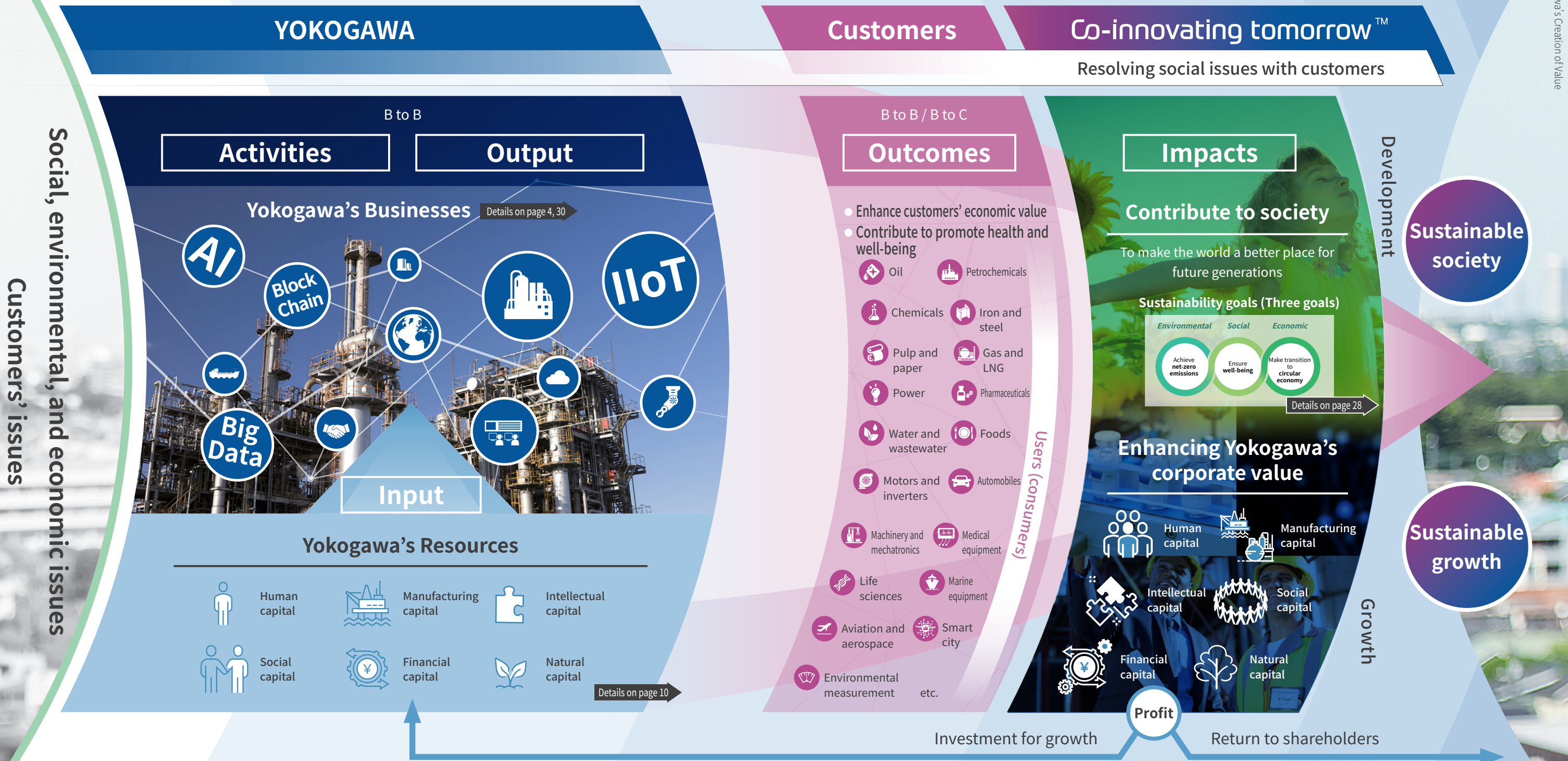
- Business consulting and supply chain management/production management solutions
- Production control systems • Field instruments and related systems • Lifecycle support services

Details on page 33

Process of Creating Value

By offering value to customers that includes “high-quality, highly reliable products,” “efficient, safe, and stable operation” and “resolution of management issues,” the Yokogawa Group is addressing and resolving issues affecting society, the environment, and industry in partnership with customers so as to contribute to society.

Yokogawa will continue investing for further enhancement of corporate value and sustainable growth of the Company. For shareholders and investors, we aim for continuous and stable increases in dividends.



Yokogawa Resources for Value Creation

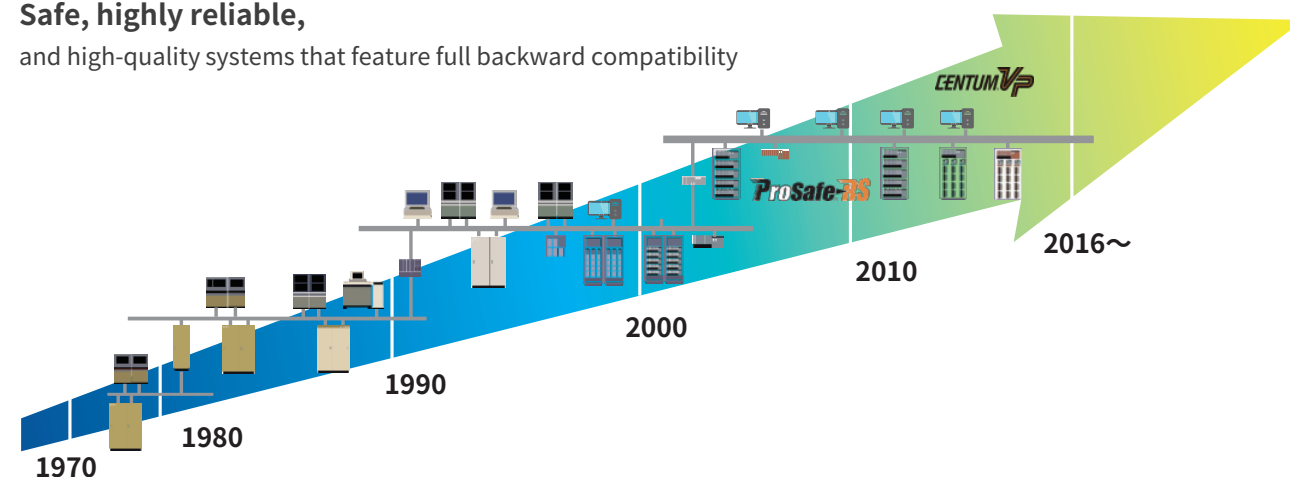
Social Capital



Customer base established through over **40,000** control system projects

99.99999 % availability (distributed control systems)

Safe, highly reliable,
and high-quality systems that feature full backward compatibility



The Yokogawa Group puts the highest priority on safety with its provision of high-quality and highly reliable backward-compatible systems, maintenance services, consulting, and other solutions, and aims to benefit society through the co-creation of value with its customers.

Working with its customers throughout the 30-year or so lifecycle of their plant facilities, Yokogawa develops

close relationships that are based on trust. This customer base is Yokogawa's most important asset, and it underpins the ongoing development of the Company's business.

On the firm foundation of this customer base, Yokogawa is expanding the scope of its solutions to cover entire value and supply chains, thereby leading to the co-creation of even more value for its customers.

Manufacturing Capital



Production sites in **13** countries

Sites in Japan **4** production

Sites outside Japan **14** production

Mindful that high precision and long-term stability are essential attributes of Yokogawa products, we are globalizing our production operations based on the quality-first principle. We aim to achieve a total

optimization of operations that will enable the global delivery of uniform-quality products at an appropriate cost and with a short turnaround time.

Human and Intellectual Capital



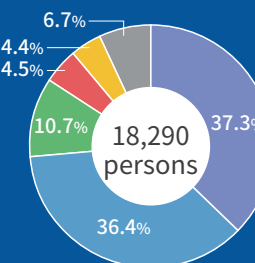
Global human resources:

18,290 persons
Includes approx. 9,000 engineers

230 service centers in **80** countries
2,000 service engineers

Composition by region

Japan
Asia
Europe
North America
Middle East
Other

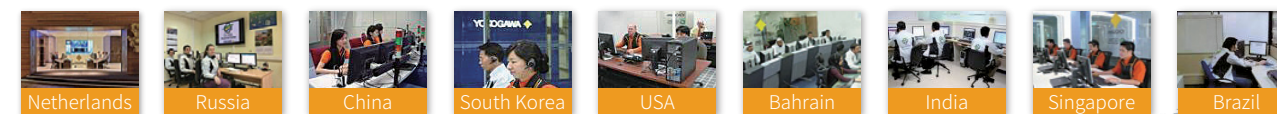


*Other: Russia, Brazil, Australia, etc.

Development centers in **8** countries outside Japan
(Singapore, India, China, USA, UK, Netherlands, Germany, Norway)

Central engineering centers in **6** countries
(Singapore, India, China, Philippines, Romania, Colombia)

Global service network



Human capital drives the co-creation of value with our customers and is the source of the high quality and reliability, advanced engineering, and project execution capabilities that are the Yokogawa Group's strengths and ensure its competitiveness.

Our business has grown in markets outside Japan, and presently more than 60% of our workforce is based outside Japan. While promoting the localization of its operations through such initiatives as the establishment of customer service centers near its customers, Yokogawa is striving to foster and enhance the capabilities of its workforce.

As the Yokogawa Group works to provide customers services and other solutions that capitalize on the superior skills and rich expertise of its workforce, it

accumulates knowledge and expertise and comes up with new ideas, and in so doing expands its intellectual capital. This is a virtuous cycle and it is working effectively.

For the efficient utilization of its engineering resources, the Group has central engineering centers in six countries around the world that play a vital role in gathering and sharing engineering know-how.

As a result of UK-based KBC Advanced Technologies joining the Yokogawa Group in 2016, Yokogawa brought into its fold a group of personnel with expertise in providing premium consulting services to management, thus becoming capable of offering one-stop solutions to customers at all levels of the organization, from senior management on down to engineers in the field.

Message from the President and CEO



The pursuit of digital technological innovation
and the co-creation of value with our customers
to improve productivity and thereby
**contribute to the realization
of a sustainable society**

President and CEO



Yokogawa's value creation process

Based on our founding principles, the Yokogawa Philosophy declares that the Yokogawa Group's role is to "contribute to society through broad-ranging activities in the areas of measurement, control, and information." As such, we have been working to resolve social issues through our business activities. Our customers in the oil & gas, chemical, power, water, materials, food, pharmaceutical, and other industries provide essential infrastructure that we all depend on in our daily lives. Our mission is to partner with them in resolving issues that impact their overall business, thereby helping to optimize and ensure safe and stable operations of their plants and facilities. We believe that fulfillment of this mission will contribute to the realization of a sustainable society.

An essential factor in our creation of value has been our formation of deep and lasting relationships with customers around the world who have come to trust us to provide solutions for plant facilities with lifecycles spanning as long

as 30 years. These relationships are the wellspring of our competitive advantage. Over the years, we have won the trust of companies in many different industries all over the world by working with them to start up and achieve stable operations at their plants and by offering maintenance and other support services to improve their efficiency. Serving this customer base, we leverage our digital technologies to augment the value of our solutions and resolve a wide range of issues, and in so doing help our customers enhance their productivity. This enables the creation of greater added value with fewer resources, which both contributes to the realization of a sustainable society and generates greater economic value. The value that we co-create with our customers has a positive impact on their own customer base, and ultimately benefits society. This is our value creation process.

The issues that Yokogawa must address continue to evolve. In response to the escalating importance of

addressing matters of global concern such as the need to reduce greenhouse gas emissions, the United Nations has adopted the Sustainable Development Goals (SDGs) to guide the efforts of the global community and indicate where corporations should target their activities. The Yokogawa Group's ongoing efforts to enhance the productivity of manufacturing operations are generating new value both for our customers and the broader society that we all are part of. Keeping in mind the relationship between our business activities and issues that concern all

in our society, we have articulated a vision for the year 2050 and have set specific sustainability goals (the "Three goals") to make the world a better place for future generations. And in addition to identifying a number of ways in which Yokogawa will need to transform itself in order to achieve these goals, we have set quantitative targets for 2030 and key performance indicators (KPIs) for 2020, and are promoting initiatives that are consistent with our mid-term business plans.

Review of TF2017 strategies

With our Transformation 2017 mid-term business plan (TF2017), whose final fiscal year concluded on March 31, 2018, we indicated three areas for transformation that were needed to lay the groundwork for reaching the goals set out in our long-term business framework. The first was a transformation of *focusing on customers* in which we aim to expand our business by concentrating resources on industries that can take full advantage of our diverse knowledge and expertise and by capitalizing on our deep and lasting customer relationships. The second was *creating new value*, which involved expanding the scope of our solution proposals to provide increasingly sophisticated solutions. The third was *becoming a highly efficient global company* by globally optimizing our cost structure and managing operations with an emphasis on profitability and efficiency.

With respect to focusing on customers and creating new value, Yokogawa's acquisition of the UK firm KBC Advanced Technologies has dramatically enhanced our ability to provide consulting services to our customers. Thanks to KBC's cultivation of a wealth of strong relationships in the highest management ranks through its provision of strategic consulting services, this acquisition has also expanded the Yokogawa Group's customer base. In addition, our development and Japan launch of the GRANDSIGHT cloud-based environment for collaborative value co-creation has enabled our customers and business partners to securely and efficiently design, develop, and continuously operate their own solutions. GRANDSIGHT also boosts project

efficiency by providing access to Yokogawa's problem-solving methodologies, tools, and know-how. And with the aim of establishing a new architecture for the industrial Internet of Things (IIoT), Yokogawa is collaborating with Microsoft, FogHorn Systems, Bayshore Networks, and Telit IoT Platforms. FogHorn and Bayshore are technology startups, while Telit is an established provider of integrated IoT products and services.

Regarding the transformation of becoming a highly efficient global company, we have centralized our engineering functions with the aim of globally optimizing the deployment of engineers, enhanced efficiency by increasing the facility utilization rate and integrating the functions of offices outside Japan, and globally optimized the production, logistics, and procurement functions to reduce costs.

Although these initiatives to transform our company have yielded results, we have not hit all the envisaged goals and must conclude that we have not acted quickly enough. Regarding KBC, the establishment of synergy and development of the solutions business in new regions and industries have taken longer than anticipated. As for earnings, we have fallen short of our targets because of drastic market fluctuations: our TF2017 assumptions on crude oil prices and exchange rates were inaccurate. We recognize that our greatest challenge will be to find ways in which we can be profitable even when we face such challenges in our business environment.

Changes in our external environment / the long-term business framework

In its formulation of a new business plan, Yokogawa's management team has focused on identifying new opportunities, while recognizing that the environment in which we operate gives few grounds for optimism. In the energy industry, a sector in which Yokogawa has considerable expertise, the outlook for crude oil prices is unclear and competition is intensifying, with companies curtailing their investments due to the slowdown in the growth of emerging economies and the changing positioning of energy resources as moves are made toward a carbon-free society. On the other hand, spurred by innovations in digital technology, ever more companies are turning to AI and big data, and this is having a great impact on the types of solutions that our customers expect from us. This new wave of technological innovation is stimulating the appetite for investment as companies look to enhance productivity by introducing the latest digital technologies. This factor, together with the increased attention that is being paid to pressing global issues such as those highlighted by the adoption of the SDGs, is creating new opportunities for Yokogawa to make use of its sophisticated problem-solving capabilities. In order to complete tasks that are left over from TF2017, namely, the realization of robust earnings, we must review our traditional growth model, which is largely dependent on the energy industry and is susceptible to changes in crude oil prices and exchange rates. We have come to the conclusion that further efforts to transform Yokogawa are dictated by changes in our business environment.

In recognition of our current situation, we have made changes to the long-term business framework that was first formulated in fiscal year 2015. These changes reflect our changing perception of where we, the Yokogawa Group, wish to be ten or more years from now. The vision

statement remains unchanged: *Through "Process Co-Innovation," Yokogawa creates new value with our clients for a bright future.* We have reinterpreted this, however, to emphasize our strong commitment to maximizing economic value for our customers and addressing social issues through the provision of solutions to our customers, and to the creation of value both for society and the environment through our customers' businesses. Moreover, we have added the bioeconomy to those business fields that Yokogawa will focus on with a long-term perspective. This decision took into consideration various countries' formulation of bioeconomy strategies and implementation of initiatives that seek to utilize renewable biological resources, which was prompted by the 2009 publishing of a report titled *The Bioeconomy to 2030* by the Organisation for Economic Co-operation and Development (OECD). Momentum in this field is building, and this can be attributed to the rapid progress in genome-related and digital technologies that has been achieved in recent years. At the same time, many new issues related to the development and manufacturing of new bioproducts have come up that will need to be addressed. Yokogawa has gained considerable experience, knowledge, and know-how through its provision of solutions that enhance productivity at every level of a company's operations, from the factory floor to the boardroom, and we believe that this can be utilized to resolve these issues. Our intention is to first expand this business in the pharmaceutical and food industries, which are both growth markets, and then expand it to other fields such as biomaterials. In these fields Yokogawa will work with its customers to achieve major advances in productivity, with the overall goal of contributing to the attainment of a sustainable society.

measurement, control, and information technologies and pursuing digital technology innovation and co-innovation with its customers that revolutionizes productivity in a wide range of business processes. To achieve this, Yokogawa will implement key strategies to achieve the following three transformations.

The first of these transformations is the *transformation of existing businesses*. Reflecting the shift in investment from the construction of new facilities to the enhancement of productivity at existing facilities, we will globally expand the solutions business by working together with our customers to achieve major advances in productivity through the offering of solutions that enhance the efficiency of both operations and maintenance.

The second transformation is the *creation of new businesses and transformation of the company's business model*. To establish a business portfolio that is not dependent on the energy field, which is highly susceptible to changing market conditions, it will be essential to create new businesses in fields that have good growth potential and are areas where Yokogawa can leverage its strengths. The establishment of a life innovation business, a new business targeting the pharmaceutical and food industries, is in line with the focus areas defined in the

long-term business framework, and is a theme that is directly linked with our goal of resolving pressing social issues. Moreover, Yokogawa will transform its business model from the simple selling of products and services to a performance-based business that can reduce customers' initial investments and a recurring business that emphasizes the offering of services.

The third transformation is the *improvement of productivity through Group-wide optimization*. We will continue to look for ways to reduce costs, mindful that we did not fully achieve this in TF2017, and will speedily implement measures to improve productivity such as the integration of the Group's support functions.

Digital transformation provides a basis for all these transformations. Leveraging the know-how that we have acquired through the provision of plant control solutions, we will utilize AI and IIoT architecture to create new value for our customers. With this digital transformation as the driving force for value creation, Yokogawa will help its customers achieve a transformation that drives up their productivity, and thereby create new opportunities for growth. Internally, we will lay a foundation for growth by undertaking a transformation of our business processes and strengthening our IT infrastructure, and will make aggressive investments to realize our goals.

The new mid-term business plan (TF 2020)

In a dramatically changing business environment, Yokogawa has formulated the Transformation 2020 (TF2020) mid-term business plan to address outstanding issues and achieve the goals set out in the long-term business framework. This is based on the recognition that

Yokogawa needs to fundamentally transform the structure of its business, and take the transformation targeted in TF2017 to a new level. The ideal that Yokogawa aspires to is expressed as follows in the TF2020 plan: *A company that seeks to build a sustainable society by using its core*



Building a stronger foundation for our business to sustain growth

In addition to these three transformations, rapid changes in our business environment require everyone in the Yokogawa organization to improve how we respond to evolving customer needs and adapt to new technologies. One initiative that illustrates our intentions in this area is the establishment of the Yokogawa University, a corporate institution that will design and provide development and training programs to equip our employees with the knowledge and skills needed to cope with a changing business environment and accelerating technological innovation. This is a transformation that will enable our employees to take on new jobs that add greater value. For example, while an engineer working in a manufacturing-related area may not have much need for financial knowledge, that person will need to be able to estimate the economic value created by a system or application with the solutions business that we plan to pursue. While continuing to introduce digital technologies for the

automation of manual business processes, we will support our employees in their efforts to achieve personal growth and create greater added value.

On the subject of corporate governance, which provides the foundation for all that we do, including our efforts to carry out the mid-term business plan, we do believe that our efforts to strengthen this function have been successful. In 2003, Yokogawa welcomed its first outside director, and currently over one third of the members of our Board of Directors come from outside the company. For more effective corporate governance, it will be important to enhance not only our systems but also the quality of the discussions that take place at meetings of the Board of Directors. Going forward, we will consider what can be done to enhance Yokogawa’s corporate value over the medium to long term, and this may consider proposals that lead to greater diversity in the composition of our Board of Directors.

Companies whose business results fluctuate with changes in crude oil prices, foreign exchange rates, and geopolitical risks will likely find growth particularly hard to achieve in the years ahead. Under its TF2020 plan, Yokogawa will aim to outperform the market growth rate and increase its profits even if circumstances in its business environment remain unfavorable. It will emphasize visible and substantial activities that will change its businesses and, as a consequence, contribute to the realization of a sustainable society. That in a nutshell is Yokogawa’s approach to meeting the expectations of its shareholders, investors, and other stakeholders. With the exception of the Yokogawa Philosophy, which is based on our founding principles, we are determined to make changes everywhere else with the goal of accomplishing a transformation that enhances our corporate value.



Message from the Head of the Corporate Administration Headquarters



About TF2017

As called for in the Transformation 2017 mid-term business plan (TF2017), the Yokogawa Group sought to transform itself by capitalizing on its customer base to expand its business and by emphasizing profitability and efficiency in company management. In accordance with a financial strategy that emphasized the channeling of the cash that is generated from these transformative measures into investment in growth while at the same time maintaining a secure financial position, the Group targeted return on equity (ROE) of 11% or more and return on assets (ROA) of 6% or more.

With the goal of expanding its business, Yokogawa laid the foundation for a solutions service business by making strategic investments such as the acquisition of the U.K.-based company KBC Advanced Technologies. However, the speed and extent of change in our business environment during the three-year period covered by the TF2017 plan exceeded all expectations, and this was particularly the case in the energy industry, our mainstay market. In response, Yokogawa has sought out ways to make itself more profitable by increasing orders and sales and reducing production and engineering costs as well as selling, general and administrative expenses. Although

net sales for fiscal year 2017 were up year on year, results still fell short of the TF2017 targets. While our efforts to improve efficiency by reducing costs did start to have an impact, we were unable to fully resolve all outstanding issues and ended up missing out targets here as well.

Regarding operating cash flow, which provides funds for our financial strategy, the Company hit its ¥100 billion target for the three-year period of TF2017. Moreover, the Company made some progress in strengthening its financial position, as indicated by the increase in shareholders’ equity and achievement of a 60.6% shareholders’ equity ratio (a 2.4% increase) in fiscal year 2017. Of the ¥50 billion that has been allocated for strategic investments to expand our business in focus industries, primarily through M&A, a total of ¥34.1 billion has been invested to date. This included outlays for the acquisition of KBC.

Although Yokogawa made progress in laying a foundation for growth under the TF2017 plan, we recognize that our efforts came up short. Our challenge henceforth will be to find ways to realize robust earnings even when market fluctuations occur.

	FY2014 Results (A)	FY2017 Target (B)	FY2017 Results (C)	Difference (C) – (B)
ROE (%)	8.6	11% or more	8.1	(2.9)
ROA (%)	4.1	6% or more	4.8	(1.2)
Net sales (Billions of yen)	405.8	440.0	406.6	(33.4)
Operating income (Billions of yen)	29.8	45.0	32.7	(12.3)
ROS (%)	7.3	10.2	8.0	(2.2)
EPS (Yen)	66.9	¥100 or more	80.27	(19.73)
Operating cash flow (Cumulative for 3 years, Billions of yen)	—	100.0	103.1	3.1
Exchange rate to 1 U.S. dollar (Yen)	110.58	110.00	110.70	

Key Performance Indicators for TF2020

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To guide its efforts under the TF2020 mid-term business plan to maximize both corporate and shareholder value, Yokogawa will utilize the key performance indicators of earnings per share (EPS) growth, organic free cash flow (FCF)*, and return on equity (ROE). We aim to increase profits, generate cash, and improve capital efficiency, outperforming market expectations. Specifically, while

aiming for growth in orders and net sales that exceeds the market growth rate, we will continue to work to achieve a transformation in our business and cost structure so that we can improve profitability regardless of what happens in our market environment.

*Organic FCF: FCF (operating CF – investing CF) + Strategic investments

Capital Policy and Financial Strategy

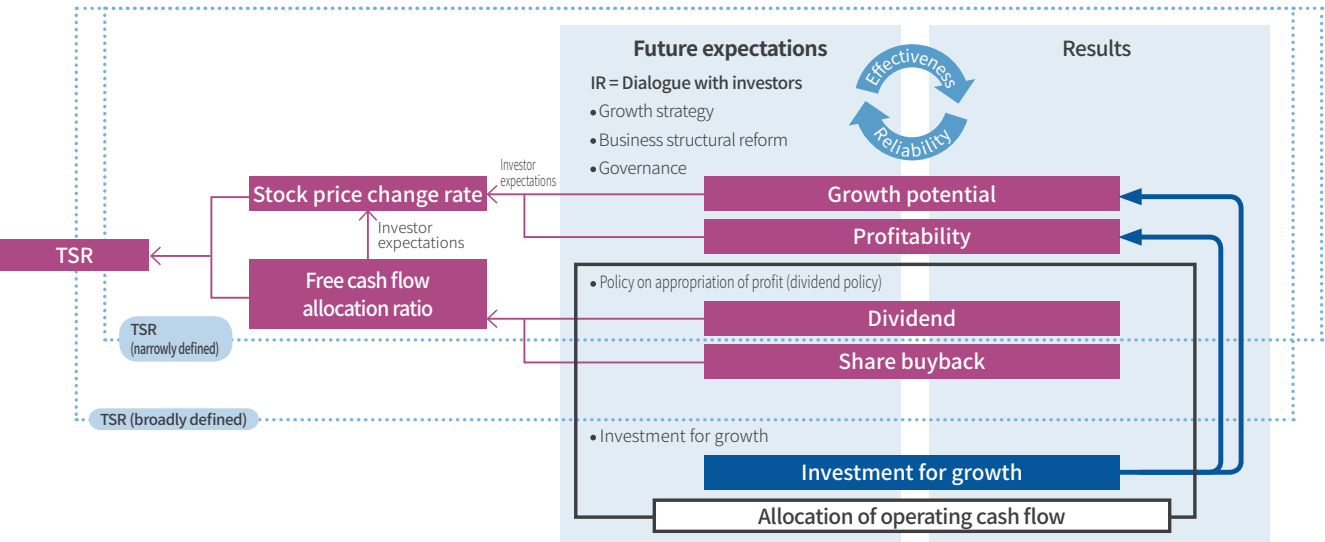
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In addition to undertaking measures to enhance corporate value under the TF2020 plan, Yokogawa will seek to maximize shareholder value over the medium to long term by ensuring that total shareholder return (TSR) always exceeds the cost of equity.

To maximize its corporate value, Yokogawa intends to allocate capital and the cash that it generates through its activities to investment for growth. Regarding investment for growth, particularly investments that involve substantial risk, it is important to accurately understand the risk that an investment presents, and to know also how much more risk one is prepared to accept, and then invest based on the investment criteria that have been set with the aim of enhancing corporate value. Moreover, in the event of the materialization of a risk that has some short-term impact on our business, we will keep shareholders' equity at the level needed to retain an A rating and maintain an optimal capital structure with sufficient funds available for investment in growth. Within the scope of this capital structure, Yokogawa aims to utilize financial leverage to reduce capital costs and enhance corporate value.

While prioritizing investment in growth, Yokogawa intends to vigorously enhance shareholder return, providing that the Company remains on a sound financial footing. In addition to the policy of distributing a certain percentage of profits according to a payout ratio, Yokogawa has introduced a policy of maintaining stable dividend payments based on indicators such as dividends on equity (DOE). This reflects our belief that, even if a large loss is expected because of some temporary factor such as a slowdown in the economy, it is desirable to continue paying a minimum dividend providing there is adequate shareholders' equity.

Going forward, Yokogawa will continue through its IR activities to actively communicate with its stakeholders in the capital markets and other parties. Furthermore, through such communication the Company will cultivate trust and foster the shared understanding needed to sustain growth in its corporate value over the medium to long term.



Mid-term Business Plan

Transformation 2020

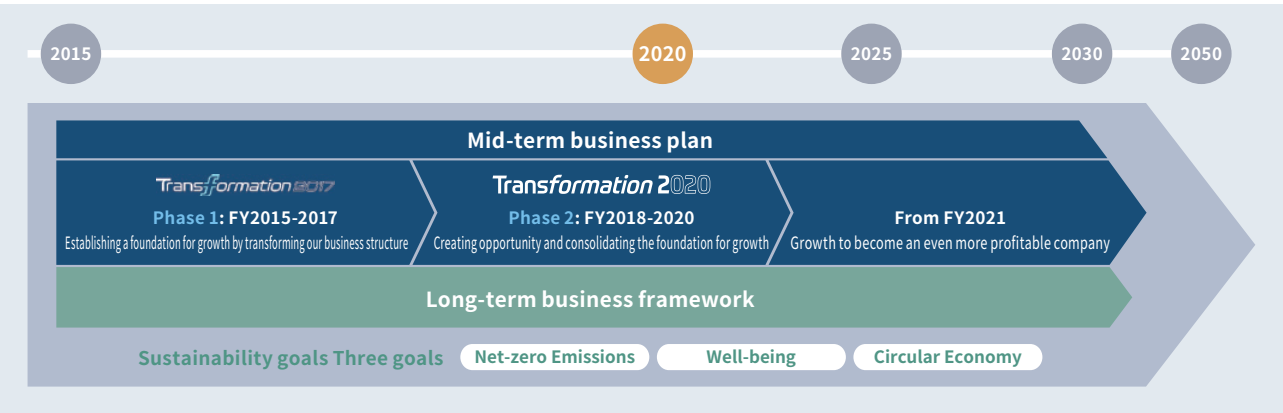
Create growth opportunities and consolidate the foundation for growth

The Yokogawa Group has formulated Transformation 2020 (TF2020), a new mid-term business plan covering fiscal years 2018 through 2020, to improve profitability and further its transformation.

Overview of Sustainability goals, long-term business framework, and mid-term business plan

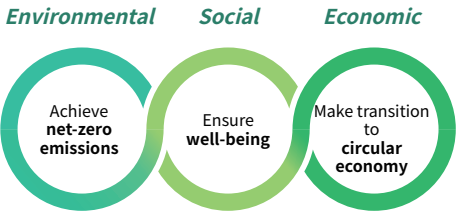
In fiscal year 2015, Yokogawa established a long-term business framework that defined its goals for the next 10 years and described what will be needed to accomplish them. Subsequent to the establishment of that framework, there have been some notable shifts on the public policy front that include the adoption in September 2015 of the Sustainable Development Goals (SDGs) by the United Nations and the adoption in December of that year of the Paris Agreement at the 21st Conference of Parties to

the United Nations Framework Convention on Climate Change (COP21). In light of these changes, in August 2017 Yokogawa established sustainability goals (Three goals) and indicated the direction that it will take to achieve them. Moreover, in reviewing the direction it will take under the long-term business framework, Yokogawa has clarified the ideals that it will strive for in the next 10 years and beyond.



Sustainability goals (Three goals)

Yokogawa will work to achieve net-zero emissions, ensure the well-being of all, and make a transition to a circular economy by 2050, thus making the world a better place for future generations.



Structure of the long-term business framework



Transformation 2020 mid-term business plan

In fiscal year 2015, Yokogawa drew up the Transformation 2017 ("TF2017") mid-term business plan with the goal of achieving the transformation needed to build a foundation for mid- to long-term growth. Changes in the business environment over the three-year period of TF2017 were greater and swifter than anticipated, and nowhere were these changes more dramatic than in the energy industry, one of Yokogawa's primary markets. Moreover, a wave of innovations in digital technology has driven unprecedented industry changes, and this is having a major impact on the company's business environment.

In this dramatically changing business environment, it will not be enough to merely continue with the TF2017 transformations that seek to increase our corporate value over the mid- to long-term: Yokogawa needs to fundamentally transform the structure of its businesses. Under TF2020, the company will seek to enhance its corporate value. Making full use of digital technology, we will seek to grow existing businesses and improve their profitability, create new businesses and establish new frontiers for growth, and take measures to dramatically improve the productivity of those organizations that support our business activities.

Key performance indicators (KPIs) and targets for TF2020

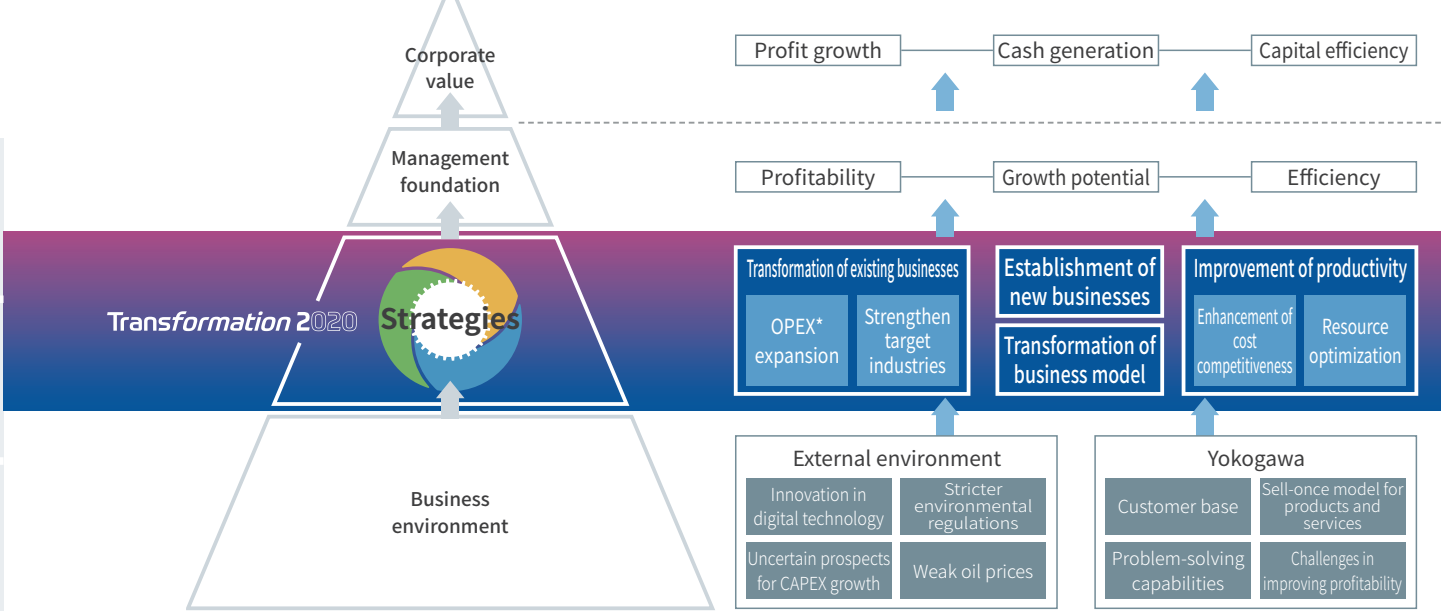
Under a basic policy of maximizing corporate and shareholder value over the medium- to long-term, Yokogawa aims to increase profitability, generate cash, and improve capital efficiency, outperforming market expectations.

KPIs	Targets
Growth in orders / net sales	3-5%/year
Growth in earnings per share (EPS)	7-9%/year ^{*1}
Return on sales (ROS)	10% or more (fiscal year 2020)
Return on equity (ROE)	10% or more (fiscal year 2020)
Organic free cash flow ^{*2}	85 billion yen or more (cumulative over three years)

^{*1} The growth rate is real growth, excluding special items such as the fiscal year 2017 impairment of goodwill, the recording of allowance for doubtful accounts, and the sale of assets
^{*2} Organic free cash flow = free cash flow + strategic investment (70 billion yen cumulative over three years)

Overview of TF2020 and positioning of strategies

Based on an accurate assessment of its business environment, Yokogawa has formulated strategies for maximizing corporate value over the medium- to long-term.

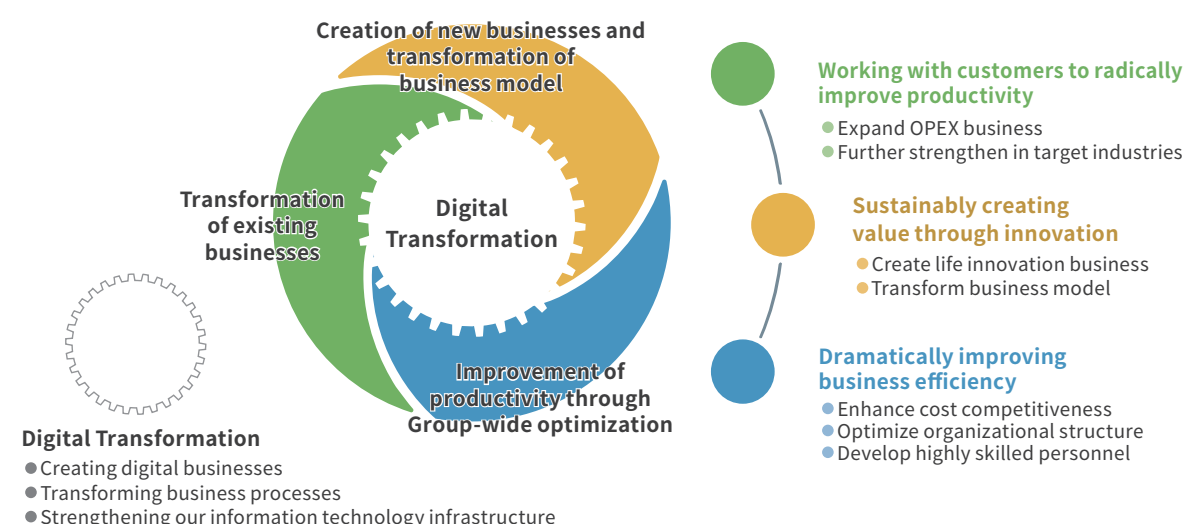


^{*}OPEX stands for operating expenditure.

Basic strategies of TF2020 mid-term business plan

TF2020 defines as follows the ideal that Yokogawa is striving to achieve: “A company that seeks to build a sustainable society by using its core measurement, control, and information technologies and pursuing digital technology innovation and co-innovation with its

customers that revolutionizes productivity in a wide range of business processes.” To achieve this, the company will implement the following basic strategies for transforming itself in three ways.



Transformation of existing businesses

Working with customers to radically improve productivity.

Expansion of OPEX business

KPI and target OPEX growth rate **7 to 10% per year** *Control business OPEX orders

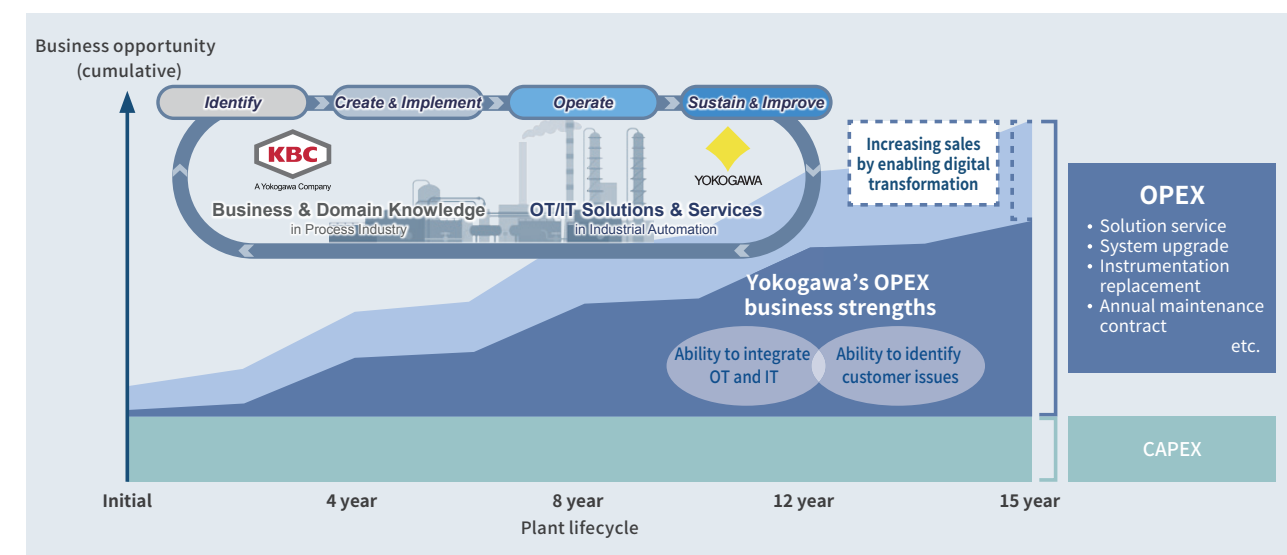
- Yokogawa will focus on expanding the OPEX business, which focuses on solving issues to improve productivity at existing plants and on providing maintenance services at these facilities.
- Yokogawa will continue with the efforts to establish and globally expand the solutions business that it pursued under TF2017.

Background	Strategy	Product portfolio
<ul style="list-style-type: none"> ● Customers are shifting from capital investment in new plants (CAPEX) to investments that seek to improve the efficiency of operations at existing plants (OPEX). 	<ul style="list-style-type: none"> ● Expand our Japan solutions business and KBC's consulting business to other regions and industries. ● Utilize data obtained from a rich installed base to optimize the service business. 	<ul style="list-style-type: none"> ● Control systems, field instruments ● KBC consulting ● Other solutions (energy conservation, cyber-security measures, etc.)

Plant lifecycle Example of a chemical project in Japan

The OPEX business is cumulative, providing solutions over the entire plant lifecycle.

Yokogawa has many opportunities in this field to exercise its strengths.



Further strengthen in target industries

KPI and target Growth in target industries **3 to 5% per year** *Control orders for the chemical and renewable energy industries

- Continue efforts to expand our business in the chemical industry to markets other than Japan, where Yokogawa already has a large share of the market.
- Cultivate the renewable energy market, which has potential for growth and addresses issues that are of social significance.

Background	Strategy	Product portfolio
<ul style="list-style-type: none"> ● Investment is expected to increase in the chemical industry due to economic growth in emerging markets and strengthening environmental regulations. ● With the aim of reducing CO₂ emissions, companies are accelerating their shift to renewable energy sources. 	<ul style="list-style-type: none"> ● Expand the bulk chemical and specialty chemical businesses outside Japan. ● Develop new renewable energy-related markets. 	<ul style="list-style-type: none"> ● Control systems, field instruments ● Manufacturing execution systems ● Information systems (facility management systems) ● KBC's consulting and more

Pursuit of transformation in measurement business

- Secure healthy profits by focusing on competitive products.
- Challenge new growth markets.

Pursuit of transformation in aviation and other businesses

- Develop our business in growth markets by leveraging proprietary technologies and our customer base.

Creation of new businesses and transformation of business model

Creating sustainable value through innovation.

Establishment of life innovation business

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KPI and target

Increase of orders for new businesses

2 to 3 times by FY2020 (compared to FY2017).

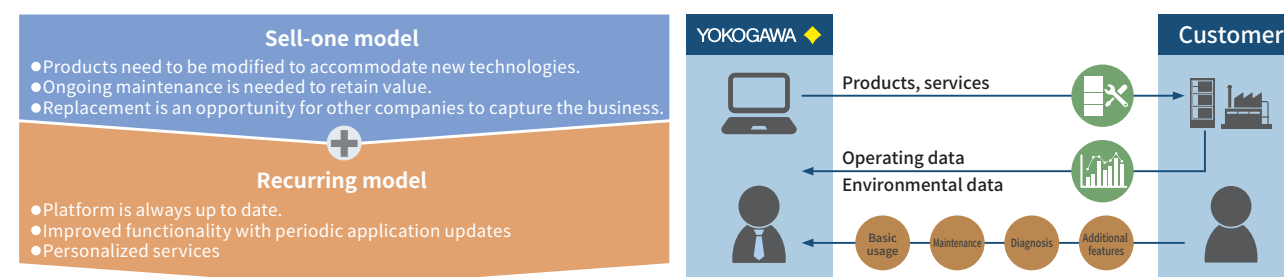
*Pharmaceutical and food industry orders
*FY2017 result: approx. 10 billion yen

Yokogawa will strive to leverage its strengths in the pharmaceutical and food industries by establishing service businesses that improve productivity throughout the value chain, including R&D, product development, manufacturing, and logistics.

Vision	Strategy
<ul style="list-style-type: none"> Through the use of measurement, control, and information technology, support people's health and enrich lives by radically improving productivity across the entire value chain, from basic research to logistics and services. 	<ul style="list-style-type: none"> Expand this business based on existing pharmaceutical/food industry businesses and new technologies and products that are under development. Expand the solutions portfolio by actively utilizing external resources and M&A.

Transformation of business model

Yokogawa will transform its business model from the simple selling of products and services ("sell-once") to a recurring business model that includes performance-based business and emphasizes the offering of services.



Improvement of productivity through Group-wide optimization

Yokogawa will dramatically improve business efficiency through Group-wide optimization.

Enhance cost competitiveness

Strengthen cost competitiveness by establishing a mechanism for continuous cost-reduction activities and by utilizing digital technology.

Optimize the Group structure

Integrate the support functions of Group companies for improved business efficiency and operational quality.

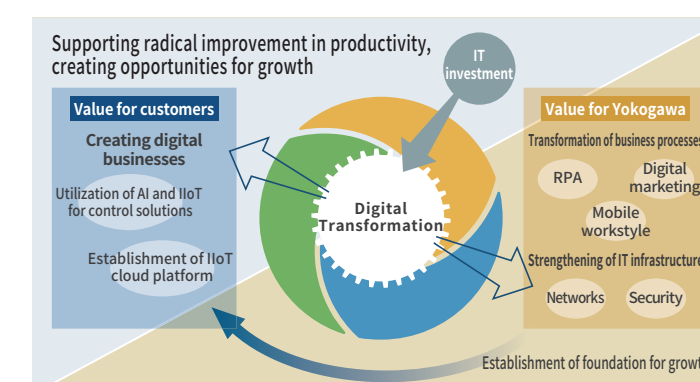
Strengthen human resources

With a focus on the company's in-house university, establish an environment in which employees can transform themselves to take on operations that create greater added value.

Digital transformation

As a basis for the three transformations, Yokogawa will seek to improve productivity both for itself and its customers by developing architecture that makes full use of digital technology. Yokogawa will help its customers achieve a transformation in their productivity by enhancing the value added by the company's AI, IIoT, and cloud-based products and other solutions, thereby leading to new opportunities for growth. And to establish a firm foundation for continued growth, the company will make increased use of RPA, digital marketing, and mobile work solutions as well as network and security technologies. The company will make the aggressive investments needed to make this happen.

*RPA stands for robotic process automation.



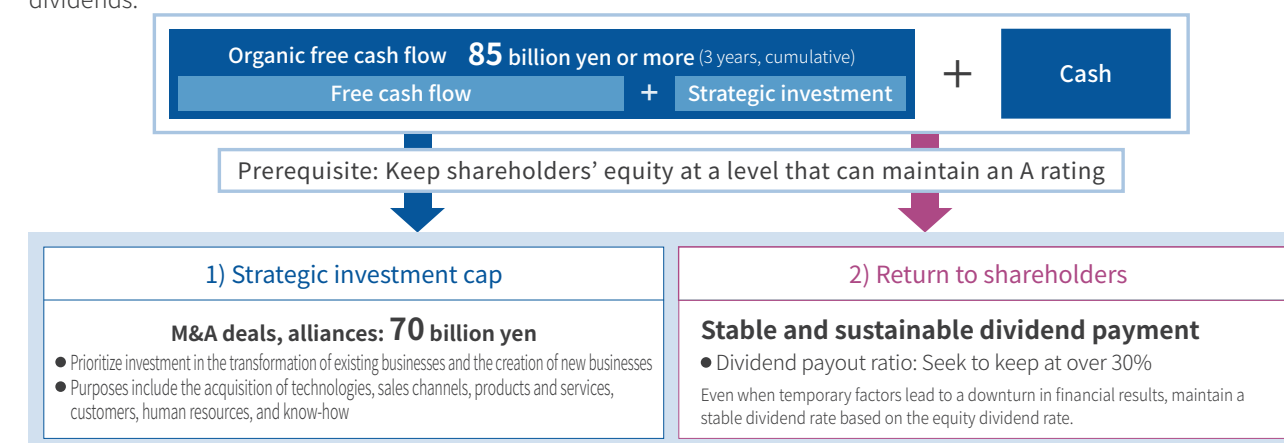
Capital policy and financial strategy

Prioritize investments that maximize corporate value and proactively increase dividends

Under TF2020, on the premise of sustainably maintaining an optimal capital structure*, the company will prioritize the allocation of the cash that it generates through the three key transformations to investments that maximize its corporate value over the mid- to long-term. The company will also actively seek to improve its payment of dividends.

Through the business strategies, capital investment for growth, and improvement of dividend payments that are set out in TF2020, the company will aim to maximize shareholder value by ensuring that total shareholder return (TSR) always exceeds shareholders' cost of equity.

*Shareholders' equity is at the level needed to maintain an A rating and there is adequate capacity for undertaking the investments needed for further growth.



1) Capital investments for growth (strategic investments)

Assuming that it maintains an optimal capital structure, the company will set aside 70 billion yen for capital investments over the three-year period of the TF2020 plan.

2) Dividend policy (basic policy on allocation of profits)

The company will also actively improve dividend payments based on the following new dividend policy.

The distribution of earnings to shareholders is a top priority for Yokogawa. By improving profitability, the company aims to secure the funds needed to continue increasing its dividend payments. Specifically, the company will strive to exceed a 30% consolidated dividend payout ratio while ensuring it retains the financial base required to make the investments needed to maximize business performance, deliver value to shareholders over the mid- to long-term, and ensure continued growth. The company also aims to maintain a stable dividend based on the dividend on equity (DOE) ratio, even when business performance deteriorates due to temporary factors.

To Realize a Sustainable Society

With customers in diverse industries, including energy, industrial materials, pharmaceuticals, and foods as well as businesses that support social infrastructure, Yokogawa is fulfilling a crucial role in efforts to realize a sustainable society. We make a contribution to a sustainable society for the benefit of future generations by resolving customers' issues through our business while striking a healthy balance between environmental, social and economic aspects.



Sustainability goals

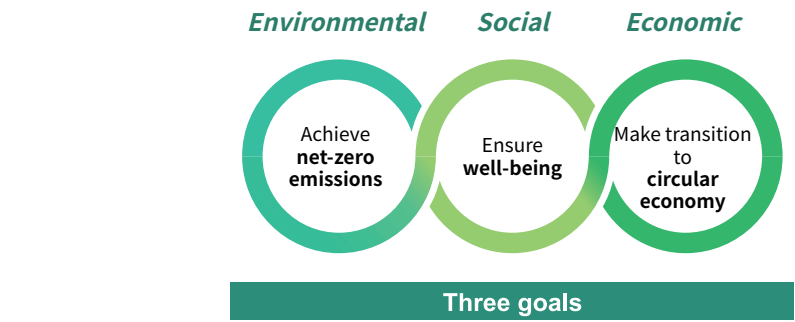
Yokogawa made a statement on its aspiration for sustainability and established sustainability goals (Three goals) for 2050 in order to help make the world a better place for future generations. The Three goals comprise of net-zero emissions, well-being, and a circular Economy, which correspond to the environmental, social, and economic aspects of sustainability.

Statement on Yokogawa’s aspiration for sustainability

Yokogawa will work to achieve net-zero emissions, make a transition to a circular economy, and ensure the well-being of all by 2050, thus making the world a better place for future generations.

We will undergo the necessary transformation to achieve these goals by 1. becoming more adaptable and resilient, 2. evolving our businesses to engage in regenerative value creation, and 3. promoting co-innovation with our stakeholders.

Sustainability goals: “Three goals”



Net-zero Emissions
Achieve net-zero emissions; stopping climate change
Climate change is an urgent issue that requires a united global response. Our goal is to reach net-zero emissions through the use of renewable energy and greater energy efficiency. By net-zero emissions, we mean a balance between greenhouse gas emissions and absorption, preventing an increase in the concentration of greenhouse gases in the atmosphere.

Well-being
Ensure Well-being; quality life for all
Well-being means a state of physical, mental, and social contentment. Yokogawa supports people's health and prosperity through the achievement of safe and comfortable workplaces and our pursuits in such areas as the pharmaceutical and food industries. We promote diversity and inclusion, providing education, training, and employment in local communities.

Circular Economy
Make the transition to a circular economy; circulation of resources and efficiency
We are seeing a movement that rejects the one-way take, make, and dispose economy. This new economy circulates resources and emphasizes services over physical products. Yokogawa aims for making a transition to a circular economy that uses resources without waste and makes effective use of assets.

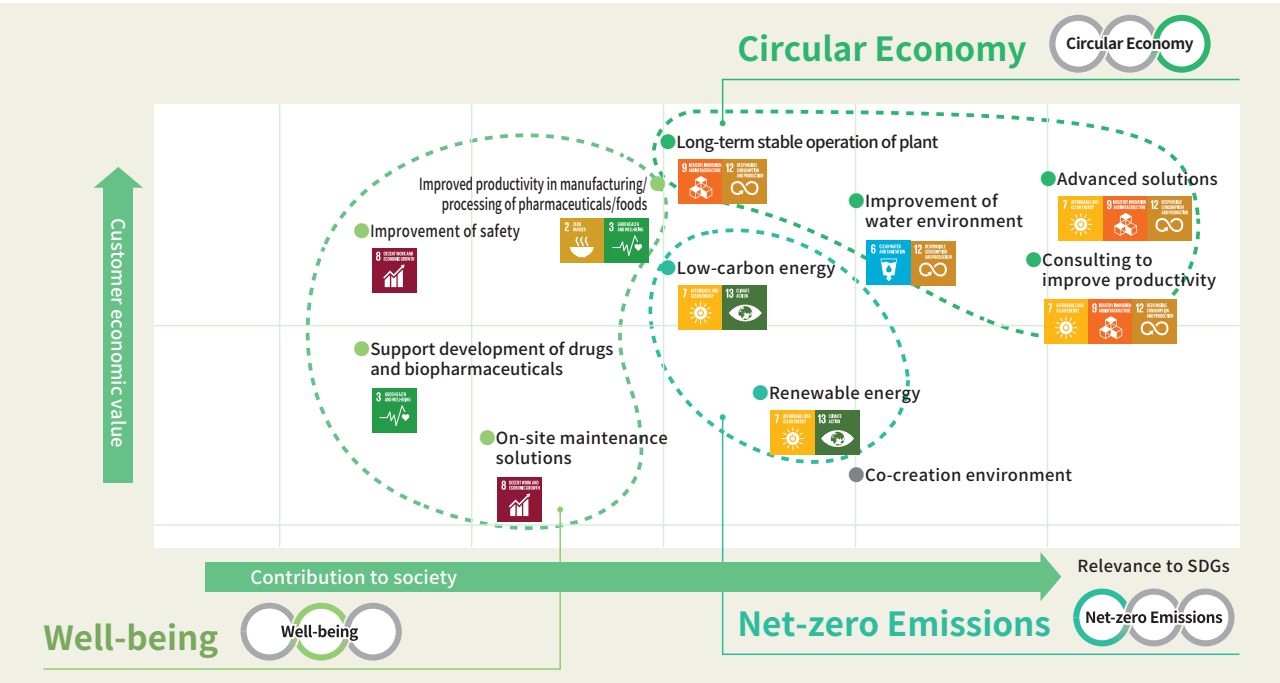
Sustainability Targets for 2030

To achieve the Three goals and thus contribute to the accomplishment of the SDGs, Yokogawa will create social and environmental value together with customers. We have selected value creation themes, identified three focus areas, and set specific medium-term sustainability targets to be achieved by 2030. The entire Yokogawa Group will address these targets, which are incorporated in our business plans.

Three goals	Business focus areas and summary of value creation stories	Sustainability targets
Stopping climate change Net-zero Emissions	Renewable and low-carbon energy Contribute to avoid CO ₂ emissions through offering of renewable energy and LNG solutions	Abided CO ₂ emissions: 1 billion tons (FY2018-2030)
Quality life for all Well-being	Life innovation and safety Support people's health and prosperity through provision of life-innovation solutions and assurance of safe and comfortable work environment	Health and safety value creation: 1 trillion yen in FY2030
Circulation of resources and efficiency Circular Economy	Energy saving and resources Contribute to sustainability and economic growth through stable and efficient operation, and resource regeneration	Resource efficiency improvement: 1 trillion yen in FY2030

Focus business areas for sustainability and value creation themes

We have evaluated our value creation themes on a scale of customer value (economic value for the customer) and social/environmental value (contribution to society). In the period up to 2020, for value creation themes, which are consistent with our Transformation 2020 mid-term business plan, we will execute a PDCA (Plan-Do-Check-Action) cycle using the number of projects and net sales as key performance indicators (KPIs).



Industrial Automation and Control Business



Satoru Kurosu

Director and Executive Vice President,
Head of Premium Solutions and
Service Business Headquarters

Masatoshi Nakahara

Director and Executive Vice
President,
Head of IA Systems and Service
Business Headquarters

Shigeyoshi Uehara

Vice President,
Head of IA Products and Service
Business Headquarters

Based on the ideals set forth in its Synaptic Business Automation concept, Yokogawa helps its customers respond to dramatic changes in their business environment and achieve the transformations needed to prevail in today's highly competitive marketplace. To accomplish this, Yokogawa aims to work with its customers as a trusted partner.

Yokogawa is highly regarded around the globe as a leader in the control field. For use in a wide range of production facilities, the Company provides highly reliable sensors for the real-time measurement of processes, analyzers, high-availability distributed control systems for the monitoring and control of processes, safety instrumented systems that can prevent plant accidents, and highly reliable software and services that

support production management. The Company partners with its customers to create new value by providing optimum solutions that enhance production efficiency, ensure high availability, make maximum use of assets, maintain safety, and optimize costs over the entire lifecycle of a plant facility. Yokogawa works hand in hand with its customers in a wide range of industries, including oil and gas, chemicals, electric power, iron and steel, pulp and paper, pharmaceuticals, and foods.

Yokogawa integrates its own technologies, expertise, and solutions with those gained through mergers and acquisitions, and alliances with IT vendors. We create value for our customers by helping to visualize and optimize business activities that occur throughout their value and supply chains.

Goal

Business concept

To Be the Most Trusted Partner

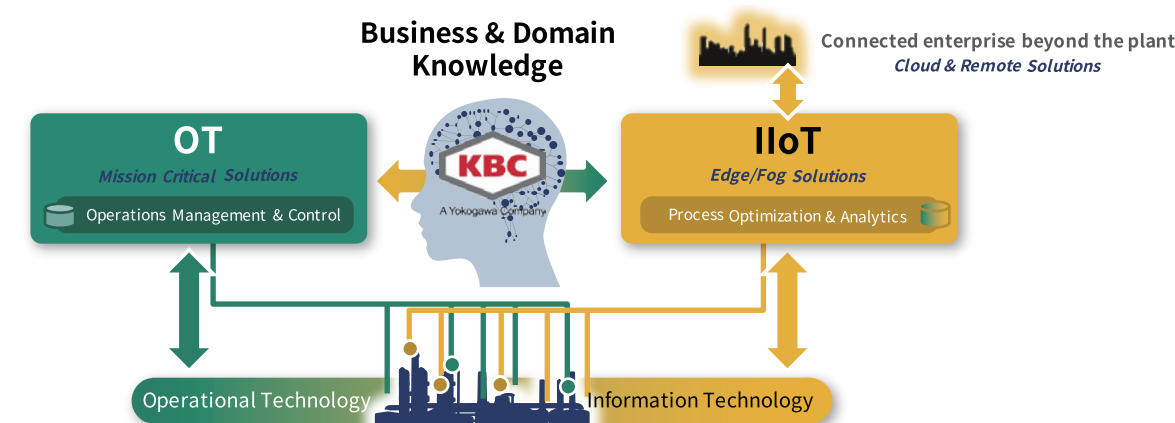
Synaptic Business Automation™

- The Synaptic Business Automation concept is **all about creating sustainable value for our customers by linking everything within their organizations**. To accomplish this, Yokogawa makes use of both its business and domain knowledge and its digital automation technologies to engage in co-innovation with customers that will drive a transformation in their business processes.
- *Synaptic* is a **reference to the synapse, a structure in the nervous system** that plays a role in the transfer of signals throughout the body. This indicates our determination to help our customers strengthen their competitiveness by linking everything within their organizations, from knowledge, data, and systems to entire supply chains.
- *Business Automation* refers to a process that goes beyond simple industrial processes to include the **automation of all an enterprise's business processes**, and it seeks through their comprehensive optimization to **enhance our customers' corporate value**.

Yokogawa's capabilities

To meet a diverse array of customer needs, Yokogawa combines its strengths in operational technology (OT) and information technology (IT) with KBC's business and domain knowledge. With these capabilities, Yokogawa is

able to offer its customers best-in-class solutions and services that cover everything from business to manufacturing operations and help them get the most out of their existing plant assets.

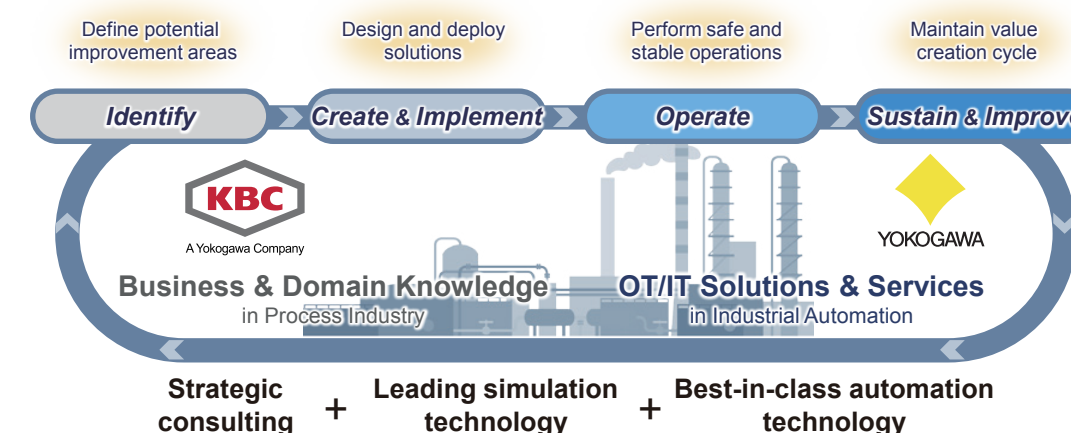


Continuous value creation throughout the business lifecycle

Yokogawa helps its customers achieve their aspirations by continuously creating value through every phase of the business lifecycle.

Through the acquisition of KBC, Yokogawa gained access to process knowledge that is useful in improving profitability for its customers by helping them identify and resolve business issues, as well as knowledge and expertise in the provision of strategic business consulting services that make use of simulation technology. Utilizing these strengths, we engage in a continuous value creation cycle that has four phases: First we *identify* customer

issues and ways to improve profitability, second we *create & implement* solutions hand-in-hand with our customers, third we help them *operate* their facilities safely and stably utilizing our automation solutions, and fourth we provide cloud-based remote consulting and other services that help them *sustain & improve* their operations over the entire facility lifecycle.



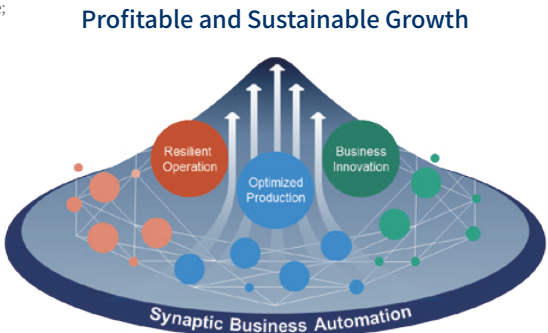
Value of Synaptic Business Automation

Based on the Synaptic Business Automation concept, Yokogawa engages with its customers to sustain the creation of value on their behalf. We work closely with them to identify issues that must be addressed to improve profitability, and co-create solutions and services based on the following three elements:

First, we aim for *resilient operation*, namely the achievement of robust operations in the presence of safety, security, and environmental risks that are a threat to business continuity. Second, we aim for *optimized*

production to improve the reliability and productivity of manufacturing operations and thereby optimize both TOTEX* and profitability. And third, we aim for *business innovation*, which aims through the facilitation of connections with our customers to create further value both for them and their customers and business partners. Through the co-creation of value, Yokogawa aims to be a trusted business partner that helps its customers improve profitability and sustain growth.

*Total expenditure throughout the business lifecycle; this is the sum of capital expenditure (CAPEX) and operating expenses (OPEX).



Yokogawa's value proposition

Yokogawa's most important value proposition is our commitment to maximizing customer satisfaction by seeing everything through to a successful completion and keeping our word. The following four points express what makes our delivery of value unique.

1 Long-term partnerships based on a shared vision

Yokogawa is always ready and willing to listen to its customers and propose optimal solutions to whatever issues they may face. We take a long-term perspective based on a shared vision for the future. That is our corporate culture.

2 Best-in-class operating performance & robust technology, from sensor to enterprise

From sensor to enterprise, Yokogawa provides best-in-class solutions that are based on its industrial domain knowledge and robust technology. With comprehensive solutions that ensure safe and stable operations, we help our customers sustain growth and generate profits.

3 Secure system integration based on a solid track record in project management

With a proven workforce of project engineers who have successfully carried out control system projects all over the world, Yokogawa is able to deliver integrated automation solutions of all sizes and complexity levels. Since delivering the world's first main automation contractor (MAC) project back in 2000, we have become a leading MAC and continue to develop innovative new engineering services.

4 Sustainable support through global reach and local delivery

With its global service network, Yokogawa is able to ensure the timely and reliable delivery of support services to its customers wherever they may be, covering the entire lifecycle and encompassing the entire value chain. We have a trusted workforce of service engineers all over the world. These are just a few of the reasons why Yokogawa has been able to achieve sustained success over the past century.

Comprehensive solutions, from business to operations

The principal components supporting Synaptic Business Automation are our strategic management consulting services and automation solutions. Yokogawa offers its customers comprehensive solutions that are optimized for every phase of the plant lifecycle and which extend to every level of the organization, from the executive suite to

the plant floor. Under the OpreX brand, which embodies the excellence of the technology and solutions that have been cultivated through the co-creation of value and which covers all of the Company's products, services, and solutions related to industrial automation, Yokogawa is enhancing its industrial automation portfolio.



Yokogawa Receives the Frost & Sullivan Global Customer Value Leadership Award in the Automation Solutions and Services Industry

Yokogawa received the 2017 Global Automation Solutions and Services Customer Value Leadership Award from Frost & Sullivan*, an international market research and consulting firm.

*Frost & Sullivan is an international market research and consulting firm. As well as contracted research, information gathering, and consultation, it also conducts proprietary market research and technological analysis. Based in California, Frost & Sullivan has research and sales offices at over 40 sites around the world.



Life Innovation Business

Focus on Well-being



Capitalizing on its track record in the measurement, control, information, and life science fields, Yokogawa is assisting its customers in the pharmaceutical and food industries in their efforts to transform productivity across the entire value chain, from basic research to logistics and services, and thus is helping to promote health and well-being.

With the broad aim of ensuring well-being that is one of Yokogawa's three sustainability goals, and in accordance with its TF2020 mid-term business plan, Yokogawa strengthened its organization by launching a Life Innovation Business Headquarters in April 2018.



Hitoshi Nara

Head of Life Innovation
Business Headquarters
Director and Executive
Vice President

Establishment of the life innovation business

Amidst issues such as global population growth and aging populations not only in the developed world but also in certain emerging countries, the pharmaceutical and food industries are playing increasingly crucial roles in ensuring quality of life. A key concern in this area has been the difficulty in ensuring the stable provision of necessary medical treatments and safe food supplies to large numbers of people.

With its aspiration to contribute to society, Yokogawa established a Life Innovation Business Headquarters to serve as a source of innovation for the resolution of issues. Starting with our existing businesses serving the pharmaceutical and food industries, the Life Innovation Business Headquarters intends to extend its business by making use of new technologies and

products that are under development, while also enriching its business portfolio by means such as the vigorous utilization of external resources and the pursuit of mergers and acquisitions.

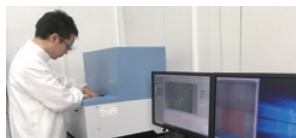


Major solutions in the pipeline

1 Solution for single-cell analysis

Single-cell analysis enables the measurement of the changes and interactions of the molecules within cells, which are the basic building blocks of all organisms. This can provide insights into the mechanisms of diseases and lead to a better understanding of the efficacy of and adverse reactions to new drugs. However, present methods are not able to pinpoint the location of the individual cells as the cells must first be handled in clusters. When these clusters are broken down into individual cells, the original location of the cells cannot be determined. Thus, it is not possible to obtain an analytical result for a particular cell and its molecular contents that corresponds to a specific location in the organ tissue.

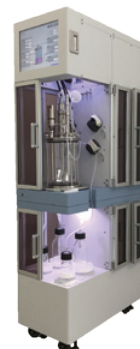
Yokogawa has developed a single-cell analysis solution that uses a confocal scanner unit to capture images of cells. This system can automatically extract components from target cells without losing their positional information, and analyzes the components by means of high-resolution mass spectrometry. It is hoped that further refinements will give the system the ability to identify detailed molecular mechanisms within or between cells. It is expected that such sophisticated systems will be a great help in understanding individual differences in drug efficacy and disease risk.



2 Solutions for cell-based manufacturing

Interest is growing around the world in the use of living organisms (microbes and cells) to produce advanced substances. This includes the development of biological products for the treatment of diseases that are resistant to conventional drugs, the development of foods, and the development of lightweight and highly rigid materials. Bioprocessing, the creation of advanced molecular structures from biological materials, is expected to play a crucial role in industry and become an integral part of production.

Through the application of the measurement and control technologies that it has developed over the years, Yokogawa aims to develop solutions for the realization of these new biological production systems.



Test and Measurement Business / Aviation and Other Businesses

Test and measurement business

- Generate healthy profits by focusing on competitive products
- Enter new growth markets

Aviation and other businesses

- Leverage proprietary technologies and our customer base to improve profitability



Masaharu Yamazaki

Senior Vice President
Head of Aerospace Products Business
Headquarters
President, Yokogawa Test & Measurement
Corporation

Test and Measurement Business

In fiscal year 2017, the final year of the TF2017 mid-term business plan, we carried out measures to attain the goals set out in the plan and achieved good results in the measuring instrument business. As planned, we developed new products to strengthen existing businesses and liquidated the underperforming analog meter business, thereby assuring stable business growth and putting the overall business on a sound financial footing. As for global markets, following North America, Europe, China and South Korea, we expanded the scope of our business in Southeast Asia by means such as posting personnel to our offices in this region, thus enhancing our ability to work directly with customers.

Positioning fiscal year 2018, year one of the new TF2020 mid-term business plan, as the first year of a shift toward a growth

trajectory for the test and measurement business, we will strive for discontinuous growth (expansion of business scope and geographical areas) over the next 10 years, while further strengthening existing businesses and maintaining a sound financial footing. Regarding the expansion of business scope, we will target markets such as electric vehicles, connected cars, and 5G mobile communication systems that are centers for innovation, and will propose integrated solutions that make use of new measurement technology, software, and peripheral equipment while keeping an eye out for opportunities to collaborate and partner with other companies. As for geographic expansion, we are focusing on India, in view of its potential for growth, and will reinforce our sales organization there.



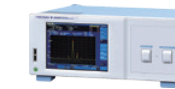
DL350
ScopeCorder



CA700 low pressure calibrator
PM100 external pressure sensor



LS3300
power calibrator



AQ6360
optical spectrum analyzer

Aviation and Other Businesses

In fiscal year 2017, orders, net sales, and operating income were down from the previous year despite an increase in sales of equipment for commercial aviation use; this was mainly due to the impact of a deteriorating shipping market on the marine navigation equipment business.

We assume that the business environment for the marine navigation equipment business will remain challenging in fiscal year 2018. Under these circumstances, we will focus on the development of next-generation products for which there is a high demand, with a view to expanding sales. In the aviation

business, which has been robust, we will capitalize on our advanced research & development capabilities to expand the existing business and cultivate new opportunities.

In the aviation business, safety comes first. High reliability is essential in the flat-panel displays that are used in cockpits and the gyrocompasses, autopilots, and other types of navigation systems that are used on ships. For its customers in the airline, aircraft manufacturing, shipping, and shipbuilding industries, Yokogawa will supply the state-of-the-art technology needed to ensure the safe transportation of passengers and cargo.



Flat-panel displays for aviation use



Gyrocompasses



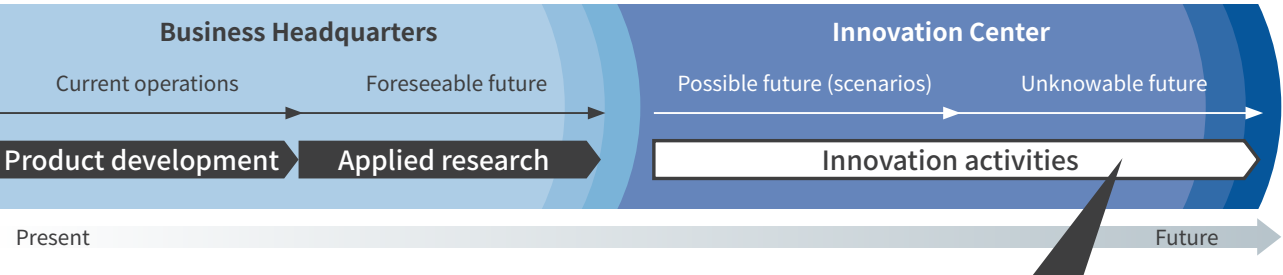
Autopilot

Innovation

Research and Development (R&D)

R&D activities at Yokogawa are classified into two types. Firstly, product development and applied research activities are geared to meeting customer needs and target a relatively foreseeable future. Secondly, innovation activities are conducted from a longer-term perspective, involve greater uncertainty, and are directed toward the identification and generation of new business opportunities. Whereas business headquarters are mainly responsible for the former, the latter is primarily the task of the Innovation Center.

R&D structure at Yokogawa



The mission of the Innovation Center is twofold:

- 1. Research and develop new technologies that complement those of each business headquarters and address customer issues, leading to expansion of the business scope.
- 2. Prepare for an uncertain and unpredictable future and open a path to the creation of new businesses by working with customers to uncover latent issues and find ways of addressing them.

Innovation Activities

By engaging in innovation activities, Yokogawa not only provides systems but also creates technologies and solutions together with customers that prompt them to change their perspectives and approaches. The innovation process consists of three concentric layers as shown in the figure below. The outermost layer, consisting of information from the field and signs of change obtained by scanning the external environment, such as markets and customers, is reflected in standardization, intellectual property and open innovation, which constitute the second layer that supports innovation activities, the innermost layer. In innovation activities, we generate ideas, refine them through R&D and incubate them. Repeated execution of these three stages leads to commercialization.



1 Ideation stage

We acquire insights into the future through the use of methodologies such as scenario planning and scanning. Based on scenarios that assume shortages of food, energy, and water will occur in the near future, the Innovation Center has elected to focus on biology, energy, and materials, and is coming up with ideas for activities that can be carried out in these fields.

2 R&D stage

We identify and then refine promising research themes from the various possibilities that emerge at the ideation stage. At this stage, researchers whose duties normally focus on the R&D of new technologies also examine the feasibility of the identified research themes, analyze markets, and, if necessary, engage in cultivation of markets.

3 Incubation stage

When an R&D project reaches an advanced stage and the goal comes into sight, the incubation stage starts. At the incubation stage, researchers develop a strategy with support from sales and marketing operations for commercialization. Then, a demonstration is conducted in collaboration with the customer to ascertain whether the developed solution offers value. If it does, the project proceeds to the commercialization stage.

Yokogawa's Solutions

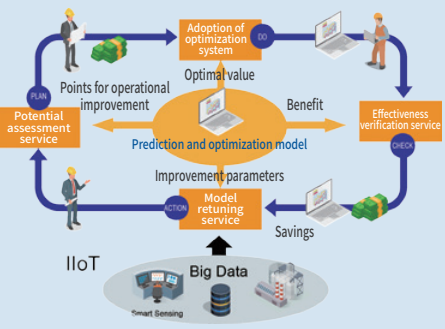
Case 1 Biological Contamination Management

To ensure food safety, companies have been recommended to introduce Hazard Analysis and Critical Control Point (HACCP) systems. Although such systems are entering wide use, the number of food recalls and food poisoning cases due to foreign substances and microbial contamination remains high. A particular drawback is that it takes too long to test for microbial contamination, so feedback cannot be provided to the food manufacturing process in a timely manner. Yokogawa advocates a simple and fast genetic testing method that utilizes a highly sensitive fluorescence measurement technology and a newly developed label-free gene analysis device. This can quickly identify microbial contamination in foods, beverages, and other products. As such, Yokogawa believes it can be a great help to food manufacturers in reducing operating costs. Yokogawa is currently developing a prototype of this system that can easily detect microorganisms in food, and is conducting proof-of-concept experiments using real foods and beverages. For the core gene analysis process, the type of analysis will vary depending on the design features of the detecting probe. This technology makes it possible to instantly determine the presence of microorganisms, and it can also be applied in counter-bioterrorism applications and to prevent disease outbreaks.



Case 2 Solutions for Optimizing Operations

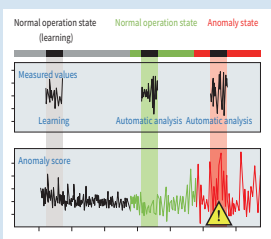
Cost-reduction potential



To save energy and enhance efficiency in manufacturing plants, one approach has been to make design changes to equipment so that it operates more efficiently. In recent years, there has been a growing need to improve the operation of entire systems on a process, site, or regional basis. Total optimization requires the linking of equipment and plants, and the calculation of an optimal operation plan for each component of a system. As a result of advances in data processing technology and IIoT systems, the foundation necessary for the effective utilization of operation data and the linkage of processes has been established; however, the process of creating the models needed for these calculations can be very time consuming and costly. To resolve this issue, Yokogawa has developed data-driven modeling and high-speed optimum scheduling technologies. By deploying these technologies to assess the potential effectiveness of solutions that improve operations and by providing consulting on the seamless implementation of the PDCA cycle covering everything up to the verification of the effectiveness of individual measures, we aim to discover problems in operations and create value.

Case 3 Use of Machine Learning and Edge Computing in Equipment Condition Analysis

At production sites, skilled engineers are able to achieve high facility utilization rates by using their five senses to detect unusual noises, vibrations, and the like at an early stage, and thereby identify equipment maintenance issues that need to be addressed. In recent years, however, a decrease in the number of such skilled engineers has become an issue. To resolve this issue, Yokogawa has made use of machine learning to develop an algorithm that has a similar analytical capability as well as an edge computing system that is suitable for installation at production sites. By combining the results of this quantitative analysis with the maintenance and failure records for specific production sites, it is possible to grasp the condition of equipment with greater precision. This is the first step toward a revolution in equipment management at production sites, and Yokogawa will continue to develop technologies that add value in this area.



Activities Supporting the Innovation Process

Standardization Standardization has an important bearing on our global competitiveness. Yokogawa participates as a member of international standards organizations such as the International Electrotechnical Commission (IEC) and the International Organization for Standardization (ISO).

Open Innovation With the aim of achieving the targets set out in the new mid-term business plan and the long-term business framework, Yokogawa is vigorously promoting collaboration with other parties that are working on promising technologies. Through the formation of strategic relationships and collaboration with partners all over the world, including universities, research institutes, and start-ups, we are working to deliver superior value to our customers.

Intellectual Property Strategy: Aiming for Global Competitiveness Based on its business plans, Yokogawa is pursuing a strategy that strengthens the Company's business

foundation and improves its global competitiveness by creating intellectual property and vigorously filing patent applications, both in Japan and other countries. When required, the Company also acquires intellectual property from other parties to accelerate the pace of its development efforts and the delivery of value to customers.

Yokogawa's intellectual property rights (as of March 31, 2018)						
	In Japan			Outside Japan		
	Registered	Pending	Subtotal	Registered	Pending	Subtotal
Patents	1,945	396	2,341	953	695	1,648
Designs	115	3	118	139	12	151
Trademarks	362	11	373	705	79	784
Total	2,422	410	2,832	1,797	786	2,583

Human Resources Management

Human Resources Strategy

A diverse workforce is an indispensable resource and a key driver for Yokogawa's growth and creation of value. To achieve the targets of the Transformation 2020 mid-term business plan, whose overall goal is the creation of new value through co-innovation with our customers, Yokogawa is pursuing a human resources strategy that is focused on transformation through the strengthening of




Transformation through the strengthening of human resources:

Creating a corporate culture in which the Company and its employees work together to sustain growth

Yokogawa University, an in-house institution, is introducing skill development and training programs to develop personnel who have demonstrated the capability to take on high value-added tasks and support individuals who wish to take on new challenges in different business fields. By offering all employees opportunities for professional growth and cultivating a corporate culture in which employees can learn from one another, Yokogawa aims to transform itself into an enterprise that is able to achieve sustained growth.

To sustain growth and enhance its corporate value over the medium to long term, Yokogawa is prioritizing the development of leaders who are capable of achieving success in the global business arena. For this purpose, Yokogawa has established a committee to oversee the development of global human resources and prepare talented individuals for managerial roles. In fiscal year 2018, the committee launched an initiative that seeks through the visualization of HR data to identify and develop such talented individuals.



Promotion of diversity and inclusion

Yokogawa will actively hire, develop, and promote people from a variety of backgrounds who differ in terms of experience, knowledge, sensibility, perspective, cultural background, and values, and in so doing will not discriminate based on ethnicity,

human resources, promotion of diversity and inclusion, and management of health and productivity. Moreover, to be a good partner, a good corporate citizen, a going concern, a good brand, and a good employer, we will work to establish a productive, healthy, and rewarding work environment throughout the Yokogawa Group.

nationality, gender, religion, age, social position, or disability. By utilizing digital technology and cultivating a safe working environment, we make it possible for every employee to demonstrate his or her full potential and to work comfortably, with a flexible workstyle. Good communication and constructive collaboration based on mutual respect facilitates the co-creation of new value. In fiscal year 2018, companies throughout the Yokogawa Group are collaborating in the promotion of various diversity and inclusion initiatives, and this includes the monitoring of progress and sharing of information.



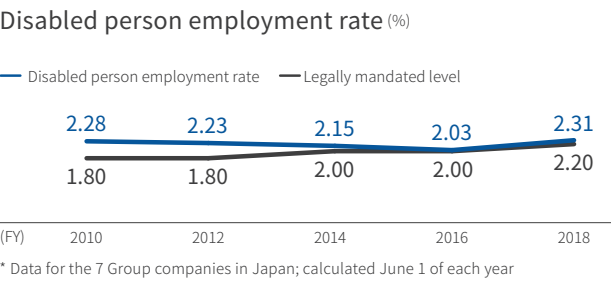
Management of health and productivity

While the individual circumstances and priorities of our employees may change over time as they pass through different life phases, Yokogawa supports them in their efforts to lead healthy lives and stay fit, both mentally and physically, so they can continue to perform to the best of their abilities. We look after the well-being of everyone in the Yokogawa family by promoting good physical and mental health and seeking to ensure that they stay motivated and content.

Following the adoption of a health declaration in 2016, Yokogawa was recognized as an Outstanding Health and Productivity Management Organization and designated a "White 500" company in 2017 and 2018. Yokogawa Solution Service Corporation, a Group company, was also recognized as a White 500 enterprise in 2018. Going forward, Yokogawa will position health and productivity management as a key element of its management practices and seek to expand the scope of its initiatives to include other companies within the Group.

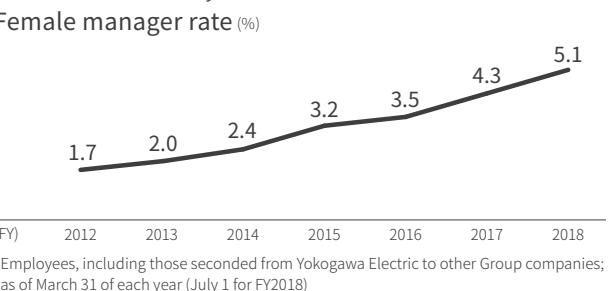
Promoting the active participation of persons with disabilities

Yokogawa has been actively hiring persons with disabilities since 1992, and such individuals have been working in various capacities within the Company, in functions such as engineering, manufacturing, sales, and administration. As of June 1, 2018, the employment rate of persons with disabilities at the seven Group companies in Japan was 2.31%. Yokogawa will continue to make vigorous efforts in this area by such means as holding briefings for Group companies in cooperation with labor affairs-related institutions, and will remain active in hiring persons with disabilities and encouraging their active participation in the workforce.



Promoting the success of women

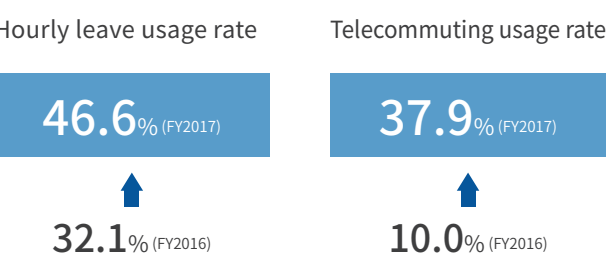
In April 2015 Yokogawa established a work section that is dedicated to the promotion of diversity, and this unit is actively helping employees achieve success in their jobs by means such as formulating career development plans for female leader candidates. Moreover, we conduct career development training for female employees as well as seminars to raise awareness among managers concerning the need to empower women. The female manager rate reached 5.1% on July 1, 2018, and we thus achieved the



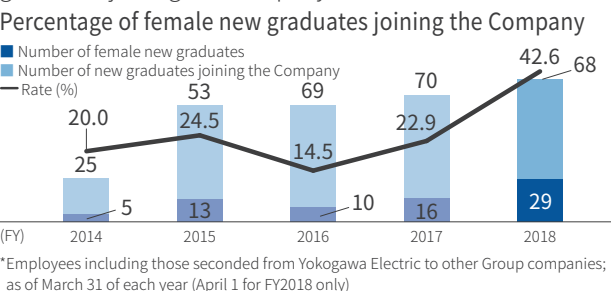
Work-style reform

We are carrying out various measures to foster a supportive work environment that allows all members of our diverse workforce to challenge themselves and develop their careers. The establishment of Yokogawa University, an in-house university, is one such important measure. At the same time, we are undertaking workstyle reforms that will enhance our co-creation of value by improving productivity, motivating employees, and encouraging personal growth.

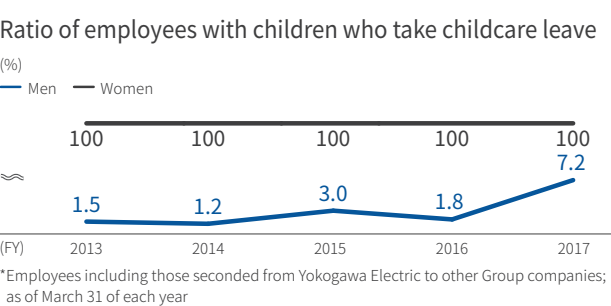
To give our employees greater flexibility by minimizing constraints on when and where they work, Yokogawa



5% target (double the percentage in fiscal year 2014) set out in Transformation 2017, the previous mid-term business plan. We will continue to carry out initiatives that will increase the female manager rate to 7%, which is our target for fiscal year 2020. In recruitment activities, our target rate for female employees is 30%, and our long-term aim is to optimize the gender composition of the Yokogawa workforce. Women made up 42.6% of the new graduates joining the Company in 2018.



introduced hourly leave and telecommuting systems in fiscal year 2016, and is cultivating a change in mindset that is conducive to the use of these systems. From fiscal year 2017, nursing leave and childcare leave can be taken on an hourly basis, and the first five days of parental leave are paid. In this and other ways, Yokogawa is helping employees maintain a good work-life balance. We are also promoting new work practices such as the introduction of Web conferencing tools and robotic process automation (RPA) that improve operational efficiency.



Quality Management / Occupational Health and Safety

Quality First

Ever since the foundation of the Company, putting quality first has been the fundamental principle of Yokogawa. Thorough customer-focused quality management has fueled Yokogawa's development. Guided by the quality-first principle, the Yokogawa Group autonomously implements quality

Same Quality throughout the World

Yokogawa's quality management consists of three basic elements: Quality Assurance (QA), Quality Improvement (QI), and Quality mind (Qm). We believe that we can satisfy our customers' expectations and build long-lasting bonds of trust only when all of these elements are engaged. The Quality First mindset is critically important for maintaining the high quality of Yokogawa products and services. All employees of the Group recognize the importance of having the Quality First mindset and quality is built into every business process in accordance with the rules and approaches shared throughout the Group.



Occupational Health and Safety

The Yokogawa group shall, in recognition that good Occupational Health and Safety (OHS) management is essential for the group, autonomously strive to promote the health and safety of its personnel, create and maintain a suitable working environment. The Group implements the Occupational Health and Safety Management System (OHSMS) to promote continual improvements of occupational health and safety

Reduction and elimination of occupational accidents

The Yokogawa Group aims to reduce and eliminate occupational accidents by integrating conventional activities, such as health and safety inspections and use of information on near misses, with occupational health and safety risk reduction initiatives. The data on occupational accidents at Group companies are aggregated and analyzed quarterly and the lessons

management to ensure uniform quality worldwide responding to changing social demands. Offering products and solutions that achieve customer satisfaction, the Yokogawa Group is making a concerted effort to reinforce the image of Yokogawa brand.

Quality supporting service network

Yokogawa's Global Response Center offers around-the-clock support in concert with global service network to keep customers' facilities performing safely and smoothly. At Global Response Center, experienced service engineers are ready 24/7 to troubleshoot and respond to customer inquiries. The engineers remotely identify trouble at customer sites and promptly provide solutions.

Yokogawa has 230 service centers in 80 countries around the world staffed by some 2,000 engineers.



Global Response Center (Yokogawa Electric headquarters)

activity level and to reduce OHS risks. Through initiatives to reduce and eliminate potential OHS risks based on OHS risk inventory and evaluation and periodic review of these initiatives by internal audit of Group companies, we are working to enhance the Group's quality of occupational health and safety step by step.

learned are shared throughout the Group to prevent recurrence of the same or similar accidents.



OHS inspection at factory

Environmental Management

Contributions toward a Sustainable Global Environment

At Yokogawa, we take seriously our responsibility to protect the environment and, recognizing our responsibility to future generations, practice environmental management from a medium- to long-term perspective. We promote efficient use of resources and significant reductions in greenhouse gas emissions together with our customers and actively work to develop environmentally friendly products and further reduce environmental impacts of the Yokogawa Group's business operations.



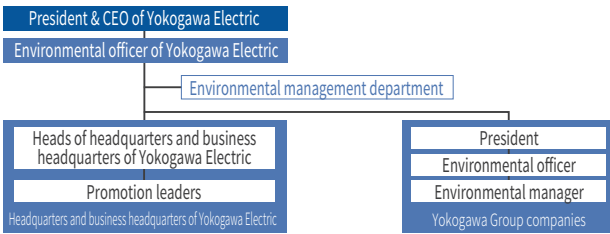
Environmental management promotion structure

Group companies have set environmental targets based on the Yokogawa Group Environmental Policy and are conducting environmental activities closely linked with their business activities.

In order to promote global environmental management, under the supervision of Yokogawa Electric headquarters, Group companies consider measures and review activities in cooperation with environmental managers of regional headquarters.

The Group's major offices and manufacturing sites around the world are ISO 14001 certified.

Environmental Management Promotion Structure



Efforts to reduce our environmental impact

The Yokogawa Group is promoting measures to save energy and for conversion to renewable energy sources to reduce the Group's greenhouse gas emissions.

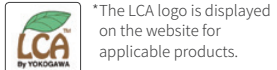
Also, Yokogawa is working to effectively utilize limited water resources, particularly in Asia and the Middle East, where water shortages are pronounced.

Design for environment

Yokogawa has set design and assessment standards for the development and manufacture of environmentally friendly products. At each phase of product design, namely, initial design, intermediate design, and final design, assessment is performed based on standards, including energy saving, resource saving, and safety.




In addition, we use lifecycle assessment (LCA) standards to evaluate energy consumption and CO₂, NO_x, and SO_x emissions at each stage throughout the product

lifecycle, from materials and parts production to assembly, distribution, use, and disposal, and make the results publicly available. Products that have cleared these standards are considered to be highly environmentally friendly, and help our customers reduce their environmental impact.



Yokogawa Group's Foundation to Support the Medium-term Sustainability Targets

With regard to environmental management, Yokogawa has set medium-term sustainability targets for 2030 and is working to build a foundation to achieve the targets.

Contribution through the Group's foundation		Sustainability KPIs and targets (*compared to FY2013)
<div><div><div>6</div><div>SAFEGUARDING THE ENVIRONMENT</div><div></div></div><div><div>7</div><div>REDUCING ENERGY CONSUMPTION</div><div></div></div><div><div>13</div><div>CLIMATE ACTION</div><div></div></div></div> <div><div>Environmental management</div><div>Promotion of efficient use of water resources, reduction of energy consumption, and reduction of greenhouse gas emissions</div></div>	<div><div>1. Water consumption amount: Promote measures for efficient use of water resources</div><div>2. Energy consumption amount: 18% reduction by FY2030*</div><div>3. Greenhouse gas emissions: 34% reduction by FY2030*</div></div>	

Message from the Chairman of the Board



Ensuring Vigorous Discussions by the Board

Mitsudo Urano
Outside Director
Chairman of the Board

As indicated by measures such as the establishment of the Yokogawa Corporate Governance Guidelines, all Yokogawa inside and outside directors have long had a commitment to strengthening the Company's corporate governance. In keeping with the good governance practices of a company that has an Audit & Supervisory Board, Yokogawa has established the Nomination Advisory Committee and the Compensation Advisory Committee, on which all outside directors serve, and this has contributed to transparent and fair governance. With the aim of achieving corporate growth, management has to take calculated risks in pursuit of returns. While embracing the diverse and illuminating perspectives of its outside directors, the Yokogawa Board of Directors has been swift and decisive in matters pertaining to the mid- and long-term business plans, and has supported management's taking of reasoned risks.

On June 26, 2018, an outside director was appointed for the first time as chairman of the Yokogawa Board of Directors. The role of the chairman is to encourage vigorous discussions among the members of the Board and ensure that they effectively carry out their strategy-formulation, decision-making, supervisory, and other functions. Having an outside director serve as the chairman of the Board is advantageous in that, by virtue of having an external perspective, this person is in a better position to shortlist those agenda items that should be discussed thoroughly, and ensure that important matters are not settled in advance. To ensure vigorous discussions by the Board, it is critically important for outside directors to have a good grasp of the Company's circumstances and be knowledgeable about all items on the agenda. For this purpose, it is essential to prepare detailed reference materials that clearly elucidate all points on the agenda that are to be discussed. With this in mind, an important aspect of my role as an outside director serving as chairman of the Board is to allocate sufficient time for discussions with management and the secretariat to prepare for meetings of the Board of Directors.

The business environment in which the Yokogawa Group operates is undergoing dramatic change. The need to resolve issues that are of global concern is becoming ever more urgent, and has driven such initiatives as the adoption of the Sustainable Development Goals (SDGs) by the United Nations and the signing of the Paris Agreement at the 21st Conference of Parties to the United Nations Framework Convention on Climate Change (COP21). These developments are creating great opportunities for the Yokogawa Group to transform itself through the pursuit of digital technology innovation. Under the Transformation 2020 mid-term business plan that was launched at the beginning of fiscal year 2018, the Yokogawa Group is pursuing three transformations that require it first to ascertain its current situation and then do away with any old practices that may hinder it from making a fresh start. To achieve the goals set out in the Transformation 2020 plan, the Board of Directors will make decisions with a sense of urgency, while taking care to maintain an appropriate distance between management and the outside directors. They will take the long-term perspective in their efforts to enhance our intrinsic corporate value.

Corporate Governance System

Corporate Governance Highlights

1. The Board of Directors has included multiple outside directors since 2007. At present, four outside directors are serving, thus ensuring management objectivity.
2. Outside directors are the majority of the members of the Nomination Advisory Committee and the Compensation Advisory Committee.
3. Decision-making on business execution is delegated to the Management Board consisting of the president, officers (including three foreign nationals), and other members to expedite the process.
4. To separate the execution and supervision of business, an outside director who is a non-executive director was appointed the chairman of the Board of Directors.

Basic view on corporate governance – governance that supports transformation

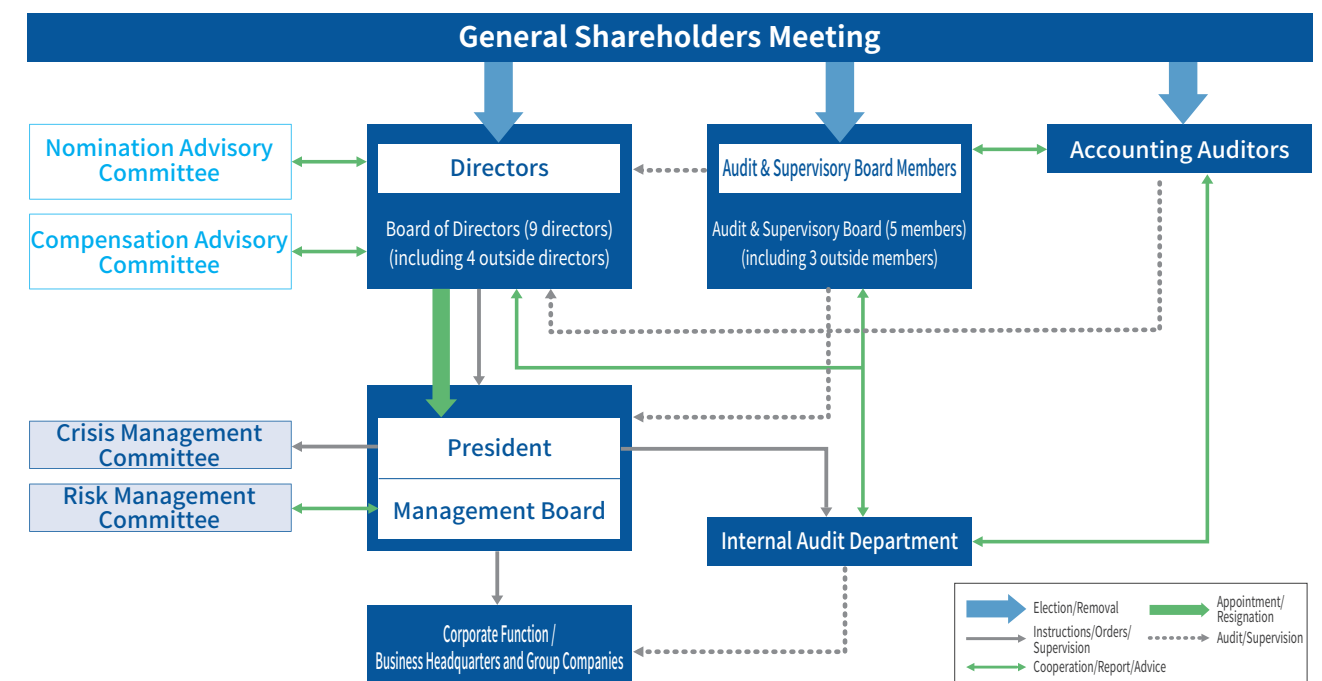
The Group has established a corporate philosophy, the Yokogawa Philosophy, and Standards of Business Conduct for the Yokogawa Group that apply to the entire Group, and strives to have appropriate relationships with all stakeholders as well as aims for sustainable corporate growth and increased corporate value over the medium to long term. In addition, based on the philosophy that “a company is a public entity of society,” the Group positions answering the trust of all stakeholders, including shareholders, customers, business partners, society, and employees, via sound and sustainable growth, as the basic mission of corporate management.

https://www.yokogawa.com/pr/pdf/cg_guidelines-en.pdf

In order to maximize its corporate value, the Group believes that efforts such as thorough compliance, appropriate risk management, and information disclosure in order to ensure constructive dialogue with shareholders and other stakeholders are important.

The Group formulates and discloses these Yokogawa Corporate Governance Guidelines which serve as the basic policy for continually working on corporate governance in line with the above views.

Summary of Corporate Governance Structure



Enhancing Corporate Governance

FY	Action	(Persons)						
		Board of Directors			Audit & Supervisory Board		Officers	
		Inside	Outside	Outside %	Inside	Outside	(Doubling as board member)	
2003	Introduced outside directors	7	1	13%	2	2	24	(6)
2004	Abolished retirement bonuses for directors	7	1	13%	2	3	24	(6)
2005		7	1	13%	2	3	26	(6)
2006	Introduced one year tenure system for directors Revised articles of incorporation to reduce number of directors (25→15)	9	1	10%	2	3	27	(7)
2007	Increased the number of outside directors Introduced takeover defense measures	8	2	20%	2	3	29	(5)
2008		7	2	22%	2	3	28	(5)
2009	Increased the number of outside directors Renewed takeover defense measures	7	3	30%	2	3	15	(5)
2010		5	3	38%	2	3	14	(3)
2011	Renewed takeover defense measures Sold shares of a listed affiliate	4	3	43%	2	3	15	(2)
2012		4	3	43%	2	3	14	(3)
2013		4	3	43%	2	3	12	(1)
2014	Established Nomination and Compensation Committee (voluntary advisory body) Discontinuation (non-renewal) of takeover defense measures Introduced standards to ensure independence of outside directors	6	3	33%	2	3	12	(3)
2015	Established Nomination Advisory Committee and Compensation Advisory Committee (voluntary advisory bodies) Conducted outside evaluation of Board of Directors Established the Yokogawa Corporate Governance Guidelines	6	3	33%	2	3	11	(3)
2016	Increased the number of outside directors Introduced a restricted stock compensation plan	6	4	40%	2	2	12	(3)
2017	Appointed a woman as an outside member of the Audit & Supervisory Board Appointed 2 foreign nationals as officers	6	4	40%	2	3	18	(4)
2018	Abolished the Senior Advisor, Advisor, and Honorary Corporate Associate positions Appointed an outside director the chairman of the Board Introduced a new performance-linked stock compensation plan (performance share unit plan)	5	4	44%	2	3	17	(4)

Decision making, business execution, and audits

At the Board of Directors, transparency and the speed of decision-making are improved through deliberations between directors who are well versed in the Company's business and outside directors who maintain a high degree of independence. Through audits by Audit & Supervisory Board members, including outside members of the Audit & Supervisory Board, performance of duties by directors is rigorously examined. Further, in order to increase transparency in the appointment of outside directors and outside Audit & Supervisory Board members, in fiscal year 2014, the Company established independence standards for outside directors and outside Audit & Supervisory Board members by the resolution of the Board of Directors.

<About independent officers >

The Tokyo Stock Exchange requests listed companies to secure at least one independent officer (an outside director or an outside member of the Audit & Supervisory Board who has no conflicts of interest with general shareholders). The Company has four such outside directors and three such outside members of the Audit & Supervisory Board, a total of seven independent officers who are registered with the Tokyo Stock Exchange (as of June 26, 2018).

Board of Directors

With the aim of achieving sustainable growth and increasing corporate value of the Group over the medium to long term as a decision-making body, the Board of Directors improves profit-earning capability and capital efficiency, and determines the general direction of the Group, including corporate strategies. Also, in addition to monitoring and supervising execution of business by management, the Board of Directors develops provisions related to the execution of duties by directors, and establishes a framework to take supervision responsibility related to the execution of business. In order to help ensure that corporate management maintains the trust of shareholders, the term of office for directors is set at one year.

Moreover, based on the Yokogawa Corporate Governance Guidelines specifying that a non-executive director shall, in principle, act as the chairman of the Board of Directors in order to separate the execution and supervision of business, an outside director was appointed the chairman of the Board of Directors in June 2018.

Examples of agenda items at the Board of Directors in FY2017

- Proposal of a long-term business framework and the new mid-term business plan
- The composition and functioning of the Board of Directors
- Formulation of sustainability goals and disclosure of risks and opportunities concerning climate change
- Reestablishment of management rules applicable to the entire Group and formulation and revision of each rule
- Review of responses to the Corporate Governance Code in FY2017

<Evaluation of the Board of Directors>

In fiscal year 2015, the Board of Directors conducted an evaluation of the Board of Directors with the support of J-Eurus IR Co., Ltd., an external organization. In fiscal year 2017, as in the previous fiscal year, the evaluation of the Board of Directors was conducted by means of a questionnaire survey for directors and Audit & Supervisory Board members. The Board of Directors conducted discussions based on these results to conduct analysis and evaluation regarding the effectiveness of the Board of Directors. As was the case in the previous year, the Board of Directors confirmed that the structure to fulfill the supervisory function for management has been established in terms of the size, composition, operation, attributes of each member, status of committees, and other factors. The Board of Directors also confirmed that open, vibrant discussions take place at the Board of Directors meetings. Consequently, the Company deems that the Board of Directors functions effectively.

Prior deliberation to set the agenda for Board of Directors meetings was identified as an issue in fiscal year 2017. In the past, led by the chairman of the Board of Directors, the agenda had been set primarily through the Decision Making Code of the Company and proposals from inside directors. The aforementioned prior deliberation to set the agenda for Board of Directors meetings is based on the idea that setting agenda items, for which deliberation from the standpoint of outside directors is deemed required, would increase objectivity and transparency and further improve the Company's corporate governance in the oversight of business execution.

Management Board

To expedite the decision-making process of the Board of Directors, decisions regarding business execution are delegated to the Management Board. The Management Board consists of the president, officers (including three foreign nationals), and standing members of the Audit & Supervisory Board. It meets once a month in principle. Its decisions are reported to the Board of Directors.

Audit & Supervisory Board

The Audit & Supervisory Board meets once a month in principle. Its members carry out auditing in accordance with an annual plan that specifies priority audit items. Audit & Supervisory Board members also attend meetings of the Board of Directors and the Management Board as well as other important meetings and hold regular meetings with departments involved with internal auditing, legal affairs, and business ethics, the last of which promotes the compliance system. At these meetings, they exchange opinions, share information about the status of their activities, and actively present recommendations. In addition, the Audit & Supervisory Board members deepen mutual cooperation with the accounting auditor and exchange information with the accounting auditor regularly or as necessary to improve the quality of audits by both sides and make the audits more efficient.

Nomination Advisory Committee and Compensation Advisory Committee

The Company has established the Nomination Advisory Committee and the Compensation Advisory Committee as voluntary advisory bodies to give opinions in response to consultations from the Board of Directors regarding nominating directors and determining compensation.

Each committee is to be comprised of at least three directors, of whom the majority are outside directors. At present, each committee is composed of five directors consisting of the president and Chief Executive Officer and all four outside directors.

<Nomination Advisory Committee>

With respect to the appointment of director and Audit & Supervisory Board member candidates, the selection of officers and the next president and Chief Executive Officer as well as the qualities (attributes, track record, etc.) sought after in directors, the Nomination Advisory Committee shall give advice so as to ensure that, from the perspective of all stakeholders, suitable personnel are in place to contribute to the Group's sustainable growth as well as its corporate governance.

● Members (as of July 31, 2018)

- Mr. Nishijima, President & CEO
- Mr. Urano, Outside Director
- Mr. Uji, Outside Director
- Mr. Seki, Outside Director
- Mr. Sugata, Outside Director

<Compensation Advisory Committee>

The Compensation Advisory Committee shall give advice so that the compensation system and compensation for Directors and officers encourage appropriate challenges targeting the Group's growth, help to hire and retain excellent human resources, and which are suitable from the perspectives of all stakeholders.

● Members (as of July 31, 2018)

- Mr. Nishijima, President & CEO
- Mr. Urano, Outside Director
- Mr. Uji, Outside Director
- Mr. Seki, Outside Director
- Mr. Sugata, Outside Director

Compensation to Directors and Audit & Supervisory Board Members

<Basic Approach to the Executive Compensation Plan>

- (1) Plan that promotes sustainable, medium- to long-term improvement in corporate value
- (2) Plan that reflects the medium- to long-term management strategy and strongly motivates the achievement of medium- to long-term management objectives
- (3) Plan that prevents bias toward short-term thinking
- (4) Plan and monetary amounts that secure and maintain excellent human resources

- (5) Plan that includes transparency, fairness, and rationality for stakeholders, decided through an appropriate process to ensure these factors

The Company's executive compensation plan is composed of fixed and performance-linked components (annual incentives and medium- to long-term incentives), and levels of compensation are set through a comparison with companies from the same industry and of the same scale both in Japan and overseas, as well as in consideration of the Company's financial conditions.

Part of the performance-linked compensation, the annual incentive, is calculated and paid based on an evaluation of the entire company's results and the individual's results for the individual year.

Of performance-linked compensation, as a medium- to long-term incentive, the Company has introduced the performance share unit plan (the "PSU Plan"), a performance-linked stock compensation plan, to replace the restricted stock compensation plan introduced in 2016 in accordance with the resolution by the 142nd Annual General Meeting of Shareholders held on June 26, 2018. The PSU Plan links incentives with the Company's mid-term business plans through performance-linked stock compensation utilizing common shares of the Company ("Company Shares"), and Company Shares and cash are allotted commensurate with the

performance evaluation period (in principle, three years), according to the extent to which performance targets, such as the Company's consolidated return on equity (consolidated ROE), have been achieved in the final fiscal year of the plan.

Moreover, as stipulated in the PSU Plan, the Company has established clawback provisions enabling it to demand uncompensated refund of monetary amounts corresponding to full or partial numbers of Company Shares delivered or cash paid to directors excluding outside directors ("Eligible Directors") and officers as compensation pertaining to the PSU Plan, if a situation arises involving substantial accounting improprieties or significant losses.

Furthermore, the performance-linked compensation, including the PSU Plan, covers Eligible Directors and officers. This is because variable compensation such as performance-linked compensation is not appropriate for outside directors and Audit & Supervisory Board members, who maintain a position independent from the performance of duties, and as such only fixed compensation is paid, identically to non-executive directors.

The policy and procedures for the appointment of director and Audit & Supervisory Board member candidates as well as officers

1) Policy for the appointment of director and Audit & Supervisory Board member candidates as well as officers

The Board of Directors shall be composed so as to be well balanced in knowledge, experience, and capabilities to effectively fulfill its roles and responsibilities, and it shall be constituted in such a manner as to achieve both diversity and appropriate size.

Under this premise, the Company appoints as candidates for director and Audit & Supervisory Board member those human resources who, in addition to contributing to improvement of corporate governance, also meet the respective criteria that follow.

■ Director candidates

- Human resources that are familiar with the Group's business and contribute to the appropriate execution of business and supervision of highly effective management.
- Human resources that have experience and knowledge required for the formulation of management strategies aiming at an increase in the Company's corporate value over the medium to long term and that contribute to right management decisions and supervision of highly effective management.

■ Audit & Supervisory Board member candidates

- Human resources that are familiar with the Group's business and contribute to appropriate auditing of management of the Company and Group companies.
- Human resources that have abundant experience as corporate managers, have expertise in areas such as accounting, finance, legal affairs, and corporate management, and contribute to appropriate auditing of management.

With respect to officers, they are appointed after it is confirmed that each candidate has sufficient experience, knowledge, etc. for the respective positions and that he or she has the intentions and attitude suitable for management.

2) Procedures for the appointment of director and Audit & Supervisory Board member candidates as well as officers

In order to enhance the objectivity and transparency of the appointment of candidates for directors, Audit & Supervisory Board members, and officers, the Company has established the Nomination Advisory Committee, which is a voluntary advisory body comprised of at least three directors, of whom a majority are outside directors, based on the resolution of the Board of Directors.

Matters with respect to appointment of director candidates and officers are resolved by the Board of Directors on the basis of reports prepared upon deliberations engaged in on the basis of appointment criteria and procedures as stipulated by the Nomination Advisory Committee.

Matters with respect to appointment of Audit & Supervisory Board member candidates are resolved by the Board of Directors upon having gained consent of the Audit & Supervisory Board with respect to reports prepared upon deliberations engaged in on the basis of appointment criteria and procedures as stipulated by the Nomination Advisory Committee.

Major Activities in Fiscal Year 2017

	Name	Principal activities	Attendance at Board of Directors meetings	Attendance at Audit & Supervisory Board meetings
Outside directors	Mitsudo Urano	Provided advice primarily based on his wide knowledge and abundant experience as a corporate manager and through his expertise in corporate governance.	100% (15/15)	—
	Noritaka Uji	Provided advice primarily based on his wide knowledge as a corporate manager and thorough his extensive expertise in technology development and IT/ICT fields.	100% (15/15)	—
	Nobuo Seki	Provided advice primarily based on his wide knowledge as a corporate manager, his abundant experience in the engineering business centered on the energy industry, and his extensive expertise in global business.	100% (15/15)	—
	Shiro Sugata	Provided advice primarily based on his wide knowledge as a corporate manager, his abundant experience in the development and marketing of industrial instruments, and his extensive expertise in global business.	100% (15/15)	—
Outside members, Audit & Supervisory Board	Zenichi Shishido	Provided advice primarily based on expertise in business law and corporate governance as well as wide knowledge grounded on a broad range of research activities.	100% (15/15)	100% (19/19)
	Izumi Yamashita	Provided advice primarily based on his perspective of a highly experienced corporate manager and wide knowledge grounded on various activities in the financial circles.	100% (15/15)	95% (18/19)
	Yasuko Takayama (Note)	Provided advice primarily based on her extensive practical experience, including handling corporate social responsibility and serving as a full-time Audit & Supervisory Board member at a major company in the consumer market, as well as her abundant experience serving as an outside executive at various companies.	100% (11/11)	100% (13/13)

Note: In the case of Audit & Supervisory Board member Yasuko Takayama, attendance at the Board of Directors meetings convened since she assumed the position on June 27, 2017 is indicated.

Internal Control Systems

The Company has established the Yokogawa Group Internal Control System to ensure the reliability of financial statements and the validity of the decision-making process. As systems that ensure that directors comply with laws, ordinances, and the Articles of Incorporation of the Company, as well as a system required by a Ministry of Justice ordinance that ensures the appropriateness of corporate operations and the operations of the corporate group comprising the Company and its subsidiaries, the Company has the internal control system to ensure proper and efficient execution of the Group's operations in place.

Moreover, as a part of the system to ensure the effectiveness of audits by Audit & Supervisory Board members, the Audit & Supervisory Board has now entered into an advisory agreement with attorneys.

Risk Management

The Risk Management Policy has been set forth for the purpose of establishing a basis for the effective and efficient conduct of enterprise risk management by the Yokogawa Group. Based on this policy, the Risk Management Committee shall decide the significant risks which shall be managed preferentially as the Yokogawa Group and decide the monitoring method for its risks and report them to the Board of Directors. The president shall be responsible for supervising all matters in relation to the risk management as the chairperson of the Risk Management Committee.

Respective organizational units of the Yokogawa Group shall perform the identification and assessment of risks followed by the preparation and implementation of the countermeasures against risks. The department in charge of internal audit shall evaluate the effectiveness of the Yokogawa Group risk management process and reports important findings to the Board of Directors and the Audit & Supervisory Board members.

Crisis situations are to be responded to as set forth in the Group Policy for Crisis Management. As the head of the Crisis Management Committee, the president controls the communication of information and issuance of

instructions in the event that the Group is in a crisis, and works to ensure safety and minimize economic losses.

Regarding information security, the Group's policies on the handling and protection of confidential information are set forth in the Group Information Security Management Code.

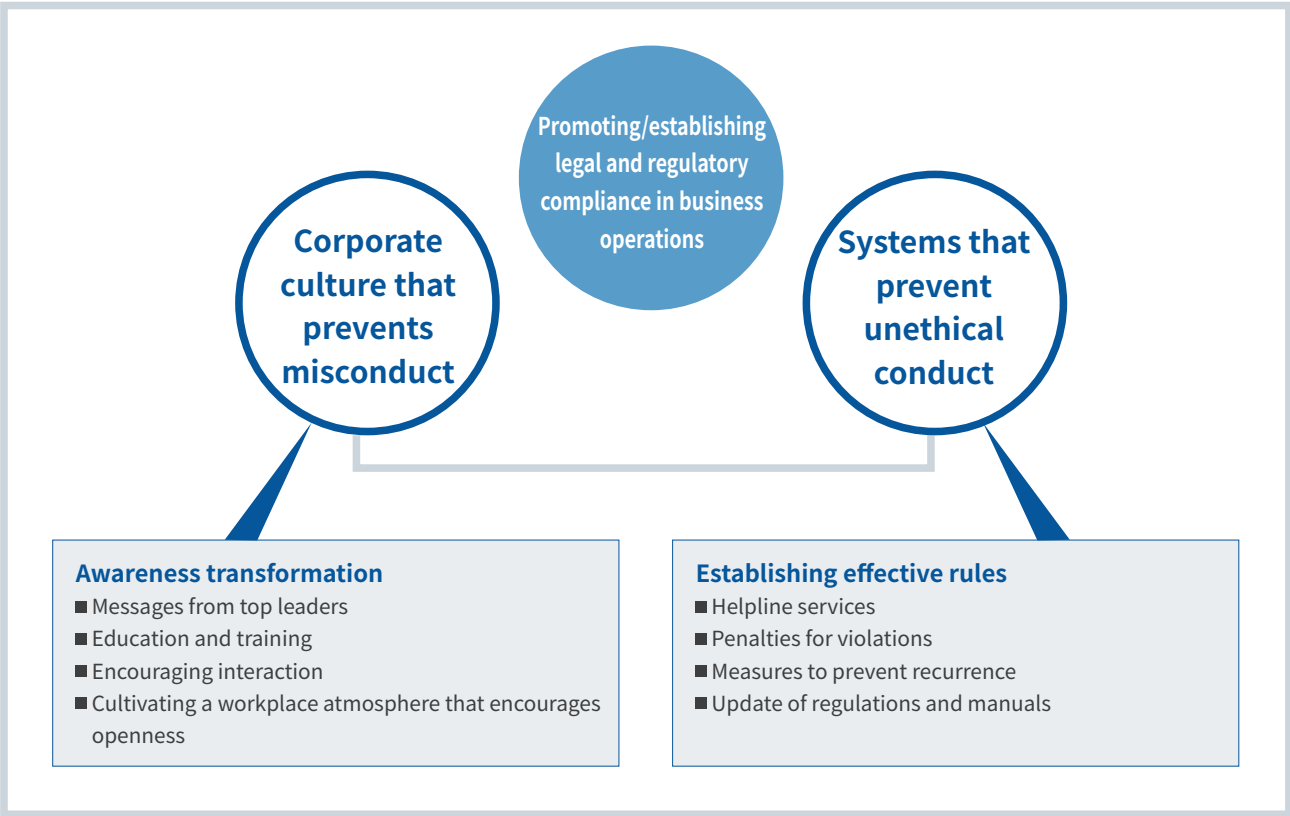
Compliance

Yokogawa has set forth its basic compliance policies in the Standards of Business Conduct for the Yokogawa Group, and directors take the lead in working to see that business ethics are upheld and embraced throughout the Group.

We have established the Standards of Business Conduct as a set of guidelines for business conduct. Detailed rules of conduct are listed in the Basic Principles of the Yokogawa Group, Basic Attitude of the Yokogawa Group and Guidelines of Conduct for Yokogawa Group Members. In addition, the Yokogawa Group Compliance Guidelines, which include supplementary Anti-bribery Guidelines, set out how employees should respond to a variety of issues encountered on the job.

Moreover, we have established a department in charge of business ethics that is charged with the identification

and resolution of issues pertaining to the compliance system. The Company is strongly promoting compliance management. It aims to be healthy and open, with both a culture that encourages and enforces proper ethical conduct and a system for preventing misconduct and scandals before they occur. In so doing, we will meet the expectations of investors and other stakeholders.



Examples of Compliance Promotion Initiatives

Awareness Raising Activities

In order to raise and inculcate awareness about compliance throughout the Group, the Company and Group companies in and outside Japan conducted compliance trainings again in fiscal year 2017. In addition, in Japan, trainings corresponding to positions were conducted, taking opportunities such as promotion to managerial positions, appointment to positions outside Japan, and upon joining the Company.

The Company and Group companies in Japan are also working to deepen understanding and increase awareness of compliance by annually holding a Compliance Week campaign, offering e-learning-based study programs for all employees, and soliciting compliance slogan entries from employees.

Compliance Awareness Surveys

We annually conduct compliance awareness surveys for all employees in order to determine how prevalent compliance awareness is among employees and to improve promotion activities. Survey results are shared throughout the Group. In addition, we analyze the survey data by workplace and function, and use the results when formulating compliance measures in the subsequent fiscal year.

Established Compliance Hotlines

To rapidly identify and address compliance issues, we have established compliance hotlines, which we actively encourage our employees to use. Specifically, in Japan we have established both an internal hotline and an external hotline that is operated by attorneys. These compliance hotlines maintain strict confidentiality in their operations and respond promptly to caller concerns.

Management Team (As of July 1, 2018)

Directors



Takashi Nishijima

President and Chief Executive Officer

Date of birth:	Aug. 12, 1957
Number of years since appointment as a director:	7 years

Mr. Takashi Nishijima properly supervises management as President and Chief Executive Officer. Furthermore, as President and Chief Executive Officer of the Company, he also serves as Chairman of the Company's Management Board, providing appropriate guidance for management, and is expected to contribute to all stakeholders. He has therefore been elected as Director.

- Apr. 1981
- Joined Hokushin Electric Works Ltd. (the present Yokogawa Electric Corporation)
- Oct. 2008
- Vice President, Head of Control Products Business Center, IA Business Headquarters
- Apr. 2010
- President of Yokogawa Meters & Instruments Corporation
- Jun. 2011
- Director of the Company, President of Yokogawa Meters & Instruments Corporation
- Apr. 2012
- Director and Senior Vice President, Head of IA Platform Business Headquarters
President and Chief Operating Officer
- Apr. 2013
- President and Chief Executive Officer (present)



Satoru Kurosu

Director and Executive Vice President

Date of birth:	Dec. 25, 1960
Number of years since appointment as a director:	7 years

Mr. Satoru Kurosu properly supervises management as a Director. He also adequately performs his duties as Head of Premium Solutions and Services Business Headquarters, which handles advanced solutions business that constitutes the core of the Group's businesses. Accordingly, he has been elected as Director because we consider him qualified to lead the building of the solutions business, and he is expected to contribute to all stakeholders .

- Apr. 1983
- Joined the Company
- Apr. 2006
- Vice President, Head of Marketing Center, IA Business Headquarters
- Apr. 2007
- Senior Vice President, Head of IA Business Headquarters
- Apr. 2009
- Senior Vice President, Head of Global Business Headquarters
- Apr. 2010
- President of Yokogawa Engineering Asia Pte. Ltd.
- Apr. 2011
- Senior Vice President of the Company, Head of IA Marketing Headquarters
- Jun. 2011
- Director and Senior Vice President, Head of IA Marketing Headquarters
- Apr. 2013
- Director and Executive Vice President of the Company, President of Yokogawa Electric International Pte. Ltd.
- Apr. 2014
- Director and Executive Vice President of the Company, Head of Solutions Service Business Headquarters, President of Yokogawa Electric International Pte. Ltd.
- Apr. 2015
- Director and Executive Vice President of the Company, Head of Solutions Service Business Headquarters
- Apr. 2017
- Director and Executive Vice President, Head of Premium Solutions and Service Business Headquarters (present)



Hitoshi Nara

Director and Executive Vice President

Date of birth:	Jan. 23, 1963
Number of years since appointment as a director:	7 years

Mr. Hitoshi Nara properly supervises management as a Director. He has also adequately performed his duties as President of Yokogawa Solution Service Corporation and has led the development of a new business model within the Group. From fiscal year 2018, he has been leading the Life Innovation Business Headquarters, and is thus expected to contribute to all stakeholders. He has therefore been elected as Director.

- Apr. 1985
- Joined the Company
- Oct. 2001
- Deputy Managing Director of Yokogawa Engineering Asia Pte. Ltd.
- Oct. 2003
- Managing Director of Yokogawa (Thailand) Ltd.
- Jan. 2007
- Head of Sales Div. I, Industrial Solutions Business Headquarters of the Company
- Apr. 2010
- Senior Vice President, Head of Industrial Solutions Business Headquarters
- Jun. 2011
- Director and Senior Vice President, Head of Industrial Solutions Business Headquarters
- Apr. 2012
- Director and Senior Vice President, Head of Industrial Solutions Service Business Headquarters
- Apr. 2013
- Director of the Company, President of Yokogawa Solution Service Corporation
- Apr. 2017
- Director and Executive Vice President of the Company, Chief Executive for Japan and Korea, President of Yokogawa Solution Service Corporation
- Apr. 2018
- Director and Executive Vice President of the Company, Head of Life Innovation Business Headquarters (present)



Masatoshi Nakahara

Director and Executive Vice President

Date of birth:	Dec. 14, 1958
Number of years since appointment as a director:	4 years

Mr. Masatoshi Nakahara properly supervises management as a Director. He also adequately performs his duties as Head of IA Systems and Services Business Headquarters. He is expected to contribute to all stakeholders through improvement of corporate value by planning and executing the system products strategy. He has therefore been elected as Director.

- Apr. 1981
- Joined the Company
- Apr. 2007
- Vice President, Head of IA Systems Business Center, Industrial Automation Business Headquarters
- Apr. 2011
- President of Yokogawa Engineering Asia Pte. Ltd.
- Apr. 2013
- Senior Vice President of the Company, Head of Industrial Automation Platform Business Headquarters
- Jun. 2014
- Director and Senior Vice President of the Company, Head of IA Platform Business Headquarters
- Apr. 2016
- Director and Executive Vice President, Head of IA Platform Business Headquarters
- Apr. 2017
- Director and Executive Vice President, Head of IA Systems and Service Business Headquarters (present)



Junichi Anabuki

Director and Senior Vice President

Date of birth:	Mar. 18, 1963
Number of years since appointment as a director:	4 years

Mr. Junichi Anabuki properly supervises management as a Director. He has also adequately performed his duties as Head of Accounting & Treasury Headquarters and contributed to sustainable improvement of corporate value. Since fiscal year 2018, he has led the Corporate Administration Headquarters, which also has the accounting and treasury functions of the Company, and is thus expected to make contributions to all our stakeholders. He has therefore been elected as Director.

- Apr. 1986
- Joined Fukutoku Sogo Bank, Ltd.
- Mar. 1992
- Joined the Company
- Jan. 2005
- General Manager, Treasury Department
- Apr. 2011
- Vice President, Head of Accounting & Treasury Headquarters
- Jun. 2014
- Director and Vice President, Head of Accounting & Treasury Headquarters
- Apr. 2016
- Director and Senior Vice President, Head of Accounting & Treasury Headquarters
- Apr. 2018
- Director and Senior Vice President, Head of Corporate Administration Headquarters (present)

Outside Directors



Mitsudo Urano

Outside Director,
Chairman of the Board

Date of birth:	Mar. 20, 1948
Number of years since appointment as an outside director:	7 years

Mr. Mitsudo Urano properly supervises management as an Outside Director. He was appointed as an Outside Director so that he can contribute to greater operational fairness, objectivity, and transparency with respect to management of the Company based on his wide knowledge and abundant experience as a corporate manager, and through his expertise in corporate governance.

- Apr. 1971
- Joined Nippon-Reizo Co., Ltd. (the present Nichirei Corporation)
- Jun. 1999
- Director of Nichirei Corporation
- Jun. 2001
- Representative Director and President of Nichirei Corporation
- Jun. 2007
- Representative Director and Chairman of Nichirei Corporation
- Jun. 2011
- Director of the Company
- Jun. 2013
- Senior Adviser of Nichirei Corporation
- Jun. 2018
- Director, Chairman of the Board of the Company (present)

Significant concurrent positions

- Outside Director of Resona Holdings, Inc.
- Outside Director of HOYA CORPORATION
- Outside Director of Hitachi Transport System, Ltd.
- Chairman of Nippon Omni-Management Association
- Chairman of Central Society for Promoting the Industrial Education



Noritaka Uji

Outside Director

Date of birth:	Mar. 27, 1949
Number of years since appointment as an outside director:	4 years

Mr. Noritaka Uji properly supervises management as an Outside Director. He was appointed as an Outside Director so that he can contribute to greater operational fairness, objectivity, and transparency with respect to management of the Company based on his wide knowledge as a corporate manager, as well as his abundant experience and expertise in technology development and IT/ICT fields.

- Apr. 1973
- Joined Nippon Telegraph and Telephone Public Corporation (the present Nippon Telegraph and Telephone Corporation)
- Jun. 1999
- Director and Head of New Generation Information Services Sector of NTT DATA Corporation
- Sep. 2000
- Director and Head of Corporate Strategy Planning Department of NTT DATA Corporation
- Jun. 2003
- Executive Vice President, Head of Enterprise Systems Sector and Head of Enterprise Business Sector of NTT DATA Corporation
- Jun. 2005
- Representative Director and Executive Vice President of NTT DATA Corporation
- Jun. 2007
- Senior Executive Vice President of Nippon Telegraph and Telephone Corporation
- Jun. 2012
- Advisor of Nippon Telegraph and Telephone Corporation
- Jun. 2014
- Director of the Company (present)

Significant concurrent positions

- Outside Director of DAIICHI SANKYO COMPANY, LIMITED
- Outside Director of Gallery Abarth Inc.
- Honorary Chairman of Japan Institute of Information Technology
- Honorary Chairman of Japan Telework Association



Nobuo Seki

Outside Director

Date of birth:	Sep. 21, 1944
Number of years since appointment as an outside director:	3 years

Mr. Nobuo Seki properly supervises management as an Outside Director. He was appointed as an Outside Director so that he can contribute to greater operational fairness, objectivity, and transparency with respect to management of the Company based on his wide knowledge as a corporate manager, as well as his abundant experience in the engineering business centered on the energy industry and extensive expertise in global business.

- Apr. 1970
- Joined Chiyoda Chemical Engineering Company (the present Chiyoda Corporation)
- Apr. 1992
- Vice President & Project General Manager of Chiyoda International Corporation in USA
- Jun. 1997
- Director of Chiyoda Corporation
- Jun. 1998
- Managing Director of Chiyoda Corporation
- Aug. 2000
- Senior Managing Director of Chiyoda Corporation
- Apr. 2001
- President and CEO of Chiyoda Corporation
- Apr. 2007
- Chairman of Chiyoda Corporation
- Apr. 2009
- General Corporate Advisor of Chiyoda Corporation
- Jul. 2012
- Advisor of Chiyoda Corporation
- Jun. 2015
- Director of the Company (present)

Significant concurrent positions

- Independent Outside Director of TEIJIN LIMITED
- Outside Director of KAMEDA SEIKA CO., LTD.
- Outside Director of Weathernews Inc.
- Chairman of Project Management Association of Japan



Shiro Sugata

Outside Director

Date of birth:	Nov. 17, 1949
Number of years since appointment as an outside director:	2 years

Mr. Shiro Sugata properly supervises management as an Outside Director. He was appointed as an Outside Director so that he can contribute to greater operational fairness, objectivity, and transparency with respect to management of the Company based on his wide knowledge as a corporate manager, as well as his abundant experience in the development and marketing of industrial instruments and extensive expertise in global business.

- Apr. 1972
- Joined USHIO INC.
- Jan. 1993
- President of BLV Licht-und Vakuumtechnik GmbH
- Jun. 2000
- Director and Corporate Senior Vice President of USHIO INC.
- Apr. 2001
- Director and General Manager of Lamp Division II of USHIO INC.
- Apr. 2003
- Director and Lamp Company President, COO of USHIO INC.
- Apr. 2004
- Director and Corporate Executive Vice President of USHIO INC.
- Jun. 2004
- Representative Director and Corporate Executive Vice President of USHIO INC.
- Mar. 2005
- President and CEO of USHIO INC.
- Oct. 2014
- Director and Corporate Advisor of USHIO INC.
- Jun. 2016
- Corporate Advisor of USHIO INC.
Director of the Company (present)
- Jul. 2017
- Special Advisor of USHIO INC. (present)

Significant concurrent positions

- Special Advisor of USHIO INC.
- Outside Director of JSR Corporation

Audit & Supervisory Board Members



Koichi Chujo

Audit & Supervisory Board Member

Date of birth:	Sep. 16, 1954
Number of years since appointment as a member of the Audit & Supervisory Board:	2 years

Mr. Koichi Chujo is well-versed in the Group's business through his experiences of engaging in the test and measurement business, serving as the Head of Quality Assurance Headquarters and conducting internal audits at the Audit & Compliance Headquarters. He has been elected as an Audit & Supervisory Board member because we consider it appropriate to reflect his knowledge and experience in audits of the Company.

- Apr. 1979 Joined the Company
- Apr. 2000 Head of Measuring Instruments Development Department, Test & Measurement Business Division
- Oct. 2005 Head of Core Technology Development Center, Communication & Measurement Business Headquarters
- Apr. 2009 Head of OE Test & Measurement Center, Communication & Measurement Business Headquarters
- Apr. 2010 Vice President, Head of Quality Assurance Headquarters
- Apr. 2014 Audit & Compliance Headquarters
- Apr. 2015 Audit, Compliance & Quality Assurance Headquarters
- Jun. 2016 Audit & Supervisory Board Member (present)



Kouji Maemura

Audit & Supervisory Board Member

Date of birth:	May 21, 1956
Number of years since appointment as a member of the Audit & Supervisory Board:	1 year

Mr. Kouji Maemura is well-versed in the Group's organization and business, and also has experience playing a leadership role in carrying out the Group's managerial reforms. He has been elected as an Audit & Supervisory Board member because we consider it appropriate to reflect his knowledge and experience in audits of the Company.

- Apr. 1980 Joined the Company
- Oct. 1999 Head of Business Process Innovation Department
- Apr. 2003 Head of Human Resources & General Affairs Division, Management Administration Headquarters
- Apr. 2006 Director and Executive Vice President of Kokusai Chart Corporation, Head of FC Division
- Oct. 2007 Director of Yokogawa Digital Computer Corporation, Head of Management Administration Division
- Jan. 2009 Business Process Innovation Headquarters of the Company
- Apr. 2010 Head of HR Administration Department, Human Resources Headquarters
- Apr. 2011 Vice President, Head of Corporate Marketing Headquarters
- Apr. 2015 Vice President, Head of Human Resources Headquarters
- Apr. 2017 Corporate Administration Headquarters
- Jun. 2017 Audit & Supervisory Board Member (present)

Outside Members, Audit & Supervisory Board



Zenichi Shishido

Outside Member, Audit & Supervisory Board

Date of birth:	Apr. 20, 1956
Number of years since appointment as a member of the Audit & Supervisory Board:	6 years

Mr. Zenichi Shishido was appointed as an outside member of the Audit & Supervisory Board so that he can contribute to the Company's audits as an expert in business law and corporate governance with his high insight based on experience in a wide range of research activities.

- Apr. 1980 Research Fellow of Faculty of Law, Tokyo University
- Apr. 1983 Assistant Professor of Faculty of Law, Seikei University
- Apr. 1985 Associate Professor of Faculty of Law, Seikei University
- Apr. 1994 Professor of Faculty of Law, Seikei University
- Jul. 2001 Registered as lawyer (Member of Dai-ichi Tokyo Bar Association)
- Apr. 2004 Professor of School of Law, Seikei University
- Apr. 2009 Professor of Graduate School of International Corporate Strategy, Hitotsubashi University (present)
- Jun. 2012 Audit & Supervisory Board Member of the Company (present)
- Apr. 2018 Professor of Graduate School of Law, Hitotsubashi University (present)

Significant concurrent positions

- Professor of Graduate School of Law, Hitotsubashi University
- Lawyer (Zenichi Shishido Law Firm)



Makoto Ohsawa

Outside Member, Audit & Supervisory Board

Date of birth:	Feb 20, 1959
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Mr. Makoto Ohsawa has a wide-ranging knowledge of corporate management and finance based on his extensive experience in these fields. Accordingly, he was appointed as an outside Audit & Supervisory Board member to oversee audits of the Company and further strengthen its corporate governance.

- Apr. 1981 Joined Bank of Japan
- May 1990 Seconded to Asian Department, International Monetary Fund
- Jun. 1997 Deputy Chief, London Representative Office, Bank of Japan
- Jun. 1999 Director, Financial Markets Department
- Jun. 2003 General Manager, Naha Branch (Okinawa)
- Sep. 2006 Joined PwC (Advisory)
- Sep. 2008 Partner in charge of Business Recovery, Financial, Healthcare and Hospitality Industries and Family Businesses
- Feb. 2012 Chief Executive Officer, FEMO Co., Ltd. (present)
- Jun. 2018 Audit & Supervisory Board Member of the Company (present)

Significant concurrent positions

- Chief Executive Officer, FEMO Co., Ltd.
- Outside Director, ZENHOREN CO., LTD.
- Outside Director, Kimitsu-Jyutaku Co., Ltd.
- Outside Director, Bank of Toyama
- Outside Audit & Supervisory Board Member, Agri Solar Co., Ltd.
- Director, Mega Solar Association

Officers

Position	Responsibility	Name
Senior Vice President	Head of Aerospace Products Business Headquarters President, Yokogawa Test & Measurement Corporation	Masaharu Yamazaki
	Head of Marketing Headquarters	Tsuyoshi Abe
Vice President	Head of Audit, Compliance and Quality Assurance Headquarters	Hajime Watanabe
	Chief Executive for North and South Americas President, Yokogawa Corporation of America	Shuji Mori
	Head of Global Sales and Industrial Marketing Headquarters	Koji Nakaoka
	Head of IA Products and Service Business Headquarters	Shigeyoshi Uehara
	Head of Human Resources and General Affairs Headquarters	Mikio Matsui
	Chief Executive for Europe, Russia and CIS President, Yokogawa Europe B.V.	Herman van den Berg
	Chief Executive for ASEAN and Pacific President, Yokogawa China Investment Co., Ltd. President, Yokogawa China Co., Ltd.	Dai Yu
	Chief Executive for Japan and Korea President, Yokogawa Solution Service Corporation	Tetsuya Murai
	Head of Global Business Service Headquarters	Kunimasa Shigeno
	Chief Executive for Middle East, Africa and India President, Yokogawa Middle East & Africa B. S. C. (c)	Pierre De Vuyst
	Head of Digital Strategy Headquarters	Yukihiro Funyu

Introducing a New Audit & Supervisory Board Member

I have been appointed an outside member of the Audit & Supervisory Board of Yokogawa Electric Corporation, a company whose distinguished history extends back over 100 years. I recognize the heavy responsibility of participating in a new chapter of Yokogawa's long history.

With over 60% of its sales coming from outside Japan, Yokogawa is a truly global company. I believe that the experience in international economics, finance, and management that I have gained through the course of my career with the Bank of Japan, the International Monetary Fund, and PwC will enable me to offer Yokogawa a new perspective on a global business environment that is undergoing dramatic change. Particularly in the field of finance, accounting systems, and internal controls, it is critically important to closely monitor the latest global developments and reflect them in management in a timely manner.

Starting a little over 10 years ago, I have been engaged in a number of positions with family-owned enterprises in which I provide support to ensure their continuity. No longer a family-owned business, Yokogawa has a robust governance structure to fulfill its role as a public entity of society, and I feel that the individual executives involved are highly motivated. On the other hand, I think there are elements we can learn from family-owned businesses that have endured for centuries. These include a clear philosophy and unceasing efforts to inculcate that philosophy among all employees, a keen sense of fiduciary responsibility, and a strong desire like that of an athlete in a long-distance relay race to hand over the business to the next generation, as well as the fostering of successors based on a long-term succession plan. Many managers of family-owned businesses consider that the true value of a person involved in management only becomes evident a couple of generations later. I will emphasize such medium- to long-term perspectives as I engage in management of the Company as an outside member of the Audit & Supervisory Board.



Makoto Ohsawa

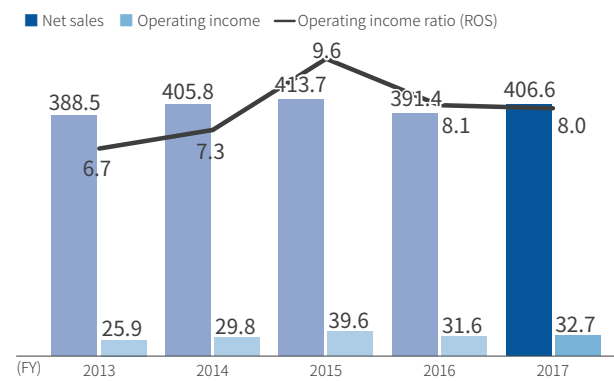
Outside Member, Audit & Supervisory Board

Financial Highlights

Earnings

Net sales (Billions of yen) / Operating income (Billions of yen) / Operating income ratio (ROS) (%)

Net sales **¥406.6** billion ROS **8.0**%

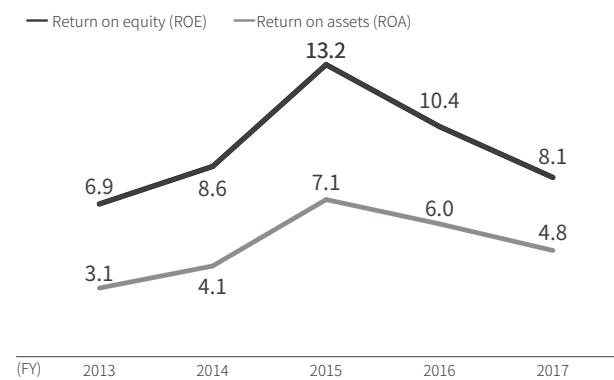


*As of March 31 of each year

Efficiency

Return on equity (ROE) (%) / Return on assets (ROA) (%)

ROE **8.1**%

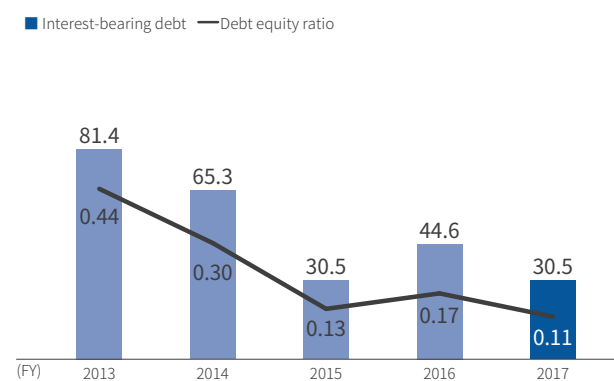


*As of March 31 of each year

Soundness

Interest-bearing debt (Billions of yen) / Debt equity ratio (Times)

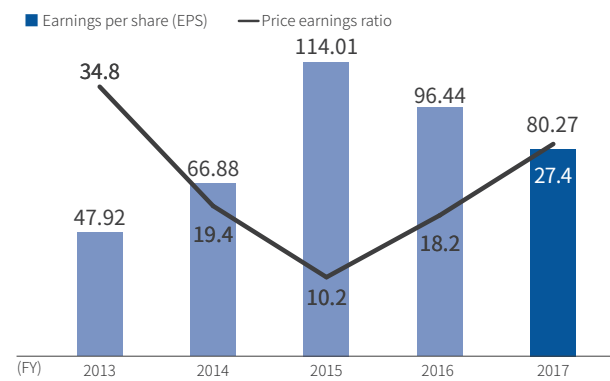
Debt equity ratio **0.11** times



*As of March 31 of each year

Earnings per share (EPS) (Yen) / Price earnings ratio (%)

EPS **¥80.27**

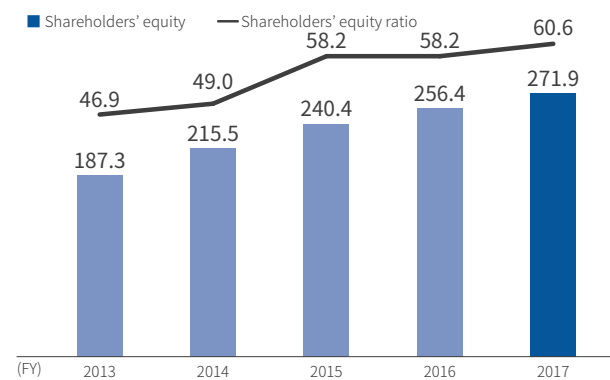


*As of March 31 of each year

Soundness

Shareholders' equity (Billions of yen) / Shareholders' equity ratio (%)

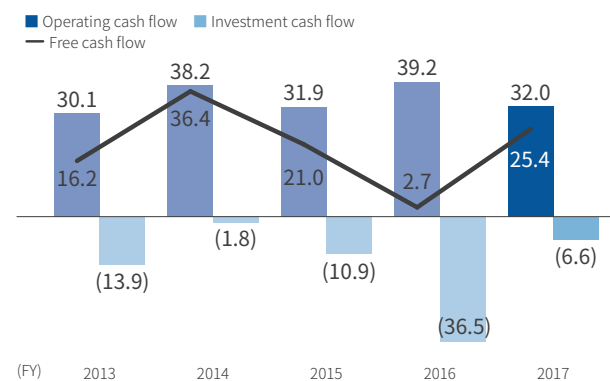
Shareholders' equity ratio **60.6**%



*As of March 31 of each year

Cash flows (Billions of yen)

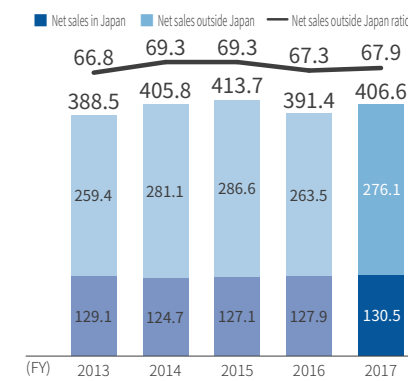
Free cash flow **¥25.4** billion



*As of March 31 of each year

Net sales in Japan and outside Japan (Billions of yen) / Net sales outside Japan ratio (%)

Net sales outside Japan **67.9**%



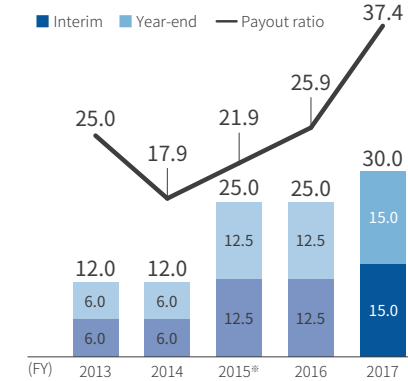
*As of March 31 of each year

Highlights by Segment

Distribution of Earnings

Dividend per share (Yen) / Payout ratio (%)

Payout ratio **37.4**%



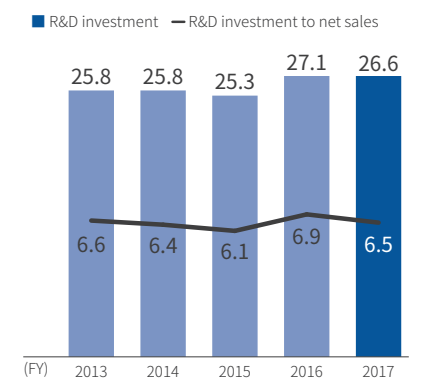
*Includes an additional 5 yen to commemorate the Company's 100th anniversary

*As of March 31 of each year

R&D

R&D investment (Billions of yen) / R&D investment to net sales (%)

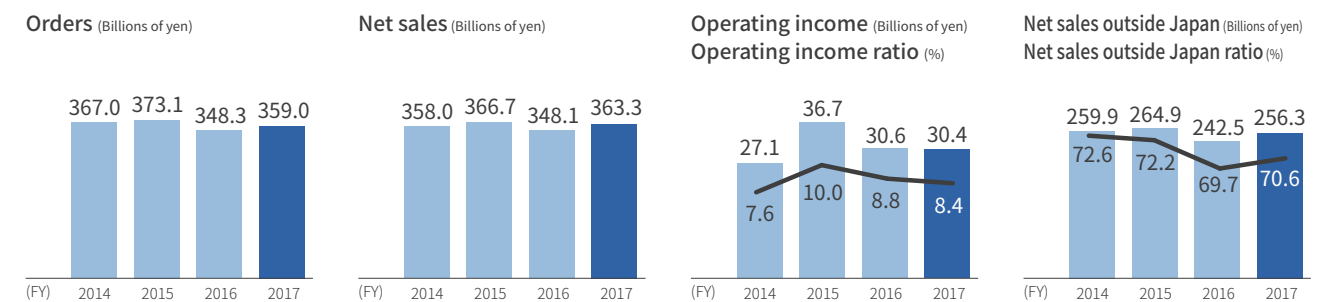
R&D investment to net sales **6.5**%



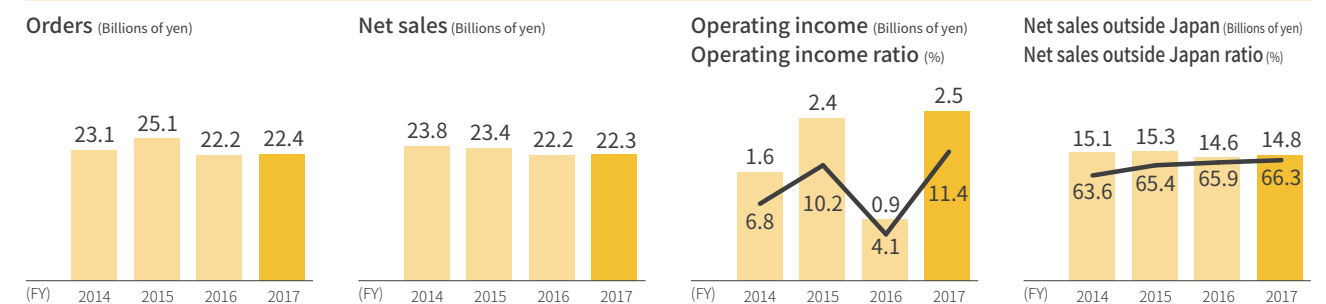
*As of March 31 of each year

*As of March 31 of each year

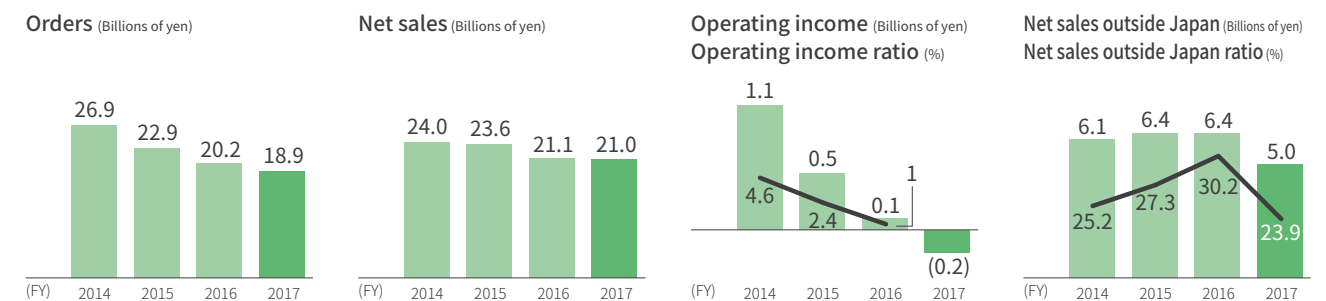
Industrial Automation and Control Business



Test and Measurement Business



Aviation and Other Businesses

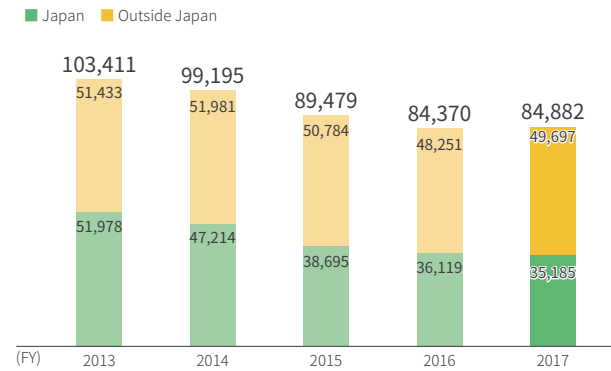


ESG Highlights

Environment

Greenhouse gas emissions (t-CO₂)

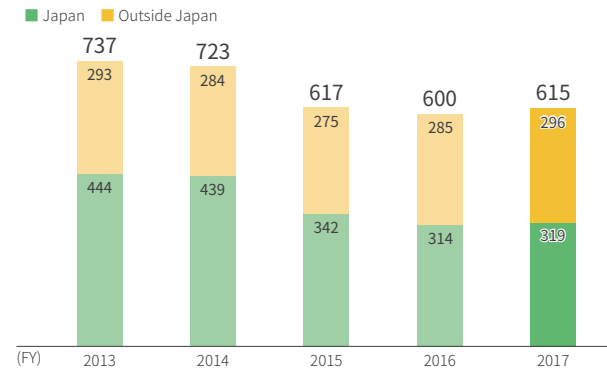
84,882 t-CO₂



* As of March 31 of each year

Water consumption (thousand m³)

615 km³

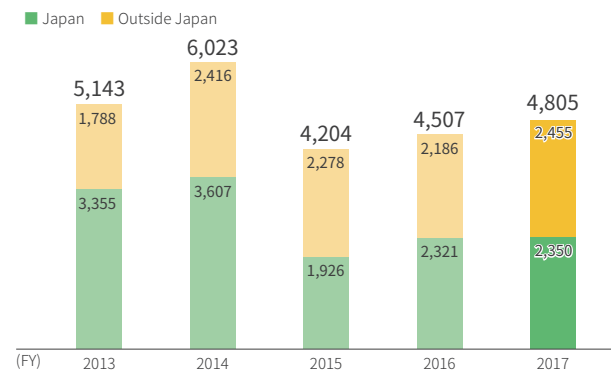


* As of March 31 of each year

Environment

Waste emissions (Tons)

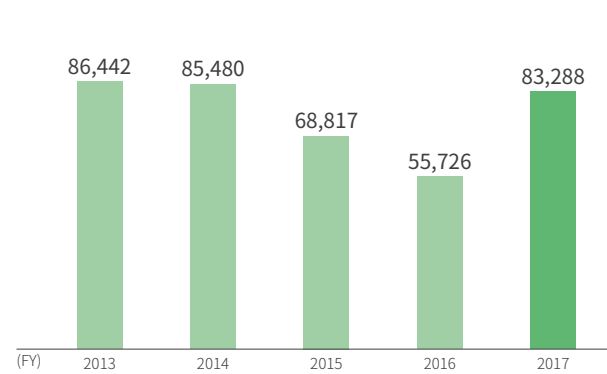
4,805 tons



* As of March 31 of each year

Renewables usage (kWh)

83,288 kWh



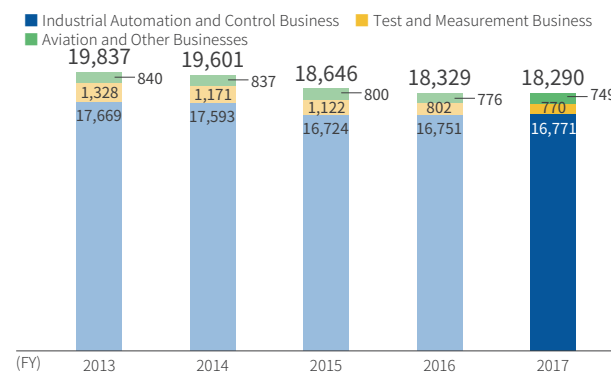
* As of March 31 of each year

* Amount of power generated by in-house photovoltaic power generation equipment

Employees

Number of employees

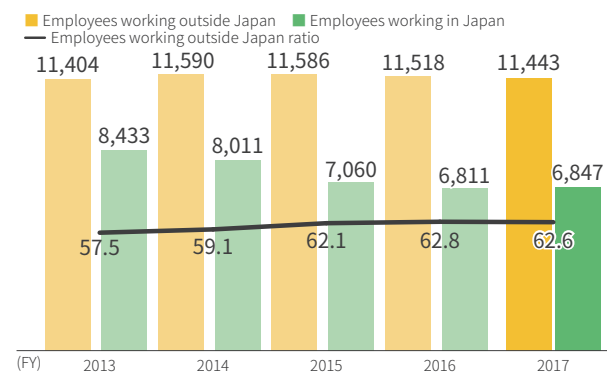
18,290 persons



* As of March 31 of each year

Employees working outside Japan ratio (%)

62.6%

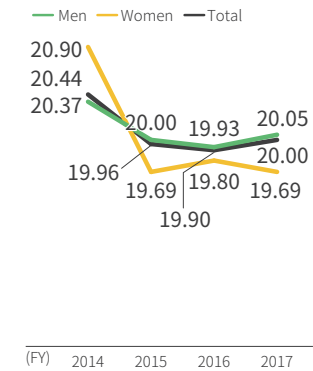


* As of March 31 of each year

Employees

Average length of service (years)

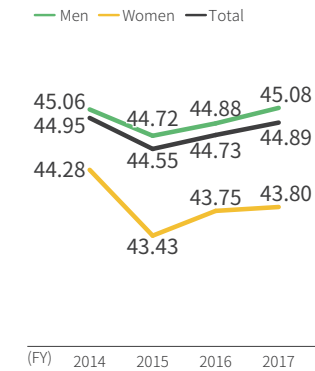
Men **20.05** years Women **19.69** years



* Yokogawa Electric on a non-consolidated basis; as of March 31 of each year

Average age (years old)

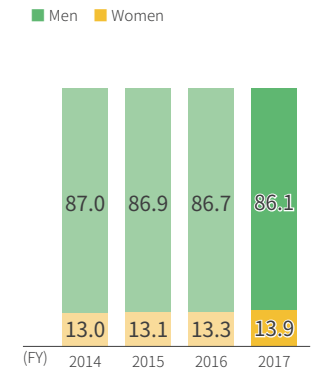
Men **45.08** years old Women **43.80** years old



* Yokogawa Electric on a non-consolidated basis; as of March 31 of each year

Gender ratio (%)

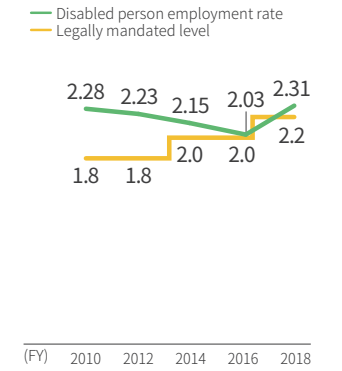
Men **86.1**% Women **13.9**%



* Employees including those seconded from Yokogawa Electric to other Group companies; as of March 31 of each year

Disabled person employment rate (%)

2.31%

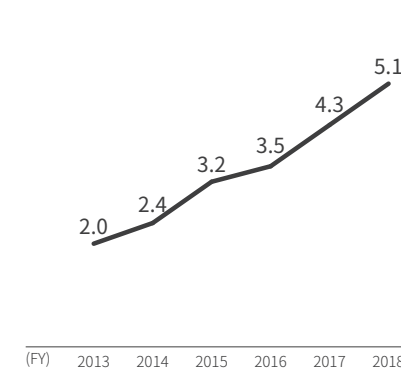


* Data for the 7 Group companies in Japan; calculated June 1 of each year

Employees

Female manager rate (%)

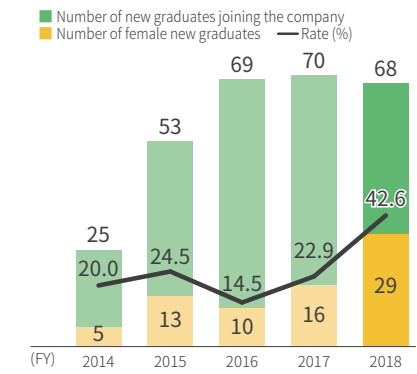
5.1%



* Employees including those seconded from Yokogawa Electric to other Group companies; as of March 31 of each year (July 1 for FY2018)

Percentage of female new graduates joining the company (%)

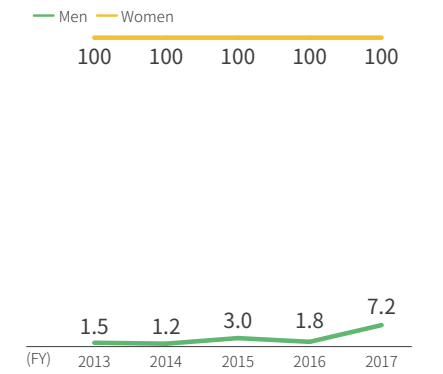
42.6%



* Employees including those seconded from Yokogawa Electric to other Group companies; as of March 31 of each year (April 1 for FY2018)

Ratio of employees with children who take childcare leave (%)

Women **100**% Men **7.2**%

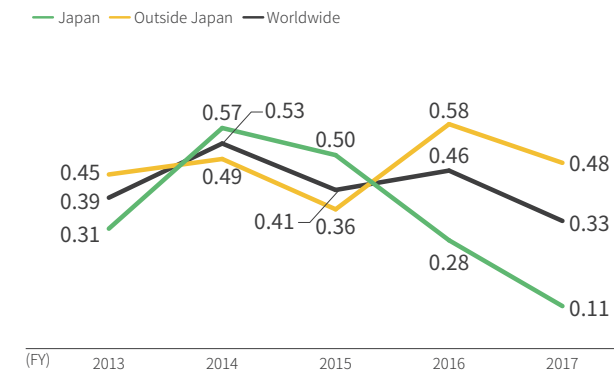


* Employees including those seconded from Yokogawa Electric to other Group companies; as of March 31 of each year

Occupational Health & Safety

Frequency rate of accidents resulting in lost workdays

Worldwide **0.33**



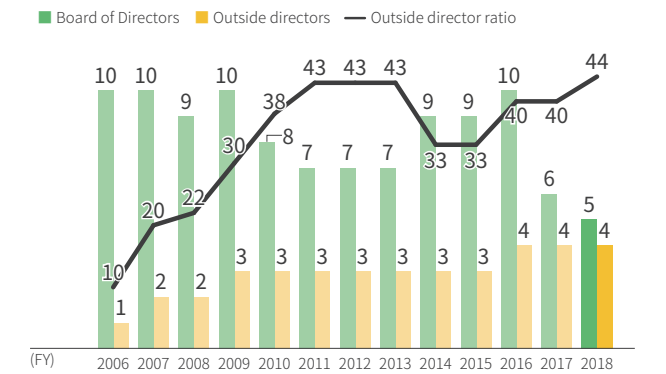
* As of March 31 of each year

* Frequency rate of accidents resulting in lost workdays = Number of accidents resulting in lost workdays ÷ Aggregate number of work-hours × 1,000,000

Outside directors

Number of directors / Outside director ratio (%)

Outside director ratio **44.0**%



* Upon conclusion of the Annual General Meeting of Shareholders in June each year

Consolidate 11-year Summary

	(Billions of yen)										(Millions of US dollars)	
Fiscal year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2017
Financial data												
Orders	455.1	374.3	315.2	334.1	344.1	354.5	406.0	417.1	421.1	390.7	400.3	3,768
Net sales	437.4	376.5	316.6	325.6	334.7	347.9	388.5	405.8	413.7	391.4	406.6	3,827
(Net sales outside Japan)	243.2	206.4	177.3	184.7	198.9	213.9	259.4	281.1	286.6	263.5	276.1	2,599
Cost of sales	277.4	253.0	214.5	215.1	195.4	206.6	229.3	236.6	236.9	222.3	231.3	2,177
Selling, general and administrative expenses	132.6	118.8	99.5	99.4	122.6	122.8	133.3	139.4	137.1	137.5	142.6	1,342
Operating income	27.4	4.7	2.6	11.1	16.6	18.4	25.9	29.8	39.6	31.6	32.7	308
Profit (loss) attributable to owners of parent	11.7	(38.4)	(14.8)	(6.7)	6.0	14.7	12.3	17.2	30.2	25.8	21.4	201
Capital expenditures	38.0	26.8	11.1	11.3	11.1	13.5	14.0	14.1	15.4	14.2	13.2	124
Depreciation and amortization	23.1	21.6	16.0	13.8	12.8	13.5	13.6	14.5	15.1	18.0	18.3	172
Research and development costs	40.9	37.2	28.8	29.2	27.5	25.5	25.8	25.8	25.3	27.1	26.6	250
Cash flow from operating activities	20.8	24.5	21.4	16.2	12.9	17.4	30.1	38.3	31.9	39.2	32.0	301
Cash flow from investing activities	(51.0)	(24.1)	(13.2)	(8.0)	(7.8)	(7.5)	(13.9)	(1.8)	(10.9)	(36.5)	(6.6)	(62)
Free cash flow	(30.2)	0.4	8.2	8.2	5.1	9.9	16.2	36.5	21.0	2.7	25.4	239
Cash flow from financing activities	23.9	28.4	11.1	(25.7)	(8.0)	(8.0)	(21.6)	(20.2)	(26.9)	6.5	(22.4)	(211)
At year-end												(Millions of US dollars)
Total assets	444.6	401.0	398.8	361.2	359.5	379.9	398.9	440.0	412.8	440.5	448.8	4,224
Interest-bearing debt	93.0	124.3	137.1	111.0	103.3	98.6	81.4	65.3	30.5	44.6	30.5	287
Shareholders' equity	220.7	167.2	153.4	141.7	145.7	168.4	187.3	215.5	240.4	256.4	271.9	2,559
Financial indicators												(%)
Operating income ratio (ROS)	6.3	1.3	0.8	3.4	5.0	5.3	6.7	7.3	9.6	8.1	8.0	
Debt equity ratio (Times)	0.42	0.74	0.89	0.78	0.71	0.59	0.44	0.30	0.13	0.17	0.11	
Return on equity (ROE)	5.1	(19.8)	(9.2)	(4.5)	4.1	9.4	6.9	8.6	13.2	10.4	8.1	
Return on assets (ROA)	2.6	(9.1)	(3.7)	(1.8)	1.7	4.0	3.1	4.1	7.1	6.0	4.8	
Shareholders' equity ratio	49.6	41.7	38.5	39.2	40.5	44.3	46.9	49.0	58.3	58.2	60.6	
Per share data												(US dollars)
Earnings per share (EPS)	44.76	(149.26)	(57.45)	(25.98)	23.11	57.03	47.92	66.88	114.03	96.44	80.27	0.76
Cash dividends	16.00	16.00	2.00	0	5.00	10.00	12.00	12.00	25.00	25.00	30.00	0.28
Shareholders' equity	856.72	649.20	595.42	550.19	565.69	653.83	727.09	836.94	900.75	959.58	1,017.40	9.58
Stock information												
Stock price at the end of the term (Yen / US dollars)	998	394	814	634	837	946	1,667	1,295	1,163	1,752	2,198	20.69
Market capitalization (Billions of yen / Millions of US dollars)	2,681	1,058	2,187	1,703	2,248	2,541	4,478	3,479	3,124	4,706	5,904	5,558
Number of issued shares (shares)	268,624,510	268,624,510	268,624,510	268,624,510	268,624,510	268,624,510	268,624,510	268,624,510	268,624,510	268,624,510	268,624,510	—
Exchange rate information												(Yen)
Average yen / US dollar exchange rate during the year	113.80	100.66	92.61	85.13	78.82	83.33	100.67	110.58	119.99	108.95	110.70	

Note: Figures are rounded down to the nearest 100 million yen.

Non-financial data¹												
Number of employees (by segment)	20,266	20,247	19,574	19,334	19,437	19,685	19,837	19,601	18,646	18,329	18,290	
Industrial Automation and Control Business	15,505	15,960	15,995	16,159	16,672	17,188	17,669	17,593	16,724	16,751	16,771	
Test and Measurement Business	2,885	2,350	2,469	2,288	1,968	1,667	1,328	1,171	1,122	802	770	
Aviation and Other Businesses	1,876	1,937	1,110	887	797	830	840	837	800	776	749	
Environmental data												
Greenhouse gas emissions (t-CO ₂)					94,244	102,312	103,411	99,195	89,479	84,370	84,882	
Water consumption (thousand m ³)					813	846	737	723	617	600	615	
Waste emissions (Tons)					6,706	6,343	5,143	6,023	4,204	4,507	4,805	
Renewables usage (kWh) ²					89,066	96,856	86,442	85,480	68,817	55,726	83,288	
Occupational health & safety												
Frequency rate of accidents resulting in lost workdays (calendar year) ³					0.29	0.32	0.39	0.53	0.41	0.46	0.33	

Notes: 1. For environmental data for fiscal year 2017, certification by Lloyd's Register Quality Assurance Limited has been obtained based on third-party assessment.

2. Amount of power generated by in-house photovoltaic power generation equipment.

3. Frequency rate of accidents resulting in lost workdays = Number of accidents resulting in lost workdays ÷ Aggregate number of work-hours × 1,000,000

Fiscal Year 2017 in Review (by topic)

Management Topics

May 2017

- Held the financial results briefing for fiscal year 2017
- Joined the World Business Council for Sustainable Development (WBCSD)



June 2017

- Signed a partnership agreement with Sinopec Engineering (Group) Co., Ltd., a Sinopec Group Company
- Held 2017 Annual General Meeting of Shareholders

August 2017

- Established “Three goals” sustainability goals for the year 2050



October 2017

- Participated in Series B Round of Funding for FogHorn Systems, Inc. to create value through IIoT

December 2017, March 2018

- Held briefings for individual investors (in December and March)



July 2017

- Acquired TechInvent2 AS that has advanced chemical injection technology

July and September 2017

- Selected as a constituent of major ESG indexes (FTSE in July, DJSI in September)



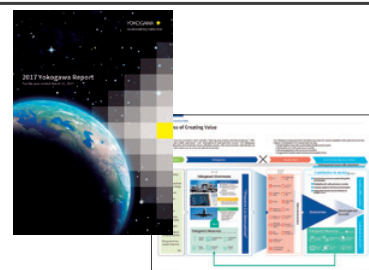
MEMBER OF
Dow Jones Sustainability Indices
In Collaboration with RobecoSAM etc.

November 2017

- Announced Synaptic Business Automation, a new concept of the Industrial Automation and Control Business

January 2018

- “Yokogawa Report 2017” highly recognized by GPIF’s asset managers entrusted with domestic equity investment



Topics on Orders Received and Products

April 2017

- Received an order to supply control systems for a desalination plant in Kuwait
- Developed the ADMAG Total Insight (TI) series of electromagnetic flowmeters



September 2017

- Developed and released CellVoyager CV8000 high-throughput cytological discovery system



November 2017

- Received an order to carry out Detailed Risk Assessments for BASF in Asia and America
- Received an order for a control system for a flue gas desulfurization system to be installed at a coal-fired power plant in Bosnia and Herzegovina
- Developed and released vibration and temperature sensor, the first product in a new lineup of small wireless Sushi Sensor for IIoT applications



February 2018

- Released Operations Management, a software package for recording and managing data on plant operations

July 2017

- Received an order to supply an integrated asset management system for Singapore’s water treatment-related facilities

October 2017

- Developed and released CENTUM VP R6.05 integrated production control system

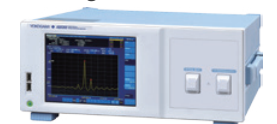


January 2018

- Signed a consultancy agreement for the integration of operations at oil refineries in Shandong Province, China
- Received an order to update a control system for water source facilities in the Dushanzi District, China
- Received an order to supply management and control systems for a gas pipeline facility in Egypt

March 2018

- Developed and released the CellLibrarian high-content data management system
- Yokogawa Test & Measurement developed and released AQ6360 optical spectrum analyzer



Risks Relating to the Group's Business

As described in the Group's statutory annual financial report filed as stipulated by the Financial Instruments and Exchange Act, the risks described below may impact its business and accounting conditions, and therefore could have a significant effect on investor decision-making. These risks include forward-looking statements that are based on judgments made by the Group at the end of fiscal year 2017. Further, the risks include items that will not necessarily affect investment decisions. However, based on an awareness of these risks, the Group maintains the necessary risk management structure and works to avoid risk occurrence as well as to minimize the impact of a risk should it occur.

1. Risks Relating to the Business Environment

a. Economic conditions

The Group mainly conducts its business activities in Japan, Asia, Europe, North America, and the Middle East. Economic trends in these markets could adversely affect its business results and financial condition.

b. International factors

The Group's sales and production operations are truly international in scope, as indicated by the fact that sales generated in all markets other than Japan currently account for approximately 70% of consolidated sales. Therefore, factors in these markets, such as economic trends; exchange rate fluctuations; changes to laws and regulations relating to investment, trade, competition, taxation, or foreign exchange; differences in commercial practices or labor standards that may have cultural or religious origins; terrorist attacks, wars, cyber-attacks, natural disasters, or other unanticipated incidents; or political, social, or other elements could adversely affect its business results and financial condition.

c. Laws and regulations

The Group observes the laws and regulations of each country in which it operates. Changes in laws and regulations or the enactment of new laws that cannot be anticipated could adversely affect its business results and financial condition. In addition, any increase in costs required to achieve compliance with environmental protection-related legislation could adversely affect its business results and financial condition.

Moreover, such legislation could impact its overall business activities, including R&D and production.

d. Fluctuations in currency exchange rates and interest rates

The Group carries out measures to ameliorate the risk of exchange rate fluctuations. However, due to their impact on the prices and costs of products and services with transactions denominated in foreign currencies, fluctuations in currency exchange rates may adversely affect its business results and financial condition. The Group also carries out measures to ameliorate the risk of interest rate fluctuations. However, fluctuations in interest rates could still adversely affect its business results and financial condition.

e. Changes in the value of assets owned

Changes in the value of shares, etc., owned by the Group could adversely affect its business results and financial condition. In addition, regarding the fixed assets owned by the Group, a decrease in asset value accompanying a decline in their market value or a fall in profitability could adversely affect its business results and financial condition.

2. Risks Relating to Business Activities

a. Industrial automation and control business

The industrial automation and control business is mainly expected to grow outside Japan in the medium to long term due to increased demand for energy in emerging and resource-rich countries. To increase its share of the global market and bolster sales and income, the Group has focused its resources on this business and strengthened systems related to R&D, production, sales, engineering, and service as well as deployment of M&As and alliances. As a result, the percentage of net sales on a consolidated basis accounted for by the industrial automation and control business has grown in recent years. Consequently, trends related to demand for plant construction and upgrades, which affect orders and sales in this business, as well as such factors as rapid fluctuations in oil prices and the success or failure of M&A transactions and alliances, could adversely affect the Group's business results and financial condition. Moreover, if the Group is unable to procure parts or execute production as planned due to some unforeseen circumstance and product supply is delayed or stops, the Group's business results and financial condition could be adversely affected.

b. Strategic investment

The Group makes strategic investment to strengthen the existing businesses and establish new businesses, centering on M&As and alliances. If the expected outcome cannot be achieved because of unanticipated change in the environment or for any other reasons, the Group's business results and financial condition could be adversely affected.

c. Securing and training human resources

The Group's growth is supported by its talented and capable personnel. The technical personnel that support its leading-edge technology in the fields of measurement, control, and information, and who assure high levels of product quality, are particularly important. Further, in the industrial automation and control business, the importance of personnel with solutions proposal capabilities as well as personnel with the project management and engineering capabilities required to work in the international market is increasing. The need to secure and train such personnel is an ongoing issue. If the Group is unable to address such issue satisfactorily, its business results and financial condition could be adversely affected.

d. Product quality

The Group provides its customers highly reliable products and services based on technologies and expertise that have been built up over many years and a rigorous quality control system. If by any chance a defect should occur in one of its products or services, and if this defect causes any damage, then this could adversely affect the Group's business results and financial condition, and could also impact its overall business activities.

e. R&D activities

The Group has positioned the development of new technologies as one of its most important management issues and is continuously carrying out R&D including digital technology, such as IIoT and AI, in its core technology areas of measurement, control, and information. However, if R&D investments do not match planned future market needs, this could adversely affect its business results and financial condition.

3. Other Risks

a. Intellectual property

In order to maintain its competitive advantages, the Group accumulates differentiated technologies and expertise relating to the products and services that it develops, and strives to protect these intellectual property assets. However, if such intellectual property is infringed upon by a third party and the Group is therefore unable to make an expected profit, it could adversely affect its business results and financial condition.

Moreover, the Group has established systems and conduct training to ensure that it does not infringe upon the intellectual property rights of other companies. However, if due to a difference in viewpoint or some other reason the Group infringes on the intellectual property rights of another company, there is a risk that it will be subsequently disadvantaged by its inability to use important technology and/or may be held liable for compensation, which could adversely affect its business results and financial condition.

b. Information security

Through its business activities, the Group acquires personal or otherwise confidential information on its customers and trading partners. It therefore establishes systems to manage this information and provides employees training on information security. However, in the event that information is leaked or abused due to some unforeseen circumstance, there is a risk the Group will be held liable for compensation or the corporate image will be drastically tarnished, which could adversely affect the Group's business results and financial condition.

c. Natural disasters, etc.

A natural disaster, such as an earthquake, fire, or flood; the outbreak of war; a terrorist attack; a cyber-attack; or a disruption in the supply chain caused by any of the aforementioned factors that makes it difficult to procure electronic parts or other materials could impact the Group's overall business activities, including its production activities. In addition, while the Group has appropriate measures in place for responding to the outbreak of infectious diseases such as new influenza strains, such diseases could have an impact on its overall business results and financial condition.

Financial and Non-financial Highlights

Financial Section

Consolidated Balance Sheet

Yokogawa Electric Corporation and its Consolidated Subsidiaries
March 31, 2018

	Millions of yen		Thousands of US dollars (Note 1)
	2018	2017	2018
ASSETS			
Current Assets:			
Cash and cash equivalents (Notes 9 and 15)	¥75,837	¥73,563	\$713,824
Receivables (Notes 4 and 15)			
Trade notes and accounts	153,646	141,288	1,446,216
Other	3,202	3,975	30,141
Less: Allowance for doubtful accounts	(3,535)	(2,622)	(33,271)
Net receivables	153,313	142,641	1,443,086
Inventories (Notes 5 and 6)	32,256	30,730	303,611
Deferred tax assets (Note 12)	7,580	3,378	71,345
Other	14,931	13,495	140,548
Total current assets	283,917	263,807	2,672,414
Property, Plant and Equipment (Notes 7 and 8):			
Land	15,812	16,235	148,830
Buildings and structures—net	45,731	47,248	430,448
Machinery, equipment and vehicles—net	7,000	6,936	65,889
Tools, furniture and fixtures—net	5,729	5,880	53,929
Construction in progress	2,142	2,119	20,159
Lease assets—net (Note 14)	318	412	2,993
Total property, plant and equipment	76,732	78,830	722,248
Investments and Other Assets:			
Investment securities (Notes 3, 9 and 15)	35,672	34,467	335,767
Investments in and advances to unconsolidated subsidiaries and affiliated companies (Note 15)	8,020	7,381	75,492
Goodwill (Note 8)	8,125	16,462	76,475
Software (Note 8)	17,780	18,428	167,358
Other intangible assets (Note 8)	11,568	13,722	108,883
Deferred tax assets (Note 12)	1,910	2,134	17,980
Other	7,823	5,659	73,639
Less: Allowance for doubtful accounts	(2,738)	(195)	(25,771)
Total investments and other assets	88,160	98,058	829,823
Total Assets	¥448,809	¥440,695	\$4,224,485

See notes to consolidated financial statements.

	Millions of yen		Thousands of US dollars (Note 1)
	2018	2017	2018
LIABILITIES AND EQUITY			
Current Liabilities:			
Short-term loans payable (Notes 9, 15 and 17)	¥1,364	¥5,352	\$12,838
Current portion of long-term debt (Notes 9 and 15)	494	10,481	4,649
Payables (Notes 9 and 15)			
Trade notes and accounts	25,466	31,363	239,703
Electronically recorded obligations—operating	10,570		99,488
Other	12,058	11,340	113,504
Income taxes payable (Note 15)	4,948	4,872	46,572
Accrued expenses	27,203	29,367	256,052
Advance received	32,174	31,637	302,841
Provision for contract loss (Notes 6 and 19)	5,882	4,418	55,364
Other (Note 12)	9,252	8,080	87,090
Total current liabilities	129,411	136,910	1,218,101
Long-term Liabilities:			
Long-term debt (Notes 9 and 15)	29,350	29,610	276,261
Liability for retirement benefits (Note 10)	3,587	3,925	33,763
Deferred tax liabilities (Note 12)	6,612	5,971	62,241
Other	1,176	1,775	11,066
Total long-term liabilities	40,725	41,281	383,331
Commitments and Contingent Liabilities (Notes 14, 16 and 17)			
Equity (Notes 11 and 22):			
Common stock, authorized, 600,000,000 shares; issued, 268,624,510 shares in 2018 and 2017	43,401	43,401	408,519
Capital surplus	54,560	54,494	513,561
Retained earnings	173,003	158,901	1,628,413
Treasury stock, 1,397,149 shares in 2018 and 1,416,623 shares in 2017	(1,394)	(1,410)	(13,116)
Accumulated other comprehensive income			
Net unrealized gain on available-for-sale securities	11,874	10,451	111,765
Deferred (loss) gain on derivatives under hedge accounting	(29)	3	(277)
Foreign currency translation adjustments	(8,426)	(8,286)	(79,315)
Defined retirement benefit plans	(1,113)	(1,157)	(10,474)
Total	2,306	1,011	21,699
Non-controlling interests	6,797	6,107	63,977
Total equity	278,673	262,504	2,623,053
Total Liabilities and Equity	¥448,809	¥440,695	\$4,224,485

Consolidated Statement of Income

Yokogawa Electric Corporation and its Consolidated Subsidiaries
Year Ended March 31, 2018

	Millions of yen		Thousands of US dollars (Note 1)
	2018	2017	2018
Net Sales	¥406,590	¥391,434	\$3,827,092
Cost of Sales (Notes 13 and 19)	231,262	222,323	2,176,789
Gross profit	175,328	169,111	1,650,303
Selling, General and Administrative Expenses (Notes 13 and 19)	142,631	137,528	1,342,540
Operating income	32,697	31,583	307,763
Other Income (Expenses):			
Interest and dividend income	2,333	2,251	21,960
Interest expense	(501)	(883)	(4,717)
Loss on valuation of investment securities	(87)		(814)
Net gain on sales of investment securities and investment in affiliated companies (Note 3)	3,692	1,795	34,748
Foreign exchange loss-net	(1,913)	(286)	(18,008)
Net gain (loss) on disposal of property, plant and equipment (Note 19)	1,866	(230)	17,563
Loss on impairment of long-lived assets (Note 8)	(9,199)		(86,590)
Equity in earnings of affiliates	869	580	8,183
Gain on sales of investment in a subsidiary		930	
Gain on a step acquisition		649	
Restructuring costs (Note 18)		(635)	
Other-net	(376)	(256)	(3,533)
Other income-net	(3,316)	3,915	(31,208)
Income before Income Taxes	29,381	35,498	276,555
Income Taxes (Note 12):			
Current	10,738	8,924	101,071
Deferred	(4,104)	31	(38,628)
Total income taxes	6,634	8,955	62,443
Net income	22,747	26,543	214,112
Net income attributable to non-controlling interests	1,297	794	12,212
Net income attributable to owners of the parent	¥21,450	¥25,749	\$201,900
	Yen		US dollars (Note 1)
Per Share of Common Stock (Note 21):			
Basic net income	¥80.27	¥96.40	\$0.76
Cash dividends applicable to the year	30.00	25.00	0.28

See notes to consolidated financial statements.

Consolidated Statement of Comprehensive Income

Yokogawa Electric Corporation and its Consolidated Subsidiaries
Year Ended March 31, 2018

	Millions of yen		Thousands of US dollars (Note 1)
	2018	2017	2018
Net Income	¥22,747	¥26,543	\$214,112
Other Comprehensive Income (Loss) (Note 20):			
Net unrealized gain on available-for-sale securities	1,398	644	13,161
Deferred (loss) gain on derivatives under hedge accounting	(32)	125	(301)
Foreign currency translation adjustments	(113)	(4,609)	(1,058)
Defined retirement benefit plans	125	257	1,172
Share of other comprehensive loss in affiliates	(28)	(44)	(263)
Total other comprehensive income (loss)	1,350	(3,627)	12,711
Comprehensive Income	¥24,097	¥22,916	\$226,823
Total Comprehensive Income Attributable to:			
Owners of the parent	¥22,745	¥22,435	\$214,095
Non-controlling interests	1,352	481	12,728

See notes to consolidated financial statements.

Consolidated Statement of Changes in Equity

Yokogawa Electric Corporation and its Consolidated Subsidiaries
Year Ended March 31, 2018

	Millions of yen											
	Outstanding number of shares of common stock	Accumulated other comprehensive income									Non-controlling interests	Total equity
		Common stock	Capital surplus	Retained earnings	Treasury stock	Net unrealized gain on available-for-sale securities	Deferred gain (loss) on derivatives under hedge accounting	Foreign currency translation adjustments	Defined retirement benefit plans	Total		
Balance, April 1, 2016 (as previously reported)	266,941,164	¥43,401	¥54,474	¥139,922	¥(1,674)	¥9,803	¥(122)	¥(3,943)	¥(1,414)	¥4,324	¥6,449	¥246,896
Cumulative effect of accounting change				28								28
Balance, April 1, 2016 (as restated)	266,941,164	43,401	54,474	139,950	(1,674)	9,803	(122)	(3,943)	(1,414)	4,324	6,449	246,924
Net income attributable to owners of the parent				25,749								25,749
Cash dividends, ¥25 per share				(6,677)								(6,677)
Purchase of treasury stock	(2,377)				(4)							(4)
Disposal of treasury stock	269,100		79		268							347
Change in scope of consolidation				(121)								(121)
Change in the parent's ownership interest due to transactions with non-controlling interests			(59)									(59)
Net change in the year						648	125	(4,343)	257	(3,313)	(342)	(3,655)
Balance, March 31, 2017	267,207,887	¥43,401	¥54,494	¥158,901	¥(1,410)	¥10,451	¥3	¥(8,286)	¥(1,157)	¥1,011	¥6,107	¥262,504
Net income attributable to owners of the parent				21,450								21,450
Cash dividends, ¥30 per share				(7,348)								(7,348)
Purchase of treasury stock	(3,026)				(6)							(6)
Disposal of treasury stock	22,500		18		22							40
Change in the parent's ownership interest due to transactions with non-controlling interests			48									48
Net change in the year						1,423	(32)	(140)	44	1,295	690	1,985
Balance, March 31, 2018	267,227,361	¥43,401	¥54,560	¥173,003	¥(1,394)	¥11,874	¥(29)	¥(8,426)	¥(1,113)	¥2,306	¥6,797	¥278,673

	Thousands of US dollars (Note 1)										
	Common stock	Accumulated other comprehensive income									Total equity
		Capital surplus	Retained earnings	Treasury stock	Net unrealized gain on available-for-sale securities	Deferred gain (loss) on derivatives under hedge accounting	Foreign currency translation adjustments	Defined retirement benefit plans	Total	Non-controlling interests	
Balance, April 1, 2017	\$408,519	\$512,938	\$1,495,682	\$(13,270)	\$98,372	\$24	\$(78,001)	\$(10,890)	\$9,505	\$57,486	\$2,470,860
Net income attributable to owners of the parent			201,900								201,900
Cash dividends, \$0.28 per share			(69,169)								(69,169)
Purchase of treasury stock				(57)							(57)
Disposal of treasury stock		171		211							382
Change in the parent's ownership interest due to transactions with non-controlling interests		452									452
Net change in the year					13,393	(301)	(1,314)	416	12,194	6,491	18,685
Balance, March 31, 2018	\$408,519	\$513,561	\$1,628,413	\$(13,116)	\$111,765	\$(277)	\$(79,315)	\$(10,474)	\$21,699	\$63,977	\$2,623,053

See notes to consolidated financial statements.

Consolidated Statement of Cash Flows

Yokogawa Electric Corporation and its Consolidated Subsidiaries
Year Ended March 31, 2018

	Millions of yen		Thousands of US dollars (Note 1)
	2018	2017	2018
Operating Activities:			
Income before income taxes	¥29,381	¥35,498	\$276,555
Adjustments for:			
Income taxes paid	(9,788)	(9,069)	(92,130)
Depreciation and amortization	16,591	16,334	156,165
Goodwill amortization	1,730	1,702	16,282
Equity in earnings of affiliates	(869)	(580)	(8,183)
Net (gain) loss on disposal of property, plant and equipment	(1,866)	230	(17,563)
Gain on sale of investment securities and investment in affiliated companies	(3,692)	(1,795)	(34,748)
Loss on valuation of investment securities	87		814
Gain on sale of investment in a subsidiary		(930)	
Gain on a step acquisition		(649)	
Restructuring costs		635	
Loss on impairment of long-lived assets	9,199		86,590
Changes in assets and liabilities:			
(Increase) decrease in trade notes and accounts receivable	(11,885)	757	(111,871)
(Increase) decrease in inventories	(1,521)	2,543	(14,321)
Increase (decrease) in trade notes and accounts payable	3,753	(3,860)	35,327
Increase in allowance for doubtful accounts	3,443	175	32,412
Decrease in liability for retirement benefits	(290)	(187)	(2,732)
Other assets and liabilities	322	(2,073)	3,026
Other-net	(2,614)	515	(24,597)
Total adjustments	2,600	3,748	24,471
Net cash provided by operating activities	31,981	39,246	301,026
Investing Activities:			
Purchases of property, plant and equipment	(6,566)	(6,485)	(61,799)
Proceeds from sale of property, plant and equipment	3,203	349	30,145
Acquisitions of intangible assets	(7,019)	(7,217)	(66,065)
Proceeds from sale of investment securities	4,661	4,113	43,870
Purchases of investments in subsidiaries with changes in consolidation scope	(1,391)	(27,564)	(13,097)
Proceed from sale of investments in subsidiaries with changes in consolidation scope		1,174	
Other-net	464	(869)	4,369
Net cash used in investing activities	(6,648)	(36,499)	(62,577)
Forward	¥25,333	¥2,747	\$238,449

(Continued)

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Forward	¥25,333	¥2,747	\$238,449
Financing Activities:			
Net (decrease) increase in short-term loans payable	(3,935)	868	(37,040)
Proceeds from long-term debt		18,417	
Repayments of long-term debt	(10,088)	(5,113)	(94,955)
Cash dividends paid	(7,344)	(6,672)	(69,127)
Cash dividends paid to non-controlling shareholders	(637)	(715)	(6,000)
Other-net	(424)	(296)	(3,989)
Net cash (used in) provided by financing activities	(22,428)	6,489	(211,111)
Foreign Currency Translation Adjustments on Cash and Cash Equivalents	(631)	(595)	(5,941)
Net Increase in Cash and Cash Equivalents	2,274	8,641	21,397
Cash and Cash Equivalents, Beginning of Year	73,563	64,922	692,427
Cash and Cash Equivalents, End of Year	¥75,837	¥73,563	\$713,824

See notes to consolidated financial statements.

Notes to Consolidated Financial Statements

Yokogawa Electric Corporation and its Consolidated Subsidiaries
Year Ended March 31, 2018

1. Basis of Presentation of the Consolidated Financial Statements

The accompanying consolidated financial statements have been prepared in accordance with the provisions set forth in the Japanese Financial Instruments and Exchange Act and its related accounting regulations and in accordance with accounting principles generally accepted in Japan (“Japanese GAAP”), which are different in certain respects as to application and disclosure requirements of the International Financial Reporting Standards.

In preparing these consolidated financial statements, certain reclassifications and rearrangements have been made to the consolidated financial statements issued in Japan in order to present them in a form which is more familiar to readers outside Japan. In addition, certain reclassifications

have been made in the 2017 consolidated financial statements to conform to the classifications used in 2018.

The consolidated financial statements are stated in Japanese yen, the currency of the country in which Yokogawa Electric Corporation (the “Company”) is incorporated and operates. The translations of Japanese yen amounts into US dollar amounts are included solely for the convenience of readers outside Japan and have been made at the rate of ¥106.24 to \$1, the approximate rate of exchange at March 31, 2018. Such translations should not be construed as representations that the Japanese yen amounts could be converted into US dollars at that or any other rate.

2. Summary of Significant Accounting Policies

● **a. Consolidation**— The consolidated financial statements as of March 31, 2018 include the accounts of the Company and its 109 (109 in 2017) significant subsidiaries (together, the “Group”). Changes include i) purchase of TechInvent2 AS; ii) establishment of Yokogawa Oman Limited Liability Company; iii) liquidation of Yokogawa MAT Corporation, and Yokogawa Industrial Safety Systems B.V.

Under the control and influence concept, those companies in which the Company, directly or indirectly, is able to exercise control over operations are fully consolidated, and those companies over which the Group has the ability to exercise significant influence are accounted for by the equity method.

Investments in 1 (1 in 2017) unconsolidated subsidiary and 2 (2 in 2017) affiliated companies are accounted for by the equity method.

The excess of the cost of an acquisition over the fair value of the net assets of the acquired subsidiary at the date of acquisition is being amortized on a straight-line basis over a period of up to 20 years. When the amount is not material, the excess of the cost of an acquisition over the fair value of the net assets of the acquired subsidiary is charged to income at the date of acquisition.

All significant intercompany balances and transactions have been eliminated on consolidation. All material unrealized profit included in assets resulting from transactions within the Group is also eliminated.

● **b. Unification of Accounting Policies Applied to Foreign Subsidiaries for the Consolidated Financial Statements** — Under Accounting Standards Board of Japan (the “ASBJ”) Practical Issues Task Force (“PITF”) No. 18, “Practical Solution on Unification of Accounting Policies Applied to Foreign Subsidiaries for the Consolidated Financial Statements,” the accounting policies and procedures applied to a parent company and its subsidiaries for similar transactions and events under similar circumstances should in principle be unified for the preparation of the consolidated financial statements. However, financial statements prepared by foreign subsidiaries in accordance with either International Financial Reporting Standards or generally accepted accounting principles in the United States of America (Financial Accounting Standards Board Accounting Standards Codification—“FASB ASC”) tentatively may be used for the consolidation process, except for the following items which should be adjusted in the consolidation process so that net income is accounted for in accordance with Japanese GAAP unless they are not material: (1) amortization of goodwill; (2) scheduled amortization of actuarial gain or loss of pensions that has been directly recorded in equity through other comprehensive income; (3) expensing capitalized development costs of R&D; and (4) cancellation of the fair value model accounting for property, plant, and equipment and investment properties and incorporation of the cost model of accounting.

● **c. Business Combinations**—Business combinations are accounted for using the purchase method. Acquisition-related costs, such as advisory fees or professional fees are accounted for as expenses in the periods in which the costs are incurred. If the initial accounting for a business combination is incomplete by the end of the reporting period in which the business combination occurs, an acquirer shall report in its financial statements provisional amounts for the items for which the accounting is incomplete. During the measurement period, which shall not exceed one year from the acquisition, the acquirer shall retrospectively adjust the provisional amounts recognized at the acquisition date to reflect new information obtained about facts and circumstances that existed as of the acquisition date and that would have affected the measurement of the amounts recognized as of that date. Such adjustments shall be recognized as if the accounting for the business combination had been completed at the acquisition date. The acquirer recognizes the bargain purchase gain in profit or loss immediately on the acquisition date after reassessing and confirming that all of the assets acquired and all of the liabilities assumed have been identified after a review of the procedures used in the purchase price allocation. A parent's ownership interest in a subsidiary might change if the parent purchases or sells ownership interests in its subsidiary. The carrying amount of non-controlling interest is adjusted to reflect the change in the parent's ownership interest in its subsidiary while the parent retains its controlling interest in its subsidiary. Any difference between the fair value of the consideration received or paid and the amount by which the non-controlling interest is adjusted is accounted for as capital surplus as long as the parent retains control over its subsidiary.

● **d. Cash Equivalents**—Cash equivalents are short-term investments that are readily convertible into cash and are exposed to insignificant risk of changes in value. Specifically, cash equivalents represent time deposits that mature within three months of the date of placement.

● **e. Inventories**—Inventories are stated at the lower of cost or the net selling value. Cost is mainly determined by the specific identification method for finished goods and work in process, and by the average method for merchandise, raw materials and supplies.

● **f. Investment Securities**—Investment securities are classified and accounted for, depending on management's intent, as follows:

- i) held-to-maturity debt securities, which are expected to be held to maturity with the positive intent and ability to hold to maturity, are reported at amortized cost; and
- ii) available-for-sale securities, which are not classified as the aforementioned securities, are reported at fair value, with

unrealized gains and losses, net of applicable taxes, reported under accumulated other comprehensive income in a separate component of equity.

Non-marketable available-for-sale securities are stated at cost determined by the moving-average method. For other-than-temporary declines in fair value, investment securities are reduced to net realizable value by a charge to income.

● **g. Property, Plant and Equipment**—Property, plant and equipment are stated at cost less accumulated depreciation and any impairment in value. Depreciation of property, plant and equipment is mainly calculated by the straight-line method over their estimated useful lives.

The estimated useful lives range principally from 3 to 50 years for buildings, and from 4 to 10 years for machinery and equipment. The estimated useful lives for leased assets are the terms of the respective leases.

● **h. Intangible Assets**—Intangible assets consist mainly of software, technology assets, customer-related intangible assets and goodwill. Depreciation of intangible assets is mainly calculated by the straight-line method over their estimated useful lives. The estimated useful lives range principally from 5 to 10 years for software for internal use, from 10 to 15 years for customer-related intangible assets and mainly 7 years for technology assets.

● **i. Long-lived Assets**—The Group reviews its long-lived assets for impairment whenever events or changes in circumstance indicate the carrying amount of an asset or asset group may not be recoverable. An impairment loss is recognized if the carrying amount of an asset or asset group exceeds the sum of the undiscounted future cash flows expected to result from the continued use and eventual disposition of the asset or asset group. The impairment loss is measured as the amount by which the carrying amount of the asset exceeds its recoverable amount, which is the higher of the discounted cash flows from the continued use and eventual disposition of the asset or the net selling price at disposition.

● **j. Allowance for Doubtful Accounts**—The allowance for doubtful accounts is stated in amounts considered to be appropriate based on the companies' past credit loss experience and an evaluation of potential losses in the receivables outstanding.

● **k. Retirement and Pension Plans**—The Company and most of its consolidated subsidiaries have defined contribution plans, and some other consolidated subsidiaries have defined benefit plans for employees.

The main method used to attribute expected benefits to each period is the benefit formula basis.

Actuarial gains or losses are amortized on a straight-line basis over the average remaining years of service of the employees (mainly 10 years) from the following year in which they arise.

Prior service cost is amortized on a straight line basis over the average remaining years of service (mainly 10 years).

● **l. Research and Development Costs**—Research and development costs are charged to income as incurred.

● **m. Bonuses to Directors**—Bonuses to directors are accrued at the end of the year to which such bonuses are attributable.

● **n. Construction Contracts**—Construction revenue and construction costs are recognized by the percentage-of-completion method, if the outcome of a construction contract can be estimated reliably. The outcome of a construction contract can be estimated reliably when total construction revenue, total construction costs and the stage of completion of the contract at the balance sheet date can be reliably measured. If the outcome of a construction contract cannot be reliably estimated, the completed-contract method should be applied. When it is probable that the total construction costs will exceed total construction revenue, an estimated loss on the contract should be immediately recognized by providing for a loss on such construction contracts.

● **o. Income Taxes**—The provision for income taxes is computed based on the pretax income included in the consolidated statements of income. The asset and liability approach is used to recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the carrying amounts and the tax bases of assets and liabilities. Deferred taxes are measured by applying currently enacted income tax rates to the temporary differences.

The Company and some domestic subsidiaries file their tax returns under the consolidated corporate tax system, which allows companies to base tax payments on the combined profits or losses of the parent company and its wholly owned subsidiaries in Japan.

● **p. Foreign Currency Transactions**—Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are translated into Japanese yen at the exchange rate as of that date. The foreign exchange gains and losses from translation are recognized in the consolidated statement of income.

● **q. Foreign Currency Financial Statements**—The balance sheet accounts of the consolidated subsidiaries outside Japan are translated into Japanese yen at the prevailing exchange rate as of the balance sheet date except for equity, which is translated at the historical rate. Differences arising from such translation are shown as "Foreign currency translation adjustments" under accumulated other comprehensive income in a separate component of equity. Revenue and expense accounts of consolidated subsidiaries outside Japan are translated into yen at the average exchange rate.

● **r. Derivatives and Hedging Activities**—The Company and certain consolidated subsidiaries use a variety of derivative financial instruments, including foreign currency forward contracts, currency options, and interest rate swaps, as a means of hedging foreign currency and interest rate risks. The Group does not enter into derivatives for trading or speculative purposes.

Derivative financial instruments and foreign currency transactions are classified and accounted for as follows: a) All derivatives other than those which qualify for hedge accounting are measured at fair value, and gains or losses are recognized in the consolidated statement of income. b) Derivatives used for hedging purposes, if the derivatives qualify for hedge accounting because of high correlation between the hedging instruments and the hedged items, gains or losses are deferred until maturity of the hedged transactions. These amounts are shown as "Deferred gain on derivative under hedge accounting" under accumulated other comprehensive income in a separate component of equity.

Foreign currency forward contracts are utilized to hedge the foreign currency risk of trade receivables denominated in foreign currencies. If the forward contracts qualify for hedge accounting, these trade receivables are translated at the contracted rates. Interest rate swaps are utilized to hedge the interest rate risk of long-term debt. Those interest rate swaps that qualify for hedge accounting and meet specific matching criteria are not re-measured at market value, but the differential paid or received under the swap agreements is recognized and included in interest expense or income.

● **s. Per Share Information**—Basic net income per share is computed by dividing net income attributable to common shareholders by the weighted-average number of common shares outstanding for the period.

Cash dividends per share presented in the accompanying consolidated statement of income are dividends applicable to the respective years including dividends to be paid after the end of the year.

● **t. New Accounting Pronouncements**—On March 30, 2018, the ASBJ issued ASBJ Statement No. 29, “Accounting Standard for Revenue Recognition” and ASBJ Guidance No. 30, “Implementation Guidance on Accounting Standard for Revenue Recognition.” The core principle of the standard and guidance is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. An entity should recognize revenue in accordance with that core principle by applying the following steps:

- Step 1 : Identify the contract(s) with a customer
- Step 2 : Identify the 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 entity satisfies a performance obligation

The accounting standard and guidance are effective for annual periods beginning on or after April 1, 2021. Earlier application is permitted for annual periods beginning on or after April 1, 2018.

The Company expects to apply the accounting standard and guidance for annual periods beginning on or after April 1, 2020, and is in the process of measuring the effects of applying the accounting standard and guidance in future applicable periods.

3. Investment Securities

Investment securities as of March 31, 2018 and 2017 consisted of the following:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Non-current:			
Equity securities	¥35,672	¥34,467	\$335,767

The cost and aggregate fair values of investment securities at March 31, 2018 and 2017 were as follows:

	Millions of yen			
	Cost	Unrealized gain	Unrealized loss	Fair value
March 31, 2018				
Securities classified as:				
Available-for-sale:				
Equity securities	¥8,191	¥15,882	¥0	¥24,073

March 31, 2017				
Securities classified as:				
Available-for-sale:				
Equity securities	¥9,069	¥13,831	¥99	¥22,801

	Thousands of US dollars			
	Cost	Unrealized gain	Unrealized loss	Fair value
March 31, 2018				
Securities classified as:				
Available-for-sale:				
Equity securities	\$77,097	\$149,489	\$0	\$226,586

The information for available-for-sale securities sold during the years ended March 31, 2018 and 2017 was as follows:

	Millions of yen		
	Proceeds	Realized gain	Realized loss
2018			
Available-for-sale:			
Equity securities	¥4,664	¥3,732	¥(40)

	Millions of yen		
	Proceeds	Realized gain	Realized loss
2017			
Available-for-sale:			
Equity securities	¥4,111	¥1,803	¥(8)

	Thousands of US dollars		
	Proceeds	Realized gain	Realized loss
2018			
Available-for-sale:			
Equity securities	\$43,899	\$35,123	\$(375)

4. Transfer of Receivables

The Company and certain consolidated subsidiaries transferred their trade notes and accounts receivable-trade before maturity based on an asset transfer agreement. The balance of those receivables whose settlement date had not been reached as of March 31, 2018 and 2017 was as follows:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Notes and accounts receivable-trade (with recourse, included in the above)	¥13,326	¥13,043 (12)	\$125,430

5. Inventories

Inventories at March 31, 2018 and 2017 consisted of the following:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Merchandise and finished goods	¥12,475	¥11,739	\$117,425
Work in process	8,574	8,218	80,702
Raw materials and supplies	11,207	10,773	105,484
Total	¥32,256	¥30,730	\$303,611

6. Expected Loss on Construction Contracts

The Group recognizes an expected loss on construction contracts when it is probable that total contract costs will exceed total contract revenue. The inventory and the expected loss on construction contracts are not offset but are separately presented in the consolidated balance sheet.

The balance of inventories relating to the expected loss on construction contracts for the years ended March 31, 2018 and 2017 was as follows:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Merchandise and finished goods	¥372	¥30	\$3,500
Work in process	1,701	370	16,010
Total	¥2,073	¥400	\$19,510

7. Property, Plant and Equipment

Accumulated depreciation on property, plant and equipment as of March 31, 2018 and 2017 was ¥138,281 million (US\$1,301,591 thousand) and ¥136,033 million, respectively.

8. Long-lived Assets

The Group reviewed its long-lived assets for impairment as of the years ended March 31, 2018 and 2017. For 2018, impairment losses of ¥9,199 million (US\$86,590 thousand) were recognized. No impairment losses were recognized for 2017.

The main components of Loss on impairment of long-lived assets for the year ended March 31, 2018 were as follows:

Location	Use	Category	Millions of yen	Thousands of US dollars
			Impairment loss	
United Kingdom	Business assets	Goodwill	¥7,050	\$66,359
		Tools, furniture and fixtures	118	1,111
		Software	171	1,610
United States and Canada	Business assets	Machinery	50	471
		Software	98	922
		Goodwill	1,103	10,382
		Other intangible assets	444	4,179
Shinagawa-ku, Tokyo	Asset planned to be sold	Land	165	1,556
		Total	¥9,199	\$86,590

The Group's business assets are grouped according to management accounting classification. Assets planned to be sold are valued on the basis of individual assets.

The book value of business assets (goodwill, etc) arising at the time of acquisition of shares of the UK- based subsidiary, KBC Advanced Technologies Limited and the US- based subsidiary, Industrial Evolution, Inc., have been reduced to their respective recoverable amounts as the business results of these companies fell below initially forecasted business plans due to changes in their business environments. The differences between the book values and recoverable amounts have been recorded as impairment losses.

Following the Company's decision to dispose of the asset, the asset planned to be sold was reduced to its recoverable amount. The difference between its book value and the recoverable amount was recorded as impairment loss.

Business assets and assets planned to be sold are measured at their recoverable amounts, which are net selling prices at disposition for assets planned to be sold.

9. Short-term Loans and Long-term Debt

Short-term bank loans at March 31, 2018 and 2017 included bank overdrafts. The annual average interest rates on the short-term bank loans were 0.562% and 1.921% for the years ended March 31, 2018 and 2017, respectively.

Long-term debt as of March 31, 2018 and 2017 consisted of the following:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Loans from banks and other financial institutions	¥29,113	¥39,209	\$274,029
Obligations under finance leases	731	882	6,881
Total	29,844	40,091	280,910
Less: Current portion	494	10,481	4,649
Long-term debt, less current portion	¥29,350	¥29,610	\$276,261

Annual maturities of long-term loans (excluding finance leases) from banks and other financial institutions, at March 31, 2018 were as follows:

Year ending March 31	Millions of yen	Thousands of US dollars
2019	¥176	\$1,657
2020	10,264	96,611
2021	14,593	137,357
2022	4,080	38,404
2023 and thereafter	Nil	Nil
Total	¥29,113	\$274,029

The annual average interest rate on long-term loans (excluding current portion) from banks was 0.116% for the year ended March 31, 2018.

Collateral and secured debt at March 31, 2018 and 2017 were as follows:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Collateral:			
Deposits	¥55	¥13	\$516
Investment securities	6	5	55
Assets in consolidated subsidiaries outside Japan*	6,905	6,599	64,993
Total	¥6,966	¥6,617	\$65,564

*“Assets in consolidated subsidiaries outside Japan” represents the aggregate amount of accounts receivable and other assets of such subsidiaries.

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Secured debt:			
Trade notes and accounts payable	¥14	¥23	\$132

The Group's interest-bearing debt includes financial covenants which require the Company to maintain certain levels of equity and income on a consolidated basis. The balance of such debt as of March 31, 2018 and 2017 was ¥24,417 million (US\$229,827 thousand) and ¥34,417 million respectively.

10. Retirement and Pension Plans

The Company and most of its consolidated subsidiaries have defined contribution plans, while some other subsidiaries have defined benefit plans. In certain circumstances, additional payments are made upon the retirement of employees.

A consolidated subsidiary participated in a multi-employer pension fund as a pension plan for its employees. The subsidiary withdrew from the multi-employer pension fund and booked ¥224 million (\$2,106 thousand) as a loss on transfer of benefit obligation relating to employees' pension fund, and included in “Other - net” of the consolidated statement of income for the year ended March 31, 2018.

a) The changes in defined benefit obligation for the years ended March 31, 2018 and 2017, were as follows:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Balance at beginning of year	¥10,734	¥10,289	\$101,034
Current service cost	657	653	6,181
Interest cost	276	277	2,600
Actuarial (gain) loss	(191)	25	(1,801)
Benefits paid	(647)	(475)	(6,087)
Others	154	(35)	1,454
Balance at end of year	¥10,983	¥10,734	\$103,381

b) The changes in plan assets for the years ended March 31, 2018 and 2017, were as follows:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Balance at beginning of year	¥6,809	¥6,199	\$64,091
Expected return on plan assets	498	305	4,689
Actuarial gain (loss)	(6)	257	(54)
Contributions from the employer	636	365	5,991
Benefits paid	(524)	(338)	(4,935)
Others	(17)	21	(164)
Balance at end of year	¥7,396	¥6,809	\$69,618

c) Reconciliation between the liability recorded in the consolidated balance sheet and the balances of defined benefit obligation and plan assets as of March 31, 2018 and 2017, was as follows:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Funded defined benefit obligation	¥10,983	¥10,734	\$103,381
Plan assets	(7,396)	(6,809)	(69,618)
Total	3,587	3,925	33,763
Unfunded defined benefit obligation			
Net liability for defined benefit obligation	¥3,587	¥3,925	\$33,763

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Liability for retirement benefits	¥3,587	¥3,925	\$33,763
Net liability for defined benefit obligation	¥3,587	¥3,925	\$33,763

d) The components of net periodic benefit costs for the years ended March 31, 2018 and 2017, were as follows:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Service cost	¥657	¥653	\$6,181
Interest cost	276	277	2,600
Expected return on plan assets	(498)	(305)	(4,689)
Amortization of actuarial loss	96	209	907
Additional payment		219	
Others	(24)	154	(229)
Net periodic benefit costs	¥507	¥1,207	\$4,770

e) Amounts recognized in other comprehensive income (before income tax effect) in respect of defined retirement benefit plans for the years ended March 31, 2018 and 2017 were as follows:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Actuarial gain	¥491	¥415	\$4,616

f) Amounts recognized in accumulated other comprehensive income (before income tax effect) in respect of defined retirement benefit plans as of March 31, 2018 and 2017 were as follows:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Unrecognized actuarial loss	¥(1,466)	¥(1,956)	\$(13,799)

g) Plan assets as of March 31, 2018 and 2017 were as follows:

(1) Components of plan assets
Plan assets:

	2018	2017
Equity investments	42%	43%
Debt investments	23	21
Cash and cash equivalents	28	29
Others	7	7
Total	100%	100%

(2) Method of determining the expected rate of return on plan assets

The expected rate of return on plan assets is determined based on the expected long-term rates of return for the various plan asset components.

h) Assumptions used for the years ended March 31, 2018 and 2017 were as follows:

	2018	2017
Discount rate	2.60%	3.80%
Expected rate of return on plan assets	4.58%	4.90%

i) Payments to defined contribution plans amounted to ¥4,476 million (US\$42,131 thousand) and ¥5,348 million for the years ended March 31, 2018 and 2017 respectively.

11. Equity

Japanese companies are subject to the Companies Act of Japan (the “Companies Act”). The significant provisions in the Companies Act that affect financial and accounting matters are summarized below:

(a) Dividends

Under the Companies Act, companies can pay dividends at any time during the fiscal year in addition to the year-end dividend upon the passing of a resolution at the shareholders’ meeting. For companies that meet certain criteria such as; (1) having a board of directors, (2) having independent auditors, (3) having an audit & supervisory board, and (4) prescribing a one-year term of service for directors (rather than the conventional two-year term) in its articles of incorporation, the board of directors may declare dividends (except for dividends in kind) at any time during the fiscal year if the company has prescribed so in its articles of incorporation.

Semiannual interim dividends may also be paid once a year upon resolution by the board of directors if the articles of incorporation of the company so stipulates. The Companies Act provides certain limitations on the amounts available for dividends or the purchase of treasury stock. The limitation is defined as the amount available for distribution to the shareholders, but the amount of net assets after dividends must be maintained at no less than ¥3 million.

(b) Increases / decreases and transfer of common stock, reserve and surplus

The Companies Act requires that an amount equal to 10% of dividends must be appropriated as a legal reserve (a component of retained earnings) or as additional paid-in capital (a component of capital surplus) depending on the equity account charged upon the payment of such dividends until the total of aggregate amount of legal reserve and additional paid-in capital equals 25% of the common stock. Under the Companies Act, the total amount of additional paid-in capital and legal reserve may be reversed without limitation. The Companies Act also provides that common stock, legal reserve, additional paid-in capital, other capital surplus and retained earnings can be transferred among the accounts under certain conditions upon resolution of the shareholders.

(c) Treasury stock and treasury stock acquisition rights

The Companies Act also provides for companies to purchase treasury stock and dispose of such treasury stock by resolution of the board of directors. The amount of treasury stock purchased cannot exceed the amount available for distribution to the shareholders which is determined by a specific formula. Under the Companies Act, stock acquisition rights are presented as a separate component of equity. The Companies Act also provides that companies can purchase both treasury stock acquisition rights and treasury stock. Such treasury stock acquisition rights are presented as a separate component of equity or deducted directly from stock acquisition rights.

12. Income Taxes

The tax effects of significant temporary differences and tax loss carry-forwards that resulted in deferred tax assets and liabilities at March 31, 2018 and 2017 were as follows:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Deferred tax assets:			
Provision for bonuses	¥2,636	¥2,623	\$24,816
Write-down of inventories	1,558	2,023	14,661
Unrealized profit of inventories	1,486	1,064	13,988
Impairment loss on investment securities	1,270	1,289	11,958
Impairment loss on investments in consolidated subsidiaries	760	1,941	7,150
Tax loss carry-forwards	26,940	32,525	253,574
Other	7,872	8,672	74,098
Less: Valuation allowance	(31,933)	(43,177)	(300,577)
Total	¥10,589	¥6,960	\$99,668
Deferred tax liabilities:			
Net realized gain on available-for-sale securities	¥(3,980)	¥(3,212)	\$(37,463)
Undistributed earnings of consolidated subsidiaries outside Japan	(1,180)	(933)	(11,103)
Property, plant and equipment	(564)	(592)	(5,307)
Intangible assets recognized on business combination	(1,220)	(1,610)	(11,481)
Other	(1,054)	(1,365)	(9,930)
Total	¥(7,998)	¥(7,712)	\$(75,284)
Net deferred tax assets	¥2,591	¥(752)	\$24,384

Net deferred tax assets were included in the following accounts in the accompanying consolidated balance sheet:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Current assets-Deferred tax assets	¥7,580	¥3,378	\$71,345
Investments and other assets-Deferred tax assets	1,910	2,134	17,980
Current liabilities-Other	(287)	(292)	(2,700)
Long-term liabilities-Deferred tax liabilities	(6,612)	(5,972)	(62,241)
Net deferred tax assets	¥ 2,591	¥ (752)	\$24,384

A reconciliation between the normal effective statutory tax rate and the actual effective tax rate reflected in the accompanying consolidated statement of income for the years ended March 31, 2018 and 2017 was as follows:

	2018	2017
Normal effective statutory tax rate	30.9%	30.9%
Permanent differences		
Expenses not deductible for income tax purposes	4.5	2.4
Dividend income and other non-taxable income	(0.4)	(0.3)
Goodwill amortization	2.2	1.7
Loss on impairment of goodwill	8.6	
Gain on a step acquisition		(0.6)
Changes in valuation allowance	(17.7)	(2.0)
Lower income tax rates applicable to certain consolidated subsidiaries outside Japan	(12.3)	(7.7)
Undistributed earnings of consolidated subsidiaries outside Japan	2.7	0.1
Other-net	4.1	0.7
Actual effective tax rate	22.6%	25.2%

13. Research and Development Costs

Research and development costs were ¥26,576 million (US\$250,150 thousand) and ¥27,126 million for the years ended March 31, 2018 and 2017, respectively and were included in the cost of sales and selling, general and administrative expenses in the consolidated statement of income.

14. Leases

The Group leases certain machinery, equipment and vehicles, tools, furniture and fixtures, and other assets.

The minimum rental commitments under non-cancelable operating leases at March 31, 2018 and 2017 were as follows:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Due within one year	¥2,625	¥2,466	\$24,707
Due after one year	6,294	5,578	59,241
Total	¥8,919	¥8,044	\$83,948

15. Financial Instruments and Related Disclosures

1. Information regarding financial instruments

a) Group policy on financial instruments

In accordance with the Group's capital expenditure program for the industrial automation and control business and the test and measurement business, the Group uses financial instruments such as bank loans to obtain necessary funding. Cash surpluses are invested in low risk financial assets. Short-term bank loans are used to fund ongoing operations. Derivatives are used to manage exposure to financial risks as described in Note 16 and are not used for speculative purposes.

b) Nature of the financial instruments and risk management

Receivables such as trade notes and trade accounts are exposed to customer credit risk. Those securities are mainly issued by the Group's customers and suppliers, and are managed by regularly monitoring market value and the financial position of the issuers.

Investment securities are exposed to the risk of market price fluctuations. The Group reviews its holdings of these securities, whose issuers are mainly its customers and suppliers, by regularly checking their market value and the financial position of the issuers.

Payment terms of payables such as trade notes and trade accounts are less than one year.

Long-term debt is used for capital expenditures and investments. In order to manage exposure to market risks from fluctuations in interest rates, the Group principally uses fixed-rate contracts; otherwise, interest rate swap contracts are used for variable rate loans.

Foreign currency trade receivables and payables are exposed to market risk resulting from fluctuations in foreign currency exchange rates. Such foreign exchange risk is hedged principally by foreign currency forward contracts and range forward options.

Basic policies on derivative transactions are set out in the Group's internal guidelines. The guidelines prescribe a control policy, designate authorized departments, specify the purpose of the transactions, define the basis for selecting financial institutions, and specify the reporting route.

The fair value of financial instruments is based on the quoted price in an active market. If a quoted price is not available, other valid valuation techniques are used instead.

2. Fair value of financial instruments

The carrying amounts in the consolidated balance sheet, fair value, and unrealized gain (loss) as of March 31, 2018 and 2017 were as detailed below. Financial instruments, whose fair value is extremely difficult to measure, are not included. Please refer to note (b) (below the following tables) on financial instruments whose fair value cannot be reliably determined.

Millions of yen			
	2018		
	Carrying amount	Fair value	Unrealized gain (loss)
Cash and cash equivalents	¥75,837	¥75,837	
Receivables-trade notes and accounts	153,646		
Less: Allowance for doubtful accounts	(3,535)		
	150,111	150,111	
Investment securities	24,073	24,073	
Total	¥250,021	¥250,021	
Short-term loans payable	¥1,364	¥1,364	
Payables-trade notes and accounts	25,466	25,466	
Electronically recorded obligations-operating	10,570	10,570	
Payables-other	12,058	12,058	
Income taxes payable	4,948	4,948	
Long-term debt	29,844	29,660	¥(184)
Total	¥84,250	¥84,066	¥(184)
Derivatives	¥(239)	¥(239)	

Millions of yen			
	2017		
	Carrying amount	Fair value	Unrealized gain (loss)
Cash and cash equivalents	¥73,563	¥73,563	
Receivables-trade notes and accounts	141,288		
Less: Allowance for doubtful accounts	(2,622)		
	138,666	138,666	
Investment securities	22,801	22,801	
Total	¥235,030	¥235,030	
Short-term loans payable	¥5,352	¥5,352	
Payables-trade notes and accounts	31,363	31,363	
Payables-other	11,340	11,340	
Income taxes payable	4,872	4,872	
Long-term debt	40,091	39,762	¥(329)
Total	¥93,018	¥92,689	¥(329)
Derivatives	¥(38)	¥(38)	

Thousands of US dollars			
	2018		
	Carrying amount	Fair value	Unrealized gain (loss)
Cash and cash equivalents	\$713,824	\$713,824	
Receivables-trade notes and accounts	1,446,216		
Less: Allowance for doubtful accounts	(33,271)		
	1,412,945	1,412,945	
Investment securities	226,586	226,586	
Total	\$2,353,355	\$2,353,355	
Short-term loans payable	\$12,838	\$12,838	
Payables-trade notes and accounts	239,703	239,703	
Electronically recorded obligations-operating	99,488	99,488	
Payables-other	113,504	113,504	
Income taxes payable	46,572	46,572	
Long-term debt	280,910	279,176	\$(1,734)
Total	\$793,015	\$791,281	\$(1,734)
Derivatives	\$(2,249)	\$(2,249)	

Notes:

(a) Fair value measurement of financial instruments

Cash and cash equivalents, trade notes and accounts receivable:

The carrying values of cash and cash equivalents, trade notes and accounts receivable less an allowance for doubtful accounts, approximate fair value because of their short maturities.

Investment securities:

The fair value of equity instruments is measured at the quoted equity market price, and the fair value of debt instruments is measured at the quoted price obtained from the respective financial institution. Information on the fair value of each class of investment security is included in Note 3.

Short-term loans payable, trade notes and accounts payable, electronically recorded obligations-operating, other payables and income taxes payable:

The carrying values of short-term loans payable, trade notes and accounts payable, electronically recorded obligations-operating, other payables, and income taxes payable approximate fair value because of their short maturities.

Long-term debt:

The fair value of long-term debt is determined by discounting cash flows related to the debt at the Group's assumed corporate borrowing rate. Long-term debt is included in the following accounts in the accompanying consolidated balance sheet: current portion of long-term debt and long-term debt.

Derivatives:

Information on the fair value of derivatives is included in Note 16.

(b) Financial instruments whose fair value cannot be reliably determined

	Carrying amount		Thousands of US dollars
	Millions of yen	March 31, 2017	
	March 31, 2018		March 31, 2018
Unlisted equity securities	¥19,619	¥19,047	\$184,673

Unlisted equity securities whose fair value cannot be reliably determined include investments in and advances to unconsolidated subsidiaries and affiliated companies.

Maturity analysis for financial assets and securities with contractual maturities

	Millions of yen		Thousands of US dollars	
	March 31, 2018		March 31, 2018	
	Due in one year or less	Due after one to five years	Due in one year or less	Due after one to five years
Cash and cash equivalents	¥75,837		\$713,824	
Receivables-trade notes and accounts	153,159	¥487	1,441,631	\$4,585
Total	¥228,996	¥487	\$2,155,455	\$4,585

16. Derivatives

Derivative transactions are used to manage foreign exchange risk and the risk of market rate fluctuations that occur in the normal course of business. The Group does not use derivatives for speculative purposes or for highly leveraged transactions.

1. Derivative transactions to which hedge accounting was not applied at March 31, 2018 and 2017

	Millions of yen			
	2018			
	Contract amount			Unrealized gain (loss)
	Total	Due after one year	Fair value	
Forward exchange contracts				
Selling contracts				
US dollar	¥5,148		¥69	¥69
Other	3,751		49	49
Buying contracts				
US dollar	4,517		(257)	(257)
Others	74		(0)	(0)
Currency swaps	9,152		(54)	(54)
Total	¥22,642		¥(193)	¥(193)

Millions of yen

	2017			
	Contract amount		Fair value	Unrealized gain (loss)
	Total	Due after one year		
Forward exchange contracts				
Selling contracts				
US dollar	¥7,109		¥204	¥204
Other	3,724	¥72	(5)	(5)
Buying contracts				
US dollar	3,816	10	(45)	(45)
Currency swaps	8,303		(196)	(196)
Total	¥22,952	¥82	¥(42)	¥(42)

Thousands of US dollars

	2018			
	Contract amount		Fair value	Unrealized gain (loss)
	Total	Due after one year		
Forward exchange contracts				
Selling contracts				
US dollar	\$48,459		\$650	\$650
Other	35,311		463	463
Buying contracts				
US dollar	42,512		(2,421)	(2,421)
Others	695		(3)	(3)
Currency swaps	86,142		(502)	(502)
Total	\$213,119		\$(1,813)	\$(1,813)

2. Derivative transactions to which hedge accounting was applied at March 31, 2018 and 2017

Millions of yen				
2018				
		Contract amount		
	Hedged item	Total	Due after one year	Fair value
Forward exchange contracts				
Buying contracts				
	US dollar	Payables	¥3,554	¥(46)
Interest rate swaps				
	Pay fixed/Receive floating	Long-term debt	18,397	18,397
				Note b

Millions of yen				
2017				
		Contract amount		Fair value
Hedged item		Total	Due after one year	
Forward exchange contracts				
Buying contracts				
US dollar	Payables	¥4,209		¥4
Interest rate swaps				
Pay fixed/Receive floating	Long-term debt	28,397	18,397	Note b

Thousands of US dollars				
2018				
		Contract amount		
	Hedged item	Total	Due after one year	Fair value
Forward exchange contracts				
Buying contracts				
	US dollar	Payables	\$33,453	\$(436)
Interest rate swaps				
	Pay fixed/Receive floating	Long-term debt	173,163	173,163
				Note b

Notes:

- (a) The above interest rate swaps which qualify for hedge accounting and meet specific matching criteria are not re-measured at market value, but the differential paid or received under the swap agreements is recognized and included in interest expense or income.
- (b) The fair value of such interest rate swaps is included in that of hedged items disclosed in Note 15.

The fair value of derivative transactions is measured at the quoted price obtained from the respective financial institution. The contract or notional amounts of the derivatives shown in the above table do not represent the amounts exchanged by the parties and are not a measure of the Group's exposure to credit or market risk.

Currency options are zero cost options.

17. Commitment Line Agreements

The Company has commitment line agreements with financial institutions in order to obtain funds for stable and efficient operation.

The commitment line of credit as of March 31, 2018 and 2017 was as follows:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Total commitment line of credit	¥45,000	¥45,000	\$423,569
Outstanding borrowings	Nil	Nil	Nil
Unused credit line	¥45,000	¥45,000	\$423,569

18. Restructuring Costs

For the year ended March 31, 2018, there were no restructuring costs.

For the year ended March 31, 2017, restructuring costs amounting to ¥635 million were incurred for expenses related to liquidation of a consolidated subsidiary following withdrawal from its business.

19. Other Notes to Consolidated Statement of Income

1. Provision for contract loss

The following provision for contract loss was included in the cost of sales in the consolidated statement of income:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Provision for contract loss	¥1,506	¥132	\$14,171

2. Selling, general and administrative expenses

The major components of selling, general and administrative expenses were as follows:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Salaries	¥42,472	¥44,924	\$399,770
Net periodic retirement benefit costs	3,677	3,951	34,611
Provision for bonuses	4,740	3,987	44,614
Allowance for doubtful accounts	3,606	267	33,942
Research and development costs	26,267	27,026	247,247

3. Net gain (loss) on disposal of property, plant and equipment

The net gain (loss) on disposal of property, plant and equipment was as follows:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Buildings and structures	¥64	¥(124)	\$602
Machinery, equipment and vehicles	(28)	(13)	(262)
Tools, furniture and fixtures	(11)	(54)	(102)
Land	1,835	(4)	17,269
Other intangible assets	6	(29)	56
Other		(6)	
Total	¥1,866	¥(230)	\$17,563

20. Other Comprehensive Income (Loss)

The components of other comprehensive income (loss) for the years ended March 31, 2018 and 2017 were as follows:

	Millions of yen		Thousands of US dollars
	2018	2017	2018
Net unrealized gain on available-for-sale securities:			
Gains arising during the year	¥5,774	¥3,531	\$54,356
Reclassification adjustments to profit or loss	(3,608)	(2,724)	(33,964)
Amount before income tax effect	2,166	807	20,392
Income tax effect	(768)	(163)	(7,231)
Total	¥1,398	¥644	\$13,161
Deferred (loss) gain on derivatives under hedge accounting:			
Gains (losses) arising during the year	¥554	¥(98)	\$5,217
Reclassification adjustments to profit or loss	(597)	265	(5,619)
Amount before income tax effect	(43)	167	(402)
Income tax effect	11	(42)	101
Total	¥(32)	¥125	\$(301)
Defined retirement benefit plans:			
Adjustments arising during the year	¥587	¥206	\$5,523
Reclassification adjustments to profit or loss	(96)	209	(907)
Amount before income tax effect	491	415	4,616
Income tax effect	(366)	(158)	(3,444)
Total	¥125	¥257	\$1,172
Foreign currency translation adjustments:			
Adjustments arising during the year	¥(203)	¥(4,606)	\$(1,907)
Amount before income tax effect	(203)	(4,606)	(1,907)
Income tax effect	90	(3)	849
Total	¥(113)	¥(4,609)	\$(1,058)
Share of other comprehensive loss in affiliates:			
Losses arising during the year	¥(28)	¥(44)	\$(263)
Reclassification adjustments to profit or loss			
Total	¥(28)	¥(44)	\$(263)
Total other comprehensive income (loss)	¥1,350	¥(3,627)	\$12,711

21. Per Share Information

Basic net income per share (EPS) for the years ended March 31, 2018 and 2017 was as follows:

	Millions of yen	Thousands of shares	Yen	US dollars
	Net income attributable to owners of the parent	Weighted average shares	EPS	
2018				
Basic EPS				
Net income attributable to common shareholders	¥21,450	267,223	¥80.27	\$0.76
2017				
Basic EPS				
Net income attributable to common shareholders	¥25,749	267,097	¥96.40	\$0.86

Diluted net income per share was not disclosed because there were no dilutive securities in the years ended March 31, 2018 and 2017.

22. Subsequent Events

Appropriation of retained earnings

The Board of Directors proposed the following appropriation of retained earnings, at March 31, 2018, which was approved at the general meeting of the shareholders of the Company held on June 26, 2018:

	Millions of yen	Thousands of US dollars
Year-end cash dividends, ¥15.0 (US\$0.14) per share	¥4,008	\$37,730

23. Segment Information

Under ASBJ Statement No. 17, "Accounting Standard for Segment Information Disclosures," and ASBJ Guidance No. 20, "Guidance on Accounting Standard for Segment Information Disclosures," an entity is required to report financial and descriptive information about its reportable segments. Reportable segments are operating segments or aggregations of operating segments that meet specified criteria. Operating segments are components of an entity about which separate financial information is available and such information is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance. Generally, segment information is required to be reported on the same basis as is used internally for evaluating operating segment performance and deciding how to allocate resources to operating segments.

1. Description of reportable segments

The Group's reportable segments are those for which separate financial information is available and regular evaluation by the Company's management is being performed in order to decide how resources are allocated among the Group. The Group operates in three business segments: industrial automation and control, test and measurement, and aviation and other businesses.

The industrial automation and control business offers comprehensive solutions including field instruments such as flow meters, differential pressure/pressure transmitters, and process analyzers; control systems and programmable controllers; various types of software to enhance productivity; and services that minimize plant lifecycle costs.

The test and measurement business offers waveform measuring instruments; optical communications measuring instruments; signal generators; electric voltage, current, and power measuring instruments; LCD drivers; and confocal scanners for observation of live cells.

The aviation and other businesses segment mainly offers cockpit flat-panel displays, engine meters, and other instruments for aviation use; marine navigation equipment such as gyrocompasses and autopilot systems; and meteorological/hydrological monitoring system equipment.

2. Accounting methods for each reportable segment's sales, income (loss), assets, and other items

The accounting policies for each reportable segment are consistent with those disclosed in Note 2, "Summary of Significant Accounting Policies."

The aggregate of the income or loss for each reportable segment corresponds to the operating income or loss in the consolidated statement of income.

The assets of a reportable segment consist of receivables-trade notes and trade accounts, inventory, property, plant and equipment, and intangible assets.

3. Information about sales, income (loss), assets and other items

Millions of yen					
	2018				
	Reportable segment				
	Industrial automation and control	Test and measurement	Aviation and other	Eliminations/ Corporate	Consolidated
Sales to customers	¥363,290	¥22,260	¥21,040		¥406,590
Intersegment sales					
Total sales	¥363,290	¥22,260	¥21,040		¥406,590
Segment income (loss)	¥30,389	¥2,534	¥(226)		¥32,697
Segment assets	259,076	13,178	27,852		300,106
Depreciation and amortization	14,938	819	834		16,591
Loss on impairment of long-lived assets	9,199				9,199
Increase in property, plant and equipment and intangible assets	13,243	842	551		14,636
Amortization of goodwill	1,730				1,730
Goodwill	8,125				8,125

Millions of yen					
	2017				
	Reportable segment				
	Industrial automation and control	Test and measurement	Aviation and other	Eliminations/ Corporate	Consolidated
Sales to customers	¥348,047	¥22,243	¥21,144		¥391,434
Intersegment sales		0		¥(0)	
Total sales	¥348,047	¥22,243	¥21,144	¥(0)	¥391,434
Segment income	¥30,611	¥898	¥74		¥31,583
Segment assets	253,941	15,338	30,180		299,459
Depreciation and amortization	14,502	865	967		16,334
Increase in property, plant and equipment and intangible assets	36,023	877	907		37,807
Amortization of goodwill	1,702				1,702
Goodwill	16,462				16,462

Thousands of US dollars

	2018				
	Reportable segment				
	Industrial automation and control	Test and measurement	Aviation and other	Eliminations/ Corporate	Consolidated
Sales to customers	\$3,419,523	\$209,529	\$198,040		\$3,827,092
Intersegment sales					
Total sales	\$3,419,523	\$209,529	\$198,040		\$3,827,092
Segment income (loss)	\$286,042	\$23,848	\$(2,127)		\$307,763
Segment assets	2,438,590	124,044	262,156		2,824,790
Depreciation and amortization	140,604	7,711	7,850		156,165
Loss on impairment of long-lived assets	86,590				86,590
Increase in property, plant and equipment and intangible assets	124,655	7,930	5,177		137,762
Amortization of goodwill	16,282				16,282
Goodwill	76,475				76,475

4. Information about geographical areas

a. Sales

Millions of yen							
2018							
	Japan	Asia	Europe	North America	Middle East	Other	Total
Sales	¥130,467	¥111,990	¥32,678	¥30,935	¥43,927	¥56,593	¥406,590

Millions of yen							
2017							
	Japan	Asia	Europe	North America	Middle East	Other	Total
Sales	¥127,944	¥98,121	¥31,185	¥32,906	¥45,555	¥55,723	¥391,434

Thousands of US dollars							
2018							
	Japan	Asia	Europe	North America	Middle East	Other	Total
Sales	\$1,228,039	\$1,054,127	\$307,583	\$291,184	\$413,465	\$532,694	\$3,827,092

Note: Sales are categorized in each country or area based on the location of end users.

b. Property, Plant and Equipment

Millions of yen							
2018							
	Japan	Asia	Europe	North America	Middle East	Other	Total
	¥53,259	¥12,252	¥6,855	¥2,642	¥1,117	¥607	¥76,732

Millions of yen							
2017							
	Japan	Asia	Europe	North America	Middle East	Other	Total
	¥53,829	¥13,328	¥6,813	¥3,040	¥1,253	¥567	¥78,830

Thousands of US dollars							
2018							
	Japan	Asia	Europe	North America	Middle East	Other	Total
	\$501,306	\$115,319	\$64,521	\$24,872	\$10,512	\$5,718	\$722,248

5. Information about major customers

No customer accounts for 10% or more of total sales of the Group.

Deloitte.

Deloitte Touche Tohmatsu LLC
Shinagawa Intercity
2-15-3 Konan
Minato-ku, Tokyo 108-6221
Japan

Tel: +81 (3) 6720 8200
Fax: +81 (3) 6720 8205
www.deloitte.com/jp/en

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of Yokogawa Electric Corporation:

We have audited the accompanying consolidated balance sheet of Yokogawa Electric Corporation and its consolidated subsidiaries as of March 31, 2018, and the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information, all expressed in Japanese yen.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in Japan. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Yokogawa Electric Corporation and its consolidated subsidiaries as of March 31, 2018, and the consolidated results of their operations and their cash flows for the year then ended in accordance with accounting principles generally accepted in Japan.

Convenience Translation

Our audit also comprehended the translation of Japanese yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made in accordance with the basis stated in Note 1 to the consolidated financial statements. Such U.S. dollar amounts are presented solely for the convenience of readers outside Japan.

Deloitte Touche Tohmatsu LLC

June 26, 2018

Member of
Deloitte Touche Tohmatsu Limited

Corporate Data

- **Corporate Name:**
Yokogawa Electric Corporation
 - **President and CEO**
Takashi Nishijima
- **Headquarters:**
2-9-32 Nakacho, Musashino-shi, Tokyo 180-8750, Japan
 - **Founded:**
September 1, 1915
 - **Incorporated:**
December 1, 1920
- **Paid-in Capital:**
43,410 million yen
 - **Number of Employees:**
18,290 (consolidated) 2,590 (non-consolidated)
 - **Subsidiaries and Affiliates:**
99 outside Japan, 11 in Japan

Support for the United Nations Global Compact

In 2009, Yokogawa approved and signed the United Nations Global Compact, an international initiative proposed by the United Nations, and has been endorsing and putting into practice its ten universal principles in the areas of human rights, labor, the environment, and anti-corruption. The Company is sharing these principles with the other members of the Yokogawa Group and with its business partners worldwide.
We will continue to strive to fulfill our responsibilities as a global company that develops business worldwide.

Takashi Nishijima, President and CEO, Yokogawa Electric Corporation



Investor Information

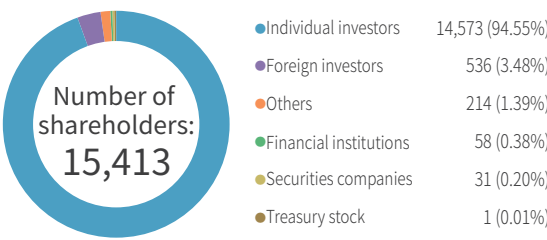
- **Number of Shares Authorized:**
600,000,000
 - **Number of Shares of Common Stock Issued:**
268,624,510
 - **Number of Shareholders:**
15,413
- **Stock Exchange Listing:**
Tokyo Stock Exchange
 - **Administrator of the Register of Shareholders:**
Mizuho Trust & Banking Co., Ltd.
1-2-1 Yaesu, Chuo-ku, Tokyo 103-8670, Japan
- **Annual General Meeting of Shareholders:**
The annual general meeting of shareholders of the Company is held in June.
 - **Accounting Auditor:**
Deloitte Touche Tohmatsu LLC

Major Shareholders (Top 10)

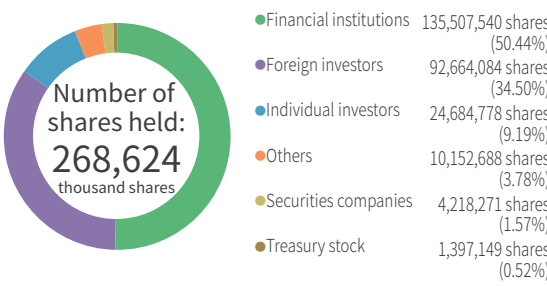
Shareholders	Number of shares held (thousand shares)	Shareholding ratio (%)
Master Trust Bank of Japan Limited (trust account)	34,466	12.9
The Dai-ichi Life Insurance Company, Limited	15,697	5.9
Japan Trustee Services Bank, Limited (trust account)	15,288	5.7
Nippon Life Insurance Company	13,484	5.0
Japan Trustee Services Bank, Limited (trust account 9)	11,518	4.3
Retirement Benefit Trust in Mizuho Trust & Banking Co., Ltd. (Mizuho Bank, Ltd. account); Trust & Custody Services Bank, Ltd. as a Trustee of Retruster	11,261	4.2
State Street Bank and Trust Company 505223	7,023	2.6
Yokogawa Electric Employee Shareholding Program	6,072	2.3
828035 Pictet and Cie (Europe) SA, Luxembourg REF: UCITS	5,480	2.1
State Street Bank West Client – Treaty 505234	4,388	1.6

Notes: 1. The Company holds 1,397 thousand shares of treasury stock.
2. The shareholding ratio is calculated after deducting treasury stock.

Shareholders by Category



Shareholding by Category



North America

- **United States**
Yokogawa Corporation of America
Yokogawa Nuclear Solutions, LLC
Yokogawa USA, Inc.
Yokogawa Venture Group, Inc.
- **Canada**
Yokogawa Canada, Inc.
- **Mexico**
Yokogawa de Mexico, S.A. de C.V.

South America

- **Brazil**
Yokogawa America do Sul Ltda.
Yokogawa Service Ltda.
- **Colombia**
Yokogawa Colombia S.A.S

Europe

- **Netherlands**
Yokogawa Europe B.V.
Yokogawa Europe Solutions B.V.
Yokogawa Europe Branches B.V.
Yokogawa Process Analyzers Europe B.V.
- **Austria**
Yokogawa GesmbH, Central East Europe
- **Belgium**
Yokogawa Belgium N.V./S.A.
- **France**
Yokogawa France S.A.S.
- **Germany**
Yokogawa Deutschland GmbH
Rota Yokogawa GmbH & Co. KG
- **Hungary**
Yokogawa Hungaria Kft.
- **Italy**
Yokogawa Italia S.r.l.
- **Poland**
Yokogawa Polska Sp.zo.o
- **Spain**
Yokogawa Iberia S.A.
- **Turkey**
Yokogawa Turkey Industrial Automation Solutions A.S.
Yokogawa Turkey International Automation Solutions A.S.
- **United Kingdom**
Yokogawa United Kingdom Limited
KBC Advanced Technologies Limited
- **Norway**
Yokogawa TechInvent AS

CIS

- **Russia**
Yokogawa Electric CIS Ltd.
Yokogawa Electric Sakhalin Ltd.
- **Kazakhstan**
Yokogawa Electric Kazakhstan Ltd.
- **Ukraine**
Yokogawa Electric Ukraine Ltd.

Middle East

- **Bahrain**
Yokogawa Middle East & Africa B.S.C. (c)
Yokogawa Engineering Bahrain SPC
- **Saudi Arabia**
Yokogawa Saudi Arabia Ltd.
Yokogawa Services Saudi Arabia Ltd.
- **United Arab Emirates**
Yokogawa Engineering Middle East & Africa FZE
- **Oman**
Yokogawa Oman Limited Liability Company

Africa

- **South Africa**
Yokogawa South Africa (Pty) Ltd.
Yokogawa African Anglophone Regions (Pty) Ltd.
- **Nigeria**
Yokogawa Nigeria Limited

Oceania

- **Australia**
Yokogawa Australia Pty. Ltd.
- **New Zealand**
Yokogawa New Zealand Limited

Asia

- **Singapore**
Yokogawa Electric International Pte. Ltd.
Yokogawa Engineering Asia Pte. Ltd.
Yokogawa Electric Asia Pte. Ltd.
Plant Electrical Instrumentation Pte. Ltd.
- **Indonesia**
P.T. Yokogawa Indonesia
P.T. Yokogawa Manufacturing Batam
- **Malaysia**
Yokogawa Electric (Malaysia) Sdn. Bhd
Yokogawa Kontrol (Malaysia) Sdn. Bhd
Yokogawa Industrial Safety Systems Sdn. Bhd
Yokogawa Analytical Solutions Sdn. Bhd

Philippines
Yokogawa Philippines Inc.

Thailand
Yokogawa (Thailand) Ltd.

Vietnam
Yokogawa Vietnam Company Ltd.

India
Yokogawa India Ltd.
Yokogawa IA Technologies India Private Limited

China
Yokogawa China Investment Co., Ltd.
Yokogawa China Co., Ltd.
Yokogawa Electric China Co., Ltd.
Yokogawa Sichuan Instrument Co., Ltd.
Yokogawa Shanghai Instrumentation Co., Ltd.
Yokogawa Shanghai Trading Co., Ltd.
Yokogawa Process Control (Shanghai) Co., Ltd.
Yokogawa Information Systems (Dalian) Corporation
Yokogawa Software Engineering (WUXI) Co., Ltd.
Yokogawa System Integration & Procurement (WUXI) Co., Ltd.

Korea
Yokogawa Electric Korea Co., Ltd.
Yokogawa Electronics Manufacturing Korea Co., Ltd.

Taiwan
Yokogawa Taiwan Corporation

Subsidiaries and affiliates in Japan

Yokogawa Solution Service Corporation
Yokogawa Test & Measurement Corporation
Omega Simulation Co., Ltd.
Yokogawa Medical Solutions Corporation
Yokogawa & Co., Ltd.
Yokogawa Denshikiki Co., Ltd.
Yokogawa Pionics Co., Ltd.
Yokogawa Foundry Corporation
Yokogawa Manufacturing Corporation
Yokogawa Rental & Lease Corporation

Yokogawa Electric Corporation

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